



UNITED STATES MARINE CORPS
MARINE CORPS AIR STATION MIRAMAR
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Safety
OCT 03 2023

STATION ORDER 5100.1

From: Commanding Officer, Marine Corps Air Station, Miramar
To: Distribution List

Subj: MARINE CORPS AIR STATION MIRAMAR SAFETY MANAGEMENT SYSTEM

Ref: (a) MCO 5100.29C
(b) OPNAV Manual 5102.1
(c) NAVSEA S0420-AA-RAD-010
(d) MCIWEST-MCB CAMPEN 5100.3
(e) 29 CFR 1910
(f) 29 CFR 1926
(g) 49 CFR 395
(h) MCO 5104.1C
(i) Navy Crane Manual P-307
(j) EM 385-1-1
(k) NAVSEA SW023-AH-WHM-010
(l) NAVSUP PUB-538
(m) MCO P11262.2B
(n) MCO 8020.14A
(o) StaO 8020.2E
(p) StaO 8020.1F
(q) StaO 8020.4B
(r) StaO 8020.3C
(s) StaO 11140.1C
(t) StaO 8600.1C
(u) StaO 3710.1D
(v) NOSSAINST 8020.22
(w) DoDI 6055.01
(x) SECNAVINST 11260.2A

Encl: (1) Marine Corps Air Station Miramar Safety Management System Listing of Chapters 1-31

1. Situation. This order establishes the Marine Corps Air Station (MCAS) Miramar's Safety Management System (SMS) aboard the station. This SMS is designed to focus our commitment on operational excellence. This order prescribes strategic policy, procedures, and responsibilities for managing all categories of safety under MCAS Miramar's control in compliance with all orders and directives.

2. Cancellation. StaO 5100.8A, 5100.1, 5100.2B, 5100.4A, 5100.5B, 5100.6B, 5104.1A

3. Mission. To increase overall readiness by reducing or mitigating human and material losses caused by mishaps. This order implements our SMS, which delineates policy and requirements to ensure a safe and healthful working environment for all MCAS Miramar personnel, tenants, and contractor organizations. All personnel will be trained, supervised, and provided with

adequate resources to perform their task safely, efficiently, and in accordance with applicable policies.

4. Execution

a. Commander's Intent and Concept of Operations

(1) Commander's Intent

(a) All Commands, units, and activities located aboard MCAS Miramar will use risk management processes for operational, training, and on- and off-duty activities in accordance with this order. Leaders shall actively support, implement, and manage all safety programs, procedures, and guidance set forth in the references. The station Executive Officer is responsible for overseeing execution of the SMS.

(b) The desired end state is the establishment and maintenance of a safety culture throughout the installation that preserves our resources through risk management, hazard identification and abatement, training, and reinforcing safe behavior, both on and off-duty.

(2) Concept of Operations

(a) The MCAS Miramar SMS details systematic policies, practices, and procedures for the improvement of operational readiness, the prevention of mishaps, and the management of safety activities. The SMS is comprised of four pillars:

1. Policy and Leadership. Operational safety policy defines the safety methods, processes, and organizational structure needed to meet both readiness and capability goals. Visible senior leader advocacy for the universal application of risk management reinforces leader and subordinate commitment to continually improving safety processes. At the most fundamental level, correct policy matched with leader engagement will create the reporting culture required to improve readiness and prevent mishaps.

2. Risk Management. The Marine Corps charges all leaders to continuously communicate that consistent application of risk management is critical to success. Leaders must embed the risk management process into day-to-day operations, deliberate planning processes, and most importantly into the mindset Marines apply to warfighting.

3. Safety Assurance. The evaluation, review, and monitoring of activities that assures commanders the elements of the SMS are being implemented, and guide continuous improvement efforts.

4. Safety Promotion and Training. The communication, training, and other actions that create a positive safety culture across all echelons of Marine Corps organizations and activities.

5. Apply the safety standards promulgated by the references and this order to all operations and workplaces.

6. Provide for abatement of identified hazards to the maximum extent possible.

7. Establish detailed procedures for reporting suspected hazards to supervisory and safety personnel without fear of reprisal.

8. Establish an ongoing safety training program for military and civilian personnel. Provide training to personnel that meets approved curricula. Include basic safety training for the activity or evolution and specific safety training for high-risk processes or operations.

9. Place safety in the reviewing chain for plans, projects, or contracts involving new construction, demolition, renovations, or traffic engineering, and procurement of safety equipment outside of routine Personal Protective Equipment (PPE) to ensure Operational Safety and Health (OSH) requirements are met and potential hazards are eliminated or controlled prior to actual purchase or commencement of work.

10. Investigate, analyze, report, and record mishaps.

11. Establish procedures to recognize superior or deficient OSH performance through evaluations and special awards.

b. Subordinate Element Missions

(1) Director of Safety

(a) Serve as overall coordinator for the MCAS Miramar's OSH Program.

(b) Establish, administer, monitor, maintain, and review the functions for the effective management of programs in ground safety, occupational safety and health, industrial hygiene, and explosive safety for the station, outlying fields and facilities, tenants, contractors, and residents.

(c) Act as the safety liaison between tenant units and the station command by providing situational input and information regarding incident and mishap updates.

(d) Perform any other duties as required in support of the Safety Department Program.

(2) Commanders, Department Heads, Managers, Supervisors

(a) Comply with the requirements of the installation safety program.

(b) Train, supervise, and resource all assigned Marines, sailors, and civilian Marines to perform their assigned task safely.

(c) Establish local programs and policies required by the references and in support of this order.

(3) Commanders/Heads of Tenant Activities and all Contractors

Adhere to all applicable safety requirements of this order. Where tenant activities or contractor's safety standards meet or exceed that of this order, the tenant or contractor shall adhere to the more stringent standard.

c. Coordinating Instructions. Submit all recommendations for changes to this order to the MCAS Miramar Director of Safety.

5. Administration and Logistics. This order is published electronically and can be accessed online via the MCAS Miramar SharePoint page at <https://eis.usmc.mil/sites/mcasm2/Adj/SitePages/Home.aspx>.

6. Command and Signal

a. Command. This Order is applicable to all MCAS Miramar military, Department of Defense (DoD) civilian employees, Non-Appropriated Funds (NAF) employees, contractors (service and general) working aboard MCAS Miramar, and tenant commands aboard MCAS Miramar through support agreements such as Memorandums of Agreement, Memorandums of Understanding, and Inter Service Support Agreements. This Order also applies to activities including NAF facilities and operations that are under the sponsorship of the Marine Corps Community Services (MCCS) Program Director or unit MCCS officers aboard MCAS Miramar for the purpose of morale, welfare, and recreation.

b. Signal. This order is effective the date signed.



T. M. BEDELL

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LOCATOR SHEET

Subj: OCCUPATIONAL SAFETY AND HEALTH PROGRAM

Location: _____
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RECORD OF CHANGES

Log completed change action as indicated.

Change Number	Date of Change	Date Entered	Signature of Person Incorporated Change

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CHAPTER 1

SAFETY MANAGEMENT SYSTEM PROGRAM AND RESPONSIBILITIES

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CHAPTER 1

SAFETY MANAGEMENT SYSTEM PROGRAM AND RESPONSIBILITIES

1000. PURPOSE. The purpose of MCAS Miramar's Safety Management System (SMS) is to provide a framework for managing OSH risks and opportunities. The aim and intended outcome of the SMS are to prevent injury and ill health to all commands, units, and activities located on MCAS Miramar, and to provide safe and healthful places to work, live, and recreate; consequently, it is critically important for the organization to eliminate and/or mitigate hazards and minimize OSH risks by taking effective preventive and protective measures.

1001. GENERAL. All commands, units, and activities located attached to MCAS Miramar will use Risk Management (RM) processes for operational, training, and on and off-duty activities in accordance with this order and their specific SMS. MCAS Miramar's SMS details systematic policies, practices, and procedures for the improvement of operational readiness, the prevention of mishaps, and the management of safety activities. The MCAS Miramar SMS is comprised of four pillars:

1. Policy and Leadership. Operational safety policy defines the safety methods, processes, and organizational structure needed to meet both readiness and capability goals. Visible senior leader advocacy for the universal application of RM reinforces leader and subordinate commitment to continually improving safety processes. At the most fundamental level, correct policy matched with leader engagement will create the reporting culture required to improve readiness and prevent mishaps.

a. All Commanders shall publish a safety policy with a clear set of safety goals and how to achieve these goals. A commitment to, and responsibility for, safety is laid out in policy letters. The safety goals need to be reasonable, achievable, discussed with unit personnel, and regularly reviewed and reevaluated. Safety must be a core value of the unit.

b. Safety Policy is more than just the Commander's policy letter. The unit SMS needs to further define in detail safety accountabilities, key safety personnel, SMS documentation and records, emergency preparedness and response, and the various safety committees' purposes, membership, authority, and meeting timelines. MCAS Miramar's accountability motto is "Manage the Risk, Protect the Force".

c. Leadership in safety requires command attention, responsibility, and accountability at all levels. The failure to intervene by anyone aware of conditions, attitudes or behavior that could lead to a mishap is unacceptable. It must be vividly clear to those in leadership capacities, that they must take immediate corrective action whenever, and wherever, they observe a situation that could lead to a mishap.

2. Risk Management. The Marine Corps charges all leaders to continuously communicate that consistent application of RM is critical to success. Leaders must embed the RM process into day-to-day operations, deliberate planning processes, and most importantly into the mindset marines apply to warfighting.

a. RM is the pillar where action takes place in the SMS. All unit members will have a basic knowledge of RM, with leadership at all levels having a more in-depth knowledge of risk management. It is everybody's responsibility to identify risks and assess hazards. After the hazard has been identified, the process of risk mitigation commences. Identified hazards and risks shall be brought to the attention of unit leadership and appropriate mitigation measures initiated. Commander's policy identifies the roles, process, and responsibilities of risk management within the unit.

3. Safety Assurance. The evaluation, review, and monitoring of activities that assures commanders the elements of the Marine Corps Safety Management System (MCSMS) are being implemented and guide continuous improvement efforts.

a. Safety Assurance is used to ensure risk controls developed under the RM process achieve their intended objectives through the life cycle of a system. Risk controls include all failsafe countermeasures and the internal and external monitoring protocols ranging from the Safety Program Administrator's daily monitoring to external command audits. An important facet of safety assurance to remember is that all the steps contained within are cyclical and continuous.

b. Safety assurance tools will be used to ensure that controls put in place are appropriate and effective. Tools already exist to assess many aspects of SMS, including the Commanding General's Inspection Program, Annual Safety Assessments, Operations Defense Readiness Reporting System report, hazard reports and mishap reports. No one can inspect safety into a program, it must be designed or built into a program. After using these tools to evaluate where a unit is with respect to SMS, the unit must take additional steps to create actionable items from that assessment to improve the system, not just fix a small part.

4. Safety Promotion and Training. The communication, training, and other actions that create a positive safety culture across all echelons of Marine Corps organizations and activities.

a. Safety must permeate every department so that it becomes transparent. In order for aircrew to be highly skilled, they must participate in realistic training conducted in a professional manner. Realistic training necessarily involves considerable exposure to hazardous flight environments. This training is not an easy task, and the achievement of this goal requires the very best risk management. Let there be no doubt in this direction. The trade-off must and shall always be weighed towards safety and the conservation of assets.

5. Plan-Do-Check-Act (PDCA). PDCA is an interactive, four-step management method used for the control and continuous improvement of processes and products. The MCSMS incorporates the PDCA cycle across each of the four pillars by creating deliberate opportunities to refine and refocus suboptimal elements as trends develop, interventions succeed or fail, and new technology is introduced. All leaders will use the PDCA methodology to ensure continuous improvement. The PDCA cycle will be incorporated to ensure our SMS continuously improves our processes and products by utilizing the safety assurance cycle in support of achieving our goal of operational excellence.

a. Plan. Establish the objectives and desired end state. Study programmatic shortfalls, emerging trends, and changing conditions. Outline

possible countermeasures and the necessary policy, programs, processes, and actions necessary to deliver results in accordance with the desired outcome.

b. Do. Implement the plan, execute the process, and make the product.

c. Check. Compare the actual results (measured and collected in "DO" above) to the desired results (targets or goals from the "PLAN"). Look for deviations in implementation from the "PLAN" and "DO" that may have affected execution. Charting data will make it easier to see trends over several PDCA cycles, and to convert the collected data into the information needed to "ACT."

d. Act. Apply corrective actions to the causes of differences between actual and desired results. Determine where to apply changes to improve the process or product. This part of the cycle should produce evidence of the future direction of the mishap prevention program and any needed changes to the policy, priorities, objectives, resources, or other program elements.

6. Safety Standard Operating Procedures. The purpose of a written Standard Operating Procedure (SOP) is to document necessary safety procedures for personnel to follow in accomplishing their duties. For this, supervisors must assess hazards and implement a program to abate or control hazards.

1002. COMMANDING OFFICER

1. The Commanding Officer (CO) is responsible for overall compliance with Marine Corps OSH standards and this order. The CO will implement a comprehensive safety program designed to enforce our SMS, OSH standards and additional safety requirements for the unique operating environment of MCAS Miramar. Specifically, the Commander's responsibilities are:

a. Ensure the resourcing and management of all installation OSH programs to include the execution of the installation's Core Safety Services (CSS). CSS's will be provided to all commands, units, and activities located on MCAS Miramar, or identified as a special area in internet Navy Facilities Assets Data Store (iNFADS) in accordance with reference (a). Provide a core safety service needs assessment to determine gaps in a unit's safety management system.

b. Ensure the performance evaluation of managers and supervisors, consistent with their assigned responsibilities and authority, reflects how well they meet requirements of this manual.

c. Ensure the Safety Department is organized, staffed, funded, and maintained as required by reference (a).

d. Organizationally place the Safety Director at the command level and ensure they implement the MCAS Miramar SMS.

e. Within 30 days of assuming command issue an OSH policy statement adopting, enhancing, and expanding the MCSMS. The policy statement shall reflect the CO's commitment to OSH and require all hands actively engage in the SMS to prevent or minimize occupational mishaps.

f. Ensure senior management, middle management, and first line supervision support the OSH program to the extent of their authority and responsibility. They shall:

- (1) Set the example for subordinates.
 - (2) Promptly correct recognized hazards.
 - (3) Clearly define and assign individual OSH responsibilities to subordinates.
 - (4) Ensure personnel receive appropriate OSH training, participate in OSH committees or meetings, and conduct stand up OSH meetings where required.
 - (5) Conduct or participate in worksite inspections, including those made by the department OSH personnel.
 - (6) Encourage safety awareness through incentives and award programs.
 - (7) Develop a reward process for outstanding safety contributions.
- g. Establish a safety council to provide a forum to identify, define, and assess OSH issues, problems, and needs and recommend corrective actions.
- h. Establish local agreements to define the respective roles and responsibilities of the Bureau of Medicine and Surgery (BUMED) and non-BUMED industrial hygienists to assist in the execution of the Station OSH program.

1003. DIRECTOR OF SAFETY

1. The Director of Safety (DS) shall be responsible to the CO for the overall administration of the MCAS Miramar Safety Department. To assist with the administration and oversight of the Safety Department, they will designate three responsible agents under the general titles Aviation Safety Officer, Installation Safety Manager, and Explosives Safety Officer. Specifically, the Director of Safety shall:

- a. Establish this order and ensure that all personnel are aware of their responsibilities governed by this order with clearly determined lines of accountability.
- b. Submit an annual budget request to support the SMS and to carry out safety responsibilities through the chain of command.
- c. Conduct and document CSS needs assessments for all tenant units aboard the installation annually and identify service gaps.
- d. Inspect all workspaces annually, or more frequently depending upon the level of risk, and complete the necessary deficiency reports.
- e. Design, provide, and tailor OSH training programs to the level of responsibility of personnel. Instruct personnel to perform their work in a safe and healthful manner.
- f. Establish and maintain liaison between the local OSH office, other DoD activities, Industrial Hygienists, and tenant safety representatives as necessary to ensure compliance with the intent of this manual.

g. State the location (s) where personnel can review copies of the Navy Occupational Safety and Health (NAVOSH) standards, records of safety and health committees and their actions and recommendations, the station hazard communication plan, and documentation on the Station OSH program.

h. Apply the RM process and other RM techniques in planning, operations, and training.

i. Provide the commander an overview of the command SMS within 60 days of assuming command in accordance with reference (a).

j. Encourage a free flow of information and ideas from personnel on methods of improving the safety of their workspace, work practices, and work procedures.

k. On behalf of the CO, MCAS Miramar, conduct a Ground Climate Assessment Survey within 90 days of change of command and annually thereafter (365 days after the commander receives the results of the prior applicable survey out-brief).

l. Interpret regulations for MCAS Miramar and tenant commands.

m. Review safety SOPs upon request.

n. Ensure the tenant commands' safety programs are sufficient to control hazards.

o. Inspect all facilities aboard MCAS Miramar.

1004. INSTALLATION SAFETY MANAGER

1. The Installation Safety Manager (ISM) shall be responsible to the Director of Safety for the overall administration of the MCAS Miramar OSH Program. The Commander organizationally places the ISM at the command level and ensures they are a qualified Occupational Safety and Health Manager. They shall assume the responsibilities of the Director of Safety in their absence. Specifically, the Installation Safety Manager shall:

a. Execute administrative details of the Marine Corps OSH Program. These are applicable to:

(1) All non-flight related operations and activities under cognizance of MCAS Miramar.

(2) All personnel assigned to, stationed at, employed by, or otherwise engaged in normal activities on MCAS Miramar.

(3) All tenants or visitors of MCAS Miramar.

b. Conduct an OSH program that implements the policies and requirements of this manual.

c. Maintain a robust OSH training program consistent with the needs of station personnel and the requirements of reference (a).

d. Review, investigate, and record lost time mishaps and recommend corrective actions where required by reference (a). Provide timely reports of findings and corrective actions to Naval Safety Center (NAVSAFECEN).

e. Establish a hazard abatement program to eliminate or control all identified hazards in a systematic manner.

f. Identify training requirements and sources of training appropriate for personnel and operations under their cognizance.

g. Maintain records of OSH training by station personnel.

h. Coordinate occupational health and industrial hygiene field support with the appropriate medical support facility.

i. Establish a comprehensive self-assessment program for the Station OSH Program.

j. Require the use of approved Personnel Protection Equipment (PPE), other safety equipment, and devices necessary to protect station personnel.

k. Review all OSH citations and findings from external authorities, i.e., Occupational Safety and Health Administration (OSHA), NAVINSGEN and internal sources, as warranted, to identify problems and the corrective actions to address the underlying causes and not merely the symptoms.

l. Develop and implement cross-reference linkage among employment records, medical records, and industrial hygiene surveillance data.

m. Ensure that personnel are aware of the formal procedure for processing written reports of unsafe or unhealthful working conditions. Reporting procedures should encourage employees to make beneficial suggestions as a positive means of correcting potential hazards.

n. Make available a copy of the station's annual summary report of occupational injuries and illnesses (OSHA 300A) for the preceding calendar year. Post this summary on all safety boards from 1st of February through 30th of April.

o. Post the Occupational Safety and Health Protection for employees of the Department of the Navy (DON) form in prominent locations such as all official bulletin boards.

p. Adapt safety directives, regulations, and suggestions from higher authority for local conditions. Prepare and keep current local safety regulations and standard operating procedures (SOPs).

q. Interact with local officials on safety matters as follows:

(1) Liaise with medical personnel to ensure proper selection and placement of employees from a safety and job analysis perspective.

(2) Liaise with security personnel on traffic management and other matters of mutual concern.

(3) Liaise with the Supply Officer by specifying standards for safety devices and proper labeling of hazardous materials.

(4) Coordinate with Facility Maintenance or the Public Works Officer on:

(a) Safety plans and specifications for new construction and alterations to existing construction.

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

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

(5) Liaise with training officer to ensure safety standards, rules, and regulations are included in training programs.

(6) Liaise with Industrial Hygienist to survey and appraise conditions affecting the health and efficiency of personnel, such as fumes, gases, dust, lighting, ventilation, temperature extremes, noise, and sanitary facilities to eliminate or minimize unhealthful conditions. Coordinate with the Radiation Safety Officer, Laser System Safety Officer, or Industrial Hygienists, as appropriate, to evaluate harmful radiation and ensure protection of exposed personnel.

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

s. Review beneficial suggestions pertaining to safety devices and practices and submit recommendations to the awards committee.

t. Organize, implement, and supervise a complete motor vehicle safety program for both government and private motor vehicle operation. Include technical guidance for training operators and conduct attitude training aimed at mishap prevention.

u. Provides support to the explosives safety program. Through the Explosives Safety Officer coordinates with Ordnance Officers, Explosive Ordnance Disposal Officers, Area Security Officers, Armorers, and other Arms, Ammunition, and Explosives Officers to ensure appropriate safety standards, rules, and regulations are included in ordnance operations.

v. Provide safety education to all supervisors, Collateral Duty Safety Officers (CDSO), and their assistants in subordinate units. Make sure they are aware of their duties and have the necessary references, equipment, and material to discharge these duties.

w. Conduct an annual assessment to evaluate the effectiveness of the command's safety and health management system utilizing internally generated audit checklists in conjunction with the Safety Function Area Checklist 5100 located on the Marine Corps Inspector General (MCIG) website.

1005. SAFETY SPECIALIST

1. The Safety Specialist shall be responsible to the Installation Safety Manager. They shall be familiar with all the duties and responsibilities of the Installation Safety Manager and perform those duties in the absence of

the Installation Safety Manager and Supervisor Safety Specialist. In addition, they will:

a. Assist the Safety Director, Safety Manager, and higher graded specialist in program management by planning, scheduling, and coordinating annual, and bi-annual inspections of all assigned facilities, and assigned functional programs providing advice and guidance to the CO, via the Safety Director or Safety Manager. In-process newly joined Marines and Civilian employees and provide an indoctrination brief. Oversee accurate accountability of new joins using computerized systems. Perform other duties as may be assigned to support the mission of the safety department and MCAS Miramar.

b. Administer the Marine Corps and NAVOSH hazards abatement programs by using and assigning risk assessment codes that combine elements of hazard severity and mishap probability in terms of categories. These assessments are used to prioritize locally and centrally funded projects.

c. Initiate and conduct safety awareness and other educational programs by teaching OSHA 10 and OSHA 30 courses when funding is available. Instruct MCAS Miramar's Collateral Duty Safety Officers Course. Provide newspaper articles, posters, banners, billboards, etc. to promote safety consciousness in supervisors, employees, dependents, and visitors. Also conduct motivational training in occupational, environmental, recreational, and hazardous material safety.

d. Monitor the Marine Corps hazardous materials management program by reviewing and approving Authorized User List submissions for hazardous materials. Review and approve recommendations to supply personnel, unit hazardous materials coordinators, technicians and other personnel on the proper storage, handling, use and recording procedures for hazardous materials.

e. Conduct the Marine Corps ground mishap reporting program by investigating mishaps and unsafe/hazardous conditions. Analyzes and prepares evaluation of findings, identifying probable causes and uses trend analysis to justify recommendations and procedural changes. Maintains the OSHA injury and illness log and submits reports to HQMC and other reporting centers in a timely manner using the Risk Management Information-Streamlined Incident Reporting (RMI-SIR) system.

f. Plan and conduct occupational, safety and health inspections and a surveillance program to encompass a wide range of industrial and airfield operational areas including: all public works shops, motor transport, bulk fuel distribution system, aircraft maintenance, materials handling and storage, construction, repair, and modifications projects. Provides an annual baseline compliance assessment of assigned programs.

g. Advise line supervisors and evaluate their effectiveness in instilling safety awareness and the need for proper use of personal protective equipment. Research specifications for personal protective equipment such as noise suppressors, respirators, machine guarding, etc., to assure their capabilities and applicability. Working with employees and management representatives to establish hearing, sight, foot, and other safety conservation areas.

h. Coordinate with support personnel including engineering, public works maintenance, preventive medicine, fire department search and rescue, provost marshal, legal, industrial hygiene, and procurement by using technical data acquired to plan and implement comprehensive hazard control measures such as smoke detection, pedestrian and motor vehicle traffic control, life safety systems and protective clothing.

i. When funding is available attend Department of Labor, Navy, Marine Corps, national and regional safety, and health conferences to keep abreast of the ever-changing regulations that will affect the MCAS Miramar's safety programs. Assists in planning and participates in local, state, and national safety promotions such as operational pauses, fire prevention week, safety awareness week, seatbelt, and bicycle safety campaigns.

1006. EXPLOSIVES SAFETY OFFICER (ESO)

1. The ESO is designated in writing by the CO and responsible to the Director of Safety. The role of the ESO is to manage the Explosives Safety Program. The ESO will provide the CO with reasoned, informed advice regarding explosive safety standards and acceptable levels of risk. In order to accomplish this role, the ESO must have direct access to the CO. Duties and responsibilities of the ESO include:

a. Ensure personnel involved with explosives operations receive required training.

b. Inspect explosives storage facilities as often as necessary, depending on the hazard associated with the operation, but at least annually.

c. Ensure all SOPs for explosives operations comply with applicable references.

d. Monitor the department's qualification and certification program for compliance with applicable references.

e. Review all site approval documents in conjunction with the safety office and fire department representatives involving facilities generating or located in explosive safety quantity-distance arcs.

f. Review all requests for deviation from established explosives safety standards to ensure that they comply with existing safety directives.

g. Conduct accident investigations in accordance with applicable references and reporting findings to higher authority as required. Maintain a record listing all accidents with recommendations for preventive measures.

h. Maintain the department's explosives safety manual and applicable explosives safety directives.

i. Provide a representative and point of contact for department explosives safety inspections, reviews, and other explosives safety related matters.

j. Monitor the facility grounding/lightning protection program.

k. Establish an auditing system to determine the effectiveness of the Station Explosives Safety Program.

1007. ALL LEVELS OF LEADERSHIP, MANAGEMENT, AND SUPERVISION THROUGH THE CHAIN OF COMMAND

1. All management-level personnel shall:

a. Make recommendations to the Installation Safety and Safe Driving Council regarding safety matters that will improve the safety program.

b. Strengthen the administration of the safety program through all levels of supervision by actively supporting the Safety Management System processes.

c. Ensure plans for new construction, alterations to buildings and facilities, and changes to work processes consider the safety and health of personnel and they are coordinated with the installation safety office and industrial hygiene.

d. Require written operating procedures, Job Hazard Analysis (JHA), or RM for operations and processes not specifically addressed in existing directives, technical publications, or manufacturer's instructions. Annually update all such instructions and forward a copy to the installation safety office.

e. Establish procedures to ensure prompt reporting of mishaps and near misses.

f. Ensure military and civilian supervisor appraisals specifically include an evaluation of their OSH program management performance.

g. Ensure SMS and overall safety performance is included in military and civilian performance plans, performance appraisals, compensation, rewards, and recognition.

h. Notify the Safety Office immediately of damage to physical property or equipment constituting a potential hazard. Additionally, report items which could result in injury to personnel or additional property damage.

i. Ensure all assigned personnel understand and comply with prescribed safety instructions, rules, and regulations.

j. Provide proper safety protective clothing and equipment and ensure appropriate use by the work force.

k. Identify civilian and military (E-4 or above) supervisory personnel by billet to receive initial supervisor safety training within 90 days of appointment and annual supervisor safety training from their initial training date.

l. Identify and appoint a safety representative titled CDSO in all functional areas for responsibility and ensure they receive at a minimum the collateral duty safety officer course within 30 days of appointment.

m. Provide assigned workplaces written Emergency Action Plans (EAP's) that include medical, fire, and emergency evacuation plans. The EAP's must include emergency phone numbers, responsibilities, procedures, and any other pertinent information and training.

n. Ensure all assigned personnel have their safety performance included in their performance appraisals.

(1) Safety performance indicators for Department Heads, Special Staff Officers and Supervisors are: Safety Program compliance inspection results, facility safety inspection results, hazard identification and abatement, timely mishap investigations and close call reporting; Supervisor accountability, Marine and Civilian Marine accountability, housekeeping, safety awards received during the year, CDSO training compliance, and supervisor safety compliance training.

(2) Safety performance indicators for Marines and Civilian Marines are: Safety Program compliance inspection results, facility safety inspection results, hazard identification and abatement, timely reporting of mishaps and near misses.

o. Require that SOPs be implemented in their commands or departments to control hazards at a level that meets regulatory guidelines from higher authority (Occupational Safety Health Administration, DOD, Department of the Navy (DON), Commandant of the Marine Corps (CMC) or consensus standards).

1008. SUPERVISORS

1. Supervisors are responsible for maintaining a safe and healthful environment for the personnel within their organization, work center, or facility. Supervisors shall:

a. Enforce safety regulations and ensure timely reporting of mishaps and near miss incidents.

b. Be thoroughly familiar with the safety requirements for safe operation of the equipment under control of personnel within their department.

c. Complete initial Supervisor Safety Training (SST) within 90 days of appointment and annually thereafter.

d. Ensure the section safety representative or CDSO has direct access to the supervisor or department head for all safety matters.

e. Provide and document work area specific on-the-job training for safety, fire protection, and health to all military and civilian personnel before assigning them duty tasks requiring this specific training in accordance with reference (a).

f. Ensure all assigned personnel complete required safety training, comply with all applicable safety policies, and maintain safe work practices, to include use of PPE and hearing protection.

g. Conduct JHAs for all work center tasks in order to identify hazards, implement controls, and mitigate risk. JHAs shall be completed and reviewed annually or when work center conditions, operations, or personnel change.

h. While using DD Form 2977 Deliberate Risk Assessment Worksheet apply the RM process to all activities.

i. Perform spot inspections to check the day-to-day safety and health of their organization, work center, or facility in accordance with reference (a).

j. Ensure OSH Deficiency Notice or equivalent, issued by safety, fire protection, or Industrial Hygiene officials is corrected promptly to eliminate hazards and correct deficiencies. Take appropriate corrective action to abate identified hazards immediately and ensure department/workplace abatement log is updated.

k. Review Industrial Hygiene reports and Occupational Safety and Health inspection results, incorporate recommended changes and take necessary corrective action. Notify the responsible industrial hygienist of any changes in procedures, materials, or equipment that could affect personnel exposures to potential health hazards, requiring a re-evaluation and updated Industrial Hygiene Survey. During the periodic evaluation, a determination will be made on the status of the workplace and any changes required in the monitoring plan or frequency of periodic follow-ups.

l. Track medical surveillance requirements for all assigned personnel. civilian medical surveillance shall be tracked in the Enterprise Safety Application Manage System (ESAMS), or other computer information system as directed by the Installation Safety Department. Ensure medical surveillance requirements for all assigned military personnel are identified for tracking in the Medical Readiness Reporting System (MRRS). At no time shall assigned personnel, military or civilian, perform a task for which he/she is not medically qualified.

m. Ensure hearing readiness of assigned personnel is at least 85% in accordance with reference (a).

n. Immediately report mishaps, near misses, and unsafe and unhealthful working conditions to the Installation Safety Department. Be prepared to brief these issues during quarterly Supervisor Safety Committee meetings and Installation Safety Council meetings.

o. Attend quarterly Supervisor Safety Committee meetings or if unavailable send a designated representative.

p. Conduct monthly shop safety committee meetings in order to increase interest in safety at the worker level and decrease the potential for mishaps. Meeting minutes will be created in accordance with reference (a).

1009. SAFETY REPRESENTATIVES

1. MCAS Miramar Collateral Duty Safety Officer. The CDSO serves as the safety representative within an installation department and reports directly to the department head for matters pertaining to safety. The CDSO assists the supervisor and department head in the execution of the safety program with primary emphasis on mishap reporting, workplace inspections, hazard communications, safety training, and personal protective equipment. The CDSO does not perform the safety functions of the supervisor but assists the supervisor and department head through coordination with the installation safety office. The CDSO shall:

a. Conduct quarterly safety inspections of assigned facilities, processes, and equipment in accordance with reference (a).

b. Attend all applicable training within 30 days of appointment.

c. Assist Supervisor in conducting a monthly Shop Safety Committee meeting in order to increase interest in safety at the worker level and decrease the potential for mishaps. Meetings minutes will be created in accordance with reference (a).

d. Maintain a turnover binder/SOP with appropriate documentation to ensure continuity. The minimum turnover binder/SOP documentation shall include:

- (1) A copy of the MCAS Miramar CO and H&HS CO Safety Policies.
- (2) A copy of the installation SMS order.
- (3) Billet appointment letters.
- (4) Duties and Responsibilities of the CDSO.
- (5) Current Supervisor Safety Committee meeting minutes and Shop Safety Committee minutes.
- (6) MCAS Miramar Safety Department Point of Contact (POC) list and current section program administrator POC list.
- (7) Current Industrial Hygiene Survey for department.
- (8) Instructions on how to enter medical surveillance exams for military and civilian personnel into computer information systems. Includes blank SECNAV 5100 Supervisor's Medical Surveillance and Certification Exam Referral form.
- (9) JHA/RM Inventory. All approved JHA/RM documents for the department reviewed and updated annually. Includes instructions of how to enter a JHA in computer information systems and have a copy of a blank DD Form 2977 Deliberate Risk Assessment Worksheet.
- (10) Evacuation drills. Record of all fire drills performed by the Fire Department and/or CDSO.
- (11) Inspection Checklist. A blank checklist of the type needed to inspect their respective work environments (e.g. warehouse, administrative areas, etc.). Include instructions on entering workplace inspections in computer information systems.
- (12) Last annual OSH inspection results.
- (13) Department Hazard Abatement Log. Will include all hazards identified during annual OSH Inspections, quarterly workplace inspections, and spot inspections. The Hazard Abatement Log shall include:
 - (a) Description of hazard and date identified.
 - (b) Description of hazard location.
 - (c) Risk Assessment Code (RAC).

(d) Description of interim controls put in place to temporarily abate the hazard with the date implemented.

(e) Final abatement control in place to permanently correct the hazard with the date implemented.

(14) Instructions on how to report mishaps or near miss incidents. Includes Supervisor's Mishap Report form that can be found on the Safety SharePoint site.

(15) Written hazards communications program for locations using hazards materials. Includes inventory of hazardous materials utilized.

(16) Copy of Safety Program points of contact.

e. Maintain the department/workplace safety board to ensure notification to personnel on safety matters. The minimum documentation to be posted on a safety board shall include:

(1) MCAS Miramar CO and H&HS CO Safety Policy.

(2) OSHA 300A Summary posted 1 Feb to 30 Apr annually.

(3) NAVMC 11401 Unsafe or Unhealthful Working Conditions forms.

(4) Emergency Action Plan.

(5) NAVFAC 3-11320/9 Fire Bill.

(6) Department/Workplace Industrial Hygiene Survey.

(7) Mishap Report Forms and mishap reporting instructions.

(8) Safety Department POC List.

2. MCCS Safety Representative. The MCCS safety representative shall:

a. Be considered as a MCAS Miramar CDSO for the purpose of requirements set forth by this Order.

3. Tenant Command Safety Representative. Tenant safety representatives shall:

a. Implement a safety program using this Order as a guide in writing their own SOPs. SOPs promulgated by parent commands are acceptable if they are specific to the task and meet the requirements of reference (a).

b. Ensure their SOP and safety program meet the requirements of reference (a) and are sufficient to control hazards.

1010. INDIVIDUAL MILITARY AND CIVILIAN PERSONNEL

1. Individuals are responsible for accomplishing their duties in a manner that shall assure personal safety, the safety of others, and the protection of other installation resources. Marines, sailors and Civilian Marines shall also be alert to observe unsafe practices, unsafe equipment, and unsafe conditions, as well as environmental conditions, in their immediate area that

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could present a hazard. Personnel shall immediately report unsafe or unhealthful conditions to supervisors for evaluation and remedial action. The Marine, Sailor or Civilian Marine may also file a report in ESAMS or other computer information system, an AnyMouse report or Civilian Employee Report of Unsafe, or Unhealthful Working Conditions (Enclosure (5) with the installation safety office per the procedures in this order. Each Marine, Sailor and Civilian Marine are required to wear or use appropriate protective clothing or equipment when needed for the safe performance of duties. All personnel are additionally required to immediately report to their supervisor any mishap or near miss (close call) resulting, or potentially resulting in property damage or personal injury.

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CHAPTER 2
COUNCILS AND COMMITTEES

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CHAPTER 2

COUNCILS AND COMMITTEES

2000. GENERAL. These councils are established to advise leadership of safety challenges, current trends, hazard corrective actions taken or required, on and off-duty mishaps, traffic safety challenges and issues and other force preservation issues.

2001. SAFETY AND SAFE DRIVING COUNCIL

1. Purpose. To establish and maintain an effective installation safety and traffic safety program to reduce mishaps, incidents, and recommend policies to the CO.

2. Meetings. The MCAS Miramar Safe Driving Council will be held concurrently with the MCAS Miramar Safety Council. The MCAS Miramar Safe Driving Council will meet quarterly or more frequently if circumstances warrant.

3. Meeting Minutes. The chairperson will ensure the preparation, publication, and file maintenance of the meeting minutes. This includes distribution to council members and affected personnel for any Recreational and Off Duty (RODS)-related issues.

4. Membership. Safety Councils are chaired by the CO or the Executive Officer (XO) and facilitated by the Safety Director or Installation Safety Manager. Tenant activities are encouraged to attend and participate in the installation safety councils. The composition of Safety and Safe Driving Council will consist of:

- a. MCAS Miramar Commanding Officer.
- b. MCAS Miramar Executive Officer.
- c. MCAS Miramar Sergeant Major.
- d. MCAS Miramar S-1 Director.
- e. MCAS Miramar S-3 Officer.
- f. MCAS Miramar S-4 Officer.
- g. MCAS Miramar Human Resources Director.
- h. MCAS Miramar MCCA Director.
- i. MCAS Miramar Medical Officer.
- j. MCAS Miramar Provost Marshall.
- k. MCAS Miramar Director of Safety.
- l. H&HS Miramar Commanding Officer.

- m. H&HS Miramar Executive Officer.
- n. H&HS Miramar Sergeant Major.
- o. Southwest Region Fleet Transportation Manager.
- p. American Federation of Government Employees President.

2002. SUPERVISORS' SAFETY COMMITTEE

1. Purpose. The Supervisors' Safety Committee shall assist the MCAS Miramar Safety Council by identifying existing or potential OSH hazards and deficiencies and recommend corrective measures per reference (a). The committee will periodically review the mishap experiences of their particular area of responsibility, including mishap prevention efforts and discussing potential hazards which may result in death, injury, or property damage. Recommendations/suggestions should be brought to the Miramar Safety Council. Supervisors shall keep documentation of these meetings.
2. Membership. Committee membership shall consist of military and civilian supervisors and Union representatives. A chairperson shall be elected annually per reference (a) or be the H&HS Ground Safety Manager (GSM).
3. Meetings. The MCAS Miramar Supervisors Safety Committee meetings will be held at least quarterly per reference (a).
4. Meeting Minutes. The committee chairperson will ensure accurate minutes are prepared and submitted to the MCAS Safety Council for review and appropriate action.

2003. SHOP SAFETY COMMITTEE

1. Purpose. To increase interest in safety at the workers' level and decrease the potential for mishaps.
2. Membership. Per reference (a), MCAS Miramar shop safety committees shall consist of personnel from each work center (e.g. office, shop crew, section, department, etc.) and have a membership of five or more persons. Each shop safety committee shall include members of the same work center. The shop safety committees shall be chaired by a civilian (journeyman level) or military supervisor.
3. Meetings. One or more committee meetings will be held monthly as scheduled by the chairperson of each shop safety committee. Meetings should be of short duration and have minimal impact on work schedules.
4. Meeting Minutes. Ensure a roster of attendees and topics discussed be provided to the supervisor, maintained in department records, and distributed to work center/unit/shop personnel. Supervisors will then forward any pertinent safety information to their work center/unit/shop safety representative, supervisors' safety committee or safety council as appropriate.

CHAPTER 3

PERSONAL PROTECTIVE EQUIPMENT (PPE)

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CHAPTER 3

PERSONAL PROTECTIVE EQUIPMENT

3000. PURPOSE. To establish the requirements for PPE per the references and reiterate the supervisor's responsibilities for providing, enforcing, using, and maintaining PPE.

3001. POLICY. The use of PPE will be the last recourse used to protect personnel from identified hazards and to manage associated risk. Engineering and administrative controls will always be evaluated first. Whenever possible, processes and equipment shall be designed and arranged to prevent hazardous exposure to personnel or administrative controls implemented to limit or reduce exposure time and or amount. When controlled exposure is necessary, PPE shall be provided, and its use required as a supplementary measure to other necessary safe practices.

3002. RESPONSIBILITIES

1. Commanders, Commanding Officers, and Department Head in charge shall:

a. Ensure adequate funding is established to support your organizations annual PPE requirements. Funding should be forecasted to support both day to day, known requirements as well as any emergency and contingency requirements based on prior year's experiences. PPE funding requirements will be identified in the "Must Fund" section of your Zero-Based Budget.

b. Ensure supervisors comply with and enforce the requirements of this chapter and references (a) and (e).

2. Managers and Supervisors

a. Conduct and document hazard assessments in each workplace where their employees are performing duties. When PPE is required, the manager or supervisor shall ensure that PPE is provided, used, maintained, and stored in a sanitary serviceable condition.

b. Contact Industrial Hygiene and the Installation Safety Office for consultation when workplace operations change to schedule appropriate evaluation when new hazardous materials are introduced, processes or procedures are changed, or engineering controls are modified or added.

c. Maintain discipline regarding personnel wearing properly fitted PPE, when required.

d. Maintain on file inspection records for all PPE until the equipment is removed from service.

3003. HAZARD ASSESSMENT PROCEDURES. The Naval Medical Center will provide IH surveys to outline occupational hazards in the workplace. These surveys will not outline the exact PPE required for specific tasks. A JHA will outline the process hazard with PPE requirements. MCAS Miramar Safety Department will assist work center supervisors in assessing workplaces for safety and occupational hazards and determine what PPE is required.

3004. ENFORCEMENT OF PROGRAM. It is the responsibility of supervisors to enforce the use/wear of appropriate PPE. Managers and Supervisors will ensure compliance with the prescribed use of PPE and document cases of noncompliance. Per reference (a), managers should consider disciplinary action as a corrective measure against the offender and/or supervisor, as necessary.

3005. PERSONNEL REGULATIONS

1. While working in industrial areas, personnel shall not wear:

- a. Torn, ragged, extremely dirty, or greasy clothing.
- b. Outer garments made of flammable synthetic materials.
- c. Shoes that are in poor condition, open-toed, open heeled, high-heeled, slippers, sandals, or platform shoes.
- d. Eye shades or spectacle frames made of flammable substances or caps with celluloid visors.
- e. Loose or dangling ornamental jewelry or other articles of clothing which may be caught in machinery.
- f. Metal frame glasses, jewelry, belt buckles, piercings, or other adornments while performing electrical work or power distribution operations.
- g. Hats with brims that restrict peripheral vision.
- h. Portable headphones, earphones, and listening devices do not enable the user to hear or respond to sirens, fire alarms, or other means of warning. Accordingly, they are prohibited while operating a motor vehicle, jogging (except on jogging trails), walking, crossing, bicycling, or skating on/or near roads and streets. Portable headphones are not a substitute for proper hearing protection. Bluetooth/hands free devices for cell phones shall utilize only one ear.
- i. Personnel shall wear required personal protective clothing and equipment while on the job.
- j. Personnel on aircraft ramps/taxiways are prohibited from wearing loose clothing, badges, tags, or equipment that could become a Foreign Object Damage (FOD) hazard.

3006. PPE PROGRAM AREAS. Supervisors are responsible for overseeing the PPE program requirements and ensure adequate PPE is provided.

a. Eye Protection Program. In conformance with the policy of the Department of the Navy, the base provides appropriate protective eye wear, as specified in accordance with MCO 5100.29C, for Marines and civilian Marines engaged in eye hazardous tasks.

b. Foot Protection Program. Marines and civilian Marines shall wear foot protection when engaged in materials handling operations or when otherwise required. Supervisors are required to use Appendix 3-A for purchasing foot protection for their employees.

c. Hand Protection Program. Hand hazardous operations are those that have a high probability of potential for skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes without adequate hand protection.

d. Head Protection Program. Head hazardous operations are those that have a high probability of potential for injury to the head from falling objects or head bumps without adequate head protection.

3007. PERSONNEL TRAINING. Supervisors shall provide and document PPE training for their personnel. Personnel utilizing PPE shall be trained on the following:

- a. When PPE is necessary.
- b. What type of PPE is necessary and why.
- c. How to don, doff, adjust, and wear PPE properly.
- d. Limitations or hazards associated with the use of PPE.
- e. Proper care, maintenance, useful life, and disposal of PPE.

3008. SIGHT CONSERVATION PROGRAM (EYE PROTECTION)

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

a. Objectives of this program are to safeguard personnel from eyestrain or injury due to defective vision and protect them against other eye injuries by providing protective eyewear.

2. Eye-Hazardous Areas. Personnel working or visiting in eye-hazardous 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 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 PPE Survey.

3. Types of Eye Protection. Type of eye protection used is dependent upon operation and hazard. Type of eye protection shall be identified on the PPE Survey.

a. Plain 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 if required for adequate protection. Goggles must be appropriate to the operation (e.g., splash-resistant goggles for working with chemicals (covered ventilation ports), impact-resistant goggles for working with particles (open ventilation). Splash goggles will also protect against particles.

c. 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, etc.) or chemical splashes. Face shields alone do not meet eye protection requirements and cannot be substituted as such.

d. Welding goggles, hoods, and shields shall have the appropriate filter lens for protection against radiant energy during welding, brazing, and oxygen cutting.

e. All eye protection shall conform to requirements of ANSI Z-87.1-1989. Approved eye protection will have ANSI Z87 stamped on glasses or goggles (e.g., temple piece).

4. Impaired Vision. Any Marine Corps personnel with vision completely or practically missing in one eye, as determined by medical officer, is more at risk for disability resulting from injury to the better eye and therefore warrants more aggressive protection regardless of occupation or MOS. The attending occupational health physician will determine requirements for work restrictions and use of eye-protective equipment after appropriate consultation with the individual's optometrist or ophthalmologist.

5. Visual Screening. Visual acuity and health screening for military personnel shall be accomplished at the locally assigned branch medical clinic. Newly hired civilian employees shall be screened as a part of the pre-placement physical examination. Visual screening of Marine Corps personnel performing duties not listed above will be accomplished on an individual basis. The Safety Manager, upon consultation with the responsible Industrial Hygienist, will assist in scheduling an appointment with the Medical Department.

6. Referral for Refraction. Marine Corps personnel engaged in eye-hazardous areas, processes, and occupations with visual acuity insufficient to meet requirements of the job shall be referred to Medical Department for refractive service. The Installation Safety Manager shall take appropriate action to ensure the required corrective eye protection is provided in accordance with this Manual.

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

8. 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 when they get under the contact lens.

9. Prescription Safety Glasses. Funding shall be allotted for civilian employees for the purchase of prescription safety glasses. Eye examination is at the employee's expense. It is the employee's requirement to provide the prescription prior to purchase. Additional features such as tinting or progressive lenses may be added at the employee's expense. Physician prescriptions must be valid within one year of submission. Department supervisors will validate the requirement for prescription glasses and submit to the supply for processing. Replacement prescription glasses may be issued every 18 months from the date of purchase or when supervisors provide sufficient justification for sooner replacements.

3009. RESPIRATORY PROTECTION PROGRAM

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 at government expense. The Safety Department and IH will aid in determining the level of protection required.

2. The DS shall designate an Installation RPPM for MCAS Miramar in writing (example provided at Appendix A). Commanders, Department Heads, Managers and Supervisors shall designate a Respiratory Protection Program Manager (RPPM) appointed in writing for commands, departments, and sections.

a. The Installation RPPM shall:

(1) Complete one of the following courses before appointment:

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

(b) Naval Occupational Safety and Environmental Training Center RPPM Course (A-493-0072).

(c) Respiratory Protection Course with at least 32 hours of training which covers: respiratory hazards, federal standards applicable to respirators, minimum RPP requirements and administration, respirator types, selection, certification, and limitations, respirator cleaning, maintenance, and inspection, qualitative and quantitative fit testing of respirators, including actual laboratory fit testing, breathing air quality, medical considerations, respirator training, confined spaces and IDLH atmospheres, special problems in program administration (facial hair, lens fogging, 503 and communication), standard operating procedures, and cartridge change out schedules.

(2) Assist Supervisors and Department RPPMs in developing written SOPs governing the selection, issue, care, and use of respirators for their respective work centers and ensure they are posted in each general work area. SOPs shall include pertinent regulations, consensus standards, and emergency and rescue guidance, as necessary.

(3) Approve in writing all purchases of nonstandard respiratory-protective equipment.

(4) Provide oversight, consultation, and an annual program assessment to department RPPM's on all aspects of their Respiratory Protection Program to ensure compliance in accordance with reference (a) and (e). This will include a review of the department's annual audit of the Respiratory Protection Program using the checklist identified in reference (a).

(5) Provide consultation on RPPM programs for all tenant units upon formal request. Ensure facilities for respirator storage, issue, cleaning, and maintenance are established.

b. MCAS Miramar Department RPPMs shall:

(1) Complete one of the following courses before appointment:

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

(b) Naval Occupational Safety and Environmental Training Center RPPM Course (A-493-0072).

(c) Respiratory Protection Course with at least 32 hours of training which covers: respiratory hazards, federal standards applicable to respirators, minimum RPP requirements and administration, respirator types, selection, certification, and limitations, respirator cleaning, maintenance, and inspection, qualitative and quantitative fit testing of respirators, including actual laboratory fit testing, breathing air quality, medical considerations, respirator training, confined spaces and IDLH atmospheres, special problems in program administration (facial hair, lens fogging, 503 and communication), standard operating procedures, and cartridge change out schedules.

(2) Develop written SOPs governing the selection, issue, care, and use of respirators for their respective work centers and ensure they are posted in each general work area. SOPs shall include pertinent regulations, consensus standards, and emergency and rescue guidance, as necessary.

(3) Conduct annual training to all respirator users. Ensure all training is recorded.

(4) Ensure all respirator users receive a medical evaluation prior to being fit-tested. Ensure all medical information is recorded.

(5) Ensure all users of tight-fitting respirators are fit-tested initially and annually. Ensure all fit testing is recorded.

(6) Ensure adequate facilities are established for respirator storage, issue, cleaning, and maintenance as required.

(7) Maintain all department records pertaining to respirator training and fit testing.

(8) Conduct an annual audit of the department Respiratory Protection Program using the checklist in reference (a).

c. Supervisors shall:

(1) Assign an RPPM in writing to their department if respirators are required.

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

(3) Supervisors of work centers that utilize respirators shall develop work-site specific SOPs with assistance of their RPPM and post them in the general work area. SOPs shall include pertinent regulations, consensus standards, and emergency and rescue guidance, as necessary.

d. Respirator users shall:

(1) Use respirators per reference (a) and (e).

(2) Report work site problems involving use of respirators to their supervisors.

(3) Properly store, maintain, and clean the respirators issued to them.

3. Respirator Selection

a. Respirators shall be selected by the RPPM in accordance with the guidelines of the IH Survey and reference (a).

b. The responsible IH shall specify type of respirators.

4. 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. Contact lenses worn with a respirator are authorized on a case-by-case basis by the Occupational Health Clinic 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 resolved 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 reference (a).

5. Voluntary Respirator Use. When respirators are not required, voluntary use of respirators are limited to a filtering face piece (Dust Mask), 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 respirators; however, they do not have to be placed in the medical surveillance program. All personnel utilizing voluntary use respirators will receive a copy of Appendix 3-B.

6. Respirator Inspection

a. Respirators shall be inspected before and after use.

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

7. Respirator Cleaning and Disinfecting. Respirators shall be cleaned and disinfected after each use. Follow procedures provided by the RPPM, manufacturer, and reference (e).

8. 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 kept sanitary.

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

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

9. 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.

10. Specifications. Sources of compressed breathing air for atmosphere supplying respirators will be tested quarterly to ensure that air quality meets the minimum Grade D requirements of the Compressed Gas Association Commodity Specification for Air, Pamphlet G-7.1-2018.

11. 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.

b. Military personnel who have been confirmed by their command or medical activity as "Fit-for-Full Duty" based on their current periodic military physicals from Occupational Health, and their annual Preventive Health Assessment (PHA) are considered qualified to wear any type of respiratory protection.

c. Users of prescription eyewear 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.

12. Fit-Testing

a. All users of negative-pressure respirators shall be fit-tested annually 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. Individuals with interfering facial hair will not be allowed to use respiratory protection equipment except for positive pressure supplied air

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hoods where appropriate. Personnel with facial hair that interferes with the sealing surface of the respirator shall not be fit-tested.

d. Fit testing shall be performed per requirements of reference (e) and this Order.

13. Training. Personnel entered into the respiratory protection program shall be trained according to references (a) and (e) 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 respiratory failure). Personnel training records shall include entries for respirator training and fit testing.

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Appendix 3-A: MCAS Miramar Footwear Hazard Assessment

MCAS MIRAMAR FOOTWEAR HAZARD ASSESSMENT

FORM IS TO BE COMPLETED BY IMMEDIATE SUPERVISOR OF EMPLOYEE			
(PRINT BELOW - EMPLOYEE LAST NAME, FIRST NAME AND MIDDLE INITIAL) (CIRCLE BELOW - MALE OR FEMALE)			
EMPLOYEE NAME:		SEX: MALE OR FEMALE	
(PRINT BELOW - SUPERVISOR CONTACT INFORMATION AND ORGANIZATION CODE)			
SUPERVISOR NAME:		SUPERVISOR EMAIL:	
SUPERVISOR TELEPHONE:		ORGANIZATION CODE:	
(PRINT BELOW - EMPLOYEE OCCUPATIONAL INFORMATION)			
EMPLOYEE PD NUMBER:		EMPLOYEE JOB TITLE:	
EMPLOYEE BIC:		JOB SERIES & GRADE:	
EMPLOYEE WORK TYPES AND EXPOSURES			
(PRINT BELOW - BRIEFLY DESCRIBE KNOWN AND ANTICIPATED FOOT HAZARDOUS WORK TYPES AND EXPOSURES THAT APPLY TO EMPLOYEE JOB PERFORMANCE)			
PROTECTION CATEGORIES	MANDATORY	RECOMMENDED	NOT APPLICABLE (N/A)
(PRINT BELOW - PLACE AN "X" NEXT TO ALL PROTECTION CATEGORIES THAT APPLY TO EMPLOYEE JOB PERFORMANCE OR ENTER "N/A" IF THAT PROTECTION IS NOT APPLICABLE)			
TOE IMPACT RATING (I/75)			
TOE COMPRESSION RATING (C/75)			
METATARSAL PROTECTION (MT/75)			
ELECTRICAL CONDUCTION (CD)			
DIELECTRIC INSULATION (DI)			
STATIC DISSIPATION (SD)			
ELECTRICAL SHOCK (EH)			
PUNCTURE RESISTANT (PR)			
CHAIN SAW CUTTING (CS)			
THERMALLY INSULATED			
CHEMICAL RESISTANT			
ANKLE PROTECTION			
WATER RESISTANT			
SLIP RESISTANT			
WELDING			
OTHER:			
LABEL INFORMATION			
(PRINT BELOW - PROVIDE SAMPLE LABEL INFORMATION TO ASSIST EMPLOYEE WITH SELECTION OF APPROPRIATE FOOTWEAR)			
LINE 1:			
LINE 2:			
LINE 3:			
LINE 4:			
SUPERVISOR AND EMPLOYEE REVIEW			
(SIGN AND DATE BELOW - SUPERVISOR AND EMPLOYEE HAVE REVIEWED THE FOOTWEAR HAZARD ASSESSMENT OVERVIEW AND THIS FOOTWEAR HAZARD ASSESSMENT FORM)			
SUPERVISOR SIGNATURE:			
EMPLOYEE SIGNATURE:			
DATE (MM/DD/YYYY):			

MCAS MIRAMAR FOOTWEAR HAZARD ASSESSMENT OVERVIEW

Protective footwear is necessary when there is a risk of injury due to:

- A heavy object falling or large animal stepping on the foot;
- A heavy object rolling over the foot;
- A sharp object penetrating the sole of the foot or cutting through the top;
- Ignition of flammable or explosive vapors or dusts from static electricity discharged between the foot and walking surface;
- Accidental contact with low voltage (AC > 50V < 600 V) live electrical systems;
- Contact with high voltage systems;
- Chainsaw usage (or similar cut hazard);
- Contact with chemicals, potentially infectious human body fluids, or human pathogens;
- Molten metals splashing on the foot;
- Slips or falls due to wet or slippery surfaces, or rough terrain;
- Environmental conditions (e.g., extreme heat/cold, bites from venomous snakes, etc.).

Performance Standards

Protective footwear must be constructed in accordance with the American Society for Testing and Materials (ASTM) Standards F2412-11, F2413-11 and F2913-11, Standard Methods for Foot Protection, Standard Specification for Performance Requirements for Protective Footwear, and Standard Test Method for Measuring Coefficient of Friction for Evaluation of Slip Performance of Footwear and Test Surfaces/Flooring Using a Whole Shoe Tester, respectively.

These standards replaced American National Standards Institute (ANSI) Standard Z41-1999, American National Standard for Personal Protection – Foot Protection.

The standards contain minimum requirements for: (1) impact resistance to the toe area; (2) compression resistance for the toe area; (3) metatarsal impact protection that reduces the chance of injury to the metatarsal bones at the top of the foot; (4) conductive properties which reduce hazards that may result from static electricity buildup; and reduce the possibility of ignition of explosives and volatile chemicals; (5) electric shock resistance to protect the wearer when accidental contact is made with live electric wires; (6) static dissipative (SD) properties to reduce hazards due to excessively low footwear resistance that may exist where SD footwear is required; (7) puncture resistance of footwear bottoms; (8) chain saw cut resistance; and (9) dielectric insulation.

ASTM footwear standards do not address some foot hazards such as thermal insulating capability, resistance to chemical permeability and biological agents, and ankle support. Protective footwear for these types of hazards must be selected with good judgment and consideration given to specific site and use conditions.

MCAS MIRAMAR FOOTWEAR HAZARD ASSESSMENT OVERVIEW

Special footwear features may be available such as specially designed comfort soles and heels for people standing for prolonged periods, temperature insulation and coatings over the outer upper of the shoe to increase shoe life or keep the feet dry. These features are considered comfort factors and not safety factors.

ASTM Foot Protection Performance Standards

Toe Impact Rating: Safety shoes or boots with impact protection are required when carrying or handling heavy materials/objects such as packages, parts or heavy tools, which could be dropped or fall onto the feet and cause serious injury. Two classes of toe impact resistance are available:

- Class 50 provides protection against exposure to impact energy of 67.8 J/cm (50 ft-lbf), which is approximately the force created by an item dropped directly on the toe weighing 50 pounds and dropped from a height of 12 inches.
WARNING: Class 50 Rating is prohibited. (Do not select this safety rating).
- Class 75 provides protection against exposure to impact energy of 101.7 J/cm (75 ft-lbf), which is approximately the force created by an object dropped directly on the toe weighing 50 lb. and dropped from a height of 18 inches.
MINIMUM OPTION: Class 75 Rating is the mandatory minimum authorized for use.

Toe Compression Rating: Safety shoes or boots with compression protection are required for work where a heavy object or item may roll over or a heavy animal may step on the toe (e.g., operating skid trucks and pallet jacks, working around bulk paper rolls or heavy pipes, etc.). In accordance with ASTM performance standards, compression resistant footwear must also meet impact resistance requirements. Again, there are two classes for compression resistance.

- Class 50 provides protection against exposure to a compressive force of 1750 lbf.
WARNING: Class 50 Rating is prohibited. (Do not select this safety rating).
- Class 75 provides protection against exposure to a compressive force of 2500 lbf.
MINIMUM OPTION: Class 75 Rating is the mandatory minimum authorized for use.

Metatarsal Protection: Safety shoes with metatarsal protection protect the bones of the upper foot from compression and impact. In accordance with ASTM performance standards, they must also meet minimum requirements for toe impact and compression. As with toe protection, metatarsal protection is also offered as Class 50 or Class 75.

WARNING: Class 50 Rating is prohibited. (Do not select this safety rating).

MINIMUM OPTION: Class 75 Rating is the mandatory minimum authorized for use.

MCAS MIRAMAR FOOTWEAR HAZARD ASSESSMENT OVERVIEW

Puncture/Penetration of Footwear Bottoms: Safety shoes or boots with puncture protection are required when there is risk of sharp objects such as nails, wire, tacks, screws, large staples, scrap metal, etc. penetrating the sole of the shoe. Protection is gained by the addition of a built-in, puncture resistant plate that is positioned between the insole and outsole.

Chainsaw Use: This type of footwear provides cut resistance to the feet in addition to the puncture resistant sole while operating a chainsaw (or device with similar hazard). This higher boot style is designed to protect the feet between the toe and lower leg.

Electric Shock: This type of footwear is constructed with non-conductive electric shock resistant soles and heels so that the outsole provides a secondary source of electric shock resistance protection to the wearer. In accordance with ASTM Standards, conductive protective footwear must also meet the impact and compression standards. Insulating protection may be compromised if the soles become wet, the soles are worn through, metal particles become embedded in the sole or heel, or employees touch conductive items that are grounded.

Electrical Conduction: Safety shoes with electrical conduction rating are intended to provide protection against the buildup of static electricity between the shoe and walking surface in areas where such static could serve as an ignition source for explosive or flammable vapors or dusts. In accordance with ASTM Standards, conductive protective footwear must also meet the impact and compression standards.

Conductive protective footwear must not be worn by personnel working near open electrical circuits. Foot powder should not be used with protective conductive footwear because foot powder provides insulation and reduces the conductive ability of the shoes.

Silk, wool, and nylon socks can produce static electricity and should not be worn with conductive footwear. Conductive shoes must be removed when the task requiring their use is completed.

Static Dissipation: This type of shoe is often used when working on or constructing sensitive electrical equipment. They are designed to prevent the buildup of static electricity which can damage electrical components, but also to provide a level of shock protection to the wearer should they inadvertently come in contact with a live electrical system.

Dielectric Insulation: This type of footwear is commonly found as an overshoe and is designed to provide the wearer with additional insulation if accidental contact is made with energized electrical conductors, apparatus or circuits, usually in a wet environment.

Slip Resistance: The following work environment factors may affect slip resistance: type of surface material; smoothness of the walking surface; wet or dry surface; type of liquid on the surface; temperature of the surface and the surrounding air.

MCAS MIRAMAR FOOTWEAR HAZARD ASSESSMENT OVERVIEW

In general, smooth and/or wet surfaces are more slippery. Cold temperatures can also reduce the amount of traction if the sole material becomes harder and less slip-resistant. Treads in the sole may allow liquid to disperse. The shape of the heel may be beveled so initially the heel makes more contact with the surface. Softer soles may also allow for more traction. Proper selection requires judgment with consideration given to specific site/use condition factors.

Performance Standard Markings

In accordance with the ANSI Standard, protective footwear must contain a permanent marking that identifies those performance standards that the footwear meets or exceeds. This is displayed in a four line format.

- **Line one** identifies that the footwear complies to an ASTM standard with a specific year of issuance.
- **Line two** identifies the gender of the user and the classifications for impact (I) resistance, compression (C) resistance, and metatarsal (Mt) impact resistance.
- **Lines three and four** indicate that the footwear is made to offer protection from specific types of hazards such as puncture resistant (PR), chainsaw use (CS), etc. Line four is used only when more than three sections of the ASTM specifications apply to any one pair of protective footwear.

Label Markings

- I – Protective Toe Impact Resistance (with number for rating)
- C – Protective Toe Compression Resistance (with number for rating).
- MT – Impact resistance for the top (metatarsal) of the foot (with number for rating).
- CD – Conductive Safety Shoes are designed to “conduct” Static Electricity through shoes and into ground. Conductive Safety Shoes are similar to Static Dissipating Safety Shoes because both are designed to dissipate Static Electricity. CD Footwear Dissipates Static Electricity much faster and more completely than Static Dissipating Safety Shoes (SD). The reason is Conductive Safety Shoes are worn in environments that are highly flammable and explosive, which means that reducing the possibility of a Static Spark or discharge is critical to the safety of not only the employee, but other employees in the immediate area and even citizens in the vicinity of the explosive area.
- DI - Identifies footwear which provides dielectric insulation.
- SD - Identifies footwear designed to reduce the accumulation of excess static electricity. Static Dissipating Safety Shoes are designed to dissipate (reduce) the amount of static electricity build-up on your body. Static Dissipating shoes actually conduct static electricity through the linings and insole, cement, and outsole and into ground.

MCAS MIRAMAR FOOTWEAR HAZARD ASSESSMENT OVERVIEW

- EH – Electrical Hazard shoes are designed to impede (reduce significantly) the flow of electricity through the shoe and to ground, thereby reducing the possibility of electrocution. Electrical Hazard shoes are not designed to be the primary source of protection in an Electrical Hazard environment. They are designed to be only a secondary source of protection in an Electrical Hazard environment.
- PR - Identifies footwear designed to be puncture resistant.
- CS - Identifies footwear which provides chain saw cut resistance.
- Other Considerations – Some categories not listed in these standards may apply.

Sample Label Information

ASTM F2413-11
M/I/75/C/75
PR
CS

The label example above meets or exceeds the minimum performance requirement of ASTM Standard F2413 as issued in 2011. Footwear was tested for a male (M) worker and has a class 75 impact (I) resistance and a class 75 compression (C) resistance. It is puncture resistant (PR) and chain saw (CS) cut resistant.

Other Considerations

Following are considerations that are beyond the scope of the ASTM performance standards.

Ankle Protection: Lace-up boots that cover the ankle and provide support are recommended when the user will be navigating rough/uneven terrain, or riding horses, ATVs, or motorcycles. A boot style also provides protection to the ankle and calf (depending on boot height) if animal bites or contact with poisonous plants or animals is a recognized hazard.

Chemical Permeability: In general, disposable shoe covers or impermeable boots will be necessary to protect against contact with hazardous chemicals. The manufacturer will provide permeability data based on the material of construction. The selected boot/shoe cover must be resistant to the chemical(s) of interest.

Biological Agents: Disposable shoe covers or rubber-like boots may be used when there is risk of contact with biological agents. Concerns apply to personnel with human waste exposures. Plumbers, Pipefitters and Wastewater personnel are some examples of affected personnel.

All employees must practice universal precautions and infection control methods and assume that all human body fluids (i.e. urine and feces which may contain human blood) are infectious for HIV, HBV, and other blood borne pathogens and must be treated accordingly.

MCAS MIRAMAR FOOTWEAR HAZARD ASSESSMENT OVERVIEW

Potential exposures to such pathogens may require the use of protective shoe covers or boots (and other personal protective equipment – i.e. face shield, gloves and coveralls, etc.) that can be easily disinfected.

Materials of construction must be compatible with the specified disinfectants. Disposable personal protective equipment that is appropriate for such uses may be more cost effective due to the labor hours expended cleaning and disinfecting reusable personal protective equipment.

Inspections and Regular Maintenance

Safety footwear should be inspected prior to each use. They should be checked for wear and tear and replaced as needed. Look for cracks or holes, separation of materials, broken buckles or laces. Check the soles for pieces of metal or other embedded items that could present electrical or tripping hazards. Follow manufacturer's recommendations for cleaning and maintenance.

Payment for Protective Footwear

In general, employers are required to purchase and provide employees with necessary personal protective equipment (PPE), including protective footwear (safety boots/shoes), washable knee high rubber boots and disposable footwear covers. However, there are a few exceptions.

Employees should consult their Supervisor regarding department-specific policies. Some departments elect to provide and pay for PPE even if not required to do so in accordance with OSHA standards. Employers are not required to pay for the following, but may require their use:

- Non-specialty safety-toe footwear (e.g., leather work boots with steel toes) if the employee is allowed to wear it off the job site.
- Ordinary clothing, including insulated winter boots, that the employee would normally have to protect themselves from the elements.
- Replacement PPE when the employee has lost or intentionally damaged the PPE. However, the employer must provide replacement PPE at a reasonable interval.
- PPE, including footwear that the employee already owns and requests to use instead of the PPE that the employer provides at no cost to employees.
- Upgraded PPE that the employee wants to buy and use rather than the PPE that employer normally provides (if allowed by the employer – Requires prior approval to be on file).

MCAS MIRAMAR FOOTWEAR HAZARD ASSESSMENT OVERVIEW

Other FAQs and Miscellaneous Tips

Steel toe vice Titanium or Composite Toe: All may be rated the same for protection but a composite toe is non-metallic and non-magnetic.

Add-on Protective Devices: Protective toe caps must be an integral and permanent part of the footwear per ANSI and ASTM standards unless independent laboratory test data demonstrates the product is at least as effective as protective footwear that is constructed in accordance with the ANSI/ASTM standards.

Metatarsal Guards: May be of an add-on type only if they are supplied with the footwear by the manufacturer and the manufacturer provides data showing them to provide protection equivalent to the ANSI/ASTM requirements.

Men's vice Women's Footwear Styles: Safety footwear is tested to different minimum interior height clearances for each sex. Men should not wear women's safety footwear as the interior height allowance is less when subjected to an impact or compression test. Women may wear men's styles as their feet are still properly protected at the minimum heights.

Inserts or Insoles: If added after the purchase of protective footwear, they could reduce or eliminate the effectiveness of the footwear.

Shopping for safety boots/shoes in the afternoon or early evening is best: Feet tend to swell throughout the day, especially for those who work while standing. By trying on footwear when your feet are at their largest size, your footwear will feel comfortable, even on the longest days.

Come prepared: Bring a typical pair of well-padded socks that you might wear to better understand how your footwear will fit.

Forms

A Footwear Hazard Assessment form is to be completed by immediate Supervisor of each employee to identify the appropriate protective footwear type required for safe and effective job performance. When completing this form, briefly describe the known foot hazardous work types and anticipated exposures. In the Protection Categories section, place an "X" or "N/A" in the response columns next to each category identifying each protection as either Mandatory, Recommended or Not Applicable (N/A) to employee job performance.

The Footwear Hazard Assessment form contains four numbered lines at the bottom to enter specific Label Information to be utilized by the employee to select the appropriate protective footwear specific to their job. Completed form is to be reviewed, signed and dated by the Supervisor and the Employee acknowledging the footwear protection categories selected.

MCAS MIRAMAR FOOTWEAR HAZARD ASSESSMENT OVERVIEW

Supervisor Approval Requirements

Standard Protective Footwear Orders: Follow GF Protective Footwear Policies and Procedures.

Physical / Medical Exception: Employee must provide a written statement (medical diagnosis) from a licensed physician (at employee expense) identifying reasons why standard protective footwear cannot be worn.

A Physical / Medical diagnosis statement must identify what specific condition is preventing the employee from wearing the employer purchased commercial-off-the-self (COTS) or catalog ordered protective footwear to qualify. Reasonable advance notice from the employee is required so the employer can resolve the special order in a timely manner.

Non-Availability Exception: If protective footwear is not readily available as COTS or a catalog option, then the Supervisor will work with the Consolidated Material Supply Center (CMSC), Supply Section and the Fiscal Resource Management Division (FRMD) to seek out reasonable accommodations in accordance with the law.

Mandatory Compliance: Protective footwear purchased will meet or exceed current OSHA requirements and comply fully with mandatory Federal Acquisition Regulations (FAR) and amendments pertaining to employer funded PPE purchases for employees.

Employer Prerogative: Employer reserves the right to consider effectiveness and economic factors when purchasing any protective footwear.

END

Appendix 3-B: Voluntary Use 29 CFR 1910.134, Appendix D

Information for Employees Using Respirators When Not Required Under the Standard

All employees must read and sign this document before obtaining a respirator for comfort reasons (voluntary use). This includes disposable respirators with 2 straps commonly referred to as dust masks. Some of the more common models of N95 Particulate Respirators are 3M 8210, 3M 8710, Gearson 1730, Moldex 2200. Contact your Supervisor or Director if you have questions.

This document does not apply for situations requiring workers to wear respirators when the air contaminants exceed recommended threshold levels. Contact the Director immediately if you think the air contaminants may exceed recommended levels.

29 CFR 1910.134, Appendix D - (Mandatory) Information for Employees Using Respirators When Not Required Under the Standard

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your own voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
2. Choose the respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

I acknowledge that I have read and understand the importance of following the above procedures.

Job: _____ Task: _____

Employee Signature: _____ Date: _____

Be sure to read the reverse side for specific respirator information.

RESPIRATORY PROTECTION



N95 Particulate Respirators (dust masks) for voluntary use by employees for comfort reasons.

Used For: Solid or non-oil based particles

Do Not Use For: Paint spray, Asbestos, Oil aerosols, Sandblasting, Gases and vapors, or Lead

Limitations:

- These respirators do not supply oxygen. They are not for use in atmospheres containing less than 19.5 % oxygen or poorly ventilated spaces such as confined spaces.
- Not for use in atmospheres immediately dangerous to life and health.
- Not for use where the hazard's exposure level exceeds your respirator's protection level for the substance.

Selection: Select the right type of respirator for the hazard. Contact your Supervisor or Director for assistance.

Wear it Properly:



Position the respirator under your chin with the nosepiece up. Pull the strap over your head resting it high at the top back of your head. Pull the bottom strap over your hand and position it around the neck and below the ears.



Place your fingertips from both hands at the top of the metal nosepiece. Using 2 hands, mold the nose area to the shape of your nose by pushing inwards while moving your fingertips down both sides of the nosepiece.



Perform a user seal check prior to each wearing. To check fit, cup both hands over the respirator and exhale vigorously. If air flow around your nose, tighten the nosepiece. If air leaks around the edges, reposition the straps for a better fit.

- Always wear both sets of head straps.
- Make sure the respirator stays in place, even when you turn your head side to side.
- Facial hair and certain facial characteristics may prohibit effective use of the product.
- Leave the work area if: (1) breathing becomes difficult, or (2) dizziness or other signs of distress occur.

Dispose of Worn Respirators: When a disposable respirator loses its ability to protect you, throw it away. It's time for a new respirator when any of the following occur:

- The filter gets clogged or damaged.
- The straps lose their elasticity.
- The facepiece tears.

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CHAPTER 4

MISHAP INVESTIGATION, REPORTING, AND RECORDKEEPING

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CHAPTER 4

MISHAP INVESTIGATION, REPORTING, AND RECORDKEEPING

4000. PURPOSE. To standardize mishap requirements and procedures for timely mishap reporting within organizations aboard MCAS Miramar. The primary objective of the Marine Corps Safety Program is to enhance readiness by preserving human life and material resources. Tenant commands will report through their respective chains of command.

4001. BACKGROUND. Accurate and complete reporting is essential to meaningful analysis and formulation of corrective action(s). Reporting mishap information provides invaluable data to assess our safety posture and make changes that prevent or mitigate harm in future incidents. A mishap in which there was minor injury or little damage may illuminate a hazard with potential to cause frequent and severe mishaps. A "Near Miss" should be reported to identify possible hazardous conditions. See definitions below.

4002. DEFINITIONS

1. Mishap. A mishap is an unplanned or unexpected event or series of events, that results in damage to DoD property; work-related illness to DoD personnel; injury to on- or off-duty DoD military personnel; injury to on-duty DoD civilian personnel; or damage to non-DoD property or injury or illness to non-DoD personnel, caused by DoD activities.
 2. Reportable Mishap. An event that meets or exceeds mishap damage thresholds or mishap injury or illness thresholds of civilian, contractor and military personnel and must be investigated and reported. Mishaps shall be reported to the DS. This list is not all inclusive, so contact Safety at 307-1356 or 307-1361 for any injury to personnel, damage to government property, or if questions arise.
- Note: OSHA uses this term to characterize serious occurrences involving work-related injury or illness of civilian and contractor employees that require the OSHA to be notified.
3. Class A, B, C, and D government property damage mishaps. This includes property damage caused by a government evolution, operation or vehicle to other government or non-government property.
 4. Class A, B, C, and D on-duty DoD civilian and military mishaps. For military fatalities and injuries occurring during Permanent Change of Station (PCS) orders, it is the responsibility of the gaining command to submit a mishap report.
 5. Class A Mishap. The resulting total cost of damages to government and other property in an amount of \$2.5 million or more, a DoD aircraft is destroyed, or an injury and/or occupational illness results in a fatality or permanent total disability.

a. Fatality/Fatal Injury. Mishap or complications of a mishap, resulting in death. When death occurs six months or more following the initial mishap, contact CMC, DS for reporting requirements.

b. Permanent Total Disability. A non-fatal injury or occupational illness, which in the opinion of competent medical authority permanently incapacitates someone. Also, the loss of the following body parts or the use thereof during a single mishap is a permanent total disability:

- (1) Both hands.
- (2) Both feet.
- (3) Both eyes.
- (4) A combination of any two of these body parts.

6. Class B Mishap. The resulting total cost of damage is \$600,000 or more, but less than \$2 million. An injury and/or occupational illness results in permanent partial disability or when three or more personnel are hospitalized for inpatient care as a result of a single accident.

a. Permanent Partial Disability. An injury or occupational illness, that results in a permanent impairment or loss of any part of the body (e.g., loss of the great toe, thumb, or a non-repairable inguinal hernia, traumatic acute hearing loss of 10 dB or greater documented by medical authority).

b. Exceptions include the following:

- (1) Loss of teeth.
- (2) Loss of tips of fingers/toes without bone loss.
- (3) Repairable hernia.
- (4) Disfigurement.
- (5) Sprains or strains that do not cause permanent limitation of motion.

7. Class C Mishap. The resulting total cost of property damage is \$60,000 or more, but less than \$600,000; or a nonfatal injury or occupational illness that results in one or more days away from work (Lost Time Case) beyond the day or shift on which the injury occurred, or the illness was diagnosed.

8. Class D Mishap. Any other occupational illness or injuries that involve medical treatment beyond first aid.

9. Other Reportable. Other incidents of interest to the Marine Corps for mishap prevention purposes that are also reportable mishaps:

a. All on-duty military fatalities or permanent total disabilities that are the result of a medical event that commenced within one hour of a command-sponsored Physical Training (PT), Physical Readiness Test (PRT), Physical Fitness Test (PFT), Combat Fitness Test (CFT), or Physical Fitness Assessment (PFA) (e.g., chest pains, heart attack, coma, etc.)

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b. Class A and B mishaps occurring as the result of a DoD activity, operation, or evolution that results in the serious injury or death of a military guest or military dependent.

c. All Government Motor Vehicle (GMV) or Government Vehicle Other (GVO) mishaps resulting in \$5,000 or more in government vehicle or government property damage, and/or injury/fatality of DoD-personnel; or a mishap caused by a GMV/GMO resulting in \$5,000 or more in total damage including any private vehicle or private property damage, and/or injuries/fatalities to non-DoD personnel.

d. All reportable injury and occupational illness mishaps involving a contractor where the Department of the Navy (DON) provided direct supervision of the contractor, the mishap was caused wholly or in part by DoD operations, and DON has the means to affect change to prevent reoccurrence of the mishap.

e. Any medically diagnosed occupational illness and injury, such as cumulative trauma disorder or musculoskeletal disease, whether or not involving further medical treatment or any time away from work.

f. Work-Related Significant Threshold Shift (STS) in hearing averaging 10 dB or more at 2000, 3000, and 4000 Hz in one or both ears, and the person's total hearing level is 25 decibels or more above audiometric zero in the same ears (averaged at 2000, 3000, 4000 Hz) when an audiologist, otologist, or occupational medicine physician confirms the shift is toward deteriorated hearing, is permanent, and is considered to be of occupational origin.

g. Any on-duty military heat stress or cold injury requiring medical treatment.

h. Any case requiring a military member or civilian employee to be medically removed under the requirements of an OSH standard.

10. Near Miss. A near miss is an unplanned event that did not result in injury, illness, or damage, but had the potential to do so. Only a fortunate break in the chain of events prevented an injury, fatality, or damage; in other words, a "Close Call."

11. Pre-Mishap and Emergency Action Plans. MCAS Miramar will utilize the Emergency Management Station Order (StaO 3440.9), and its associated checklists for all major mishaps aboard the installation in accordance with reference (a).

4003. RESPONSIBILITIES

1. Commanding Officers, Department Heads, Managers, Supervisors will:

a. Ensure mishaps are reported to the DS as required in references (a) and (b).

b. Supervisors shall report all mishaps on the RMI system or other computer information system as identified by the MCAS Miramar Safety Department within 3 working days. As a back-up only, email correspondence

to the Director of Safety may be used for reporting provided a Supervisor's Mishap Report form is utilized. Supervisor's Mishap Report forms are available on the Safety SharePoint site, or one can be sent electronically by contacting the Director of Safety. This form is also located within each department's CDSO Turnover Binder and on the Safety Board. In the event of Class A mishap, a mishap report will be immediately provided with as much preliminary information available to the installation XO and the Director of Safety. This information provides information for notification to OSHA (Civilians) and time sensitive briefs to Headquarters Marine Corps (Military).

2. DS will:

a. Call Naval Safety Command to report all Class A mishaps and request support.

b. Call the OSHA at 800-321-OSHA and Marine Corps Installations West (MCIWEST) Safety Office at 760-763-6410/5332 to report all civilian, on-duty, or mishap fatalities within eight hours of notification.

c. The Director of Safety will maintain this log/file that will include the supervisor's initial report, messages and supporting documents related to the mishap, including investigation and damage estimate documentation. The mishap will also be entered into the RMI system for appropriate tracking and reporting to higher authority. The Director of Safety will forward reports via the RMI system to the Naval Safety Center and Headquarters Marine Corps. The DS will coordinate safety investigations of all MCAS Miramar mishaps, maintain records of safety investigation reports, and conduct mishap trend analyses. The DS will also provide safety specialists to participate in Safety Investigation Boards (SIBs).

d. The DS will submit Calendar Year (CY) Annual Summary of Work-related Injuries and Illnesses (OSHA 300A form) for federal civilian employees. The OSHA 300A form will be submitted to the CO No Later Than (NLT) 15 January of the following year. This report must be signed by the Commanding Officer and submitted to higher echelon authority for consolidation to be sent to CMC, SD. This report must also be posted on safety boards and visible to the Command from 1 February to 30 April of the following year.

3. MCAS Miramar and tenant GSMS will:

a. Investigate and report all mishaps that meet the criteria of "reportable". Safety representatives and tenant GSMS will provide a copy of mishap reports to the MCAS Miramar Safety Department for installation-wide trend analysis purposes.

4004. TYPES OF INVESTIGATIONS

1. Unit Mishap Investigations. Class C and D mishaps that do not require a SIB, are investigated at the unit level by the responsible supervisor with assistance from the Director of Safety, if requested or required.

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2. Command Mishap Investigation. The Command shall direct an investigation for any mishap requiring an SIB via Naval message and assign an appropriate mishap file number. The following mishaps require an SIB investigation:

a. Class A and B mishaps that occur on duty, on or off duty on the installation, or on or off duty while performing official duties.

b. A Marine Corps operational mishap involving explosives, explosive devices, direct or indirect fire weapons, pyrotechnics, incendiary devices, or combat chemical agents that result in injury or Class D property damage.

c. All on-duty mishaps that require the inpatient hospitalization of three or more personnel, all amputations, and all losses of an eye.

d. Any mishap the Commanding Officer deems appropriate for a Command Investigation at their discretion.

e. For complete details on mishap types, reporting requirements, and investigation echelons, refer to reference (b).

3. Safety Investigation Boards. SIBs are appointed/convened to investigate selected mishaps to determine causes and identify and recommend actions to prevent similar mishaps.

a. Appointing Authority. SIBs are appointed by the Commanding General Marine Corps Installation West.

b. Personnel Appointed. Personnel appointed may not be appointed to, nor serve on, any other investigative board associated with the same mishap. Members will be appointed in writing. Once appointed, SIB activities will become the primary duty of all members until completion and release of the Safety Investigation Report (SAFEREP).

c. Composition of a Board. Details for board composition and responsibilities are outlined in references (a) and (b).

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CHAPTER 5

MAINTENANCE AND SERVICES CONTRACTOR SAFETY PROGRAM

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CHAPTER 5

MAINTENANCE AND SERVICES CONTRACTOR SAFETY PROGRAM

5000. GENERAL. Maintenance and Services Contractor safety requirements are established to ensure the health and safety of contractor employees and MCAS Miramar personnel aboard this installation. All contractor employees performing work aboard MCAS Miramar and organizations hosting contractor, shall adhere to the contractor safety requirements in accordance with Engineers Manual 385-1-1, OSHA 29 CFR 1926, and this order. Disregard for the contractor safety requirements may result in the discharge of contractor employees and the potential termination of existing contracts.

5001. RESPONSIBILITIES

a. Maintenance and Services Contractor and Sub-Contractors

(1) Ensure that all applicable federal, state, and local occupational safety and health requirements are being complied with.

(2) Develop and implement a comprehensive occupational safety and health plan.

(3) Conduct an Activity Hazard Analysis IAW EM 385-1-1 by all contractors for all major, definable phases of work. This analysis shall identify all hazards associated with the work progress through the phase and describe how those hazards shall be controlled. Normally the analysis is performed by someone knowledgeable of the phase of the work such as the foreman or seasoned journeyman skilled labor.

(4) Required to attend pre-construction meetings prior to the start of construction or contract activities for the purpose of reviewing safety requirements and discussing implementation of all safety and health provisions pertinent to the work under contract.

(5) Ensure that employees have completed applicable safety and health training and provide appropriate documentation upon request.

(6) Receive a contractor safety briefing (Figure 1) which must be completed by the contractor and submitted to the Installation Safety Office prior to commencing any work. The briefing forms are maintained at the Installation Safety Office and may be used to evaluate and record contractor safety performance.

(7) Ensure that employees have completed applicable medical surveillance requirements and provide appropriate documentation upon request.

(8) Ensure all mishaps, injuries, damage to government property, and/or near misses are reported to the Government Contracting Office or hosting organization immediately.

(9) Provide the Installation Safety Office with current and previous years OSHA Logs and Total Case Incident Rate (TCIR) and Days Away, Restricted or Transferred (DART) rates as requested.

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(10) Contractors prior to entering a permitted confined space shall provide the Installation Safety Office with a copy of their confined space entry permit and on-site rescue plan as identified in Chapter 11 of this order.

b. Commanders, Tenants, Department Heads, Managers and Supervisors

(1) Communicate the contractual, statutory, safety, and health requirements to the contractor prior to the start of the contract.

(2) Ensure that an occupational safety and health plan is submitted by the contractor prior to the start of any work and a copy is provided to the Installation Safety Office for review.

(3) Upon receipt of a report of noncompliance or any condition that poses danger to safety or health, issue a written request for immediate corrective action from the contractor. A copy of the notice shall be forwarded to the Installation Safety Office.

(4) Ensure the Safety Office is invited to all pre-construction meetings held with contractors.

(5) Ensure that all required permits are completed by the contractor prior to the start of work.

(6) Notify the Safety Office immediately of contractor mishaps and forward a copy of the contractor's accident report within three working days.

(7) Notify the Safety Office immediately of an OSHA complaint and/or inspection of a contractor's job site.

(8) Communicate with the Safety Office of all contracts that are ongoing and cancelled aboard MCAS Miramar.

c. Installation Safety Manager

(1) Ensure Safety Office personnel attend pre-construction meetings and that all safety and health regulations and pertinent work site hazard information have been incorporated where necessary.

(2) Review and monitor the contractor's adherence to its written occupational safety and health plan and all applicable safety and health requirements.

(3) Review contractor mishap data and provide recommendations to the contractor hiring vehicle regarding the safety performance of potential contractors.

(4) Appointing a Contractor Safety Program Manager (CSPM) to provide oversight and consultation for this program.

d. Confined Space Program Manager

(1) Ensure compliance of the contractor safety program. Maintain copies of the contractors confined space permits.

e. Director, Installation and Logistics

(1) Ensure Safety Office is a member of the Work Induction Board (WIB) for all construction projects.

5002. PROGRAM AREAS. All contractors, regardless of their relationship with the installation, will be afforded the same level of safety oversight provided to the installations permanent tenant organizations.

a. Maintenance and Services Contractors. Maintenance and Services Contractors are those that have been brought on base by an external organization or tenant activity such as MCCA, Public Works, Communications Division, Contracting and Purchasing, S-6, 3d MAF, Defense Commissary Agency, etc. These contractors are the responsibility of the agency that are requiring the contract; however their safety performance impacts the installation mission and will be given consultation by the Installation Safety Office.

5003. PROGRAM ELEMENTS

a. Occupational Safety and Health Plan. Contractors shall be required to have a Safety and Occupational Health Program implemented that is tailored to meet the safety requirements of each contract and the associated task and products of that contract. This shall be documented in the contractor's safety plan.

b. All service and construction contracts shall include the requirement for the contractor to have a site-specific safety plan. The plan shall be tailored to the project, based on the size and complexity of the construction or project to be accomplished.

c. This plan must comply with all applicable safety and health regulations, e.g., 29 CFR 1926, 29 CFR 1910, EM 385-1-1 Army Corps of Engineers, and this Order.

d. The Government shall review the Contractor's Safety Plan for adequacy, completeness and compliance with applicable OSHA and/or EM 385-1-1 requirement.

e. Acceptance of the contractor's OSH plan only signifies that the plan generally conforms to the requirements of the contract. It does not relieve the contractor of the responsibility for providing employees with a safe and healthful working environment.

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FIGURE 1

MCAS MIRAMAR CONTRACTOR SAFETY BRIEFING

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MCAS Miramar
Contractor Safety Briefing

From: Installation Safety Office (ISO)

Date: _____

To: Contractors aboard MCAS Miramar

Subj: CONTRACTOR SAFETY REQUIREMENTS AND SAFETY BRIEFING

Project: _____

Dates: _____

Contractor Company Name: _____

Contract Number: _____

Location: _____

All personnel on the installation are required to be provided a workplace free of recognized hazards. Additionally, all personnel are required to report unsafe conditions and unsafe work practices immediately to their supervisor or to the Installation Safety Office.

All contractors operating aboard MCAS Miramar shall be required to comply with the following:

1. Comply with MCAS Miramar safety orders and applicable federal and state safety regulations. A copy of the Station Order may be reviewed at the Installation Safety Office (building 6022).
2. Maintain and comply with the Contractor's Safety Plan.
3. Maintain a safe and healthful job site and report any unsafe conditions to the Contracting Officer's representative and the ISO.
4. All applicable permits must be obtained before work commences.
5. All confined spaces shall have a confined space permit posted prior to entering the confined space. The contractor shall issue a confined space permit daily or at the beginning of each work shift. The contractor shall notify the Miramar's Confined Space Program Manager at 858.307.1357 upon entry and exit of personnel into the confined space.
7. Lockout/tag-out procedures shall be enforced in accordance with OSHA standards, 29 CFR 1910.147, EM 385-1-1 Army Corps of Engineers, and applicable state standards.
8. Smoking, eating, and drinking only in designated areas.
9. For environmental issues, contact Environmental Division at 858.307.6115.

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10. For emergency services, call 911.

11. The Points of contact for the Installation Safety Office is
Michael.svenson@usmc.mil 858.307.1356 or Jeremy.jensen1@usmc.mil
858.307.8898.

High-hazard operations to be performed during this project:

Projected Dates:

Location:

Confined Space Entry: _____

Elevated Work: _____

Trenching: _____

Hot Work: _____

Lockout/Tag-out: _____

Asbestos: _____

Other: _____

Remarks: _____

Printed Name

Signature

Position

Date

Phone number: _____

Safety Specialist: _____ Phone Number: _____

CHAPTER 6

HAZARDOUS MATERIAL AND HAZARD COMMUNICATION

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CHAPTER 6

HAZARDOUS MATERIAL AND HAZARD COMMUNICATION PROGRAM

6000. PURPOSE. The purpose of this chapter is to provide guidance for the safe use of Hazardous Materials (HM) and provide guidance for OSHA's Hazardous Communication (HAZCOM) standard for MCAS Miramar per reference (e). This chapter establishes a program to ensure that all hazardous materials used, stored, or shipped aboard this installation are identified and evaluated. The hazard information will be provided to all employees who may be exposed to such materials. The program also establishes compliance with reference (e), the Occupational Safety and Health Standard for HAZCOM, by outlining a comprehensive HAZCOM written program which incorporates labeling requirements for HM, Safety Data Sheets (SDS), inventory list of HM, information on hazardous non-routine task, training and information, management responsibilities and record keeping.

6001. APPLICABILITY AND SCOPE. This chapter applies to all personnel who handle, transport, store, use, or dispose of HM. All personnel shall handle HM in a manner that safeguards personnel, property, and the environment. The necessity to use hazardous and potentially HMs 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 SDS 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 HM. Prior to working with HM, personnel must receive HAZCOM training that complies with reference (e).

6002. RESPONSIBILITIES

1. Commanding Officers, Department Heads, Managers, Supervisors

a. Establish in writing a HM program for the command, department, section, or workplace.

b. Define and assign responsibilities within MCAS Miramar for the Hazardous Material Control Program (HMCP) and ensure compliance with this Order.

c. Develop, implement, manage, and revise as necessary a hazardous materials Authorized Usage List (AUL).

d. Ensure activity managers, such as shop heads, general foremen, and supervisors participate in the HMCP.

e. Ensure that only AUL authorized hazardous materials identified are used aboard MCAS Miramar.

f. Ensure that assigned personnel working with hazardous materials receive initial training and required training annually.

g. Ensure assigned personnel comply with hazardous materials procurement and disposal procedures outlined in reference (p).

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h. Examine all work processes and materials with intent of substituting hazardous materials with less hazardous substances whenever possible.

i. Ensure SDS are available to users for all hazardous materials used in workplace.

j. Ensure all hazardous materials are maintained in an approved container with appropriate labels.

k. Ensure each work center is inspected and an inventory is developed of all HM on hand. The inventory shall include all open-purchase, government stock items, and miscellaneous cleaning materials and updated at least annually or when significant changes occur. The inventory shall be submitted to the Installation Safety Office no less than annually. Mishaps involving HM and exposure to hazardous chemicals shall be reported to the Installation Safety Office.

l. Ensure SDSs are readily available to anyone who uses HM, and employees are trained on the use of the HM before being allowed to use any hazardous product/chemical, supervisors will also ensure that such chemicals are on the AUL.

m. Ensure all HMs are maintained in an approved and properly labeled. Ensure these labels provide the manufacturer's name, the product name, and hazard warning. Each HM container regardless of if it is the original container or transferred to a different or smaller container must be labeled with the following:

(1) The original GHS HAZCOM compliant manufacturer's label, or an exact copy of the GHS HAZCOM compliant manufacturer's label, or

(2) A GHS HAZCOM compliant label generated by a source other than the manufacturer or supplier (e.g., HMIRS system), or

(3) In instances where a GHS HAZCOM label is not available and there is insufficient information available to generate a GHS HAZCOM compliant label, a standard DoD Hazardous Chemical Warning Label (DD 2521 or DD 2522) may be used until such time that a GHS HAZCOM compliant label can be obtained or generated.

(4) Commands, units, and activities will accept the content of manufacturer provided HAZCOM labels at face value and do not need to verify the technical content of the label.

2. Director of Safety

a. Appoint an Installation Hazardous Communication Coordinator to provide technical assistance concerning SDSs and hazardous material operations.

b. Assist the Environmental Management Division, Industrial Hygiene, Facilities Department (HAZMIN Center), in coordinating the hazardous materials control program.

c. Request on an annual basis a copy of the HAZMIN Center Hazardous Materials inventory.

d. Ensure Hazardous Materials are inspected during workplace inspections where HAZMAT is utilized.

3. Installation Hazardous Communication Coordinator

a. Provide technical assistance concerning SDS and hazardous material operations.

b. Provide a HMCP template to MCAS Miramar departments, sections, or workplaces that utilize HM to aid in their development of a written HMCP.

c. Inspect annually departments, sections, or workplaces that utilize or store HM.

d. Conduct annual review of the HM program.

6003. REQUIREMENTS

1. AUL

a. The AUL is a list of hazardous materials that may be requisitioned by each department in order to complete their mission. It is an important component of the Hazardous Materials Control Program and is used as a tool in cradle-to-grave tracking of hazardous materials on post. The AUL is approved and modified as necessary by MCAS HAZMIN Center.

b. The AUL shall include all hazardous materials and any materials having components that meet or have potential to meet the definition of hazardous waste during any phase of its existence. For each hazardous material listed, the AUL must include the stock number and item name for stock numbered items purchased via the stock system, or the product name and manufacturer name as they appear on the product label/SDS for items not purchased via the stock system. In addition, the AUL shall identify the process(es) for each hazardous material it lists. MCAS HAZMIN Center shall maintain this AUL for all hazardous materials cleared for use aboard the installation and provide a copy to the Installation Safety Office annually.

c. Products may be periodically added to the AUL for several reasons such as:

(1) A more desirable product has been identified.

(2) A product with a more appropriate unit of use is identified.

(3) A less hazardous material has been identified as a substitute for another product.

(4) A new process has been added that requires different materials than those already in use.

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d. Procedures. The following procedures are established to add products to the AUL. These procedures ensure an adequate evaluation and review of hazardous materials is accomplished before they are added to the AUL.

(1) Requests for additions to the AUL must be initially routed to MCAS Miramar HAZMIN Center. The requester provides documentation (including the nomenclature, NSN, manufacturer, and SDS) to assist in the evaluation of the product for inclusion in the AUL.

(2) MCAS Miramar HAZMIN Center will determine if the requested product should be approved. Standardized guidelines will be followed to ensure an adequate and consistent review process for all materials.

(3) After careful review of the material, MCAS Miramar HAZMIN Center has three options:

- (a) Add the material to the AUL.
- (b) Disapprove addition of the material to the AUL.
- (c) Recommend an alternative product.

2. SDS

a. The SDS includes information such as the properties of each chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical. The SDS must have a minimum standard of 16 sections. The SDS preparers may also include additional information in various section(s).

b. Reference (a) requires that SDSs be available to personnel for potentially harmful substances handled in the workplace under the "Employee right to know" rules.

c. SDS may be kept in any form, including operating procedures, and may be designed to cover groups of hazardous materials in a work area where it may be more appropriate to address the hazards of a process rather than individual hazardous chemicals. SDSs must be accessible at all times.

3. Household-like Material

a. A household product that is used in a workplace in such a way that the duration and frequency of use are the same as that of a consumer is not required to be included in the HAZMAT program.

b. It is up to each individual command, unit, or activity to make this determination for their workplaces by assessing the exposure potential of the consumer products that may be utilized and ensure that the frequency and duration of use of these products, by their personnel, are not greater than that of normal household use.

4. Storage of Materials

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a. Users will maintain centralized storage of all hazardous materials used aboard the installation. As hazardous materials are received, they shall be placed in approved storage buildings or lockers. Personnel will retrieve items from buildings or lockers as needed and will not maintain hazardous material storage at the shops.

b. MCAS Miramar Units will ensure the following for all hazardous materials:

(1) Ensure shelf-life management and extension procedures are performed to prevent the loss of materials due to shelf-life expiration.

(2) Ensure that hazardous material stocks are inventoried at least semi-annually. Each inventory will verify the shelf-life, SDS information, identity, and quantity of HM present at the facility.

6004. HAZCOM PROGRAM

1. A written HAZCOM Program shall be established by activities that are specific to the command, department, section, or workplace and include:

a. A list of hazardous chemicals authorized for use in the workplace (i.e., AUL).

b. An inventory of hazardous materials.

c. Instruction for labeling HM containers.

d. Instruction on preparation and distribution of SDSs to employees.

e. Location of SDSs within the workplace.

f. Development and implementation of employee training.

2. SDS

a. Each command is responsible for obtaining SDSs for HM used aboard MCAS Miramar and will maintain a reference library (may be electronic) of SDS's. The reference library location shall be identified to employees.

b. Work center supervisors shall ensure work areas maintain and have readily available to workers SDS's of all hazardous materials used in the work center.

3. Labels and Warnings. Supervisors are responsible for ensuring HM is properly stored in work areas. Safety personnel will perform routine inspections to ensure HMs are properly labeled and used properly.

4. Training

a. Personnel who have the potential to be exposed to hazardous chemicals shall receive training on HM and precautionary measures needed for protection against potential hazards.

b. Supervisors shall inform new personnel of the HAZCOM/GHS Program and schedule job-specific training before the employee is allowed to start work.

c. Supervisors may obtain assistance in developing specific hazard training information from their Safety Office.

d. Training is necessary each time a new hazard is introduced into the work area, but not necessarily linked to a new chemical. For example, if a new solvent is brought into the workplace and poses a hazard similar to an existing chemical for which training has already been performed, then training is not necessary. However, if the new solvent poses a new/different hazard that has not been addressed in previous training, training on the new hazard is required.

5. HAZCOM training shall emphasize the following:

a. A summary of the OSHA HAZCOM/GHS standard.

b. Job-specific HM, chemical properties of the materials (including visual appearance and odor), and methods used to detect the presence or release of hazardous chemicals.

c. Physical and health hazards associated with the potential exposure to workplace chemicals.

d. Procedures to protect against hazards (e.g., PPE, work practices, emergency procedures, etc.).

e. Hazardous chemical spill, leak, and disposal procedures.

f. The location and availability of the written HAZCOM program, including the SDSs, content comprehension, and how to obtain/use appropriate hazard information.

g. Providing personnel with a SDS to read does not satisfy training requirements. Training is to be a forum for explaining not only hazards associated with chemicals in the workplace but also providing the opportunity for personnel to ask questions to ensure they understand the information presented.

h. Document training in personnel training folders and enter the completed training in ESAMS.

6. Workplace non-routine tasks

a. Supervisors planning non-routine tasks shall ensure personnel are trained and equipped to the same extent as those required for routine tasks prior to initiation of the scheduled work.

b. The Safety Department can aid the supervisors in developing and documenting non-routine HM training.

7. Contractor Employers and Employees. Supervisors are responsible for ensuring contractor employers and employees adhere to the policies of reference (e).

a. Supervisors will implement and maintain at each workplace a written HAZCOM Plan/SOP containing the following elements (If using this chapter as a HAZCOM plan, this chapter must be posted in the workplace):

(1) A list of chemicals, SDSs, and HM SOPs.

(2) A plan detailing how the requirements for labeling and other forms of warning, SDS's and employee information, and training are going to be met in the workplace.

(3) Personnel responsible for the following must be appointed in writing:

(a) Initial and on-going HAZCOM training.

(b) Labeling of in-shop containers.

(c) Labeling of any shipped containers.

(d) Obtaining and maintaining SDSs.

b. Procedures to review and update label information when necessary. SOPs do not have to be lengthy or complicated. They are intended to comply with the HAZCOM program and assure that all requirements will be met.

6005. LITHIUM BATTERIES

1. 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.

a. Fire. Lithium is a reactive metal that burns extremely hot when ignited and is difficult to extinguish without proper training and equipment.

b. 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).

c. Chemical Burn. Lithium batteries will release toxic chemicals if they leak, vent, or rupture from internal over-pressure 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., appropriate chemical resistant gloves).

6006. LITHIUM BATTERY STORAGE REQUIREMENTS

1. Lithium batteries suitable for use shall be stored in command-approved storage facilities or areas. The Safety Department shall be notified if there is a new storage requirement and a lithium battery storage area authorization form shall be complete using appendix 6-A. Only lithium batteries and or equipment with lithium batteries installed will be stored in these facilities or areas. The criteria for a lithium battery storage facility or area include:

- a. Ease of access for emergency response equipment.
- b. Distance from other structures.
- c. Inaccessibility to unauthorized personnel.
- d. Distance from canals or ditches that could allow heavy metal to be released during a fire to enter bodies of water.
- e. 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 two inches from facility walls and have at least two 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.
- f. 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.
- g. Lithium batteries shall not be exposed to direct sunlight or water during storage or while discharging.
- h. 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. No one, other than properly trained and equipped emergency response personnel, shall reenter the battery storage facility or area. An SDS/MSDS for each lithium battery type in storage shall be available at the battery storage facility or area for emergency response personnel.
- i. 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 as required by the fire department.

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j. 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 area will be marked to warn emergency service personnel of lithium battery contents.

k. Units shall inspect battery storage facilities and areas at least monthly to assess their serviceability.

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APPENDIX 6-A: LITHIUM BATTERY STORAGE AREA AUTHORIZATION



MCAS Miramar
Lithium Battery Storage Area Authorization

General Information

Date: _____ Building #: _____
Command: _____ Work Center / Section: _____
Supervisor: _____ Supervisor Contact Number: _____
Safety Representative: _____
Hazardous Waste Coordinator: _____
Hazardous Material Manager: _____

Workplace HAZCOM Training Completed by Supervisor

Date Completed: _____
Number of Employees Trained: _____

Site Approval Requirements

Safety Data Sheet (SDS): Attach SDS to this Authorization
Location of Proposed Site (Map): Attach Map with Proposed Site to this Authorization
Lithium Battery Storage Area Inspection Checklist: Attach Inspection Checklist to this Authorization
Quantity to be on Site: _____
Authorized Use List Entry Date: _____
Industrial Hygiene Department Notification Date (x8925 or 8926): _____
MCAS Miramar Fire Department Notification Date (x1962): _____
MCAS Miramar Environmental - Hazardous Waste Division Notification Date (x1087): _____

Authorization Form Prepared By (Typically the Unit Hazardous Material Manager or Safety Representative)

Printed Name (Last, First MI): _____
Signature: _____

Safety Department

Is Lithium Battery Storage Area Approved? (Circle One) Yes No
Comments (required for all no answers): _____

Printed Name (Last, First MI): _____
Signature: _____

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CHAPTER 7

OCCUPATIONAL SAFETY AND HEALTH INSPECTION PROGRAM

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CHAPTER 7

OCCUPATIONAL SAFETY AND HEALTH INSPECTION PROGRAM

7000. PURPOSE. The purpose of an OSH Inspection Program is to provide all personnel with a safe and healthful place of employment per reference (a). This chapter will provide guidance for conducting workplace safety and health inspections. Workplace safety and health inspections will be conducted per references (a). The matrix in table 1 shall be used to determine the RACs for safety and fire inspection hazards and program deficiencies. All recognized hazards shall be eliminated or controlled as quickly as possible, subject to prioritization based upon risk assessment, and assignment of Risk Assessment Code per reference(a).

7001. BACKGROUND. The Safety Department may inspect all units and commands aboard MCAS Miramar, including tenant activities per reference (a). MCAS Miramar safety staff and tenant commands will conduct an annual Core Safety Service Survey per reference (a).

7002. INSPECTIONS, ASSESSMENTS AND FREQUENCY

1. Assessments and Inspections

a. Safety Management System Self-Assessment

(1) The MCAS Miramar Marine Corps Safety Management System (MCSMS) Self-Assessment will cover all applicable safety disciplines. OSH Specialists will conduct multi-discipline (e.g., Aviation, Occupational, etc.) assessments that address commander and supervisor support, compliance with MCSMS directives, and the overall effectiveness of the MCSMS. These assessments will be conducted in conjunction with the annual safety program review inspections in accordance with reference (a).

b. Safety Inspections

(1) Inspections will be conducted annually in accordance with the MCAS Miramar Safety Department's Standard Operating Procedures (SOP) for Safety Inspections. A copy can be requested from the Safety Department.

(2) The DS shall publish an annual fiscal year inspection schedule distributed to units NLT 30 September for the upcoming fiscal year. Distribution of the inspection schedule to units is the fiscal year notice of OSH Inspection for that fiscal year.

(3) Inspections are conducted by using the applicable MCAS Miramar OSH Program Audit sheet(s) in three parts; an OSH Survey Guide Cover sheet used to determine scheduling, an evaluation of the unit/command core safety through use or program audit sheets, and a walkthrough inspection of the facilities. The inspection will also cover PPE requirements and compliance, ensure appropriate PPE training and fit testing is conducted, and ensure PPE is available and properly used and maintained HM storage, compatibility, and verify the required annual HM inventory per reference (a).

(4) All workplaces will be inspected at least annually by DS OSH personnel. For workplaces where there is an increased risk of accident, injury or illness due to the nature of the work being performed, inspections will be made more frequently. High hazard areas will be identified by the DS and inspected semi-annually at a minimum.

2. Core Safety Services Needs Assessment

a. MCAS Miramar safety staff and tenant commands will conduct an annual CSS assessment that include the following:

(1) An assessment of tenant command safety personnel missions, functions, and task responsibilities.

(2) Annually assess OSH SMS requirements based on specific tenant missions, functions, and tasks.

(3) Determine the need for program managers or designated SOH personnel for high-risk programs such as hazardous energy control, electrical safety, confined space, fall protection, and respiratory protection.

(4) Annually review services provided, and services planned for the upcoming year.

7003. GENERAL PROCEDURES. All work centers, training facilities, and 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 specialist/manager, the ISM may accept the tenant's safety inspections as outlined in the needs assessment.

a. A RAC is assigned to all hazardous conditions or unsafe acts observed during the inspection. RACs are not assigned to safety program evaluation findings. A RAC is assigned on hazard severity and probability of occurrence. Reference (a) explains the criteria for RAC assignments.

b. The OSH inspector shall provide a written inspection report to the DS within 5 working days. The DS shall provide the OSH inspection report to the unit commanders or directors within 10 working days after the inspection. This inspection report must describe the findings which form the basis for issuance of any NAVMC 11400 or equivalent form and any recommendations for correction.

c. If required, a NAVMC 11400 or equivalent form shall be issued within 15 days of the inspection. Units/commands are given 30 days from the date of the inspection report to respond to deficiencies with a Corrective Action Plan (CAP).

d. A Notice of Hazard must be posted at or near the site of the hazard for each RAC 1, 2, or 3 hazard found during the inspection which is not corrected immediately. Safety Inspectors will advise the supervisor to post the Notice of Hazard at/near the hazard.

e. Open RACs or program management findings shall be updated every 30 days from the date of the inspection receipt until corrected.

f. The work center supervisor shall:

(1) Ensure work center and program inspections are conducted quarterly by the assigned work center safety representative or the supervisor. The inspection and findings are required to be recorded in the findings identified in the abatement log. The work center inspections shall include a review of the SOPs, Training Manuals (TMs), and all other directives that govern the operations, processes, or management of the facility to assure that guidance materials, orders, regulations, etc., are present, current, and available. Supervisors may use the checklist provided by the Installation Safety Office that is in their department or workplace CDSO Turnover Binder to document inspection completion.

(2) Ensure the supervisor or the safety representative for the work center is present for any OSH inspection to encourage exchange of information, provide access, answer questions, and develop an immediate record of deficiencies identified.

(3) Review completed inspection reports to determine if any deficiencies are present within their area of responsibility and initiate action as needed.

(4) Within 30 working days of receipt of notification of work center OSH deficiencies, complete the Deficiency or Hazard recommendation response in the Risk Management Information (RMI) system. For hazards that cannot be abated within 30 working days, the supervisor of the work center must update the recommendation in RMI every 30 days until corrected.

(5) Ensure changes in work processes or new equipment are identified so a job hazard analysis evaluation can be conducted and written before the new process begins.

Table 1. RAC Matrix

Hazard Severity		Mishap Probability			
Description	Code	A Likely to occur immediately	B Probably will occur in time	C Possible to occur in time	D Unlikely to occur
Death, permanent total disability, or loss of facility or asset	I	1 Critical	1 Critical	2 Serious	4 Minor
Permanent partial disability or major property damage	II	1 Critical	2 Serious	3 Moderate	4 Minor
Lost workday injury or compensable injury, or minor property damage	III	2 Serious	3 Moderate	4 Minor	5 Negligible
Injury involving first aid or minor supportive medical treatment, a minimal threat to personnel or property, or a violation of a standard	IV	4 Minor	4 Minor	5 Negligible	5 Negligible

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CHAPTER 8

OCCUPATIONAL SAFETY AND HEALTH TRAINING

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CHAPTER 8

OCCUPATIONAL SAFETY AND HEALTH TRAINING

8000. PURPOSE. MCAS Miramar will establish and implement a written training plan for OSH per reference (a) and (e). This chapter establishes a safety training plan and working relationship with other departments to fulfill requirements.

8001. PROCEDURES. The DS will coordinate a schedule of, OSH, Traffic Safety and HAZCOM/GHS classes. The training schedule will be the beginning of each fiscal year. Units, departments, or activities may request training outside of these scheduled training classes through use of the Core Safety Services Request form found in appendix 8-A. These requests will be supported based on availability of instructors. Training will be documented on a class roster or entered on computer information systems as identified by the MCAS Miramar Safety Department. The DS will provide upon request class rosters and administrative support for computer information system management.

8002. JOB SAFETY TRAINING. All personnel shall receive safety training before their assigned work begins and at least annually. This training is provided and documented by work center supervisors. At a minimum, the training will consist of the following topics:

1. Hazards of the job and specific safety guidance that applies to their work center/unit/shop.
2. Hazards of the work area environment to include awareness of identified confined spaces (permitted and unpermitted), recognition of danger and caution tags, and the Hazard Communication Program requirement, i.e., Employee's Right to Know.
3. Proper personal lifting techniques.
4. Location of medical facilities and procedures for obtaining treatment.
5. Location and use of emergency and fire protection equipment.
6. Workplace emergency procedures including evacuation, fire reporting, emergency numbers, and alarm and extinguisher location(s).
7. Requirements and procedures for reporting mishaps, near misses, occupational injuries, and occupational illnesses.
8. Reporting unsafe equipment, conditions, or procedures to supervisors.
9. Requirements of the Marine Corps Traffic Safety portion of the SMS, including mandatory use of seat belts and helmets, speed limits, local traffic hazards, and personal RM. Additionally, brief the use of electronic devices while operating a government/private motor vehicles on- or off-base in accordance with Volume 3, Marine Corps Traffic Safety Program. When applicable, discuss motorcycle safety training requirements before riding a motorcycle.

10. Purpose of and procedures for Hazard Reporting.

11. Location and content of the Federal (Command) Occupational Safety and Health Protection for employee's poster.

8003. 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, new/change in equipment, relocation of work stations, updated SOP, alteration of control devices, modifications to buildings, or changes in Technical Manuals. Supervisors will ensure each person affected by a change-in-work is trained and that documentation of such training is maintained.

8004. SAFETY REPRESENTATIVE TRAINING. The Safety Department will at a minimum provide a Collateral Duty Safety Officers course that provides MCAS Miramar shop safety representatives with the skills and knowledge to effectively participate in installation SMS in accordance with reference (a).

8005. SUPERVISOR SAFETY TRAINING. The command, unit, or activity leadership shall ensure SST is provided to all supervisory personnel which will include Civilian and Marine supervisors. New supervisors shall be assigned in Supervisor Safety Training and Annual Refresher within 90 days of appointment. All training rosters will be maintained for a period of five years.

8006. OCCUPATIONAL SAFETY AND HEALTH SPECIALIST (OSHS) TRAINING

1. The ISM will ensure personnel filling safety and health positions are fully trained and meet the training requirements of reference (a). An Individual Development Plan (IDP) is established for their career development.

2. Submit annually to HHQ's OSHS training needs for the next year based on the employee IDPs.

3. OSHS will ensure they receive a minimum of seven 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).

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APPENDIX 8-A: CORE SAFETY SERVICES REQUEST FORM



Tracking Number:
Assigned by Safety Dept

MCAS Miramar Core Safety Services Request

Part I - The Request (to be completed by the Unit/Command requesting safety support)		Today's Date:
Support Requested:	Select From Drop-Down or Start Typing	
Unit/Command:		
<i>Note: Primary POC must be Unit GSO/GSM, Motorcycle Club President, or S-3 SNCO.</i>		
Primary POC:		Contact Number:
Alternate POC:		Contact Number:
Dates and Times:	Preferred Date(s):	Alternate Date(s):
	Preferred Time(s):	Alternate Time(s):
Location of Support:		
Number of Personnel to be Trained:		Signature of Primary POC:
Requirements and/or Preferences:		

Requesting Unit: STOP!

Send via email to smbmirarmcas.safet@usmc.mil and Carbon Copy (CC) the Course Instructor (listed in "Support Requested").

Part II - Instructor Coordination (to be completed by Course Instructor)		Date Recvd:
Course Instructor:		
Resources/Funds Required:		
Date(s) Support is Available:		
Persons Required:	Setup	people @ hrs Overtime/Comp Time?
	Conduct Event	people @ hrs Overtime/Comp Time?
	Breakdown	people @ hrs Overtime/Comp Time?

Part III - Validation/Approval (to be completed by Safety Department Supervisor)		Date Recvd:
Date/Time Available?		
Priority:	<input type="radio"/> Mission Critical <input type="radio"/> Mission Essential <input type="radio"/> Mission Enhancing	
Recommendation:	<input type="radio"/> Approve <input type="radio"/> Disapprove By:	
Comments/Notes:		

Part IV - Approval/Execution (to be completed by Director of Safety or Safety Department Manager)		Date:
Decision:	<input type="radio"/> Approved <input type="radio"/> Disapproved By:	
Comments/Notes:		

Part V - Feedback/Closeout (to be completed by the Unit/Command requesting safety support after training is complete)	
Was this a Success?	
Lessons Learned:	
Ways to Improve:	
Comments/Notes:	

Classes or requests may be canceled or adjusted due to instructor availability, fiscal constraints, or public health issues (COVID-19)

CHAPTER 9

PERSONNEL REPORTS OF UNSAFE/UNHEALTHFUL WORKING CONDITIONS

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CHAPTER 9

PERSONNEL REPORTS OF UNSAFE/UNHEALTHFUL WORKING CONDITIONS

9000. PURPOSE. To provide guidelines and procedures for submitting reports of unsafe/unhealthful working conditions and to outline the appeal process when disagreeing with corrective actions taken by the command.

9001. POLICY. Detecting unsafe or unhealthful working conditions at the earliest possible time and making prompt corrections of these hazards at the lowest possible working level are essential elements of the SOH program. Reporting of unsafe/unhealthful working conditions and appeal procedures will ultimately be conducted in accordance with reference (a).

9002. HAZARD REPORTING

1. Personnel reporting unsafe/unhealthful working conditions may do so by submitting an oral or written report to the Safety Department at any time. Any employee or employee representative may submit a written report of an unsafe/unhealthful working condition directly to the Director of Safety. Blank copies of hazard report forms and procedures shall be in areas convenient to all workplaces. Employees who wish to remain anonymous shall indicate so on the form.

a. Acceptable means of written reports are NAVMC 11401, NAVMC 11509, ESAMS, RMI, or Interactive Customer Evaluation (ICE) system. ICE comments should be addressed to the DS. NAVMC 11401 and NAVMC 11509 Forms are found on the Safety Department website, Share-Point and all unit safety boards.

b. Personnel are encouraged to participate in the MCAS Miramar OSH program and will not be subjected to restraint, interference, coercion, discrimination, or reprisal by virtue of their participation per references (a). Should personnel believe they are being subject to coercion, interference, etc., they have the right to report such incidents to the CO, MCAS Miramar using the chain of command.

2. The safety office will investigate all hazard reports brought to its attention. The assigned safety specialist will investigate the hazard report within one (1) duty day for critical/imminent danger situations, three (3) duty days for potentially serious situations, and 10 duty days for lesser conditions. The safety specialist discusses the hazard report with the employee who submitted the report (if known), the responsible supervisor or manager, and other parties involved in order to validate the hazard and determine the best interim control and corrective action. If the report involves a health or environmental hazard, the safety office shall refer the hazard report to the local Medical Treatment Facility (MTF) or environmental activity within one (1) day for investigation. The safety office will provide an interim or complete response in writing to the originator of a written report within 15 working days of receipt.

3. All employees shall be encouraged to report unsafe or unhealthful working conditions to their immediate supervisor first who will promptly investigate and take appropriate corrective actions. Supervisors will contact the DS for

assistance as necessary. Supervisors will keep the reporting employee informed of all actions taken.

9003. HAZARD REPORT APPEALS. If the originator of the hazard report is dissatisfied with the assessment of the alleged hazard made by the safety authority or with actions taken to abate a confirmed hazard, they are encouraged to confer with the DS and/or the unit safety manager/OIC and attempt a resolution. If the originator remains dissatisfied after conferring with the DS, they may submit an appeal to the CO, MCAS Miramar in writing. The appeal request shall include a detailed description of the hazardous condition and the following:

1. A description of the alleged hazard including its location and standards violated, if known (a copy of the original hazard report will suffice).
2. How, when, and to whom the original report of the alleged hazard was submitted.
3. Actions (if known) taken as a result of the original report.
4. A statement explaining why the actions taken as a result of the original report were unsatisfactory and are being appealed.
5. If the response provided by the first level in the appeal chain does not satisfy the originator, additional appeals may be submitted up the appeal chain. The appeals process is normally coincident with the originator's chain of command. At each level of the appeal process, the originator shall provide complete documentation, including a copy of the initial report, information on actions taken by review authority and reasons why the originator is not satisfied with those actions.
6. The final appeal authority within the Marine Corps is CMC, DS. If the CMC, DS response does not satisfy the originator, the next level of appeal shall be through the Assistant Secretary of the Navy, Installations and Environment (ASN (I&E)). Final level of appeals within DoD is to the Deputy Under Secretary of Defense, Environmental Security (DUSD (ES)). Copies of all level appeals shall be provided by the originator to CMC, DS and the originator's commander. Appeals shall describe, in detail, the Marine Corps disposition of the report (i.e., results of the previous appeals) and the originator's objections.
7. As a last resort, if not satisfied with the final DoD disposition, the originator may contact, in writing, the Office of Federal Agency Safety Programs, Department of Labor OSHA, Washington DC 20210. Appeals must describe in detail the entire processing of the report, contain copies of all previous appeals and describe the originator's objections.
8. The sequence of appeals for military personnel is via the chain of command concluding at the Office of the Secretary of Defense.
9. The originator of the appeal 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, an appeal may be submitted to the next higher reviewing authority without waiting for a reply. An interim

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reply shall be made to the originator of the report when the 20 working day 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.

10. Any appeal which bypasses these established procedures will be returned to the originator per reference (a).

9004. POSTING NOTICES. A Notice of Hazard Deficiency of the unsafe or unhealthful working condition shall be posted at the site 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 safety office for at least five (5) years after the end of the calendar year in which final action is completed.

CHAPTER 10

HAZARDOUS ENERGY CONTROL PROGRAM (LOCKOUT/TAGOUT)

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CHAPTER 10

HAZARDOUS ENERGY CONTROL PROGRAM (LOCKOUT/TAGOUT)

10000. DISCUSSION AND POLICY

1. This chapter establishes policy and minimum procedures for the MCAS Miramar Hazardous Energy Control Program (Lockout/Tagout). This program ensures 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. It applies to all machines, equipment, Marine Corps personnel, and contractors who may be exposed to hazardous energy during servicing, maintenance, inspections, or modification activity performed.

10001. APPLICABILITY

1. The requirements of this chapter apply to the control of hazardous energy during servicing and maintenance of machinery and equipment. Requirements apply when one or more of these three conditions exist:

- a. When personnel perform energized work.
- b. Unexpected energizing or movement of machinery or equipment which could cause injury to personnel and/or property damage.
- c. Release of energy during the maintenance or servicing of such equipment or machinery which could cause injury to personnel and/or property damage.

2. This policy does not cover routine production operations unless:

- a. Operations require workers to remove or bypass a guard or other safety device.
- b. Operations require workers to place any part of their bodies into an area of the machine or equipment where work is actually performed upon the material being processed (i.e., point of operation), or where an associated danger zone exists during the machine operating cycle.
- c. The requirements of this chapter do not apply to:
 - (1) 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.
 - (2) Exposure to electrical hazards from work on, near, or with conductors or equipment in electric utilization at installations as defined by reference (e).
 - (3) Work on cord and plug-connected electrical equipment where exposure to the hazards of unexpected start-up of the equipment is controlled

by unplugging the equipment, and the plug is under the exclusive control of the worker performing the servicing or maintenance.

(4) 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.

(5) Hot tap operations involving transmission and distribution systems for substances such as gas, steam, water, or petroleum products performed on pressurized pipelines if:

(a) Continuity of service is essential.

(b) Shutdown of the system is impractical.

(c) Documented procedures are followed, and special equipment utilized to protect personnel.

3. Affected Worker. An affected worker is defined as 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.

4. Authorized Worker. An authorized worker is defined as a person who locks out or implements a tagout system procedure on machines or equipment to perform service or maintenance on that machine 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.

10002. RESPONSIBILITIES. Station personnel who could be exposed to hazardous energy sources shall be instructed in the safety significance of the lockout or tagout program. Personnel authorized to perform lockout or tagout shall receive training commensurate with their responsibilities. 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. Director of Safety

a. Ensure all Station personnel who could be exposed to hazardous energy sources receive formal training in the purpose and function of the lockout/tagout program.

b. Ensure specific lockout/tagout energy control procedures are developed and maintained for all systems and equipment aboard MCAS Miramar using the Lockout/Tagout Checklist, NAVMC 11403.

c. Ensure the lockout/tagout program is evaluated using the Lockout/Tagout Program Evaluation Form, NAVMC 11402.

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 to ensure compliance with the electrical safety program for installation departments, units, or activities.

2. Installation Safety Manager

a. Coordinate initial and annual lockout/tagout training.

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

3. Lockout/Tagout Coordinators

a. Administer the lockout/tagout program within their respective departments.

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. Initial purchases of devices will be approved by the Safety Department.

c. Develop lockout/tagout procedures and evaluate annually the lockout/tagout program.

d. Maintain a lockout/tagout log in accordance with this Order. Lockout/Tagout Log NAVMC 11404 shall be used for this purpose.

e. Control the issue of lockout and tagout devices and ensure a particular locking device can be traced to a specific authorized worker.

4. All Personnel. All personnel are responsible for recognizing when Lockout/Tagout is being used, the general reasons for Lockout/Tagout, and the importance of not tampering with or removing Lockout/Tagout devices.

5. Authorized Workers. Authorized workers are responsible for:

a. Comply with the lockout/tagout requirements set forth by reference (a) and (e) when performing maintenance, service, repair, or modifications including, but not limited to, mechanical, potential, electrical, and thermal energy sources.

b. Workers shall immediately advise the work area supervisor of inoperable equipment or machinery. Supervisors shall determine if hazardous energy control Lockout/Tagout or administrative devices are needed and, if so, that appropriate devices are attached. They shall coordinate placement of tags and assignment of Risk Assessment Codes by fire, safety, or health personnel, as necessary.

6. Work Center/Unit/Shop Supervisors. Shall:

a. Generate and maintain equipment-specific written Lockout/Tagout procedures.

b. Perform a self-assessment of work environments using these procedures at least annually.

c. Determine appropriate training and assure workers are provided required training.

d. Prohibit workers from working on equipment requiring Lockout/Tagout until trained and authorized to perform Lockout/Tagout procedures.

e. Assign and document worker Lockout/Tagout authorization.

(1) Designate specific equipment or categories of equipment and develop control procedures.

(2) Verify worker is qualified to perform necessary energy-control procedures.

(3) Ensure consistent application and enforcement of Lockout/Tagout policies.

f. Maintain accurate Lockout/Tagout logs.

(1) Ensure authorized workers make log entries when applying/removing Lockout/Tagout devices.

(2) Ensure Lockout/Tagout logs are readily available for equipment or machinery being serviced, i.e., on equipment or machinery or in a centralized location for those areas where multiple maintenance tasks are being performed.

g. Ensure necessary Lockout/Tagout hardware is available.

h. Maintain a roster of all Lockout/Tagout devices assigned to authorized personnel.

i. Control Lockout/Tagout tags before and after use. Tags or a log containing the tag information shall be maintained for one year after removal to verify the status of locks and tags used during a review period.

j. Control emergency keys for Lockout/Tagout locks.

k. Remove Lockout/Tagout devices only in an emergency. Refer to Emergency Removal procedures for additional guidance.

l. Maintain Lockout/Tagout tags after removal from machinery or equipment.

m. Be trained as an authorized worker.

7. Contractors or Other Outside Agencies. Contract personnel engaged in activities that require Lockout/Tagout shall:

a. Comply with OSHA regulations for Lockout/Tagout procedures including a written plan and employee training certificates. Submit a copy of instructions explaining the contractor or agency's OSHA compliant control of hazardous energy program as required by the statement of work or direction by contracting officer representative.

b. Inform work center/unit/shop supervisors of the contractor's Lockout/Tagout procedures.

c. Be familiar with Marine Corps Lockout/Tagout procedures per this chapter.

d. Ensure all individuals involved in the activity understand and comply with restrictions and prohibitions of hazardous energy control procedures applicable to activities being performed.

10003. SPECIFICATIONS FOR LOCKOUT/TAGOUT

1. Lockout/Tagout devices and tags are not required when:

a. Working on cord and plug connected electrical equipment if:

(1) There is a single energy source which can be easily identified and isolated.

(2) All hazardous energy is controlled by unplugging the equipment and there is no potential for the release of stored, residual, or accumulated hazardous energy.

(3) The plug remains under continuous positive control of the worker performing servicing, maintenance, or modification. If a worker leaves the work for any reason, a plug Lockout/Tagout device is required to prevent serious injury to the employee upon his/her return or other employees.

b. Operations on energized equipment (e.g., measuring, troubleshooting, calibration), when continuity of service is essential to safety, or shutdown cannot be reasonably accomplished. Supervisor approval is required for such operations and documented safety procedures that provide an equivalent level of safety shall be established and followed.

c. Minor tool changes, adjustments, and servicing during normal operations provided:

(1) Such activities are routine, repetitive, and integral to use of the equipment, and/or

(2) Work is done using alternative measures that provide effective worker protection.

d. Hot Tap Operations. Work on transmission and distribution systems, such as gas, steam, water, or petroleum products, can be performed on pressurized pipeline systems if:

(1) The supervisor or authorized worker demonstrate continuity of service is essential.

(2) System shutdown is impractical and documented procedures are in place and used.

(3) Appropriate PPE is used that will provide effective protection for workers.

2. Authorized Lockout Devices. These locks are used only to ensure safety of authorized workers during servicing, maintenance, or modification of equipment and machines and shall:

a. Be readily identifiable as a lockout device, e.g., numbered, specific color lock or band (such as red), and/or labels affixed to the lock.

b. Not be used for any other purpose.

c. Be singularly keyed with only authorized workers retaining the key(s) to the lock(s) when in use; a log shall be maintained by the shop supervisor to identify equipment being locked out under the Lockout/Tagout program.

d. Be applied to energy isolation device(s) prior to any servicing, maintenance, or modification actions.

e. Be substantial in order to prevent removal except by excessive force using special tools, such as bolt cutters or other metal cutting tools.

f. Be inventoried and maintained to ensure accountability. There is no requirement to inventory devices, zip ties, chains, or tags. However, Lockout/Tagout devices should be adequate to support the expected Lockout/Tagout requirements identified in the shop specific procedures.

3. Authorized Tagout Devices. Authorized tagout tags shall be used in conjunction with energy-isolating devices. Danger, Do Not Start, DoD, or commercial equivalent tags, shall be used in conjunction with administrative devices. These tagout devices immediately alert workers to existing and/or potential hazards from servicing, maintenance, or modifications to equipment or machinery. The work center/unit/shop supervisor shall ensure an adequate supply of locks and tags are available.

a. Authorized tags. DoD or commercial tags are authorized for lockout purposes and shall be used for lockout situations. All employees shall be instructed that these tags indicate that equipment is locked out for maintenance or inoperability.

b. Tagout devices shall:

(1) Withstand the environment for the duration of expected exposure.

(2) Be constructed and printed so they do not deteriorate or become illegible, especially in wet or corrosive environments. Laminated devices (tags) are acceptable.

(3) Warn against hazardous conditions if equipment or machinery is energized.

(4) Clearly identify the worker who applies them.

(5) Be secured with a self-locking, non-reusable, and non-releasable attachment, such as a nylon or plastic cable tie, with a minimum unlocking strength of 50 pounds.

4. Verification

a. All Lockout/Tagout operations shall use written procedures. Refer to the Lockout/Tagout procedures required content in paragraph 6 of this section.

b. All sources of hazardous energy shall be shut off and secured. Each disconnecting means shall be legibly marked to indicate its purpose unless located and arranged so the purpose is evident. Markings shall be sufficiently durable to withstand the environment involved.

c. Lockout/Tagout shall be performed at each identified hazardous energy control point by each worker authorized to work on the equipment. Each authorized worker shall:

(1) Apply their issued or assigned Lockout/Tagout device when servicing, maintaining, or modifying machinery or equipment, regardless of duration of activity or proximity to the energy-isolating device (e.g., circuit breaker, disconnect switch, or valve).

(2) Personally witness or verify the absence of hazardous energy or assure that the verification has been performed.

5. Equipment-Specific Energy Control. An equipment-specific written procedure shall be developed and used for all equipment or machinery undergoing servicing, modification, or maintenance.

a. Equipment-Specific Written Procedures. The supervisor shall:

(1) Develop equipment-specific written energy control procedures with input from authorized workers most familiar with the equipment or machine. If procedures exist in equipment TOs, the supervisor shall review those procedures to ensure they are specific and address all types of hazardous energy contained in the equipment or machinery. Safety input from a GS-0018 Safety and Occupational Health Specialist may also be useful to the supervisor for the development for equipment-specific written energy control procedures.

(2) Ensure equipment or machines requiring written procedures are identified and procedures are posted on equipment or readily available to workers authorized to Lockout/Tagout the equipment.

b. Supervisors need not document Lockout/Tagout procedures for machines or equipment if all the following elements are met:

(1) No potential for stored or residual energy or re-accumulation of energy after shutdown.

(2) Has a single energy source easily identified and isolated.

(3) Isolation and lockout of single energy source completely de-energizes and deactivates the equipment or machinery.

(4) Isolation from energy source is maintained and locked out for duration of maintenance or servicing.

(5) A single lockout device and tag achieve lockout of the equipment or machinery.

(6) The lockout device is under the exclusive control of the authorized worker performing maintenance or servicing.

(7) Maintenance or servicing does not create hazards for other workers.

(8) No mishaps and/or near misses involving the unexpected activation or re-energization of the machine or equipment during servicing or maintenance have occurred when utilizing this exception.

6. Lockout/Tagout Procedures Required Content. Equipment-specific written procedures shall incorporate all applicable elements of general Lockout/Tagout procedures and any specific information. Each Lockout/Tagout step shall be clearly explained in the context of the specific equipment or machine. Written procedures shall include the specific equipment or machine to which the procedure applies and must identify:

- a. All jobs to be accomplished and equipment involved.
- b. The procedures that require control of hazardous energies.
- c. Components or locations generating hazardous energies to be controlled.
- d. Energy sources/types that shall be controlled.
- e. Process for notifying affected workers before controls are applied and after removal.
- f. Procedural steps to shut down and secure equipment or machinery. (Includes specific locations to shut down, isolate, block, and safely release and secure all potentially stored or residual hazardous energies.)
- g. Type of Lockout/Tagout hardware required and procedural steps for applying Lockout/Tagout devices.
- h. Procedural steps to test and verify lockout effectiveness for hazardous energy control.
- i. Procedural steps to restart equipment or machinery.

- j. Workers authorized to perform Lockout/Tagout.

10004. LOCKOUT/TAGOUT PROCEDURES

1. Only authorized workers shall perform Lockout/Tagout procedures. Personnel directly affected by the operation or shutdown of the equipment or machine shall be notified of Lockout/Tagout devices. Notification shall be given before controls are applied and after they are removed. Procedures for applying locks or tags shall include and be performed in the following order.

a. Prior to Start. Prior to starting any procedure, authorized worker(s) shall physically locate and identify all isolating devices to ensure that switches, valves, or other energy isolating devices are locked and tagged out and manual or freely moving components are blocked or chocked to prevent movement. Authorized worker(s) shall resolve questions regarding the identification of electrical or other energy sources with their supervisor before proceeding. If following equipment-specific written procedures would compromise safety, the authorized worker, with supervisor approval, may modify the sequence of steps, but all steps shall be performed.

b. The Nine Step Lockout/Tagout Process. The Authorized Worker shall:

(1) Step One - Preparation. Determine if equipment-specific written energy control procedures are applicable to the task. If so, the worker shall review control procedures and ensure they are followed correctly.

(a) Prior to shutting down equipment or machines, the supervisor, authorized worker, or operator must have knowledge of and assess the type (e.g., electrical, mechanical, hydraulic), magnitude (e.g., 120 volts, 60 psi, etc.), and hazards of the energy to be controlled, including hidden energy sources such as springs, capacitors, elevated parts, etc.

(b) Determine, in accordance with written procedures, appropriate methods for controlling the hazardous energy. Methods for energy-isolation may include, but are not limited to, circuit breakers, disconnect switches, or valves.

(2) Step Two - Notification. Notify all affected workers of the impending shutdown and that they shall not disturb lockout devices or attempt to re-start the equipment until informed it is safe to resume normal operations.

(3) Step Three - Shutdown. Verify it is safe to shut down the equipment or machine.

(a) The equipment or machine shall be turned off or shut down using normal stopping and shutdown procedures (depress stop button, open toggle switch, close shut off valve, etc.). Note: Depressing the emergency stop button is NOT a proper shut down method.

(b) When equipment or machines use a simple wall plug as the single energy source and all hazardous energy, including stored, residual, or accumulated hazardous energy, is controlled by unplugging the equipment, it

shall be unplugged, and the plug controlled by the supervisor or authorized worker.

(4) Step Four - Isolation and Verification.

(a) Isolate all energy sources by operating (switch off, valve off, etc.) energy-isolating device(s).

(b) Verify the correct energy-isolating device has been operated and that steps taken to ensure energy isolation (Lockout/Tagout applied to disconnect, valve, etc.) correctly correspond to the equipment that requires Lockout/Tagout.

(c) Ensure all energy isolating devices needed to control the energy to or contained within the equipment or machine are used.

(5) Step Five - Lockout/Tagout Device Application.

(a) Affix Lockout/Tagout devices (typically locks) to hold energy-isolating devices in an "off" or "safe" position that physically prohibits normal operation of the energy-isolating device. Both tags and locks shall be installed. Tags are warning devices attached to energy isolating devices and cannot provide the physical restraint or security of a lock.

1. Tags shall indicate date, time, reason, department name, telephone number, and name of the worker installing the device.

2. To prevent inadvertent or accidental detachment, tags shall be securely attached with a self-locking and non-releasable attachment (e.g., a nylon or plastic cable tie-off strap) with a minimum unlocking strength of 50 pounds.

3. Tags may cause a false sense of security. Workers shall be trained on the use and limitations of tags as part of the overall energy control program.

(b) Initial Lockout/Tagout devices shall be attached to each energy-isolating device by the first authorized worker. Additional authorized workers who perform service, maintenance, or modification on the equipment or machine shall apply their own locks during their maintenance activities.

(6) Step Six - Additional Measures. Once the system is locked and tagged out, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained, or otherwise rendered safe.

(a) Insert physical restraints (blocks, chocks) for moving or raised parts, blind flanges for pressurized piping, and/or disconnect springs (if safe to do so), etc., to ensure moving parts are physically restrained or disconnected.

(b) The authorized worker shall completely release or otherwise control any stored energy and block any unexpected motion. Equipment or machines shall be in a zero-energy state.

1. For stored mechanical energy, vent valves, spring releases, blocking devices, or equipment repositioning, as appropriate, shall be used.

2. For stored electrical energy, approved grounding wands or discharge devices shall be used. If re-accumulation of stored energy to a hazardous level is possible, verification of isolation, such as leaving the ground wand in place, shall be continued until servicing, maintenance, or modification is complete.

3. The authorized worker shall demonstrate that the equipment or machine is de-energized or isolated before starting work on Lockout/Tagout equipment or machinery.

(7) Step Seven - Isolation Confirmation.

(a) Physically attempt to operate energy-isolating devices and attempt to restart the equipment or machine using normal controls. Caution: Return operating controls to "safe" or "off" position after the test.

(b) When the equipment to be worked on does not have normal controls, e.g., on/off switch, etc., use the following procedure for isolation confirmation. Test potential energy sources using appropriately rated and calibrated instruments or testers. Instruments used to test voltage, pressure, or temperature shall be checked for proper operation both before and after use. If the authorized worker is not qualified to test the energy being isolated, they shall ensure the energy is tested by a qualified person.

(8) Step Eight - Keep Lockout/Tagout Devices in Place. A lock and tag shall remain in place until work on the equipment or machine is complete.

(a) In rare circumstances, it may be necessary to temporarily remove Lockout/Tagout devices before work is complete, such as for adjustment or repositioning equipment.

(b) Use the following sequence of actions when Lockout/Tagout devices must be temporarily removed from the energy-isolating device:

1. Notify all affected workers and supervisors.

2. Clear equipment or machine of tools and materials.

3. Remove all workers from equipment or machine area and ensure required tools are safely and properly positioned.

4. Remove all repositioning and blocking devices and return all vents and valves to normal operating positions.

5. Remove all grounding/shorting conductors, hooks, or wands.

6. Put on any required PPE.

7. Energize and proceed with testing or positioning.

8. De-energize all systems; reapply Lockout/Tagout measures; notify all affected workers and supervisors; and continue servicing, maintenance, or modification of the equipment or machine.

(9) Step Nine - Before restoring machines and equipment to service, the supervisor or authorized worker will:

(a) Ensure all personnel, tools, and maintenance or servicing equipment have been removed and guards reinstalled.

(b) Notify personnel that the locks or tags have been removed and equipment is in service.

(c) Remove all locks or tags and restore the energy-isolating device to the 'ON' position.

c. Tag-Out Only. A "tag-out only" procedure may be used in the rare case a device cannot be locked out. Use extra caution with Tag-Out Only procedures as tags are warning devices and do not provide the physical restraint and security of a lock. Tags may evoke a false sense of security by the worker. A Tag-Out Only procedure may be used if:

(1) A justifiable and verifiable need is identified.

(2) Approval is obtained from the supervisor.

(3) Authorized workers follow Lockout/Tagout procedures, with the following changes:

(a) Omit placement of the lock.

(b) In place of the lock, a secondary means of isolation shall be used. Removing an isolating circuit element, blocking a controlling switch, opening an extra disconnect device, or removing a valve handle are examples of secondary measures. The secondary means of isolation shall be identified on the tag affixed in accordance with equipment-specific written Lockout/Tagout procedures.

(c) The tag shall be secured with a self-locking and non-releasable attachment (e.g., a nylon or plastic cable tie-off strap) with a minimum unlocking strength of 50 pounds. A tag used without a lock shall be supplemented with at least one additional safety measure that provides a level of safety equivalent to that obtained by the use of a lock. These devices shall be attached so they interfere with the operation of energy-isolating devices (worker has to undo or remove the tag to operate isolating device).

(d) If tag placement would compromise safety by obscuring indicator lights or controls or where a tag cannot be attached directly to the energy-isolating device due to design, the tag shall be located as close as safely possible to the device, in a position immediately obvious to anyone trying to operate the equipment or machine. Energy-isolating devices for such equipment or machinery shall be modified or designed to accept a lockout device whenever new equipment or machinery is installed or major replacement, repair, renovation, or modification is performed. Only one authorized worker may work under a Tag-Out situation at any time.

(4) Multiple Lockout. If more than one worker needs to Lockout/Tagout equipment or machinery:

(a) Each authorized worker shall place their own lock on the lockout device and install their own tagout device.

(b) A multiple lockout device (hasp) shall be used when an energy-isolating device cannot accept multiple locks.

(c) Each worker shall remove their own Lockout/Tagout devices when work is complete.

(5) Three-Step Release from Lockout/Tagout Process.

(a) Step One - Preparation and Notification. Before removing lockout or tagout devices and reenergizing machines or equipment, the authorized worker shall:

1. Notify all affected workers the system is ready for return to service. Ensure all personnel are clear of the equipment point of operation and other hazard zones.

2. Inspect the work area and ensure all tools, debris, and non-essential personnel are removed or positioned a safe distance from the equipment or machinery.

3. Replace safety guards, inspect equipment or machinery, and ensure guards are operational.

(b) Step Two - Removal of Additional Devices.

1. The authorized worker shall remove any additional devices applied in accordance with Lockout/Tagout Application Step Five.

2. Remove all safety grounding devices.

3. Verify the work for which Lockout/Tagout was applied is complete and it is safe to reenergize the equipment or machinery.

(c) Step Three - Removal of all Locks and Tags.

1. Each Lockout/Tagout device shall be removed only by the authorized worker who applied it. When the authorized worker who applied a Lockout/Tagout device is not available to remove it, their supervisor may

remove the device using emergency removal procedures. An example of an emergency procedure, undertaken only in extreme circumstances, would be that the use of equipment or machinery is required immediately.

2. Authorized workers shall remove all Lockout/Tagout devices and restore the energy isolating device to the 'ON' position.

3. Notify all workers the lockout condition has been cleared (locks and tags removed) and equipment or machinery is ready for operation.

4. Energize the equipment or machinery and restore to normal operating condition.

5. Annotate Lockout/Tagout log with clearance information.

d. Emergency Removal. Emergency Removal of Lockout/Tagout Devices. In some instances, a lock and/or tag may have to be removed by someone other than the person who applied the lockout device. For example, contractors may complete their work and leave without removing their issued locks, or a worker may be absent due to illness or other reasons. Under such circumstances, the supervisor may need to remove the lock, and in doing so, the supervisor assumes responsibility for the safety of the equipment and those who work with it. If the authorized worker who applied a Lockout/Tagout device is not available to remove it, the supervisor may remove the device, if it is safe to do so, provided:

(1) Specific training and procedures are developed, documented, and incorporated into the shop energy control program which demonstrate the safe equivalent to removal of the device by the authorized worker who applied it. Locks should never be removed in haste or confusion.

(2) The supervisor verifies the authorized worker who applied the device is not at the facility. Before removing another's lock, the supervisor must perform all of the following steps, in the order listed:

(a) The supervisor makes every reasonable effort to contact the authorized worker who applied the device. This shall include a thorough search of the premises, the individual's normal workplace (if different), and telephone calls to both home and office numbers.

1. These efforts are documented on the Lockout/Tagout log, NAVMC 11404.

2. If the authorized worker is contacted, the supervisor informs the worker their Lockout/Tagout device must be removed and the reason for the removal. The supervisor shall determine if the worker can return to work and, if not, shall advise the worker their Lockout/Tagout device will be removed and returned by the supervisor.

(b) Determine and understand the reason for the lockout.

(c) Determine and understand the need for removal of the lock by someone other than the person placing it.

(d) Thoroughly examine all parts of the locked-out system and assess its readiness for use. This requires a visual inspection of all wiring, conduit, piping, etc., between the energy isolating device and the equipment, and a complete inspection and understanding of the equipment. If the supervisor is not completely familiar with the equipment, they must enlist the aid of those who are. Supervisors are cautioned that the person asking to have the lock removed may not be the best consultant on this issue.

(e) If the supervisor is satisfied that the person who placed the lock cannot be contacted or cannot be present and that there is an immediate need to operate the equipment, and that the equipment and all connected apparatus are safe for operation and the supervisor has verified it is safe to remove the Lockout/Tagout device, the supervisor may use the emergency key to remove the Lockout/Tagout device or cut it off if the key is not available. Procedures for release from Lockout/Tagout shall be followed when removing Lockout/Tagout device(s).

(f) It is essential the person who originally placed the lock be notified as soon as possible that the lock has been removed. The supervisor ensures the worker is given the removed lock and informed of the reasons for removal before the worker returns to duty.

e. Temporary Lockout/Tagout Device Removal. If necessary to temporarily remove Lockout/Tagout devices to start equipment or machinery for test or component repositioning, restoration procedures shall be performed in accordance with Step Eight in Section 10004. The equipment or machinery shall be locked and tagged out in accordance with Step Five in Section 10004 when test or repositioning procedures are complete.

f. Group lockout/tagout. A group Lockout/Tagout procedure may be appropriate when multiple authorized workers perform servicing, maintenance, or modification on the same piece of equipment or machinery and multiple lockout procedures are not feasible.

(1) The supervisor shall:

- (a) Determine if a group Lockout/Tagout procedure is appropriate.
- (b) Convene a meeting of all members of the group covered by the procedure.
- (c) Describe tasks to be performed.
- (d) Delegate primary Lockout/Tagout responsibility to a designated authorized worker for the group.

(e) Ensure each member of the group is trained and authorized to perform Lockout/Tagout procedures.

(2) The designated authorized worker shall:

- (a) Follow each step of the Lockout/Tagout procedures.

(b) Place their key(s) inside a gang lockbox. Group lockboxes shall be constructed to permit attaching multiple locks to the outside of the enclosure to prevent opening until all locks are removed.

(c) All other workers in the group shall assure each step of the Lockout/Tagout procedures is complete, then lock and tag the group lockbox to prevent access until all locks are removed.

(d) When work is complete, each worker shall remove their lock from the group lockbox, the designated authorized worker shall remove their lock off of the group lockbox, obtain the key(s) from the lock box, and return the equipment to service in accordance with the Three-Stop Release procedure from the Lockout/Tagout Process.

g. Shift Changes. Specific, written procedures shall be developed and used during shift or personnel changes to ensure continuity of lockout and tagout protection. This includes provision for orderly transfer of Lockout/Tagout devices between off-going and on-coming supervisors and authorized workers to minimize exposure to hazards from unexpected energization, start-up, or release of stored energy from equipment or machinery.

(1) The authorized worker going off-shift shall leave their lock/tag on the lockout until the oncoming authorized worker has placed their own lock/tag on the lockout.

(2) The off-going authorized worker may then remove their lock/tag from the lockout.

(a) The off-going authorized worker shall provide the on-coming authorized worker and supervisor information regarding the status of equipment or machinery affected.

(b) All such transfers shall be documented in the appropriate Lockout/Tagout log.

(3) Verification of the lockout (energy state) shall be performed by a supervisor or designated authorized worker for the on-coming shift prior to any maintenance or servicing on locked out equipment or machinery. Any authorized worker on the equipment or machinery may verify the lockout status during/after shift change. All authorized workers are strongly encouraged to perform their own verification of lockout before performing duties on locked out equipment or machinery.

(4) Equipment or machinery shall remain locked out during maintenance and servicing activities.

(5) Basic Shift Change Examples:

(a) Guiding Principles:

1. There shall be no loss of Lockout/Tagout continuity during shift changes.

2. Procedures for Lockout/Tagout during shift changes shall be documented and followed.

3. Each authorized worker shall have a specific key, and keys shall not be traded between authorized workers.

10005. TRAINING REQUIREMENTS

1. Initial Training. Both authorized and affected employees as defined by OSHA will receive training in accordance with reference (a) and (e). Supervisors shall verify training for both authorized and affected employees when accomplished.

2. Recurring Training. Recurring training shall be performed at least annually. The training shall establish employee proficiency, include an in-depth review of current and previous procedures, and introduce new or revised control methods and procedures, as necessary.

3. Retraining. Authorized workers and affected employees shall be retrained in accordance with reference (a) and (e).

4. Training Documentation. All training, e.g., familiarization, initial, and recurring, shall be documented. Training documentation shall be certified current and include each individual's name, type, and dates of training in their personnel training record. Supervisors shall ensure all training documentation is readily available during inspections and Lockout/Tagout program evaluations.

10006. PROGRAM EVALUATIONS

1. Self-Assessments. Work center/unit/shop Lockout/Tagout self-assessments shall be conducted by an authorized worker or supervisor annually, to ensure compliance with all program elements. Self-assessments shall be designed to correct any deviations or inadequacies observed. The assessment shall be documented, provide for a demonstration of the procedures, and include, as a minimum:

a. Identification of equipment and machinery for which the Lockout/Tagout program applies.

b. Review of Lockout/Tagout logbooks for equipment or machinery in the Lockout/Tagout program.

c. A review of each worker's responsibilities under the program.

e. A review of training records that all applicable training has been conducted, is current, and is properly documented.

f. The date of the inspection and name of the unit representative conducting the self-inspection.

2. Annual Inspection. Commanders and supervisors shall ensure annual inspections of Lockout/Tagout procedures within their organization are conducted by an individual above the shop level supervisor to verify and

document the effectiveness of the energy control procedures. A qualified safety and occupational health inspector shall review Lockout/Tagout inspection reports during organization safety inspections to ensure compliance. The inspection shall include, as a minimum:

- a. Review of Lockout/Tagout procedures with authorized workers.
- b. Observation of Lockout/Tagout procedures to ensure workers understand and follow procedures.
- c. Review of training and self-assessment documentation to ensure Lockout/Tagout requirements are met.
- d. Out brief to shop or unit supervisor or, as appropriate, documented in the written report.

10007. CONTRACTORS

1. In accordance with reference (w), responsibility for the safety and health of contractor operations is generally limited to protecting DoD and Marine Corps operations and the safety of DoD personnel, facilities, and equipment. Contractors are responsible for safety and health risks to their personnel and the protection of the public, except where the Marine Corps has contractually agreed to assume responsibility for the contract employee's health and safety. Marine Corps responsibilities must be clearly stated in contract language, including contractor personnel deploying with the Corps. Refer to reference (w), Enclosure 5, for additional information.

2. Supervisors and safety and health professionals will contact the installation Contracting Office when any doubt exists about whether a contractor is in compliance with contract safety and health specifications.

a. When contractor personnel are engaged in activities covered by this standard, the command, unit, or activity must provide the contractor agency with a copy of the control of hazardous energy program of the command, unit, or activity where the work is to be performed. Marine Corps and contractor personnel conducting joint Lockout/Tagout operations shall use the requirements in this chapter. These details will be specified in the contract.

b. The work center/unit/shop supervisor and the authorized worker most familiar with the equipment or machinery being serviced by the contractor shall ensure the contractor is provided specific information related to the known hazards of the work to be conducted, e.g., type and magnitude of energy sources. All affected workers shall be made aware of the contractor's work and the need to follow prescribed related safety procedures.

c. Marine Corps personnel are restricted from accessing contractor work areas, unless working in conjunction with the contractor. If this is impractical or cannot be accomplished, the on-site supervisor shall assure the contractor's work does not jeopardize Marine Corps personnel, equipment, and property.

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OCT 03 2023

Appendix 10-A: NAVMC 11402 LOCKOUT/TAGOUT PROGRAM EVALUATION

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 <input type="checkbox"/> NO <input type="checkbox"/>	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 <input type="checkbox"/> NO <input type="checkbox"/>	
6. Following injuries resulted from lockout/tagout related mishaps:	

Designed using FormFlow 2.15, HDMC/ARSE, Oct 98

NOTE: Conduct evaluation annually

StaO 5100.1
OCT 03 2023

Appendix: 10-B: NAVMC 11403 LOCKOUT/TAGOUT CHECKLIST

NAVMC 11403 LOCKOUT/TAGOUT CHECKLIST (8-98) (EF)
SN: 0108-LF-071-1100

Procedure Reference No.	Date Approved																		
Equipment Name	Equipment No.																		
Location	Work Center																		
General Description																			
<p><small>NOTE: Required for all equipment, machinery, or processes that fall to meet exceptions of MCO P5100.5F, Chapter 12, paragraph 12003.</small></p> <p><small>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.</small></p> <p><small>A. Operator Controls: Determine type of controls available to operator. Identify energy sources and lockout/tagout capacity for equipment.</small></p> <p><small>List typed of operator controls:</small> _____</p>																			
<p><small>B. Energy Sources: Check or list energy sources on equipment.</small></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Electrical <input style="width: 40px; height: 20px;" type="checkbox"/></td> <td style="width: 33%;">Steam <input style="width: 40px; height: 20px;" type="checkbox"/></td> <td style="width: 33%;">Hydraulic <input style="width: 40px; height: 20px;" type="checkbox"/></td> </tr> <tr> <td>Pneumatic <input style="width: 40px; height: 20px;" type="checkbox"/></td> <td>Gas <input style="width: 40px; height: 20px;" type="checkbox"/></td> <td>Other <input style="width: 40px; height: 20px;" type="checkbox"/></td> </tr> <tr> <td>Stored Energy Sources <input style="width: 40px; height: 20px;" type="checkbox"/></td> <td colspan="2"></td> </tr> </table> <table style="width: 100%; border: none; margin-top: 5px;"> <thead> <tr> <th style="width: 40%; text-align: center; font-size: small;">Identify Energy Source and Location</th> <th style="width: 20%; text-align: center; font-size: small;">Lockable? Yes or No</th> <th style="width: 40%; text-align: center; font-size: small;">Type of Device</th> </tr> </thead> <tbody> <tr> <td style="height: 20px; border: 1px solid black;"></td> <td style="border: 1px solid black;"></td> <td style="border: 1px solid black;"></td> </tr> <tr> <td style="height: 20px; border: 1px solid black;"></td> <td style="border: 1px solid black;"></td> <td style="border: 1px solid black;"></td> </tr> </tbody> </table>		Electrical <input style="width: 40px; height: 20px;" type="checkbox"/>	Steam <input style="width: 40px; height: 20px;" type="checkbox"/>	Hydraulic <input style="width: 40px; height: 20px;" type="checkbox"/>	Pneumatic <input style="width: 40px; height: 20px;" type="checkbox"/>	Gas <input style="width: 40px; height: 20px;" type="checkbox"/>	Other <input style="width: 40px; height: 20px;" type="checkbox"/>	Stored Energy Sources <input style="width: 40px; height: 20px;" type="checkbox"/>			Identify Energy Source and Location	Lockable? Yes or No	Type of Device						
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Stored Energy Sources <input style="width: 40px; height: 20px;" type="checkbox"/>																			
Identify Energy Source and Location	Lockable? Yes or No	Type of Device																	
<p><small>C. Shutdown Procedure: List in order the steps necessary to re-activate or energize the equipment.</small></p> <div style="border: 1px solid black; height: 30px; margin-top: 5px;"></div>																			
<p><small>NOTIFY ALL AFFECTED WORKERS WHEN IMPLEMENTING THIS PROCEDURE</small></p> <p><small>D. Start up Procedure: List in order the steps necessary to re-activate or energize the equipment.</small></p> <div style="border: 1px solid black; height: 30px; margin-top: 5px;"></div>																			
<p><small>NOTIFY ALL AFFECTED EMPLOYEES WHEN IMPLEMENTING THIS PROCEDURE</small></p> <p><small>NOTES:</small></p> <div style="border: 1px solid black; height: 100px; margin-top: 5px;"></div>																			

Designed using FormFlow 2.15, HDMC/ARSE, Aug 98

StaO 5100.1
OCT 03 2023

APPENDIX 10-C: NAVMC 11404 LOCKOUT/TAGOUT LOG

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

DEVICE TYPE, SER. NO. & SEQ. NO.	EQUIPMENT ID &/OR DESCR. & LOCATION	PURPOSE	PDS. 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, HDMC/ARSE, Oct 98

StaO 5100.1
OCT 03 2023

CHAPTER 11

ELECTRICAL SAFETY PROGRAM

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CHAPTER 11

ELECTRICAL SAFETY PROGRAM

11000. INTRODUCTION

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

2. This chapter pulls key requirements from the OSHA standards, the National Fire Protection Association (NFPA) Standard for Electrical Safety in the Workplace (NFPA 70E), and Unified Facility Criteria Electrical Safety Operations and Maintenance Standard (UFC 3-560-01) to assist personnel in establishing an Electrical Safety Program. Electrical lockout/tag-out and lockout tags plus policy continue to be included in Chapter 10, Hazardous Energy Control.

11001. PROGRAM DEFINITIONS AND HAZARDS

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

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

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

3. Arc Flash. An arc flash is the sudden release of electrical energy through the air when a high-voltage gap exists and there is a breakdown between conductors. An arc flash gives off thermal radiation (heat) and bright, intense light that can cause burns. Temperatures have been recorded as high as 35,000°F. High-voltage arcs can also produce considerable pressure waves by rapidly heating the air and creating a blast. This pressure burst can hit a worker with great force and send molten metal droplets from melted copper and aluminum electrical components great distances at extremely high velocities. These and other hazards can be

eliminated or reduced by pre-job planning (e.g., job hazard analysis) which must include engineering guidance in understanding the system's operation and review of up-to-date single line and schematic as-built drawings. All apparel, tools, and other equipment required for worker safety must be identified and available before beginning the job.

11002. RESPONSIBILITIES

1. Commanding Officers, Department Heads, Managers, Supervisors

a. Establish in writing an electrical program that will directly address all electrical hazards that exist at the installation, unit, or activity.

b. Define and assign responsibilities within the installation, unit, or activity for the Electrical Safety program and ensure compliance with this Order.

c. Ensure activity managers, such as shop heads, general foremen, and supervisors participate in the electrical safety program.

d. Ensure that assigned personnel working on electrical equipment receive initial training and required training annually.

e. Supervisors and managers at the command, unit, or activity level must enforce the applicable principles as they pertain to the systems under their cognizance.

f. Supervisors and managers will ensure mishap, near miss, and hazard reports are made to the installation safety department in accordance with Chapter 4 of this Order.

2. Director of Safety

a. Ensure all Station personnel who could be exposed to electrical hazards sources receive initial awareness training.

b. Ensure the electrical safety program is evaluated annually.

c. Designate in writing an electrical safety program coordinator(s) who is delegated responsibility and authority to ensure compliance with the electrical safety program for installation departments, units, or activities.

3. Installation Safety Manager

a. Coordinate initial and annual electrical safety training.

b. Provide technical assistance in drafting electrical safety procedures for each piece of affected equipment.

4. Electrical Safety Program Coordinator

a. Enforce electrical safety procedure compliance.

b. Evaluate annually the electrical safety program.

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5. All Personnel. All personnel are responsible for recognizing electrical hazards and immediately informing supervisor for corrective actions.

6. Authorized Workers. Authorized workers are required to:

a. Comply with the electrical safety requirements set forth by this Order, NFPA 70 (NEC), NFPA 70E, and reference (a) and (e) when performing maintenance, service, repair, or modifications to electrical energy sources.

11003. GENERAL ELECTRICAL SAFETY

1. All electrical equipment must be installed in accordance with NFPA 70 and NFPA 70E.

2. Recognized Hazards. Electrical equipment must be free from recognized hazards that are likely to cause death or serious physical harm. Equipment must be suitable for the installation and use, and must be installed and maintained in accordance with the manufacturer instructions.

3. Labeling of Disconnects. Each disconnecting means (the switch or device used to disconnect the circuit from the power source) must be clearly labeled to indicate the circuit's function, unless it is located and arranged so the purpose is evident. Identification should be specific rather than general. For example, a branch circuit serving receptacles in a main office should be labeled as such, not simply labeled "receptacles". All labels and marking must be durable enough to withstand the environment to which they may be exposed.



On/Off switch locations not identified

4. Existing Installations. All existing installations shall be evaluated and labeled accordingly with Arc Flash rating and the Hazard Risk Category. These installations will be evaluated and the arc flash ratings established by an experienced electrical professional in accordance with the current edition of NFPA 70E, Standard for Electrical Safety in the Workplace.

5. Guarding of Live Parts. Live parts of electric equipment operating at 50 volts or more must be guarded against accidental contact. Proper guarding can be achieved by use of an approved cabinet or other approved enclosure, by location in a room or vault that is accessible to qualified persons only, or by elevating the equipment or controlling the arrangement of the space to

prevent contact by unqualified persons. If electric equipment is located in an area where it is potentially exposed to physical damage, the enclosure or guard must be of sufficient strength to prevent such damage.



Missing cover plate

6. General Wiring Design and Protection. New electrical wiring, and the modification, extension or replacement of existing wiring must conform to the requirements of reference (e) and the Uniform Building Code.

7. All equipment will be used following the Underwriters Laboratory (UL) listing guidance and will be used following the manufacturer's instructions or technical manuals.

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

9. Precautions for equipment commonly found in workplaces. The equipment in paragraphs 11 through 16 is found in many environments. Specific precautions and instructions for these will be applied.

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

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

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



Damaged outer jacket

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



Ungrounded 2-wire cord



Heavy load appliances plugged into surge protector

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



Daisy chain

d. Do not use extension cords to raise and lower equipment.

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

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

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



Damaged cord exposing insulation

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



Cord rating

14. Ground fault circuit interrupters (GFCI)

- a. All GFCI-protected outlets must be installed as required by NFPA 70.
- b. Periodic testing with a GFCI tester is recommended to ensure the GFCI is functioning at the correct current levels. Replace defective GFCI receptacles.

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

15. Portable electric heaters. The local command, unit, or activity will establish a policy on portable electric heaters. For MCAS Miramar see Station Order 11320.1 series. Portable electric heaters are high-wattage appliances that have the potential to overload circuits and/or cords.

a. Do not operate a heater suspected of being damaged. Before use, inspect the heater, cord, and plug for damage. Follow all operation and maintenance instructions.

b. Do not leave the heater operating while unattended or while sleeping.

c. Keep combustible material such as papers, cloth, and wood at least 3 ft (0.9m) from the front, sides, and rear of the heater.

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

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

f. Do not power the heater with an extension cord or power strip.

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

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

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

j. Ensure heater is equipped with an anti-tip over switch.

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

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

11004. GENERAL ELECTRICAL WORK PRINCIPLES

1. General work principles

- a. Assume all conductors are live until tested.
 - b. Safety related work practices must be used while persons are exposed to electrical hazards from electrical conductors or circuit parts that are or can become energized. Specific safety-related work practices must be consistent with the nature and extent of the associated electrical hazards.
2. Wet or Damp Locations. Work in wet or damp work locations (i.e., areas surrounded by or near water or other liquids) should not be performed unless it is absolutely critical. Electrical work should be postponed until the liquid can be cleaned up. These special precautions must be incorporated while performing work in damp locations:
- a. Only use electrical cords that have GFCIs.
 - b. Place a dry barrier over any wet or damp work surface.
 - c. Remove standing water before beginning work.
3. All electrical wiring and equipment must be a type listed by a nationally recognized testing laboratory for the specific application for which it is to be used.

11005. ELECTRICALLY-SAFE WORK CONDITION

1. The normal condition required for performance of electrical work is an electrically-safe working condition. Energized electrical conductors and circuit parts to which personnel might be exposed must be put into an electrically-safe work condition before work is performed, if personnel are within the limited approach boundary, or there is an interaction with the equipment where conductors are not exposed, but an increased risk of injury from an exposure to arc flash hazard exists.
2. Before work is begun, the qualified person must ascertain whether any part of an electric power circuit (exposed or concealed) is located such that the performance of work could bring any person, tool, or machine into physical or electrical contact with it. Some equipment has more than one source of power that requires opening multiple breakers or switches and/or removing multiple fuses.
3. Steps to establish an Electrically-Safe Work Condition
 - a. De-energize the circuit and equipment. The circuit and equipment to be worked on must be disconnected from all electric energy sources. Control circuit devices, such as pushbuttons, selector switches, and interlocks, may not be used as the sole means for de-energizing circuits or equipment. Stored electric energy which might endanger personnel must be released.
 - b. Apply lock or tag to the disconnecting means using the control of hazardous energy, in accordance with Chapter 18, Hazardous Energy Control.
 - c. Verify the de-energized condition. Use appropriate test equipment to test the circuit elements and electrical parts of equipment to which

personnel will be exposed and verify that the circuit elements and equipment parts are de-energized.

11006. ENERGIZED WORK. Energized work is work being performed inside the Limited Approach Boundary or where exposed, energized electrical conductors or circuit parts are readily accessible by inadvertent contact with tools or personnel when the electrical conductor or circuit parts have not been placed in an electrically-safe work condition.

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

a. De-energizing the conductors or equipment could result in an increased hazard.

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

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

2. Work on energized electrical equipment when not placed into an electrically-safe work condition requires an energized electrical work permit approval by the commander, commanding officer, or officer in charge. The commander, commanding officer, or officer in charge may designate a senior manager to approve energized work permits. Permits that cover routine work tasks to be performed by trained and qualified persons can be written to cover a long period of time; for example, if the worker is trained and wearing the necessary PPE, a permit might be issued for three months to replace a fuse that involves an exposed energized electrical conductor. Permits covering a long period must ensure all exposed energized electrical conductors are rendered safe from unauthorized personnel who may inadvertently be exposed to electrical energy.

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

a. A description of the circuit and equipment to be worked on and its location.

b. Justification why the work must be performed in an energized state.

c. A description of safe work practices to be employed.

d. Results of the shock analysis.

e. Determination of shock protection boundaries.

f. Results of the arc flash hazard analysis.

g. The necessary PPE.

h. Means employed to restrict the access of unqualified persons from the work area.

i. Evidence of a job completion briefing including a discussion of job specific hazards.

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

a. Performing a voltage verification to establish an electrically-safe working condition.

b. Testing, troubleshooting, and voltage measuring where:

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

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

11007. TRAINING

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

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

3. A Qualified Person (QP), i.e., those permitted to work on or near exposed energized parts, will, at a minimum, be trained in and familiar with:

a. The skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment.

b. The skills and techniques necessary to determine the nominal voltage of exposed live parts, and

c. The clearance distances specified in reference (e) Table S-5 and the corresponding voltages to which the qualified person will be exposed.

Table S-5 - Approach Distances for Qualified Employees - Alternating Current

Voltage range (phase to phase)	Minimum approach distance
300V and less	Avoid contact
Over 300V, not over 750V	1 ft. 0 in. (30.5 cm)
Over 750V, not over 2kV	1 ft. 6 in. (46 cm)
Over 2kV, not over 15kV	2 ft. 0 in. (61 cm)
Over 15kV, not over 37kV	3 ft. 0 in. (91 cm)
Over 37kV, not over 87.5kV	3 ft. 6 in. (107 cm)
Over 87.5kV, not over 121kV	4 ft. 0 in. (122 cm)
Over 121kV, not over 140kV	4 ft. 6 in. (137 cm)

d. Personnel must be adequately trained to administer first aid and Cardiopulmonary Resuscitation (CPR).

4. To be considered qualified, the person must be trained, able to demonstrate electrical skills and knowledgeable in the operation of the equipment associated with the work task or the specific work method, able to identify and avoid hazards.

11008. PERSONAL PROTECTIVE EQUIPMENT

1. When personnel are working within the Arc Flash Protection Boundary, they must wear arc-rated clothing and other PPE as required by the job task.

a. Arc-rated clothing must be worn wherever there is possible exposure to an electric arc flash above the threshold incident energy level for a second degree burn.

b. PPE used for protection from the thermal hazards associated with an arcing fault must be arc-rated.

c. The garment manufacturer's instructions for arc-rated clothing washing, laundering, and maintenance must be followed.

2. Workers must wear nonconductive head protection wherever there is a danger of head injury from electric shock or burns due to contact with energized electrical conductors or circuit parts or from flying objects resulting from an electrical explosion.

3. Workers must wear protective eyewear, footwear, and hand and arm protection which conform to applicable ASTM and ANSI standards. Properly tested rubber insulating gloves must be rated for the voltage for which the gloves will be exposed.

4. Workers must use insulated tools and/or handling equipment when working inside the Limited Approach Boundary of exposed energized electrical conductors or circuit parts where tools or handling equipment might make accidental contact. The NFPA 70 and reference (e) provide further information for tasks that require insulated tools.

CHAPTER 12

CONFINED SPACE PROGRAM REQUIREMENTS

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CHAPTER 12

CONFINED SPACE PROGRAM REQUIREMENTS

12000. PURPOSE. To prescribe policy and procedures applicable to the entry and work in spaces designated as "confined" or "enclosed" as defined in reference (a) and (e). To inform personnel engaged in enclosed or confined space operations of the hazards and precautions associated with such operations. To establish specific authority and responsibility for those delegated to administer the confined space program.

12001. SCOPE. This section pertains to military, civilian, and contractor personnel operating aboard MCAS Miramar. Conduct the confined space program operations per reference (a) and (e). Conduct aviation gas free engineering per reference (a) and (e). This section provides information and guidance for confined space operations aboard MCAS Miramar. It is not inclusive and does not contain all conceivable operations and conditions that may be encountered. Therefore, it is essential that personnel engaged in confined space operations clearly understand the intent and fundamental concepts of this instruction.

12002. POLICY. All confined spaces aboard MCAS Miramar are to be considered Permit-Required Confined Spaces (PRCS). Miramar Fire Department must also be notified prior to confined space entry. Guidance and requirements stated herein shall be applied to the maximum extent possible under the direct control and supervision of the designated Confined Space Program Manager (CSPM) for MCAS Miramar. Entry into confined, closed, or enclosed spaces is prohibited until the space has been tested and proper controls put in place to ensure work can be conducted safely. All PRCS procedures contained in references (a) and (e) shall be followed by all Marine Corps personnel, tenant commands, and contract personnel. A CSPM or a Competent Person will authorize entry into a confined space as defined in reference (a) and (e).

12003. RESPONSIBILITIES. The Installation CSPM is physically located in the Safety Department Office at Building 6022. Personnel requiring CSPM services (e.g., space testing, treatment, and certification) shall contact the CSPM at 858-307-1357 or contract the front desk at 858-307-1359.

1. Commanders, commanding officers, and officers in charge of commands, installations, units, or activities with confined spaces shall:

a. Appoint, in writing, a command CSPM responsible for implementing the confined space entry program. The CSPM shall be trained and qualified in accordance with this chapter.

b. Ensure organizations that employ individuals who must enter PRCS develop and publish an internal Permitted Required Confined Space Entry Permit (PRCSEP) SOP to include a PRCS inventory. CSPM can provide assistance in the development of this SOP.

(1) Ensure the SOP is approved by the CSPM. For each PRCS the SOP shall include the pre-entry protocol, including permit issuance and atmospheric testing; a background of the specific hazards of the PRCS and a JHA; protocol

for entry operations including the types of work being done inside the PRCS and atmospheric testing/monitoring procedure, and the non-entry rescue protocol, including required equipment and how to configure the equipment for the job at hand.

(2) Ensure compliance with the training requirements for all personnel subject to PRCS entries as set forth references (a).

(3) Ensure that all personnel adhere to the SOP for all entries into PRCS.

(4) Conduct regular program audits at least annually to ensure compliance with applicable regulations and instructions. The PRCS Program Review Checklist in Appendix 12-A is a good tool to use to audit your program or to assist in developing an internal checklist.

2. Director of Installation and Logistics shall:

a. Ensure contractors involved in PRCS work aboard MCAS Miramar have established a PRCSEP and inform them that confined space personnel shall be adequately qualified and entries shall be conducted under the requirements section 1910.146 of reference (a) and chapter (5) of this Order.

b. Conduct inspections to verify Permit-Required Confined Space Entry Program (PRCSEP) compliance at contractor worksites prior to contractor entry into PRCS and during the entry period as required by the permit.

c. Contractors prior to entering a permitted confined spaces shall provide the CSPM with a copy of their confined space enter permit.

d. Ensure that contractors have trained their personnel concerning the hazards of the PRCS they shall enter and work aboard MCAS Miramar.

e. Ensure that all contract personnel have received the required PRCS training and hold current certification for the duties to be performed.

f. Ensure contractors who decide to have their employees enter a permit space provide their own rescue and emergency services.

g. If Marine Corps and contractor personnel are to occupy the same space at the same time, the CSPM shall issue separate permits and the appropriate contractor representative shall ensure the contractor is informed of Marine Corps findings. The contracting officer shall inform the contractor or ROICC that contractor retains legal obligation for safety of contractor personnel.

3. Director of Safety shall:

a. Maintain overall cognizance of the PRCSEP.

b. Provide the required funding and support for the oversight of the PRCSEP by the Installation CSPM.

4. Installation Confined Space Program Manager (ICSPM) shall:

a. Provide oversight and guidance for the PRCSEP and for all organizations aboard MCAS Miramar.

b. Conduct annual audits of commands and departments entry operations, SOPs, and training records using the PRCS Program Review Checklist in Appendix C Provide recommendations for compliance with PRCSEP requirements and applicable regulations.

c. Issue test entry permits for newly recognized PRCS. Oversee the initial testing/monitoring process when the PRCS is of a size, configuration, or depth that requires testing to be conducted from within the space, per this Order.

d. Maintain records of entry operations (cancelled permits) for one year from the date of entry.

e. Provide FEAD with a current recall roster of MCAS Miramar CSPMs and all department Confined Space Competent Persons (CSCP) in the event of an afterhours or weekend emergency.

f. Conduct an annual self-assessment of the MCAS Miramar PRCSEP using the checklist provided in Appendix 12-A.

g. Halt any PRCS operation not in compliance with the permit and applicable regulations or if unsafe practices are observed.

h. Upon request, assist in the acquisition of additional specialized testing for MCAS Miramar activities working in PRCS.

i. Maintain an inventory of all permit required confined spaces and update when new PRCS's are identified.

j. Amend the installation's confined space program as necessary to ensure the program's continued success.

5. Section Supervisors/Shop Supervisors shall:

a. Identify all personnel involved in the PRCSEP. Appendix 12-D provides an example of the Authorized PRCSEP Personnel Letter template. The letter shall be submitted to the CSPM at least annually or as personnel changes occur.

b. Review all permits after the termination of entry operations for correctness and compliance.

c. Audit at least one entry, by each PRCSEP employee, semi-annually to determine safety awareness and evaluate the employee's level of competency or provide annual refresher training approved by the ICSPM that focuses on the organization's local program. Ensure all audits of employee entries are documented. This can be completed by recording it on the permit used for the entry in the "Other Comments" block or by annotating the date of the audit on authorized PRCSEP roster.

d. Ensure that all personnel involved in the PRCSEP receive the required initial training and appropriate refresher training. Maintain records of

training and certification of competency for as long as such personnel are involved in the program or a minimum of three years. Forward copies of documented training to the CSPM within 15 days of completion. Ensure the records are readily available for review by entry supervisors and inspectors.

e. Ensure all PRCSS are properly labeled, per reference (a) and (e).

f. Ensure that all cutting, welding, brazing, and heating performed in PRCs is conducted per this Order and the local SOP.

g. Ensure entry team personnel are provided with all required entry, communication, and rescue equipment.

h. Submit copies of the cancelled entry permit to the ICSPM for each PRCs entry operation within 30 days of the permit cancellation. Retain copies of canceled permits for one year.

i. Ensure that only the department CSPM, entry supervisor, attendant, or entrant performs atmospheric tests and assesses existing hazards within the PRCs. Further ensure that one member of the entry team monitors atmospheric conditions from outside the space.

6. Department or Unit Confined Space Program Manager shall:

a. Perform atmospheric testing and inspecting for physical hazards in confined spaces.

b. Determine whether acceptable entry conditions exist, authorize the entry, oversee entry operations, terminate the entry, and cancel the entry permit.

c. Must be appointed in writing by the unit commander or department director.

d. Administer permits for entering into PRCs after JHA has been completed and approved by the ICSPM.

e. Execute alternate procedures when approved by the ICSPM and coordinate confined space operations.

f. Notify the ICSPM when a new PRCs is identified within their workspaces.

g. Assist Section/Shop Supervisor in the performance of their duties in support of the Confined Space Program.

h. Ensure all personnel affected by the PRCSP are identified and trained.

i. Submit confined space entry permits to the ICSPM.

7. Entry Supervisors. Procedures and duties for Entry Supervisors are clearly delineated in section 1910.146 of reference (e).

8. Entrants. Procedures and duties for Entrants are clearly delineated in section 1910.146 of reference (e).

9. Attendants. Procedures and duties for Attendants are clearly delineated in section 1910.146 of reference (e).

12004. PERMIT REQUIRED CONFINED SPACES

1. Requirements for Permit Required Confined Space entry:

a. Onboard MCAS Miramar, all confined spaces are considered Permit Required Confined Spaces.

b. In compliance with OSHA Standard 29 CFR 1910.146 (c) (8), (Host Employer) this installation is required to provide a contractor, with information pertinent to the known conditions of the Permit Required Confined Spaces identified in the contract scope of work to be performed on MCAS Miramar.

c. All Manholes and Unvented Vaults are presumed to contain atmospheric contaminants from aircraft fuel run-off to decomposing organic material and hazardous wildlife.

d. Atmospheric contaminants may reduce Oxygen levels to below 20.9%.

e. Oxygen levels may be adequate, but the presence of Explosive Gases or Hydrogen Sulfide may provide even more severe Hazardous Breathing or Explosive Atmospheres.

f. As always, be mindful of the variety of Hazardous Wildlife that may inhibit the cool, dark damp locations which include insects with venomous bites.

g. As a Department of Defense (DoD) or Private Sector Contractor, are required to comply with requirements of OSHA Standard 29 CFR 1910.146.

h. Ensure contractors who decide to have their employees enter a permit space provide their own rescue and emergency services.

12005. PERMIT REQUIRED PROGRAM ELEMENTS. The six basic elements of the confined space entry program consist of:

1. Identification and Preliminary Testing. The ICSPM, with the assistance of the department CSPM and the Industrial Hygienist, shall evaluate each confined space to determine whether it meets the criteria of a PRCS. The department CSPM shall maintain a current inventory of all PRCSs within their unit, department, or workspaces and provide a copy to the ICSPM.

2. Prevention of Unauthorized Entry. Supervisors shall brief all assigned employees of the entry restrictions and use physical means (e.g., locks, barriers) to secure spaces under their control. In addition, each PRCS shall be posted with a sign that reads "DANGER CONFINED SPACE, ENTRY BY PERMIT ONLY, CONTACT MCAS MIRAMAR CSPM 858-307-1357/1359". The sign shall be posted in a conspicuous location near likely entry points.

3. Comprehensive Hazard Evaluation. Evaluation of a confined space shall be conducted in accordance with 29 CFR 1910.146 prior to entry. The evaluation should include the following:

a. Initial Atmospheric Testing. At the completion of this testing, each space is classified as follows:

- (1) Class I Space. Contains atmospheres or conditions that are IDHL.
- (2) Class II Space. Contains atmospheres or conditions that are dangerous, but not IDHL.
- (3) Class III Space. Contains atmospheres or conditions that 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 that safe conditions are maintained. The types of testing vary and no single rule can be established for all operations. The CSPM shall be consulted to determine the frequency and type of test for periodic or continuous monitoring. The following operations shall be carefully considered for periodic or continuous monitoring:

- (1) Hot work with the potential of generating hazardous concentrations of toxic agents.
- (2) Hot work in the presence of preservatives, see page of flammables from seams or rivets, and similar operations.
- (3) Applications of preservatives, paints, epoxies, and similar operations that may generate hazardous concentrations of toxic or flammable vapors.
- (4) Cleaning operations, sludge removal, and similar operations that may produce or cause release of hazardous concentrations of toxic or flammable vapors.
- (5) Any other similar operations that 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 atmospheric testing. These instruments shall be suitable for the task as certified by NIOSH, Mine Safety and Health Administration (MSHA), or other nationally recognized testing authority such as Underwriters Laboratory or Factory Mutual. The CSPM shall ensure the instruments are properly used, maintained, and calibrated per the manufacturer's instructions.

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. Confined Space Entry Permits

a. If any entry into a PRCS is required, the entry supervisor shall provide a Confined Space Entry Permit to the unit or department CSPM and the ICSPM and (see APPENDIX 12-B for example). The permit shall include a description of the space, operation to be performed, and a list of proposed entry personnel. Based on the results of the comprehensive hazard evaluation discussed above, the CSPM or ACSPM shall grant approve entry or work can be performed safely. Permits shall be valid for no longer than one shift (8 hours) or the time required to complete the assigned task or job identified on the permit, whichever is less. Confined space entry permits shall be distributed as follows; four copies - one to each:

- (1) Copy - Job site (posted where all entrants have visual access).
- (2) Copy - Installation Safety Office.
- (3) Copy - Person conducting the atmospheric testing.
- (4) Copy - Entry Supervisor of the employee(s) entering the space.

b. If entry into a confined space is rejected, "REJECTED" shall be printed in large bold letters on all copies of the permit to ensure that personnel involved with a particular space shall NOT enter until the CSPM, ACSPM or CSPM has cleared the space.

c. When a permit expires, a copy shall be forwarded to the Installation Safety Office for retention.

d. All permits will be maintained by the ICSPM for one year, including permits that have been rejected. Entry Permits that contain atmospheric testing information that constitute an employee exposure record will be maintained for the employee's duration of employment plus 30 years as stipulated by reference (e).

5. Training and Qualifications

a. All CSPM and Assistant Confined Space Program Manager (ACSPM) must successfully complete a course that meets the criteria of 29 CFR 1910.146 and this enclosure to qualify for appointment. The following training is approved:

- (1) OSHA 2264, Permit-Required Confined Space Entry.
- (2) NAVSAFENVTRACEN A-493-0030, Confined Space Safety.

b. Entry supervisors, authorized entrants, and attendants shall be certified annually by the CSPM as being trained and having demonstrated to be competent. Records of training and certification of competency shall be

maintained by the CSPM for as long as such personnel are involved in the confined space entry program.

c. Entry supervisors shall ensure authorized entrants, and attendants are trained on the skills necessary for the safe performance of assigned duties, including specific hazards accordance with 29 CFR 1910.146. The CSPM shall assist in such training, as necessary. The entry supervisor shall certify on the entry permit that authorized entrants and attendants are properly trained in their duties under this manual.

d. Personnel assigned duties requiring them to enter into and work inside confined spaces shall have such duties included in their position description and personnel records. They shall be required to receive a physical examination annually based upon the type of work to be performed and the potentially hazardous exposures. Physical examinations shall be provided if determined necessary by industrial hygiene evaluations. A termination physical examination shall be given upon reassignment to another position or termination of employment.

6. Program Evaluation. Evaluation of the confined space entry program shall be completed by the CSPM at least annually and following any confined space mishap or incident.

12006. CONFINED SPACE RESCUE. MCAS Miramar does not have personnel certified to conduct confined space rescue. Any confined space entry will require permit to enter a confined space and an On-Site Rescue Plan filed with the Installation Safety Office using Appendix 12-C. In the event a confined space rescue becomes necessary, MCAS Miramar first responders will secure the scene and immediately invoke mutual aid with the City of San Diego. Upon notification via 911 dispatch center, the San Diego Fire Department will respond to the scene and personnel trained and qualified to conduct confined space rescue will conduct the rescue or recovery. MCAS Miramar Fire Department along with San Diego Fire Department shall participate in an emergency response drill for retrieval of an employee or dummy from a confined space at least annually.

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APPENDIX 12-A: CONFINED SPACE PROGRAM AUDIT CHECKLIST

Confined Space Program Audit Checklist

Unit or Department Inspected:		Date:			
Unit or Department POC:		Contact Info:			
#	ITEM ASSESSED	Y*	N*	NA	COMMENTS *Requires comment as to why or how the item is Yes or No. If no, what is the fix or solution?
Enrollment & Management					
1	Did the Commander or Department Head appoint in writing a Confined Space Program Manager (CSPM) and when practical, an Assistant Confined Space Program Manager (ACSPM) for the Unit or Department?				
2	Has the CSPM and ACSPM received required training? 1. Permit Require Confined Space Entry, OSHA 2264 Or 2. Confined Space Safety, NAVSAFENVTRANCEN, A-493-0030				Enter Dates Trained Here
3	Are all affected confined space workers trained and identified by the CSPM or ACSPM? Retain copy of training roster and attached to this audit.				# in Program: # Trained:
4	Is refresher training and update training conducted?				
5	Does the Command or Department maintain training documentation until personnel are no longer with the command?				

Confined Space Program					
6	<p>Has the Command or Department developed a written Confined Space (CS) program incorporating at least the following:</p> <ol style="list-style-type: none"> 1. Approved and signed by Commander or Department Head 2. Identify responsibilities to include contractors 3. Required training 4. Identify CS Hazards 5. Warning signs and labels 6. CS surveys 7. CS inventory when practical 8. Personal Protective Equipment (PPE) requirements 9. CS equipment required 10. CS entry forms/permits 11. Mishap reporting and investigation procedures 12. CS rescue plan 13. CS inspections 14. Maintaining documentation 15. Annual CS program assessment 				
7	Does the Command or Department determine the type of CS system(s) and method(s) to be used for work inside CS?				
8	Does the Command or Department develop site specific CS Entry Plans? The plan shall be developed either by the CSPM or ACSPM.				
9	Is an audit of the CS program conducted annually?				
PPE and Equipment					
10	Does the Command or Department purchase the appropriate PPE and work equipment for each CS?				

11	Has the Command or Department established a CS equipment storage area and developed requirements for the care, maintenance, and inspection procedures in accordance with manufacturer's instruction and recommendations?				
Permit Required Confined Space(s)					
12	Does a qualified CSPM evaluate and maintain an inventory of all permit required confined spaces with confined space hazard assessments?				
13	Are each permit-required confined space posted with a sign stating "Danger – Permit-Required Confined Space – Authorized Entrants Only" (or an equally effective posting) in English and the host nation primary language?				
14	Does the Command or Department complete the NAVMC 11405 Confined Space Entry Permit and post near or at the entry portal of the permit-required confined space?				
15	Did the Command or Department develop a rescue plan and procedures?				
16	Does the Command or Department terminate the entry and cancel the permit when entry operations covered by the permit have been completed, or when a condition that is not allowed under the entry permit arises in or near the permit space?				
Inspector Name (print):		Signature:			

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APPENDIX 12-B: EXAMPLE CONFINED SPACE ENTRY PERMIT

Confined Space Entry Permit							
Permit Number:		Date/Time Issued:		Date/Time Expired:		Emergency Number:	
Location/Space I.D:		Entry Supervisor Name (print):		Entry Supervisor Signature:		Installation CS Program Manager Name/Number:	
Entry Purpose/Operations to be conducted:							
Methods of Communication:							
Atmospheric Checks							
Instrument:		Model:	Serial Number:			Calibration Date:	
Test	Safe Range	Pre-Entry Testing	Time	Periodic Testing	Time	Periodic Testing	Time
Oxygen Content %	19.5 - 23.5%						
Explosive % LEL	< 10%						
Carbon Monoxide (CO)	< 35 ppm						
Hydrogen Sulfide (H2S)	< 10 ppm						
Tested By (Print):				Signature:			
Authorized Entrants				Authorized Attendants			
Confined Space Hazards							
<p>Check where applicable below:</p> <p> Oxygen-Deficient Atmosphere <input type="checkbox"/> Mechanical <input type="checkbox"/> Electrical <input type="checkbox"/> Oxygen-Enriched Atmosphere <input type="checkbox"/> Engulfment <input type="checkbox"/> Fire <input type="checkbox"/> Toxic Atmosphere <input type="checkbox"/> Entrapment <input type="checkbox"/> Steam <input type="checkbox"/> Hydraulic <input type="checkbox"/> Flammable Atmosphere <input type="checkbox"/> Pneumatic <input type="checkbox"/> Other CS Hazards: </p>							
Required Safety Precautions							
<p>Check where applicable below:</p> <p> Attendant <input type="checkbox"/> Fire Extinguisher <input type="checkbox"/> Rescue Equipment <input type="checkbox"/> Safety Boots <input type="checkbox"/> Hard Hat <input type="checkbox"/> Ventilation <input type="checkbox"/> Respirators <input type="checkbox"/> Lockout/Tagout <input type="checkbox"/> Communication <input type="checkbox"/> Protective Gloves <input type="checkbox"/> Lighting <input type="checkbox"/> Barricade Job Site <input type="checkbox"/> Other Safety Precautions: </p>							

APPENDIX 12-C: ON-SITE RESCUE PLAN

"NOTICE"

Permit Required Confined Spaces

1. Onboard Marine Corps Air Station (MCAS) Miramar, all Manholes and Unvented Vaults are considered Permit Required Confined Spaces.
2. In compliance with OSHA Standard 29 CFR 1910.146 (c) (8), (Host Employer) this installation is required to provide you, the Contractor, with information pertinent to the known conditions of the Permit Required Confined Spaces identified in the contract scope of work to be performed aboard MCAS Miramar.
 - (a) All Manholes and Unvented Vaults are presumed to contain atmospheric contaminants from aircraft fuel run-off to decomposing organic material and hazardous wildlife.
 - (b) Atmospheric contaminants may reduce Oxygen levels to below 20.9%.
 - (c) Oxygen levels may be adequate, but the presence of Explosive Gases or Hydrogen Sulfide may provide even more severe Hazardous Breathing or Explosive Atmospheres.
 - (d) As always, be mindful of the variety of Hazardous Wildlife that may inhabit the cool, dark damp locations which include insects with venomous bites.
3. As a Department of Defense (DoD) or Private Sector Contractor, you are required to comply with requirements of OSHA Standard 29 CFR 1910.146 (c) (9). Your feedback will enable us to monitor hazardous environments throughout the installation. Any Hazards confronted or created in Permit Spaces shall be brought to the attention of the installation Safety Department either through a debriefing or during the entry operation. **"Should any emergencies arise, immediately call 911 and report the specific location and need for emergency services". Do Not attempt to enter the space and perform any rescue!**
4. The MCAS Miramar points of contact for Permit Required Confined Spaces is Mr. Dobby D. Parchment (858) 307-1357. – CSPM

"MCAS MIRAMAR CONFINED SPACE PROGRAM REQUIREMENTS"

Contractor Operations

Where contractors are performing work on Marine Corps Air Station Miramar, OSHA Standards 29 CFR 1910.146 and Station Order 5100.8 Chapter 11 applies and the following provisions shall pertain to such work performed:

- a. The Contractor shall provide a "Competent Person" per Title 29 Code of Federal Regulations, Part 1910 and Title 29 Code of Federal Regulations, Part 1926 and as recommended by the NIOSH Criteria Document for Confined Spaces or Cal/OSHA requirements, as applicable.
- b. Laws and regulations make no provisions for Marine Corps personnel to issue permits for contractor operations. Performance of such functions may involve assumption of liability by Marine Corps personnel in the event of a mishap. Marine Corps personnel Shall Not Certify Spaces or Issue Permits for Contractor Operations or Personnel.
- c. Where Marine Corps Air Station Miramar personnel are to occupy the same space at the same time the MCAS Miramar CSPM/ACSPM or other Designated Qualified Person and the appropriate contractor representative shall issue separate permits and the contractor shall be informed of the MCAS Miramar findings. However, the contractor shall be informed by the contracting officer or FEAD Office that the contractor retains legal obligation for the safety of contractor personnel.

NOTE: Marine Corps personnel cannot make an entry or perform hot work based on a National Fire Protection Association (NFPA) Certificate, Certified Marine Chemist Certificate, or Competent Person certification written for contractor operations. In all cases involving contractor operations, the contracting officer shall inform the appropriate contractor that the contractor's confined space entry personnel must be adequately trained and qualified and that all operations are to be conducted under all requirements, of references 29 CFR 1910.146 and this Station Order. Since MCAS Miramar Personnel, equipment, and facilities may also be at risk and liability will not be assumed.

Confined Space Emergencies

- Do not enter the space to save the Victim
- Only remove/hoist personnel by lifeline as required
- Call 911 for emergency rescue and immediately state that a confined space emergency has occurred.
- Give specific location and any other pertinent information request emergency response team to the location.

On-Site Rescue Procedures

The attached On-Site Rescue Plan and these Procedures are part of the written plan for the confined space and are based on the assessment of hazards in this space.

Prior to entry and/or work in the confined space:

1. The entry supervisor will ensure that the attached "on-site rescue plan" for the confined space has been completed and that all the rescue equipment identified in the plan is available to effect a rescue in the confined space.
2. The entry supervisor will ensure that an adequate number of appropriately trained persons (as documented in the attached "on-site rescue plan") are available for immediate implementation of these on-site rescue procedures that apply to the confined space.
3. The entry supervisor will review all emergency procedures, including procedures relating to emergencies outside the confined space with all entrants and other related personnel.
4. The attendant establishes communication with all workers, using the means described in the attached "on-site rescue plan".

On entry and while working in the confined space:

1. The attendant who is stationed outside and near the entrance to the confined space as described in the attached "on-site rescue plan" remains in constant communication with all workers inside the confined space.
2. The attendant must be notified immediately if an entrant recognizes:
 - unusual action/behavior
 - an unexpected hazard
 - an unsafe act or
 - detects a condition prohibited by the permit
3. Entrants must exit the confined space as quickly as possible, when:
 - an order to evacuate is given by the attendant or entry supervisor
 - an entrant recognizes a sign or symptom of over-exposure
 - an unacceptable condition arises or
 - an evacuation alarm is activated.

In the event of a confined space rescue:

1. MCAS Miramar does not have personnel certified to conduct confined space rescue. In the event a confined space rescue becomes necessary, MCAS Miramar first responders will secure the scene and immediately invoke mutual aid with the City of San Diego. Upon notification via 911 dispatch center, the San Diego Fire Department will respond to the scene and personnel trained and qualified to conduct confined space rescue will conduct the rescue or recovery.

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MCAS MIRAMAR ON-SITE RESCUE PLAN		
Confined Space Name/Location:	Identification #:	Date:
Attendant:	Employer:	
Employer:	2)	
On-Site Rescue Personnel/Designation:	3)	
1)	4)	
Methods of Communication: Attendant to Rescue Personnel: <input type="checkbox"/> Phone <input type="checkbox"/> Audible Signal <input type="checkbox"/> Radio <input type="checkbox"/> Intercom		
Attendant to workers: <input type="checkbox"/> Phone <input type="checkbox"/> Radio <input type="checkbox"/> Intercom <input type="checkbox"/> Audible Signal <input type="checkbox"/> Visual Hand Signal <input type="checkbox"/> Rope Signal		
Methods of Rescue: <input type="checkbox"/> External (Retrieval) <input type="checkbox"/> Internal: <input type="checkbox"/> Congested: <input type="checkbox"/>		
<input type="checkbox"/> Hauling System Required: <input type="checkbox"/> Patient lowering system required/lowering area: <input type="checkbox"/>		
<input type="checkbox"/> Anchor overhead: <input type="checkbox"/>		
Anchorage: <input type="checkbox"/> Beam <input type="checkbox"/> Stairwell <input type="checkbox"/> Support Strut <input type="checkbox"/> Support Column <input type="checkbox"/> Other: <input type="checkbox"/>		
Pre-Rigging required? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Rescue Equipment Requirements (check <input type="checkbox"/> where applicable below and indicate quantity needed):		
<input type="checkbox"/> Hauling Systems: <input type="checkbox"/> Carabiners: <input type="checkbox"/> Pulleys: <input type="checkbox"/> Shock absorbers/lanyards: <input type="checkbox"/>		
<input type="checkbox"/> Anchor Straps: <input type="checkbox"/> Webbing: <input type="checkbox"/> Ascenders: <input type="checkbox"/> Body Harnesses: <input type="checkbox"/>		
<input type="checkbox"/> Rigging Plates: <input type="checkbox"/> Safety Lines: <input type="checkbox"/> Main Lines: <input type="checkbox"/> Wrist/Ankle Harnesses: <input type="checkbox"/>		
<input type="checkbox"/> Fire Extinguishers: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Rescue Equipment Inspections		
Identified rescue equipment inspected by competent worker: <input type="checkbox"/> Employer: <input type="checkbox"/>		
Record of inspection(s) attached <input type="checkbox"/> Yes		
Medical Equipment Requirements (check <input type="checkbox"/> where applicable below and indicate quantity needed):		
<input type="checkbox"/> First Aid Kit: <input type="checkbox"/> Packaging Device: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Additional PPE Requirements (Indicate what is needed):		
<input type="checkbox"/> High Visibility Vests <input type="checkbox"/> Hearing Protection <input type="checkbox"/> Safety Boots <input type="checkbox"/> Hard Hats <input type="checkbox"/> Safety Glasses/Goggles <input type="checkbox"/> Gloves		
<input type="checkbox"/> Face Shield <input type="checkbox"/> <input type="checkbox"/>		
Description of Space (include location of attendant):		
Diagram of Space (Use Back of Page if needed):		
Completed by: <input type="checkbox"/> Entry Supervisor <input type="checkbox"/> Attendant <input type="checkbox"/> Other: <input type="checkbox"/> Date: <input type="checkbox"/>		

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APPENDIX 12-D: EXAMPLE AUTHORIZED PRCSEP PERSONNEL LETTER



UNITED STATES MARINE CORPS
MARINE CORPS AIR STATION MIRAMAR
PO BOX 452001
SAN DIEGO CA 92145-2001

5100
CSP/Cert
DD Mon YY

From: Section Supervisor, Shop Supervisor, Assistant Confined
Space Program Manager (ASCPM), Division or Department
To: Confined Space Program Manager, Marine Corps Air Station,
Miramar

Subj: PERMIT REQUIRED CONFINED SPACE ENTRY PROGRAM PERSONNEL

Ref: (a) MCO 5100.29C
(b) MCAS Miramar StaO 5100.1

Encl: (1) PRCSEP Personnel Roster

1. Per references (a) and (b), the following personnel listed in the enclosure have completed the Initial Permit Required Confined Space Entry Program training. In addition, personnel training records were reviewed to verify that required additional training such as Respiratory Protection, Lock Out/Tag Out, Hazard Communication, Fall Protection, and Personal Protection Equipment has been completed. Personnel have received training on all required equipment specific to this department to perform assigned work tasks when entering PRCSSs.

2. The personnel listed in the enclosure are hereby certified to enter PRCSSs to perform assigned duties.

3. The listed personnel have read and understand the requirements contained in the division/department standing operation procedures and references (a) and (b).

4. Point of contact for Division/Department is Mr. John Doe at 577-XXXX.

I. M. BOSS

Copy to:
Dept Head, (Div/Dept)
(Div/Dept) Safo

CHAPTER 13

BLOODBORNE PATHOGENS PROGRAM (EXPOSURE CONTROL PLAN)

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CHAPTER 13

BLOODBORNE PATHOGENS PROGRAM (EXPOSURE CONTROL PLAN)

13000. PURPOSE

1. The Bloodborne Pathogens Program is supported by the implementation of an Exposure Control Plan (ECP) to meet the letter and intent of the OSHA Bloodborne Pathogens Standards. The ECP is a policy to prevent or reduce the risk of personnel occupationally contracting Hepatitis B Virus (HBV), Human Immunodeficiency Virus (HIV), and other bloodborne diseases.

a. The ECP sets forth procedures, engineering controls, personal protective equipment, work practices, and other methods designed to protect personnel and meet the requirements stipulated in the OSHA Bloodborne Pathogens Standards.

13001. POLICY. The ECP for Bloodborne Pathogens will comply with references (a) and (e).

13002. APPLICABILITY. Applicable personnel are encouraged to study provisions of the Bloodborne Pathogens Program and review their unit, department, or workplace ECP and direct questions and/or comments to their Exposure Control Officer. The input and involvement of applicable personnel is needed to ensure the ECP continues to provide adequate workplace safety. Unit, department, and workplace ECP are subject to annual review by the MCAS Miramar Bloodborne Pathogens Program Coordinator.

13003. DEFINITIONS

1. Biohazard Label. A label affixed to containers of regulated waste and other containers used to transport blood and other potentially infectious materials. The label must be fluorescent orange-red with the biohazard symbol and the word "biohazard" on the lower part of the label.

2. Blood. Human blood, human blood components, and products made from human blood.

3. Bloodborne Pathogens. Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, HBV and HIV.

4. Contaminated. The presence or the reasonably anticipated presence of blood, or other potentially infectious materials on an item or surface.

5. Contaminated Sharps. Contaminated objects that can penetrate the skin including, but not limited to, needles and broken glass.

6. Decontamination. The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

7. Personnel. An individual employed in a health care, industrial or other facility, or operation that may be exposed to bloodborne pathogens in the course of their assignments.
8. Engineering Controls. Controls (e.g., sharps disposal containers, self-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.
9. Exposure Control Officer. Personnel designated by the unit, department, or workplace who are responsible for tracking BBP requirements. In most cases this will be the employee's supervisor.
10. Exposure Incident. A specific eye, mouth, other mucous membrane, non-intact skin, parenteral contact with blood, or other potentially infectious materials that results from personnel performing their duties.
11. Hand Washing Facilities. A facility providing an adequate supply of running potable water, soap, single use towels, or air-drying machines.
12. HBV. The disease can produce mild to chronic infection, liver damage such as cirrhosis, liver cancer, or death due to liver failure.
13. HIV. The precursor to the Acquired Immunodeficiency Syndrome (AIDS). AIDS results in the breakdown of the immune system, so the body does not have the ability to fight off other diseases. Currently no vaccination exists to prevent infection of HIV, and there is no known cure.
14. Licensed Health Care Professional. A person who is legally permitted a scope of practice that allows them to independently perform the activities required by reference (e), section 1030, paragraph f.
15. Medical Consultation. A consultation which takes place between personnel and a licensed medical professional for the purpose of determining the employee's medical condition resulting from exposure to blood or other potentially infectious materials, as well as any further evaluation or treatment that is required.
16. National Institute for Occupational Safety and Health (NIOSH). The federal agency which assists OSHA in occupational safety and health investigations and research.
17. Occupational Exposure. Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of their duties.
18. Other Potentially Infectious Materials (OPIM)
 - a. The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, anybody fluid that is 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- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

19. Parenteral. Piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions.

20. PPE. PPE is specialized clothing or equipment worn by personnel for protection against a hazard. General work clothes (e.g., uniforms, scrub suits, pants, shirts, or blouses) are not intended to function as protection against a hazard. These work clothes are not considered to be PPE.

21. Regulated Waste. Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items caked with dried blood or other potentially infectious materials capable of releasing these materials during handling, to include contaminated sharps.

22. Source Individual. Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to personnel. Examples include, but are not limited to, trauma victims and human remains.

23. Universal Precautions. An approach to infection control. According to the concept of universal precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

24. Work Practice Controls. Controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

13004. EXPOSURE DETERMINATION. Units, departments, or workplaces who are required to establish and maintain a Bloodborne Pathogens (BBP) program due to occupational exposure through work processes identified in periodic IH surveys, shall prepare an exposure determination by completing the following, and incorporating it into their exposure control plan (this exposure determination shall be made without regard to use of PPE):

1. List all job classifications in which all employees in those job classifications have occupational exposure.
2. List all job classifications in which only some employees have occupational exposure.
3. List all tasks and procedures or groups of closely related tasks and procedures in which occupational exposure occurs. Include tasks and procedures that are performed by employees in job classifications listed above.

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4. Identify and maintain a list of all employees related to tasks and duties listed above and monitor and record compliance with training and medical requirements as listed in reference (e).

For the following MCAS Miramar job classifications, it is reasonable to anticipate occupational exposure to bloodborne pathogens while performing certain jobs or tasks as identified in periodic IH surveys for the below:

<u>Department</u>	<u>Job Title</u>	<u>Procedure</u>	<u>Location</u>
PMO	Patrolman	First responder	Patrol
MCCS	Lifeguards	First responder	Swimming Pools
MCCS	Childcare	Providers	Child Development Centers
Fire Dept	Firefighters	First responder	MCAS Miramar
OPS	ARFF/EOD	First responder	Flight Line

13005. ENGINEERING CONTROLS. Commands, departments, or workplaces shall identify specific engineering controls based on the occupational exposure processes identified in their IH survey. The identified engineering controls should be listed in their command/unit/activity exposure control plan along with activities/tasks or processes where utilization is required. (examples include: long handled dustpan and broom, chemical absorption kit, tongs for cleaning up broken glass, sharps containers, etc.)

13006. REQUIRED WORK PRACTICES (GENERAL)

1. Wash hands with soap immediately or as soon as possible after removing gloves or other PPE and after hand contact with blood or OPIM.
2. If conditions are such that hand washing facilities are not available, use antiseptic hand cleaners and wash hands at the first available opportunity.
3. Remove PPE immediately upon leaving the work area or as soon as possible. Discard PPE in accordance with waste disposal procedures identified in unit, department, or activity ECP or contact the MCAS Miramar Hazardous Waste division or Occupational Health Clinic for further instructions.
4. Do not eat, drink, smoke, apply cosmetics/lip balm or handle contact lenses in work areas where there is a potential occupational exposure.
5. Always follow PPE and engineering control requirements when handling blood or other potentially infectious material.
6. Universal precautions shall be observed to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials.

13007. PPE

1. Where there is occupational exposure, personnel will be provided with (at no cost to the individual) required PPE including, but not limited to, gloves, glasses with side shields, and face shields. When necessary, provide hypoallergenic, powderless, or other alternative gloving to personnel who are allergic to types normally provided.
2. Obtain PPE through the worksite immediate supervisor or designated personnel.
3. Do not decontaminate or wash single-use (disposable) gloves for re-use.
4. Remove and dispose of PPE prior to leaving the work area.
5. Workplace supervisors will ensure that provided PPE does not permit blood or OPIM to pass through or contact clothing, skin, mouth, or mucous membranes.
6. Workplace supervisors will survey PPE and ensure that an adequate amount is on-hand at all times.
7. Command/unit/activity exposure control plans shall list the types of PPE available for use, and circumstances under which to use them in relation to the hazardous processes identified in their IH survey.

<u>Item</u>	<u>Procedure</u>
One-way valve disposable rescue breather	Rescue breathing/CPR
Disposable gloves	Rescue breathing/CPR

13008. HOUSEKEEPING

1. Work Surfaces. Decontaminate work surfaces with an appropriate disinfectant immediately after blood spills or OPIM and at the end of the work shift.
2. Equipment. Routinely check equipment for blood or OPIM contamination and decontaminate as necessary.
3. Receptacles. Inspect, clean, and disinfect bins, pails, cans, and similar receptacles intended for reuse which have a potential for becoming contaminated with blood or OPIM immediately or as soon as possible upon visible contamination.
4. Glassware. When cleaning up potentially contaminated broken glass, use a brush and dustpan; do not use your hands.
5. Responsibilities. Supervisors are responsible for providing clean and sanitary worksites for small quantities of bio-hazards materials. Supervisors will request support through Installation S-4 or the Hazardous Waste division for contract support for large bio-hazard cleanups.

13009. WASTE DISPOSAL

1. The worksite supervisor shall ensure that waste is properly eliminated and that the following is observed:

a. Items containing contaminated material shall be placed in an appropriately designated leak proof bag or container.

(1) If outside contamination of the container/bag is likely to occur, use a second leak proof container/bag, color-coded, or labeled, over the outside of the first and close it to prevent leakage during handling, storage and/or transport.

b. Potentially infectious material not considered to be regulated waste, can be disposed of by traditional means.

c. It is the responsibility of the worksite supervisor to determine the existence of regulated waste.

d. Regulated waste must be maintained and stored separately from other waste and disposed of in accordance with applicable state and local regulations.

e. Command/unit/activity exposure control plans shall lay out procedures for collection and disposal of regulated waste (to include sharps containers). Medical (Occupational Health Clinic) and environmental departments (Hazardous Waste division) may be contacted for further guidance or assistance if needed.

13010. COMMUNICATION OF HAZARDS TO PERSONNEL

1. Labels

a. Affix warning labels to containers of infectious waste and contaminated PPE.

b. Labels shall bear the legend described in references (a) and (3). They shall be fluorescent orange or orange-red or predominately so, with lettering or symbols in the contrasting color.

c. Labels shall be an integral part of the container or affixed as close as safely possible to the container by string, wire, adhesive or any other method that prevents their loss or unintentional removal.

d. Substitute red bags or red containers for labels on containers of infectious waste.

e. Workplace supervisors are responsible for ensuring that containers of bio-hazardous waste are properly labeled.

f. Workplace supervisors shall create JHA's for all work processes that have occupational exposure and enforce compliance with safety protocols.

2. Information and Training

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a. Personnel with occupational exposure shall participate in Exposure Control Training prior to their initial assignment and at least annually thereafter. The workplace supervisor is required to ensure personnel with potential occupational exposure receive training. Training is completed within departments and training rosters kept at departments. ARFF, EOD, Fire Dept, PMO, and MCCS conduct their own training and have their own training slides. Training may also be requested through the Safety Department Bloodborne Pathogens Program Coordinator.

b. Personnel shall receive information and training in the following areas:

- (1) Regulatory standards.
- (2) Epidemiology and symptoms of bloodborne diseases.
- (3) Modes of transmission of bloodborne pathogens.
- (4) Exposure control plan.
- (5) Appropriate methods for recognizing tasks and procedures that may involve exposure to blood or OPIM.
- (6) Use and limitations to prevent or reduce exposure, including appropriate engineering controls and work practices.
- (7) Personal protective equipment.
- (8) Selection of personal protective equipment.
- (9) Hepatitis B vaccine.
- (10) Appropriate actions and contact personnel in the event of an emergency.
- (11) Procedures in the event an exposure incident occurs, including reporting method.
- (12) Medical counseling.
- (13) Signs, labels, and/or color-coding.
- (14) Questions and answers.

13011. MEDICAL SURVEILLANCE

1. General Information

a. Enrollment in BBP Program. Supervisors who have personnel who are enrolled in the bloodborne pathogens program due to being in positions identified to have occupation exposure shall ensure those personnel report to the MCAS Miramar Occupational Health Clinic, for initial medical screening exam. It is at the Occupational Health Clinic as part of the bloodborne

pathogens medical screening exam that personnel can declare to not take the Hepatitis B vaccination and sign the Hepatitis B Vaccine Declination form.

(1) Workplace supervisors will ensure entry of bloodborne pathogens medical surveillance is entered in ESAMS, RMI or other computer information system as directed by the Installation Safety Department.

b. 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 which results from the performance of an employee's duties, including providing first aid as a responder. All exposures will be reported immediately to the workplace supervisor, and an immediate confidential medical evaluation will be provided by MCAS Miramar Occupational Health. The MCAS Miramar Branch Health Clinic is responsible for initial medical evaluations and counseling. After normal working hours, weekends and holidays, personnel are to report to a medical treatment facility MTF off base where the incident victim(s) are being directed to and/or transported by Emergency Medical Services (EMS) personnel for further screening. Post exposure medical care management shall be obtained through the Workmen's Compensation claim process.

(1) Supervisors will complete a medical referral form documenting the following in the "remarks" section:

(a) The route(s) of exposure.

(b) HBV and HIV antibody status of the source individual's blood (if known).

(c) The circumstances under which the exposure occurred.

c. Assistance. Concerns on bloodborne pathogens should be directed to the DSS, the BHC, or the Naval Hospital Infection Control, Occupational Medicine or IH Departments.

13012. RECORDKEEPING AND TRAINING

a. Medical Records. Medical records shall be kept for the length of the individual's employment plus 30 years per reference (d). Maintain records at the designated medical treatment facility supporting the command or activity or transferred to the archives according to current regulations.

b. Training Records. All training is required to be entered into permanent records.

(1) Supervisors will keep training records for three years. The records will include:

(a) Instructor name and qualifications.

(b) Date of training.

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- (c) Contents or summary of training session.
- (d) Names and job titles of all persons attending training.

CHAPTER 14

RECREATION AND OFF-DUTY SAFETY PROGRAM

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CHAPTER 14

RECREATION AND OFF-DUTY SAFETY PROGRAM

14000. PURPOSE. This Order promulgates policy and establishes procedures to eliminate or minimize the probability of mishaps occurring during off-duty and/or recreational activities.

14001. BACKGROUND. MCAS Miramar is committed to the safety of all Marines, their families, and the public. This commitment extends to all recreational and off-duty activities, as the loss of personnel to mishaps adversely affects both unit readiness and our Marines' families and communities. An effective Recreation And Off-Duty (RODS) program is vital to individual and unit health, and overall operational readiness.

This chapter incorporates RODS into the new MCAS Miramar SMS to better align the RODS program requirements and to highlight the fundamental goal of the system, to have Marines continuously identifying hazards, assessing risk, and implementing controls. Integration of RODS into the SMS framework allows the installation to systemically extend RM and other safety principles to the recreational and off-duty environment, which is critical because historically most Marines are injured and killed when they are off-duty. This chapter and the larger SMS provide leaders with management tools to help identify recreational and off-duty hazards and make sound risk decisions.

14002. SCOPE. This program is applicable to the following:

1. All Miramar active duty military members, on-duty and off-duty.
2. All Miramar reserve personnel, on-duty and off-duty while in any type of active duty status.
3. All Miramar civilian employees while on-duty or in an official travel status.
4. All individuals participating in recreational activities on Marine Corps owned or controlled property.

14003. RESPONSIBILITIES

1. Commanding Officer

a. Establish a command RODS program compliant with the requirements detailed in this chapter and in accordance with reference (a).

b. Include RODS specific commander's intent in the State-of-Health (SOH) policy statement. Where established, ensure SOH policies developed to supplement this chapter include local RODS requirements.

2. Director of Safety

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- a. Ensure that the RODS Program reflects command presence and leadership initiatives.
- b. Appoint an Installation RODS Program Manager to provide oversight of the RODS program.
- c. Coordinate safety inspections of command owned or controlled MCCA recreational areas.
- d. Ensure RODS training is provided to command military members and civilian employees as required.
- e. Ensure self-assessment of the command RODS program is conducted as a part of the SOH self-assessment at least annually and complies with all requirements specified by higher level commands.
- f. Ensure command RODS Program Managers participate in safety councils, safety committees, or and contribute to the creation of safety promotion materials.
- g. Ensure RODS mishaps are reported, investigated, and documented in accordance with this order's requirements, and corrective actions are implemented to mitigate risks associated with identified hazards.
- h. Provide local area/host nation hazard briefs to newly assigned and tenant military members and civilian employees within 30 days of arrival.
- i. Enforce compliance with appropriate personal protective equipment requirements for all command directed or sponsored RODS events.
- j. Ensure risk management is integrated into all off-duty activities.
- k. Ensure purchases or installation of command procured RODS equipment not provided through local MCCA office meets all safety requirements. Local MCCA staff may be consulted for guidance.

3. Installation Safety Manager

- a. Shall provide oversight of Off-Duty and Recreation Safety Program duties to include the following:
 - (1) Participate in local council meetings to identify and recommend improvements for specific recreation, athletics, and home safety problem areas.
 - (2) Liaison with activities having ownership of MCCA facilities and equipment to facilitate local information exchange.
 - (3) Participate in the evaluation of plans and specifications of recreational facilities prior to acquisition to ensure hazards are eliminated. Ensure recommendations for improvements are submitted in writing to the cognizant field authority.

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(4) Inspect recreational facilities at least annually. Conduct follow up inspections to ensure corrective actions have been taken or corrective action plans are provided.

(5) Ensure recreational and athletic equipment purchased for use by personnel conforms, as applicable, with safety guidelines established by nationally recognized consensus agencies such as the American National Standards Institute (ANSI).

b. Shall be responsible for implementing the prescribed Safety standards and shall incorporate the Off-Duty and Recreation Safety Program requirements into existing activities, programs and facilities where appropriate. These requirements include, at a minimum, the following:

(1) Routinely distribute safety awareness information. This information may include the following:

- (a) Home safety literature.
- (b) Risk Management Techniques.
- (c) Consumer Product Safety literature.
- (d) National Safety Council literature.
- (e) Bulletins and other safety information.

4. Installation MCCA Director

a. Assign an MCCA safety officer in writing, who shall be trained per references (a).

b. Develop and publish SOPs, including minimum safety requirements, for the use of all MCCA facilities and equipment. The facility supervisor shall provide activity-specific safety training in accordance with MCCA Policy Manual to patrons, as appropriate. SOPs shall be displayed in appropriate locations. The area/activity/facility supervisor will develop a process for tracking the completion of all required training and testing requirements. Training records will be maintained per reference (a).

c. Ensure safety and health inspection reports are reviewed and appropriate written responses are returned to the Installation Safety Office within 30 days of unit receipt. Abatement actions shall be reported for each item identified during the inspection.

d. Ensure written emergency action plans are properly posted and include medical, fire, and evacuation plans. Include emergency phone numbers, specific billet responsibilities and any other pertinent information and training.

e. Enforce the use of required PPE for patrons participating in all MCCA-sponsored activities.

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f. Attend installation Safety Council meetings.

5. Tenants, Department Heads, Managers, and Supervisors

a. Appoint a RODS Program Manager with the authority to successfully oversee and implement the program in accordance with reference (a).

b. Provide RODS training during command indoctrination requirements on awareness of the commands RODS program, individual responsibilities, and local awareness training (such as known local hazards, local laws, restricted areas, and common geographic high-risk recreational activities).

c. Ensure the RODS program manager conducts quarterly recreational, athletics, and home safety hazard awareness training that is seasonally and geographically appropriate. RODS should include recreation, athletics, and home safety as well as substance abuse. Maintain documentation of completed training for two years.

d. Ensure the RODS program manager briefs personnel on internal recreation, athletics, and home mishap notification procedures.

e. Ensure recreation and off-duty safety policy is followed in all activities under their control including non-appropriated fund activities and operations that are under the sponsorship of the unit special services officer or the MCCA Director for the purposes of morale, welfare and recreation.

f. Assess the hazards and risks presented by the activity or recreational event then determine and implement controls.

g. Ensure safety requirements are embedded in the operating procedures, and training includes the controls to minimize mishaps or to halt the activity or operation when unsafe conditions exist.

h. If required, ensure personnel complete a proficiency evaluation prior to participation in an athletic or recreational event. For example, rental and use of a MCCA boat requires proof of a safe boating course.

i. Prohibit military members from participating in high-risk recreational activities alone.

j. Encourage military members and civilian employees to stop and reevaluate risk when RODS activities become unsafe or are more hazardous than anticipated, and to have a plan that includes abort criteria and a plan to halt the activity if required.

k. Review RM assessments submitted by military members preparing to engage in high-risk on-duty and off-duty recreational activities prior to execution.

l. Ensure RODS mishaps are correctly reported, investigated, and documented, and corrective actions are implemented to reduce the risk of future mishaps.

m. Ensure subordinates understand and meet their responsibilities required by this chapter.

n. Ensure self-assessment of the command RODS program is conducted as a part of the SOH self-assessment at least annually and complies with all requirements specified by higher level commands.

o. Ensure RODS program manager provides RODS training to military members and civilian employees at Indoc/Check-in.

6. Personnel

a. Use the RM process to identify hazards, assess risk, and implement controls before and during participation in recreational and off-duty activities. Stop and reevaluate risk when RODS activities become unsafe or more hazardous than anticipated, and to have a plan that includes abort criteria, and a plan to halt the activity if required.

b. Have the required level of knowledge and physical ability before participation in any RODS activity.

c. Wear all required or appropriate personal protective equipment.

d. Do not engage in high-risk recreational activities alone.

e. Stay aware of the command's list of high-risk recreational activities and inform the chain of command before participating.

f. Complete a high-risk recreational activity assessment with the command RODS program manager or supervisor in advance of high-risk recreational activity participation.

g. Complete any required training, gain certifications, or meet applicable qualifications in advance of participation in any high-risk recreational activities and submit documentation to a supervisor and the command RODS program coordinator.

h. Report RODS-related mishaps to a supervisor or chain of command as soon as possible.

i. Report hazards or deficiencies in MCCA recreational areas to MCCA staff.

j. Comply with all local, state, national, or host nation laws, regulations and rules when participating in RODS activities.

k. Wear all required or appropriate personal protective equipment during participation in recreational activities while on-duty or off-duty at MCCA-controlled recreational areas.

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1. Report on-duty and off-duty recreational mishaps to a supervisor or the chain of command as soon as possible.

m. Comply with all local, state, national, or host nation laws, regulations and rules when participating in recreational activities while on- or off-duty.

14004. RISK MANAGEMENT AND RODS

1. The RM process will be applied to manage and control risk for RODS at all levels. Potential hazards associated with RODS events and activities will be fully assessed in advance. Risk assessment and implementation of controls will be made at the lowest authority level possible. The goal is to ensure all hazards are accounted for and mitigated.

a. Continuous Engagement. Individual military members require direct one on one communication from leaders at all levels to reinforce the need to incorporate risk management into all recreational and off-duty decision making. Group discussions (safety briefs) are acceptable for multiple participants of specific on-duty organizational or general off-duty RODS events and activities. All briefs and discussions should reinforce the need to continuously identify hazards, assess risk, and implement safety controls for both individual and group activities.

b. Recreational Operations and Equipment. Equipment and facilities provided by MCCA for off duty recreational purposes must meet rigid safety standards. Introduction of large scale recreational operations or local purchase/installation of recreational equipment outside of the MCCA needs to meet the same safety standards and requirements used by MCCA. Commands establishing their own recreational operations or purchasing RODS equipment will consult with their local MCCA staff or another qualified safety authority to ensure a thorough risk analysis is completed. At a minimum, the safety considerations listed in manufacturer instructions and MCO P1700.27B Ch. 1, MCCA Policy Manual will be maintained for MCCA type operations and equipment.

14005. HAZARD IDENTIFICATION AND RODS

1. Hazard identification for RODS-related facilities will be accomplished during the inspections required in Chapter 7 of this Order. SOH inspections of these areas will focus on the identification of hazards that may cause injury or illness to on-duty workers, off-duty USMC personnel (military and civilian), and patrons of MCCA areas.

14006. TRAINING

a. Initial Training. All personnel are required to receive initial RODS training at Indoc/Check-in.

b. Refresher Training shall be accomplished as identified below:

(1) Military personnel will receive refresher RODS training during annual Back In The Saddle (BITS) and 101 Days of Summer operational pauses.

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(2) Supervisors shall brief their civilian employees on recreational and off-duty safety before enrollment in the civilian fitness program.

c. **RODS Briefs.** The unit RODS program manager shall ensure military personnel receive RODS briefs prior to any holiday, foreign port visits, returning from deployment, seasonal change, or when RODS mishaps highlight the need for additional training. RODS briefs may be informal or formal and encompass a variety of training methods including safety stand-downs, division and department briefs, supervisory briefs, mishap testimonials, videos, and guest speakers. These briefings should be carefully prepared to minimize the time burden on the command.

d. **MCCS Patron Training.** MCCS-authorized patrons will be provided training in safety techniques and procedures associated with the use or receipt of MCCS-controlled recreational areas or equipment that potentially exposes the user to safety or health hazards. Patrons will be trained by staff qualified to provide instruction on safety measures specific to the equipment or activity. Training qualifications of MCCS staff providing instruction will meet the requirements in MCO P1700.27B CH 1, MCCS Policy Manual. Patrons may be allowed to show proof of safety course completion by recognized and approved organizations to meet MCCS patron training requirements.

e. **Group Physical Training/Recreational Events.** Participants in command directed recreational events outside of MCCS-controlled facilities will receive guidance on safety precautions to prevent mishaps in advance of the activity. This guidance may include techniques for pre- and post-activity exercise and how to properly use required personal protective equipment. Commands may request this guidance from local MCCS staff on recreational safety procedures for events outside MCCS facilities.

f. **Specific Participant Training.** Individuals desiring to engage in RODS activities with mandatory training will successfully complete the required training. Commands may also choose to require the completion of training that would otherwise be optional before allowing members to participate in high-risk recreational activities specific to a geographic location.

g. Training records and submitted to the S-3's and rosters will be maintained for at least 5 years.

14007. **HIGH-RISK ACTIVITIES.** High-risk activities shall require a high-risk recreational activity assessment with the command RODS program manager or supervisor in advance of high-risk recreational activity participation. Examples of high-risk recreational activities include skydiving, paragliding, scuba diving, white water rafting/kayaking, vehicle racing to include formal racing/defensive driving instruction, remote hiking and camping, and rodeo participation.

CHAPTER 15
LEAD SAFETY PROGRAM

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CHAPTER 15

LEAD SAFETY PROGRAM

15000. PURPOSE. To establish procedures and requirements to eliminate or mitigate exposures to lead hazards during industrial and construction activities performed by all military and civilian personnel aboard MCAS Miramar.

15001. BACKGROUND

a. Lead refers to metallic lead, all inorganic lead compounds, and organic lead soaps. Organic lead compounds are excluded. Common uses for lead and lead compounds include ballast, radiation shielding, ammunition, paint filler and hardener, rubber antioxidant, 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.

b. Lead is a long recognized health hazard. In recognition of the serious health hazards associated with and numerous sources of potential lead exposure, strict controls to limit both occupational and environmental exposures are required.

15002. RESPONSIBILITIES

a. Commanders, department heads, and supervisors shall ensure work operations using lead or materials containing lead are conducted per this Order and references (a) and (e).

b. Supervisors of personnel conducting operations with lead or lead containing materials shall:

(1) Notify the Lead Program Manager (LPM) within the Public Works department before commencing operations, including self-help projects such as paint removal and sanding, which may generate any amount of airborne lead to ensure proper PPE is provided; and environmental work center containment and monitoring is conducted.

(2) Ensure personnel who enter lead controlled boundaries are trained according to this Order and references (a) and (e).

(3) Ensure personnel who are assigned duties inside of lead controlled boundaries receive required medical examinations and are assigned to the medical surveillance program if applicable. Maintain a list of personnel on the medical surveillance program for lead. This list shall be made available to the DS upon request.

(4) After consulting with the DS and IH, provide required PPE for personnel involved in lead operations.

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(5) Notify the DS and IH of any significant change in the process or equipment that may affect personnel exposures to lead.

(6) Ensure personnel are trained per this chapter and chapter 9 of this Order.

c. Director of Safety:

(1) 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 Grants schools.

(2) Provide technical support and guidance on written aspects of the Lead Safety Program, appropriate training and PPE to supervisors and USO/DSRs.

(3) Redirect to the responsible MCAS Miramar IH Division any requests for evaluation of operations involving lead.

(4) Ensure a hazard assessment survey is completed.

(5) Notify the responsible IH of any personnel entering or working inside of lead controlled boundaries.

(6) Ensure supervisors are informed of proper safety equipment acquisition procedures.

d. MCAS Miramar Public Works Officer:

(1) Coordinate with the MCAS Miramar LPM for the monitoring of all lead activities by other service providers such as PWC San Diego and Facilities Engineering and Acquisition Division (FEAD), and coordinate with the MCAS Miramar LPM the receipt of all appropriate documentation of lead activities for permanent records to be maintained in the MCAS Miramar Facilities Management Division (Public Works Department) office.

(2) Coordinate with the MCAS Miramar LPM for the training required under the Lead Management Program.

(3) Coordinate planning and funding of all lead control measures and abatement on MCAS Miramar.

(4) Coordinate with the MCAS Miramar LPM for the scheduling, planning, and monitoring of all construction project activities in areas that are known to contain (or suspected to contain) lead-containing materials in order to prevent unnecessary damage to the materials and potential employee exposure. As per regulations, prior to any construction activities (i.e. renovation, remodeling, demolition, etc.) a thorough inspection of the affected facility must be conducted by the MCAS Miramar LPM (or authorized representative). This shall include, but not limited to; review and inspection of the existing MCAS Miramar Lead Management Plan for the individual facility to identify previously surveyed materials.

e. MCAS Miramar Facilities Maintenance Division Director:

(1) Appoint a MCAS Miramar LPM. The MCAS Miramar LPM shall oversee the Lead Abatement Program and ensure all aspects of the program are implemented.

(2) Ensure the MCAS Miramar LPM oversees training and certification requirements for applicable MCAS Miramar personnel.

(3) Ensure the MCAS Miramar LPM reviews all work requests that may affect lead-containing materials, including Self Help work requests for possible lead involvement.

f. Industrial Hygiene:

(1) Evaluate work operations involving lead and conduct air sampling as required.

(2) Develop and recommend lead controlled boundaries based on air sampling data.

(3) In coordination with the DS and supervisors, recommend required PPE.

(4) Advise supervisors of personnel recommended to be included in the medical surveillance program for lead.

(5) Provide technical support and guidance to the DS.

g. Occupational Health Office: Provide medical surveillance for service members and DoD civilian employees.

h. Personnel Working with Lead:

(1) Comply with work control procedures, including the wear and use of the prescribed PPE.

(2) Report to supervisor any observed unsafe work conditions.

(3) Receive the proper medical examinations as required.

15003. LEAD EXPOSURE CONTROLS

a. 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. Recirculation of HEPA filtered air from lead operations is not recommended. At no time shall a non-HEPA vacuum be used in lead operations.

b. On a case-by-case basis, the LPM or responsible MCAS Miramar IH Division shall identify specific vacuum and ventilation requirements for dust producing operations.

c. Ventilation systems used to control personnel exposure to lead are required to be evaluated by the LPM and IH quarterly and within five days of any significant change in either the work process or equipment.

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d. 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 shall dry-sweeping be employed. Cleaning materials, boundary materials, and wastewater shall be treated as lead contaminated HM.

15004. TRAINING

a. For purposes of training, designated lead workers are defined as those individuals who are exposed to airborne lead concentration in excess of the TWA. Training shall be coordinated by the DS.

b. 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 be in accordance with references (a).

c. 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 Time Weighted Average.

15005. WARNING SIGNS AND CAUTION LABELS. Warning signs shall be posted at each location where lead may exceed the Permissible Exposure Level (PEL) of 50 ug/m3 as an eight-hour TWA. These signs may contain a listing of required PPE and shall state as a minimum:

DANGER
LEAD
MAY DAMAGE FERTILITY OR THE UNBORN CHILD
CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM
DO NOT EAT, DRINK OR SMOKE IN THIS AREA

15006. WORKER NOTIFICATIONS. Within five working days after receipt of a health hazard evaluation, the responsible IH shall notify each worker in writing of their exposure. Where 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.

15007. LEAD MEDICAL SURVEILLANCE PROGRAM. This program consists of three basic elements: pre-placement medical evaluation, semi-annual blood lead level 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 IH 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.

CHAPTER 16

FALL PROTECTION PROGRAM

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CHAPTER 16

FALL PROTECTION PROGRAM

16000. PURPOSE. This chapter establishes a fall protection program for MCAS Miramar.

16001. BACKGROUND. Falls are a leading cause of traumatic occupational death among workers according to statistics from Department of Labor. Additionally, an OSHA study of 99 fall-related fatalities suggests that virtually all of those deaths could have been prevented by use of guardrails, body harnesses, safety nets, floor opening covers, or other means that would reduce worker exposure to fall hazards.

16002. POLICY

1. Fall protection must be provided to all personnel exposed to fall hazards on any elevated walking working surface with unprotected sides, edges, roofs, or floor openings, from which there is a possibility of falling four feet or more to a lower level; or where there is a possibility of a fall from any height onto dangerous equipment, into a hazardous environment, or onto an impalement hazard.

a. General industry requirements in accordance with reference (e). Fall protection shall be provided to civilian and military personnel exposed to a fall of four feet or more. This four-foot rule applies to all walking and working surfaces and includes open-sided floors and platforms, wall openings and window openings at a stairway landing, floor, platform, or balcony with a drop of four feet or more.

b. Construction operations in accordance with reference (f). Fall protection shall be provided when workers can fall six feet or more during construction operations. This six-foot rule applies to all walking and working surfaces, including roofs, open-sided floors and platforms, wall openings and window openings at a stairway landing, floor, platform, or balcony with a drop of six feet or more.

c. There is no safe distance from an unprotected side or edge of a roof or floor. The distance alone is ineffective to protect personnel from unprotected sides and edges.

d. There is no minimum time duration that allows the exclusion of fall protection requirements, e.g., if a two-minute job requires 15 minutes to establish fall protection. Exemption: reference (f) allows inspectors to be exempted from the fall protection requirements when performing an inspection before or after the performance of work.

2. Each command, unit, or activity may prescribe supplementary requirements for special conditions above and beyond that exceed the fall protection policy set forth in this chapter.

16003. SCOPE. This chapter applies to all commands, directorates, and work centers aboard MCAS Miramar. This chapter applies to all personnel, civilian, military, and contractors aboard MCAS Miramar. Contractors working aboard MCAS Miramar will abide by references (e), (f), and (j). Military unique situations (Special Patrol Insertion/Extraction (SPIE) rigging, rappelling, etc.) will be governed by the appropriate Technical Manual (TM),

Field Manual (FM), Fleet Marine Force Manual (FMFM), or SOP as approved by the Commanding Officer, MCAS Miramar or other competent authority.

16004. RESPONSIBILITIES

1. Commanding Officers/Department Heads/Directors. Commanding Officers, department heads, and directors shall:

- a. Comply with the policies and responsibilities of this order.
- b. Ensure safety officers and supervisors assess worksite 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.
- d. Assign a Fall Protection Program Manager responsible for the development and implementation of the fall protection program.

2. Director of Safety. The DS shall:

- a. Provide fall protection training material and instruction for supervisors and workers as required.
- b. Provide recommendations for appropriate fall protection.
- c. Stop any work operations that are not in compliance with safety guidelines.
- d. Review all written fall protection SOPs.

3. Director, Facilities Maintenance Department. The Director shall:

- a. Evaluate structures and materials for suitable fall protection anchor points as required. Evaluate fall protection systems for compliance with applicable standards as requested by the Fall Protection and Prevention Manager. Provide written documentation of evaluations to the Director, Safety upon request.
- b. Ensure new projects eliminate the need for fall protection or incorporate fall protection systems in the design phase to ensure worker protection.

4. Facilities Engineering and Acquisition Division. FEAD shall:

- a. Ensure contractors performing work aboard MCAS Miramar are aware of the provisions of this Order, 29 CFR 1910, 29 CFR 1926, and USACE EM 385-1-1 when applicable. Ensure inclusion of a written fall protection and prevention program within their Health and Safety Plan (HASP).
- b. Check contractors for compliance with this program and stop work if non-compliance becomes evident.

5. Supervisors. Supervisors shall:

a. Request assistance from the activity safety officer/manager, the MCAS Miramar Fall Protection Program Manager, or other fall protection competent person when assessing potential fall hazards and preparing the Fall Hazard Survey Report.

b. Provide personnel with a written Fall Protection Plan, approved by the MCAS Miramar Fall Protection Program Manager, or other fall protection competent person, detailing steps necessary to control fall hazards. For routine and predictable tasks, a site-specific Fall Protection and Prevention Plan shall be prepared and used. For non-routine, infrequent, and emergency tasks, where Personal Fall Arrest Systems (PFAS) are used, personnel may prepare and use a generic Fall Protection and Prevention Plan. Plans must be prepared and approved before any work at heights begins.

c. Provide personnel with a stable work platform.

d. Provide personnel with appropriate personal fall protection equipment.

e. Require personnel to use fall protection equipment properly.

f. Install barriers or debris nets below elevated work surfaces to protect personnel from falling objects.

g. Ensure personnel use fall protection systems properly and ensure all equipment is stored and maintained according to applicable regulations and manufacturers' recommendations.

6. The Fall Protection Program Manager (FPPM). An experienced Officer/SNCO or civilian Marine assigned in writing by the command who is responsible for the development and implementation, auditing, and evaluation of the program. Through training, knowledge, and expertise, the FPPM should be able to identify, evaluate, and address existing and potential fall hazards. The FPPM position need not be an exclusive title designation. With adequate education, training, and experience the same person may also function as a Competent Person for Fall Protection. The FPPM Shall:

a. Ensure that personnel exposed to fall hazards and other personnel involved in the program receive adequate training as outlined in the Department of the Navy Fall Protection Guide for Ashore Facilities, American National Standard Institute ANSI/ASSE Z359 Fall Protection Standard, and references (a) and (e).

b. Successfully complete an approved course within 60 days of assuming responsibility for managing the program.

c. Assist the supervisor with development of a Fall Protection Program plan.

7. Competent Person (CP) for Fall Protection. An SNCO, senior Non-Commissioned Officer (NCO) or civilian Marine designated by the command in writing to be responsible for the immediate supervision, implementation, and monitoring of the fall protection program, who through training, knowledge, and expertise is capable of identifying, evaluating, and addressing existing and potential fall hazards, as well as the application and use of personal fall protection and rescue systems or any component thereof, AND who has the

authority to take prompt corrective measures to eliminate or control the hazards of falling. The CP for Fall Protection shall:

- a. Conduct onsite evaluations.
- b. Ensure supervision of the fall protection program.
- c. Provide hands-on training for end users of fall protection devices and/or 76 systems.
- d. Successfully complete an approved Fall Protection Competent Person course within 60 days of assignment. Note: An Aviation Fall Protection CP must attend an aviation-specific fall protection course.

8. MCAS Miramar Personnel. MCAS Miramar personnel shall:

- a. Comply with the requirements of the Fall Protection Program.
- b. Request supervisor assistance, if required, when assessing potential fall hazards.
- c. Use appropriate fall protection equipment and techniques when fall hazards are present.
- d. Inspect fall protection equipment before use and maintain the equipment per the manufacturer's recommendations. All equipment that is damaged will be immediately removed from service. Any personal fall arrest protection equipment that has been subjected to shock will be removed from service until inspected by the manufacturer or other competent person.
- e. Report unsafe conditions and equipment to supervisor.

16005. PRINCIPLES OF FALL PROTECTION

1. There are many workplaces, duties, and tasks that have the potential to expose personnel to fall hazards. Construction projects and maintenance activities routinely encounter fall hazards and are governed by 29 CFR 1926 and 29 CFR 1910 respectively. Protection and prevention efforts must be implemented using the hierarchy of control and in concert with the MCAS Miramar Fall Protection and Prevention Manager.

2. Military specific activities should not be viewed as entirely exempt from fall protection and prevention requirements. To the extent possible, military specific activities should be assessed using Risk Management and identified hazards controlled.

16006. RESCUE PLAN AND PROCEDURES. When personal fall protection systems are used, the designated CP for Fall Protection at the command, unit, or activity must ensure that the mishap victim can self-rescue or can be rescued promptly by others should a fall occur. Specific guidance on rescue procedures can be found in references (e) and (f). A rescue plan for personnel suspended in a body harness after a fall must be site-specific.

16007. INSPECTION OF FALL PROTECTION EQUIPMENT. Before each use and prior to donning of personal fall protection equipment, the end user must carefully inspect the equipment following the inspection steps recommended by the fall protection equipment manufacturer's instructions. A CP for Fall Protection,

other than the end user, must ensure personal fall protection equipment is inspected at least annually. Inspection of the equipment by the CP for Fall Protection must be documented.

16008. FALLS FROM HEIGHTS MISHAP REPORTING. Falls from heights mishaps under this paragraph must be reported to the MCAS Miramar Safety Department. If fall arrest equipment is impacted or activated during a fall and no injury to the employee is sustained, it should be reported as a near-miss.

16009. 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. Training shall be documented and provided upon request to the DS.

a. Initial Awareness Training. Initial awareness training is conducted upon check-in by the MCAS Miramar Safety Department for all MCAS Miramar personnel.

b. Fall Protection Program Manager Training. The FPPM shall complete one of the below courses to be considered properly trained:

(1) OSHA 3115 - Fall Protection Course.

(2) NAVSAFENVTRACEN CIN# A-493-0099 - Fall Protection Program Manager Course.

(3) Other course as approved by the MCAS Miramar Safety Department.

c. Competent Person for Fall Protection. The CP for fall protection shall complete the NAVSAFENVTRACEN CIN# A-493-0103 - Competent Person Fall Protection course or as approved by higher echelon.

d. End User of Fall Protection. The end user of fall protection or employee who is required to wear fall protection at heights shall be provided with hands-on and practical demonstrations for using local equipment on the following subjects by the Competent Person or FPPM:

(1) Selection and safe use of equipment.

(2) Application limits.

(3) Proper anchoring and tie-off techniques.

(4) Estimation of fall distances including determination of deceleration distance and total fall distance.

(5) Methods of inspection.

(6) Storage, care, and maintenance of equipment.

(7) Applicable regulations.

(8) Limitations of equipment.

(9) Specific lifelines.

(10) Rescue and self-rescue techniques.

(11) Recognize fall-hazard deficiencies and fall risks at the worksite.

16010. AUDITS AND EVALUATIONS. The command, unit, department, or workplace fall protection program must be audited and evaluated by the Fall Protection Program Manager at periodic intervals not to exceed one year. The program audit and evaluation must identify strength and deficiencies for each element of the fall protection program along with recommendations for improvements. The audit and evaluation must be documented. The Fall Protection Program Compliance Audit Checklist is located in Appendix 16-A and Chapter 3 of the DON Fall Protection Guide for Ashore Facilities.

APPENDIX 16-A: FALL PROTECTION PROGRAM COMPLIANCE AUDIT CHECKLIST

MCAS MIRAMAR SAFETY MANAGEMENT SYSTEM

Fall Protection Program Compliance

FALL PROTECTION PROGRAM COMPLIANCE CHECKLIST For COMMANDS, UNITS, AND ACTIVITIES HAVING PERSONNEL PERFORMING WORK AT HEIGHTS, EXPOSED TO FALL-HAZARDS, AND USING FP EQUIPMENT		Date of Audit:		
Unit:	Command POC:			
Prepared and Audited by (Signature):		Location:		
FALL PROTECTION PROGRAM CRITERIA		Yes	No	N/A
1. a. Does the command, unit, or activity have personnel working at heights, exposed to Fall Hazards above 4 feet, and using Fall Protection (FP) Equipment?				
b. Is there a possibility of a fall from any height onto dangerous equipment, into a hazardous environment, or onto an impalement hazard?				
c. Is there any need to deviate from the 4-foot threshold requirement? Is this deviation approved by the designated Competent Person for fall protection?				
d. If Yes, a Fall Protection program is required to be established and implemented.				
BASIC PROGRAM REQUIREMENTS		Yes	No	N/A
2. Is the Fall Protection program written and approved by the activity safety office?				
3. a. As an alternate to the written Fall Protection program, is the Activity using the Fall Protection guide as their program with Safety Office review and approval?				
b. If using the guide as the Activity Fall Protection program, is the site specific fall protection requirements and information included?				
ADDITIONAL REQUIREMENTS		Yes	No	N/A
4. Is there a need for the activity to have additional requirements above and beyond the requirements stated in current orders?				

DUTIES AND RESPONSIBILITIES		Yes	No	N/A
5.	Did the command, unit, or activity delineate duties and assign responsibilities of personnel involved in the Fall Protection program, including Program Manager, Competent and Qualified Persons for Fall Protection, in the implementation of a managed Fall Protection program?			
6.	Do the assigned personnel have the necessary skills, knowledge, training and expertise to manage, administer and implement the Fall Protection program safely?			
WORKPLACE SURVEYS AND ASSESSMENT OF FALL HAZARDS		Yes	No	N/A
7.	Has a survey been conducted for each Fall Hazard at existing buildings, facilities or structures, and a Fall-Hazard Survey Report prepared?			
8.	Was a Fall Hazard analysis performed to determine the risk assessment, hazard severity, and fall mishap probability?			
9.	Is one or more Fall Protection methods identified in the survey report to eliminate or control each Fall Hazard?			
10.	Do the surveyed walking and working surfaces have the structural integrity to support the workers safely (e.g., working on roofs)?			
11.	a. For personnel conducting roof inspections and investigations, have they received proper training to conduct the work safely, prior to accessing the roof? b. Did the Safety Office approve accessing the roof?			
12.	Has the Fall-Hazard survey assessment been validated annually for comparison purposes?			
FALL PROTECTION AND PREVENTION PLAN		Yes	No	N/A
13.	For personnel exposed to Fall Hazards and using fall-arrest equipment (not otherwise protected by a passive Fall Protection system such as guardrails), has a Site-specific Fall Protection and Prevention Plan been prepared and submitted to the Safety Office for review and approval? (It is recommended to prepare a generic Fall Protection & Prevention Plan for non-routine tasks [e.g., emergency tasks]). The plan must be updated as conditions change, once every six months.			
14.	Is the Fall Protection and prevention plan prepared either by the designated competent or Qualified Person for Fall Protection? If the plan includes Fall Protection components or systems requiring direction, supervision, design calculations, or drawings by the Qualified Person for Fall Protection, does the plan include the name, qualifications and responsibilities of the QP?			
15.	Does the plan describe in detail the specific practices, equipment, methods, procedures to be used to protect workers from falling to a lower level, and the inspection requirements?			

FALL HAZARD PREVENTION AND CONTROL				
PREFERRED ORDER OF CONTROL MEASURES		Yes	No	N/A
16.	Have the Fall-Hazards been evaluated to determine the preferred order of control measures for selecting the appropriate Fall Protection method (i.e. elimination or prevention)?			
17.	Can Fall-Hazards be eliminated by alternate work methods or changing task(s) or process(s)?			
SELECTION OF FALL PROTECTION MEASURE		Yes	No	N/A
18.	Is the most appropriate Fall Protection method selected, compatible with the type of work being performed?			
STANDARD TEMPORARY GUARDRAIL SYSTEMS		Yes	No	N/A
19.	If guardrails are used, do they comply with the specified requirements for height, strength and minimum material of construction?			
20.	a. If perimeter cables are used at unprotected sides or edges, as a method of attaching a lanyard to the cables, do they meet the design requirements for horizontal lifelines? b. Did the Qualified Person for Fall Protection design the system including anchorages as a horizontal lifeline system?			
COVERS		Yes	No	N/A
21.	a. If covers are used to cover a hole 2 inches in its least dimension, are they capable of withstanding, without failure, at least twice the combined weight of the worker, equipment, and material that will pass over it? b. When covers are used, are they secured in place and clearly marked or color-coded?			
WORK PLATFORMS		Yes	No	N/A
22.	When working from elevated work platform, is the platform equipped with guardrail or other Fall Protection system? Is the work platform maintained properly?			
SAFETY NET SYSTEM		Yes	No	N/A
23.	Does the safety net installation meet the specified criteria and requirements, including the size of the mesh openings and the strength of the outer rope or webbing?			

24. Has the safety net been tested in a suspended position with 400 pounds test weight immediately after installation and under the supervision of a Qualified Person?			
25. If a safety net was relocated, repaired or left in place for more than 6 months, was it retested in suspension under the supervision of Qualified Person?			
26. Was the inspection of the safety net performed by a Competent Person in accordance with manufacturer's instructions and recommendations?			
27. Inspection of safety nets must be performed immediately after installation, weekly thereafter, and following any alteration or repair. Has the inspection been documented?			
PERSONAL FALL PROTECTION SYSTEMS	Yes	No	N/A
28. Do all the fall-arrest systems and equipment used meet the ANSI/ASSE Z359 Fall Protection Standard?			
29. When selecting personal Fall Protection system, are the free-fall distance, total fall distance, and available clearance taken into consideration?			
30. Do the snap hooks and carabineers used meet ANSI Z359 Fall Protection Standard? (Snap hooks and carabineers meeting the ANSI Z359.1-1992 (R1999) standard must not be used.)			
31. For workers having body weight outside the capacity range of 130-310 lbs. and using Fall Protection equipment, is it permitted in writing by the manufacturer?			
32. If it is necessary to increase the free-fall distances beyond 6 feet (i.e. tying at the feet level) and limiting the maximum arresting force on the body under 1,800 lbs., is the Qualified Person for Fall Protection making this determination? There are two types of energy absorbing lanyards, the 6 ft. free fall and 12 ft. free fall. <ul style="list-style-type: none"> • When the tie off point is located above the dorsal D-ring use the 6 ft. free fall energy absorbing lanyard. • When the tie-off point is located below the dorsal D-ring, use the 12 ft. free-fall energy absorbing single or "Y" lanyards. • A Qualified Person for Fall Protection is required to make this determination. 			
33. If the sternal D-ring attachment point of the body harness (located at the sternum) is used for fall-arrest, is the worker exposed to a free-fall distance of less than two feet, and the average arrest force on the body less than 900 lbs.?			
34. Is the proper Self Retracting Device (SRD) selected and used, taking into consideration the horizontal or vertical application? There are four types of manufactured SRDs, self-retracting lanyard (SRL) used only in vertical applications, SRL with leading edge Capability used in vertical and horizontal applications, SRL for rescue and a hybrid component of any two of the above SRDs.			

35. When using "Y" lanyard for 100% tie-off, does the joint between the two legs of the lanyard withstand a force of 5,000 lbs.?			
36. The unused leg of the "Y" lanyard must not be attached to any part of the harness, except to attachment points specifically designated by the manufacturer. Has the manufacturer of the equipment designate such attachment points (Lanyard parking location)?			
37. a. When using a positioning system, is the worker using a separate system (secondary system) that provides back-up protection from a fall? b. When using a restraint system, is the lanyard length short enough (or adjustable) to prevent a worker from being exposed to a Fall-Hazard?			
38. a. When using climbing-ladder FA System for ascending or descending on fixed ladders, is the distance between the connection point of the body harness and the rail or cable 9-12 inches? b. Will the system stop the fall within two feet from the onset of a fall? c. Prior to installation, has the ladder (to which the climbing device will be attached), been designed to withstand the forces generated by the fall of the climber?			
FALL-ARREST EQUIPMENT SELECTION CRITERIA	Yes	No	N/A
39. Does the selected fall-arrest equipment meet the latest ANSI Z359 Fall Protection Standard? (Any equipment meeting ANSI A10.14 and ANSI Z359.1 1992 (R1999) standards must not be used)			
40. Can the manufacturer of the selected equipment substantiate thru Third-Party Testing Laboratories, Witness Testing, or Manufacturer Self-Certification Testing that the equipment meets ANSI Z359 Fall Protection Standard and was designed, selected, and approved by the Qualified Person for Fall Protection?			
TRAINING	Yes	No	N/A
41. Is all Fall Protection training for all personnel involved in the Fall Protection program following the ANSI Z359.2 Standard? Retain copy of training roster and attach to this audit.			
42. Are workers trained by a Competent Person for Fall Protection who is qualified to deliver training on the safe use of Fall Protection and rescue equipment, including hands-on and practical demonstrations in accordance with the requirements of current Fall Protection orders and publications?			
43. Did the assigned Competent and Qualified Persons for Fall Protection receive adequate training?			
44. Did other personnel involved in the Fall Protection program receive adequate training?			

45.	Has the above training been documented and verified with a certificate of training?			
46.	a. Did end-users receive refresher training on the safe use of Fall Protection equipment once every two years? b. Did the Competent Person for Fall Protection receive refresher training to stay current with the Fall Protection and educational requirements once every two years? c. Did other personnel involved in the Fall Protection program receive recommended or required refresher/update training as specified in current Fall Protection orders and publications?			
SELECTION OF ANCHORAGES FOR FALL-ARREST EQUIPMENT		Yes	No	N/A
47.	a. For certified fall arrest anchorages identified and designed by a Qualified Person for Fall Protection, are they capable of supporting at least twice the maximum arresting force? b. For non-certified fall-arrest anchorages selected by a Competent Person for Fall Protection, are they capable of supporting a minimum force of 5,000 pounds per person attached?			
48.	a. For non-certified positioning, climbing ladder fall-arrest system and rescue anchorages selected by a Competent Person for Fall Protection, are they capable of supporting 3,000 pounds per employee attached? b. For non-certified restraint anchorages selected by a Competent Person for Fall Protection, are they capable of supporting 1,000 pounds per employee attached? c. For Certified anchorages for positioning, restraint, climbing ladder fall-arrest system, are they selected, identified and designed by a Qualified Person for Fall Protection, meeting the requirement of two times the foreseeable force on the worker? d. If needed, are certified anchorages for assisted rescue and self-rescue designed for 5 times the intended loading by a qualified person?			
49.	Are the certified horizontal lifeline (HLL) anchorages designed by a registered professional engineer with experience in designing HLL systems or by a Qualified Person for Fall Protection who has appropriate training and experience? Non certified anchorages are not permitted for HLL			
RESCUE PLAN AND PROCEDURES		Yes	No	N/A
50.	For personnel working at heights and using fall-arrest equipment, has a site-specific Fall-hazard rescue plan and procedures been prepared and maintained at the work location?			
51.	If self-rescue or assisted-rescue are the planned methods to be used during rescue, did the personnel conducting rescue receive adequate training?			
52.	If required, are independent anchorages for rescue identified and selected?			
53.	If the method of rescue is by the jurisdictional public and Government-emergency response agencies, has a pre-incident plan been developed?			

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INSPECTION OF PERSONAL FALL PROTECTION EQUIPMENT		Yes	No	N/A
54.	Have procedures been established for inspection, storage care and maintenance of the equipment in accordance with the manufacturer's instructions and recommendations, or 3-M maintenance system, whichever is more stringent?			
55.	Does the Competent Person for Fall Protection inspect the Fall Protection equipment annually and with documentation? It is recommended the CP inspect the equipment semiannually.			
56.	Does the end-user inspect the equipment prior to each use?			
FALLS FROM HEIGHTS MISHAP REPORTING		Yes	No	N/A
57.	Are falls-from-heights mishaps reported following the reporting criteria of OPNAVINST 5102.1D/MCO P5102 (series)?			
EVALUATION OF PROGRAM EFFECTIVENESS		Yes	No	N/A
58.	Are procedures in place to audit and evaluate the Fall Protection program at least once annually?			

CHAPTER 17
WALKING-WORKING SURFACES

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CHAPTER 17

WALKING-WORKING SURFACES

17000. INTRODUCTION. Slips, trips, and falls continue to be the leading mishaps reported in Marine Corps workplaces. Obstacles in walk areas, liquid spills, sawdust accumulations, and the use of slippery surface cleaners can cause slipping hazards and shall be cleaned up immediately to prevent slips, falls, and injuries. OSHA maintains general industry regulations on walking-working surfaces that guard against these hazards. References (a) and (e) provide definition and additional guidance.

17001. SCOPE. This chapter applies to all commands, directorates, and work centers aboard MCAS Miramar. This chapter applies to all personnel, civilian, military, and contractors aboard MCAS Miramar. Contractors working aboard MCAS Miramar will abide by references (e), (f), and (j).

17002. GENERAL REQUIREMENTS. All walking-working surfaces shall be maintained free of hazard in accordance with references (a), (e), (f), and (j). They shall be maintained in a clean and dry condition that is kept in good repair and clear of obstructions. They shall be properly illuminated and guarded to prevent falls. Workplace supervisors shall ensure walking-working surfaces are kept free of hazards and inspection must be included during spot checks of their work areas.

17003. FIXED LADDERS. In addition to the requirements of references (a), (e), and (f) special consideration must be taken to restrict the access to these ladders.

1. Access. Where unauthorized use of a fixed ladder poses a hazard, the facility manager shall ensure the ladders are secured from unauthorized access. Ladders in public areas require guarding to prevent unauthorized access. The bottom seven (7) feet shall be guarded. Examples of guarding include the use of a fence with locked gates and making the bottom portion portable or spring loaded and available only as needed. Additionally, there must be a warning sign prohibiting access by unauthorized persons.

17004. PORTABLE/EXTENSION LADDERS

1. The following practices are prohibited:

- a. Ladders set on unstable surfaces.
- b. Ladders placed in areas where they can be displaced by activities or traffic, such as a doorway, passageway, or driveway, without any preventive measure such as barricade or guard.
- c. Ladders used as scaffolds, unless specifically designed for that purpose.
- d. Personnel reaching too far out to the sides.
- e. Personnel standing too high to maintain their balance.

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- f. Use of a defective ladder, e.g., broken rail or rung.
- g. Improvising and using a make-shift ladder.
- h. Personnel carrying materials in their hands while ascending or descending a ladder.
- i. Using a ladder with conductive side rails while working on electrical circuits or near live electrical lines, etc.
- j. Descending with their back to the ladder, unless specifically designed for that purpose.
- k. Paint wood ladders with an opaque coating, since possible defects may be covered up.

2. Requirements:

a. Acquisition and Selection Considerations.

(1) Portable ladders shall meet American National Standards Institute design and construction specifications. Exception: Fire department ladders shall be maintained and inspected in accordance with NFPA 1931, Standard for Manufacturer's Design of Fire Department Ground Ladders, and NFPA 1932, Standard on Use, Maintenance, and Service Testing of In-Service Fire Department Ground Ladders.

(2) There are a variety of ladder styles; selection, to include construction material and proper size, shall be based on where and how the ladder may be used. Ladders are assigned one of five (5) workload ratings. Supervisors shall order Type IAA, IA or I ladders whenever possible. Type II ladders shall only be considered when local purchase is required, and local manufacturers cannot provide Type IAA, IA or I. Type III ladders shall not be procured for industrial use. Refer to Table 17.1 for additional information.

Table 17.1: Ladders Workload Ratings

Duty Rating	Ladder Type	Working Load (Pounds)
Extra Heavy Duty	IAA	375
Extra Heavy Duty	IA	300
Heavy Duty	I	250
Medium Duty	II	225
Light Duty	III	200

17005. TRAINING. There are no formal training requirements for walking-working surfaces. However, all personnel shall be trained to recognize and avoid unsafe conditions to include inspection of ladders before use.

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CHAPTER 18

HEAT INJURY PROTECTION PROGRAM

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CHAPTER 18

HEAT INJURY PROTECTION PROGRAM

18000. PURPOSE. To provide policy, assign responsibility, and establish instructions for implementation of the Marine Corps Air Station Miramar Heat Injury Prevention Program in accordance with reference (a) and the NAVMED P-5010-3 Prevention of Heat and Cold Stress Injuries.

18001. BACKGROUND. The human body uses energy in its vital processes and in doing work. This energy becomes heat, which at ordinary temperatures is radiated from the body to the environment. When the temperature of the environment becomes as warm as the skin, this is no longer possible. When the temperature of the environment is higher than that of the skin, then the process is reversed and the body gains heat. When the body cannot lose heat to the surrounding environment, it begins sweating. The sweat evaporates, transferring heat from the body to the surrounding air. This process cools the body and maintains the normal temperature. Sweating causes loss of body water and salt. This upsets the heat regulating mechanisms of the body. Lack of proper heat regulation in the body may cause it to become a heat casualty.

18002. APPLICABILITY AND SCOPE. This Order is applicable to all MCAS Miramar commands responsible for the oversight, administration, or conduct of operations or mandated PT during the hot weather season and hot weather operational environments. It shall meet the requirements of the reference as applicable. In addition, safety training, the need for SOPs, and mishap reporting and investigation requirements for all mishaps shall be in accordance with reference (a). Appendix (18-A) contains information on the prevention and first aid for heat casualties that will be used as a guide in planning work and training during periods of hot weather. Appendix (18-A) establishes heat conditions and a warning system to be used during hot weather. Appendix (18-A) establishes the concept of water usage per individual for planning purposes.

18003. RESPONSIBILITIES

1. Commanding Officer. Responsible for the safety of personnel, the implementation of the above safety policies and the publishing and enforcement of safety regulations.

2. Director of Safety

a. If resources are available will procure and maintain Wet Bulb Globe Temperature (WBGT) loaner equipment for visiting units. Units will operate and maintain loaner WBGT meter per the manufacturer's requirements.

b. Administer the requirements and ensure the accuracy, modification, and distribution of this Order.

3. Station Operations

a. Provide the resources to ensure that Meteorology and Oceanography (METOC) procure and maintain WBGT equipment.

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4. Meteorology and Oceanography

a. Responsible for obtaining proper WBGT readings and calculating the Wet Bulb Globe Temperature Index (WBGTI) as outlined below, setting corresponding flag conditions, and communicating flag conditions throughout MCAS Miramar.

b. Require WBGT readings be taken and whenever ambient dry bulb temperatures exceed 80 degrees F. When ambient dry bulb temperatures exceed 80 degrees F., compute the WBGTI every hour on the hour from the time normal work commences until the end of work or the ambient dry bulb temperature is below 80 degrees F.

c. When the WBGTI meets or exceeds green flag conditions (80 WBGTI), the WBGTI shall be calculated twice per hour, on the hour and half-hour. WBGT readings shall be maintained in a WBGT bound log in accordance with reference (a). Heat Stress Logs will be inspected during regularly scheduled site visits, command inspections, and during Higher Headquarters (HHQ) inspections.

d. At any time MCAS Miramar is in Heat Conditions IV - WBGTI of 90.0°F or higher (Black Flag) METOC will be required to send a warning message using AT-HOC mass notification system.

5. Subordinate Element Missions

a. Unit Commanders

(1) Ensure that all personnel involved with hot weather-related training and operations are familiar with this Order and are aware of the inherent dangers associated with heat injuries.

(2) Ensure RM will be implemented for all PT exercises and hot weather operations.

(3) Disseminate information contained in appendix (18-A) to all Marines engaged in training during hot weather.

(4) When planning training during periods of obviously high heat and humidity, comply with the guidance contained in appendix (18-A).

(5) Obtain the WBGTI reading prior to the actual conduct of training during the casualty danger period.

6. All Unit Leaders, SNCOs/NCOs, and Supervisors

a. Supervise, and provide fluid replacement for personnel.

b. In accordance with appendix (18-A) monitor work rest cycles, and ensure water is consumed during rest periods.

c. Ensure personnel are properly acclimated in accordance with appendix (18-A). Personnel with prior heat related injuries will be closely monitored during hot weather operations or activities.

d. Ensure occupationally exposed personnel are trained and acclimatized for hot weather conditions prior to hot weather operations and physical training.

e. Ensure all Marines and occupationally exposed civilians receive heat injury risk management training initially and at least annually. This training should be conducted by medical department personnel and include:

(1) A discussion of general safety for the activity or evolution to be conducted.

(2) An explanation of the WBGT heat index, use of the WBGT formula, accompanying flag warning system, and wind chill chart in appendix (18-A).

(3) Familiarization with the causes, types, prevention, and emergency treatment of heat and cold stress injuries.

f. Ensure heat injuries are reported to safety office in accordance with Chapter 4 of this Order.

18004. PREVENTION AND FIRST AID FOR HEAT CASUALTIES

1. General

a. The human body uses energy in its vital processes and in doing work. This energy becomes heat, which at ordinary temperatures is radiated from the body to the environment. When the temperature of the environment becomes as warm as the skin, this is no longer possible. When the temperature of the environment is higher than that of the skin, then the process is reversed and the body gains heat.

b. When the body cannot lose heat to the surrounding environment, it begins sweating. The sweat evaporates, transferring heat from the body to the surrounding air. This process cools the body and maintains the normal temperature.

c. Sweating causes loss of body water and salt. This upsets the heat regulating mechanisms of the body. Lack of proper heat regulation in the body may cause it to become a heat casualty.

2. Types, Symptoms, and First Aid

a. There are three basic types of heat casualties: heat stroke, heat exhaustion, and heat cramps. Heat exhaustion may progress into heatstroke. Heatstroke is the most serious of the conditions and unless promptly treated, will result in death or permanent brain damage. Heatstroke is a true medical emergency.

b. Types, symptoms, and first aid treatment for the most serious types of heat casualties are listed in figure 18.1 below:

Figure 18.1: Heat Injuries, Symptoms, and First Aid

Injury	Symptoms	First Aid*
Heat stroke	<ul style="list-style-type: none"> ▪ Confusion ▪ Fainting ▪ Seizures ▪ Excessive sweating or red, hot, dry skin ▪ Very high body temperature 	<ul style="list-style-type: none"> ▪ Call 911 or “DOC” <p>While waiting for help:</p> <ul style="list-style-type: none"> ▪ Place individual in shady, cool area ▪ Loosen clothing, remove outer clothing ▪ Fan air on individual; cold packs in armpits ▪ Wet individual with cool water; apply ice packs, cool compresses, or ice if available ▪ Provide fluids (preferably water) as soon as possible unless individual is very drowsy or unconscious and would choke. ▪ Stay with individual until help arrives
Heat exhaustion	<ul style="list-style-type: none"> ▪ Cool, moist skin ▪ Heavy sweating ▪ Headache ▪ Nausea or vomiting ▪ Dizziness ▪ Light headedness ▪ Weakness ▪ Thirst ▪ Irritability ▪ Fast heartbeat 	<ul style="list-style-type: none"> ▪ Have individual sit or lie down in a cool, shady area ▪ Give individual plenty of water or other cool non-carbonated beverages to drink ▪ Cool individual with cold compresses/ice packs ▪ Take to NMRTC or emergency room for medical evaluation or treatment if signs or symptoms worsen or do not improve within 60 minutes. ▪ Do not return to duty that day
Heat cramps	<ul style="list-style-type: none"> ▪ Muscle spasms ▪ Pain ▪ Usually in abdomen, arms, or legs 	<ul style="list-style-type: none"> ▪ Have individual rest in shady, cool area ▪ Individual should drink water or other cool beverages ▪ Wait a few hours before allowing individual to return to strenuous work ▪ Have individual seek medical attention if cramps don’t go away
<p>* Remember, if you are not a medical professional, use this information as a guide only to help personnel in need.</p>		

3. Prevention. Following are a few simple rules to avoid heat exhaustion and heatstroke during hot weather:

a. You are encouraged to drink water frequently and to drink as much as you need. Infrequent large intakes may lead to stomach distention, vomiting, and/or cardiac problems. When working on your own, drink water when you want it and drink all you want. You may need from two quarts to three gallons a day when consuming field rations and performing heavy work in hot weather. In fact, the need for water may exceed the desire.

b. Stay away from "cold drinks" while still sweating.

c. The average diet provides the necessary daily salt requirements. Salt tablets should be avoided, unless prescribed and under the supervision of a medical department.

d. Keep your headgear on in the sun and remember that light and loose clothing will reflect the sun's heat.

e. If you feel sick or dizzy when heated, take it easy for a while. DO NOT OVEREXERT YOURSELF!

f. If you stop sweating - GET PROMPT MEDICAL AID!

g. Eat lightly in hot weather and avoid sweets.

h. Poor physical condition, lack of muscle tone, obesity, alcohol, and lack of sleep increase susceptibility to heat illnesses.

4. Acclimatization

a. Personnel who are not accustomed to physical activity under conditions of high temperature are particularly susceptible to heat injury. This is especially true of individuals who are ten pounds or more overweight, or in whom a circulatory or sweating deficiency is noted. Conditions of high humidity and solar heat increase the possibility of heat injury.

b. Training programs for personnel who are climatically and/or physically deficient should be limited in intensity and time. A break-in period of 14-21 days with progressive degrees of physical exertion and heat exposure will usually suffice for achieving acclimatization. During the period, the workload should be increased gradually but not to the point of exhaustion or to the point where personnel will be unduly fatigued the following day. Until acclimatized, personnel will lose greater than normal quantities of water and salt. These losses must be replaced.

c. While acclimatization increases tolerance for heat, it does not make an individual immune to becoming a heat casualty. Overexertion can lead to heat illness even in mild weather.

d. Figure 18.2 suggests a 21-day acclimatization program that may be used.

Figure 18.2: Acclimatization in Garrison

Day	Dress	WBGT (°F)	Duration	Activity (moderate workload)
1	NO ACTIVITY. REST, EAT, DRINK AND SLEEP (24 hr. after arrival)			
2	T-shirt and shorts	79-86	1 x 50 min	Walk 3.5 mph
3	T-shirt and shorts	79-86	2 x 50 min	Walk 3.5 mph; rest 15 min; resume walking.
4	T-shirt and shorts	79-86	100 min	Walk 3.5 mph
5	Utility uniform	79-86	2 x 50 min	Walk 3.5 mph; remove blouse; rest 15 min; resume walking
6	Utility uniform	79-86	100 min	Walk 3.5 mph
7	Utility uniform and 22 lbs. load	79-86	2 x 50 min	Walk 3.5 mph; Remove blouse and load; rest 15 min; resume walking.
8-21	Utility uniform and 22 lbs load. (Add load to 39 lbs as tolerated on days 14+)	79-86	100 min	Walk 3.5 mph
Note 1. Allow for continuously available fluids to quench thirst.				
Note 2. The moderate workload may be adjusted at one's own pace or mission needs but must avoid exhaustion or next day fatigue.				

5. Water Intake. Water intake must be sufficient to replace that lost by sweating. During field exercises in hot weather this will require an allowance of up to one pint of water per individual per hour if heat exhaustion is to be avoided. Personnel should be encouraged to drink water in small, frequent amounts. See appendix (16-A) for water requirements for activity level versus mean temperature.

6. Rest, Sleep, and Recreation during Acclimatization Periods

a. Schedules should call for a ten-minute break every hour. The hour immediately after the noon and evening meals should be devoted to relaxation or non-strenuous training. Eight hours of sleep per twenty-four-hour period is the minimum required sleep for general efficiency.

b. Sleeping, messing, and recreation quarters should be screened and well-ventilated by either natural or mechanical means. A WBGTI of more than 80°F during the day calls for artificial cooling if possible.

7. Aid Stations. Field Aid Stations should be especially prepared to treat cases of heat illness. Artificial cooling devices should be employed at treatment stations and in ambulances whenever possible.

8. Previous and Injury and Illness. Susceptibility to heat injury is greatly enhanced by illness, infections, or any febrile condition including reaction to immunization. A previous history of heatstroke, vascular

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disease, or skin trauma such as heat rash, acute sunburn, or any condition affecting sweat secretion or evaporation, increases the risk of heat injury. These cases call for special consideration by a medical officer.

9. Clothing

a. Clothing and equipment should be worn in such a way as to provide maximum skin ventilation without unnecessary exposure to bright sunlight.

b. In adjusting clothing and equipment, care should be taken to avoid restriction of blood circulation.

10. Instruction. All Marines should receive periodic instructions from the Medical Department concerning the prevention, recognition, and emergency treatment of heat casualties.

APPENDIX 18-A: HEAT CONDITION AND FLAG WARNING SYSTEM

1. Control of Physical Activity

a. The WBGTI. This index combines shade, air temperature, radiation, humidity, and wind into a single value to be used as a guide for controlling training. It is obtained by reading three simple instruments and multiplying each reading by a known factor. The results are then totaled and added to create the index. Training programs in warm weather should be planned provisionally on the basis of the WBGTI.

b. Instruction

(1) The Shade Dry Bulb (DB) Thermometer. This is an ordinary thermometer which measures air temperature.

(2) The Wet Bulb (WB) Thermometer. This is an ordinary thermometer with a moist wick surrounding the bulb. The WB reading will be the same as the corresponding DB only when the relative humidity is 100 percent. The WB thermometer will read less than the DB thermometer because of evaporative cooling of the bulb by the surrounding wick. The difference between the readings of the two thermometers becomes greater as humidity becomes less.

(3) The Globe Thermometer (GT). This is an ordinary thermometer inserted through an airtight stopper into a hollow copper ball six inches in diameter. The ball is painted matte black on the outside. The stem of the thermometer is exposed for the reading. The black surface of the ball absorbs heat from the sun and other surfaces that may exceed the globe in temperature. The ball loses temperature to the cooler air by convection and to cooler surfaces by radiation. In an un-shaded outdoor position, the GT reading is normally above the DB thermometer reading. Daytime readings of 20°F or more above the air temperature are observed under calm, sunny conditions. Either a decrease in radiant heat or an increase in wind velocity, or both, will lower the globe reading. Therefore, the GT reading is a balance between heat gained by radiation and heat lost by convection. The reading can be said to include air temperature, air movement, and radiation.

(4) Results. It can readily be seen that the three instruments described above take into account all four variables of the thermal environment: temperature, humidity, radiation, and air circulation.

(5) Portable Heat Stress Monitor. In addition to the above-mentioned instruments, some organizations are using new portable, digital heat stress monitors in CONUS, OCONUS, and in theater with great degrees of accuracy. These portable monitors incorporate WBGT sensing technology. These instruments calculate and display a WBGTI value that considers the effects of ambient air temperature, humidity, air flow (which provides an evaporative cooling effect to the body) and radiant heat from sources such as the sun, furnaces, ovens, boilers, etc. To determine safe work times or appropriate work-rest regimens within the monitored environment, the WBGTI is then applied to look-up tables from organizations such as the U.S. Navy, the American Conference of Governmental Industrial Hygienists, the Electric Power Research Institute, and others.

c. Formula. The WBGT is calculated as follows:

Dry Bulb Temperature x 0.1
Wet Bulb Temperature x 0.7
Black Globe Temperature x 0.2
TOTAL WBGT INDEX

The formula applies to environments that are warm enough to cause sweating and to the type of hot weather clothing now worn by Marines. The factors in the formula should be measured at the actual locale of training.

d. Use of the Index

(1) When the WBGTI value reaches the temperatures indicated in the parenthesis below, the corresponding color of flag closest to the specific site of the hot weather operation will dictate the level of the operation.

(a) Green Flag (WBGT Index of 80°F to 84.9°F). Heavy exercises for non-acclimatized personnel must proceed with caution and under constant supervision.

(b) Yellow Flag (WBGT Index of 85°F to 87.9°F). Strenuous exercises, such as marching at standard cadence, curtail for non-acclimatized Marines in their first three weeks. Avoid outdoor classes in the sun.

(c) Red Flag (WBGT Index of 88°F to 89.9°F). All physical training proceeds with caution for those Marines not thoroughly acclimatized at least 12 weeks. Thoroughly acclimatized Marines may carry on limited activity not to exceed six hours per day.

(d) Black Flag (WBGT Index of 90°F and above). Halt all non-essential physical activity for all units. Essential activities described below may proceed after appropriate risk management decision by commander and or commanding officers.

(e) Essential Activities. Essential activities may be conducted outside above guidance with the following considerations:

1. Essential activities are those activities associated with scheduled exercises or other major training evolutions where the disruption would cause undue burden on personnel or resources, be excessively expensive, or significantly reduce a unit's combat readiness.

2. Conduct essential outdoor physical activity at a level that is commensurate with work/rest cycles in conjunction with the unit's commanding officer, coordinating with the unit's medical officer and/or medical personnel as well as the supporting medical facility to ensure preparation for expected heat illnesses. Commands are encouraged rescheduling these activities during cooler periods of the day. Individual elective outdoor physical fitness training shall also observe the same strict guidance.

(2) Work/Rest and Water Consumption Table. The following table provides water consumption intake requirements based on the amount of work being performed and the amount of rest during a one-hour period.

Flag Condition	WBGTI °F	Easy Work		Moderate Work		Strenuous Work	
		Work/Rest	Water per Hr	Work/Rest	Water per Hr	Work/Rest	Water per Hr
Green	80-84.9	No Limit	.5 Qt	50/10	.75 Qt	40/20	1 Qt
Yellow	85-87.9	No Limit	.75 Qt	40/20	.75 Qt	30/30	1 Qt
Red	88-89.9	No Limit	.75 Qt	30/30	.75 Qt	20/40	1 Qt
Black	> 90	50/10	1 Qt	20/40	1 Qt	10/50	1 Qt

Notes:

-Rest means minimal physical activity (sitting or standing) and should be accomplished in the shade if possible.

-For Mission Oriented Protective Posture (MOPP) gear, PPE, or body armor add 10°F to the WBGT Index.

-Work/rest times and fluid replacement volumes will sustain performance and hydration for at least four hours of work in the specified heat category. Individual water needs will vary \pm .25 quarts per hour.

(3) Examples of Work

Easy Work	Moderate Work	Strenuous Work
<ul style="list-style-type: none"> -Weapon maintenance -Walking hard surface at 2.5 mph with <30 lbs load -Manual of Arms -Marksmanship training -Drill and Ceremony 	<ul style="list-style-type: none"> -Walking loose sand at 2.5 mph with <40 lbs load -Calisthenics -Patrolling -Individual movement technique (e.g.; low crawl, high crawl) -Defensive position construction -Field assaults 	<ul style="list-style-type: none"> -Walking hard surface at 3.5 mph with >40 lbs load -Walking loose sand at 2.5 mph with a load -Running and participating in physical conditioning training

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CHAPTER 19

LASER HAZARD CONTROL PROGRAM

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CHAPTER 19

LASER HAZARD CONTROL PROGRAM

19000. PURPOSE. To prescribe installation policy and guidance concerning the control of laser radiation hazards. When questions arise outside the scope of this chapter, reference(h) shall be used.

19001. SCOPE. This chapter is applicable to all activities and tenant commands that operate or maintain laser systems aboard MCAS Miramar. 3rd MAW units shall comply with the requirements of their Wing Orders.

19002. BACKGROUND. As laser systems become more numerous, solid laser radiation hazards prevention programs are key to assuring a mishap-free workplace. Reference (h) prescribes policy and guidance in the identification and control of laser radiation hazards. It applies to the design, use, and disposal of all equipment and systems capable of producing laser radiation including laser fiber optics. It also issues guidance on establishing a command Laser Hazard Control Program including requirements for a Laser System Safety Officer (LSSO), personnel training, laser engineering protective eye-wear, laser warning signs, and administrative and engineering protective measures.

19003. RESPONSIBILITIES. A Local Laser Safety Officer (LLSO) will be established within each activity/tenant command that possesses, operates, maintains, or trains with laser devices. The LLSO will be incorporated within existing safety elements to the maximum extent possible. Technical expertise and the LSSO may be drawn from an available source within each unit; however, each will function through the organization's existing safety establishment.

1. The MCAS Miramar LSSO shall be appointed in writing and shall have direct access to the CO on all laser safety matters. The LSSO shall be a graduate of an approved LSSO Course. Duties shall include:

a. Review this chapter annually and provide updates as necessary.

b. Maintain an inventory of all lasers utilized aboard MCAS Miramar for dissemination upon request to the Administrative Lead Agent (ALA), currently the Bureau of Medicine and Surgery (BUMED) within the Department of the Navy (DON) or to HHQ.

c. Coordinate LSSO training as needed.

d. Maintain copies of laser radiation hazard surveys provided by the Range Laser Safety Specialist (RLSS) team, which document certification of military target ranges designated for use of laser weapons systems.

2. An LSSO shall be appointed in writing for any unit/activity using Class IIIB, Class IV, or military exempt lasers. The unit/activity LSSO shall be a graduate of an approved LSSO Course and shall have direct access to the unit/activity CO on all laser safety matters. Duties shall include:

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a. Publish a unit/activity local laser safety program command policy, safety regulations and SOPs, in accordance with this order and reference (a).

b. Maintain an inventory of all unit/activity held laser devices along a laser data worksheet for each device and provide a copy of the inventory to the installation LSSO upon request.

c. Maintain copies of flight approvals and Laser Safety Review Board findings on each applicable laser system.

d. Maintain a log of all operational, maintenance, or training laser firings to include: date, time, location, operator, purpose, and personnel present. A log of all airborne firings should include type of aircraft and Bureau Number (BUNO), location, heading, altitude, airspeed, and designation target.

e. Maintain a current listing of all personnel who are authorized to engage in laser operations and ensure that each individual is enrolled in the proper medical surveillance program.

f. Maintain training records of all personnel who engage in laser operations, maintenance, or training. These records will be maintained for two years and include times and dates of training received, as well as copies of designations and assignments for laser operations.

19004. LASER SAFETY TRAINING PROGRAM

1. All personnel working with laser devices or in areas using or storing Class IIIB, Class IV, or equivalent military-exempt lasers shall receive appropriate classroom training.

2. Local lesson plans will be submitted to the MCAS Miramar LSSO and safety manager. Such lesson plans should, at a minimum, encompass all applicable topics contained in the reference.

3. Formal safety school requirements of LSSOs and other necessary laser safety training needed for operations and maintenance will be locally budgeted and coordinated through training.

4. Normal laser-related technical training (operations and maintenance) is not applicable under this Order.

19005. LASER EYE PROTECTION (LEP)

1. All personnel exposed to lasers, either directly or indirectly, are required to wear laser eye protection.

2. All goggles or spectacles must be properly labeled and inspected prior to use. All LEP devices shall have the proper optical density at the appropriate wave lengths for each type of laser being used.

19006. MEDICAL SURVEILLANCE PROGRAM

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1. This program is a Naval Medical Department function although the program implementation and reporting of overexposure incidents are the responsibilities of the LSSO.

2. Personnel using or working around Class IIIB or Class IV lasers shall be enrolled in the medical surveillance program either as "Laser Personnel" or "Incidental Personnel" as defined below:

a. Maintenance personnel whose work with lasers requires them to bypass the safety interlocks and personnel involved in procedures that expose them to an open laser beam, shall be enrolled in the Medical Surveillance Program as "Laser Personnel".

b. Operators of fielded military Class IIIB or IV systems and aircrew aboard aircraft using Class IIIB or IV military laser systems shall be enrolled in the Medical Surveillance Program as "Incidental Personnel".

c. All other personnel will be categorized per specific job requirements.

3. Medical surveillance protocols for individuals designated as "Laser Personnel" or "Incidental Personnel" shall include a pre-placement exam that consists of a visual acuity exam and a review of their ocular history, and a termination exam, which consists of a visual acuity only.

19007. MISHAP INVESTIGATION REPORT PROCEDURES. In the event of an overexposure incident or suspected overexposure incident, the following action shall be taken:

1. An initial notification message reporting any overexposure or suspected overexposure shall be sent to BUMED. A follow-on phone call will be made to inform the chain of command, to include the MCAS Miramar LSSO.

2. An initial investigation shall be conducted by the unit LSSO with assistance from MCAS Miramar LSSO. If an aircraft mishap investigation is initiated, the Aviation Mishap Board (AMB) shall include a LSSO, Technical Laser Safety Officer (TLSO) designation minimum) on the investigation board as an adjunct member.

3. Mishap Reports shall be sent via the chain of command using ESAMS/RMI-SIR in accordance with applicable mishap reporting directives with copies to Safety (DS/LSSO), MCIWEST (DS).

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CHAPTER 20

EXCAVATION PERMIT (DIG PERMIT)

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CHAPTER 20

EXCAVATION PERMIT (DIG PERMIT)

20000. PURPOSE. To establish and implement a written policy for operations involving trenching and excavation work at MCAS Miramar. This chapter was established to assist in identifying, evaluating, and controlling the risks and hazards presented by work associated with excavations. All excavation work, regardless of the level of complexity, requires pre-planning which includes a safety brief and excavation permit in accordance with appendix (20-A).

20001. PROCEDURES. Operations involving trenching or excavation below 4 feet can result in hazards that are difficult to control and expose workers to unnecessary hazards. Cave-ins, contaminations, and contact with buried utilities are just a couple of these hazards. However, since hazards posed are similar to those associated with confined space entry; units, departments or workplaces that conduct operations involving trenching or excavation must develop procedures that address such things as atmospheric testing, ventilation, and emergency response planning. The Public Works Officer (PWO) and FEAD will ensure that permits for contractors are completed in order to assist in the identification of potential hazards. The PWO or Safety Department will ensure permits for all others are completed.

a. All persons intending to "dig" or excavate below 4 feet within the boundaries of MCAS Miramar are required to complete an excavation permit before commencing work. Digging refers to any process or activity involving the disturbance of soil, regardless of size, depth or nature of excavation. Personnel must be trained per reference (f), Subpart P.

b. The following will be completed before work commences.

- (1) Ensure a competent person is assigned to the job.
- (2) Determine soil type.
- (3) Check utility locations (color-code).
- (4) Check environmental site maps.
- (5) Complete Subsurface Operations Permit (PWD & S-6).
- (6) Complete Excavation Permit (Appendix (20-A)).
- (7) Identify location and place markers.
- (8) Brief workers before excavation begins (start of each shift).
- (9) Inspect excavation (start of each shift).
- (10) Stop work immediately if an unexpected utility, contamination, or unexploded ordnance is discovered.
- (11) Return area to a safe condition.

20002. DEFINITIONS

a. Competent Person. An employee of the responsible entity who is, per reference (f), Subpart P, capable of identifying existing and predictable hazards in the surroundings or working conditions and who has authorization to take prompt corrective measures to eliminate them. This person must be knowledgeable about soil analysis, the use of protective systems, and the requirements of reference (f), Subpart P.

b. Excavations. Are defined as any human-made cut, cavity, trench, or depression in an earth surface formed by earth removal or any operation that bores into the strata.

c. Utility location. Services requiring a trained person designated to mark utilities by the color code designated.

d. Worker exposure. Is the term used for an individual entering an excavation that is deeper than five feet or shallower involving other factors that could contribute to a cave-in or other personnel hazard (e.g., workers position in a trench, vibration, contamination, or surface water).

e. Color Codes

Red	Electric power lines, cables, conduit, and lighting cables.
Orange	Telecommunication, alarm or signal lines, cables, or conduit.
Yellow	Natural gas, oil, steam, petroleum, or other gaseous or flammable material.
	Sewers and drain lines.
Blue	Drinking water.
Violet	Reclaimed water, irrigation, and slurry lines.
Pink	Temporary survey markings, unknown/unidentified facilities.
White	Proposed excavation limits or route.

20003. ENVIRONMENTAL NOTIFICATION. This Order does not alleviate the requirement for Environmental Department (S-7) to be notified before operations involving trenching and excavation commences. The requirements of this Order are meant to ensure the safety of employees and contractors aboard MCAS Miramar.

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APPENDIX 20-A: TRENCH/EXCAVATION AND ENTRY PERMIT

MCAS MIRAMAR TRENCH/EXCAVATION AND ENTRY PERMIT									
LOCATION:							DATE/PERIOD AUTHORIZED		
TIME OF INSPECTION(S)					IF CONTRACTOR COMPANY NAME				
WEATHER CONDITIONS:							TEMP:		
CREW LEADER / PH #				SUPERVISOR / PH #					
DIMENSIONS		DEPTH =				YES	NO	HAZARDOUS CONDITIONS	
		TOP	W	L		<input type="checkbox"/>	<input type="checkbox"/>	Surface drainage	
		BOTTOM	W	L		<input type="checkbox"/>	<input type="checkbox"/>	Below water table	
OSHA SOIL CLASSIFICATION			TESTED			<input type="checkbox"/>	<input type="checkbox"/>	Bulging walls	
<input type="checkbox"/> A			METHOD USED			<input type="checkbox"/>	<input type="checkbox"/>	Floor heaving	
<input type="checkbox"/> B						<input type="checkbox"/>	<input type="checkbox"/>	Frozen soil	
<input type="checkbox"/> C						<input type="checkbox"/>	<input type="checkbox"/>	Super imposed loads	
						<input type="checkbox"/>	<input type="checkbox"/>	Vibration	
						<input type="checkbox"/>	<input type="checkbox"/>	Wet soil	
PROTECTION METHODS					UNEVEN IRREGULAR WALLS				
(Walls Must be vertical-No voids)					<input type="checkbox"/> Trench box				
SHORING					Sloping: <input type="checkbox"/> 1:1 (45 deg) <input type="checkbox"/> 1 1/2:1 (34 deg)				
<input type="checkbox"/> Timber					YES NO ENVIRONMENTAL CONDITIONS				
<input type="checkbox"/> Pneumatic					<input type="checkbox"/> <input type="checkbox"/> Confined Space Permit Required				
<input type="checkbox"/> Hydraulic					<input type="checkbox"/> <input type="checkbox"/> Gas detector used?				
<input type="checkbox"/> Screw Jacks					YES NO PWD SUBSURFACE PERMIT DONE				
<input type="checkbox"/> Trench Shield					<input type="checkbox"/> <input type="checkbox"/> Utility rep:				
COMMENTS:									
UNSAFE CONDITIONS					COMPETENT PERSON SIGNATURE AUTHORIZING PERMIT				
ALL UNSAFE CONDITIONS MUST BE CORRECTED PRIOR TO TRENCH ENTRY. IF ANY HAZARDOUS CONDITIONS ARE OBSERVED, THE TRENCH MUST BE IMMEDIATELY EVACUATED AND NO ONE ALLOWED TO RE-ENTER UNTIL CORRECTIVE ACTION HAS BEEN TAKEN.									
					SIGNATURE OF PERSON GIVING SAFETY BRIEF				
FOLLOW UP REQUIREMENTS									
PLACEMENT OF SPOILS & EQUIPMENT					LADDER LOCATION				
<input type="checkbox"/> Spoils at least 2 feet from edge of trench					<input type="checkbox"/> Located in protected area				
<input type="checkbox"/> Spoils not increasing super-imposed load					<input type="checkbox"/> Within 25 ft of safe travel				
<input type="checkbox"/> Backhoe at end of trench					<input type="checkbox"/> Secured				
OTHER					<input type="checkbox"/> Extends 36 in. above the landing				
<input type="checkbox"/> WEATHER CHECKED FOR RAIN					<input type="checkbox"/> Leads to safe landing				
EMERGENCY & OTHER PHONE NUMBERS									
FIRE AND EMERGENCY RESCUE: 911				ENVIRONMENTAL 307-1630			SAFETY DEPT. 307-1356		
				GIS OFFICE 307-- 6302					
ALTERNATE FORMS ARE AUTHORIZED IF ALL DATA IS PROVIDED									

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CHAPTER 21

WEIGHT HANDLING SAFETY

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CHAPTER 21

WEIGHT HANDLING SAFETY

21000. PURPOSE. The purpose of this chapter is to ensure the safe lifting and controlling capability of all applicable Weight Handling Equipment (WHE) used in support of Marine Corps operations aboard MCAS Miramar. It is also to promote safe operating practices through the inspection, test, certification, qualification, and operation requirements prescribed in references (e), (l), and (m), and to publish procedures and responsibilities for the WHE Management Program.

21001. BACKGROUND. Each year, crane and forklift mishaps take a heavy toll on lives and property damage. Load lifting equipment consists of the use of cranes, forklifts, vehicle lifts and associated equipment. These mishaps can be avoided through a proactive WHE Management Program. WHE programs can be tailored to the equipment being used.

21002. DEFINITIONS

1. Weight Handling Program. The MCAS Miramar's WHE Management Program includes weight handling equipment and those personnel involved in the management, operation, alteration, test, inspection, maintenance, certification, engineering, training, and acquisition thereof.

2. Weight Handling Equipment. WHE consists of cranes (e.g., portal cranes, mobile cranes, building cranes, portal mounted commercial boom assemblies, multi-purpose machines, or equipment that may be used in a crane-like application to lift suspended loads), rigging gear (e.g., slings, shackles), and associated equipment (e.g., portable hoists, portable load indicating devices).

3. Ordnance Handling Equipment (OHE). OHE is specifically designated equipment used for assembling, disassembling, handling, transporting, lifting, positioning, rotating, or containing ammunition, explosives, and related components.

4. Certification. Certification is the process by which, on a periodic basis, WHE is approved for use at Marine Corps activities. For cranes the process includes review of all applicable maintenance records, condition inspection, and load test to ensure that the crane has been maintained in a safe and serviceable condition and is functioning properly.

a. Certification Requirement. The Navy Crane Center must certify all Marine Corps owned equipment requiring third party certification. For contractor-owned equipment operated on MCAS Miramar, a private OSHA-accredited certification agency must provide the third party certification.

b. Procedures. Reference (i) addresses specific procedures for third party certification.

c. Inspections. Reference (f) addresses procedures for conducting inspections.

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5. Rigging Gear and Associated Equipment. Types of equipment used in weight handling operations include rigging gear (wire rope slings, shackles, eye bolts, swivel hoist rings, links, rings, turnbuckles, etc.), portable manual and powered hoists, portable load indicators (dynamometers, load cells, crane scales, etc.), below-the-hook lifting devices, portable A-frames, portable floor cranes, and portable gantries used for general lifting, as well as cranes and hoists procured with, integral to, and used solely in support of larger machine systems.

21003. RESPONSIBILITIES. Commanders and Department Heads shall develop and implement a weight handling program to maintain and operate WHE to ensure compliance with references (a), (e), (f), (i), (j), and (k) to include the following:

1. Follow all applicable regulations and SOPs, to include reviews of manufacturers recommendations on any modifications or adjustments to equipment. Obtain in writing any approvals from manufacturers or Naval Crane Center, Naval Facilities Engineering Command before making modifications.
2. Ensure all WHE not in compliance is removed from service.
3. Ensure proper investigation and reporting of WHE mishaps.
4. Ensure all personnel are trained and licensed to operate WHE, per local, state, and federal instructions.
5. Ensure all personnel are trained and qualified to perform rigging operations per local, state and federal instructions.
6. Maintain copies of records of daily inspections, maintenance, and load testing.
7. Ensure corrective actions are taken during annual safety inspections of all WHE and associated equipment.

21004. COMPLIANCE

1. All WHE testing shall be performed in accordance with the manufacturer's recommended procedures and reference (i) or the equipment's Technical Manual for that piece of equipment. WHE erection shall be performed under the supervision of a designated qualified person as defined in the American Society of Mechanical Engineers B30.5. Shop fabricated lifting devices are not authorized.
2. Contractors working aboard the installation shall comply with references (e), (f), and (j). **ALL** contractor cranes shall have reference (i) appendix P Certificate of Compliance filled out before the crane is allowed on MCAS Miramar. The Contracting Officer shall ensure a copy of this form is provided to the MCAS Miramar Safety Department.
3. Personnel shall wear/use PPE, tools, and other equipment required to perform work involving WHE to include:
 - a. Seat belt worn at all times.

b. Safety shoes, safety helmet/hard-hat, and other equipment necessary as identified in the JHA; and

c. Hard-hats shall be worn while operating mobile WHE.

21005. TRAINING

1. WHE (Crane) Operators. Only crane operators who have met the requirements of references (e), (f), (i), local, and state requirements may be authorized to operate cranes.

a. WHE operators of Marine Corps owned equipment will be training in accordance with reference (i).

b. Contractor personnel operating WHE shall be certified by an OSHA accredited certification agency (third party certification) that meets the requirements of references (e) and (f).

c. All operators shall have a current license on their person while operating WHE.

2. Riggers. Riggers shall be trained in accordance with reference (e), (f), and/or (i).

3. Training Records. Commanders and supervisors shall review WHE operator training records annually to ensure compliance with local, state, and Federal licensing and permit instructions in accordance with reference (e). Supervisors shall review annually the respective JHA. Contractors shall review their personnel training records and sub-contractor personnel records prior to operating on the installation. The WHE Program Coordinator shall inspect records during annual inspections.

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CHAPTER 22

ERGONOMICS PROGRAM

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CHAPTER 22

ERGONOMICS PROGRAM

22000. PURPOSE. To establish procedures and requirements for the Ergonomics program. The goal is to prevent Work-related Musculoskeletal Disorders (WMSDs) for military and civilian personnel.

22001. BACKGROUND

1. 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, Cumulative Trauma Disorders, and Overuse Syndrome. WMSDs result from the cumulative effect of repeated traumas associated with specific workplace risk factors, to the musculoskeletal system.

22002. INFORMATION. Musculoskeletal disorders affect soft tissues of the back, neck, shoulder, elbow, hand, wrist, and fingers. These include the nerves, tendons, cartilage, ligaments, and muscles. Musculoskeletal harm and reduced human performance capabilities often result from a mismatch between workers and manual tasks required of them. Risk factors include, but are not limited to:

1. Force. The amount of physical effort required to maintain control of equipment or tools or 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. e.g. prolonged typing, assembling components, and repetitive hand tool usage.

3. Awkward or Static Postures. Awkward posture refers to positions of the body (limbs, joints, back) that deviate significantly from the neutral position while performing job tasks e.g. overhead work 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 or standing in one place for prolonged periods of time.

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, and 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. Examples include resting the wrist on a hard desk edge; tool handles that press into the palms or using the hand as a hammer. When present for sufficient duration, frequency, magnitude, or in combination, these risk factors may cause WMSDs.

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In addition, personal risk factors, such as physical conditioning, existing health problems, gender, age, work technique, hobbies, and organizational factors (e.g., job autonomy, quotas, and deadlines) may contribute to but do not cause the development of WMSDs. Additionally, environmental conditions such as working in temperature extremes may contribute to developing WMSDs.

22003. RESPONSIBILITIES

1. Commanders, Commanding Officers, and Department Heads shall:

a. Ensure personnel exposed to musculoskeletal risks receive appropriate training.

b. Ensure work center evaluations are completed, per the MCAS Miramar Ergonomics Program. These evaluations should be included in the periodic IH surveys.

c. Plan and provide an annual budget to purchase ergonomic materials and equipment such as sit/stand desks, seating, anti-fatigue mats, workstations, tools, material handling devices, jacks, hydraulic pallet lifts, creepers, stands, etc., for personnel to prevent WMSD injuries and illnesses.

d. Ensure newly appointed supervisors, managers, and personnel receive appropriate ergonomics training.

e. Use the local medical branch clinic or Industrial Hygiene department recommendations in the assignment of injured workers to light or restricted duty.

f. Designate an Ergonomics Manager/Coordinator and members for an Ergonomics Team, with advice from local medical personnel, to administer the ergonomics program.

2. Director of Safety shall:

a. Establish an Ergonomics Program.

b. Appoint in writing an ergonomic trained Safety Specialist as a member of the MCAS Miramar Ergonomics Team and as the MCAS Miramar Ergonomic Program Manager. The trained Safety Specialist shall have received at least 40 hours of formal training by attending the NAVOSH Navy Ergonomics Program (CIN: A-493-0085) or similar program.

c. Ensure the Safety Department is advised on ergonomic issues as they occur.

d. Coordinate ergonomics training and education for the ergonomics team.

e. Oversee safety aspects of the ergonomics effort.

3. Director, Naval Branch Health Clinic Miramar: The Director of Naval Branch Health Clinic shall be responsible for the following:

a. Occupational Medicine Services. Cognizant medical commands shall support line activity initiatives to reduce WMSDs by providing occupational medicine services. Occupational medicine professionals shall collaborate with commands for the purpose of participating in command Ergonomics Teams, conducting workplace visits to obtain knowledge of operations, work practices, and transitional-duty jobs to provide ergonomics assessments, and facilitate recovery of individuals with WMSDs.

b. Physical Standards Pre-placement and Periodic Examinations. For positions that involve significant risk for WMSDs, the command, human resources office, and cognizant medical command shall review the presence and adequacy of existing physical requirements of the job and make recommendations for improvement to the command.

c. Coordinate with Navy BUMED.

d. Provide technical and administrative guidance for the medical aspects of the ergonomics program.

e. Monitor WMSD trends using appropriate records.

f. Verify low risk of transitional duty assignments.

g. Assist in the medical recovery of individuals with WMSDs and the implementation of transitional duty processes.

h. Assist commands in the development of physical requirements for positions.

4. MCAS Miramar Ergonomics Team. The Ergonomics Team shall consist of:

a. The Ergonomics Coordinator (GS-0018 Safety and Occupational Health Manager or equivalent).

b. At least one representative from the Human Resources Office (this may be the Injury Compensation Process Administrator (ICPA)).

c. An advisory or support representative from engineering or facility maintenance; and

d. An advisory representative from contracting or purchasing.

e. The Ergonomics Team shall:

(1) Review all exceptional or special needs ergonomic furniture and equipment based upon survey results.

(2) Provide recommendations to supervisors on appropriate furniture/equipment prior to purchase.

(3) Ensure coordination of medical aspects of the ergonomics program with responsible MTF.

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(4) Review injury and illness records related to musculoskeletal disorders, develop trend analyses, and report results to OSH Safety Council.

(5) Meet quarterly to discuss ergonomic surveys, WMSD's, trends, set program goals, and develop strategies.

5. MCAS Miramar Ergonomics Program Manager shall:

a. Serve as focal point for the MCAS Miramar Ergonomics program and perform ergonomic evaluations on high risk areas, processes, and personal workstations.

b. Ensure accurate record keeping of ergonomics team minutes.

c. Ensure ergonomic training is coordinated with the Safety Department for MCAS Miramar personnel.

d. Audit status of implementation of the ergonomics program annually to include workplace processes, awareness, and documentation.

e. Identify existing and potential musculoskeletal risks for trending purposes.

f. Conduct an annual ergonomic program assessment and worksite evaluations upon request. These evaluations should be included in the periodic IH surveys.

g. Set priorities for identified musculoskeletal risks for abatement.

h. Implement corrective action plans.

i. Develop methods to evaluate the effectiveness of corrective actions and document results.

j. Maintain documentation on annual surveys, team meetings, trend analyses, investigations, ergonomic improvements, and associated costs.

k. Chair the Ergonomics Team and provide interface with the Safety Council.

6. Director of Human Resources. The director of the Human Resources Office shall be responsible for the following:

a. Appoint at least one representative to serve on the Ergonomics Team. This may be the ICPA.

b. Ensure all supervisors, managers, and employees receive appropriate ergonomics training as developed by the Ergonomics Team.

c. Use MTF recommendations in the assignment of injured workers to light or restricted duty.

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d. Provide the Ergonomics Team with information on compensation claims and costs associated with WMSDs to enable them to perform trend analysis.

7. Director of Public Works. The director of the Public Works or Facilities Department shall be responsible for the following:

a. Appoint in writing an advisory or support representative from engineering or maintenance to the Ergonomics Team.

b. Appoint in writing an advisory representative from contracting or purchasing to the Ergonomics Team.

c. Implement Ergonomics Team recommendations to eliminate or reduce work center ergonomic risk factors.

d. Integrate ergonomics considerations into all work center improvements.

8. Supervisors/Unit Safety Officers/Unit Safety Reps: Computer/Electronic Accommodations Program (<https://cap.mil>)

a. Ensure personnel receive ergonomics awareness training.

b. Request assistance from the MCAS Miramar Ergonomic Program Manager for recognizing, assessing, and monitoring musculoskeletal risk factors.

9. All Personnel:

a. Report suspected ergonomic hazards to supervisors and first line safety officers/managers.

b. Participate in worksite evaluations, surveys, and ergonomic hazard analyses.

c. Attend ergonomics training sessions as required and apply the knowledge and skills acquired to actual jobs, tasks, processes, and work activities.

d. Practice early reporting of symptoms of cumulative trauma disorders to supervisors and health services.

e. Utilize proper body mechanics and recommend ergonomic work processes.

f. When provided, use the appropriate tools, equipment, parts, materials, and procedures in the manner established by managers and supervisors.

g. Maintain equipment in good condition and report damaged equipment immediately to supervisor.

h. Provide feedback to supervisors regarding the effectiveness of design changes, new tools or equipment, or other interventions.

i. Report WMSD signs, symptoms, and hazards to the supervisor as early as possible to facilitate medical treatment and initiate proactive interventions.

22004. ERGONOMICS PROGRAM ELEMENTS. Further guidance is available in references (a) and (e).

1. Management Commitment and Personnel Involvement. A collaborative partnership between all working levels is essential to prevent musculoskeletal disorders. 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 crucial for preventing musculoskeletal disorders by risk identification and developing an effective means for hazard abatement.

2. Requesting an Ergonomics Survey. A request should be routed through the employee's supervisor, after identifying perceived hazards, or from Occupational Health once diagnosed with an ergonomics related injury or illness.

3. Work Center Analysis. Purpose of a workplace analysis is to identify existing hazards that may cause musculoskeletal disorders and other injuries. Identification of jobs with musculoskeletal risk factors shall assist in determining where detailed job analysis and intervention priorities are needed.

a. One method of workplace analysis requires a review by the MCAS Miramar Ergonomic Team of mishap logs, compensation claims, personnel complaints and suggestions, safety inspections, and IH surveys for musculoskeletal disorders.

b. Another method of workplace 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 IH survey) reveal potential for musculoskeletal, a symptom or body part discomfort survey shall be administered to determine if intervention is warranted. This method provides a proactive approach on collecting information prior to actual injury.

4. Hazard Prevention and Control. The goal of hazard prevention and control is to eliminate, reduce, or control the presence of musculoskeletal risk 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, administration controls, and PPE (back belts and wrist splints are not considered PPE). All risks identified shall be assigned a RAC and entered into the hazard abatement log as described in reference (a).

a. Managers must recognize and understand ergonomic issues in order to support the Ergonomic Program with adequate resources.

b. Supervisors are required to recognize and abate hazardous work situations.

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c. Personnel are required to identify and report stressful work situations to their supervisors and corporate intervention measures.

d. Ergonomic team members shall interpret safety, health, and compensation data to make informed program and management recommendations.

22005. PROGRAM EVALUATION AND REVIEW. The Ergonomics Program Coordinator shall annually assess the implementation and effectiveness of MCAS Miramar Ergonomic Plan.

22006. TRAINING

1. Ergonomics awareness training shall be made available to all military and DoD civilian personnel. Training should enable each person to recognize work center risk factors (ergonomic), as well as understand procedures used to minimize these risks.

2. Ergonomics awareness training should include:

a. Ergonomics definition and concepts.

b. Work center physical risk factors and personal traits that may contribute to an injury.

c. How to recognize and report early warning signs and symptoms associated with various WMSDs.

d. 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.

e. Conducted annually and upon request.

f. Training shall be documented, in accordance with references (e) and (g).

g. Additional training shall be conducted when personnel are assigned to a new task with different risks, or when risks are newly identified in a task.

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CHAPTER 23

SAFETY AWARDS PROGRAM

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CHAPTER 23

SAFETY AWARDS PROGRAM

23000. PURPOSE. The purpose of the MCAS Miramar Safety Awards Program is to encourage, recognize, and promote excellence in safety and health among all commands, activities, and tenants aboard MCAS Miramar.

23001. RESPONSIBILITIES

1. Commanding Officer MCAS Miramar. The Commanding Officer will implement a comprehensive safety awards program designed to recognize the outstanding safety performance of tenant units, military, and civilian personnel aboard the installation. Specifically, the Commander's responsibilities are:

a. Provide resources to allow the Director of Safety to execute the installation's safety award program.

b. Request written approval from the Commanding General, Marine Corps Installation West for purchasing safety award items (Safety Pins, Coins, Plaque's, and other like items).

2. Director of Safety

a. Compile organizational safety data and submit recommended recipients for each organization award to Installation Commander.

b. Coordinating with the station command deck to arrange for presentation of the awards to the selected units/divisions/departments.

c. Responsibility for the purchase of awards items:

(1) Provide written approval authorizing the purchase of award items (CG, MCI-W).

(2) Ensure the Award Matrix corresponds with this chapter and indicate how many of each award type will be distributed annually.

(3) Request and retain quotes from vendors that includes all costs associated with procuring award items for the entire fiscal year, and ensure it corresponds with the Award Matrix.

d. Process awards in accordance with applicable SOPS.

3. Commands, Activities, and Tenants

a. For annual awards, forward the award nominations to the MCAS Miramar Director of Safety no later than the 15th day of October after the fiscal year has ended.

23002. AWARDS

1. Individual Achievement in Safety Award. This annual award will recognize the contributions or noteworthy accomplishments the individual made to their Safety Management System during the fiscal year. The MCAS Commanding Officer will recognize the "Annual Award" recipient during a designated Commanders briefs or safety council meetings. Award recipients will receive a Certificate of Appreciation signed by the MCAS Commanding Officer and a 24-hour time off award for civilian employees, and a "72" time off award for military personnel.

a. Eligibility. All personnel aboard MCAS Miramar.

b. Award Criteria. Nominations will be in a narrative style limited to one page and submitted through the chain of command. The narrative will describe the contributions or noteworthy accomplishments the individual made to their safety management system.

2. Commanding Officer's Installation Safety Award. The Commanding Officer's Installation Safety Award is the highest safety award given to any command, activity, and tenant aboard MCAS Miramar. It is presented to the unit that has achieved and maintained an excellent Safety Management System, and maintains a safe and healthful workplace. Each unit's safety program and safety performance are reviewed based on annual safety program assessments, facility inspections, hazard abatement, participation in training, mishap rates, mishap reporting, significant improvements made, and through the recommendations made by the units CO/XO/DOSS/OIC's. The selected unit will receive a plaque for the year.

a. Eligibility. All commands, activities, and tenants aboard MCAS Miramar.

b. Award Criteria. To be considered for this award, a safety management system must be established and maintained, and will be judged on the awards criteria below.

(1) The command safety department/office is organized at the staff level with personnel as described in Marine Corps Safety Management System (MCO 5100.29C).

(2) The command Safety Officer is trained and assigned in writing.

(3) The command has received a rating of Mission Capable on their most recent Commanding Generals Inspection Program (CGIP) and a satisfactory on their most current Explosive Safety Inspection (ESI).

(4) The percentage of mishaps throughout the fiscal year has shown a significant reduction rate.

(5) Hazards identified during annual OSH Inspections have been abated or updated within 30 days of issuance of deficiency notice(s).

3. Safety Division, Headquarter Marine Corps Awards

a. Marine Corps Ground Safety Awards. The Director, Safety Division, will convene the Marine Corps Ground Safety Awards Board annually, on or about 1 February.

(1) Warrior Preservation Award. This award is presented each fiscal year to the Marine Corps installation that has maintained the most comprehensive safety management system.

(a) Eligibility. All Bases, Stations, Depots, Support Activities, and Air Facilities that provide the core safety services identified in reference (a).

(b) Award Criteria. Nominees will have made significantly greater contributions to safety than normally expected of those in their particular assignments during the fiscal year. A safety program must be established and maintained installation-wide, and will be judged on the awards criteria listed below. Nomination packages will be endorsed by the first General Officer in the chain of command.

(2) Marine Corps Safety Award. This award is presented each fiscal year to the Marine Corps command in each category that has maintained the most outstanding safety management system.

(a) Eligibility. All Marine Corps commands.

(b) Award Criteria. Commands shall submit nomination packages for the appropriate HHQ or unit category.

(3) Marine Corps Safety Excellence Award. This award is presented each fiscal year to one officer, one enlisted, and one government civilian employee (of any service/pay plan whose primary responsibilities are outside of Safety Occupational and Health) who have made the most significant contribution to the Marine Corps Safety Management System.

(a) Eligibility. All Marine Corps military and government civilian employees.

(b) Award Criteria. Marine Corps Safety Excellence Award/Marine Corps Civilian Safety Professional of the Year Criteria, the narrative will describe the contributions or noteworthy accomplishments the individual made to the Marine Corps Safety Management System during the fiscal year.

(4) Marine Corps Civilian Safety Professional of the Year Award. This award recognizes a civilian government employee in the safety community for outstanding contributions to the Marine Corps Safety Management System

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(a) Eligibility. All Community of Interest civilian career safety professionals (Occupational Series GS-0017/0018/0803/0019) are eligible.

(b) Award Criteria. Marine Corps Safety Excellence Award/Marine Corps Civilian Safety Professional of the Year Criteria, the narrative will describe the significant contributions and noteworthy accomplishments that the individual made to the Marine Corps Safety Management System during the fiscal year.

(5) Road Warrior Award. Individual Government Motor Vehicle Operator Award. This award is presented to the military and government civilian employees operating Government Motor Vehicles (GMVs) and tactical vehicles who achieve mishap/violation free driving mileage at 2,500 mile increments. The award consists of a certificate from the Commandant of the Marine Corps.

(a) Eligibility. All Marine Corps military and government civilian employees operating GMVs and tactical vehicles.

(b) Award Criteria. The individual command is responsible for tracking an operator's mileage record. Commanders will determine operator eligibility for this award and submit award requests with endorsements to the CMC SD using the sample letter format in reference (a).

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RISK MANAGEMENT

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CHAPTER 24

RISK MANAGEMENT

24000. PURPOSE. To establish a RM policy in accordance with reference (a) as an integral part of MCAS Miramar operations, training, and planning to optimize operational capability and readiness, and to enhance mission accomplishment.

24001. DISCUSSION. Force preservation does not have a single solution. However, every effort will be made to prevent a situation that will degrade mission capability rather than planning to deal with the situation after it occurs. Risk mitigation is central to the idea of readiness and must not be an afterthought in actions during combat, in training, in garrison and off duty. RM is one of the best means available to eliminate senseless and needless loss of life, injury, and materiel damage. Active participation of everyone in the RM process of identifying, assessing, and controlling risks arising from factors experienced on a daily basis such as uncertainty, ambiguity, and change will allow for informed decisions. This process is one in a range of tools to be used by personnel at all levels for minimizing risk to an acceptable level commensurate with completing the task at hand or accomplishing the mission.

24002. INHERENT RISK. Risk is inherent in every phase of tasking, missions, and operations due to today's complex and dynamic environment. Additionally, off duty activities present their own set of hazards and risks requiring the application of RM processes and principles. As hazards and risk are present both on and off duty, it is incumbent upon all Marines, both military and civilian, to understand how to assess and manage risk to achieve mission success and preserve combat readiness.

24003. APPLICATION. All personnel aboard MCAS Miramar shall apply RM concepts to identify and mitigate risk in all tasks, missions, operations, and personal activities whether forward deployed, in garrison or on liberty, no matter how routine these events become over time. Risk Assessments (RA) submitted to MCAS Miramar Safety Department will be developed by utilizing a Deliberate Risk Assessment Worksheet (DRAW) DD Form 2977. All civilian personnel shall apply RM concepts while on duty and are highly encouraged to use these concepts while off duty.

24004. SCOPE. This chapter is intended for personnel of all ranks, assigned missions, and organizational levels. It is imperative that leaders at all levels understand the fundamental importance of embedding these principles within the culture of their organizations. Implementation of RM at the Air Station will be accomplished as follows.

1. Training. Per reference (a), a Risk Management Instructor (RMI) will be designated in writing to ensure appropriate training for all military and civilian personnel. Leaders will ensure all Marine Corps personnel are trained initially and biennially thereafter in the concepts and principals of RM. Training will be consummate with rank, experience, and leadership position. RM training will be incorporated into existing training periods on safety and operational planning/decision making whenever possible.

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a. H&HS, CO will ensure that MCAS Miramar military personnel complete training on MarineNet utilizing the following course codes consummate with rank, experience, and leadership position:

- (1) SDRMGTE130 - Risk Management for Private-Lance Corporal
- (2) SDRMGTSENO - Risk Management for Senior Leaders
- (3) SDRMGTSULO - Risk Management for Small Unit Leaders

b. The MCAS Miramar Human Resources Office will ensure that MCAS Miramar civilian personnel are assigned in TWMS the below training for completion annually:

- (1) 684783 - TWMS - Risk Management Training for Civilians

2. Integration. The RM process will be integrated into all levels of command.

a. Hazards shall be identified, RA, and controls developed and implemented during the earliest possible planning stages. Operations shall be continuously monitored for effectiveness of controls and situational changes.

b. All identified hazards, RA, and control measures will be incorporated into briefs, notices, and written plans.

c. A thorough RA for all new or complex evolutions will be conducted to define acceptable risk and possible contingencies for the evolution.

d. The RM process will be documented in safety, training, and lesson learned reports. Reports should comment on identified hazards, RA, and the overall effectiveness of controls implemented.

e. The Director of Safety, upon request, will provide RM Worksheets and/or checklist to develop plans for a specific evolution or process.

24005. RISK MANAGEMENT PROCESS

1. Terms

a. Hazard. Any real or potential condition that can cause injury, illness, or death to personnel; damage to or loss of equipment or property; degradation of mission capability or impact to mission accomplishment; or damage to the environment. (Synonymous with the term "threat.") A hazard is a mishap cause, or mishap causal factor, waiting to happen.

b. Risk. Chance of adverse outcome or bad consequence, such as failed or degraded mission, injury, illness, or loss. Risk level is expressed in terms of hazard probability and severity.

c. RA. A structured process to identify and assess hazards. Risk Assessment results in an expression of potential harm, described in terms of severity, probability, and exposure to known hazards. It is accomplished in the first two steps of the RM process.

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d. RM. The process of dealing with risk associated with military operations, which includes risk assessment, risk decision making, and implementation of effective risk controls.

2. Five Step Process:

a. Identify the Hazard. Begin with an outline or chart of the major steps operation (operational analysis). Next, conduct a Preliminary Hazards Analysis by list all the hazards associated with each step along with possible causes for associated hazards.

b. Assess the Hazard. For each identified hazard, determine the associated degree of risk in term of probability and severity.

c. Make Risk Decision. First, develop risk control options. Start with the most serious risk and select controls that will reduce the risk to a minimum. With selected controls in place, decide if the benefit of the operation/event outweighs the risk. If risk outweighs benefit, ensure acceptance of risk is approved at the appropriate level.

d. Implement Controls. The following measures can be used to eliminate hazards or reduce the degree of risk.

(1) Engineering Controls. Controls that utilized engineering methods to reduce risk by design, material selection, or substitution when technically or economically feasible.

(2) Administrative Controls. Controls that reduce risk through specific administrative actions, such as:

(a) Providing suitable warnings, markings, placards, sign, and notices.

(b) Establishing written policies, programs, instructions, and SOP.

(c) Training personnel to recognize hazards and take appropriate precautionary measures.

(d) Limiting exposure to a hazard (either by reducing the number of personnel/assets or the length of exposure time).

(3) Personal Protective Equipment. Serves as a barrier between personnel and a hazard. It should be used when other controls do not reduce the hazard to an acceptable level.

e. Supervise. Conduct follow-up evaluations of the controls to ensure they remain in place and have the desired effect. Monitor for changes that may require further controls. Take corrective action when necessary.

3. RM Process Levels. The RM process exists on three levels: "Time Critical", "Deliberate", and "In Depth". RM process levels are based upon the mission, situation, time available, proficiency level of personnel and assets available. These levels involve RA processes from "on the run" mental or oral review of a situation to much more through evaluations relying on

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research data, analysis tools, or other studies to clearly identify the hazard(s).

4. Principles of RM. RM incorporates the following four principles:

a. Accept risk when benefits outweigh the cost. Marine Corps traditions are built upon principles of seizing the initiative and taking decisive action. The goal of RM is not to eliminate risk, but to manage risk so the mission can be accomplished with the amount of loss. The process of weighing risks against the benefits and value of the task or mission helps maximize success. Balancing cost and benefits is a subjective process. Therefore, personnel with knowledge and experience of the mission or task must be engaged when making risk decisions.

b. Accept no unnecessary risk. An unnecessary risk is any risk that, if taken, will not contribute meaningfully to task or mission accomplishment or will needlessly jeopardize personnel or material. Risk is managed through relentless training, awareness of the risk being confronted, and a clear-eyed understanding of the mission at hand. Training and the confidence derived from it will directly result in increased performance and a better control of risk that are an inescapable part of daily existence. The acceptance of risk does not equate to the imprudent willingness to gamble. Additionally, if not all detectable hazards have been identified, then unnecessary risk is being accepted. The RM process, in conjunction with sound safety principles, identifies hazards that might otherwise go unidentified and provide tools to reduce or offset risk. End state: take only risks that are necessary to accomplish the task, activity, or mission.

c. Anticipate and manage risk by planning. Integrating RM into planning at all levels, and as early as possible, provides the greatest opportunity to make well-informed risk decisions and to implement effective risk controls. This engaged approach enhances the overall effectiveness of RM by reducing mishaps, injuries, and cost. Hazard controls that have been identified during reconnaissance and preplanning should reside in the operations order.

d. Make risk decisions at the right level. RM decisions are made by the leader directly responsible for the operation. While anyone can make a risk decision, the appropriate decision level should reside whereby the leader can make decisions to accept, eliminate, or reduce the risk. Prudence, experience, judgment, intuition, and situational awareness of leaders directly involved in the planning and execution of the mission are critical elements in making effective RM decisions. When leaders responsible for executing a mission determine that risk cannot be controlled at their level, or goes beyond the commander's stated intent, the risk decision shall be elevated within the chain of command to the senior Officer or Staff Non-Commissioned Officer. If unable to mitigate the risk at the unit level, the risk decision shall be elevated to the next commander in the chain of command.

e. Designation of RM Authority is determined by the Unit Commander. Examples of designees include the XO or civilian equivalent or based on Risk Levels as follows:

Risk Level	Decision Authority
Extremely High (EH)	Commander/Director
High (H)	OX/Deputy Director/Field Grade Officer
Medium (M)	Company Grade Officer/Manager
Low (L)	Supervisor/Section Lead

5. RA Matrix. A risk matrix is used to accomplish the second step of the RM process. The RAC is defined by a matrix which represents the degree of risk associated with a hazard considering two elements: hazard severity and mishap probability. Using the matrix, the RAC is described as follows:

a. Determine Severity. An assessment of the potential consequence intensity that can occur because of exposure to a hazard. It is defined by the degree of injury, illness, property damage, loss of asset (time, money, personnel), or task or mission impairing factors. When analyzing risk, it is based on the worst credible outcome. Consideration must be given to the number of personnel and resources potentially exposed to a hazard when determining potential severity. Exposure is an expression that considers the frequency, length of time, and percentage of people or assets subjected to a hazard. Exposure is a component of risk but is not directly used to assign a level of risk. Rather, it is a consideration in determining probability and severity. The greater the number of resources exposed to a hazard, the greater the severity. Additionally, the combination of two or more hazards may increase the overall level of risk. Hazard severity categories are assigned as Roman numerals according to the criteria in Figure 24.1.

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Figure 24.1. Severity Categories

Category		Description
Catastrophic	I	<ul style="list-style-type: none"> • Loss of the ability to accomplish the mission • Death or permanent total disability • Loss of a mission-critical system or equipment • Major facility damage • Severe environmental damage • Mission-critical security failure • Unacceptable collateral damage • Objectives unachievable
Critical	II	<ul style="list-style-type: none"> • Significantly degraded mission capability or unit readiness • Permanent partial disability or severe injury or illness • Significant damage to property, systems, or the environment • Shortfalls to critical mission requirements • Significant collateral damage • Able to only partially achieve objectives
Moderate	III	<ul style="list-style-type: none"> • Degraded mission capability or unit readiness • Minor damage to equipment, systems, property, or the environment • Minor injury or illness • Most requirements are met
Negligible	IV	<ul style="list-style-type: none"> • Little or no adverse impact on mission capability or unit readiness • Minimal threat to personnel safety or health • Little or no property, systems, or environmental damage: fully functional and serviceable • Little or no impact to mission success • Objectives achievable

b. Determine Probability. This is a measure of the likelihood that a potential consequence will occur. An assessment of the probability that a hazard will result in a mishap or loss is defined by considerations of such factors as location, exposure (cycles or hours of operation), affected populations, experience, or previously established statistical information. Probability categories are assigned a letter according to the criteria in Figure 24.2.

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Figure 24.2. Probability Categories

Category		Description
Frequent	A	<ul style="list-style-type: none"> Frequent to occur. Continuously experienced by an individual item or person. Continuously experienced over a service life of an inventory of items or group.
Likely	B	<ul style="list-style-type: none"> Likely to occur, immediately or within a short period of time. Expected to occur frequently to an individual item or person. Expected to occur continuously over a service life of an inventory of items or group.
Occasional	C	<ul style="list-style-type: none"> Occasionally will occur in time. Expected to occur several times to an individual item or person. Expected to occur occasionally over a service life of an inventory of items or group.
Seldom	D	<ul style="list-style-type: none"> Seldom may occur in time. Can reasonably be expected to occur at some time to an individual item or person. Can reasonably be expected to occur at some time over a service life for an inventory of items or group.
Unlikely	E	<ul style="list-style-type: none"> Unlikely it will occur in time. Unlikely to occur, but possible in the service life for an inventory of items or group.

c. Assign the RA Level. The RA Level is an expression of risk that combines the elements of hazard severity and probability of mishap occurrence. The RA Level is a level of risk for each hazard expressed in the Joint RA Matrix in Figure 24.3.

Figure 24.3. Joint Risk Assessment Matrix

Risk Assessment Matrix			PROBABILITY					
			Frequency of Occurrence Over Time					
			A Frequent <small>(Continuously experienced)</small>	B Likely <small>(Will occur frequently)</small>	C Occasional <small>(Will occur several times)</small>	D Seldom <small>(Relatively, can be as infrequent as once)</small>	E Unlikely <small>(Improbable, but possible to occur)</small>	
SEVERITY	Effect of Hazard	Catastrophic <small>(Death, Loss of Asset, Mission Capability or Unit Readiness)</small>	I	EH	EH	H	H	M
		Critical <small>(Severe Injury or Damage, Significantly Degraded Mission Capability or Unit Readiness)</small>	II	EH	H	H	M	L
		Moderate <small>(Minor Injury or Damage, Degraded Mission Capability or Unit Readiness)</small>	III	H	M	M	L	L
		Negligible <small>(Minimal Injury or Damage, Little or No Impact to Mission Readiness or Unit Readiness)</small>	IV	M	L	L	L	L
			Risk Assessment Levels					
			EH=Extremely High H=High M=Medium L=Low					

24006. RA RESOURCES. Joint Risk Assessment Tool (JRAT).

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1. The JRAT is a Web-based software application that assists the user with completing a deliberate RA worksheet (DD Form 2977). The software guides the user through each of the steps in an intuitive fashion with help screens and process information. The JRAT allows the chain-of-command to supervise and conduct quality control of the RA process. Upon completion of an assessment, reports can be printed and the assessment can be shared electronically. The USMC JRAT site is available via CAC access at:
<https://jrat.safety.army.mil/login.aspx>.

24007. PREVENTION AND CONTROL OF WORKPLACE HAZARDS

1. Purpose. To identify, eliminate, and/or control recognized safety and health hazards within the workspace prior to exposing employees to a safety or health hazard.

2. Policy. Prevention and control of workplace hazards will comply with reference (a). Supervisors will ensure all hazards shall be eliminated or controlled as quickly as possible subject to prioritization based upon RAC assigned thru the RM process.

3. JHA. The JHA process begins with identification of the potential hazards or risks associated with a particular job. Once the hazards are understood, the consequences of those hazards are then identified and followed by control measures to eliminate or mitigate the hazards. The JHA should include a RA of each hazard occurring and the severity of the consequences using the RAC to analyze the level of risk associated with each job step. The JHA can be used to help refine safe work procedures and will act as a tool for training new employees.

a. Workers and management need to understand that documentation will not make the job safe. Supervisors will use the documented JHA to ensure workers understand the risks and hazards associated with the job and know how to use the chosen controls in such a way as to eliminate or mitigate those risks. The JHA documents the decisions of this process. JHA's shall be entered in ESAMS.

b. Reference (e) may be used as guidance when completing a JHA. The IH survey and Safety Department are valuable resources in identifying hazards and methods to reduce hazards.

c. Work shall not begin until the JHA for the work activity has been accepted by the first line supervisor and reviewed by the second line supervisor. The JHA will be discussed with all personnel engaged in the activity working on site.

d. The JHA shall be reviewed annually and modified as necessary to address changing conditions, operations, or changes in the number of qualified person(s).

24008. SPECIAL RM EVENTS. DRAW will be completed for all special events to include events held in Flight Line Hangars.

a. Flight Line Hangars. These hangars have Aqueous Film Forming Foam (AFFF) systems that incorporate Ultraviolet/Infra-Red (UV/IR) sensors that

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set off with as little as a lighter flame. The procedures outlined in this Order and StaO 11320.1A (MCAS Miramar Fire Protection and Life Safety Instructions) will be completed prior to any special event being conducted in Flight Line Hangars.

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CHAPTER 25

ASBESTOS SAFETY PROGRAM

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CHAPTER 25

ASBESTOS SAFETY PROGRAM

25000. PURPOSE. This section establishes MCAS Miramar policy and responsibilities for compliance with current regulations addressing asbestos found in buildings aboard the installation.

25001. DISCUSSION

1. Provisions of this chapter apply to industrial and construction activities performed aboard MCAS Miramar. These provisions pertain to asbestos operations conducted on or in installation buildings, grounds, and structures.

2. Marine Corps policy is 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.

25002. BACKGROUND

a. Asbestos is a general term used to describe several mineral silicates that 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.

25003. POTENTIAL HEALTH EFFECTS. Exposure to asbestos constitutes a major health hazard. Inhalation of asbestos fibers can produce severe lung damage in the form of disabling or fatal fibrosis of lungs. Some of the diseases associated with asbestos exposure are listed below.

a. Asbestosis. Asbestosis is a scarring (fibrosis) of the lung. The scarring impairs the elasticity of the lung tissue and hampers its ability to exchange gases. This leads to inadequate oxygen intake to the blood. The disease restricts breathing leading to decreased lung volume and it increases resistance in the airways. These last two impairments make the actual act of breathing difficult. It is a slowly progressive disease with a latency period of 10 to 20 years. Asbestosis is irreversible and may continue to progress long after exposure to asbestos has ceased. The earliest symptom of asbestosis is often coughing. As the disease progresses, shortness of breath upon exertion is noted. Changes in pulmonary function, rales (crackling sounds in the lower half of the lung), and clubbed fingers are disease markers. As the disease advances, x-rays of the chest will help demonstrate the incidence of fibrosis, although a lung biopsy provides the only definitive diagnosis. Relatively high doses of exposure are needed before asbestosis is observed. While there is no cure for asbestosis, anyone suffering from the disease should be removed from further exposure as more

disabling fibrosis can be prevented by eliminating further inhalation of asbestos fibers.

b. Lung Cancer. Lung cancer is a malignant tumor of the bronchi covering. The tumor grows through surrounding tissue invading and often obstructing air passages. The earliest symptom is often a persistent cough; a physical exam may attribute the symptom to chronic bronchitis. Chest x-rays sometimes show shadows that indicate tumors and enlarged lymph nodes. However, the definitive diagnosis of lung cancer is based upon microscopic examination of lung tissue. The time between exposure to asbestos and the occurrence of lung cancer is typically 20 years. Although there are many cases of lung cancer, a clear increase in risk has been found among people who work with asbestos. Moreover, there is no threshold or limit of exposure below which the risk of lung cancer is not increased.

c. Mesothelioma. Mesothelioma is a cancer of the mesothelium, the lining of the abdominal wall. It is considered to be a marker disease for asbestos exposure. Early stages are associated with few symptoms. By the time it is diagnosed, it is always fatal. Effective therapy does not exist. There is no exposure threshold for mesothelioma. Similar to other asbestos-related diseases, mesothelioma has an extended latency period of 20 to 40 years.

d. Other Diseases. Other diseases and adverse health effects have been noted among the population exposed to asbestos fibers. Increased evidence of non-respiratory cancers has been observed in some recent epidemiological studies. Cancers of the larynx, esophagus, stomach, colon, rectum, kidney, and pancreas are present at slightly higher than predicted levels. An abnormality found on x-rays of persons exposed to asbestos is pleural plaque (thickening of the lining of the chest cavity). These are usually not symptomatic of asbestos diseases and require no treatment. However, they tend to increase the likelihood of developing lung cancer. Pleural plaques are found in exposed workers as well as in their family members. Pleural plaques are also found in people living near mines, shipyards, and manufacturing plants where asbestos is or was utilized.

25004. RESPONSIBILITIES

a. Commanders, department heads, and supervisors shall ensure work operations using asbestos or materials containing asbestos are conducted per this Order, reference (a), and StaO 5100.3B (Asbestos Management Program).

b. Supervisors of personnel conducting operations with Asbestos or asbestos containing materials shall:

(1) Notify the Asbestos Program Manager (APM) within the Public Works department before commencing operations, including self-help projects.

(2) Ensure personnel who enter asbestos controlled boundaries are trained according to references (a), and this Order.

(3) Ensure personnel who are assigned duties inside of asbestos controlled boundaries receive required medical examinations, and are assigned to the medical surveillance program if applicable. Maintain a list of

personnel on the medical surveillance program for asbestos and ensure they are entered into ESAMS/RMI-SIR. This list shall be made available to the DS upon request.

(4) After consulting with the DS and APM, provide required PPE for personnel involved in asbestos operations.

(5) Notify the DS and APM of any significant change in the process or equipment that may affect personnel exposures to asbestos.

(6) Ensure personnel are trained per this chapter and chapter 3 of this Order.

c. Safety Department:

(1) Appoint in writing an APM who has received appropriate training.

(2) Have oversight for all asbestos related activities aboard MCAS Miramar.

(3) Redirect to the responsible MCAS Miramar APM any requests for evaluation of operations involving Asbestos.

(4) Ensure a hazard assessment survey is completed.

(5) Notify the responsible APM of any personnel entering or working inside of ACM controlled boundaries.

(6) Ensure supervisors are informed of proper safety equipment acquisition procedures.

d. MCAS Miramar Public Works Officer:

(1) Serve as the primary advisor to the MCAS Miramar in accordance with StaO 5100.3B.

(2) Coordinate with the MCAS Miramar Asbestos Program Manager for the monitoring of all asbestos activities by other service providers such as PWC San Diego and FEAD and coordinate with the MCAS Miramar Asbestos Program Manager the receipt of all appropriate documentation of asbestos activities for permanent records to be maintained in the MCAS Miramar Facilities Management Division (Public Works Department) office.

(3) Coordinate with the MCAS Miramar APM for the training required under the AMP.

(4) Coordinate planning and funding of all asbestos control measures and abatement on MCAS Miramar.

(5) Coordinate with the MCAS Miramar APM for the scheduling, planning, and monitoring of all construction project activities in areas that are known to contain (or suspected to contain) asbestos-containing materials in order to prevent unnecessary damage to the materials and potential employee exposure. As per regulations, prior to any construction activities (i.e. renovation, remodeling, demolition, etc.) a thorough inspection of the affected facility

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must be conducted by the MCAS Miramar MCAS Miramar APM (or authorized representative). This shall include, but not limited to; review and inspection of the existing MCAS Miramar Asbestos Management Plan for the individual facility to identify previously surveyed materials.

e. MCAS Miramar Facilities Maintenance Division Director:

(1) Appoint a MCAS Miramar APM. The MCAS Miramar APM shall oversee the Asbestos Management Program and ensure all aspects of the program are implemented.

(2) Ensure the MCAS Miramar APM maintains existing inventory and asbestos abatement project files.

(3) Ensure the MCAS Miramar APM within the division is certified as an Asbestos Management Planner, Asbestos Inspector, Asbestos Supervisor, and Asbestos Project Designer.

(4) Ensure the MCAS Miramar APM oversees training and certification requirements for applicable MCAS Miramar personnel.

(5) Ensure the MCAS Miramar APM reviews all work requests that may affect asbestos-containing materials, including Self Help work requests for possible asbestos involvement.

f. APM:

(1) Evaluate work operations involving asbestos and conduct and oversee compliance as required.

(2) Develop and recommend asbestos controlled boundaries based on sampling data.

(3) In coordination with the DS and supervisors, recommend required PPE.

(4) Advise supervisors of personnel recommended to be included in the medical surveillance program for asbestos.

(5) Provide technical support and guidance to the DS.

g. Occupational Health Office: Provide medical surveillance for service members and DoD civilian employees.

h. Personnel Working with Asbestos:

(1) Comply with work control procedures, including the wear and use of the prescribed PPE.

(2) Report to supervisor any observed unsafe work conditions.

(3) Receive the proper medical examinations as required.

CHAPTER 26

TRAFFIC SAFETY PROGRAM

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CHAPTER 26

TRAFFIC SAFETY PROGRAM

26000. PURPOSE. This Order outlines the MCAS Miramar Traffic Safety Program (DRIVESAFE) and the minimum Federal, DOD, and state of California requirements in order to minimize risk in all driving activities. This order also includes additional policy and emphasis placed by Headquarters Marine Corps (HQMC) and the MCAS Miramar Commanding Officer in areas shown to be particularly problematic for Marine Corps personnel.

26001. APPLICABILITY. The regulations provided in this chapter are applicable to MCAS Miramar and all tenants and elements of MCAS Miramar.

26002. REQUIREMENTS. MCAS Miramar will follow the provisions of the HSPG, state of California Vehicle Codes, and this order to the extent relevant to MCAS Miramar activities and modified as necessary in consideration of Marine Corps unique requirements. Any type of motor vehicle to include electric vehicles while operating on MCAS Miramar roadways will require a valid state driver's license or permit. Commands at all levels shall ensure compliance with this order and its initiatives.

26003. RESPONSIBILITIES

1. Commanding Officer

- a. Appoint in writing an Installation Traffic Safety Manager (ITSM).
- b. Ensure a written traffic safety program is established that incorporates all activities and units within the boundaries of MCAS Miramar that meets the requirements of reference (a).
- c. Ensure a system of traffic engineering is established and maintained to mitigate defects in vehicles and roadways and improve traffic control measures.
- d. Ensure, when warranted, that motor vehicle mishaps are properly investigated.
- e. Establish and maintain a system of traffic law enforcement as appropriate to deter dangerous and irresponsible behavior.
- f. Establish a continuous education program to improve the knowledge, skills, attitudes, and judgment of all personnel operating or riding in or on motor vehicles.

2. Tenant Commanders

- a. Establish a written traffic safety program that supports and complements the program established by MCAS Miramar in accordance with reference (a).
- b. Ensure traffic safety is incorporated into applicable training programs on a continuing basis.

3. Installation Safety Manager

- a. Maintain the traffic safety program and ensure the accuracy and proper distribution of this Manual.
- b. Represent the command in traffic safety councils.
- c. Ensure that proper training in traffic safety is implemented for MCAS Miramar.
- d. Maintain a motor vehicle mishap location map to indicate intersections and areas requiring rearrangement, special supervision, or equipment.
- e. Provide a continuous stream of traffic safety education to improve the knowledge, skills, attitudes, and judgment of all personnel operating or riding in or on motor vehicles.
- f. Provide a local hazard brief to newly assigned military members and civilian employees during the check-in process. Upon request provide tenant military members a local hazard brief.

4. Public Works Officer

- a. Establish engineering methods to reduce traffic mishaps by eliminating defects in roadways and establishing better traffic control measures.
- b. Plan and design streets, highways, and abutting lands and the traffic operations thereon with an emphasis on reducing the possibility of traffic mishaps.
- c. Perform comprehensive traffic and road surveys of MCAS Miramar for the purpose of eliminating hazardous conditions that exist or may develop.
- d. When applicable, provide recommendations to MCAS Miramar authorities to correct hazardous conditions.

5. Provost Marshal's Office (PMO)

- a. Exercises traffic control over all vehicles, private and military, within the boundaries of MCAS Miramar, to include setting speed limits, erecting appropriate traffic signs and devices, installation of raised pavement markers or speed bumps, and issuing appropriate citations to traffic violators.
- b. Ensure that roadways aboard MCAS Miramar are not blocked, rerouted, or otherwise delayed without prior consent by PMO.
- c. Perform comprehensive traffic and road surveys of MCAS Miramar for the purpose of eliminating hazardous conditions that exist or may develop.

6. Department Heads

a. Department Heads shall ensure that strong emphasis is placed on the prevention of traffic mishaps. Traffic safety shall be incorporated into applicable training programs on a continuing basis.

b. Provide Pre-Departure Safety briefings for all Marines less than 26 years of age prior to departure to a permanent change of station or traveling extended distances (beyond established out-of-bounds limits) on leave or extended liberty.

c. Ensure that duty time limits for motor vehicle operators are understood by drivers and do not exceed established criteria for the material transported.

d. Verify in Marine Corps Training Information Management System (MCTIMS) that all Marines assigned to their section under the age of 26 have completed an approved Driver's Improvement Course.

e. Assign remedial driving to persons who have been convicted of serious moving traffic violations, been found at fault in a traffic accident while driving a government vehicle, or otherwise shown by their actions that their driving habits/attitudes warrant additional attention.

f. Require all assigned personnel to complete the Holiday Accident Reduction Program (HARP) form provided prior to departing MCAS Miramar on leave, extended liberty, permissive TAD, permanent change of address, or permanent change of station.

7. All Personnel. All personnel shall become familiar with the installation's rules and regulations.

a. All Marines, Sailors (serving with Marine Corps units or stationed on Marine Corps installations), and Civilian Marines are responsible for compliance with the provisions of this Order and applicable traffic laws.

26004. ORGANIZATION. The MCAS Miramar CO has established and will maintain a Safe Driving Council to meet quarterly in conjunction with the MCAS Miramar Commander's Quarterly Safety Council or more frequently as required.

26005. DRIVER SAFETY

1. Operator Duty Time. To reduce the potential for traffic mishaps caused by operator fatigue, specific duty time limits are established for all Marine Corps personnel operating motor vehicles. These time limits consider the degree of risk involved in various motor vehicle operations (e.g., weapons convoys, administrative supply runs, annual training, flight line operations, and public highway operations).

a. Duty time limits during normal operations shall include the following minimum requirements:

(1) Drivers will be provided with at least eight (8) consecutive hours of rest (off duty) during any 24-hour period. Leaders and supervisors shall ensure that, preceding a known prolonged work or sleep loss period, off

duty time will be kept as free of work-related requirements as possible and, ideally, should be spent at rest or asleep.

(2) An operator will not drive more than ten (10) consecutive hours in a duty period (including rest and meal breaks). Mission essential billets requiring shifts in excess of 10 hours (e.g., security patrols, severe weather operations, training support) will develop specific written procedures to minimize the hazards of increased mission-required driving time. To reduce the potential for traffic mishaps caused by operator fatigue following extended duty or shift work, leaders and supervisors will establish written rest-recovery guidance. At a minimum, the guidance will include:

(a) Options to mitigate fatigue in extended duty or shift work.

(b) The requirement to complete a deliberate risk assessment associated with using fatigued personnel to operate a motor vehicle. The deliberate risk assessment should consider such things as time on duty, the individual's physical condition, driving conditions, and length of travel.

(c) Control measures such as alternative means of transportation or designating rest stops for fatigued personnel until they are sufficiently rested to operate a motor vehicle.

b. Drivers will take rest breaks (at least 15 minutes) every two (2) hours of driving and allow a 30-minute meal break for every 10-hour driving period. The maximum TDY travel by Government Owned Vehicles/Private Owned Vehicles (POVs/GOVs) is limited to 400 miles per travel day. A means of recording driving time must be established for designated motor vehicle operators who operate GOVs on a regular basis.

2. When transporting hazardous material or explosives, two qualified/certified drivers will be assigned to the vehicle if the trip will require more than eight (8) hours of travel.

3. Squadron/unit commanders shall establish maximum driving times and mileage limits for Marines on orders, leave, or liberty. These mileage limits must not exceed allowable limits suggested when using the Travel Risk Planning System (TRiPS).

4. Vehicle Inspections

a. GOVs (including non-appropriated fund vehicles) must pass, at least annually, a safety inspection. Copies of this inspection will be maintained for two years. The inspections shall relate to safe vehicle performance to include lighting, glass, exhaust systems, wipers, horn, brake systems, steering systems, suspension systems, tires, and wheel assemblies.

b. POVs must be in compliance with all Federal safety, noise, and emissions standards. The state of California does not require an annual vehicle safety inspection. California does require an emissions inspection every two years. Leaders are authorized and encouraged to conduct periodic POV inspections of Marines in their charge for safety features and

roadworthiness. A vehicle safety checklist is provided in appendix (26-A) of this Order to be used to conduct a vehicle safety inspection.

5. Pre-departure Safety Briefs

a. Pre-Departure vehicle/traffic safety briefings and traffic risk assessments shall be conducted for all personnel prior to executing permanent change of station orders, going on leave or extended liberty, or when traveling extended distances.

b. TRiPS is accessible via Marine online (MOL) and is designed to provide Marine leaders the opportunity to perform a risk assessment based on individual driving habits and trip details. TRiPS provides detailed directions and route maps for the trip, and should be used by all Active Duty Marines and civilian employees who travel on orders, leave, liberty, or extended distances.

6. Investigation Reports and Records. All traffic mishaps resulting in any damage to vehicles, property, utilities, or personnel, no matter how slight, must be reported to MCAS Miramar PMO immediately. Thorough investigation is the primary means of obtaining facts surrounding a mishap. All available traffic mishap investigation and violation reports and records will be collected to provide a basis for traffic safety improvement. A copy of the reports/data will be sent to the ITSM. The data will be analyzed prior to the quarterly Safe Driving Council meeting to determine the nature of current trends or problem areas.

7. Training and Education. MCAS Miramar Station Safety will ensure continuous traffic safety training and education programs are appropriately presented to improve knowledge, skills, attitudes, and judgment of all personnel driving or riding in or on motor vehicles. The Safety Department will also provide traffic safety training to commands. Training can be found at the on-line Enterprise Safety Applications Management System (ESAMS).

8. Drivers Under 26 Years of Age. All military personnel under the age of 26 will complete a traffic safety course. For all Marines under the age of 26 the first gaining unit will ensure the Marine receives at least four hours of driver's awareness training within 60 days of reporting to the command. MCAS Miramar Station Safety offers the National Safety Council's "Alive at 25" Driver Improvement Course, consisting of (4.5) hours of driver's awareness training to include local hazards awareness. Commands utilizing the Drivers Improvement Course on MarineNet are required to provide 30 minutes of local traffic familiarization.

a. Alive at 25 is held twice monthly or more frequently depending on demand in building 6022. The classes start at 0645 and end at approximately 1300.

b. Course enrollment is conducted through MCAS Miramar ESAMS unit safety representatives. Upon enrollment, an electronic confirmation letter will be issued assigning you an appointed place of duty. Questions regarding enrollment please call the ITSM at 307-1356.

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c. All classes will be documented by the S-3/Training via the Marine Corps Training Information Management System (MCTIMS).

9. Remedial Driver Training. Remedial driver training courses shall be attended by persons who have been convicted of moving traffic violations or who have been determined to be at fault in a traffic mishap while operating any POV or GOV. The squadron/unit commanding officer or MCAS Miramar traffic court will assign attendees. MCAS Miramar Safety offers the National Safety Council's "Attitudinal Dynamics of Driving" (ADD) Defensive Driving Course, consisting of one eight (8) hour session of classroom instruction covering attitude, fatigue, driver impairment due to the use of alcohol or other drugs, consequences of improper/poor driving habits, and other appropriate topics.

a. All personnel assigned to this course must attend the entire session to receive a completion certificate. Failure to complete the course will cause an automatic loss of installation driving privileges.

10. Training Cost. Training required by this order shall be provided at no cost to military members. Individuals electing to attend private or state-sponsored courses when military-sponsored courses are available will pay fees individually. When electing to pay for non-Marine Corps supported courses, individuals will ensure that the course curriculum is approved by CMC (SD) to ensure credit for course completion. DOD civilians, dependents, and retirees may attend courses provided by MCAS Miramar at no cost on a space available basis.

a. Order of precedence. The personnel categories below are listed in order of precedence for seats available and are authorized to register for and take courses:

- (1) Active duty Marine Corps Personnel.
- (2) Other active duty military personnel, reservists, and National Guard.
- (3) DOD Civilian Employees, if required by their position description or mandated by the MCAS Miramar traffic court.

b. The following personnel categories may fill unused seats on a space available basis in the event that surplus seats exist due to insufficient members of the above authorized groups being present for training or if mandated by the MCAS Miramar traffic court:

- (1) Dependents of active duty personnel.
- (2) Retired military.

11. Records of Course Completion. MCAS Miramar Safety will maintain course completion records, (e.g. sign-up sheets, sign-in rosters, attendance rosters and completion card logs) per local written procedures. Each Marine is responsible to ensure the appropriate completion code is entered into the MCTFS and MCTIMS.

12. Unexcused Absences. Failure to attend an enrolled course has a negative effect on scheduling and training opportunities. Commands will be notified of Unexcused Absences (UA) for appropriate administrative or disciplinary action.

13. Duplicate Course Completion Cards. A course sponsor or the ITSM may issue a duplicate card to replace a lost or stolen completion card for a period of up to three years. Duplicate cards may only be issued for the same course type. A course sponsor may provide a course completion card to an applicant who possesses a valid state-specific course.

14. Driver Distractions. Distractions are defined as any action that distracts the driver's attention from the safe operation of the motor vehicle and recognition of traffic signals, emergency signals, alarms, announcements, the approach of emergency response vehicles, and human speech. This includes talking on cell phones, using listening devices (e.g., iPods), using or performing any form of texting, using computers, or actively programming navigational systems while the vehicle is in motion (in drive or in gear).

a. Marine Corps personnel, while operating any vehicle (whether or not on official Government business), are prohibited from using any Government-supplied or Personal Electronic Device (PED) for phone calls, text messaging, or other uses without a hands-free device or the vehicle being safely parked. This includes law enforcement use of in-car mobile data terminals and other in-car electronic devices other than fixed two-way communications.

b. GOV drivers and A-drivers shall not use hand-held or hands-free personal electronic devices while driving.

c. Whenever possible, all other activities that detract from attentive driving will be conducted only when the vehicle is safely parked.

15. Reduced Visibility. All vehicles aboard MCAS Miramar will be operated with headlights turned on during darkness or conditions of reduced visibility. During conditions of rain or heavy fog, windshield wipers will be turned on and headlights shall be on low beam.

16. Impaired Driving

a. Ongoing public information and education efforts to prevent impaired driving will be conducted at all levels using available resources including community, state, and national special emphasis programs, classes, newspapers, and displays. The information will emphasize alternatives to alcohol-impaired driving, such as designated driver and taxi services.

b. MCAS Miramar Arrive Alive Program is implemented and maintained by the ITSM as an alternative to impaired driving.

c. Alive at 25 Driver Improvement Course and Attitudinal Dynamics of Driving (Remedial Defensive Driving Course) address the negative consequences of impaired driving.

d. All motorcycle and off-road recreational vehicle safety courses taught aboard MCAS Miramar contain instruction on the effects of alcohol on operators.

e. MCAS Miramar 101 Days of Summer Health and Safety Fair and the annual Back in the Saddle (BITS) both address the consequences of impaired driving and operation.

f. The ITSM is available to provide additional impaired driving prevention briefs at unit safety stand-downs and post-deployment traffic safety briefs.

g. PMO will submit monthly-impaired driving data/reports to the ITSM.

17. Speed Control. Speed limits (maximum/minimum) established for MCAS Miramar are based on traffic engineering requirements and are consistent with state and local laws. All personnel shall be in strict compliance with these speed limits, except during bona fide military emergencies by emergency personnel.

a. The maximum speed aboard MCAS Miramar is 25 mph unless otherwise posted.

b. Aboard MCAS Miramar lane splitting, or lane sharing is not authorized.

c. The use of radar or laser detection devices that indicate the presence of speed recording instruments or that transmit simulated erroneous speeds is prohibited.

26006. GOVERNMENT AND PRIVATELY OWNED VEHICLE SAFETY

1. Vehicle Safety Standards

a. All motor vehicles which are purchased, leased, or rented, by the Marine Corps personnel shall meet all applicable requirements of 49 CFR 571, Federal Motor Vehicle Safety Standards (FMVSS). Procured and leased commercial vehicles will be equipped with air bags, seatbelt, and shoulder belt/harnesses, antilock braking systems, and electronic stability control.

b. Marine Corps (including non-appropriated fund) special purpose and light utility vehicles, whether purchased commercially or designed to contract specifications, shall be equipped when applicable with safety belts and a Rollover Protection System (ROPS).

c. Personally owned autonomous vehicle operators are not authorized to use the vehicle systems that control all aspects of the dynamic driving task, known as high or full automation while operating on the station.

2. Occupant Safety and Restraints

a. All vehicles purchased, leased, or rented by Marine Corps personnel shall be equipped with the restraint systems (safety belts) required by

FMVSS. Every effort shall be made to procure or lease vehicles equipped with air bags (preferably for both driver and passenger), anti-lock brakes, and daytime running lights.

b. All personnel (military, civilian, dependents, contractors, non-appropriated fund employees, visitors) operating or riding as a passenger in a POV or rented vehicle on MCAS Miramar shall ride only in designated seating positions equipped with safety belts and shall wear the safety belts. Safety belts will also be used when a POV or rental vehicle is being used for official business off the installation.

c. Safety belts and other required restraint systems shall be worn by all military service members and reserve component members on active federal service, or inactive duty and training, while operating any vehicle or riding as a passenger, whether on or off duty, on or off any DoD installation.

d. Safety belts and other required restraint systems shall be worn by all operators and passengers on or off MCAS Miramar. The senior occupant of any vehicle shall be responsible for enforcement and will not permit the operation of any vehicle until all passengers are wearing the required restraint system specified for the type of vehicle.

e. All children under two years of age shall ride in a rear-facing car seat unless the child weighs 40 or more pounds or is 40 or more inches tall. The child shall be secured in a manner that complies with the height and weight limits specified by the manufacturer of the car seat. Children under the age of eight must be secured in a car seat or booster seat in the back seat. Children who are eight years of age or over or have reached 4'9" in height may be secured by a booster seat, but at a minimum must be secured by a safety belt. Passengers who are 16 years of age and over are subject to California's Mandatory Seat Belt law.

f. All restraint systems will be maintained in a serviceable condition and readily available for occupant use.

g. In cases of noncompliance, corrective measures with respect to the offender and supervisor will be taken as appropriate. Non-use or malfunction of GOV restraint systems which result in injury to DoD personnel shall be identified along with actions taken to prevent reoccurrence in the mishap reporting system.

h. Minimum penalties for failure to wear proper restraint systems aboard MCAS Miramar are in addition to standard local ticketing policies.

(1) First violation: Thirty (30) days suspension of all installation POV and GOV driving privileges, plus attendance at an approved remedial driver's improvement course.

(2) Second violation: Six (6) months suspension of all installation POV and GOV driving privileges.

(3) Third violation: One (1) year suspension of all installation POV and GOV driving privileges.

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3. Transporting Personnel

a. To the highest extent possible, personnel shall be transported in passenger vehicles such as sedans, station wagons, vans, or buses with seating that meets federal standards for occupant transportation.

b. Tactical vehicles used for transporting personnel shall have fixed seating for each person. Personnel may be transported in vehicles without fixed seating on the flight line only if the passenger remains fully seated on the floor.

c. All occupants shall be seated within the body of the vehicle when the vehicle is in motion.

d. With the exception of tactical operation, personnel may not be transported on highways in tactical vehicles.

e. Riding on the bed of a PMV is not authorized.

4. Government Motor Vehicle Operator Licensing

a. Operator Training. Leaders and supervisors will ensure that all GOV drivers/operators are properly trained and qualified in accordance with this Order. Civilian U.S. Government Motor Vehicle Operator's Identification Card (OF-346) applicants must possess a valid state driver's license. Personnel assigned as "assistant drivers" will hold a valid Government Motor Vehicle Operator's Identification Card (OF-346) for the vehicle they are assisting in operating and be familiar with its operation and all of its components.

b. Vehicle Specific Training. The leaders and supervisors shall have oversight on the development and implementation of vehicle-specific training programs for operators of Government-owned tactical and commercial vehicles. Written requirements and procedures shall specify vehicle type, content of initial training required, quantity of supervised driving experience, certification procedures, driving restrictions for operators awaiting training/certification, frequency, and content of refresher training, and remedial training for observed undesirable driving behaviors. Special attention should be paid to up-armored variants of tactical vehicles and all commercial vehicles over 15,000 lbs. Gross Vehicle Weight Rating (GVWR).

c. Medical Certificates. A valid medical certificate (OPNAV 8020/6), obtained from an appropriate, qualified care giver and signed by competent authority are mandatory for all personnel, military and civilian, who, by military occupational specialty (MOS) or position description (PD) are required to operate motor vehicles in performance of their job (e.g., motor transport personnel, facility maintenance personnel, security/military police (MP) personnel, mail service personnel, etc.).

d. Training Record Keeping. Any training received in order to operate any GOV shall be documented on the drivers' OF-346 and all appropriate, associated paperwork and documents shall be maintained in their personnel training record or driver's history file. The issuance of an OF-346 ensures the driver has met the training requirements for each vehicle endorsed on the

license (vehicle data plate specifications) and that the license examiner has ensured that the operator fully understands and has demonstrated the safe operation of the vehicle and all of the options and components on the vehicle. Written results of all knowledge tests and performance skills tests will be maintained in the driver's history file located at the licensing authority or the ITSM office for a period of five years.

5. Commercial Motor Vehicles. All commercial vehicles are considered to be in one of two categories: cargo or passenger. Each category has multiple sub-categories. The requirements for training and licensing vary and are dependent on the type of vehicle the applicant will be operating. All training and licensing programs shall ensure that:

a. Documentation. Documentation of completed training is maintained for all applicants who successfully complete training to operate GOVs.

b. Drivers of GOVs over 15,000 lbs. GVWR have the appropriate endorsement on an OF-346 for the type, class, and weight of vehicle they are qualified to operate.

c. Drivers of vehicles over 26,000 lbs. GVWR have appropriate state Commercial Driver's License (CDL) and appropriate corresponding endorsements on their OF-346 for each of the vehicles they will be operating.

d. Revocation of Government Vehicle Driving Privileges. MCAS Miramar personnel will not operate government motor vehicles when the driver:

(1) Is under the period of suspension or revocation of driving privileges by any state or host nation.

(2) Has had base driving privileges suspended or revoked.

(3) Has failed a urinalysis, has received a driving under the influence suspension, or any other indication of chemical and/or substance abuse.

(4) As directed by the unit or installation commander.

6. Large Cargo Vehicles and Passenger Vans. The MCAS Miramar Southwest Region Fleet Transportation (SWRFT) develops and provides training to operators of large cargo and passenger vans over 10,000 lbs. GVWR. The training includes unique handling characteristics of large, long wheelbase vehicles with high passenger or weight capacities. At a minimum, the training will include hands-on operation, proper vehicle loading, GVWRs, cargo displacement, weight distribution, mismatched tire identification, correct tire pressure and operating variances for different manufacturers and handling characteristics of the vehicle.

7. Buses. Operators of Marine Corps owned or leased buses shall be 21 years of age, have a current medical certificate, and have successfully completed a bus operator's course. The bus operator's course must meet HQMC, federal, state, and local requirements. All buses are divided into three categories: school bus, standard bus, and coach bus. Bus operators must have an OF-346

with appropriate endorsements for each type of bus (weight and capacity). Corresponding documented results of both the written and skills tests for each type of bus will be maintained in the driver's history file.

8. Material Handling Equipment (MHE). All MHE operators must be trained and licensed. All operators must have a valid MHE license in their possession while operating the MHE, and a valid medical certificate. The license must delineate the specific type and safe working load of the MHE the operator is qualified to operate. All MHE operators will wear a hard hat (except when on the flight line), steel toe shoes, and gloves as PPE whenever operating or within close proximity of working MHE. Eye protection and ear protection may be required depending on working conditions. All MHE will be operated in accordance with Chapter 27 of this Order.

9. Emergency Vehicles. Before being assigned to operate police, ambulance, fire, crash and rescue, other response/patrol vehicles that are equipped with lights and sirens, or any vehicle that is selected by the owning command to respond to emergency situations in an emergency mode, operators shall successfully complete the Emergency Vehicle Operator Training Course (EVOC). This requirement applies to Explosive Ordnance Disposal (EOD) and HAZMAT response vehicle operators if the vehicle is operated in an emergency response mode with lights and sirens.

10. Training

a. All training must be conducted by a certified instructor. MCAS Miramar units that have emergency vehicle operators shall establish and maintain a file for each EVOC graduate. The ITSM shall inspect annually the EVOC files/records to ensure all emergency vehicle operators are current in EVOC training. The file shall include results of written examinations and demonstrated skills examinations. Units are responsible for obtaining initial and refresher training. The training cost is the unit responsibility. All emergency vehicle operators shall complete refresher training every four years.

b. An OF-346 shall be issued to operators who successfully complete EVOC training. The EVOC endorsement ensures that the operator has met the requirements of the course and fully understands the responsibilities of operating an emergency vehicle in the emergency mode. The endorsement of "EVOC Qualified" on the OF-346 should not be confused with vehicle specific training.

c. Initial MP EVOC training and renewal training shall be conducted with a patrol car. For an emergency vehicle larger than a standard patrol car, a vehicle-specific endorsement shall be made on the OF-346 (i.e., ambulance, rescue truck, fire apparatus, and all emergency vehicles over 10,000 pounds GVWR). All training shall be documented with test results in the operator's history file maintained by each squadron/unit EVOC training coordinator.

d. Emergency vehicle operators shall not operate their vehicles at any time at a speed that is not reasonable for weather, visibility, traffic, or

roadway conditions. All emergency vehicle operators shall practice due regard for others and only respond in the emergency mode to true emergencies.

26007. MOTORCYCLE SAFETY

1. Motorcycle Operator Licensing. All operators of government and privately owned motorcycles must be properly licensed when operating such vehicles on public highways/roadways and aboard MCAS Miramar.

2. Motorcycle Safety Training. The purpose of the Marine Corps Motorcycle Safety Training Program is to provide entry level riders with the minimum skills necessary to begin riding safely and to provide opportunities for renewal training, (e.g. sustainment or lifelong learning) for experienced motorcycle operators throughout their riding career. The program is an effort to reduce mishaps that negatively affect readiness. All active duty motorcycle riders must complete Level I training prior to attending any other advanced level motorcycle training. The MCAS Miramar Traffic Safety Program offers three levels of motorcycle training taught by certified personnel that include hands-on training, a rider skills evaluation, and a written knowledge-based evaluation.

3. Motorcycle Safety Foundation (MSF) Basic Riders Course (BRC) (Level I). BRC is held monthly in building 6022 and the motorcycle training range adjacent the MCAS Miramar East Gate. The course starts at 0645 and consists of two training days (the range exercise portion may start and end earlier due to weather conditions).

a. California Motorcycle Safety Program Motorcycle Training Course. (CMSP-MTC) is held monthly in building 6022 and the motorcycle training range adjacent the MCAS Miramar East Gate. The course starts at 0645 and consists of two and a half training days (the range exercise portion may start and end earlier due to weather conditions). This is for a California M/C Endorsement.

4. Advanced Rider Course Street Techniques (ARC-ST) (Level II). ARC-ST is held in Station Safety building 6022. The course starts at 0645 and consists of one training day (the range exercise portion may start and end earlier due to weather conditions). The MSF Military Sportbike Riders Course (MSRC) and Experienced Rider Course (ERC) is also credited as Level II training.

a. Total Control Intermediate Rider's Course (IRC). TC-IRC is held in Station Safety motorcycle range building 6650. The course starts at 0645 and consists of one training day (the range exercise portion may start and end earlier due to heat conditions). TC-IRC is also credited as Level II training. Motorcycle specific jacket required for this course.

5. Lee Parks Total Control Clinic, American Super Camp, Advanced Rider Track Day (ARTD), and MSF Rider Coach Prep Course (Level III). Training availability is dependent on available funding and also through partnerships with other MCIWEST installations.

6. Course Enrollment

a. Unit S-3 must ensure that Marines receive orders to attend a motorcycle safety course. Marines will first report to unit motorcycle club president or S-3 training officer who will enroll the student via the on-line ESAMS or other computer information system as designated by the MCAS Miramar Safety Department.

b. Applicants who own their own motorcycle will then report to the Station Safety, building 6022, with a valid state motorcycle license or learner's permit, proof of insurance, valid registration, and completed motorcycle safety inspection. Motorcycle inspections can also be conducted by the motorcycle club president or appointed qualified personnel prior to course enrollment.

c. Once the motorcycle inspection is complete, the ESAMS unit representative will assign the applicant to the next available motorcycle safety course and provide an enrollment confirmation letter with the course information.

d. If applicants fail the prerequisite safety inspection, or if safety or maintenance issues arise, they will be dropped from training and their command will be notified.

7. Loaner Training Motorcycles. Active duty personnel who own a motorcycle must ride their own motorcycle in order to learn operating and handling characteristics specific to them. Loaner training motorcycles are available for the BRC, and are reserved for active duty who do not already own or are contemplating a motorcycle purchase.

8. Motorcycle Equipment Requirements. The following minimum PPE is mandatory for all persons operating or riding as a passenger while aboard MCAS Miramar, and for all Marine Corps and other military personnel assigned to a Marine Corps command operating or riding a motorcycle off installation.

a. Helmet. An approved helmet meets the standards of DOT. When a helmet manufacturer meets or exceeds test standards, "DOT" and/or "SNELL" will be applied by the manufacturer and appears centered on the back of the helmet in white letters on a black background. Regardless of the lettering on the back of the helmet, a non-removable tag is installed on the inside of the helmet that indicates the helmet meets DOT and or Snell standards. The interior head padding is typically one inch thick, and the chinstrap is riveted to the helmet and uses a non-snapping buckle under the chin.

b. Eye Protection. Eye protection consists of riding glasses or goggles that are American National Safety Institute (ANSI) Standard Z87.1 approved and shatter resistant. Eye protection used without a face shield or windshield should seal the cup of the eye through the use of a strip of foam material around the inside of the lens.

c. Hand Protection. Hand protection consists of full fingered riding gloves. The glove shall be constructed of or with abrasion resistant material. Gloves designed for riding have added padding and retain a natural curl when not worn.

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d. Long Sleeves or Jacket. Long sleeve shirts or jackets shall be at the wrist while riders' hands are on the handlebar grips. A riding shirt or jacket should be constructed of abrasion resistant material. An armored type-riding jacket made of abrasion resistant material is highly recommended. All Level III motorcycle training aboard MCAS Miramar will require a riding jacket, jackets can be provided upon request.

e. Leg Protection. Leg protection consists of sturdy, full-length pants or trousers that extend to the ankle.

f. Foot Protection. Leather boots are highly recommended for Level I motorcycle training aboard MCAS Miramar. Any shoe or boot that has an open toe, open foot/heel design, an extensive heel over 2 inches, or a total canvas or rubber material construction are prohibited. Acceptable foot protection consists of sturdy, above the ankle shoes or boots that provide support and traction when riding or when in transition of movement from a stop/starting position.

g. Reflective Vest. There is no requirement to wear a reflective motorcycle vest during day or night operations. Riders are encouraged to wear retro-reflective materials or use other visibility-increasing devices on their motorcycles. Unit motorcycle club presidents are encouraged to use incentive-based promotional programs to encourage the use of retro-reflective PPE and the use of armor/padded riding gear or PPE.

9. Motorcycle Requirements. Only street-legal motorcycles shall be operated aboard MCAS Miramar. Forks that have been extended through the use of slugs or other devices are prohibited. In addition to the below requirements, all motorcycles registered aboard MCAS Miramar will conform to the California Vehicle Code.

a. Mirrors. No motorcycle will be operated aboard MCAS Miramar without two rearview mirrors attached to either side of the handlebars or fairing. Mirrors must afford a clear view to the rear of at least 200 feet.

b. Seats. Each motorcycle passenger shall be provided with a regulation seat and footrests.

c. Brakes. Motorcycles will be equipped with brakes on all wheels, except the wheels of a sidecar. Brakes must be capable of holding the vehicle in gear at idle while slowly releasing the clutch until the engine decelerates. All brakes will be maintained in good working order and free of leaks and/or frayed cables.

d. Fenders. Motorcycles will be equipped with front and rear fenders. Fenders may not be altered in any manner that leaves sharp or jagged edges.

e. Fuel Tanks. The fuel tank filling spout must be closed by a cap or cover with no sharp points and must be made of non-combustible materials. There must be no visible fuel leaks.

f. Horn. Every motorcycle must have a functional electric horn that is audible from a distance of 200 feet, but does not emit a whistle sound or an unreasonably loud or harsh sound.

g. Muffler. Every motor vehicle subject to vehicle registration will have a muffler that prevents any unusual or excessive noise. The exhaust system will not emit noise above 82 dBA, measured at a distance of 50 feet.

h. Tires. No tires shall be used that are worn so that less than 1/16 of an inch tread depth remains in any two adjacent grooves at any location of the tire. Re-grooved tires are prohibited.

i. Wheels. Wheels will have no visible damage. The front and rear wheels must be properly aligned, with no evidence of shimmy or wobble. No missing or broken spokes are allowed.

j. Windshield. A windshield is not required. Red or amber glazing material is prohibited. Safety glazing material shall be used when replacing any glazing material on a windshield.

k. Operator Controls. The throttle, clutch, shift lever, and all other controls must operate smoothly with no sticking, binding, or broken levers. Cables must be firmly connected and serviceable.

l. Handlebars. Handlebars shall not be positioned so that the hands of the driver, when upon the grips, are 6 inches above shoulder height when sitting astride the motorcycle.

m. Lights. Motorcycles will be equipped with a headlamp, license plate lamp, rear reflector, brake lamp, turn signals, and tail lamp in good working order. Headlamps must have functioning high and low beams. The high/low beam indicator must be fully functional.

(1) The headlamp will be mounted on the front of the motorcycle between 24 and 54 inches above the roadway. It will be of sufficient intensity to meet the requirements of the California Vehicle Code. The headlamp will be on at all times while the motorcycle is in operation.

(2) Tail lamps will be red when illuminated and visible from a distance of 300 feet. Either the tail lamp or a separate lamp is required to illuminate the entire surface of the license plate during darkness. The license plate must be legible from a distance of 50 feet.

(3) At least one red reflector, whether separate or in combination with a required lamp, will be mounted on the rear of the motorcycle between 20 and 60 inches above the roadway.

(4) At least one red stop lamp is required on the rear of the motorcycle. It must be actuated upon application of both the front and rear brakes, together or separately, and must be visible at a distance of 300 feet. Stop lamps will be mounted between 20 and 60 inches above the roadway.

(5) A turn signal system is required on all motorcycles originally equipped with turn signals. The system will include four turn signal lamps, two single-faced front lamps and two single-faced rear lamps, so connected that the front and rear lamps on the side toward which a turn is made will flash to indicate the turn. The turn signals and brake lights must meet California Vehicle Code requirements.

10. Sanctioned Competitive Events and Organized Track Events. Marines participating in a sanctioned event or an installation-sponsored track event will comply with all insurance, mechanical, and protective equipment requirements of the sponsoring organization in addition to the requirements of this order.

11. Motorcycle Mentorship and Clubs

a. As directed by HQMC, All O-5 and above commands shall establish motorcycle mentorship programs that incorporate a structured club type organization in accordance with reference (a).

b. The purpose of these motorcycle clubs is to identify and mentor inexperienced riders, foster respectful riding practices, and ensure continuing education opportunities are available for all Marine Corps club members throughout their riding career.

c. Commanders shall appoint a Motorcycle President and Mentor to promote motorcycle safety.

d. Installation Safety can facilitate training and meetings at building 6022. The ITSM can provide training and briefings to unit clubs upon request.

e. The ITSM will also periodically meet with unit club presidents to discuss training, local trends and hazards, and changes to motorcycle regulations as they pertain to active duty riders.

26008. OTHER GOVERNMENT VEHICLES

1. Purpose. To provide additional guidance to reference (a) with regard to the use of PPE and the training required for operating Low Speed Vehicles (LSVs), all-terrain vehicles (ATVs) and recreational off-highway vehicles (ROHVs) in a garrison and off-road/non-tactical environment.

2. Background. Due to fiscal constraints and the reduction in garrison mobile equipment (GME), there has been an increase in procurement and use of ATV's and ROHVs. ATVs and ROHVs handle differently than other vehicles. Collisions and rollovers can occur quickly, even during routine maneuvers such as turning, driving on hills, and over obstacles. Further, ATVs and ROHVs are not subject to the same level of safety and crash protection as GME. This order aims to reduce the potential for accidents and ensure ATVs and ROHVs are safe and operated in a professional manner.

3. Information

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a. GVO. For the purpose of this section, GVOs are defined as vehicles designed primarily for off-the-highway operation such as construction-tracked vehicles, forklifts, road graders, agricultural-type wheeled tractors, and aircraft tugs. Includes military combat and tactical vehicles (e.g., tanks, self-propelled weapons, armored personnel carriers, amphibious vehicles ashore, and high-mobility multipurpose-wheeled vehicles).

b. LSV. For the purpose of this section, LSVs are defined as any 4-wheeled motor vehicle whose top speed is greater than 20 miles per hour but less than 25 miles per hour, and whose gross vehicle weight rating is less than 3,000 pounds.

c. ROHV. For the purpose of this section, ROHV are defined as motorized off-road vehicles designed to travel on four or more non-highway tires, with a steering wheel, non-straddle seating, seat belts, an occupant protective structure, and engine displacement up to 1,000cc. Sometimes referred to as side-by-sides or utility vehicles.

d. ATV. For the purpose of this section, ATVs are defined as any motorized off-highway vehicle designed to travel on three or four low-pressure tires, having a seat designed to be straddled by the operator and handlebars for steering control, with or without passenger capability.

4. Training

a. Before operating a GVO, ATV, LSV or ROHV operators will, at a minimum, be screened by their supervisor to ensure the operator is at least 18 years of age, and will be given training on local conditions, hazards, regulations, inspection requirements, fueling, and other factors that may affect the operation of the vehicle in their area. The supervisor must document this training in the operator's official training record.

b. If the GVO, LSV, or ROHV is to be operated on the street, the driver, at a minimum, must possess a valid state driver's license. ATVs are prohibited from being operated on a public roadway.

c. If personnel are required to operate a GVO, ROHV, or ATV as part of their work duties, then the operator must have received formal resident training, which has been either provided or approved by their installation safety department, Commandant of the Marine Corps Safety Division, or have an endorsement on their OF-346, Government Motor Vehicle Operator's Identification Card before operating any GVO, ROHV, or ATV.

5. PPE, Seat Belts, and Safety Equipment

a. If the GVO, LSV, or ROHV is equipped with seat belts or harnesses, they will be used at all times by all occupants while the vehicle is in operation. If one of the seat belts or harnesses is unserviceable, no passenger will occupy that seating position. If the driver/operator's seat belt or harness is unserviceable, the GVO, LSV, or ROHV will be considered deadlined and will not be used until such time the seat belt or harnesses can be properly repaired or replaced.

b. All manufacturer-installed safety equipment will be maintained in working order and used in compliance with the manufacturer's recommendations.

c. The appropriate PPE used by the operator and passengers of GVOs, LSVs, ATVs, and ROHVs will be determined through a combination of local command guidance, job hazard analysis, and the use of manufacturer-recommended PPE.

26009. PEDESTRIAN SAFETY

1. Purpose. Pedestrian Safety shall receive emphasis as part of the overall Traffic Safety Program. MCAS Miramar provides separation of pedestrian and motor vehicle traffic, to include sidewalks, pedestrian crossings, and bicycle/jogging paths in order to ensure maximum safe traffic flow without jeopardizing pedestrian safety. Particular emphasis shall be placed on the protection of children walking to and from daycares, recreation facilities, entering and leaving school buses, and playing in military housing areas. An inventory of pedestrian-motor vehicle mishaps shall be maintained and included in the analysis program as required by this order.

2. PPE Requirements. Appropriate fluorescent or retro-reflective apparel that meets the performance class 2 or 3 of ANSI/ISEA 107 standards will be provided to, and utilized by, all Marine Corps personnel who are exposed to vehicle traffic in their assigned duties and when within six feet of any traveled portion of a roadway, highway, parking lot, or where vehicles congregate or assemble (e.g. marching troops, road guards, all traffic control personnel, roadway maintenance and construction crews, electricians and telephone repair personnel).

3. Walking, Jogging, or Running. Individuals will not walk, jog, or run on roadways during high traffic density and at peak traffic periods usually between 0600-0800 and between 1500-1700. Personnel shall wear retro-reflective clothing, (e.g. approved Marine Corps PT uniform with reflective piping) and/or a reflective vest or belt when conducting physical training on or near roadways during periods of reduced visibility and within 3ft of roadways. Personnel shall always move against traffic and obey all traffic rules and regulations.

4. Bicycle and Personal Transportation Equipment. Bicycle and personal transportation equipment safety will be emphasized at MCAS Miramar and all activities as an important part of the MCAS Miramar's Traffic Safety Program.

a. The use of approved bicycle helmets and other PPE approved by the Consumer Product Safety Commission (CPSC), American National Safety Institute or Snell Memorial Foundation is mandatory for all personnel who ride bicycles or operate personal transportation equipment, including Segway's (excluding handicap power mobility scooters) aboard MCAS Miramar.

b. Bicycles and personal transportation equipment (excluding handicap power mobility scooters) will be equipped with a white headlight or reflector highly visible from the front and at least one red reflector visible from the rear when being operated between the period from one hour prior to sunset and one hour after sunrise. Bicycles shall be equipped with spoke/wheel-mounted

reflectors for increased visibility from the side. To enhance visibility, bicycle riders shall wear light color clothing during the day and reflective clothing at night. Bicyclists will ride with the flow of traffic and obey all traffic regulations.

5. Skating and Skateboarding. Specific skating areas aboard MCAS Miramar are established for recreational roller-skating, skateboarding and inline skating. Approved helmets are required for all skaters and skateboarders. PPE such as elbow pads, kneepads, and wrist guards are strongly recommended. A retro-reflective belt or clothing is required when skating on or within three (3) feet of any roadway, street, or parking lot.

6. Portable Electronic Listening Devices. The following applies to the use of headphones, earbuds/phones, or other listening devices while walking, jogging, running, skating, skateboarding, or bicycling:

a. Use is prohibited within and up to three feet of a street, roadway, highway, avenue, or parking lot. The use of these devices masks or prevents recognition of emergency signals, alarms, announcements, the approach of motor vehicles, and human speech.

b. Use is authorized on a running/walking track, sidewalk, or pathway provided it is greater than three feet from a street, roadway, highway, avenue, or parking lot. Pedestrians are responsible to ensure that they always maintain a minimum of three feet of clearance from streets, roadways, highways, avenues, and parking lots, or are otherwise protected from traffic (e.g. a pedestrian bridge or designated pedestrian pathway).

7. Unauthorized Vehicles. Powered child/youth model scooters, powered skateboards, pocket bikes, and other similar powered equipment not meeting DOT motor vehicle standards for public roadways are prohibited for use on public roadways aboard MCAS Miramar.

26010. MISHAP MANAGEMENT

1. Reporting. All motor vehicle mishaps aboard MCAS Miramar and controlled ranges in a GOV or POV will be reported to PMO and investigated, regardless of severity. The unit owning the mishap in coordination with their traffic safety manager will conduct a safety mishap investigation independent of the PMO Traffic Investigation, IAW current safety mishap investigation policies for their command.

2. Investigation. A thorough mishap investigation is the primary means of obtaining facts surrounding a mishap. The ITSM shall maintain a database of all traffic related mishaps for the installation and installation personnel. All available traffic mishaps investigation and violation reports and records will be collected to provide a basis for traffic safety improvement. The data must be analyzed periodically to determine the nature of current trends or problems. Facts, conclusions, recommendations, and countermeasures developed as a result of these analyses, shall be used in traffic education, enforcement and engineering efforts.

3. Analysis. The MCAS Miramar Provost Marshal shall establish a program through which analysis of local traffic mishaps are conducted. The results of these analyses shall include recommendations for corrective measures that could be taken to reduce the frequency and severity of traffic mishaps. This program shall include all on-base and off-base roadways in close proximity to MCAS Miramar. At a minimum, the analysis shall provide accurate identification of mishap locations and an analysis of high incident locations (defined as location(s) with multiple incidents) and include identification of design and operating features that contribute to the high mishap frequency or severity. The TSM will present this analysis to the Safe Driving Council and installation organizations responsible for highway design, construction, maintenance, and traffic engineering so each department can assess and initiate appropriate actions for improvements.

4. Emergency Medical Services. MCAS Miramar will ensure procedures exist to provide rapid identification and response to traffic mishaps, sustain and prolong life through proper first aid (both on-scene and in-transit), and provide the coordination, transportation, and communications necessary to bring the injured to definitive medical care in the shortest practical time without creating additional hazards.

5. Debris and Hazard Control Clean Up. The PMO will establish written standard operating procedures (SOP) for the orderly and safe cleanup of spills, debris, and wreckage from roadways resulting from motor vehicle mishaps.

24011. ARRIVE ALIVE PROGRAM

1. Purpose. To provide active duty personnel who are intoxicated and feel they should not be driving, with a means to safely return to MCAS Miramar or their residence. The use of this program shall not be viewed as deficiency on behalf of the service member, but rather as a prudent choice, made in the spirit of good order and discipline.

2. Discussion. Even with a proper liberty plan, there will be those occasional times when service members may find themselves unfit to operate a motor vehicle after consuming alcoholic beverages. In recognition of the sound judgement displayed by choosing not to drive intoxicated, the Arrive Alive Program (AAP) was developed as a safe, command-sponsored alternative to driving intoxicated.

3. Requirements. Personnel utilizing the Arrive Alive card shall not suffer any adverse consequences resulting from use of the card. Use of the card will not be cause for leaders to leverage substance abuse counseling, or other related programs.

4. Responsibilities. The AAP is a shared responsibility between MCCS, the utilizing command, and the service member employing the card.

a. Personnel will be issued Arrive Alive cards from their commands. Upon entering a taxi, the service member will inform the taxi driver that an Arrive Alive card will be used. The taxi driver will confirm the identity of the service member, and ensure it matches the Arrive Alive card. The driver

will retain the card. Upon arriving at the destination aboard MCAS Miramar or off-station residence, the passenger will be provided a copy of the receipt for the fare. The original receipt will be attached to the Arrive Alive card, which will be turned in by the driver to the taxi company for further submission to MCCA. The individual will provide payment to MCCA.

b. Director, Marine Corps Community Services

- (1) Administer the AAP.
- (2) Contract with a San Diego taxicab company for the AAP. The taxi company must have a toll free number, service coverage of San Diego County, and agree to the contract terms provided by MCCA.
- (3) Provide a deposit to the cab company if required.
- (4) Designate a MCCA point of contact.
- (5) After receipt of payment from the individual who used the Arrive Alive card, forward payment for the bill to the taxi company.
- (6) Account for AAP cards used and the payment of bills.

c. Director, Station Safety

- (1) Serve as the issuing authority for AAP cards.
- (2) Provide serialized AAP cards to commands desiring to participate in the program.
- (3) Maintain a record of serialized Arrive Alive cards issued to commands.

d. Commands onboard MCAS Miramar, including Visiting Commands

- (1) Assign an individual to manage the AAP. It is recommended that the unit ground safety manager manage the AAP.
- (2) Ensure personnel are provided an opportunity to voluntarily participate in the AAP.
- (3) Ensure personnel electing to participate in the AAP are briefed on their responsibility to pay the taxi bill and sign a Statement of Understanding, or a similar command generated binding SOU.
- (4) Document and issue serialized AAP cards to participating personnel. This will be the source document to permit MCCA to track cards used for taxi fare so that MCCA can notify commands which service members owe payment.
- (5) Report lost, stolen, or returned AAP cards to the MCCA Coordinator.

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(6) Track and forward AAP card payments to the MCCS AAP Coordinator or direct individuals to render payment directly to MCCS.

(7) Ensure accurate tracking of serialized AAP cards.

(8) Retrieve AAP cards during the checkout process.

e. Personnel using the AAP

(1) Follow the procedures for using the AAP card as detailed on the SOU.

(2) Pay particular attention to ensuring that the taxicab driver immediately returns your military ID card.

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APPENDIX 26-A: POV INSPECTION CHECKLIST

POV INSPECTION CHECKLIST								
SECTION I- PERSONAL DATA								
NAME:	RANK:	UNIT:	DRIVER'S LICENSE (number/state/ expiration date)					
SECTION II- VEHICLE INFORMATION								
POST DECAL # AND EXPIRE DATE	LICENSE PLATE # /STATE/EXPIRE DATE	MAKE	MODEL	COLOR	YEAR			
SECTION III- INSURANCE COVERAGE								
INSURANCE COMPANY	INSURANCE POLICY NUMBER				EXPIRATION DATE OF COVERAGE			
SECTION IV- VEHICLE INSPECTION								
For each of the inspections mark an "S" if Satisfactory and a "U" if unsatisfactory.								
ITEM OF INSPECTION	INSPECTION NUMBER							
	1	2	3	4	5	6	7	8
1. Hand Brake- Properly adjusted, check emergency brake by: pull/push emergency brake, apply foot to brake, gently press gas pedal								
2. Foot Brake- Foot pedal cannot travel more than half way to floor, does brake light stay on								
3. Wipers- Both wipers are installed on vehicle, windshield wipers work, blades show signs of wear								
4. Inside and Rear Mirrors- Missing, cracked								
5. Horn- Does it work								
6. Headlights- Both high and low beams operational, cracked, condensation, secured								
7. Tail Lights- Lenses intact, tail light working when turned on (red)								
8. Back Up Lights- Lenses intact, left and right backup lights work (White Light)								
9. Under The Hood- Check all fluid levels to ensure they are sufficient for safe operations of vehicle (Wiper Fluid, Brake Fluid, Oil, transmission fluid)								
10. Seat Belts- Seatbelt Front/Rear (Include shoulder harness during inspection, may have a center seat belt); Missing, frayed, does not snap								
11. Turn Signals- Front- Lenses intact, left and right turn signals blink (red lights in rear and yellow lights in front)								
12. Turn Signals- Rear- Lenses intact, left and right turn signals blink (red lights in rear and yellow lights in front)								
13. Hazard Lights- Front- Lenses intact, left and right turn signals flash/blink at the same time								
14. Hazard Lights- Rear- Lenses intact, left and right turn signals flash/blink at the same time								
15. Windshield- Not cracked, broken or scratched to the degree that impairs vision								
16. Window Glass- Not cracked, broken or scratched to the degree that impairs vision, go up and down, is not scratched or tinted to the degree that impairs vision								
17. Tires- Tread depth, wear, bulges, imbedded objects, cuts, and breaks. If the tread does not reach the top of Lincoln's head, there is insufficient tread depth*								
18. Emergency Kit- (OPTIONAL) First aid kit, warning triangle, flashlight, fire extinguisher, blanket, flares, shovel, chains, tools, etc.								
REMARKS	Inspector/Date	Inspector/Date	Inspector/Date	Inspector/Date	Inspector/Date	Inspector/Date	Inspector/Date	Inspector/Date
*Tires- Ensure there is a spare tire in vehicle that is functional.								

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CHAPTER 27

POWERED INDUSTRIAL TRUCK SAFETY PROGRAM

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CHAPTER 27

POWERED INDUSTRIAL TRUCK SAFETY PROGRAM

27000. PURPOSE. Powered industrial trucks also known as MHE i.e. (Forklifts). Before operating MHE, operators must familiarize themselves and comply with regulations and standards listed in the references. Only qualified personnel who are properly trained and licensed are authorized to operate MHE. Supervisors will not assign or direct any person to operate any MHE unless the individual is trained, certified, and properly licensed for that particular type of equipment.

27001. EVALUATION REQUIREMENTS. In accordance with reference (e), licensed MHE operators must be periodically evaluated (at least once every 3 years) while they operate MHE in the workplace to ensure that their skills remain at a high level and must receive refresher training whenever there is a demonstrated need for it. Evaluators must be familiar with the respective MHE features, operation, and with the workplace conditions/environment; however, they do not need to be licensed as an MHE operator. The evaluator will document the MHE operator evaluation with the form provided below. If the operator passes the evaluation the operator will be sent to the designated licensing official for license renewal. If the operator fails, the evaluation the operator will be re-trained per section 27007 and 27008 of this chapter.

27002. EQUIPMENT MAINTENANCE RESPONSIBILITIES. Operators will inspect their equipment before each use. Units may use their own inspection forms for the type of equipment that will be used. Inspection forms will be maintained on record for at least three months. If repairs are needed that prevent the MHE to operate in a safe manner, a do not operate tag will be placed on the MHE and the MHE will be discontinued from use until repairs have been made. Report all inoperable MHE to MCAS Miramar Southwest Regional Fleet Transportation (SWRFT) for repairs. Once repairs have been made test the equipment before it is put into service to ensure the equipment is safe to operate. Do not operate MHE that has passed its maintenance due date. Notify SWRFT immediately if the MHE maintenance due date has expired.

27003. RESPONSIBILITIES. The SWRFT Garrison Mobile Equipment (GME) Certifying Official is responsible for licensing of MHE operators, and for managing the SWRFT MHE maintenance, inspection, and weight testing and certification program per reference (k) through (l). SWRFT MHE program administrator will ensure that all safety MHE requirements are being met per the references.

1. The Station Ordnance officer will administer the Ammunition and Explosive (A&E) MHE program aboard MCAS Miramar per reference (k).
2. The Station Safety Manager will administer the MHE safety program aboard MCAS Miramar.
3. Officers in Charge (OICs) and supervisors shall ensure MHE operators are properly trained and licensed, MHE are used in a safe manner, and required MHE maintenance and inspections are performed. OICs and supervisors shall

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keep a log of qualified MHE operators for the unit and keep a record of all unit MHE.

4. The MHE operator is responsible for operating MHE in a safe manner, inspecting MHE at the beginning of each work shift and completing the appropriate inspection form. Each MHE operator will poses an MHE license (OF-346) with the type of MHE that is authorized to be operated and any other endorsements that are required when operating that particular MHE. This license will be valid for a maximum of three years. Each MHE operator is also required to be medically qualified to operate MHE. Each MHE operator will have in their possession an OPNAV 8020/6 medical certificate with the proper class endorsement to be qualified to operate an MHE.

27004. SAFETY REGULATIONS FOR MATERIAL HANDLING EQUIPMENT

1. It is a violation of federal law for anyone UNDER 18 years of age to operate MHE.
2. It is a violation of federal law or for anyone to operate MHE without the proper training and certification.
3. When operating MHE, operators are required to wear seatbelts, hard hats, and applicable safety harnesses.
4. No person will ride on the forks or any portion of the forklift not designed for passengers.
5. Electric forklifts are not designed to be operated on a public roadway; therefore it is recommended that these lifts not be operated on a roadway for a distance greater than 300 meters.
6. Before refueling a forklift turn off the engine.
7. When MHE is used to lift personnel, use a safety platform that is approved for use by the MHE manufacturer and includes a fall protection or personal fall arrest system. Ensure the safety platform is firmly secured to the lifting carriage and/or forks. An operator will remain at the controls of the MHE while the employee is lifted.
8. When the MHE operator's vision is obscured, the operator will slow down and sound the horn.
9. If the load blocks the operator's view, drive the MHE slowly in reverse.
10. When backing up sound your horn twice if the MHE does not have an automatic audible warning signal when in reverse.
11. When ascending or descending grades greater than 10 percent, drive the MHE with the load upgrade.
12. Properly secure ramps before driving over them.
13. Handle only stable and safely arranged loads. Secure palletized loads to prevent tipping.

14. Only lift loads within the rated capacity of the MHE.
15. Only use approved MHE when operating in hazardous locations.
16. When lifting or down loading large loads or restricted visibility ensure a ground guide is available to assist you in the operation.

27005. MHE OPERATIONS

1. When MHE is used to remove products from truck trailers, the truck vehicle operator will set the brakes on the vehicle and trailer and place wheel chocks under the rear tires.
2. If MHE is used in trailers that are not attached to a truck tractor, install appropriate trailer supports under the front of the trailer and place wheel chocks under the rear tires.
3. When an MHE is left unattended, put the MHE into neutral, lower the forks to the ground, set the emergency brake, shut off the engine and remove the key. When parked on an incline, chock the wheels.
4. A MHE is considered unattended when the operator is 25 feet or more away from the MHE or when the MHE is not in view.
5. Before the operator dismounts the MHE and is within 25 feet and in sight of the MHE, lower the load to the deck, put the MHE in neutral and set the parking brakes.
6. Before loading a truck trailer inspect the trailer floor for breaks and weaknesses before driving an MHE on them.

27006. MHE BATTERY CHARGING OPERATIONS

1. Battery charging locations will be equipped with spill kits to safely flush and neutralize spilled battery acid and electrolyte.
2. No smoking in the battery charging area.
3. Maintain eyewash equipment in charging areas.
4. Conduct battery charging operations in well-ventilated spaces.
5. Personnel who change or service batteries and handle corrosive liquids will wear proper PPE.

27007. MHE OPERATOR TRAINING. MHE Operators will be trained per references (k) and (l). Training will consist of classroom safety training and hands-on training with equipment used in the unit.

1. Initial MHE classroom training will take place at SWRFT Miramar Bldg. 6317. Please call (760) 725-4728 for class schedule and appointment.
2. For A&E MHE Operators course training please call the Station Explosive Safety Officer (ESO) at (858) 307-8868.

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27008. REFRESHER OPERATOR TRAINING. An MHE operator shall attend MHE refresher training whenever:

1. The operator has been observed to operate MHE in an unsafe manner.
2. The operator has been involved in an accident or near miss incident.
3. The operator has received an evaluation that reveals that the operator is not operating the MHE safely.
4. The operator is assigned to drive a different MHE class, lift code, Safe Working Load (SWL), type designation or different working conditions are encountered.
5. A condition in the workplace changes in a manner that could affect safe operations of the MHE.

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FORKLIFT OPERATOR EVALUATION FORM

Instructions: Use this checklist during the field session to evaluate operator proficiency. It can also be used for periodic evaluation to ensure that operators are continuing to operate forklifts properly.

Operator Name		Evaluator Name				
Date of Evaluation		Equipment Operated				
Operator Behaviors		Good	Fair	Poor	N/A	Comments
Pre-use Inspection						
1. Follow the Operator's Daily Checklist.						
2. Look for damage.						
3. Document all findings on the checklist.						
Picking Up a Load						
1. Square up on the center of the load.						
2. Stop with the fork tips about 1 foot from the load.						
3. Clear personnel from the area near the load.						
4. Level the forks; then slowly drive forward until the load contacts the carriage.						
5. Lift the load carefully and smoothly until it is clear.						
6. Tilt the mast head back slightly to stabilize the load.						
7. Look over both shoulders.						
8. After out and stopped, lower the load to travel height.						
Traveling						
1. Do not raise or lower the load and forks while traveling.						
2. Maintain a safe speed.						
3. Observe all traffic rules, warning signs, floor load limits and overhead clearances.						
4. Keep arms and legs inside the forklift.						
5. Follow other vehicles at a safe distance.						
6. Slow down when cornering.						
7. Use the horn to alert others.						
8. Travel with the load facing uphill while on a ramp or incline.						
9. Stop smoothly.						
Putting Down a Load						
1. Make sure there is sufficient clearance for the load.						
2. Clear personnel from the area near the load.						
3. Square up to the location; then stop about 1 foot away.						

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Operator Behaviors	Good	Fair	Poor	N/A	Comments
Putting Down a Load (continued)					
4. Raise the load to placement level.					
5. Move forward slowly.					
6. If the load is on a pallet, lower it into position and lower the forks further.					
7. Look over both shoulders before backing out.					
8. Back straight out until the forks have cleared.					
9. Lower the forks to traveling position.					
Parking					
1. Fully lower the forks.					
2. Neutralize the controls.					
3. Set the brakes.					
4. Turn off the power.					
5. If parked on an incline, block the wheels.					
6. Park only in authorized areas.					
Fueling and Battery Recharging					
1. Engine off.					
2. Fire extinguisher nearby.					
3. Proper Personal Protective equipment (PPE).					
4. Safe fueling and battery recharging procedures followed.					
5. Spills cleaned up immediately.					
General					
1. Look for damage.					
2. Document all findings on the checklist.					
Based on my evaluation, the operator has successfully completed the evaluation and is qualified to operate the following equipment. <input type="checkbox"/>	Equipment Type				
Based on my evaluation, the operator has not demonstrated competence in operating the following equipment. <input type="checkbox"/>	Equipment Type				
Evaluator Signature	Operator Signature				

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CHAPTER 28

RADIATION SAFETY PROGRAM

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CHAPTER 28

RADIATION SAFETY PROGRAM (RSP)

28000. PURPOSE. The RSP is designed to prevent the unnecessary exposure of personnel to ionizing radiation, to include contamination of equipment; to identify the requirements for compliance with Nuclear Regulatory Commission (NRC) licenses and specific Naval Radioactive Materials Permits (NRMP); and to establish procedures for meeting those requirements. Procedures include provisions for storage, use, possession, transportation, and disposal of Radioactive Material (RAM) and training required for personnel involved in any of those activities. All personnel under Marine Corps Air Station Miramar are required to understand their respective roles and duties when the handling and working with radioactive isotopes.

28001. BACKGROUND. Safety standards for ionizing radiation from RAM and other radiation sources are derived from a variety of federal regulations. The NRC has primary responsibility for regulating RAM and it grants permission to receive, possess, distribute, use, transport, transfer, and dispose of RAM under special conditions established in individual licenses.

28002. POLICY. To protect military and civilian personnel from the harmful effects of ionizing radiation, such that all exposures to ionizing radiation will be kept ALARA. This is accomplished through a comprehensive RSP which is consistent with applicable standards. All sources of ionizing and non-ionizing radiation shall be reported to the IRSM. Examples include, but are not limited to, x-ray/gamma radiography operations, moisture density testing, or testing of research and development equipment.

28003. RESPONSIBILITIES

1. Installation Radiation Safety Manager. The IRSM is the individual appointed in writing at the Installation level who is responsible for coordinating the RADCON Program. The IRSM has oversight over all radiation programs aboard the installation to include tenant commands that maintain radioactive devices on the Installation. The IRSM will have direct access to the installation CO for issues involving radiation safety. The IRSM is staffed within the Installation Safety Department. The IRSM will:

a. Recommend the appointment of Assistant IRSMs (AIRSM) to the Installation Commander in sufficient numbers to administer the RADCON Program at the Installation and provide appropriate training to each AIRSM. In the temporary absence of the IRSM from the Installation, the AIRSM will fulfill the IRSM duties.

b. The IRSM shall successfully complete RSM-R training endorsed by CMC SD within six months of assuming the duty of IRSM.

c. Coordinate and direct the action of the AIRSMs in the administration of the RADCON Program.

d. Maintain inventory reports of NRMP, radioactive commodities, or sources under the installation's control as required by reference (a).

Installation inventory reports will be reconciled with the previous inventory to account for changes or discrepancies. The inventory report will include this reconciliation (statement of changes, losses, additions, or updates).

e. Maintain decommissioning files containing copies of inventory reports, areas of use, facility surveys and reports of radiation incidents and accidents.

f. Manage the Installation's Low Level Radioactive Waste (LLRW) or Unwanted Radioactive Waste (URW) Program. Dispose of LLRW/URW through the Navy LLRW Program. Coordinate the disposal of LLRW/URW with the Naval Sea Systems Command Radiation Safety Officer (NAVSEA RSO) and provide copies of the manifests to the Radiological Control Office Marine Corps Logistics CMD, Albany, GA.

g. Oversee the shipment and transportation of sources of ionizing radiation onto and off the Installation.

2. Command Radiation Safety Manager (CRSM)

Successfully complete the applicable RSO Course(s) provided by the Naval Sea Systems Command Detachment, Radiological Affairs Support Office (NAVSEADET RASO) and United States Marine Corps (USMC) RSP Management course provided by CMC (SD) prior to assuming duties.

a. Sign NRMP amendments when applicable.

b. Be appointed in writing by the CO directly (i.e., not "By Direction") and document in writing their acceptance of the responsibilities and position of CRSO.

c. Have independent authority to stop operations associated with their NRMP or X-ray program that they consider unsafe.

d. Have sufficient time and commitment from management to fulfill their duties and responsibilities as outlined in their specific NRMP and all radiation safety directives/local SOPs to ensure that RAM and/or sources of ionizing radiation are used in a safe manner.

e. Have direct access to the CO for all matters concerning radiation safety.

f. When required by an NRMP or as needed, recommend to the CO to assign an Assistant Radiation Safety Officer (ARSO) with the same training and qualifications as the RSO.

g. Ensure that a radiation safety review, audit, and inspection program is implemented and that results are forwarded to the CO, via the chain of command for review.

h. Provide complete copies of RAM inventories and Radioactive Material (RAM) Movement Forms to the IRSM as required in reference (a).

i. Conduct internal audits and inspections as follows:

(1) Quarterly - Radiological Controls Procedures and Practices (observation of operations when possible), NRMP compliance, and transportation of RAM shall be inspected.

(2) Semi-annually - Radiation medical examination (pre-placement, re-examinations, and terminations) occupational radiation exposure and personnel dosimeter records and logs, required records and reports, receipt, transfer, and disposal of RAM, and corrective actions for discrepancies identified during previous audits or inspections (if applicable) in accordance with reference (a).

(3) Annually - RSP training, ALARA Compliance, emergency plans and exercises, inventories of equipment containing radiation sources shall be audited and an overall review of the RSP shall be submitted to the CO.

j. Provide an annual commander's brief to the CO on the status of the RSP for which they are responsible, to include at a minimum, all inspections, or assessments since the last commander's brief and any NRMP actions or correspondence.

k. Ensure strict compliance with all applicable regulations, instructions, and orders that are relevant to the RSP, to include any specific conditions associated with an NRMP.

l. In order to maintain proficiency in radiation safety practices and to remain current with guiding regulations, all RSMs designated in writing shall accumulate three continuing education credits approved by CMC (SD) within the previous five years. Credits may be earned by attending the annual USMC COP (1 credit attendee, 2 credits lecturer), and RSM-RADCON (RSM-R) training (2 credits). If this requirement cannot be met, the RSM shall be required to successfully complete the RSM course again within the 5-year period after initial completion.

m. Perform or coordinate radiation surveys/leak tests/wipe test as required to ensure compliance with the references and NRMPs.

n. Conduct radiation awareness safety training. Training will be conducted and evaluated annually or more frequently as required.

o. Promptly report to the CO and the NAVSEADDET RASO any violation of specific NRMPs, naval directives, federal requirements, any mishap, significant incident, personnel injury, suspected overexposure, spread of contamination, or internal deposition involving RAM sources.

p. The CRSM will ensure that a copy of each completed RAM Movement Form is provided to the IRSM and maintained on file at the generating command for seven years. After seven years, original RAM Movement Forms shall be turned over to the IRSM (CRSM if there isn't an IRSM) to be retained indefinitely in accordance with reference (a).

28004. RESPONSIBLE OFFICER (RO)

(1) Quarterly - Radiological Controls Procedures and Practices (observation of operations when possible), NRMP compliance, and transportation of RAM shall be inspected.

(2) Semi-annually - Radiation medical examination (pre-placement, re-examinations, and terminations) occupational radiation exposure and personnel dosimeter records and logs, required records and reports, receipt, transfer, and disposal of RAM, and corrective actions for discrepancies identified during previous audits or inspections (if applicable) in accordance with reference (a).

(3) Annually - RSP training, ALARA Compliance, emergency plans and exercises, inventories of equipment containing radiation sources shall be audited and an overall review of the RSP shall be submitted to the CO.

j. Provide an annual commander's brief to the CO on the status of the RSP for which they are responsible, to include at a minimum, all inspections, or assessments since the last commander's brief and any NRMP actions or correspondence.

k. Ensure strict compliance with all applicable regulations, instructions, and orders that are relevant to the RSP, to include any specific conditions associated with an NRMP.

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m. Perform or coordinate radiation surveys/leak tests/wipe test as required to ensure compliance with the references and NRMPs.

n. Conduct radiation awareness safety training. Training will be conducted and evaluated annually or more frequently as required.

o. Promptly report to the CO and the NAVSEADDET RASO any violation of specific NRMPs, naval directives, federal requirements, any mishap, significant incident, personnel injury, suspected overexposure, spread of contamination, or internal deposition involving RAM sources.

p. The CRSM will ensure that a copy of each completed RAM Movement Form is provided to the IRSM and maintained on file at the generating command for seven years. After seven years, original RAM Movement Forms shall be turned over to the IRSM (CRSM if there isn't an IRSM) to be retained indefinitely in accordance with reference (a).

28004. RESPONSIBLE OFFICER (RO)

1. Any unit having custody of licensed or permitted radioactive commodities must assign a RO. The RO shall receive radiation safety training that is commensurate with one's duties and responsibilities. The RO shall:

- a. Perform or ensure the conduct of radiation safety program requirements for the receipt, handling, storing, physical inventory, packaging, and shipping of licensed sources of ionizing radiation.
- b. Complete all documentation and ensure reporting requirements are fulfilled.

28005. RADIATION PROTECTION ASSISTANT (RPA)

- 1. All RPAs shall be appointed in writing and successfully complete a radiation safety training program provided by the RSO or RSM within 30 days of assuming duties as RPA.
- 2. All RPAs shall maintain an inventory of radioactive materials within the unit.
- 3. All RPAs will report any loss, damaged, or radiological incident or exposure immediately to their respective commands and to the IRSM/IRSO.

28006. STATION FIRE CHIEF

- 1. The Fire Chief will ensure that the department is capable of supporting emergency response actions in the event of a radiological incident. The Fire Chief shall:
 - a. Appoint an RPA in writing to administer the RADCON Program for the Division and provide appropriate training.
 - b. During on-site radiological emergencies, assume the responsibilities of Incident Commander.
 - c. Ensure Fire and Emergency Services personnel designated as emergency response personnel receive annual training on radiation safety and radiological emergency response hazards.
 - d. Maintain a copy of inventories provided by the IRSM to identify the locations of radioactive materials stored aboard the Installation.
 - e. Notify the IRSM of all radiological emergencies, accidents, and incidents.
 - f. Ensure compliance with this Order and all applicable regulations regarding radioactive materials.

26007. RADIATION WORKERS/LIMITED RADIATION WORKERS

- 1. Radiation workers or limited radiation workers are individuals who operate, maintain, store, inventory, ship or receive equipment with radioactive materials. Radiation workers/limited radiation workers shall:

- a. Obey all verbal and written radiological control instructions.
- b. Not handle radioactive materials unless they have received and have documented the required training appropriate to the operations they are to perform.
- c. Wear dosimeters (e.g., thermoluminescent dosimeters (TLD's), pocket dosimeters) when required by reference (a), NRMP's or NRC licenses.
- d. Promptly report to their supervisor and/or RPA any incident, personnel injury, suspected over exposure, contamination and any suspicious or questionable occurrence involving ionizing radiation sources.

28008. CONTRACTORS AND OTHER NON-DOD AGENCIES. Contractors and other Non-DoD agencies shall implement their own RSP that meets all pertinent radiation protection standards. The following provisions apply to contractors performing work aboard the Installation:

1. Directorates responsible for issuing contracts and/or having control of contractor oversight involving RSP type work must be authorized by Naval Sea Systems Command (NAVSEA 04N). A formal request signed by the CO shall be submitted to NAVSEA 04N via the NAVSEADET RASO.
2. The contractor shall have an RSO to ensure compliance with RSP requirements and protection of contractor personnel in accordance with reference (a).
3. Marine Corps personnel shall not perform radiation services for contractor personnel as performance of such functions may involve assumption of liability.
4. Where Marine Corps and contractor personnel work together in areas where RAM or ionizing radiation may be present, the contractor shall provide a separate radiation survey for his personnel. The contractor shall be informed of Marine Corps survey findings, location of RAM and radiation areas, and local controls used. However, the contracting officer or Facilities Engineering and Acquisition Division, Engineering Technician (FEAD/ET) shall also inform the contractor that the contractor retains legal obligation for the safety of contractor personnel.
5. The contractor will provide the FEAD/ET with an inventory of all radioactive sources and commodities that will be brought aboard the Installation and shall assure that transportation of all RAM is in compliance with all pertinent regulations. The contractor must receive an authorization letter prior to bringing any isotope aboard the Installation from the FEAD Engineering Technician.
6. The FEAD Engineering Technician will inform the IRSM when the contractor will be using RAM on the Installation. The FEAD/ET will provide all NRC required documentation upon request to the IRSM.

28009. RADIOLOGICAL CONTRACT OVERSIGHT MANAGEMENT AUTHORIZATION (RCOMA). Requests for or identification of any external sources of ionizing radiation being brought onto their installation by outside contractors, DoD services,

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or federal agencies, whether for storage or utilization, the IRSM shall ensure a RCOMA has been processed as necessary per reference (c).

1. The request shall be submitted at least 30 days before the requested start date to allow the Installation Safety Office to submit the Letter of Authorization to the Commanding Officer. Minimum RCOMA requirements are as follows:

a. A signed Report of Proposed Activities in Non-Agreement States (NRC Form 241).

b. An approved NRC Federal Materials License (Form 374) If you have an NRC Regional Administrator signed Form 374 there is no requirement to submit a Report of Proposed Activities (NRC Form 241).

c. Formal Radiological Safety Plan, which shall include operating and emergency procedures pertinent to the services to be provided and actions to control jobsite-boundary radiation exposures below those allowed for members of the general public under NRC and OSHA.

d. Project start and end date.

e. RSO/Competent Person identified with contact information.

f. Copy RSO training certificates.

g. What quantity of sources and activity are being requested.

h. If requesting RAM storage on the installation provide the location, drawings, and security requirements.

i. Positive control procedures and measures while on the installation.

j. RAM or any machine or radioactive material source capable of producing ionizing radiation equipment will be brought onboard.

k. Leak test certifications shall include the following information at a minimum:

(1) The identity of each source or device (e.g., source or device manufacturer, model number, serial number, isotope, and quantity).

(2) The identity of the command possessing the source.

(3) The leak test date and next scheduled leak test date.

(4) The leak test methods used (e.g., dry filter paper or wet cloth swipe and areas wiped).

(5) The leak-test results expressed in units of becquerels (microcuries) for each area wiped.

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(6) A description of the equipment used to analyze the leak test (e.g., counting instrument manufacturer, model number, and serial number), if provided or available.

(7) The name of the organization performing the test.

(8) The name and dated signature of the certifying individual, or the sources.

(9) The ISRM shall meet with the contractor at the installation gate and verify the gamma source is transported in accordance with Department of Transportation (DOT) requirements. The ISRM shall perform a survey of the contractor's vehicle upon arrival to ensure radiation levels are ≤ 2 mrem/hr (0.02 mSv/hr) on contact with the vehicle.

CHAPTER 29

HEARING CONSERVATION PROGRAM

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CHAPTER 29

HEARING CONSERVATION PROGRAM

29000. PURPOSE. The Hearing Conservation Program goal is to prevent personnel from suffering occupational hearing loss due to noise exposure and ensure auditory fitness for duty in the workforce. The ear has no mechanism to block out sound; it simply receives all the noise. If this noise is a high-intensity impulse (e.g. gunfire) or a loud continuous sound (e.g. jet) and it keeps striking the ear complex, eventually hearing loss may occur. Because of its incremental and cumulative nature, occupational hearing loss may not be noticed until serious impairment has already taken place.

1. If the noise-induced hearing loss is permanent, medical treatment cannot correct the condition or restore hearing. Noise-induced hearing loss can be prevented by reducing the amount of noise produced at the source, limiting the exposure time, or stopping the noise from reaching the ear. An effective hearing conservation program depends on leading by example regarding the wearing of Hearing Protection Devices (HPDs). Corrective and/or disciplinary action should be taken when personnel fail to comply with the personal hearing protection requirements.

29001. RESPONSIBILITIES

1. Commanders, Commanding Officers, and Department Head in charge shall:

a. Institute a hearing conservation program where a potential noise hazard has been identified and maintain a roster of personnel placed in the program.

b. Ensure adequate funding is established to support your organizations annual PPE requirements. Funding should be forecasted to support both day to day, known requirements as well as any emergency and contingency requirements based on prior year's experiences.

c. Appoint a designated HCP Liaison (HCPL) to coordinate HCP services and program performance reporting data between the command and the NMRTC, and to track compliance of HCP requirements.

d. In cooperation with the medical treatment facility, annually evaluate hearing conservation program effectiveness.

e. Commanders are required to document in the minutes of quarterly safety council meetings their overall hearing readiness (completion rates for reference (baseline) audiogram, annual or periodic audiogram (as medically prescribed). Those commands with completion rates below 85 percent will develop a documented Plan of Action and Milestones (POA&M) to obtain 100 percent completion rate.

f. Eliminate or reduce hazardous noise levels through the use of engineering controls.

g. Label all areas, work sites, and equipment identified as noise hazardous.

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2. Managers and Supervisors. Supervisors are responsible for managing the HCP in accordance with command procedures, to include scheduling hearing tests for their personnel at the nearest NMRTC occupational audiology department. Use SECNAV Form 5100/1, "Supervisor's Medical Surveillance and Certification Exam Referral" to coordinate hearing tests and communicate employee disposition between the command and the NMRTC. Personnel reporting for annual monitoring audiograms will bring their HPDs to verify fit and effectiveness.

a. Per reference (a), ensure a recent Industrial Hygiene report is posted in all areas identified as industrial noise-hazardous areas.

b. Ensure the use of hearing protection is strictly enforced in accordance with this Order.

c. Ensure personnel routinely exposed to hazardous noise are identified and included on the command's hearing conservation roster.

d. Ensure personnel included in the hearing conservation program receive a hearing test, HPD fitting, and refresher training annually.

e. Provide personnel with HPDs and ensure proper usage by personnel where administrative or engineering controls are identified as infeasible or ineffective.

3. Hearing Conservation Program Liaison (HCPL)

a. Track engineering control project for hazardous noise in the unit's hazard abatement log until abated.

b. At least annually, in coordination with occupational audiologist and industrial hygienists explore the market for new HPD products and technology to incorporate into the supply system.

c. Ensure the date of reference audiogram and date of periodic audiogram are documented in MRRS or other approved OSH electronic tracking system.

d. Ensure personnel with Significant Threshold Shifts (STS) complete follow-up care until the STS resolves, or a Permanent Threshold Shifts (PTS) is documented. Supervisors ensure that personnel referred to an audiologist for further medical assessment comply with scheduled appointments.

e. Date of periodic audiogram may only be entered into MRRS or other approved electronic tracking system when:

(1) No STS exists on the periodic audiogram.

(2) Subsequent to an STS or other abnormal findings, personnel have completed all required follow-up audiograms and diagnostic audiology evaluations.

4. Safety Departments

a. In coordination with the Industrial Hygiene Department, maintain a command roster of all personnel identified for inclusion in the hearing conservation program.

b. Ensure that initial and periodic hearing conservation training is documented.

c. Investigate any Temporary Threshold Shifts (TTS) and PTS and implement corrective actions for their prevention.

d. Enter STSs in the appropriate injury/illness log. An STS is a change in hearing threshold level of 15 dB or more in any frequency 1000 to 2000 Hz in either ear: or an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear. STSs are considered recordable when an audiologist, otologist, or occupational medicine physician confirms that shift work is toward deteriorated hearing, permanent, and consistent with an occupational origin (work-related hearing loss). If the review of monitoring results shows a shift in hearing of an average of 25 dB or more at 2000, 3000, and 4000 hertz in either ear as compare to the original baseline, a log entry is required (OSHA recordable).

e. Maintain a list of all hazardous noise areas and equipment as identified by NMCSO Industrial Hygiene Department during the noise surveys and assign RACs as appropriate.

f. Notify supervisors and employees of their failure to use HPDs during routine safety inspections.

g. Maintain a list of the military combat equipment designated as potentially noise hazardous to ensure personnel are aware that wearing of HPDs is required.

h. Utilize the current Military Readiness Reporting System (MRRS) to validate completion of baseline assessment, follow-up appointments, and documentation of PTS's.

i. Document annual self-assessment of the HCP using the required self-assessment checklist from appendix (a).

5. Military and Civilian Personnel

a. Wear HPDs whenever exposed to hazardous noise.

b. Attend hearing tests and training sessions as scheduled.

c. Abide by the requirements of this Order and make others aware of the need to use HPDs when in noise hazardous areas.

6. Facilities Engineering and Public Works. Facilities Engineering and Public Works personnel shall ensure that all equipment being considered for purchase is included in plans and specifications and has the lowest noise emission levels technologically and economically feasible.

7. Navy Medicine. Navy Medicine supports the Marine Corps by performing periodic IH surveys, occupational audiology services through the electronic record systems: Defense Occupational and Environmental Health System

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(DOEHRS)-Hearing Conservation (HC); and DOEHRS-IH. Approved Department of Defense Information Technology Portfolio Repository - Department of the Navy (DITPR-DON) systems, such as the Medical Readiness and Reporting System (MRRS) and the electronic health record provide commanders unit's IMR. These services include but are not limited to:

a. Evaluations of the work environment for noise hazardous operations and equipment.

b. Recommendations for inclusion of personnel in the hearing conservation program, periodic hearing testing, and the evaluation of this testing.

c. Initial and refresher training in conjunction with the annual hearing-monitoring program.

d. Consultations regarding investigations of any temporary or permanent threshold shift and recommendations for their prevention.

29002. NOISE MEASUREMENTS. In order to effectively control noise, it is necessary to accurately measure noise according to standard procedures and properly evaluate the measurements against accepted criteria.

1. Noise measurements shall be taken as part of the industrial hygiene survey.

2. An IH technician, exposure monitor, occupational audiologist or other individual suitably trained by an IH is authorized to take noise measurements.

3. In cases where circumstances such as high worker mobility, significant variations in sound levels, or a significant component of impulse noise make area monitoring generally inappropriate, suitably trained personnel shall conduct personal dosimetry.

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

5. Suitably trained personnel shall conduct all noise measurements taken to determine an individual's exposure with the microphone of the measuring instrument placed at a height that most closely approximates the position/location of the worker's ear during normal working conditions. Work centers may require repeat measurements during a single day and/or on different days of the week to account for the variations in noise level due to changes in operational schedules and procedures.

6. The record of noise measurements shall be retained for the duration of the facility and include, as a minimum:

a. The number, type, and location of the noise sources.

b. Number and identification of personnel in the work area and their daily noise exposure and duration.

c. Type, model, serial number of test equipment and calibration data.

d. Location, date, and time of noise measurements.

e. Noise levels measured and hazard radius.

f. The name and signature of the person(s) conducting the study.

7. In the absence of a qualified professional's assessment and documentation to the contrary, activities shall consider personnel at risk if routinely exposed to sound levels greater than 85 dBA, or for impact or impulse noise, 140 dB peak sound pressure level. These individuals shall be identified on a roster or equivalent database for inclusion in the hearing conservation program. Although this chapter requires hearing conservation measures when noise levels are greater than 85 dBA, the implementation of all available measures may not be necessary in every case. For example, activities shall require visitors to a hazardous noise area to wear protection, but would not require visitors to have their hearing tested or be included on a roster of noise-exposed personnel. There may also be unique situations where sound levels rise unpredictably to greater than 85 dBA or above for short durations so that the wearing of hearing protective devices may be judged impractical or unnecessary. Activities shall document decisions to waive the use of hearing protective devices; such professional judgments shall be rendered by an IH or other qualified professionals, using approved instrumentation and considering all relevant factors.

8. Determinations to exclude individuals who are already included in a hearing conservation program will be made only by professionals qualified to provide or evaluate noise exposure assessments. In no case will activities exclude individuals already included in a program based upon exposure assessment alone without concurrence from an audiologist or physician trained in occupational hearing loss. Such concurrence is necessary to avoid exclusion of personnel who are noise susceptible or at exceptional risk due to pre-existing hearing loss. Personnel who use hearing aids shall not use them in place of approved hearing protectors. Hearing aids may not be used in conjunction with hearing protective devices except as approved by an audiologist or otolaryngologist on a case-by-case basis.

9. Activity follow-up of exposure assessments shall include, as a minimum, the following elements:

a. Identification of those responsible for designating work areas or equipment as noise hazardous.

b. Identification of individuals exposed to hazardous levels of noise, updating this roster at least semi-annually.

c. Identification of the medical facility responsible for audiometric monitoring

d. Identification of those responsible for training personnel in the elements of the hearing conservation program.

e. Activities shall notify each employee exposed to an 8-hour TWA of greater than 85 decibels of the results of the exposure assessment.

29003. LABELING

1. Hazardous noise areas and equipment which produce noise levels greater than 85 dBA or 140 decibels peak sound pressure level dBP shall be labeled with hazardous noise warning decals or labels.

a. Posting an entire building is not recommended unless nearly all areas inside are designated hazardous noise areas.

b. Each tool or piece of equipment producing sound levels greater than 85 dBA shall be conspicuously marked.

29004. NOISE ABATEMENT

1. Engineering controls shall be the primary means of eliminating or reducing personnel exposure to hazardous noise. All practical design approaches to reduce hazardous noise to non-hazardous levels by engineering principles shall be explored. Engineering controls include design and maintenance of machinery, equipment and operations; substitution with less noisy machines and processes; reduction of vibrating surfaces (e.g. damping) and vibration driving forces; and enclosing or isolating the noise source, process changes and muffling devices. The design objective for engineering controls is to reduce steady state noise levels to below 85 dBA or 140 dBP where personnel may be present during normal operation.

2. Administrative controls are used to minimize the number of personnel exposed to hazardous noise and the duration of their exposure until engineering controls are implemented, or when they are not fully effective or feasible. Administrative controls must be implemented when the use of HPDs is inadequate to reduce exposure at or below 85 dBA time-weighted average (TWA).

29005. PERSONAL HEARING PROTECTION DEVICES (HPDs)

1. Personnel working in or entering designated hazardous noise areas must have HPDs in their possession at all times and wear them whenever the noise sources are operating, regardless of exposure time. All personnel exposed to gunfire, artillery or missile firing, under any circumstances, shall wear HPDs. In situations where noise hazardous items are checked out (e.g. tool rooms), users should show their HPDs as evidence of personal protection.

2. All Marine Corps personnel exposed to hazardous noise shall be fitted with earplugs under medical supervision and issued free of charge with a carrying case for permanent retention. All other military and civilian personnel shall be provided HPDs and trained in their use prior to their exposure to potentially hazardous noise levels.

3. Double protection shall always be worn when the noise levels exceed 104 dBA or 165 dBP. A competent person as defined by paragraph 8002 shall render all determinations on the suitability of hearing protectors and any waivers on their use. Progressive degrees of hearing protection needed to prevent noise exposure are:

a. Plug or muff (85-104 dBA, 140-165 dBP).

b. Plug and muff (above 104 dBA, 165 dBP).

c. Plug and muff and administrative control (when the use of HPDs do not reduce noise levels below 85 dBA or 140 dBP).

29006. HEARING TESTING MEDICAL EVALUATION PROGRAM

1. All personnel routinely exposed to hazardous noise greater than 85 dBA or equal to and above 140 dBP, shall be placed in the hearing testing and evaluation program. This program shall include reference (baseline), monitoring and termination audiograms. Personnel shall receive a reference audiogram before assignment to duty in a designated hazardous noise area. The inclusion of personnel who infrequently or only incidentally enter hazardous noise areas depends on the exposure assessment by the industrial hygienist, audiologist, and/or occupational and environmental medicine physician.

2. All military personnel shall receive a valid baseline audiogram as part of their entrance examination into the Hearing Conservation Program. Hearing tests performed at Military Entrance Processing Stations shall not be used as baseline audiograms. All civilian personnel who are routinely exposed to hazardous noise shall be included in the hearing conservation program. They shall receive a baseline audiogram before assignment to duty in designated hazardous noise areas.

3. Personnel enrolled in the hearing conservation program should receive a monitored audiogram at least annually for as long as they are occupationally exposed to hazardous noise. Monitoring audiograms should also be conducted when individuals complain of hearing difficulties. The monitoring audiogram is compared with the baseline or revised reference audiogram to determine if a significant threshold shift has occurred. Monitoring audiograms are designed to detect a threshold shift before the individual suffers enough hearing loss to affect communications.

4. All military personnel shall receive an audiogram upon termination of service. Civilian personnel included in the Hearing Conservation Program shall receive a termination audiogram when they either cease working in noise hazardous areas or upon termination of service. Personnel moving to other jobs (within the Marine Corps) involving hazardous noise exposure need not be given a termination audiogram. Medical Department personnel will notify the safety office of personnel with recordable hearing loss.

29007. TRAINING. Training is crucial to the success of the MCAS Miramar. All personnel included in this program shall be informed accordingly and

provide initial training in hearing conservation as prescribed in reference (a). Training shall consist of the following.

1. The elements and rationale for a hearing conservation program.
 - a. The effects of noise on hearing.
 - b. The purpose of HPDs; the advantages, disadvantages, and attenuation of various types of HPDs; and instructions on selection, fitting, use, and care of HPDs. All personnel (military and civilian) issued personal HPDs shall receive this training.
 - c. The purpose of periodic audiometric testing and an explanation of the test procedures.
 - d. Encouragement to use hearing protectors when exposed to hazardous noise during off duty activities.

29008. RECORDKEEPING

1. All noise monitoring records and audiograms that are pertinent to an individual's exposure shall be incorporated into his/her medical record.
2. A current inventory of all designated hazardous noise areas and operations shall be maintained by the installation safety office to include: noise measurements dBA, TWA's, list of personnel at risk, and the types of control measures used.
3. The safety department is responsible for annually evaluating the hearing conservation program effectiveness as identified in reference (a). Data to determine compliance will be made available by the assigned branch medical clinic providing hearing conservation support, as extracted from the Military Readiness Reporting System (MRRS).

29009. FUNDING. Use regular operating maintenance funds to provide the noise abatement and hearing conservation program materials.

29010. DEFINITIONS

1. Administrative Control. A method of limiting daily noise exposure by control of the work schedule.
2. Audiogram. A chart, graph, or table showing an individual's hearing threshold levels as a function of frequency.
3. Decibel (dB). A unit used to express the measurement of sound pressure levels. It is equal to 20 times the common logarithm of the ratio of the existing sound pressure to a reference sound pressure of 20 micropascals.
4. dBA. The standard abbreviation for sound levels measured with a sound level meter set on the A-weighting network. The A-weighting reduces the contribution of lower sound frequencies that are of less concern for hearing conservation purposes.

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5. dBp. The standard abbreviation for the peak sound pressure level in decibels.

6. Engineering Control. Any procedure or method, other than an administrative control or personal hearing protection, that reduces the sound level whether at the noise source or in the hearing zone of the exposed personnel.

7. Exchange Rate. Dosimeters measure a time-weighted exposure to noise above a predetermined limit and incorporate a set exchange rate in the computation. The exchange rate permits an increased intensity if exposure time is reduced. The BUMED exchange rate is 4 dB for a 50 percent reduction in exposure time.

8. Hazardous Noise

a. Exposure to any steady state noise that exceeds 85 dBA, regardless of duration.

b. Exposure to impulse or impact sound pressure levels equal to or greater than 140 dBp.

9. Hazardous Noise Area

a. Any work area where the sound levels (continuous or intermittent) routinely exceeding 85 dBA.

b. Any work area where the sound pressure levels (impulse or impact noise) routinely equal or exceed 140 dBp.

10. Impulse or Impact Noise. A short burst of sound pressure consisting of either a single impulse or series of impulses. A single impulse has an abrupt rise to a peak pressure, followed by a delay back to the ambient pressure that occurs within one second. Where the intervals between impulses are less than 500 milliseconds, the noise is considered continuous. Short bursts of automatic weapons fire are considered impulse noise.

11. Monitoring Audiograms. Periodic audiograms, obtained subsequent to the baseline or reference audiogram that are used to detect shifts in the individual's threshold of hearing.

12. Reference (Baseline) Audiogram. A baseline audiogram is the first one performed prior to occupational exposure to hazardous noise while in government service. This baseline is considered the reference for hearing conservation purposes against which future audiograms are compared. A baseline audiogram may be re-established from the baseline after determination that a change in hearing is permanent, at which point it becomes the reference (or revised reference) audiogram. All baseline and reference audiograms must be obtained when the individual is free from auditory fatigue (at least 14 hours removed from exposure to hazardous noise). Hearing protection cannot be used to meet the criteria. There can be no transient otology pathology (disease state of the ear or hearing) when the baseline or reference is obtained.

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13. STS. A change in hearing threshold relative to the baseline audiogram or an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear, or a change of plus or minus 15 dB at any frequency 1000 to 4000 Hz.

14. Time-Weighted Average (TWA). An average exposure over a given period of a person's working time, as determined by continuous or intermittent measurements (sampling) during the period.

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CHAPTER 30

AVIATION SAFETY PROGRAM

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CHAPTER 30

AVIATION SAFETY PROGRAM

30000. PURPOSE. The purpose of the MCAS Miramar Aviation Safety Program is to eliminate hazards and enhance the safety awareness of all hands. MCAS Miramar must detect and eliminate hazards, concentrate on safety awareness training, and enforce the highest possible standards of conduct and performance.

30001. RESPONSIBILITIES

1. Commanding Officer MCAS Miramar shall:

a. Ensure the MCAS Miramar Aviation Safety Program is fully coordinated with the provisions of reference (a) and local aviation support requirements.

b. Identify and appoint a Aviation Safety Officer in all functional areas for aviation safety and ensure they are a graduate of the School of Aviation Safety Aviation Safety Command (ASC) course or the SAS Aviation Safety Officer (ASO) Course.

2. MCAS Miramar Director of Safety (DOS) shall:

a. Implement the commander's safety policies and supervise the MCAS Miramar Aviation Safety Program.

b. Maintain access to aviation safety records and mishap statistics such as the Naval Safety Center's RMI/SIR.

3. MCAS Miramar Aviation Safety Officer shall:

a. Act as the principle advisor to the CO and DOS on all aviation safety matters.

b. Advise and have direct access to the commander, the executive officer, and the DOS on all matters pertaining to the organization's aviation safety management system.

c. Advise and assist the Commanding Officer and the DOS in establishing and managing the MCAS Miramar Aviation Safety Program.

d. Input aviation mishap and related information into RMI/SIR and other records systems as required.

e. Coordinate aviation safety matters with the CO H&HS Miramar and MCAS department heads as appropriate.

f. Liaison with the 3d MAW ASO and ensure they have developed, implemented, and are executing a proactive aviation safety management system in order to identify, mitigate, and if possible, eliminate hazards.

g. Be a graduate of the ASO course.

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h. When requested, provide annual training to the MCAS Miramar primary staff on the following: MCAS Miramar pre-mishap plan; MCAS Miramar aviation safety organization; MCAS Miramar aviation safety requirements; and the collection, distribution and storing of safety information.

i. Provide training to the Aviation Mishap Board in accordance with the reference.

4. H&HS Director of Safety and Standardization (DOSS) shall:

a. Act as the principle advisor to the CO and DOS in all aviation safety matters.

b. Advise and assist the Commanding Officer and the DOS in establishing and managing the MCAS Miramar Aviation Safety Program.

c. Input aviation mishap and related information into WESS and other records as required.

d. Coordinate aviation safety matters with the CO H&HS Miramar and MCAS department heads as appropriate.

e. Liaison with the 3d MAW ASO as appropriate.

f. Be a graduate of the ASO course.

g. Provide annual training to the MCAS Miramar primary staff on the following: MCAS Miramar pre-mishap plan; MCAS Miramar aviation safety organization; MCAS Miramar aviation safety requirements; and the collection, distribution and storing of safety information.

h. Provide training to the Aviation Mishap Board in accordance with the reference.

CHAPTER 31

EXPLOSIVE SAFETY MANAGEMENT PROGRAM

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CHAPTER 31

EXPLOSIVE SAFETY MANAGEMENT PROGRAM

31000. PURPOSE. The purpose of the MCAS Miramar Explosives Safety Management Program (ESMP) is to minimize the potential explosive hazards and enhance the explosive safety awareness of all hands.

31001. RESPONSIBILITIES

1. CO MCAS Miramar shall:

a. Ensure the MCAS Miramar ESMP is fully staffed and resourced to execute with the requirements of reference (a) and local Station Orders.

b. Identify and appoint a Explosive Safety Officer in all functional areas for the ESMP and ensure they have direct access to the installation commanding officer for all matters pertaining to explosive safety.

c. Establish an explosives safety site planning Integrated Product Team (IPT) per reference (a).

2. MCAS Miramar Public Works Officer (PWO) shall:

a. Assign a facility planner to the Explosives Site Approval Development Team (SADT) per reference (v).

b. Assign a representative in the Public Works Department and the facility planners to the explosives safety site planning IPT per reference (a).

3. MCAS Miramar DOS shall:

a. Implement the commander's explosive safety policies and supervise the MCAS Miramar ESMP.

b. Maintain access to explosive safety records and ensure explosive mishaps are investigated and reported in RMI/SIR.

c. Assign the Explosives Safety Officer to the Explosives SADT per reference (v).

d. Assign the Explosives Safety Officer to the explosives safety site planning IPT per reference (a).

4. MCAS Miramar ESO shall:

a. Act as the principle advisor to the Commanding Officer and DOS on all explosive safety matters.

b. Develop, implement, and manage a explosives safety program that complies with the provisions of reference (a).

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c. Implement a records management process that documents and supports the ESMP.

d. Maintain approved explosives safety site plan packages.

e. Maintain the facility databases in the Environmental and Explosives Safety Web Portal with all Potential Explosives Sites (PES) and Exposed Sites (ES).

f. Ensure compensatory measures, either from deviations or explosives site plans, are addressed in the appropriate SOP or order and all commands affected are notified in writing of the requirements.

g. Ensure that installation operations involving the transportation, storage, and handling of Class V materiel are conducted in compliance with applicable directives and executed in a safe manner.

h. Provide the explosives training of personnel involved with explosives operations in accordance with reference (a).

i. Monitor the facility grounding/lightning protection program.

j. Conduct annual Explosives Safety Self-Assessments (ESSAs).

k. Provide notification of Munitions of Explosives Concerns (MEC) or Munitions Potentially Presenting an Explosives Hazard (MPPEH) discoveries to COMMARCORSYSCOM.

l. Verify a current review of all electronic transmitting equipment has been conducted to ensure compliance with respect to Hazards from Electromagnetic Radiation to Ordnance (HERO) and ensure installation has obtained the necessary reviews from Space and Naval Warfare Systems Command (SPAWARCSYSCOM) and Naval Surface Warfare Center Dahlgren.

m. Ensure the following reviews are conducted annually and documented. Maintain copies of the current year and two previous year's documentation.

(1) Magazine inspection to ensure compliance with explosives safety and construction standards.

(2) Inspection of all active explosives operating buildings or workplaces.

(3) Encroachment review.

(4) Map review of explosives safety arcs to ensure all ESQD arcs and PESs and ESs within ESQD arcs are shown and accurate.

5. CO and OIC shall: All COs and OICs that requisition, receive, handle, store, or transport munitions are responsible for the following:

a. Publish SOPs that govern explosives operations performed within their unit.

b. Ensure that all personnel involved in the storage, transport, handling, maintenance, receipt/issue, and use of munitions receive required training prior to their assignment to duties involving munitions.

c. Provide copies of all work requests for any work inside the 110% Explosives Safety Quantity Distance (ESQD) arcs to the ESO.

d. Provide copies of all Malfunction, Mishap, and Ammunition and Explosives (A&E) Reports to the ESO.

e. Assign an ESR per reference (a).

31002. MCAS MIRAMAR SPECIFIC EXPLOSIVES SAFETY PROGRAM

1. The MCAS Miramar, Explosives Safety Office develops, implements, and executes a comprehensive Explosives Safety Program that promotes compliance with DoD, USN, and USMC explosives safety regulations to enhance force preservation by providing education, technical assistance, policy guidance, and understanding of the hazards associated with the handling, issue/receipt, storage, and transportation of A&E.

2. To have a successful explosives safety management program all tenants and non-tenant's units aboard the installation must comply with all explosives safety regulations and policies. To ensure all explosives safety regulations and policies are being complied with, the station explosives safety office will conduct annual Explosives Safety Self-Assessments (ESSA) on all tenant and non-tenant commands aboard the installation. To conduct the ESSA the station explosives safety office will utilize the explosives safety evaluations guide located in reference (n) and other applicable references. The following explosives safety programs will be self-assessed during the annual ESSA process:

- a. Program 01 EXPLOSIVES SAFETY ADMINISTRATION MANAGEMENT
- b. Program 02 EXPLOSIVES FACILITY CERTIFICATION / MASTER PLANNING
- c. Program 03 A&E QUALIFICATION / CERTIFICATION
- d. Program 04 A&E STANDARD OPERATING PROCEDURES
- e. Program 05 A&E FACILITIES
- f. Program 06 LIGHTNING PROTECTION/ GROUNDING/ EMISSIONS CONTROL
- g. Program 07 MUNITIONS / ENVIRONMENTAL COMPLIANCE
- h. Program 08 A&E TRANSPORTATION AND EQUIPMENT
- i. Program 09 A&E OPERATIONS
- j. Program 10 INVENTORY MANAGEMENT FOR (Navy & Marine Corps class V Assets)

3. Per reference (a), the installation explosives safety program will be managed by the Station Explosives Safety Officer. To assist the ESO in managing the installation explosives safety program all units that handle, and process A&E will assign an Explosives Safety Representative.

4. To assist in complying with the station explosives safety program; station tenant and non-tenant commands will utilize the following station orders and other applicable references in conjunction with reference (a) and (n) in managing their explosives safety program. These orders are published electronically and can be accessed online via the MCAS Miramar SharePoint page.

a. Reference (o) is MCAS Miramar Explosives Safety Self-Assessment (ESSA) program. A formal program whereby a shore installation conducts periodic safety appraisals of ongoing A&E operations. A well planned and executed ESSA serves as a catalyst for creating and maintaining an operational environment which fosters concerted interdepartmental efforts in accomplishing safety related goals. An annual ESSA schedule is listed in enclosure (1) of reference (o) indicating what month each unit will be self-assessed.

b. Reference (p) is MCAS Miramar Standard Operating Procedures for the Combat Aircraft loading Area, Weapons Staging Area, and Aircraft arm/de-arm areas. This order includes instructions and procedures for the safe and secure operational use of the primary and secondary Combat Aircraft Loading Areas (CALA) and arm/de-arm areas aboard the airfield.

c. Reference (q) is MCAS Miramar local area transportation of A&E to and from Marine Corps Air Station Miramar. This order is to ensure all units desiring to transport A&E to and from MCAS Miramar are cognizant of all applicable laws, safety regulations, and criteria regarding transportation of A&E over public highways.

d. Reference (r) is MCAS Miramar Hazards of Electromagnetic Radiation to Ordnance Emissions Control (EMCON) bill. The EMCON order provides information, procedures, and instructions for implementation and oversight of electromagnetic radiation hazards to A&E on board the installation.

e. Reference (s) is MCAS Miramar Inspection and Testing of Lightning Protection and Grounding systems for A&E storage facilities /operating areas. This order instructs and provide procedures for visual inspections and electrical testing of all grounding systems to include A&E storage facilities, Aircraft grounding, and Hangar grounds.

f. Reference (t) is MCAS Miramar Ordnance policies and procedures for the processing and support of class V A&E. This order promulgate policy pertaining to the handling, storage, security, transportation, shipping, allowances, requisitioning, disposition, disposal, salvage, and safety of class V A&E aboard the installation.

g. Reference (u) is MCAS Miramar Airfield Operations Manual (AOM) Chapter 12 Ordnance Operations. Chapter 12 within the airfield operations manual delineates rules and regulations regarding ordnance operations that are specific to MCAS Miramar.

31003. EXPLOSIVES SAFETY TRAINING

1. To ensure personnel is being properly trained when handling and processing A&E and related hazardous materials aboard the installation. The station ESO provides the following explosives safety classes.

a. Explosives Drivers Course. This course is required for personnel whose duties require personnel to drive A&E on and off the Station. Personnel who are certified explosive drivers are required to attend this course every two years in order to maintain their qualifications.

b. HAZMAT Fuels Drivers Course. This course is required for personnel whose duties require personnel to drive flammable liquids (Fuel) on and off the Station. Personnel who are certified HAZMAT fuel drivers are required to attend this course every two years to maintain their qualifications.

c. A&E Material Handling Equipment (MHE) Operators Course. This course is required for personnel whose duties require them to operate MHE with A&E. This training is a onetime only requirement and must be evaluated every three years to sustain their qualifications.

d. Visiting Unit Explosives Safety Brief. This training is provided to deployed squadrons visiting MCAS Miramar. This training familiarizes visiting squadron personnel of unique explosives safety requirements aboard the air station.

e. Unexploded Ordnance (UXO) class. This class trains personnel aboard the installation in recognizing UXO and procedures to retreat and report UXO items on station.

f. Annual A&E Awareness Training. This training is provided to personnel who handle and process Arms, Ammunition, and Explosives (AA&E). This training familiarizes personnel on annual AA&E requirements when handling and processing A&E.

g. Explosives Safety Stand Downs. The ESO provides explosives safety classes on a case-by-case basis when needed.

h. Material Potentially Presenting an Explosive Hazard (MPPEH) training. This training provides personnel to determine the safety status of expended munitions and the process and procedures to ensure MPPEH material is documented as safe (MDAS) or Inert prior to delivery of material to DLA or the QRP.

2. Please contact the station Explosives Safety Officer in scheduling any explosives safety classes or any other questions regarding explosives safety at (858) 307-8868.