

**Marine Corps Air Ground Task Force Training Command, Marine
Corps Air Ground Combat Center (MAGTFTC, MCAGCC) Safety Program**

Furthering guidance pertaining to the implementation of Occupational Safety & Health, Traffic Safety, Radiation Safety, Laser Safety and Explosives Safety programs aboard MAGTFTC, MCAGCC can be found at AC/S G-7 Safety Division's SharePoint site at:

<https://intranet.mciwest.usmc.mil/palms/G7/Safety/default.aspx>.

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(m) PWCPEARLINST 5100.20
(n) 29 CFR 1910.333
(o) Public Law 91-596
(p) DODINST 6055.1
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(r) NAVMC DIR 5100.8
(s) MCO P5102.1B
(t) DODINST 6055.4
(u) OPNAVINST 5100.12J

MAGTFTC, MCAGCC SOP FOR SAFETY

1. Situation. This publication is a standing operating procedure (SOP) to locally implement the Occupational Safety and Health component of the Marine Corps Safety Program. It provides guidance and local implementation instructions per the references.

2. Mission. This SOP provides guidance in the organization and administration of the OSH Program, and outlines the minimum standards to be maintained in these areas. Commanding officers, officers, enlisted, and civilian supervisors at all levels are responsible for the safety of personnel in their charge.

3. Execution.

a. Commander's Intent and Concept of Operations

(1) Commander's Intent

(a) All Marine Corps Air Ground Combat Center and tenant unit personnel (military, DoD civilian and NAF employees) will comply with the procedures contained herein.

(b) Commanding Officers and Directors will implement, administrate and provide oversight of the OSH program per the references and this order. Assistant Chiefs of Staff and Special Staff Officers will assign a Safety Officer/administrator for their area of responsibility. Commanding officers and directors will provide oversight and training for those assigned personnel and assist in areas beyond the scope of the Collateral Duty Safety personnel. Ensure the widest dissemination of the contents of this Manual.

4. Command and Signal

a. Command This manual is applicable to all organizations, units, and personnel aboard Marine Corps Air Ground Combat Center, Twentynine Palms, including those personnel attached or assigned for temporary duties (including reservist), as well as those tenant and adjacent organizations utilizing or while aboard this installation.

MAGTFTC, MCAGCC SOP FOR SAFETY

TABLE OF CONTENTS

CHAPTER

1. POLICY AND RESPONSIBILITIES
2. OCCUPATIONAL SAFETY & HEALTH INSPECTION PROGRAM
3. SAFETY COUNCILS AND COMMITTEES
4. SAFETY INSPECTIONS
5. DRIVERS IMPROVEMENT/ADD TRAINING PROGRAMS
6. MISHAP REPORTING & INVESTIGATION PROGRAM
7. MATERIAL/WEIGHT HANDLING EQUIPMENT (MHE/WHE) OVERSIGHT
8. PERSONAL PROTECTIVE EQUIPMENT
9. LOCKOUT/TAGOUT ENERGY CONTROL PROGRAM
10. FALL PROTECTION PROGRAM
11. HAZARD COMMUNICATION (HAZCOM) STANDARDS PROGRAM
12. CONFINED SPACE ENTRY PROGRAM
13. RESPIRATORY PROTECTION PROGRAM
14. OFFICE SAFETY PROGRAM
15. EXPLOSIVES SAFETY
16. ASBESTOS ABATEMENT OVERSIGHT
17. OFF-DUTY/RECREATION SAFETY OVERSIGHT
18. OPERATIONAL RISK MANAGEMENT (ORM) TRAINING PROGRAM
19. ERGONOMICS OVERSIGHT
20. REPORTS OF UNSAFE OR UNHEALTHFUL WORKING CONDITIONS/
MARINE CORPS GROUND ANONYMOUS SAFETY REPORTING SYSTEM
(ANONYMOUS)

MAGTFTC, MCAGCC SOP FOR SAFETY

TABLE OF CONTENTS

- 21. RADIOLOGICAL SAFETY
- 22. TACTICAL SAFETY PROGRAM
- 23. CONTROLLING OF HAZARDS OF ELECTROMAGNETIC RADATION
- 24. SAFETY PROGRAMS, PROCEDURES AND TRAINING
- 25. LEAD ABATEMENT OVERSIGHT
- 26. BLOODBORNE PATHOGENS OVERSIGHT
- 27. RODENT BORNE DISEASE PROGRAM
- 28. SAFETY PRECAUTIONS FOR THE INSTALLATION AND USE OF
ELECTRONIC DEVICES
- 29. MEDICAL SURVEILLANCE OVERSIGHT
- 30. TRAFFIC/MOTORCYCLE/EVOC TRAINING PROGRAMS
- 31. ELECTRICAL SAFETY TRAINING

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 1

POLICY AND RESPONSIBILITIES

<u>POLICY</u>	<u>PARAGRAPH</u>	<u>PAGE</u>
POLICY	1000	1-1
SAFETY MANAGER'S RESPONSIBILITIES	1001	1-2
DUTIES AND RESPONSIBILITIES OF COMMANDING OFFICERS AND SECTION/ ACTIVITY HEADS	1002	1-4
RESPONSIBILITIES OF THE COMMANDING OFFICER, NAVAL HOSPITAL	1003	1-4

MAGTFTC, MCAGCC SOP FOR SAFETY

POLICY AND RESPONSIBILITIES

1000. POLICY. Command policy is to aid in the conservation of manpower and material to the fullest extent through the application of a comprehensive, effective, and continuous safety program. One of the prime responsibilities of commanding officers, directors, and civilian supervisors is the safety of personnel and material under their jurisdiction. They will make every effort to eliminate, as practicable, the needless waste of manpower and material through the reduction of mishaps within their commands. The Commanding General is concerned with the continuous safety, welfare, and health of all individuals attached to the Marine Air Ground Task Force Training Command (MAGTFTC) - Marine Corps Air Ground Combat Center (MCAGCC), on and off duty.

1001. INSTALLATION SAFETY DIRECTOR'S RESPONSIBILITIES. The Installation Safety Director (ISD) is a special staff officer and as such is responsible to the Commanding General for technical matters regarding the Installation Safety Program. In any operation or hazardous practice where there is imminent danger of serious injury or death to personnel or serious damage to material or equipment, the ISD will take immediate steps to cease that operation. The ISD is authorized to issue notices or reports of unsafe or unhealthy working conditions which must be given prompt and effective action. Reports of such action will be made immediately to the department head or commanding officer concerned and to the Center Inspector. Other responsibilities of the ISD include:

1. To implement, coordinate, and enforce the Marine Corps Occupational Safety and Health Program at the MAGTFTC, MCAGCC Safety Office.
2. To monitor and analyze mishap reports, except for the determination of line of duty and misconduct, which remains the responsibility of commanding officers.
3. To conduct safety inspections and recommend corrective action on unsafe practices and /or conditions.
4. To supervise the preparation of reports and records necessary to carry out the Safety Program.

MAGTFTC, MCAGCC SOP FOR SAFETY

5. To cooperate with the Environmental Health Officer in establishing and maintaining the Environmental Health Program.
6. To monitor, in cooperation with the Industrial Hygiene Officer, all work centers. This team will place emphasis on work centers where personnel are engaged in hazardous occupations or working with hazardous materials.
7. To establish and maintain a safety library open to all parties at the Installation Safety Office.
8. To obtain outside program speakers on safety subjects as required.
9. To recommend, in cooperation with the Industrial Hygiene Officer, precautions necessary for safe use of hazardous materials, i.e., chemicals, solvents, etc.
10. To furnish posters, safety education material, and publications regarding the Safety Program. This does not alleviate unit safety officers of furnishing similar materials as budget restraints do not allow for the MAGTFTC - MCAGCC Safety Office to supply every unit with sufficient quantities.
11. To advise the Resident Officer in Charge of Construction (ROICC) concerning safety problems associated with contractor operations.
12. To ensure that plans for the facilities, methods, and equipment are reviewed and approved for adequate safety.
13. To coordinate the efforts of various safety councils and committees.
14. To cooperate with the Naval Hospital Industrial Hygiene Officer in establishing and maintaining the Sight and Hearing Conservation Programs.
15. To represent the command in various local, regional and national safety meetings and conferences, including service sponsored activities, where applicable.
16. To provide Driver Improvement, Motorcycle Safety, and Remedial Driver classes.
17. To coordinate with the MAGTFTC, MCAGCC Supply Officer with respect to standards for safety devices and equipment and proper labeling of hazardous materials.

MAGTFTC, MCAGCC SOP FOR SAFETY

18. To coordinate with the Marine Corps Community Services Director to ensure that safety standards, rules and regulations are included in Special Services programs.

19. To consult and maintain liaison with appropriate personnel for safety reviews of plans, programs, and specifications, with particular preference to revised or new operations, developments, and standard operating procedures with respect to explosive and ammunition matters.

20. To study safety problems and conduct job safety analyses in order to develop remedial safety measures related to mechanical processes, shop and field operations and physical conditions.

21. To furnish training for collateral duty safety personnel, civilian supervisors and employees.

22. To provide qualified individuals to manage the command's Respiratory Protection Program, Confined Space Entry Program, Laser/Radiation Safety Program and Explosive Safety Program.

23. To keep the Commanding General informed at all times as to the occupational safety and health posture of the command.

1002. DUTIES AND RESPONSIBILITIES OF COMANDING OFFICERS AND SECTION/ACTIVITY HEADS

1. Commanding Officers and heads of sections/activities, both military and civilian, are primarily responsible, through the chain of command, for the prevention of mishaps. In order to carry out this responsibility they are obligated to:

a. Maintain a safe driving education program for off-duty military personnel.

b. Enforce the provisions outlined in this Manual.

c. Promptly report all injuries and mishaps.

d. Ensure that subordinate units are made aware of and pursue a comprehensive safety indoctrination program.

e. Notify the Safety Manager immediately of all damage to physical property which constitutes a potential or actual hazard.

MAGTFTC, MCAGCC SOP FOR SAFETY

f. Make recommendations in regard to safety which would improve the program.

g. Ensure employees of all units at the Combat Center will appoint one officer as Safety Officer and one (or more) noncommissioned officers to assist the Safety Officer. The Safety Manager will be notified of the appointments by a copy of the appointing order/letter.

1003. RESPONSIBILITIES OF THE COMMANDING OFFICER, NAVAL HOSPITAL. The Commanding Officer, Naval Hospital shall provide support to the Combat Center Occupational Safety and Health Program, which includes occupational medicine (medical treatment and surveillance), industrial hygiene and environmental health, including field support.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 2

OCCUPATIONAL SAFETY AND HEALTH ACT

<u>PARAGRAPH</u>	<u>PAGE</u>	
GENERAL	2000	2-1
OSHA STANDARDS	2001	2-1
RESPONSIBILITY	2002	2-1

MAGTFTC, MCAGCC SOP FOR SAFETY

OCCUPATIONAL SAFETY AND HEALTH ACT

2000. GENERAL. 29 CFR 1960, Basic Program Elements for Federal Employee Occupational Safety and Health Programs, directs the Secretary of Labor to issue a set of basic program elements to assist the various federal agencies in carrying out their responsibilities under the Occupational Safety and Health Act (OSHA).

2001. OSHA STANDARDS. Federal agency heads, to include military commands, are responsible for establishing and maintaining an effective and comprehensive safety and health program that is consistent with the standards prescribed by the Secretary of Labor.

2002. RESPONSIBILITY

1. All Commanding Officers/Directors/section heads, and supervisory personnel will become familiar with the requirements of OSHA and with the standards promulgated as a result thereof.
2. The command Senior Medical Officer will comply with the medical and health aspects of OSHA and in relation to the Industrial Health Program for civilian employees and military personnel.
3. The Staff Judge Advocate is designated as the legal advisor in the legal ramifications of OSHA as it relates to the Marine Corps.
4. All personnel who desire to make purchases will research pertinent safety standards and will include in their requisition such specifications that will ensure compliance with safety standards.
5. Commanding Officers/Directors/section heads will, as a matter of priority, correct existing violations of safety standards.
6. Regional Office in Charge of Construction (ROICC) will ensure that all contracts to private contractors contain a clause requiring the contractor to comply with applicable OSHA standards.

MAGTFTC, MCAGCC SOP FOR SAFETY

7. Prior to the alteration, remodeling, repair, or retrofit of facilities by members of this command, plans of such action will be submitted to the Deputy Director and Fire Chief for their recommendation.

8. Prior to the letting of contracts for new construction, the Deputy Director and the Fire Chief will, in conjunction with the Head, FMD ensure compliance with the published safety and fire prevention measures.

9. The Deputy Director will direct regular inspections of the Installation, reporting all violations of OSHA standards to the appropriate commanders or supervisors who will take such action as required abating the violations.

10. Civilian and military supervisors are responsible for the safety of personnel working under their supervision. Particular care should be exercised in indoctrinating new employees in safety procedures and rules. Shop supervisors of industrially employed personnel, or their designated representatives, shall conduct at least one safety meeting each month.

11. All personnel shall cultivate the habit of working safely, conforming with all safety rules and regulations paying strict attention to the work being performed.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 3

SAFETY COUNCILS AND COMMITTEES	<u>PARAGRAPH</u>	<u>PAGE</u>
SAFETY COUNCILS AND COMMITTEES	3000	3-2
CONSOLIDATED SAFETY/SAFE DRIVING COUNCIL	3001	3-2
UNIT SAFETY COMMITTEES	3002	3-3
LASER SYSTEMS SAFETY COUNCIL	3003	3-3

CHAPTER 3

SAFETY COUNCILS AND COMMITTEES

3000. SAFETY COUNCILS AND COMMITTEES. The following Safety Councils and Committees are established as a part of the Safety Program to initiate and take action to prevent accidents and injuries through supervision, education of personnel, and by stressing safety consciousness.

3001. COMBINED SAFETY/SAFE DRIVING COUNCIL

1. The Council shall review all reports of hazardous conditions, procedures and/or processes, and submit recommendations to the Commanding General for corrective action.

2. Council members shall review motor vehicle accident reports, driver education needs and traffic control devices to assure that all are directed toward improving the traffic safety program.

3. Reference (a) directs each activity to have a Safety Council and a Safe Driving Council. The Combat Center Combined Safety/Safe Driving Council fulfills the requirements of all commands located aboard the Combat Center. The Council will be comprised of the following members:

a. Standing Members:

- (1) Chief of Staff - Chairman
- (2) Director, Installations and Logistics
- (3) Director, Manpower
- (4) Director, G3
- (5) Director, MCCS
- (6) Provost Marshall
- (7) Safety Manager - Recorder

b. Adjunct members:

- (1) Commanding Officer, MCCES

MAGTFTC, MCAGCC SOP FOR SAFETY

- (2) Commanding Officer, 7th Marines
- (3) Commanding Officer, Headquarters Battalion
- (4) Commanding Officer, CLB-7
- (5) Commanding Officer, MWSS-374
- (6) Commanding Officer, VMU-1
- (7) Fire Chief
- (8) Naval Hospital Safety Manager
- (9) Staff Judge Advocate
- (10) American Federation of Government Employees Union Representative

4. The Combined Safety/Safe Driving Council will meet quarterly. Minutes of the council meeting will be submitted to the Commanding General.

3002. UNIT SAFETY COMMITTEES

1. Unit safety committees are to concern themselves only with problems involving the industrial operations in their respective shops and are not authorized to undertake responsibility for other facets of the safety program except as individuals making recommendations to their Commanders and/or the Consolidated Safety/Safe Driving Council.

2. Members of unit safety committees are responsible for the identification of unsafe practices and conditions within their area of responsibility, reporting such practices and conditions to the immediate supervisor for correction. Each committee is to concern itself with continual observation of the safety factors involved in their industrial operations noting particular areas where improvements may be warranted. Such findings or recommendations will be forwarded to the next higher level of supervision.

3003. LASER SYSTEMS SAFETY COUNCIL. Per reference (b), the Council is established as an integral part of the Combat Center Laser Hazards Control Program. The Council is comprised of the Laser Systems Safety Officers of all units operating or training with laser systems aboard the Combat Center.

3004. SAFE DRIVE WORKING GROUP (SDWG). The SDWG will meet monthly or as required to review, plan and carry out special projects as directed by the Safe Driving Council. The SDWG will consist of a representative of each appointed member of the Safe Driving Council.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 4

SAFETY INSPECTIONS	<u>PARAGRAPH</u>	<u>PAGE</u>
PURPOSE	4000	4-2
GENERAL	4001	4-2
INSPECTION FREQUENCY	4002	4-2
RESPONSIBILITY	4003	4-2
INSPECTION PROCEDURES	4004	4-4
DEFINITION OF HAZARD SEVERITY CATEGORIES, MISHAP PROBABILITY SUBCATEGORIES AND RISK ASSESSMENT CODES	4005	4-4
POSTING OF NOTICES	4006	4-5
INTERIM CONTROLS	4007	4-5
WRITTEN REPORTS	4008	4-5
CORRECTIVE ACTIONS	4009	4-6
INSPECTION FOLLOW-UP	4010	4-6
UNIT SAFETY OFFICER	4011	4-6
REPORT OF UNSAFE OR UNHEALTHY WORKING CONDITIONS	4012	4-6
4-1 NOTICE OF UNSAFE OR UNHEALTHY WORKING CONDITIONS		4-7
4-2 MONTHLY GROUND SAFETY INSPECTION CHECKLIST		4-8

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 4

SAFETY INSPECTIONS

4000. PURPOSE. Safety inspections are conducted to identify unsafe conditions, processes or procedures that will or could possibly result in occupational illness or injury, or damage to government equipment and/or property.

4001. GENERAL. Ideally, an effective OSH Program will eliminate hazards before they become mishaps. To accomplish this, hazardous conditions and unsafe acts must be identified before they cause an injury or damage equipment.

1. Safety and health surveys and inspections are the most effective way to identify problem areas before they result in mishaps. A properly managed Survey/Inspection Program conducted by knowledgeable personnel can yield the following benefits:

(a) Detect specific hazardous conditions and unsafe acts requiring attention before they result in mishaps.

(b) Identify the need for specific safeguards and precautions for personnel and equipment.

(c) Promote the Safety and Occupational Health Program to working-level personnel.

(d) Encourage individuals to inspect their own work areas and practices and increase their level of hazard awareness by focusing attention on their areas of responsibility.

(e) Bring safety management personnel in closer contact with other management personnel, supervisors and working-level personnel to strengthen working relationships and establish a common purpose.

4002. INSPECTION FREQUENCY

1. All Workplaces shall be inspected at least annually by MAGTFTC - MCAGCC Base Safety Center OSH personnel.

2. For workplaces where there is an increased risk of accident, injury or illness due to the nature of the work being performed, inspections shall be made more frequently. High hazard areas shall be identified by the Installation Safety Office and inspected semi-annually.

MAGTFTC, MCAGCC SOP FOR SAFETY

4003. RESPONSIBILITY.

1. Director, Base Safety Division. The MAGTFTC, MCAGCC Safety Director is responsible to provide formal workplace inspections in response to request by persons in authority, reports by employees of unsafe or unhealthy working conditions, and per Title 29 Code of Federal Regulations, Part 1910; Title 29 Code of Federal Regulations, Part 1960; and MCO 5100.8. Accordingly the Director, Installation Safety Office shall:

SAFETY INSPECTIONS

- a. Conduct formal workplace safety inspections, prepare written reports, and assign Risk Assessment Codes (RAC) with reference to standards or directives violated.
- b. Post OSH Deficiency Notices, as required in accordance with MCO 5100.8.
- c. Assist the supervisor of the workplace to inspect and help the department, as necessary, develop abatement plans.
- d. Maintain a status code of OSH deficiencies noted as a result of inspections.
- e. Review, prioritize and endorse as appropriate, all work requests initiated by a supervisor of a workplace concerning OSH deficiencies before submission to Assistant Chiefs of Staff, Unit Commanders, and OIC's.
- f. Appraise the MAGTFTC, MCAGCC Installation Safety Office and the Commanding General of all outstanding OSH deficiencies having a RAC of 1, 2, or 3 that cannot be abated promptly.

2. Workplace Supervisors. Workplace supervisors are responsible to ensure daily workplace safety inspections of their areas are conducted. Additionally, supervisors shall:

- a. Accompany the inspection party to encourage exchange of information, provide access, and to ask and answer questions.
- b. Abate all identified workplace OSH deficiencies.
- c. Within 30 workdays of a Notification of Posting (NOP) of such deficiencies, complete the OSH Deficiencies form, Section B, and return a copy to the Director, Installation Safety Office.

MAGTFTC, MCAGCC SOP FOR SAFETY

d. Initiate interim control measures at work areas awaiting permanent abatement.

e. For hazards, which cannot be abated within 30 workdays, the supervisor of the work place shall develop, in cooperation as necessary with the department head, a hazard abatement plan. Update the abatement plan status every 30 workdays using the OSH Deficiency Notice. The abatement plan for each deficiency shall include the following standard data.

(1) Date the hazard was identified.

(2) Location of the hazard

(3) Hazard description and the standard violated.

(4) Risk Assessment Code (RAC.)

(5) Interim control measures to be put into place.

(6) Description of abatement action including estimated cost and completion date.

(7) Close-out statement indicating the completed abatement action, date, cost, process discontinuance, or worksite vacated.

4004. INSPECTION PROCEDURES

1. Inspections shall not unreasonably disrupt operations in the workplace and should be consistent with the established operational concepts of the command. Inspections may be conducted with or without prior notice. No-notice inspections shall be conducted when, in the judgment of safety and health personnel, they will provide a more meaningful assessment of actual operating conditions and practices, or at the request of unit Commanding Officers. This is particularly important when evaluating operations in which the safety and occupational health of individuals depend heavily on work practices and/or the use of personal protective equipment. No-Notice inspections should be used when evaluating reports by personnel of unsafe or unhealthful working conditions. Inspectors will always notify organizational Commanding Officers/Directors/Department Heads before starting any formal inspections.

MAGTFTC, MCAGCC SOP FOR SAFETY

2. Inspectors may discuss with personnel those matters affecting their safety and occupational health, and or offer them the opportunity to identify unsafe and/or unhealthy working conditions.
3. Inspectors shall comply with safety and occupational health rules applicable to the work place being inspected.
4. At the conclusion of the inspection the inspector will confer with and informally advise the supervisor of the workplace inspected of any apparent unsafe/or unhealthful working conditions discovered during the inspection.
5. Imminent danger situations discovered during an inspection shall be brought to the immediate attention of supervisory personnel, including the Commanding General or Commanding Officer of the unit, director or department head for necessary action.
6. The supervisor of a workplace, and/or the workplace safety inspection to encourage the exchange of information concerning existing or potential unsafe working conditions. Employee representatives may accompany the inspector if desired.

4005. DEFINITION OF HAZARD SEVERITY CATEGORIES, MISHAP PROBABILITY SUBCATEGORIES AND RISK ASSESSMENT CODES

1. Hazard Severity Categories. Hazard severity categories shall be assigned by OSH personnel based on the following definitions:
 - a. Category I. Imminent danger exists where there is a reasonable (not necessarily absolute) certainty that the hazard may cause death or serious physical harm or catastrophic damage to property or equipment immediately or within a short period of time.
 - b. Category II. Serious hazard exists where there is substantial probability that death or serious physical harm or major property damage could result at some point in time from exposure.
 - c. Category III. Non-serious hazard exists when conditions could result in a mishap or occupational illness, but probably not death or serious irreversible physical harm, or could cause substantial damage to property or equipment.

MAGTFTC, MCAGCC SOP FOR SAFETY

d. Category IV. Probability of affecting personal safety is unlikely, but still a violation of a NAVOSH standard.

2. Mishap Probability Subcategories. Mishap probability subcategories shall be assigned by capital letters based on the following definitions:

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

b. Subcategory B. Probably will occur in time. May occur in time.

c. Subcategory C. May occur in time.

d. Subcategory D. Unlikely to occur.

3. Risk Assessment Codes. The RAC is an expression of risk which combines the categories of hazard severity and subcategories of mishap probabilities. The RAC is assigned an Arabic numeral as defined as follows:

a. RAC 1. Critical

b. RAC 2. Serious

c. RAC 3. Moderate

d. RAC 4. Minor

e. RAC 5. Negligible

NOTE. See reference (a) for Risk Assessment Code Matrix.

4006. POSTING OF NOTICES. In all cases where military or civilian personnel are exposed to unsafe or unhealthy working conditions which are verified by the Installation Safety Office as being significant (e.g., RAC 1, 2, or 3), an OSH Deficiency Notice provided by the Base Safety Center, advising exposed personnel of the unsafe and/or unhealthy working conditions shall be posted by the supervisor of the workplace in the immediate vicinity of the hazardous condition. The notice shall remain posted until the hazardous condition is abated. Upon notification of abatement, the Base Safety Center shall authorize removal of the notice and document the hazard abatement.

MAGTFTC, MCAGCC SOP FOR SAFETY

4007. INTERIM CONTROLS. Immediate abatement of deficiencies in work areas may not always be possible, and some temporary deviation of safety standards may be required. Therefore, it is necessary that the supervisor and the Installation Safety Office establish appropriate interim controls as soon as deficiency is noted. Such controls shall be outlined on the OSH Deficiency Notice and followed. Interim control measures to be in effect for more than 60 days shall be approved by the Director, Installation Safety Office.

4008. WRITTEN REPORTS. Written reports of workplace inspections shall be distributed to concerned officials, including commanding officers, to assure rapid and effective remedial action on deficiencies. Such reports shall reference standards or other directives violated, other unsafe work practices, and management deficiencies observed. The report shall also include recommended corrective action when appropriate.

4009. CORRECTIVE ACTIONS. When corrective actions cannot be accomplished within 30 days due to circumstances beyond the control of the supervisor of the workplace; he/she shall request assistance from the appropriate authority. Records of action taken to effect compliance (i.e. work requests for assistance, etc.), shall be maintained in the hazard abatement log until such corrective measures are implemented.

4010. INSPECTION FOLLOW-UP. Inspectors shall establish procedures for follow-up of required corrective action per reference (c) to ensure timely and effective response by responsible personnel.

1. The Director, Installation Safety Office will inspect or survey each organization aboard MCAGCC Twentynine Palms annually and will document all deficiencies per this order and the references. Documentation and reporting of corrective action will be required of inspected organizations, to include interim controls and abatement procedures implemented.

4011. UNIT SAFETY OFFICER. Each organization safety representative shall inspect or survey each of its component units at least quarterly per this order. Discrepancies noted shall be forwarded to the unit commander for corrective action. Additionally they shall:

1. Establish a system to document and report discrepancies to the supervisor of the workplace concerned, and require specific corrective actions within a reasonable period of time.

MAGTFTC, MCAGCC SOP FOR SAFETY

2. Document and report corrective actions to the unit safety section for follow-up for effectiveness and/or adequacy.
3. Assemble and forward discrepancy reports and corrective action reports to concerned management personnel and the commanding officer for review, comment or action as appropriate.
4. Establish a system to monitor trends in hazardous conditions and unsafe activities and to verify the adequacy of corrective actions. Maintain records of inspections and corrective action for at least 3 years.

4012. REPORT OF UNSAFE OR UNHEALTHY WORKING CONDITIONS

1. When a possible safety hazard is noted by, or reported to, the Center Safety Office, the Safety Manager will direct an investigation. If a hazard is determined to exist or an unsafe practice is occurring that cannot be immediately abated, a Hazardous Condition Notice shall be prepared and forwarded to the appropriate Directorate/Command.
2. Hazardous Condition Notices will describe the condition/practice; cite applicable references, and recommend corrective action if appropriate. Hazardous Condition Notices may be either advisory in nature or require a report of corrective action. If a report of corrective action is directed, the reply shall be by return endorsement to the notice and returned to the Deputy Director within five working days.

MAGTFTC, MCAGCC SOP FOR SAFETY

NOTICE OF UNSAFE OR UNHEALTHY WORKING CONDITIONS

An inspection was made on _____ by the Safety Office and the following violated safety and health standards or regulations existed at _____

THE FOLLOWING VIOLATED STANDARDS OR REGULATIONS ARE HEREBY POSTED

Standard or Regulation Being Violated	Description Of Violation	Date Of Which Violation Is To Be Corrected or The Status Of Any Abatement Action
SIGNATURE:		DATE OF ISSUANCE:

Figure 4-1 - Notice of Unsafe or Unhealthy Working Conditions.

MAGTFTC, MCAGCC SOP FOR SAFETY

MONTHLY GROUND SAFETY INSPECTION CHECKLIST

Work Center	
Date of Inspection	
Inspector (Print)	
Inspector (Signature)	

Discrepancy	Sat	UnSat	Remarks
Fire Lanes Properly Marked			
Fire Lanes Free of Obstacles			
Fire Bill posted in Work Space			
Fire Evacuation Plan Posted in Space			
Fire extinguisher readily accessible			
Fire extinguisher fully charged			
Fire extinguisher inspection to date			
Eyewash Station accessible			
Eyewash station works/Full			
Eyewash station water recently changed			
Eyewash station inspection to date			
Noise Hazard Areas Marked			
Eye protection signs in place			
No Smoking Signs in Place			
Exits Clearly Marked			
Exits unobstructed			
Strike/Stumble/Trip Hazards marked			
Stair Treads/nonskid condition			
Handrails/Steps condition			
Electrical Outlets not overloaded			
Electrical Wiring shielded /condition			
Eye Protection Available/Serviceable			
Respirators Available/Serviceable			
Safety Binder up to date			
Lockout/Tag out instructions present			
Safety Board up to date			
Area clean and in good order			
Covered rag containers available			
Rag and trash containers marked			
No loose materials on deck			
No oils or chemicals/fluids on deck			
No unsecured wire across traffic lanes			
General Condition of walls/ceilings			
Peeling Paint			
Condition of Pipes and Lagging			
All windows and doors function			
Proper Ventilation/Systems work			
Proper Lighting/Fixtures Work			
Heavy Machinery Secured			
Rotating Machinery Guarded/Marked			
Cutting Tools Shielded/Secured			
Other:			

Figure 4-2 - Monthly Ground Safety Inspection Checklist

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 5

TRAFFIC SAFETY PROGRAM	<u>PARAGRAPH</u>	<u>PAGE</u>
GENERAL	5000	5-2
RESPONSIBILITIES	5001	5-2
GOVERNMENT MOTOR VEHICLE MISHAP REPORTING	5002	5-3
PRIVATE MOTOR VEHICLE MISHAP REPORTING (ON-CENTER)	5003	5-3
DRIVER EDUCATION PROGRAM	5004	5-3
RULES OF THE ROAD	5005	5-4

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 5

TRAFFIC SAFETY PROGRAM

5000. GENERAL. The objective of the Traffic Safety Program is to conserve manpower and equipment through a comprehensive, effective, and continuous Motor Vehicle mishap prevention program encompassing education, licensing, enforcement and engineering. The elements of the Traffic Safety Program contained in reference (d) are accomplished through:

1. Advice and assistance furnished by the Installation Safety Office/Safe Driving Council.
2. Mishap investigation and reporting.
3. Training, examining and licensing of motor vehicle operators.
4. Traffic enforcement and deterrents.
5. Traffic and road engineering.
6. Special emphasis on the traffic safety program.
7. Vehicle inspections and maintenance.

5001. RESPONSIBILITIES

1. Safety Director is responsible for:

- a. Advising the Safety Council on recommended courses of action to improve the Motor Vehicle Mishap Prevention Program.

- b. Providing Driver Improvement, Motorcycle and Remedial Driver classes.

- c. Compiling mishap data reflecting trends, frequency and severity rates.

- d. Preparing traffic safety articles for publishing in the Observation Post.

- e. Assist commands and PAO or G-5 in developing special emphasis traffic safety programs prior to extended liberties and leave periods.

MAGTFTC, MCAGCC SOP FOR SAFETY

f. Assisting unit safety officers with their organizational motor vehicle mishap prevention program.

2. Provost Marshal. The Provost Marshal, as head of the security section, supervises the military police that are charged with enforcement of traffic regulations. The Provost Marshal provides assistance to the Safety Council on traffic flow, marking and signing of streets and highways, and current trends on traffic violations.

3. Southwest Region Fleet Transportation (SWRFT). SWRFT has staff cognizance over the operation and maintenance of all administrative motor vehicles assigned for use by the Installation Safety office; excluded are Exchange, clubs, and other non-appropriated fund vehicles. The SWRFT has similar responsibilities regarding operation of material handling equipment. The SWRFT maintains records of mileage accrued and provides such information to the Installation Safety office for use in preparation of safety reports. The SWRFT furnishes estimates of the cost to repair government vehicles damaged in accidents. The SWRFT conducts the training, examining and licensing program for operators of government vehicles.

4. Unit Commanders. Commanding officers are responsible for implementing the Traffic Safety Program by ensuring that all personnel in their command receive eight hours of instruction annually on Motor Vehicle Safety as per reference (e).

5. Others. The Director, MCCS and other persons having charge of non-appropriated fund vehicles will ensure that operators are qualified as per reference (e).

5002. GOVERNMENT MOTOR VEHICLE MISHAP REPORTING

1. Motor vehicle mishaps must be reported and investigated for the purpose of gathering information, which can be analyzed with a view towards eliminating hazards, which contribute to vehicle mishaps. In order to fully evaluate the motor vehicle safety program needs aboard the Combat Center, the Safety Manager must be included in the routing of all motor vehicle mishap reports.

2. When a government motor vehicle (GMV) is involved in a mishap, aboard MAGTFTC - MCAGCC, the operator(s) of the vehicle(s) will notify the Military Police Desk Sergeant, who will direct Military Police unit(s) to the scene for traffic control and accident investigators to conduct an investigation.

MAGTFTC, MCAGCC SOP FOR SAFETY

5003. PRIVATE MOTOR VEHICLE ACCIDENT REPORTING (ON-CENTER). Privately owned vehicles which are involved in mishaps aboard the MAGTFTC - MCAGCC will be reported by the operator, passenger(s) or witness(s), to the Military Police, who will conduct a traffic accident investigation.

5004. DRIVER EDUCATION PROGRAM

1. Alive At 25 Defensive Driving Course

a. All Marines under the age of 26 will complete a course in traffic safety. The "Alive At 25" Defensive Driving Course is presented weekly for all military personnel under 26 years of age. The first gaining unit/organization will ensure all Marines under the age of 26 receive defensive driving training within the first 60 days of checking in. See Combat Center Bulletin 5100 series (Safety Training Classes/Meetings) for scheduled dates and reporting times.

b. This course is a prerequisite for all military personnel under the age of 26 desiring to obtain Combat Center vehicle access decals, prior to being scheduled for the motorcycle safety course and when obtaining GMV operator permit.

2. ATTITUDINAL DYNAMICS OF DRIVING. This course is established for those personnel whose actions have shown that they require such training. Personnel include:

a. Individuals assigned by the Combat Center Traffic Court.

b. Individuals identified by their commanding officer as high risk drivers based on past driving history or behavioral indicators.

NOTE: This course is presented once a month or as needed.

3. EMERGENCY VEHICLE OPERATOR COURSE (EVOC)

The Installation Safety Office will oversee the EVOC program and ensure that the following guidelines are met: Individuals shall complete an emergency vehicle operator course before being assigned to drive DoD police vehicles, ambulances, fire trucks, and crash and rescue vehicles or other response vehicles when equipped with lights and siren. The National Highway Traffic Safety Administration's (NHTSA) Emergency Vehicle Operator Course (EVOC) or other training approved by the CMC (SD), conducted by a certified instructor, meets this requirement. All operators of these vehicles shall complete the training

MAGTFTC, MCAGCC SOP FOR SAFETY

every three years as directed in reference (f).

4. NEW JOINS. All commands shall provide local traffic safety familiarization training to all military new joins. The training shall consist of base and local area driving hazards and recognized traffic concerns.

5005. RULES OF THE ROAD

1. Vehicle operators, two and four wheel, pedestrians, and joggers are required to comply with the California Department of Motor Vehicle Codes. The Provost Marshall has adapted and published these rules and regulations in the current version of CCO P1630.8.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 6

MISHAP REPORTING PROGRAM	<u>PARAGRAPH</u>	<u>PAGE</u>
DEFINITIONS	6000	6-1
RESPONSIBILITIES	6001	6-8
PROCEDURES	6002	6-8
Figure 6-1 Preliminary Report of Mishap		6-10

CHAPTER 6

MISHAP REPORTING PROGRAM

6000. Definitions

1. Mishap Reporting Program. Reference (g) outlines procedures for the records, mishap data, fatalities, lost workday cases, occupational injuries and illnesses, number of workdays lost due to injuries and illnesses, property damage for which the government is liable, and both government and private motor vehicle mishaps.

2. Mishap. An unplanned event or series of events, which results in one or more of the following:

- a. Injury to military personnel either on or off duty.
- b. Injury to civilian personnel while in a Federal work status.
- c. Injury to nongovernment personnel as a result of Marine Corps operations.
- d. Occupational illness to either military or civilian personnel.
- e. Damage to government property or equipment.
- f. Damage to public or private property as a result of Marine Corps operations.

3. Reportable Mishap

- a. Mishap resulting in a fatality.
- b. Mishaps resulting in injury or occupational illness which results in lost time beyond the day of occurrence.
- c. Mishaps resulting in vehicle or property damage of \$5,000.00 or more for which the government is liable.

4. Recordable Mishap

- a. All mishaps defined as recordable.

MAGTFTC, MCAGCC SOP FOR SAFETY

b. All no lost time civilian employees submitting forms CA-1, CA-2 and CA-6 to the Office of Workers' Compensation, Department of Labor.

c. All off-duty Military mishaps resulting in lost time.

5. Non-reportable Mishaps. The following mishaps are not reportable under this manual but may be required by other directives:

a. Damage or injury by direct action of an enemy or hostile force.

b. Injuries associated with non-occupational diseases where the disease itself, not the injury, is the cause of lost time; e.g., a minor laceration suffered by a hemophiliac which results in lost time.

c. Attempted or consummated suicide or homicide or any other intentionally self-inflicted injuries.

d. Injuries resulting from altercations, attacks or assaults, unless incurred in the performance of duties.

e. Injuries or fatalities to persons in the act of escaping or eluding military or civilian authorities.

f. Hospitalization for treatment where the patient is retained beyond the day of admission solely for administrative reasons.

g. Hospitalization for observation or administrative reasons not related to the immediate injury or occupational illness.

h. Injuries that result from preexisting musculoskeletal disorders or from minimum stress or strain such as simple, natural, nonviolent body positions or actions as in dressing, sleeping, coughing or sneezing. These are injuries unrelated to accident-producing agents or environments normally associated with active participation in daily work or recreation.

i. Injuries or damage resulting from an aircraft mishap as defined in OPNAVINST 3750.6.

MAGTFTC, MCAGCC SOP FOR SAFETY

j. Death due to natural causes that is unrelated to an on-duty hazard, environment or evolution as determined by competent medical authority.

k. Damage to government equipment or property incurred during authorized testing or combat training where the damage was expected as part of the test or evolution.

l. Property damage as a result from felonious acts such as vandalism, riots, civil disorder, arson or theft.

6. Employees

a. Military Personnel. All military personnel on Active duty including Marine Corps Reserve personnel on Active duty or in a drill status; officer candidate students; and foreign national military personnel assigned to the Marine Corps or traveling in Marine Corps vehicles. For mishap reporting purposes the Commanding Officer or Officer in Charge of the personnel involved is responsible for the investigation and reporting process. Mishaps to military personnel enroute to a new duty station will be the responsibility of the receiving command. The MCAGCC Commanding General reserves the right to direct investigations of all mishaps occurring aboard the MAGTFTC - MAGCC.

b. Civilian Personnel. This includes all Marine Corps General Schedule and Wage Grade employees in the competitive or excepted service paid from appropriated Federal funds and covered by the Federal Employees Compensation Act.

c. Other Civilian Personnel. This includes all non-appropriated fund employees and foreign nationals employed by the Marine Corps.

7. On-Duty Marine Corps Personnel

a. At an installation or off-base location to perform their officially assigned work. This includes those activities incident to normal work activities, such as walking to and from parking lots, lunch periods or rest breaks. Travel to and from snack bars, dining halls and etc., is considered related to having lunch.

b. Being transported by Marine Corps or commercial conveyance for the purpose of performing officially assigned

MAGTFTC, MCAGCC SOP FOR SAFETY

work. This includes reimbursable travel for temporary duty performed in private motor vehicles, but does not include routine travel to and from work.

c. Participating in unit-directed physical training, Sergeant's Course, specialized training and etc.

8. Off-Duty Marine Corps Personnel. Whether on or off a Marine Corps installation, personnel are off-duty upon termination of the normal work schedule, travel to and from work, in a leave or liberty status, participation in voluntary sports to include installation team sports, on lunch or break and engaged in personal activities unrelated to eating or resting such as shopping, jogging and etc.

9. Lost Workday Case. Cases when a mishap results in personnel missing one or more days of work. Days away from work are those days (consecutive or not) on which personnel would have worked but could not because of an occupational injury or illness. The number of lost workdays does not include the day of the injury or onset of the occupational illness, the day returned to duty, or any days a civilian employee was not scheduled to work, such as Saturdays, Sundays or holidays.

10. Occupational Illness. Any abnormal physical condition or disorder other than those resulting from an injury (as defined above) caused by repeated exposure to environmental factors associated with the occupational environment and resulting in any of the following:

- a. Fatality, regardless of the length of the illness.
- b. Lost workday case as defined above.
- c. Repetitive motion injury such as carpal tunnel syndrome.

11. Observation Procedure. Hospitalization or restriction from assigned work activities for observation or diagnosis is not a lost workday case.

12. Government Motor Vehicle. A motor vehicle which is owned, leased (including GSA vehicles under Marine Corps control), or rented by the Marine Corps (not individuals on official travel) which is primarily designed for over the road operation, and whose general purpose is the transportation of cargo or personnel. Examples of government motor vehicles are: passenger

MAGTFTC, MCAGCC SOP FOR SAFETY

cars, station wagons, ambulances, buses, trucks, and tractor-trailers. For mishap reporting purposes the following are not considered GMVs:

a. Special Purpose Vehicles designed primarily for off-the-highway operation such as forklifts, road graders, tractors, bulldozers and ground support equipment.

b. Combat Vehicles designed for a combat environment such as armored personnel carriers and tanks.

c. Vehicles on memorandum receipt to, and operated by non-Marine Corps personnel or activities such as the U. S. Postal Service or the American Red Cross.

13. Government Motor Vehicle Mishap. A mishap involving a government motor vehicle being operated as such which results in death injury or property damage.

14. Non-Motor Vehicle Mishaps. The following examples, although reportable and accountable under other mishap categories, are not considered motor vehicle mishaps.

a. Personnel injuries that occur while loading, mounting or dismounting a motor vehicle which is not moving.

b. Cargo directly damaged by weather or damage to a GMV resulting solely from natural phenomena.

c. Damage to a properly parked vehicle unless it is damaged by another government vehicle. GMV's are considered properly parked only when they are in an authorized parking area.

d. Damage to a government vehicle caused by objects thrown or propelled into it.

e. Damage to a government vehicle resulting from fire when no vehicle accident occurred.

f. Damage to a government vehicle being handled as a commodity and not operated under its own power.

15. Private Motor Vehicle Mishaps. A traffic mishap which does not involve a government motor vehicle in a fatality or lost workday case to military personnel, on or off duty, or civilian personnel on duty, or result in reportable damage to government

MAGTFTC, MCAGCC SOP FOR SAFETY

property. Motorcycles fall into this category.

16. Property Damage. \$20,000 or more in government owned or non-government owned Property damage, \$5,000 or more in government motor vehicle damage, as A result of government evolution/operations.

17. Cost Data

a. Cost of damage to Department of Defense property and equipment will be computed utilizing the actual cost of repair or replacement, including the number of man-hours for labor.

b. A standards rate of \$16.00 per man-hour will be used for computing labor cost.

18. Mishap and Injury Classes

a. Class A: A mishap resulting in a fatality, permanent disability, or total reportable cost of \$2,000,000.00 or more.

b. Class B: A mishap resulting in a permanent partial disability; hospitalization of 3 or more personnel; or total reportable damage cost of \$500,000.00 or more, but less than \$1,000,000.00.

c. Class C: A mishap resulting in a lost time case or total reportable damage cost of \$50,000.00 or more, but less than \$200,000.00.

19. ELECTRONIC REPORTING. A web-enabled data collection system has been developed to allow submission of all recordable/reportable mishaps by electronic means. Although Chapter 5 provides the naval message format for a SIREP, electronic reporting is to be used as the equivalent of the SIREP to alleviate administrative burden, ease routing, and provide timely access to data reports.

a. Web-Enabled Safety System (WESS). All Navy and Marine Corps recordable/reportable mishaps shall be reported using WESS. WESS provides data fields matching the information required in the SIREP format, for the applicable mishap types.

(1) The WESS system will automatically indicate which SIREP data elements are required for entry based on the selected classification, type of mishap, and reporting activity.

MAGTFTC, MCAGCC SOP FOR SAFETY

(2) The WESS system is password protected. To allow for local management of access to WESS mishap reporting and data retrieval, each Navy and Marine Corps command or activity will:

(i) Designate an individual(s) to serve as their Safety Authority (SA). This is typically the safety manager, safety officer, executive officer, regional safety manager, etc., who manages WESS mishap reporting for one or more commands or activities.

(ii) Provide the name, rank/rate/grade, and position title of the designated SA, by naval message or on command letterhead, to COMNAVSAFECEN. The command or activity's SA will then be electronically recorded as having permission to approve WESS account applications for personnel under their cognizance.

(3) Any requests for WESS accounts and passwords from a command or activity will go through the SA for approval and then will be forwarded to COMNAVSAFECEN for account creation and password issuance.

(4) If a command or activity does not have a designated SA on file, account requests will be reviewed and approved by COMNAVSAFECEN Delegated Administrators (DAs).

(5) The command or activity, through their SA, will manage the access, notifications, release authority, routing, and report permissions given to their personnel for WESS use at their activity.

(i) Everyone within a command, activity or chain of command using WESS for initiating entries, report completion, review, endorsement, approval, or editing of records or reports must have their own account to access the system.

(ii) WESS has functions allowing reports to be saved, retained in the system, routed within the command or activity, edited or approved by authorized personnel within the submitting command or activity, released or submitted electronically, and provide notification to the chain of command of released reports. Commands and activities are encouraged to establish their own review, approval, release, and notification policies for WESS reports by local directive or notice.

(6) WESS entries should be made as frequently as feasible to ensure data are entered and available for retrieval.

MAGTFTC, MCAGCC SOP FOR SAFETY

Where connectivity with internet service is intermittent, WESS has a function to allow partial entries to be entered and saved, then re-accessed, completed, and transmitted to COMNAVSAFECEN at the next opportunity for internet connectivity.

(7) If a submitted report must be changed or amended, WESS provides instructions for searching for a WESS report, using the original locally assigned serial number, date of mishap, and/or involved UIC/RUC/MCC. For information gained after submitting the WESS data, commands and activities shall amend or edit the original record in WESS (retrieving the record using the same serial number).

(8) Data from submitted reports is electronically transmitted to COMNAVSAFECEN, where it is reviewed for quality assurance purposes (data is validated and narratives checked to remove personal identifiers) and entered into the consolidated database.

(i) Entered data may be retrieved as data reports and logs directly from WESS on-line and maintained locally either in hard copy format or electronically.

(ii) WESS provides a selection of pre-formatted report types for download or printing, as well as a function for creating custom reports. Reports and Injury Logs may also be retrieved in PDF format prior to submission after drafting in WESS.

(9) WESS has a feature to route reports upon submission.

(i) Reports can be routed to specific e-mail addresses or to a Community of Interest (COI). A COI can be the chain of command, to provide a copy of the mishap report, or a larger group who may have particular interest in the lessons learned. The activity or command can select from pre-determined COI's in WESS.

(ii) Activities and commands using WESS-DS may add any number of addressees to the outgoing e-mail, which transmits the report upon submission, or send a separate e-mail with the text file attached.

(10) Any WESS user with an account and locally granted permission may download non-privileged, pre-formatted or custom mishap data reports, tables, queries, and graphs for any UIC/RUC/MCC.

MAGTFTC, MCAGCC SOP FOR SAFETY

(i) The WESS Help link may be used to request additional data, or tailored reports, if certain data is not available through the pre-formatted or custom reports in WESS.

(ii) Activities or commands requiring access to the complete WESS database for ad-hoc queries, including all Privacy Act and privileged data, must request specific permission for that access. Requests for access shall be made to COMNAVSAFECEN as part of the request for a WESS account process.

a. Initial Class A/B Notification reports, as required by MCO P5102.1B, section 3002.1, may be made using WESS in lieu of or in addition to phone calls. All applicable sections of the abbreviated Initial Class A/B Notification Report are to be completed and the report submitted immediately to COMNAVSAFECEN.

b. Reports and endorsements prepared as the result of a SIB will be made using WESS or by naval message using the MCO P5102.1B.

c. Information on requesting a WESS account and the WESS Users' Guide is available on the COMNAVSAFECEN web site at www.safetycenter.navy.mil, under On-Line Mishap Reporting.

6001. RESPONSIBILITIES

1. Safety Director. The Safety Director will provide training in proper ground mishap reporting procedures for all MCAGCC and tenant unit safety officers, NCO's, and civilian supervisors.

2. Unit Commanders. Unit Commanders will establish internal procedures to ensure compliance with the investigation, reporting, and record keeping requirements per reference (h) and that all mishap reports are provided to CG MAGTF TRNGCOM as an information recipient.

3. Unit/Collateral Duty Safety Officers/NCOS. Unit Safety Officers/NCOs are responsible for coordinating mishap reporting programs by ensuring the accuracy of mishap messages, mishap statistical recording/reporting and sustaining liaison with the MCAGCC Safety Office.

4. Supervisors. Supervisors are responsible for reporting all employee mishaps of personnel under their supervision. Civilian personnel mishaps must be related to on duty occurrences only.

MAGTFTC, MCAGCC SOP FOR SAFETY

Supervisors will be responsible for insuring that the required reports are submitted to the Safety Manager.

5. Employees. Employees are responsible to inform their immediate supervisor, SNCO or officer of any mishap or near miss that they were involved in or have knowledge of.

6. Civilian Personnel Officer. The Civilian Personnel Officer will provide a copy of all OSHA 301 Forms Incident Reports on injury claims filed by MCAGCC employees to the Safety Manager within five working days of receipt.

7. Non-appropriated Fund Civilian Personnel Office. Non-appropriated Fund Personnel Officer will provide a copy of all LS-202 forms filed by NAF employees to the MCAGCC Safety Manager within five working days of receipt.

6002. PROCEDURES

1. Preliminary Report of Mishap.

a. In addition to the requirements for formal mishap reporting, preliminary reports of mishaps will be submitted to the MCAGCC Safety Manager.

b. A preliminary report of Mishap will be submitted in writing as depicted in Figure 6-1.

2. Guidelines for Completing Mishap Reports. General guidelines are provided per reference (f), chapter 4 to assist personnel in properly completing a Serious Mishap Report (SMR), Message Mishap Report (MMR), Formal Safety Investigation Report (FSIR) and a Hazard Alert (HA).

MAGTFTC, MCAGCC SOP FOR SAFETY

PRELIMINARY REPORT OF MISHAP FOR CIVILIAN/MILITARY PERSONNEL

NAME _____ RANK/GRADE _____

JOB SERIES/MOS _____

LAST 4 SSN _____ Marital Status _____ AGE _____

Weight _____ Height _____

WORK

SECTION/UNIT _____

MISHAP REPORTING OFFICIAL (POC) _____

PHONE _____

DATE/TIME OF MISHAP _____ LOCATION OF

MISHAP _____

WITNESSES (NAME & UNIT)

WITNESS STATEMENTS YES _____ NO _____ (Request statements if not
already in process)

MISHAP STATUS

(CHECK APPLICABLE SPACES)

_____ ON DUTY _____ OFF DUTY _____ LOST TIME _____ NO

LOST TIME

_____ HOSPITAL _____ QUARTERS _____ LIGHT DUTY _____ CON

LEAVE

_____ OFF-BASE _____ ON-BASE

EQUIPMENT/VEHICLE INVOLVEMENT

MILITARY VEHICLE

(NUMBER &

TYPE) _____

CIVILIAN VEHICLE

(NUMBER &

TYPE) _____

EQUIPMENT DAMAGE

TYPE _____

COST ESTIMATE

MAGTFTC, MCAGCC SOP FOR SAFETY

INJURIES

MILITARY (NUMBER/TYPE

W/MEDVAC INFO)

CIVILIAN (NUMBER/TYPE

W/MEDVAC INFO)

PRESENCE OF FIRE/AMMO/FUEL SPILL AND/OR CHEMICALS (DESCRIBE)

SYNOPSIS OF EVENTS

(DESCRIBE MISHAP BRIEFLY: WHOM, WHAT, WHERE AND WHY. LIST ANY EQUIPMENT INVOLVED)

NOTE: FIGURE 5-1, MCO 5102.1A Ch1, PROVIDES A MATRIX TO DETERMINE EXTENT OF MISHAP REPORTING BASED ON DUTY STATUS, ON OR OFF-BASE, AND PROPERTY DAMAGE COSTS.

Figure 6-1 Preliminary Report of Mishap

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 7

MATERIAL/WEIGHT HANDLING EQUIPMENT (MHE/WHE) OVERSIGHT

MOTOR VEHICLES AND MATERIAL HANDLING EQUIPMENT (MHE)	<u>PARAGRAPH</u> 7000	<u>PAGE</u> 7-2
MATERIAL HANDLING EQUIPMENT (MHE)	7001	7-3
INSPECTION AND TESTING OF COMMERCIAL AND TACTICAL LOAD LIFTING EQUIPMENT	7002	7-4

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 7

MATERIAL/WEIGHT HANDLING EQUIPMENT (MHE/WHE) OVERSIGHT

7000. MOTOR VEHICLES AND MATERIAL HANDLING EQUIPMENT (MHE)

1. Operator's Responsibilities. Operators of motor vehicles and motorized material handling equipment will conform to the provisions of reference (i).

2. Passenger Limitations

a. Vehicles with floor shifts will not be operated with more than the driver and one passenger in the front seat.

b. Vehicles with column shift, conventional and automatic transmissions, will not be operated with more than the driver and two passengers in the front seat.

c. No personnel, military or civilian, will be permitted to ride in or on any vehicle with any part of their body outside the bed or body of any truck or automobile; nor shall they be permitted to ride while standing. No passengers are allowed to ride in the bed of pickup trucks unless the truck is provided with seats and seat belts designed for passenger use. This prohibition applies to GMVs and POVs operated over the roads aboard the MAGTFTC - MCAGCC and to GMVs off Center.

d. The provisions of the above paragraph do not apply to fire fighting personnel riding/standing on approved fire fighting apparatus.

e. The responsibility for enforcement of the safety rules for the operation of motorized material handling equipment rests with the operator of the particular motor vehicle.

f. No vehicle shall be so loaded, as to obscure the operator's view ahead or to either side, or to interfere in any manner with the safe operation of such vehicle. In addition, rear view mirrors shall be arranged to afford a suitable view to the rear of the vehicle.

g. Doors, hatches, gates, hoods, and chains will be closed and secured from opening or swinging while vehicle is in motion.

h. Motor vehicles will not be left running while operators are not in attendance.

MAGTFTC, MCAGCC SOP FOR SAFETY

i. A complete stop must be made before reversing the direction of travel.

j. No vehicle will be backed without first ascertaining that it is safe to do so. When backing vehicles with limited vision to the rear, an assistant will be required to walk to the rear of the vehicle and direct the operator.

k. Prior to crossing at grade level of any railroad track or tracks, operators of any motor vehicle carrying explosive substances or flammable material shall stop their vehicle, preferably within 50 feet but not less than 15 from the nearest rail of that railway. Then operators shall cross only in such gear of the vehicle as will make a change of gears unnecessary while on the tracks. No stop is required at any such crossing when a police officer is directing traffic or a traffic control signal directs traffic to proceed. Extreme caution will be used even in the presence of such traffic control.

l. Warning devices such as red flags, lanterns, etc., will be placed on loads protruding beyond the normal end of the bed or body of any vehicle by more than three feet.

m. All tools and equipment shall be properly stowed and securely fastened when transported with personnel.

n. All personnel riding in commercial type or privately owned vehicles will wear restraining devices. Devices will also be worn in tactical vehicles when so equipped.

3. Maintenance

a. When inflating tires on wheels equipped with lock rings, and which are not mounted on the vehicle, a safety cage will be used. Personnel will keep hands and fingers outside of the safety cage during inflation of a tire.

b. Do not step on, or lay tools on batteries.

c. No motor vehicle shall be fueled while the engine is running.

d. Engines shall not be run in shops or other enclosed spaces without adequate provisions for exhaust gas removal.

MAGTFTC, MCAGCC SOP FOR SAFETY

e. "Spinner Knobs" are not authorized on the steering wheel of government vehicles.

f. Smoking or lighting of matches or lighters within 50 feet of any fueling point is prohibited.

7001. MATERIAL HANDLING EQUIPMENT

1. When handling material, whether or not using motorized equipment, care should always be exercised to use the principles of safe operation.

2. In loading/unloading operations, no short cuts shall be taken which increases the hazard. Any condition that makes loading or unloading unsafe must be reported to the supervisor. Under no circumstances shall material be stacked in such a manner as to constitute a safety or fire hazard.

3. When handling material, keep hands and feet where they will not be caught between the material and any other object. Call for assistance in any case where it appears the object may be too heavy or bulky for one person to handle.

4. Carry material with a clear view ahead.

5. Personnel will not use their feet as braking devices either by friction or as chock on hand trucks.

6. All overhead storage areas will be clearly marked with the maximum loading per square foot.

7. Material shall be stacked and secured when moving so that it cannot jar or work loose from vibration. Loading should never exceed safe limits in relation to type of material, regardless of the maximum load capacity of equipment.

8. When climbing on stacked material is required, a ladder or appropriate climbing device shall be employed and the worker shall ensure that it is in good condition.

9. When loading or unloading cars or trucks at a dock, a bridge plate of adequate size and strength, will be used for accessing the vehicle. Bridge plates shall be securely placed and fastened with locks, pins or bolts.

MAGTFTC, MCAGCC SOP FOR SAFETY

10. When moving hand trucks, dollies, trailers, or other wheeled vehicles by hand, the employee shall push the vehicle from behind. The load on such vehicles shall be arranged so as to allow a clear view while moving it. Personnel shall never pull such vehicles or walk backward while moving them.
11. Material will not be carried while climbing ladders. A hand line shall be used after ascending. Hands will be left free while climbing.
12. All hoisting equipment will be inspected annually. At no time will a person work under an object supported only by jacks; stands of sufficient strength to support the load will be utilized.
13. Operators should thoroughly test and inspect hoist controls, brakes, and crane cables before commencing operation of cranes.
14. Cranes shall be operated by qualified licensed operators. Student operators must be under the supervision of an experienced operator, a crane repairman, or an inspector. Only authorized personnel shall be allowed to enter crane cabs.
15. Crane booms or fall cables shall never be allowed to come closer than 10 feet from any power line.
16. A qualified operator shall be in the cab of a crane at all times when the engine is running. This training is available through Southwest Regional Fleet Transportation.
17. Only authorized cages, properly secured, will be used to lift personnel with forklift trucks. The truck shall not be moved from one location to another while personnel are in the cage.

7002. INSPECTION AND LOAD TESTING OF COMMERCIAL AND TACTICAL LOAD LIFTING EQUIPMENT

1. Reference (i) states the procedures for the inspections and load testing of Marine Corps commercial and tactical load-lifting equipment.
2. All requests for load testing support shall be submitted through the chain of command to the Manager, Southwest Regional Fleet Transportation.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 8

PERSONAL PROTECTIVE EQUIPMENT	<u>PARAGRAPH</u>	<u>PAGE</u>
PROTECTIVE CLOTHING AND EQUIPMENT	8000	8-2
SIGHT CONSERVATION	8001	8-2
FOOT PROTECTION	8002	8-3
HEARING PROTECTION	8003	8-4
IDENTIFICATION OF NOISE HAZARD AREAS	8004	8-4
PROCUREMENT OF PERSONAL PROTECTIVE EQUIPMENT	8005	8-4
FIGURE 8-1 PERSONAL PROTECTIVE EQUIPMENT		8-5

CHAPTER 8

PERSONAL PROTECTIVE EQUIPMENT

8000. PROTECTIVE CLOTHING AND EQUIPMENT

1. Responsibilities. It is the responsibility of the supervisor to ensure that employees (civilian and military) who are engaged in hazardous occupations or procedures wear the proper safety clothing or equipment as required by Reference (g). Figure 8-1 is a guide to personal protective equipment required by vocation. Appropriate helmets and ballistic eye protection/goggles will be worn at all times by military personnel when riding in or on tactical vehicles, Utility ATVs, or heavy equipment. The following guidelines apply: a DOT approved motorcycle helmet will be used for motorcycles, mopeds, and Quad-runners; a Kevlar helmet will be worn in tactical vehicles; and a hard hat or Kevlar helmet will be worn when operating construction/heavy equipment. Civilians and contractors are required to wear appropriate PPE when in or on tactical vehicles, ATVs, heavy equipment, motorcycles, or mopeds.

2. Procurement. It is the responsibility of the commanding officers/directors/ section heads to procure adequate safety clothing and safety equipment, including safety shoes, for the protection of their personnel who are engaged in hazardous occupations or operations.

3. New Procedures/Operation. The table of protective equipment shown in figure 8-1 is not all-inclusive. Organizations requiring different types of protective clothing or equipment may contact the Installation Safety Office for advice and/or recommendation.

8001. SIGHT CONSERVATION

1. Purpose. The purpose of Sight Conservation Program per reference (b) is to ensure all employees are adequately protected from injuries to the eyes while employed at MCAGCC.

2. Scope.

MAGTFTC, MCAGCC SOP FOR SAFETY

a. The Sight Conservation Program is mandatory for civilian employees and industrially employed military personnel who are employed or engaged in eye-hazardous operations. Any employee whose vision is fully impaired in one eye is considered to be engaged in eye-hazardous work, regardless of his occupation, and will wear protective eye-wear at all times.

b. The personal protective equipment chart, Figure 8-1, shows the trades and operations that are associated with a high incidence of eye injuries, as well as trades and operations where safety eye-wear is mandatory.

3. Determination of Eye Hazards

a. During the normal course of safety inspections by safety section personnel, buildings, shops, processes, or procedures that are suspected of being eye hazardous areas will be recorded.

b. The Safety Manager will evaluate such areas in company with the Unit Safety Officer and/or supervisor for a final determination. All eye hazardous areas will be marked per NAVFAC P-308, Color for Naval Shore Activities. (NOTAL)

4. Eligibility for Prescription Eyewear. Prescription safety glasses will be furnished to all civilian employees who work in eye hazardous areas or have loss of vision in one eye. Both appropriated and non-appropriated fund sections will budget for their employees. Military personnel will be handled through Naval Hospital channels.

5. Procedure for Obtaining Safety Prescription Eyewear. Commanding officers/ directors/section heads that have civilian employees who require prescription safety glasses and meet the criteria in paragraph 8001 will complete the following actions:

a. Civilian personnel are responsible for obtaining an eye refraction examination and securing an accompanying prescription for safety glasses.

b. A blank UNICOR Federal Prison Industries, Inc. form shall be completed by the examining optometrist. This form is available from Installation Safety Office.

c. Unit will fund and initiate purchase requests through appropriate sources.

MAGTFTC, MCAGCC SOP FOR SAFETY

6. Procedure for Obtaining Non-Prescription Safety Eyewear

a. Civilian employees who do not require prescription eyewear and work in designated eye-hazardous areas will be issued nonprescription safety eyewear. Nonprescription (Plano) eyewear can be purchased by the units from government or commercial sources.

b. Military personnel who occasionally work in eye-hazardous occupations/areas will be furnished face shields, safety goggles, or safety glasses by their own organizations.

c. All protective eyewear, prescription or Plano, shall comply with ANSI Z87.

8002. FOOT PROTECTION

1. General. Military and civilian personnel will wear foot protection engaged in foot hazardous operations for the purpose of preventing foot injuries.

2. Applicability. Figure 8-1 sets forth the operations, trades and/or processes considered to be foot hazardous, and where mandatory foot protection is required.

3. Foot protection appropriate to the work situation will be provided at government expense. Toe guards are no longer acceptable substitutes for the issuance of permanent safety shoes.

4. All personnel assigned to MAGTFTC - MCAGCC requiring safety shoes will place their orders through their respective work centers or military supply channels as appropriate. Work centers, or military supply facilities in the case of military personnel, will be responsible for sizing, ordering, receiving and ensuring proper fit of safety shoes. Funding for safety shoes is the responsibility of the employing facility or military organization.

8003. HEARING PROTECTION

1. GENERAL. Exposure to potentially harmful noise is one of the most significant occupational health hazards faced by military personnel. Repeated exposure of unprotected personnel to

MAGTFTC, MCAGCC SOP FOR SAFETY

hazardous noise that may be produced by aircraft, weapons, vehicles, industrial, and recreational activities may cause permanent damage to hearing and can also cause other effects harmful to health, job performance, and communication.

2. Noise levels routinely above 84 decibels (dB) are regarded as potentially harmful to human hearing. Continuous and intermittent noise (such as that produced by jet and propeller-driven aircraft, engines, and industrial activities) lie within the 80 to 130 dB range. Blast and impulse noises (such as gunfire and rockets) may measure 150 to 160 dB.

8004. IDENTIFICATION OF NOISE HAZARD AREAS

1. Qualified personnel from the Installation Safety Office, Naval Hospital or Preventive Medicine Section shall conduct noise level surveys to determine where noise hazards exist per reference (j). Results of these surveys will be provided to the Naval Hospital Industrial Hygiene Officer.

2. Work environments found to have noise levels of 84 dBA or greater should be studied to determine the potential hazard. Engineering control feasibility studies shall be initiated in those areas where personnel, even though protected by hearing protective devices, are exposed to continuous noise levels of 80 dBA for four hours or more. Additional detailed studies shall be conducted under the supervision of an industrial hygienist.

3. Impact or impulse noise, such as gunfire cannot be accurately evaluated with a sound level meter. In this respect, all personnel exposed to gunfire or artillery fire under any circumstances, shall wear ear protection devices, regardless of the length of exposure or technical/engineering controls in effect.

4. Work areas or equipment which produce sound pressure levels of 84 dBA or greater shall be appropriately labeled. NAVMED 6260/2, Hazardous Noise Warning Decal, 8" x 8-1/2" (NSN 085-00-212-608), and the NAVMED 6260/2A, Hazardous Noise Warning labels, 1" x 1-1/2" (NSN 085-00-212-6020) (for labeling small equipment and hand tools), are the approved decals and labels for appropriately marking noise hazardous areas or equipment. Exteriors of military combatant equipment are excluded from this labeling requirement.

MAGTFTC, MCAGCC SOP FOR SAFETY

5. Hearing protection devices shall be worn by all personnel when they must enter or work in an area posted as a noise hazard area.

8005. PROCUREMENT OF PERSONAL PROTECTIVE EQUIPMENT. All requisitions for personal protective equipment (PPE), regardless of source or intended use, must be coordinated through the Installation Safety Office to ensure adequacy and appropriateness for the intended application.

Hazardous Trade and/or Occupation	Footwear	Head-wear	Eye-wear	Other
Asphalt/Cement Worker	X	X-1 or 2	A-7 or 8	A-5
Automotive Mechanic	X	A-1 or 2	A-7, 8, 11	
Body & Fender Mechanic (Auto	X	A-1 or 2	A-7, 8, 11	
Meat Cutter	X			A-5 (Mesh)
Carpenter	X	X-1 or 2	X-7 or 11	
Cement Finisher	X	A-1		
Crater and Packer	X	A-8		
Crane Hookman	X	X-1 or 2	X-7 or 11	A-5
Diesel Equipment Mech	X	A-1 or 2	A-7, 8, 11	
Electrician	X	A-1, 2 (Elec)	A-7, 12	
Electrician Lineman	X	X-1 or 2	A-7, 12	A-5
Firefighter	X	A-15	A-12, X-11	A-15
Heating Plant Operator	X	A-1 or 2	A-7, 8	
Heavy Duty Equipment	X	A-1 or 2	A-7, 8, 11	
High Lift Truck or Fork-Lift Operator	X	A-1 or 2		
Joiner			X-7, 11	
Laser Maintenance			A-7	
Locksmith	X		A-7	
Laborer (All)	X	A-1 or 2	A-7	
Machinist	X	X	X-7, 8, 8,	
Ordnance Equipment Mech	X	A-1 or 2	A-7, 8, 8,	
Automotive Painter				A-4
Pest Control Equipment Operator	X	A-1 or 2	A-8, 8	A
Pipefitter and/or	X	A-1 or 2	A-7	A
Refrigeration and Air Conditioning Mechanic	X	A-1 or 2		A-8, 8

Rigger	X	X-1	X-7, 11	A-5
Sandblaster	X	X-1 or 14	X-7	A-4, 5
Sheet Metal Worker	X	A-1 or 2	X-7, 11	A
Track Laborer	X	X-1	X-7, 11	A
Truck Driver	X	A-1		

Figure 8-1. Personal Protective Equipment

Hazardous Trade and/or Occupation	Footwear	Headwear	Eye-wear	Other
Heavy Warehouseman	X			
Welder	X	X-3	X-13	A-5, 13,
Inspectors	X	A	A	A
Power Sawing	X		A-7, 8	
Nailing			A-7, 8	
Strapping and Strap Cutting			A-8	
Chemical Handling	A		A-8, 12	A
Packing and Preservation	X	A	A-7	
Grinding and Buffing	X	X	X-7, 8	
Degreasing			A-8	
Paint Chipping and/or Scraping			A-8	
Steam Cleaning	X		A-8, 12	
Brazing, Cutting, and Burning	X	X-3	X-8	X-5, 8, 13, 14
Reproduction			A-7	A-
Riveting			X-7	A-5
Working with Fiberglass or Other Fibrous Material			X-12 (Dust Goggles)	X-4, 5
Batteries (Handling)			X-8	X-5, 6, 8
HazMat/HazWaste Handler	A		A-8, 8, 12	A-4 5, 16

Figure 8-1. Personal Protective Equipment

MAGTFTC, MCAGCC SOP FOR SAFETY

NOTE: Personnel employed in occupations not listed, but who work in near proximity to one or more of those listed, will be required to wear adequate and appropriate protection as determined by supervisors and/or the Safety Manager.

LEGEND:

X - Must wear protective equipment at all times while engaged in occupation or operation.

A - Where hazards exist and as appropriate.

1. Safety Hat
2. Bump Cap
3. Welders Protective Cap
4. Respirator (plastic spectacle, goggle, etc.)
5. Gloves (Protective)
6. Apron (Protective)
7. ANSI Z87 approved spectacles with
8. Chemical Splash Goggles (Unvented Clothing
9. Spectacle Goggles, Type A, Filtered lens
10. Face Shield
11. Corrective Safety Glasses
12. Other eye protective equipment
13. Welders Helmet
14. Welders Protective Clothing side shields or Chipper Goggles
15. Fire Fighters PPE and
16. Other PPE as authorized in T/O

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 9

LOCKOUT/TAGOUT ENERGY CONTROL PROGRAM

	<u>PARAGRAPH</u>	<u>PAGE</u>
PURPOSE	9001	9-2
POLICY	9002	9-2
SCOPE	9003	9-2
APPLICATION	9004	9-3
DEFINITIONS	9005	9-3
GENERAL	9006	9-5
RESPONSIBILITIES	9007	9-5
DEVICES USED TO IMPLEMENT THE LOCKOUT/TAGOUT PROGRAM	9008	9-7
SPECIFIC LOCKOUT/TAGOUT WRITTEN PROCEDURE	9009	9-7
PERFORMING THE LOCKOUT/TAGOUT PROCEDURE	9010	9-8
TESTING OR POSITIONING OF MACHINES EQUIPMENT OR COMPONENTS THEREOF	9011	9-9
RESTORING MACHINES OR EQUIPMENT TO NORMAL PRODUCTION OPERATIONS	9012	9-9
PROCEDURE INVOLVING MORE THAN ONE PERSON	9013	9-10
REMOVAL OF LOCKOUT/TAGOUT DEVICES BY OTHER THAN THE AUTHORIZED EMPLOYEE	9014	9-10
LOCKOUT/TAGOUT REQUIREMENTS FOR CONTRACTORS AND DOD PERSONNEL FROM OUTSIDE ACTIVITIES	9015	9-10
SHIFT OR PERSONNEL CHANGES	9016	9-11

MAGTFTC, MCAGCC SOP FOR SAFETY

PERIODIC EVALUATION	9017	9-11
TRAINING	9018	9-11
ELECTRICAL LOCKOUT/TAGOUT	9019	9-12
MISHAPS RELATED TO LOCKOUT/TAGOUT	9020	9-12

CHAPTER 9

LOCKOUT/TAGOUT ENERGY CONTROL PROGRAM

9001. PURPOSE. The purpose of the Lockout/Tag out Program is to ensure that before any MCAGCC military or civilian personnel performs any servicing or maintenance on machinery or equipment where unexpected energizing, start-up or release of any type of energy (electricity, steam, hydraulic, pneumatic, gravity, etc.) could occur and cause injury, the machinery or equipment is rendered safe to work on by being locked or tagged out.

9002. POLICY. All machinery/equipment shall be locked out or tagged out to prevent accidental or inadvertent operation when such operation may cause injury to personnel performing maintenance, servicing, repairing, and /or modifications to machinery/equipment. This program complies with Title 29 Code of Federal Regulations, Part 1910.

9003. SCOPE. This manual covers the servicing and maintenance of machines and equipment in which the "unexpected" energizing or start-up of machines or equipment, or release of stored energy could cause injury to personnel or equipment damage. It establishes standard performance requirements to control such hazardous energy. This program applies to all MCAGCC commands. This program does not apply to:

1. Work on cord and plug-connected electric equipment for which exposure to the hazards of unexpected energizing or start-up of the equipment is controlled by the unplugging of the equipment from the energy source and by the plug being under the exclusive control of the employee performing the servicing or maintenance.
2. Hot tap operations involving transmission and distribution systems for substances such as gas, steam, water or petroleum products when they are performed on pressurized pipe lines provided it can be demonstrated that:
 - a. Continuity of service is essential.
 - b. Shutdown of system is impractical.

MAGTFTC, MCAGCC SOP FOR SAFETY

c. Documented procedures are followed, and special equipment is used which will provide proven effective protection for employees. In these instances, use industry standards published by the American Petroleum Institute and other trade organizations to develop these specific work procedures.

3. Installations under the exclusive control of electric utilities for the purpose of power generation, transmission, and distribution, including related equipment for communications or metering.

4. Exposure to electrical hazards from work on, near or with conductors or equipment in electrical utilization installations, which is covered by 29 CFR 1910, Subpart S. For these particular industries use the appropriate OSHA standard to guide work practices.

9004. APPLICATION. Normal production operations are not covered by this chapter. Servicing or maintenance which takes place during normal production/emergency operations are covered on if:

1. An employee is required to remove or bypass a guard or other safety device.

2. An employee is required to place any part of his or her body into an area on a machine or piece of equipment where work is actually performed upon the material being processed (point of operation) or where an associated danger zone exists during a machine or equipment operating cycle.

NOTE: Minor tool changes, adjustments and other minor servicing activities which take place during normal production operations are not covered by this chapter if they are routine, repetitive and integral to the use of the equipment for production, provided the work is performed using measures which provide effective protection.

9005. DEFINITIONS

1. Affected Employee. An employee whose job requirement includes operating or using a machine or equipment which servicing or maintenance is being performed under lockout or maintenance is being performed.

2. Authorized Employee. An authorized employee is one who performs a lockout or tag out procedure on a machine or piece of equipment to perform service or maintenance on that machine or equipment.

MAGTFTC, MCAGCC SOP FOR SAFETY

An authorized employee and an affected employee may be the same person when the affected employee's duties also include performing maintenance or service on a machine or equipment, which must be locked out or a tag out system implemented.

3. Capable of being Locked Out. An energy isolating device is capable of being locked out, either designed with a hasp or other attachment or integral part to which, or through which, a lock can be affixed, or if it has a locking mechanism built into it. Other energy isolating devices are also capable of being locked out, if lockout can be achieved without the need to dismantle rebuild or replace the energy isolating device or permanently alter its energy control capability.

4. Energized. Connected to an energy source or containing residual or stored energy.

5. Energy Isolating Device. A mechanical device that physically prevents the transmission or release of energy including but not limited to a manually-operated electrical circuit breaker, disconnect switch, manually operated switch by which the conductors or a circuit can be disconnected from all ungrounded supply conductors and no pole can be operated independently, a slide gate, a slip blind, line valve, line block, and any similar device used to block or isolate energy. The item does not include a push button, selector switch, or other control circuit type devices.

6. Energy Source. Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy.

7. Hot Tap. A procedure used in repair, maintenance, and servicing activities which involves welding on a piece of equipment (pipelines, vessels or tanks) under pressure, in order to install connections of appurtenances. It is commonly used to replace or add sections of pipeline without the interruption of service for air, gas, steam, and petrochemical distribution systems.

8. Lockout. The placement of a lock-out device on an energy isolating device per an established procedure, ensuring that the energy isolating service and the equipment being controlled cannot be operated until the lock-out device is removed.

MAGTFTC, MCAGCC SOP FOR SAFETY

9. Lockout Device. A device that uses a positive means such as a lock, key or combination type, to hold an energy isolating device in the safe position and preventing energizing a machine or equipment.

10. Lockout/Tag out Log. A control document to administer the lockout/tag out procedures. These logs are the records of authorization for each lockout/tag out action on systems or equipment.

11. Lockout/Tag out Coordinator. One or more individuals trained and designated in writing by the Commanding Officer, Director or Head to control the lockout/tag out program in their area of cognizance. A Lockout/Tag out Coordinator may be an authorized employee when that employee's duties include performing servicing or maintenance covered under this chapter.

12. Normal Production Operations. The use of a machine or equipment to perform its intended production function.

13. Potential Energy. A function of height of an object above some datum plane. This datum plane is usually considered to be where that object would come to rest if the restraints holding the object were released, such as where the upper die in a punch press is positioned if the restraining device holding the upper die in place was to be removed the potential energy of the upper die would be converted into kinetic energy resulting in the upper die being propelled downward, coming to rest on the lower die. This motion can cause a crushing, cutting, lacerating, amputating, or fracture injury to an employee's arm, hand, or some other part of the body, which occupies the space between the dies.

14. Residual Energy. The presence of springs, under tension or compression or by the presence of liquids or gases under pressure (either above or below atmospheric pressure).

15. Service and/or Maintenance. Workplace activities such as construction, installation, setting up, adjusting, inspecting, modifying, maintaining and/or servicing machines or equipment. Includes lubrication, cleaning, or un-jamming of machinery or equipment and making adjustments or tool changes, where the employee may be exposed to "unexpected" start-up of the equipment or release or hazardous energy.

16. Setting Up. Any work performed to prepare a machine or equipment to perform its normal production operation.

MAGTFTC, MCAGCC SOP FOR SAFETY

17. Tag out. The placement of a tag out device on an energy isolating device, per an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tag out device is removed.

18. Tag out Device. A prominent warning device, such as a tag and a means of attachment which can be securely fastened to an energy isolating device per an established procedure to indicate that the energy isolating device and the equipment being controlled may not be operated until the tag out device is removed.

9006. GENERAL. All equipment and machinery shall be locked out or tagged out to protect against accidental or inadvertent operation during any servicing or maintenance activity. Anyone operating or attempting to operate any switch valve or other energy isolating device that is locked or tagged out may be subject to disciplinary action.

1. OSHA has promulgated two standards that require lockout/tag out of machinery and equipment. They are:

a. Control of Hazardous Energy (lockout/tag out) - 29 CFR 1910.147

b. Lockout/tag out of Electrical Safe Work Practice Standard - 29 CFR 1910.333

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

3. When a tag out device is used on an energy-isolating device which is not capable of being locked out, the tag out device shall be attached at the same location that the lockout device would have been attached and shall provide a level of safety equivalent to that obtained by using a lockout program. Consider the use of additional means to provide adequate protection such as removing an isolating circuit element, blocking a control switch, opening an extra disconnecting device or the removal of a valve handle to reduce the likelihood of inadvertent energizing.

4. Whenever major replacement, repair, renovation or modification of machines or equipment is performed, and whenever new machines or equipment are installed, contracting/purchasing agents and design engineers shall ensure that energy isolating devices are provided which are designed to accept a lockout device.

MAGTFTC, MCAGCC SOP FOR SAFETY

9007. RESPONSIBILITIES. Any employee who could be exposed to hazardous energy sources shall be instructed in the safety significance of the lockout or tag out procedure. Employees authorized to perform lockout or tag out shall receive training commensurate with their responsibilities and per OSHA requirements. Each new or transferred employee whose work operations are or may be affected shall be instructed in the purpose and use of lockout/tag out procedure. Follow lockout/tag out system procedure at all times.

1. Installation Safety Office shall:

a. Provide or coordinate initial and annual lockout/tag-out training.

b. Ensure an annual evaluation of the lock-out/tag-out program is conducted.

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

d. Designate in writing a Lockout/Tag out Control Program Manager.

2. Directors, Commanding Officers and Department Heads.
Directors, Commanding Officers and department heads shall:

a. Ensure formal training is provided to all personnel who could be exposed to hazardous energy sources in the purpose and function of the lockout/tag out program. Lockout/Tag out Coordinators and authorized employees must possess the knowledge and skills necessary for the safe application, use and removal of the lockout/tag out program controls. Affected employees must understand the purpose, function and restrictions of the lockout/tag out program. Maintain certification containing each employee's name and date of training to ensure training has been accomplished and is being kept up to date.

b. Ensure that internal monthly audits (more often if deemed necessary) of the Lockout/Tag out Log are performed to ensure compliance with this manual. Correct discrepancies immediately.

c. Evaluate the Lockout/Tag out program for their area of cognizance annually, using the Annual Evaluation Report and forward a copy to Installation Safety Office. Use Figure 9-1 for this purpose.

MAGTFTC, MCAGCC SOP FOR SAFETY

d. Hold supervisors and individual employees accountable for any failure to comply with the lockout/tag out control program, and/or overriding or removing any lockout/tag out device without authorization.

e. Designate in writing a Lockout/Tag out Coordinator who is delegated the responsibility and authority to control and administer the lockout/tag out program for their area of cognizance.

3. Lockout/Tag out Coordinators. Lockout/Tag out Coordinators are responsible for administering the program within their respective organizations.

a. Be thoroughly familiar with this chapter.

b. Enforce Lockout/Tag out Procedure compliance and ensure that an ample supply of standardized locks and tags are available. Each organization is responsible to supply unit lockout/tag out devices.

c. Maintain the Lockout/Tag out Log, figure 9-3, in accordance with this manual. Control the issue of lockout and tag out devices and ensure a particular locking device can be traced to a specific employee.

4. Authorized Employees. Authorized employees shall:

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

b. Inform the Lockout/Tag out coordinator of any hazardous situations which may be harmful to personnel or equipment, as it pertains to lockout/tag out procedures.

5. Affected Employees. Affected employees shall comply with all requirements of the Lockout/Tag out program.

9008. DEVICES USED TO IMPLEMENT THE LOCKOUT/TAGOUT PROGRAM

1. Lockout Devices. Use padlocks as the primary lockout device. Padlocks shall be red in color, singularly identifiable (not used for other purposes), capable of withstanding the environment to which exposed, and shall bear an individual serial number and sequence number, for example, WC69-001. The next lock would be WC69-002 and so on.

MAGTFTC, MCAGCC SOP FOR SAFETY

a. Examples of some lockout devices include but are not limited to:

(1) Keyed type padlocks. No two locks shall be keyed the same. The Lockout/Tag out Coordinator until placed into use will maintain locks and keys.

(2). Combination type padlocks are not authorized for use.

(3). Blank flanges.

(4). Valve lockout covers, chains, and metal cables.

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

3. Tag out Device. A tag is used to prohibit the operation of an energy-isolating device and the equipment being controlled which could jeopardize the safety of employees or endanger the equipment. Equipment will not be operated, worked on or removed when tagged out. An example of a tag is in Appendix J. In situations where equipment must be worked on and is incapable of being locked out, the equipment shall be tagged out using this tag per paragraph 9109.

a. The tag and its means of attachment shall be strong enough to prevent inadvertent or accidental removal. Attachment devices shall be non-reusable, attachable by hand (not tools required), self locking, and non releasable with a minimum unlocking strength of 50 pounds.

9009. SPECIFIC LOGKOUT/TAGOUT WRITTEN PROCEDURE. This procedure establishes the minimum requirements for the lockout or tag out of energy isolating devices. NOTE: Specific SOP'S to control hazardous energy sources must be developed at the shop level for each piece of equipment or machinery before maintenance or servicing is performed. Machines and equipment shall be evaluated using Appendix H, Energy Source Determination Checklist.

1. Expectations. Written procedures for a particular machine or equipment need not be developed only when all of the following elements exist.

MAGTFTC, MCAGCC SOP FOR SAFETY

- a. The Machine has no potential for stored or residual energy or the re-accumulation of stored energy after shutdown, which could endanger employees.
- b. The Machine or equipment has a single energy source, which can be readily identified and isolated.
- c. The isolation and locking or tagging out of that energy source will completely de-energize and deactivate the machine or equipment.
- d. The machine or equipment is isolated from that energy source and locked or tagged out during servicing or maintenance.
- e. A single device will achieve a locked or tagged out condition.
- f. The lockout/tag out device is under the exclusive control of the authorized employee performing the service or maintenance.
- g. The servicing or maintenance does not create a hazard for other employees.
- h. In utilizing this exception, there have been no accidents involving the unexpected activation or reenergizing of the machine or equipment or during servicing or maintenance.

9010. PERFORMING THE LOCKOUT/TAGOUT PROCEDURE

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

2. Lock-out or Tag-out System Procedure

a. Notify all affected employees and their supervisor that a lockout or tag out is going to be utilized and the reason therefore. The authorized employee shall know the type and magnitude of energy that the machine equipment utilizes and shall understand all inherent hazards.

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

MAGTFTC, MCAGCC SOP FOR SAFETY

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

3. Lockout/Tag out Device Application

a. A Lock or tag shall be affixed to each energy "isolating device" by the authorized employee.

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

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

d. Tags that cannot be affixed directly to the energy isolating device shall be located as close as possible to the device, in a position that will be immediately obvious to anyone attempting to operate the device.

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

f. Prior to starting work, the authorized employee shall verify that isolation and reenergizing have been accomplished. After ensuring that no personnel are exposed, operate the normal operating controls to make certain the equipment will not operate. (Do not activate controls, which cannot be returned to the safe, neutral or off position without the application of power to the equipment (e.g., dog and clutch assemblies).

CAUTION: RETURN OPERATING CONTROL (S) TO THE "SAFE" OR "OFF" POSITION AFTER THE VERIFICATION TEST.

g. Enter all pertinent data into the Lockout/Tag out Log, Figure 9-3

9011. TESTING OR POSITIONING OF MACHINES, EQUIPMENT, OR COMPONENTS THEREOF. Situations in which lockout devices must be temporarily removed from the energy isolating device and the machine or equipment energized to test or position the machine or equipment, the following sequence of action shall be followed:

MAGTFTC, MCAGCC SOP FOR SAFETY

1. Clear the machine of tools and materials. Ensure all required components are operationally intact.
2. Ensure all affected employees have been safely positioned or removed from the area.
3. Lockout/tag out devices can then be removed by the authorized employee who applied the device, except as otherwise authorized by paragraph 9114 of this manual.
4. Energize and proceed with testing, positioning, etc. as required.
5. De-energize all systems and establish lockout/tag out measures in accordance with the requirements set forth in this order before continuing work on equipment.

9012. RESTORING MACHINES OR EQUIPMENT TO NORMAL PRODUCTION OPERATIONS

1. After servicing and/or maintenance is completed and equipment is ready for normal production operations, the authorized employee shall check the area around the machines or equipment to ensure that no one is exposed.
2. After tools have been removed from the machine or equipment, guards have been reinstalled, employees are safely repositioned or removed, and operating controls are verified to be in the safe or off position, remove all lockout/tag out devices to restore energy to the machine or equipment.
3. Complete applicable portions of the line item in the Lockout/Tag out Log, Figure 9-3.

9013. PROCEDURE INVOLVING MORE THAN ONE PERSON. In the preceding steps, if more than one individual is required to service a piece of equipment, each shall place his/her own assigned lockout or tag out device on the energy isolating device(s). If necessary, an energy isolating device hasp may be used. If lock-out is used, a single gang hasp may be used to lock-out the machine or equipment, each employee will then use his/her own assigned lock to secure the gang hasp. As each person finishes his or her portion of the work, that person will remove his/her lock from the gang hasp. Only the last employee to remove his/her lock/tag may reenergize the machine/equipment. Each person applying a lock/tag shall make an entry into the Lockout/Tag out Log when applying the device and clear their device form the Log when their portion of the work is completed.

MAGTFTC, MCAGCC SOP FOR SAFETY

9014. REMOVAL OF LOCKOUT/TAGOUT DEVICES BY OTHER THAN THE AUTHORIZED EMPLOYEE. Lockout/Tag out devices shall be removed from each energy isolating device by the employee who applied it, EXCEPT, lockout/tag out devices may be removed by the Lockout/Tag out Coordinator or an authorized/Competent person appointed by the Lockout/Tag out Coordinator if the authorized employee who applied it is not available, and:

1. It is verified that the authorized employee who applied the device is not at the facility.
2. All reasonable efforts were made to contact the authorized employee to inform him/her that the lockout or tag out device has been removed.
3. The authorized employee has this knowledge before he/she resumes work at that facility.
4. In such cases, the Lockout/Tag out Coordinator or the authorized/competent person appointed shall cut the lock or tag. An appropriate entry shall be made in the Lockout/Tag out Log to indicate the name of the person who notifies the authorized employee and the time and date the lockout tag was removed.

9015. LOCKOUT/TAGOUT REQUIREMENTS FOR CONTRACTORS AND DOD PERSONNEL FROM OUTSIDE ACTIVITIES

1. Contractor performing servicing or maintenance on MCAGCC equipment shall comply with 29 CFR 1910.146 and 29 CFR 1910.333. The Resident Officer in Charge of Construction (ROICC) or other responsible contracting agent is responsible to ensure all outside contractors are informed of the elements of this program and to obtain information regarding the contractor's lockout/tag out program.

a. The contract shall require the contractor to inform cognizant personnel in the affected work site of the contractor's lockout/tag out program.

2. Personnel from other DoD activities performing servicing or maintenance on MCAGCC shall comply with the respective activity's lockout/tag out program (e.g., Public Works Center personnel shall comply with the requirements of PWCPEARLINST 5100.20). These instructions must meet the requirements of 29 CFR 1910.147 and 29 CFR 1910.333.

a. The cognizant management officials of the outside activity and the affected work site shall inform each other of their respective lockout/tag out Programs.

MAGTFTC, MCAGCC SOP FOR SAFETY

3. Commanding Officers/department heads will ensure their cognizant personnel understand and comply with restrictions and prohibitions of the outside activities lockout/tag out program.

9016. SHIFT OR PERSONNEL CHANGES. In case of shift or personnel changes, the Lockout/Tag out Coordinator will brief their replacement and shall ensure the orderly transfer of lockout/tag out devices between off-going and on-coming employees to minimize exposure to hazards from the unexpected energizing or start-up of the machine or equipment, or release of stored energy. Authorized personnel assuming control of locked out equipment shall be fully briefed on the scope and stage of the work by those personnel being relieved.

9017. PERIODIC EVALUATION. The Installation Safety Office Lockout/Tag out Control Program Manager shall evaluate the effectiveness of the entire program at least annually. Any deviation or inadequacies shall be documented and corrected.

9018. TRAINING

1. Training shall be provided to all authorized, affected and other personnel as required by 29 CFR 1910.147 and 29 CFR 1910.33, or other consensus standards. Only trained personnel can put effect Lockout/Tag out.

2. Qualified instructors will conduct training and prepare a record certifying that the employee training has been accomplished. Retraining shall be conducted whenever there is:

a. A change in affected/authorized employee job assignments.

b. A change in job assignments or a change in machines, equipment or process that presents a new hazard.

c. When there is a change in the energy control procedure (s).

d. Additional retraining shall be conducted whenever the periodic inspection reveals, there is a reason to believe, that there are deviations from or inadequacies in employee knowledge or use of the energy control procedures.

MAGTFTC, MCAGCC SOP FOR SAFETY

9019. ELECTRICAL LOCKOUT/TAG OUT (29 CFR 1910.333)

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

2. Locks can be placed without a tag only under the following circumstances:

- a. Only one circuit or piece of equipment is deenergized.
- b. The lockout period does not extend beyond the work shift.
- c. Employees exposed to the hazards associated with reenergizing the circuit or equipment are familiar with this procedure.

3. A qualified person shall use test equipment to test the circuit elements and electrical parts of equipment to which employees will be exposed and shall verify that the circuit elements and equipment parts are de-energized. The test shall also determine if any energized condition exists as a result of inadvertently induced voltage or unrelated voltage back feed even though specific parts of the circuit have been de-energized, and the test equipment shall be checked for proper operation immediately before and after this test.

9020. MISHAPS RELATED TO LOCKOUT/TAGOUT. Supervisors are responsible to fully investigate mishaps, and report the cause of such mishaps to the Installation Safety Office. If the mishap involved the control of hazardous energy with a single lockout source, a specific procedure will be written and included in a specific SOP before work is continued. If the mishap involved a specific procedure for a piece of equipment, the lockout/tag out SOP will be re-evaluated and modified (if necessary) prior to authorizing work to continue.

MAGTFTC, MCAGCC SOP FOR SAFETY

LOCKOUT/TAGOUT PROGRAM EVALUATION
NAVMC 11402, Rev 7-98

Unit/Department evaluated:

Date(s) of evaluation:

Evaluation conducted by:

(Signature/Printed Name)

1. General policy has been reviewed: YES / NO (circle one)
Comments on general policy:

2. Following specific procedures were reviewed (list below):

3. Following specific procedures were modified (list below):

4. Following specific procedures were added (list below):

5. Review of the Occupational Injuries and Illnesses Log and
associated mishap reports was conducted: YES / NO (circle one)

6. Following injuries resulted from lockout/tag out related
mishaps:

Figure 9-1 NOTE: Conduct evaluation annually.

MAGTFTC, MCAGCC SOP FOR SAFETY

LOCKOUT/TAGOUT CHECKLIST
NAVMC 11403, Rev 7-98

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

NOTE: Required for all equipment, machinery, or processes that fail to meet exceptions of MAVMC 5100.1, Chapter 12, par. 12003.

Use this checklist to document procedures for lockout or tag out 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 energizing, start-up, or release of stored energy could injure personnel or damage equipment.

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

List types of operator controls:

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

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

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

C. Shutdown Procedure: List in order the steps necessary to shut down and de-energize the equipment.

NOTIFY ALL AFFECTED WORKERS WHEN IMPLEMENTING THIS PROCEDURE

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

NOTIFY ALL AFFECTED EMPLOYEES WHEN IMPLEMENTING THIS PROCEDURE

NOTES:

MAGTFTC, MCAGCC SOP FOR SAFETY

Figure 9-2
LOCKOUT/TAGOUT LOG
NAVMC 11404, Rev 7-98.

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

* Signature _____Shop/Unit_____

Figure 9-3

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 10

FALL PROTECTION PROGRAM	<u>PARAGRAPH</u>	<u>PAGE</u>
GENERAL	1000	10-2
POLICY	1001	10-2
SCOPE	1002	10-2
RESPONSIBILITIES	1003	10-2
PRINCIPLES OF FALL PROTECTION	1004	10-3
TRAINING	1005	10-4
WORK PLATFORMS	1006	10-5

CHAPTER 10

FALL PROTECTION PROGRAM

1000. GENERAL. Falls are a leading cause of traumatic occupational death among workers according to statistics from the Department of Labor. Additionally, an OSHA study of 99 fall-related fatalities suggests that virtually all of those deaths could have been prevented by use of guardrails, body harnesses, safety nets, floor opening covers, or other means that would reduce employee exposure to fall hazards.

1001. POLICY. This chapter establishes a fall protection program that implements requirements of 29 CFR 1910, General Industry, 29 CFR 1926, Construction and NAVMC Dir 5100.8

1002. SCOPE. This manual applies to all commands, directorates, and work centers aboard MCAGCC. Contractors working aboard MCAGCC will abide by 29 CFR parts 1926 and 1910.

1003. RESPONSIBILITIES

1. Commanding Officers/Directors/section heads:

- a. Comply with the policies and responsibilities of this chapter.
- b. Ensure safety officers and supervisors assess worksite hazards, review pertinent regulations and update organization SOPs regarding fall protection policies.
- c. Ensure personnel who are exposed to fall hazards receive appropriate training and fall protection equipment.

2. Deputy Director:

- a. Provide fall protection training material and instruction for supervisors and employees.
- b. Provide recommendations for appropriate fall protection.
- c. Stop any work operations that are not in compliance with appropriate standards.

MAGTFTC, MCAGCC SOP FOR SAFETY

3. Director, Facilities Management Division:

a. Evaluate structures and materials for suitable anchor points when fall protection systems are required to protect the safety of employees.

b. Ensure new projects are designed to alleviate the need for fall protections equipment when performing maintenance.

4. ROICC. The ROICC shall: Ensure that contractors performing work aboard MCAGCC are aware of Fall Protection standards and when applicable, require inclusion of a written fall protection PROGRAM within their statement of work.

5. Supervisors

a. Request assistance from the organization safety officer or Installation Safety Office when assessing potential fall hazards.

b. Provide employees with stable work platforms, scaffolds, or ladders.

c. Provide employees with appropriate fall protections equipment.

d. Require employees/subordinates to use provided fall protection equipment properly.

e. Inspect fall protection equipment before use and properly maintain per manufacturers recommendations. Remove for service any personal fall protection equipment that has been shock-loaded until inspected by the manufacturer or other competent persons.

f. Ensure appropriate barriers are in place below elevated work surfaces to protect personnel from falling objects and/or debris nets are used.

6. Employees

a. Comply with the requirements of reference (g).

b. Request supervisory assistance when assessing potential fall hazards.

c. Use fall protection techniques and equipment properly. When fall arrest systems are damaged or/has been shock-loaded report to supervisor immediately.

d. Report unsafe work conditions to supervisors.

1004. PRINCIPLES OF FALL PROTECTION

1. The type of work that may expose personnel to fall hazards is divided into two general categories by OSHA, with separate standards covering each type of work. The categories are construction and maintenance, as defined below:

a. Construction. All new construction, modification, or repairs to existing structures, as well as painting or repainting of structures fall under 29 CFR 1926.501-503

b. Maintenance. Maintenance and spot painting of structures falls under 29 CFR 1910 Subpart D.

2. Both standards use a potential fall of 6 feet or greater as the trigger point for the requirement to implement a fall protection PROGRAM. The standards also differentiate between low-slope roofs with a pitch less than or equal to 4 in 12 (vertical to horizontal), and steep roofs, with a pitch greater than 4 in 12. During the assessment of a fall hazard and design of fall protection system, it is important to note that low slope roofs and steep roofs require different types of fall protection measures, and that combinations of fall protection systems may be required to control specific hazards. Additionally, the design of a fall protection system may require the coordination of supervisors, safety professionals, and civil or mechanical engineers to maximize worker safety. Some widely used fall protection systems with partial listings of requirements are below. Consult the OSHA regulations for complete requirements and exceptions.

a. Guard Rail Systems. Can be temporary or fixed, but must be strong enough to withstand 200 lbs., Static force in any direction. The top edge must be 42 inches high (+3 inches) with mid rails, screen, parapet, or mesh positioned so there is no opening greater than 19 inches. The system may be rope, wire cable, metal railings etc. Use toe boards (4 inches high) or other more effective systems to protect employees from falling objects such as tools or materials.

b. Safety Net System. Mesh net extending a minimum of 8 feet from edge, installed as close as possible to the employee's working level and able to withstand a 400 lb. Weight dropped from the highest exposed working surface.

MAGTFTC, MCAGCC SOP FOR SAFETY

NOTE: Consult the pertinent 29 CFR for minimum net extension distances which can vary according to potential distance of fall.

c. Personal Fall Arrest System. Composed of a body harness, lanyard with shock absorbing device and self-locking connectors, and horizontal, vertical, or self retracting lifeline and/or anchor point. All components of the system must be rated at 5000 lbs. breaking strength minimum, and must be compatible for use together as a system. Anchorages for lifelines must be independent of any anchorages used for suspended platforms, scaffolding, etc. The personal fall arrest system cannot allow the worker free-fall distance to exceed 6 feet.

d. Covers. Covers for holes in floors, roofs, and other walking/working surfaces must be able to withstand twice the weight of the employee, equipment, and material that may be imposed on the cover at any time. The cover must be fastened to prevent slippage and must be marked "cover" or "hole" (except manhole Covers or steel grates).

e. Warning Line System. Rope, wire, or chain 34"-39" high placed inwards at least 6 feet from the edge, flagged every 6 feet with high visibility materials, supported by stanchions capable of withstanding a force of 16 lbs. without tipping. Can only be used on a low slope roof having a pitch of equal or less than 4 in 12 (vertical to horizontal)

f. Safety Monitoring System. A competent person may be designated as a safety monitor who acts as a warning system if an employee appears to be unaware of a fall hazard. The monitor must be on the same working surface, with no visual obstructions, and must be close enough to communicate orally with the employee. The monitor may not have any other duties, and this system can only be used on a roof having a slope less than or equal to 4 in 12 (vertical to horizontal).

1005. TRAINING

1. Fall protection training shall be provided to all personnel who may be exposed to fall hazards. The training shall enable each person to recognize the hazards of falling, as well as understand the procedures to be followed to minimize these hazards.

MAGTFTC, MCAGCC SOP FOR SAFETY

a. The training shall be conducted by a competent person shall include:

(1) Nature of fall hazards in work area.

(2) Correct procedures for erecting, disassembling, and inspecting the fall protection systems to be used.

(3) The use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems, controlled access zones, and other protection used.

(4) The role of each employee in the safety monitoring system used.

(5) Limitations on the use of mechanical equipment during performance of roof work on low-sloped roofs.

(6) The correct procedures for handling and storage of equipment and materials, and the erection of overhead protection.

a. Training shall be documented to include the class roster, date, name of the instructor, and kept on file.

b. Retraining will be conducted when changes to the workplace or the fall protection techniques render previous training ineffective.

1006. WORK PLATFORMS. Various types of work platforms are in use throughout MCAGCC. These include scaffolds, truck mounted man lifts, ladders, fork trucks, etc. Each type of platform has its own inherent hazards. Supervisors must research specific regulations for each type of platform in Title 29 Code of Federal Regulations, Part 1910, Title 29 Code of Federal Regulations, Part 1926, and/or contact the Installation Safety Office for assistance.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 11

HAZARD COMMUNICATION (HAZCOM) STANDARDS PROGRAM

	PARAGRAPH	PAGE
GENERAL	1100	11-2
DEFINITION	1101	11-2
LABELING AND MARKING	1102	11-2
PROCEDURES	1103	11-3
MATERIAL SAFETY DATA SHEETS	1104	11-3

FIGURES

11-1 SAMPLE DOD HAZARDOUS MATERIAL LABEL	11-4
11-2 FEDERAL SUPPLY CLASSES	11-6
11-3 IDENTIFICATION OF HAZARDOUS MATERIAL	11-7

CHAPTER 11

HAZARD COMMUNICATION (HAZCOM) STANDARDS PROGRAM

1100. GENERAL. The development of new chemical products and the introduction of new chemical processes make mandatory that precautionary measures be taken during the handling of toxic and dangerous chemicals. Hazardous chemicals and materials ordinarily thought to be safe may become hazardous under certain conditions. Therefore, it becomes imperative that all aspects of accident prevention designed to control and regulate the storage, handling and use of hazardous chemicals and materials be implemented to protect personnel.

1101. DEFINITION. Hazardous materials, as referred to in this manual, are defined as any materials that by virtue of their potentially dangerous nature require controls to assure adequate protection of life, health, and property. The definition for the purpose of this Manual excludes ammunition, weapons, explosives, explosive actuated devices, propellants, pyrotechnics, chemical and biological warfare materials, bulk fuels, and medical and pharmaceutical supplies.

1102. LABELING AND MARKING. The current editions of references (g) and (i) requires that specified labels and markings be applied to hazardous material by the supplier to each unit, intermediate and shipping container, unit loads, and individual components within kits and sets. Hazardous materials obtained through the supply system will be so marked and labeled. The manufacturer's label may meet this requirement.

NOTE: Vehicles transporting hazardous materials will be labeled in accordance with procedures outlined in the 49 CFR, part 172.

MAGTFTC, MCAGCC SOP FOR SAFETY

Availability of Labels, Numbers, and Letters. Labels are available through the supply system. Listed below are the National Stock Numbers for the DoD Hazardous Material Warning Label:

Item	NSN
DD 2521 (8.5" X 11")	0102-LF-012-0800
DD 2522 (4" X 7")	0102-LF-012-1100

Label Description. The Hazardous Chemical Warning label system is a means of communicating standardized hazard warning information to personnel when manufacturers' labels cannot be used. Label information shall be based on the information provided on the manufacturers' MSDS and label. The data elements of the DoD Hazardous Chemical Label are presented in Figure 11-1.

1103. PROCEDURES

1. Specified labels and marking must be applied to hazardous material by the supplier.
2. Hazardous materials obtained through the supply system will be marked and labeled. The Supply Officer of each activity shall be responsible for assuring that local purchases of hazardous material provide for labeling and marking.
3. Supervisory personnel shall be responsible for the proper labeling of all hazardous chemical containers and materials after receipt in their respective work areas.
4. All personnel shall complete the Department of Defense's Federal Hazard Communication Training Program as soon as practicable on a one-time basis. Contact Safety Manager, extension 6154 for Instructor availability.

1104. MATERIAL SAFETY DATA SHEETS (MSDS)

1. Chemical manufacturers and importers shall obtain or develop an MSDS for each hazardous chemical or material they produce or import. Employers shall have an MSDS for each hazardous chemical or material they use.

MAGTFTC, MCAGCC SOP FOR SAFETY

2. MSDS come in various forms, i.e., Department of Labor Form OSHA 20; Department of Defense Form 1811 or in the Department of Defense Hazardous Information System 6050 (microfiche) and CD-ROM format. The purpose of the data sheets is to provide information about the toxicity, first aid, disposal procedures, fire data, etc. that apply to hazardous material and make it available to the employee.

3. MSDS Forms are obtained from the same source of supply from which the material is obtained. Each supply source, whether military or civilian, must be able to provide the purchaser with a MSDS that applies to the material purchased.

4. In most cases, materials are currently in use that does not have an applicable MSDS at the using unit level. In this case, an inventory must be conducted and missing MSDS obtained. In some cases, research must be done by the using unit to pinpoint the NSN or chemical name of the material to assist the supply unit. Additional assistance can be obtained through the Installation Safety Office.

5. Supervisors will ensure MSDS information is readily available at all work centers storing, handling, or using hazardous chemicals and/or materials.

6. All personnel, subject to being exposed to hazardous chemicals and/or materials, must be briefed on all inherent hazards and precautions to be taken to prevent injury and/or illness.

7. The Naval Hospital Industrial Hygiene Officer (ext. 2001) may be contacted for information relating to work centers exposure level in reference to Permissible Exposure Levels (PELs) found on MSDS.

MAGTFTC, MCAGCC SOP FOR SAFETY

HAZARDOUS CHEMICAL WARNING LABEL					
1. CHEMICAL/COMMON NAME:					2. HAZARD CODE:
3. NSN/LSN:		4. PART NUMBER:			
5. ITEM NAME:					
6. HAZARDS (X all that apply)		(1) Acute (Immediate)			(2) Chronic
		NONE	SLIGHT	MODERATE	SEVERE
a. HEALTH					
b. CONTACT					
c. FIRE					
d.					
7. SPECIFIC HAZARDS AND PRECAUTIONS (Including Target Organ Effects):					
8. PROTECT (X all that apply)			a. EYES		b. SKIN
					c. RESPIRATORY
9. CONTACT:					
a. COMPANY NAME					
b. ADDRESS (Street, P.O. Box, City, State, Zip Code and Country):					
c. EMERGENCY TELEPHONE NUMBER (Include Area Code):					
10. PROCUREMENT YEAR FOR HAZARDOUS CHEMICAL:					

DD Form 2521 Figure 11-1. - Sample DOD Hazardous Material Label.

MAGTFTC, MCAGCC SOP FOR SAFETY

HAZARDOUS MATERIAL IDENTIFICATION AND CERTIFICATION GUIDE

1. GENERAL. Hazardous material identification data are required for all material that, by virtue of its potentially dangerous nature, requires controls to assure adequate safety to life and property. Hazardous materials are found in all Federal Supply Classes, and judgment must be exercised to determine which must be controlled.

FEDERAL SUPPLY CLASS CRITERIA: It is important to know if an item in a Federal Supply Class (FSC) composed predominantly of flammable or toxic material is actually not hazardous, or has merely not been identified. To assure positive and complete identification in these classes, a certified Material Safety Data Sheet is required for each item in the FSC as indicated in Table I. Identification and certification shall also be required for items that would ordinarily be catalogued under one of the classes in Table I, but are catalogued in another class because of their specific use or included as parts of another item or kit. Table II lists classes in which only items having hazardous characteristics need be identified and certified.

MAGTFTC, MCAGCC SOP FOR SAFETY

TABLE I

FEDERAL SUPPLY CLASSES IN WHICH ALL ITEMS MUST BE IDENTIFIED AND CERTIFIED

FEDERAL SUPPLY	TITLE
6810	Chemicals
6820	Dyes
6830	Gases; Compressed and Liquefied
6840	Pest Control Agents and Disinfectants
6850	Miscellaneous Chemical Specialties
7930	Cleaning and polishing Compounds and Preparations
8010	Paints, Dopes, Varnishes, and Related Products
8030	Preservative and Sealing Compounds
8040	Adhesives
Group 91	(Packaged Products Only)
9110	Fuels, Solid
9110	Liquids Propellants and Fuels, Petroleum Base
9115	Liquid Propellant Fuels and Oxidizers, Chemical
9140	Fuel Oils
9150	Oils and Greases: Cutting, Lubricating, and
9160	Miscellaneous Waxes, Oils and Fats

Figure 11-2. Identification of Hazardous Material.

MAGTFTC, MCAGCC SOP FOR SAFETY

TABLE II

FEDERAL SUPPLY CLASSES IN WHICH ONLY HAZARDOUS ITEMS NEED TO BE IDENTIFIED

FEDERAL SUPPLY	TITLE	HAZARDOUS ITEMS REQUIRING IDENTIFICATION
1170	Pyrotechnics	Warning Fuses, Fire Starter
1175	Demolition	Explosive Devices/Materials
2640	Tire rebuilding/repair materials	Only items containing Flammable/ Toxic Materials
3439	Welding and brazing supplies	Only hazardous items such as cleaners, flux, acid
3610	Printing and duplicating equipment	Flammable/Toxic lithographic solutions
5610	Mineral Construction materials, bulk	Cutback asphalts, deck/floor coatings/ sealers and flight deck compounds
5640	Wallboard, building paper and thermal insulation	Asbestos cloth
6115	Batteries, Primary	Lead-acid, mercury, and
6505	Drugs, biological, and official reagents	Hazardous Item
6750	Photographic Supplies	Chemicals, solvents, thinners, cements
6780	Photographic sets, kits,	(See FSC 6750)
7510	Office Supplies	Solvents, thinners, cleaning fluids, flammable inks,
8510	Perfumes, toilet preparations and powder	Pressurized containers with propellants
8520	Toilet soap, shaving preparations and dentifrices	(See FSC 8510)
8720	Fertilizers	Weed and pest control items
9920	Smoker's articles	Lighter fuel/matches

Figure 11-3. Identification of Hazardous Materials - Continued

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 12

CONFINED SPACE ENTRY PROGRAM

	<u>PARAGRAPH</u>	<u>PAGE</u>
PURPOSE	1200	12-2
BACKGROUND	1201	12-2
DEFINITIONS	1202	12-2
RESPONSIBILITY	1203	12-3
PROCEDURES	1204	12-6
FIGURES		
12-1 CONFINED SPACE ENTRY PERMIT		12-9
12-2 CONFINED SPACE PRE-ENTRY CHECKLIST		12-10

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 12

CONFINED SPACE ENTRY PROGRAM

1200. PURPOSE. To establish a Confined Space Entry Program for MAGTFTC, MCAGCC and to set forth specific instructions, policies and requirements for confined space entry services and procedures.

1201. BACKGROUND

1. Confined spaces are potentially dangerous. Needless deaths and injuries have occurred where workers were overcome by various hazards upon entering confined spaces. Numerous confined spaces can be found aboard MAGTFTC - MCAGCC. Examples of such spaces include storage tanks, boilers, fuel cells, sewers, underground utility vaults, tunnels, pits and manholes. A comprehensive confined space entry program will help protect all MAGTFTC - MCAGCC and tenant unit activities and personnel who perform or may be exposed to operations which require entry into, working in or adjacent to such spaces.

2. It is MAGTFTC - MCAGCC policy that all confined spaces shall be considered to contain the most unfavorable and unsafe condition and entry into or work in or adjacent to such spaces is prohibited until the space has been evaluated by a qualified person to establish appropriate safety precautions.

1202. DEFINITIONS

1. Confined Space Entry Program. Activity that includes all tests and procedures performed by qualified and designated personnel to eliminate the risk of fire, explosion, exposure to toxic substances, or asphyxiation associated with closed compartments or poorly ventilated spaces.

2. Confined Space. A space which by design has limited and restricted openings for entry and exit and a lack of natural ventilation which could contain or produce hazardous contaminants or oxygen deficiencies or enrichment. Confined spaces are not intended for normal continuous personnel occupancy. In non-maritime activities this includes spaces such as fuel storage tanks, process vessels, boilers, furnaces, sewers, utility tunnels, vaults and similar spaces.

MAGTFTC, MCAGCC SOP FOR SAFETY

3. Permit-required Confined Space. A space that meets the definition of a confined space and has one or more of the following characteristics:

a. Contains or has the potential to contain a hazardous atmosphere.

b. Contains a material that has the potential for engulfing an entrant.

c. Has an internal configuration that might cause an entrant to be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross section.

d. Contains any other recognized serious safety or health hazards.

4. Hot Work. Hot work for the purpose of confined space operation includes all flame heating, welding, torch cutting brazing, carbon arc gouging, or any work which produces heat of 400°F or more; or in the presence of flammables or flammable atmospheres, other ignition sources such as spark or arc producing tools or equipment, static discharges, friction, impact, open flames or embers, non explosion-proof lights, fixtures, motors, or equipment, etc.

5. Confined Space Program Manager (CSPM). A person trained, qualified, selected, and certified by the Commanding General and responsible for the administrative and technical aspects of the activity confined space entry program. The CSPM is authorized to make decisions as to when all necessary and effective precautionary measures have been taken to ensure that risk of fire, explosion, exposure to toxic substances, suffocation, and asphyxiation have been eliminated prior to entry of personnel into closed or poorly ventilated locations or commencement of Hot Work.

6. Assistant Confined Space Program Manager (ACSPM). The duty of the Assistant Confined Space Program Manager is to provide assistance to the CSPM. The specific duties of the ACSPM shall be the same as those of the CSPM except that such duties shall be performed under the technical supervision of the CSPM. The ACSPM shall meet the same requirements for certification as the CSPM and shall be equally qualified to perform confined space entry services.

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7. Confined Space Safety Technician (CSST). A principal person trained, qualified, selected and certified by the CSPM and responsible for the administrative and technical aspects of his/her section/unit Confined Space Entry Program. The CSPM or ACSPM may delegate duties to the CSST except when specific instructions to the contrary are given.

8. Confined Space Entry Permit. A permit issued and signed by the CSPM or ACSPM which describes the environmental conditions of a space. The certificate identifies the space, lists safety notations, shows the date/time the space was inspected and, in the case of a "SAFE" notation, the date/time the certification becomes invalid (eight hours maximum). The certificate also indicates the requirements for maintaining a safe condition. A sample Confined Space Entry Permit is shown in Figure 14-1.

9. Confined Space Pre-entry Checklist. A checklist completed and signed by the CSST, which outlines specific safety tasks to be executed prior to entry or work in, or on boundaries of a confined space.

10. Hot Work Permit. Permit issued by the Fire Department for cutting and welding with portable gas or arc equipment. Permission is annotated by Fire Department representative endorsement on the "Hot Work Permit" block and by checking the "Safe For" block of the Confined Space Entry Permit.

1203. RESPONSIBILITY

1. Commanding General, Marine Corps Air Ground Combat Center. The Commanding General, MCAGCC, shall authorize and designate one person as the MCAGCC CSPM. Certification shall be accomplished after determination that the individual meets the qualifications per reference (k), Naval Sea Systems Command Gas Free Engineering Program. Assistant CSPMs will also be certified by the CG upon recommendation of the Installation Safety Office CSPM.

2. Unit Commanders. Unit commanders shall ensure that manuals and standard operating procedures are on hand which are pertinent to their operations.

3. Confined Space Program Manager.

a. Establish a program, which ensures a safe confined space environment with respect to:

- (1) Flammable, combustible and explosive hazards.
- (2) Specific toxic hazards.
- (3) Oxygen deficiency and enrichment.
- (4) Any combination of (1),(2),or(3).

b. Administer the Confined Space Entry Program.

4. Assistant Confined Space Program Manager (ACSPM). Functions as assistant to the CSPM and may function as the CSPM during the absence of the CSPM.

5. Confined Space Safety Technician (CSST). The CSST shall conduct initial testing of confined spaces where authorized by the CSPM under the following conditions:

a. Spaces and operations that do not involve hot work, highly toxic, or highly flammable materials such as hydrazine or gasoline.

b. Testing procedures are clearly established by the CSPM and issued by a process of instruction or standard operating procedure.

c. By direction, certify as safe, spaces and operations that are of a repetitive routine nature.

6. Line Manager. Management personnel shall ensure that:

a. Confined spaces under their control are identified and properly evaluated by the CSPM, or the qualified assistant under the direction of the CSPM, prior to commencement of operations within the space.

b. The provisions, procedures, and requirements of this chapter are fully met.

7. Supervisory Personnel. Supervisors shall be familiar with the provisions of this chapter as they relate to personnel or operations under their supervisory control. They shall act positively to eliminate any potential hazards existing in operations under their control and shall:

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- a. Ensure that all employees under their immediate supervision are aware of the hazards associated with confined spaces and the precautions necessary to control such hazards.
- b. Strictly enforce observance of the safety and health requirements of this chapter and the specific instructions issued by the CSPM (or qualified assistant under the direction of the CSPM) on entry permits.
- c. Promptly report to cognizant management any unsafe conditions or procedures and, where warranted by the severity of such conditions, cease all operations until corrective action has been effected.
- d. Prohibit unauthorized entry into confined spaces under their control.

8. Entry Supervisors. The supervisor of the employee(s) authorized entry into a Permit-required Confined Space as listed on the permit, is responsible for:

- a. Knowing the hazards that may be faced during entry.
- b. Verifying, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin.
- c. Terminating the entry and canceling the permit when required (and notifying the CSPM).
- d. Verifying that rescue services are available and that the means for summoning them are operable.
- e. Removing unauthorized individuals who enter or attempt to enter the permit space during operations.
- f. Determining that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.
- g. Signing the permit prior to personnel entry to ensure that he/she is aware of the entry requirements. Each relieving entry supervisor shall initial the permit to acknowledge that they understand the entry requirements until permit expires.

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9. Operating Personnel. All persons engaged in confined space entry or work, are responsible for fully understanding and strictly observing the safety standards, regulations and procedures, and specific instructions from the CSPM on entry permits. Further, personnel shall:

a. Report to their immediate supervisor any condition, procedure, or equipment that is considered unsafe.

b. Warn others believed to be endangered by failure to observe the proper procedures or precautions.

c. Report to their supervisor any injury or evidence of impaired health occurring in the course of work or duty, or which may affect the safe performance of duties.

d. When entering permit-required confined spaces:

(1) Properly use all required protective and other equipment.

(2) Communicate with the attendant as necessary to enable the attendant to monitor the entrants and to enable the attendant to alert entrants of the need to evacuate as required.

(3) Alert the attendant whenever a warning sign or symptom of exposure to a dangerous situation is recognized or if a prohibited situation is detected.

(4) Exit from the permitted space as quickly as possible whenever an order to evacuate is given by the attendant or supervisor, any warning sign or symptom of exposure to a dangerous situation is recognized, a prohibited condition is detected, or an evacuation alarm is activated.

10. Contractors. Contractor operations, which involve employees to enter into confined spaces or atmospheres immediately dangerous to life shall comply with the provisions of OSHA 29 CFR 1910.146, 29 CFR 1926 and EM 385-1-1.

11. Public Works Officer. The Public Works Officer will ensure that specific requirements for testing and training are included into any and all contracts, which involve entry into confined or enclosed spaces.

12. Resident Officer in Charge of Construction (ROICC). The ROICC will ensure that civilian contractor personnel prior to their employees' entry into or performing work in confined spaces have accomplished the required testing and training.

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13. Safety, Occupational Health, and Fire Protection Managers. The Installation Safety Office, Occupational Health and Fire Protection Managers shall coordinate their respective programs with the CSPM and provide assistance in the evaluation and control of confined space hazards.

1204. PROCEDURES

1. Commanding General, Marine Corps Air Ground Combat Center. The Commanding General shall make, or cause to be made, an evaluation of the Confined Space Entry Program at least annually. This annual review shall include an evaluation of CSPM/CSST's actively engaged in confined space entry work (i.e., 40 hour, or 10 certificates/checklists issued or equivalent combination). Those who have demonstrated satisfactory work performance shall be re-certified. Personnel previously certified who have not been actively engaged in confined space entry work (as defined above) shall complete a minimum of 40 hours of on-the-job training under supervision of a Certified CSPM to refresh their skills prior to recertification.

2. Unit Commanders. Where no published directive exists for repetitive type functions (e.g., external fuel cells, entry into underground pits with cold or hot work, etc.), organizations performing such work shall prepare their own standard operating procedures. The CSPM, Industrial Hygienist, and the Fire Chief will review these, where applicable, prior to publication or implementation.

3. Confined Space Program Manager and Assistant Confined Space Program Manager

a. CSPM/ACSPM shall issue and sign permits for initial entry, hot work in, on, or adjacent to entry into all permit-required confined spaces. Permits shall be valid for a period of time specified on the permit, usually not to exceed the time required to complete the assigned task or job. Copies of permits shall be retained for 12 months. Confined space entry permits shall be distributed as follows:

(1) One copy shall be posted at the main entrance or most commonly used access to the space.

(2) One copy shall be retained for the CSPM's file.

(3) One copy shall be provided to the unit requesting the entry services.

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b. Ensure that command personnel develop an awareness of the hazards posed by explosive, toxic, and asphyxiating gases in confined spaces. Advise on the dangers of hot work and cold work within or on such spaces and locations.

c. Have the authority to order personnel out of spaces or suspend work whenever a potential or existing unsafe condition is found.

d. Develop the necessary curriculum for formal and practical training of confined space safety technicians.

e. Ensure that appropriate personnel conduct proper maintenance and calibration of all confined space entry instrumentation and have on hand sufficient quantities to meet minimum needs of the command.

4. Confined Space Safety Technician (CSST)

a. CSST's will complete a pre-entry checklist (Figure 15-2) for initial entry and cold work in confined spaces that do not contain, or have not previously contained highly toxic, or highly flammable materials as authorized by the CSPM.

b. Exercise authority to suspend work whenever an unsafe condition exists or develops during the course of an operation.

5. Supervisors

a. Supervisors shall ensure that initial confined space entry services are requested at least 24 hours in advance of work performance. Renewal of entry permits which will expire before work is expected to be completed shall be requested from the CSPM.

b. Ensure that proper equipment, including personnel protective equipment, is provided as required by the CSPM/CSST.

c. Instruct all personnel involved in the work as to the requirements and limitations of the confined space entry permit.

d. Ensure that all instructions, written or oral, from Confined Space Entry personnel are strictly followed.

e. Ensure that only authorized personnel are allowed to enter confined spaces under their control.

MAGTFTC, MCAGCC SOP FOR SAFETY

f. Ensure that jobs involving hot work are not performed until the appropriate hot work permits have been obtained from the Fire Department.

6. Employees. Employees shall not enter confined spaces until test evaluations and a qualified person has performed prescribed procedures.

7. Contractors

a. Current laws and regulations make no provision for Marine Corps personnel to perform confined space entry services for contractor operations. Performance of such functions may involve assumption of liability by the Marine Corps in the event of a mishap. Therefore, Marine Corps confined space entry personnel shall not certify spaces for contractor operations except where failure to do so would create an extreme emergency or endanger government personnel and property and therefore, create even greater potential liability. All such certifications must be authorized by the Commanding General and shall be personally conducted or supervised by the CSPM. However, the contractor will coordinate with the ROICC to ensure that the Installation Safety Office CSPM will be available to meet with the contractor's confined space entry representative prior to the commencement of any confined space testing.

b. In the event that an operation involves both Marine Corps military/civilian and contractor personnel, both Marine Corps and contractor confined space testing and certification shall be required.

c. In all cases involving contractor operations, the contracting officer shall inform the appropriate contractor that the contractor's confined space entry personnel shall be adequately qualified and that all operations are to be conducted under all other statutory or regulatory requirements.

8. Public Works. The Installation Safety Office CSPM will be invited to participate in applicable planning stages of any contract or work that will entail entry into or work on confined spaces.

9. Resident Officer in Charge of Construction (ROICC). The ROICC will advise the Installation Safety Office CSPM of any work involving entry into or work being conducted in or on confined spaces by contractor personnel.

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10. Fire Department. The Fire Department is the sole agency with trained and properly equipped personnel to effect rescue during emergencies. As such, it will be considered as the emergency control point during all confined space entry operations. In the event confined space entry personnel are overcome or injured in confined space incidents, the fire department shall be contacted by dialing 911. At no time will personnel who are not trained in emergency rescue procedures make a rescue attempt involving entry.

MAGTFTC, MCAGCC SOP FOR SAFETY

29P-5100/1(10-95)

CONFINED SPACE ENTRY PERMIT NO. _____

REQUESTING ACTIVITY:			
REQUESTING PERSON:		RANK:	EXT:
LOCATION:	ITEM/SPACE:		
OPERATION TO BE CONDUCTED:			
CERTIFICATION TIME/DATE:		EXPIRATION TIME/DATE:	

REQUIREMENTS COMPLETED	TIME/DATE	REQUIREMENTS COMPLETED	TIME/DATE
Area Secured	/	Rescue Equipment	/
Lines Capped/Blanked	/	Communication	/
Lockout/Tagout	/	Respiratory Equipment	/
Purged/Flushed	/	Other PPE's	/
Ventilation	/	Lighting (Explosion Proof)	/
Standby/Safety Watch	/	Fire Extinguisher	/
Hot Work Permit ()	/	Other	/

FIRE DEPARTMENT ENDORSEMENT

CONTINUOUS ATMOSPHERIC TEST DATA (Record results every 2 hours).					
TEST		INITIAL		FOLLOW UP	
Oxygen Content (%)					
Flammable/Explosive (% LEL)					
Toxic (ppm)					
INSTRUMENT	MODEL	SERIAL #		CALIBRATED	REMARKS
TESTED BY:					TIME/DATE:

[]	NOT Safe For Personnel - NOT Safe For HOT WORK
[]	NOT Safe For Personnel Without Protection - NOT Safe For HOT WORK
[]	SAFE For Personnel - NOT Safe For HOT WORK
[]	SAFE For Personnel - SAFE For HOT WORK
[]	CLEANED And PURGE
[]	INERTED - NOT SAFE For Personnel INSIDE - SAFE For HOT WORK Outside
[]	PROVISIONAL - Entry By Personnel For Cleaning Only (See Remarks)

REMARKS:

This certificate indicates the condition that existed at time of testing. Personnel conducting work are not relieved of the responsibility for making inspections for the presence of visible hazardous conditions. If any person notices a change of conditions in contrast to those that existed at time of

CSPM/ASSIST:	ENTRY SPVSR:
--------------	--------------

ENTRANT :	ATTENDANT :
-----------	-------------

Figure 12-1. -- Confined Space Entry Permit.

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29P-5100/2 (11-94)

CONFINED SPACE PRE-ENTRY CHECKLIST

ACTIVITY:		PHONE:	
LOCATION:		ITEM/SPACE:	
OPERATION TO BE CONDUCTED:			
TEST EQUIPMENT:		SER #	TIME/DATE: /
RESULTS:	OXY: %;	LEL: %;	TOX: ppm
1. Is the worksite barricaded or a barrier established to keep unauthorized personnel out?		YES []	NO []
2. Did your survey of the surrounding area show it to be free of hazards, such as drifting vapors from tanks, piping or sewers and physical hazards?		[]	[]
3. Are moving parts and electrical sources locked out/tagged out?		[]	[]
4. Are appropriate personal protective equipment available to operating personnel and are they trained in their use?		[]	[]
5. Are personnel with active role in this entry operation familiar with their confined space duties?		[]	[]
6. Are you trained in the operation of the atmospheric monitor to be used?		[]	[]
7. Has a calibration/functional test been performed this shift on the atmospheric monitor to be used?		[]	[]
8. Did you test the atmosphere of the confined space before entry?		[]	[]
9. Was the atmosphere test acceptable or within safe guidelines?		[]	[]
10. Is there a positive means to summon rescue and emergency services?		[]	[]
Note: If any of the above questions is answered "NO", do not enter space. Contact your immediate supervisor.			
EMERGENCY PROCEDURES: DO NOT ENTER SPACE FOR RESCUE. CALL THE FIRE DEPARTMENT AT EXTENSION 911.			
PREPARED BY:			
(CSPM/CSST)			
REVIEWED BY:		/	
(ENTRANT)		(ATTENDANT)	
<p>This certificate indicates the condition that existed at time of testing. Personnel conducting work are not relieved of the responsibility for making inspections for the presence of visible hazardous conditions. If any person notices a change of conditions in contrast to those that existed at time of test, they must stop work immediately and exit the space. Contact the CSST or CSPM (or his assistant, at ext. 6154/7262) for retest. Changes in conditions of work procedures other than those stated will require CSST reevaluation of the whole operation.</p>			

Figure 12-2. -- Confined Space Pre-entry Checklist.

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CHAPTER 13

RESPIRATORY PROTECTION PROGRAM	<u>PARAGRAPH</u>	<u>PAGE</u>
PURPOSE	1300	13-2
DEFINITIONS	1301	13-2
RESPONSIBILITIES	1302	13-4
PROCEDURES	1303	13-4

FIGURES

13-1	IDENTIFICATION OF RESPIRATOR CARTRIDGES AND GAS MASK CANISTERS	13-10
13-2	RESPIRATOR SELECTION GUIDE	13-11
13-2B	RESPIRATOR SELECTION GUIDE (CONT'D)	13-12
13-3	ASSIGNED PROTECTION FACTORS	13-13
13-3B	ASSIGNED PROTECTION FACTORS (CONT'D)	13-14
13-4	MEDICAL CLEARANCE FOR RESPIRATOR USE	13-18

CHAPTER 13

RESPIRATORY PROTECTION PROGRAM

1300. PURPOSE. To control occupational illness caused by breathing air contaminated with harmful dusts, fumes, mists, gases, smokes and vapors. The primary action shall be to prevent atmospheric contamination. This shall be accomplished, as far as feasible, by accepted engineering control measures such as enclosure or confinement of the operation, general and local exhaust ventilation, and the substitution of less toxic materials. When effective engineering controls are not feasible, or while they are being instituted, appropriate respiratory protection must be used per reference (g) and (1).

1301. DEFINITIONS

1. Respiratory Protection Program (RPP)

- a. Publication of written standing operating procedures.
- b. Training of employees in the selection, use and general care of respirators.
- c. Special medical surveillance of employees whose duties require the use of respirators.
- d. Industrial hygiene evaluation of the overall respiratory protection program.
- e. Development of personnel, supervisor and program administrator responsibilities in the Installation Safety Office Respiratory Protection Program.
- f. Stocking, distribution, fitting, maintenance, testing, record keeping, and selection of respirators.
- g. Survey capabilities for identification of hazardous atmospheres.

2. Respiratory Protection Program Manager (RPPM). An individual who has successfully completed a formal respiratory protection course administered by NIOSH, OSHA, or other equivalent course.

MAGTFTC, MCAGCC SOP FOR SAFETY

3. Atmosphere Immediately Dangerous to Life or Health (IDLH). Any atmosphere that poses an immediate hazard to life or produces immediate irreversible debilitating effects on health.

4. Contaminant. A material or agent not normally present in the atmosphere, e.g., dust, fumes, gas, mist, or vapors, which can be harmful, irritating or a nuisance.

5. Dust. Small solid particles created by breaking up larger particles by processes such as crushing, grinding or explosion.

6. Fumes. Very small (10 micrometers or less) solid particles formed by condensation of volatilized solids, usually metals.

7. Gas. Diffuse formless fluid normally in gaseous state.

8. Lifeline. A rope suitable for supporting one person, to which a lanyard or safety belt (or harness) is attached.

9. Mist. Finely divided liquid droplets suspended in air and generated by condensation or by atomization.

10. Vapor. Gaseous form of substances which are normally in the solid or liquid state.

11. Pesticide. Any chemical used to kill pests, such as insects.

12. NIOSH. National Institute for Occupational Safety and Health.

13. OSHA. Occupational Safety and Health Administration.

1302. RESPONSIBILITIES

1. Commanding General, Marine Corps Air Ground Combat Center. The Commanding General shall ensure that an effective respiratory protection program is in force wherever and whenever effective engineering atmosphere controls are not feasible or in force.

2. Commanding Officer, Naval Hospital. The Commanding Officer, Naval Hospital will provide for initial and periodic medical evaluations and physicals to be administered to all DoD employees required to wear respiratory protection equipment in order to assure that they are physically able to perform their assigned tasks while using the equipment.

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3. Safety Director. The Safety Director will provide an individual who has successfully completed either the NIOSH Occupational Respiratory Protection Course or an equivalent course administered by OSHA to serve as the Command's Respiratory Protection Program Manager.
4. Industrial Hygienist. The Industrial Hygienist will provide assistance and service to the respiratory protection program manager and supervisors who require assistance in the requirement for, selection of proper types and fit testing of respiratory protection equipment.
5. Respiratory Protection Program Manager. The primary duty of the Respiratory Protection Program Manager is to ensure that the respiratory protection requirements outlined in this Manual are implemented and complied with.
6. Confined Space Program Manager (CSPM). The Confined Space Program Manager shall ensure that personnel entering confined spaces requiring respiratory protection equipment are utilizing the appropriate equipment and are made aware of the inherent hazards involved.
7. Supervisors. Supervisors will ensure that a proper respiratory protective device is being used for each type of hazard. They will provide precautions such as lifelines when required. They will ensure that respirators are assigned for the exclusive use of one individual. Supervisors will ensure that employees whose work operations require their wearing respiratory equipment do not have facial hair which negates the effectiveness of the type of equipment being used. Supervisors will also ensure that employees using respiratory protection undergo adequate training in the use, maintenance and functional characteristics of respirators as well as their limitations. Supervisors will also ensure that employees whose duties require the use of respiratory protection devices have been medically examined and found to be physically qualified. A "Medical Clearance for Respirator Use" form (Figure 13-18) should be completed for each employee for record keeping purposes.
8. Employees. Employees shall obtain, use and maintain their personal respiratory protection equipment per appropriate instructions and training. At no time will employees use equipment which has not been issued to them personally and/or for which they have not received a qualitative fit test. Employees shall perform face piece fit checks and inspect their respirator before and after each use. Any discrepancies or malfunctions noted must be reported to their immediate supervisor.

1303. PROCEDURES

1. Respirator Selection Considerations

a. Only respirators which are approved by NIOSH and/or OSHA shall be used. Respiratory protection equipment shall be selected by Respiratory Protection Program Manager using the most current "NIOSH Certified Equipment List". Selection guidance and information is provided in Figure 15-1 to Figure 15-3.

b. To correctly assess the nature of the hazard requiring respiratory protection the following factors must be considered as a minimum: the chemical, physical, and toxicological properties of the contaminant such as:

(1) Warning properties of the contaminant gas or vapor (smell, taste, eye irritation, or respiratory irritation).

(2) Whether the contaminant is absorbed through the skin.

(3) Whether any of the contaminants are "Immediately Dangerous to Life or Health (IDLH)" or whether injurious effects would be produced after prolonged exposure.

(4) Concentration of the contaminant in the atmosphere.

(5) Permissible Exposure Limit (PEL) for the contaminant(s).

(6) Whether an oxygen-deficient or oxygen-rich atmosphere exists or may be created.

(7) Whether toxic, flammable, or explosive by-products are present or may be produced.

(8) The nature, extent and frequency of the duties to be performed by personnel (e.g., welding, painting, etc.) in the work area.

(9) Sorbent efficiency of cartridge or canister.

(10) Any possibilities of high heat or reaction with sorbent material in the cartridge or canister.

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(11) Any possibility of shock sensitivity (explosion hazard) of the substance absorbed on cartridge or canister sorbent.

(12) Respirator protection factor or degree of protection provided.

2. Warning Signs of Respirator Failure

a. Particulate Air-Purifying. When breathing difficulty is encountered with a filter respirator (due to partial clogging with increased resistance), the filter(s) must be replaced. Disposable filter respirators must be discarded.

b. Gas or Vapor Air-Purifying. If, when using a gas or vapor respirator (chemical cartridge or canister), any of the warning properties (e.g., odor, taste, eye irritation, or respiratory irritation) occur, promptly leave the area and check the following: proper face seal, damaged or missing respirator parts, saturated or inappropriate cartridge or canister. If no discrepancies are observed, replace the cartridge or canister. If any of the warning properties appear again, the concentration of the contaminants may have exceeded the cartridge or canister design specification. When this occurs, an airline respirator or Self Contained Breathing Apparatus (SCBA) is required.

c. Service Life of Air-Purifying Respirator Canister and Cartridges. The canisters or cartridges of air-purifying respirators are intended to be used until filter resistance precludes further use, or the chemical sorbent is expended as signified by a specific warning property, e.g., odor, taste, etc. New canisters, cartridges or filters shall always be provided when a respirator is reissued. When in doubt about the previous use of the respirator, obtain a replacement canister or cartridge.

d. Supplied Air Respirator. When using an airline respirator, leave the area immediately when the compressor failure alarm is activated or if an air pressure drop is sensed. When using an SCBA leave the area as soon as the air pressure alarm is activated.

3. Breathing Air Requirements

a. Breathing air or sources of breathing air (i.e. compressors) for supplied-air respirators or SCBA's shall meet at least the minimum Grade D breathing air requirements as described in American National Standard Commodity Specification for Air (ANSI/CGA G-7.1-1989).

b. Routine monitoring/testing of the breathing air quality shall be conducted. Assistance can be obtained from the Naval Hospital Industrial Hygienist.

4. Entry and Standby Precautions. The Installation Safety Office Confined Space Program Manager will ensure that all personnel entering an IDLH area are provided with the appropriate types of personal protective equipment, clothing and suitable respirators. In addition, at least one trained standby person, similarly equipped shall be present in the nearest uncontaminated area.

Assistance from the Fire Department Hazardous Materials Response Team will be made available upon request from the CSPM. The standby person and those workers in the IDLH area must be able to communicate continuously with each other, e.g., visually, by telephone or radio, signal line, etc. Respirator users who enter into the IDLH area must also be equipped with safety harnesses and lines for removal should it become necessary.

5. Respirator Fit Testing

a. Quantitative respirator fit testing is the primary method used by the MAGTFTC, MCAGCC Safety Office utilizing a Quantifit machine. The respirator is not functioning properly unless the air comes only through the cartridge(s), canister, or airline in the case of supplied-air respirators. Each individual who is required to use a respirator shall be tested at time of initial fitting and annually thereafter, except for those who work with or may be exposed to asbestos or lead which require semiannual testing. As a minimum, the following procedures shall be used to insure an adequate fit:

(1) Quantitative Fit Testing. During a fit test, the respirator inlets are capped with test adapters and the inhalation valves are removed from the mask.

MAGTFTC, MCAGCC SOP FOR SAFETY

(2) With the test subject holding his/her breath for no more than ten seconds, the Quantifit establishes and maintains a slight vacuum, or controlled negative pressure, inside the mask.

(3) With the respirator inlets sealed, all sources of leakage into the mask are through the face-to-facepiece seal.

(4) The volume of air drawn out of the mask by the Quantifit during this short period of time is equal to the leak rate into the mask through the face-to-facepiece seal. This process determines whether or not the respirator user has a face-to-facepiece seal.

b. Qualitative fit testing is only used when quantitative fit testing is unavailable.

(1) All respirators shall be donned in accordance with the manufacturer's recommendations.

(2) The face piece seal shall be checked by the wearer each time the respirator is used. Perform positive or negative fit checks per the manufacturer's instruction or perform the following positive and negative fit check procedures:

(i) Positive Pressure Test. For most respirators, place the palm of the hand or thumb over the exhalation valve and press lightly. Exhale gently to increase pressure inside the face piece. Respirator is properly fitted if no air leaks out around the edges and slight positive pressure can be felt inside the face piece.

(ii) Negative Pressure Test. Inhale while covering the cartridge or canister inlet lightly with the palm(s) of the hand(s), being careful to minimize pressure on the respirator. No air should leak into the face piece.

(3) No respiratory protection equipment, except positive pressure supplied-air hoods, where appropriate, shall be worn by individuals with beards, sideburns, or facial hair that prevent a good face seal. Where the user's facial hair interferes with the proper performance of the respiratory protection equipment, the user (employee) shall be assigned other duties from that position until they can be satisfactorily fit tested and protected. Other items which may interfere with proper fit of the respiratory protection equipment could be a skull cap which projects under the face piece, temple pieces on eye glasses, or the absence of one or both dentures.

MAGTFTC, MCAGCC SOP FOR SAFETY

(4) During respirator fit testing, isoamyl acetate (banana oil), saccharin mist or irritant smoke fit test protocols per Appendix 15-C of reference (q) shall be used to test for proper fit.

6. Record Keeping. Respirator fit testing shall be documented and maintained by the supervisor and shall include the type of respirator, brand name and model, method of test and test results, test date and the name of the instructor/tester.

7. Inspection and Cleaning of Respirators

a. The inspection and cleaning of respirators shall be performed by personnel who have received training approved by the Respiratory Protection Program Manager, or the Industrial Hygienist.

b. Respirator personnel shall, as a minimum:

(1) Inspect each respirator for possible defects.

<u>Items to Inspect</u>	<u>Possible Defects</u>
Head bands/neck straps fraying	Damage, loss of elasticity,
Face piece	Damaged/distortion, vision impairment, Cracking Inhalation/exhalation valves Condition of rubber, distortion, cuts, proper seating
Filter cartridge gaskets	Damaged (cut or torn) seats
Cartridge or filter	Inappropriate type for job, damaged, outdated, used to capacity
Prefilter	Inappropriate type for job, excessive breathing resistance, rips, tears or holes Canister Broken seal, outdated, damaged, inappropriate type for job

(2) Remove and discard all used cartridges and filters.

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(3) Disassemble and hand wash the face piece and parts in a cleaning and sanitizing solution. NOTE: Strong cleaning and disinfecting agents can damage respirator parts. Temperatures above 43C (110F) and vigorous mechanical agitation shall be avoided. Solvents (e.g., paint removers) which can affect rubber and other parts shall not be used. Ultrasonic or other suitable washers may be used in accordance with manufacturer instructions.

(4) Rinse in clean warm water at a maximum temperature of 43C (110F). Sanitize with MSA cleaner/sanitizer solution PN 34377, NSN 6840-00-570-5299 or as recommended by the manufacturer of the respirators.

(5) Air dry in a clean uncontaminated area in such a way as to prevent distortion. If drying cabinets are used the drying temperature shall not exceed 43C (110F).

(6) Reassemble respirator and replace any damaged parts.

(7) Place respirator in a clean plastic bag or other container and seal.

(8) Store in a clean, dry, uncontaminated area without crowding which may distort the respirator face piece. Respirators should not be stored in such places as lockers or tool boxes unless they are in a carrying cases or cartons.

c. Respirator personnel shall not service/repair any respirators for which they have not been specially trained. In addition, they shall not perform any work on reducing valves, regulators, or alarms but shall return such items to the manufacturer for all repairs and adjustments.

d. Each emergency respirator shall be inspected after each use or at least every month and a record of inspection dates, findings, etc., shall be maintained by the work center supervisor.

7. Respiratory Protection Training

a. While selecting a respirator for a given hazard is important, equally important is the proper use of the respirator. Proper use can be ensured by training all employees and supervisors who are required to use respirators or supervise respirator users. Such training shall include as a minimum the following:

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- (1) Nature and degree of respiratory hazards.
- (2) Respirator selection, capabilities and limitations.
- (3) Donning procedures, fit checks/testing and proper wearing.
- (4) Respirator cleaning, maintenance, inspection and storage.

b. Training frequency is annual unless specified otherwise in OSHA's standards, and can be given at the time of fit testing. Initial training should be one hour; refresher training can be tailored to the individual. Training will be provided by the MCAGCC Respiratory Protection Program Manager (Installation Safety Office ext. 6154). Formal training programs are presented by the Navy, NIOSH, and OSHA. Contact the Safety Manager (ext. 6154) for assistance in how to obtain quotas.

c. Wearing of contact lenses (gas permeable and soft contact lenses, but not hard contact lenses) in contaminated atmospheres with respiratory protection equipment is permitted.

d. Respirator training shall be properly documented and shall include the type and model of respirator for which the individual has been trained and fit tested. Records of such training shall be maintained by the supervisor.

e. Industrial hygiene technical assistance may be obtained by contacting the local industrial hygienist.

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Figure 13-1.

Atmospheric Contaminant(s) to be Protected Against	Color Assigned
Acid Gases	White
Organic Vapors	Black
Ammonia Gas	Green
Carbon Monoxide	Blue
Acid Gases and Organic Vapors	Yellow
Acid Gases, Ammonia, and Organic Vapors	Brown
Acid Gases, Ammonia, Carbon Monoxide, and Organic Vapors	Red
Other Vapors and Gases Not Listed Above	Olive
Radioactive Materials (Except Tritium and Noble Gases) ¹	Purple
Dusts, Fumes, and Mists (Other than radioactive materials) ²	Orange

Notes:

1. A purple stripe shall be used to identify radioactive materials in combination with any vapor or gas.
2. An orange stripe shall be used on canisters only to identify dusts, fumes and mists in combination with any vapor or gas.
- 3 Identification of Respirator Cartridges and Gas Mask Canisters. The Respirator Decision Logic Sequence is presented below in the form of flow chart. This flow chart can be used to identify suitable classes of respirators for adequate protection against specific environmental conditions.

MAGTFTC, MCAGCC SOP FOR SAFETY

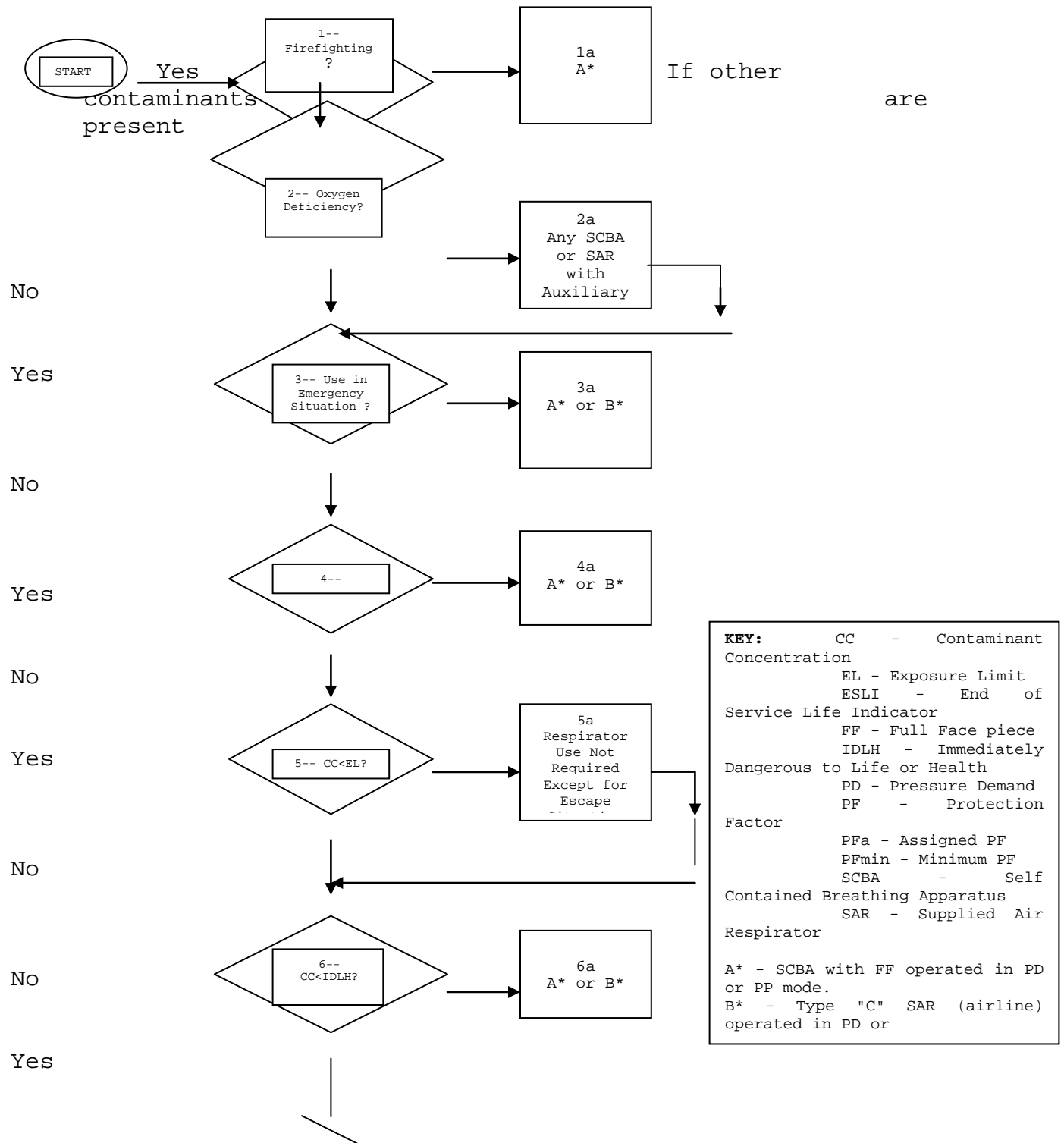


Figure 13-2. - Respirator Selection Guide.

MAGTFTC, MCAGCC SOP FOR SAFETY

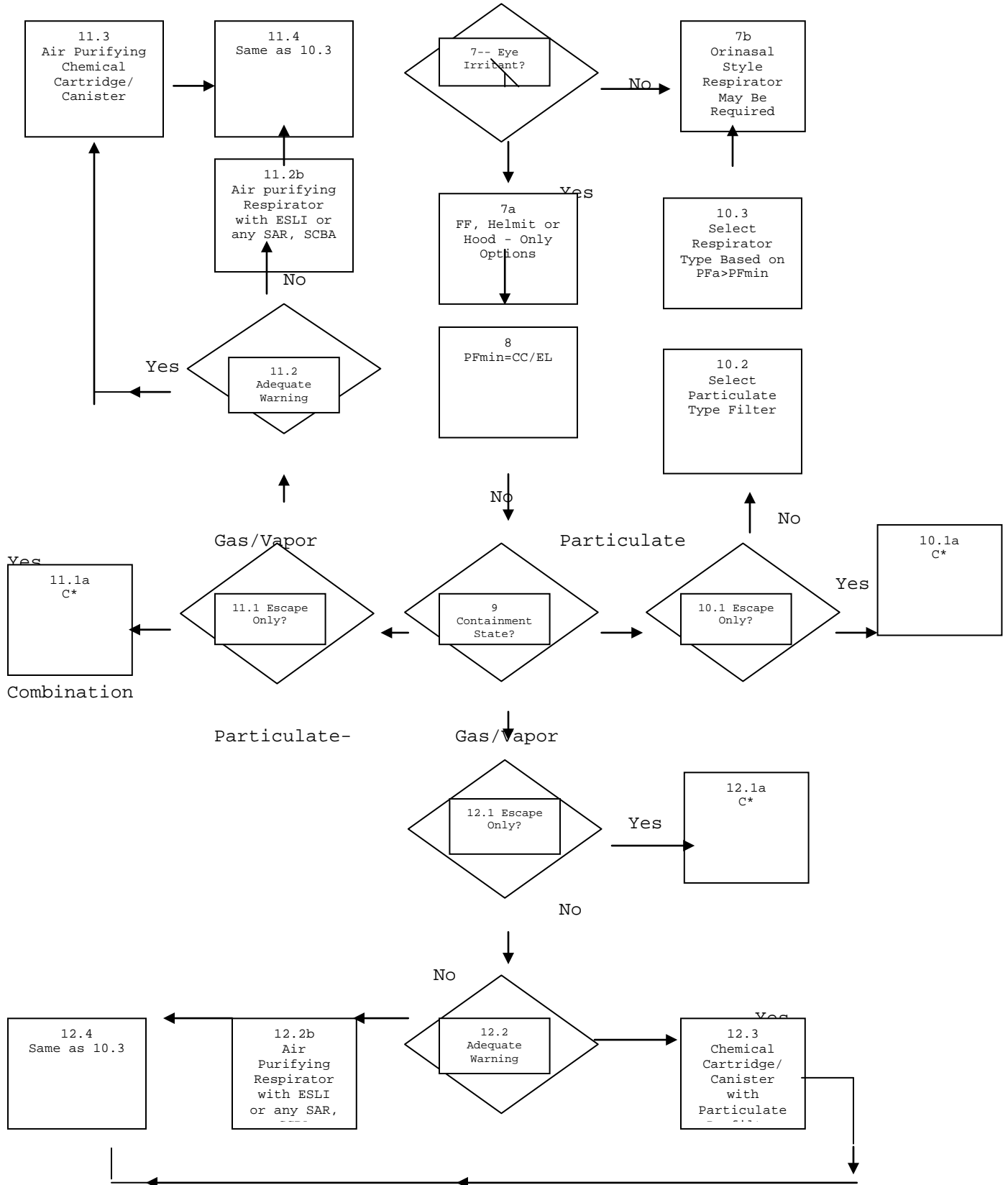


Figure 13-2B. -- Respirator Selection Guide -- Continued.

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Assigned Protection Factor	Class of Respirator	Reference*
5	Single-use dust or dust/mist respirator Quarter mask respirator	NIOSH NIOSH
10	Air-purifying half mask respirators, including reusable, disposable, and maintenance-free respirators equipped with particulate filters and/or chemical cartridges, or combination particulate/chemical cartridge filters Air-purifying full face respirators equipped with particulate filters other than HEPA filters Supplied-air half mask respirators operated in the demand mode	ANSI- disposable/ maintenance free NIOSH - reusable NIOSH NIOSH
25	Powered air-purifying respirators equipped with a hood, helmet or face piece Supplied-air respirators equipped with a hood or helmet operated in a continuous flow mode Powered air-purifying respirators equipped with a loose fitting face piece	NIOSH NIOSH NIOSH
50	Air-purifying full face respirator equipped with HEPA filters, chemical cartridges or combination particulate/chemical cartridges Powered air-purifying full face or half mask respirator equipped with HEPA filters, chemical cartridges, or combination particulate/chemical cartridges Gas mask equipped with chemical canister or combination particulate/chemical canister Powered air-purifying gas mask equipped chemical canister or combination particulate/chemical canister Supplied-air full face respirators operated in demand or continuous flow mode Supplied-air half mask respirator operated in continuous flow mode Full face demand SCBA Half mask pressure demand supplied-air respirator	NIOSH NIOSH NIOSH NIOSH NIOSH NIOSH NIOSH NIOSH NIOSH

Figure 13-3. - Assigned Protection Factors.

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Assigned Protection Factor	Class of Respirator	Reference*
2,000	Full face pressure demand supplied-air respirator	NIOSH
2,000 or IDLH Atmosphere	Full face pressure demand SCBA or combination full face pressure demand supplied-air respirator with auxiliary SCBA	NIOSH
Firefighting	Full face positive pressure SCBA	NIOSH

* NIOSH reference is NIOSH Respirator Decision Logic.
ANSI reference is ANSI Z88.2-1992.

1. Single-use dust or dust/mist respirators are approved for use against dust or mists that may cause pneumoconiosis and fibrosis.
2. Reusable air-purifying respirators can be cleaned, sanitized, and, used again with new filters and/or chemical cartridges.
3. Disposable respirators are discarded after the end of its recommended period of use, after excessive breathing resistance due to filter clogging, or when odor breakthrough occurs.
4. Maintenance-free respirators can be either discarded after breakthrough/filter clogging or can be cleaned, sanitized, and used again with new filters and/or chemical cartridges.
5. Loose-fitting respirators form a partial seal with the face and do not cover the neck and shoulders.

Fit testing: Tight fitting negative pressure respirators fit tested by the qualitative protocols can be worn in contaminated atmosphere up to 10 times the PEL. The higher protection factors stated herein are assigned by successfully completing a quantitative fit test with a fit factor that is at least 10 times greater than the assigned protection factor. Positive pressure respirators, including PAPRs, with tight sealing face pieces must be qualitatively or quantitatively fit tested in a negative pressure mode to be assigned the assigned protection factors.

A quantitative fit factor of at least 100 must be obtained. Tight fitting PAPRs can be assigned protection factors up to the protection factor obtained during quantitative fit testing.

Note: Combination supplied-air and air-purifying respirators are approved under the air-purifying component, whichever has the lower assigned protection factor.

For protection against contaminants that are regulated by individual OSHA standards (e.g., formaldehyde, benzene, vinyl chloride, asbestos, lead), refer to the respiratory protection table in the specific standard to obtain the correct assigned protection factor.

Figure 13-3B. -- Assigned Protection Factors -- Continued.

29P-5100/3 (11-94)
MEDICAL CLEARANCE FOR RESPIRATOR USE

<u>TO BE COMPLETED BY UNIT/SECTION SAFETY OFFICER:</u>													
NAME:				RANK:		SSN#:		DOB:					
SPVSR/OIC/NCOIC:					SECT/UNIT:			EXT:					
JOB DESCRIPTION:													
SPECIAL WORK CONSIDERATION (Based on IH or Unit Safety Officer Survey):													
LEVEL OF WORK EFFORT:		LIGHT []		MODERATE []		HEAVY []		STRENUOUS []					
EXTENT OF RESPIRATOR USAGE:		DAILY []		WEEKLY []		RARELY []							
LENGTH OF TIME ANTICIPATED USE:													
_____ Unit Safety Officer/NCO				_____ Extension			_____ Date						
<u>TO BE COMPLETED BY PHYSICIAN:</u>													
CLASS:													
[] No restriction on respirator use.													
[] Some specific use restrictions.													
[] No respirator use permitted.													
RESTRICTION:													
_____ Examining Physician				_____ Extension			_____ Date						
<u>TO BE COMPLETED BY RESPIRATORY PROTECTION PROGRAM MANAGER (RPPM):</u>													
TYPE(S) OF RESPIRATOR(S):													
Self-Contained Breathing Airline Supplied Combination Airline & SCBA Air-purifying					Chemical Cartridge Spectacle Kit Other _____								
RECOMMENDED MAKE & SIZE:													
3M		F/F	SML	MED	LRG	NORT	F/F:	SML	[]	MED	[]	LRG	[]
		H/F	SML	MED	LRG		H/F:	SML	[]	MED	[]	LRG	[]
MSA		F/F	SML	MED	LRG	_____	F/F:	SML	[]	MED	[]	LRG	[]
		H/F	SML	MED	LRG	Othe	H/F:	SML	[]	MED	[]	LRG	[]
ORDERING INFORMATION:													
_____ RPPM				_____ Extension			_____ Date						

Figure 13-4. Medical Clearance for Respirator Use.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 14

OFFICE SAFETY PROGRAM	<u>PARAGRAPH</u>	<u>PAGE</u>
PURPOSE	1400	14-2
GENERAL EQUIPMENT	1401	14-2
MISCELLANEOUS OFFICE MACHINES	1402	14-2
FANS	1403	14-3
WASTE BASKETS	1404	14-3
LADDERS	1405	14-3
HOUSEKEEPING	1406	14-3
LIFTING	1407	14-3

CHAPTER 14

OFFICE SAFETY PROGRAM

1400. PURPOSE. To provide general requirements for safety within office areas, an environment common to all of us, but seldom considered hazardous. Safety, in a factory or in an office, requires making the workplace safe.

1401. GENERAL EQUIPMENT

1. Filing Cabinets

a. Whenever practical, individual upright filing cabinets should be secured to prevent overbalancing.

b. Never leave a file cabinet drawer open when it is not being used. Do not open more than one drawer at a time, since cabinets easily overbalance. Use the handles when opening and closing file cabinet drawers.

c. Do not place heavy material or files of smaller size (such as card index files) on top of filing cabinets.

2. Desks

a. Handles should always be used when closing typewriter compartments. Because of the weight of typewriters, these sections of desks close rather rapidly and may cause injury to fingers or hands.

b. When possible, containers shall be provided in which to keep sharp objects when not in use. Razor blades shall have the cutting edge covered when kept in a desk drawer.

c. Glass desk tops shall not be used. Tops made of acrylic plastic or safety glass may be used.

d. Pencil sharpeners and other equipment should not protrude from top edges of desks.

e. Desk drawers should never be left open, to prevent a person from inadvertently striking or tumbling over them.

MAGTFTC, MCAGCC SOP FOR SAFETY

3. Chairs

a. Personnel should not sit in a tilted position in any chair. All of the chair feet shall be in contact with the floor. Swivel chairs may turn over if the occupant leans back too far.

b. Do not stand on chairs, tables, etc., to reach high objects (i.e., to set clocks). Use a step stool or ladder.

1402. MISCELLANEOUS OFFICE MACHINES

1. Before using office machines, be sure they are properly located and not in danger of falling.

2. Never clean or lubricate electrical appliances when they are in operation. When cleaning electrical appliances which are controlled by a switch on the machine, be sure the switch is turned off and the plug pulled out.

3. Do not touch any electrical connection with wet hands. Be sure that all electrical equipment is grounded.

4. Protection shall be provided against moving parts on addressograph, mimeograph, bookkeeping machine, tabulating machines, and other types of power driven office equipment.

5. All electrical office machines, fixed and portable, shall be provided with three-wire (grounded) connecting cords where applicable. Underwriters Laboratory (UL) listed double insulated two wire type is excepted.

1403. FANS

1. Each ventilating fan within seven feet of the floor or working platforms will be equipped with a wire mesh, fan blade guard with openings which will reject a ball 1/2" in diameter.

2. Electrical fans should not be placed on boxes, low tables, or in any other position where an individual might catch hands or clothes in the revolving blades.

MAGTFTC, MCAGCC SOP FOR SAFETY

1404. WASTE BASKETS. Personnel shall not put broken glass in waste baskets. It is suggested that this material be packed in heavy paper, marked "broken glass", and placed alongside the waste basket at the end of the day, so that the person removing the waste paper will not be cut accidentally.

1405. LADDERS. Small ladders and stands used in offices shall be equipped with treads or non-slip material, and safety feet.

1406. HOUSEKEEPING. Keep the floor clear of paper clips, pencils, soft drink bottle caps, and like objects which can cause falls and damage vacuum cleaners.

1407. LIFTING. All personnel engaged in the lifting of heavy material of any type shall be instructed by their supervisors and shall carefully follow the proper method of lifting objects.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 15

EXPLOSIVES SAFETY	<u>PARAGRAPH</u>	<u>PAGE</u>
PURPOSE	1500	15-2
GENERAL	1501	15-2
RESPONSIBILITY	1502	15-2
HANDLING	1503	15-2
STORAGE	1504	15-3
TRANSPORTATION	1505	15-3
TURN IN	1506	15-5
MALFUNCTION, MISHAP AND SERIOUS INCIDENT REPORTING	1507	15-5
SUSPECT AMMUNITION AND DUDS	1508	15-6
GUIDANCE	1509	15-6

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 15

EXPLOSIVES SAFETY

1500. PURPOSE. Provide policies and procedures for the safe handling, storage, transportation, and turn in of ammunition/explosives, components and containers. An explosive safety program will be implemented for the relevant education of military personnel, and DoD civilian's employees.

1501. GENERAL. Ammunition and explosives are designed to inflict casualties and destroy property and material. Treatment of ammunition and explosives without proper safety precautions will result in catastrophe.

1502. RESPONSIBILITY

1. The Officer in Charge of the Center Magazine Area (CMA) is responsible for all ordnance within the CMA and all incoming and outgoing off-station shipments.

2. Commanding officers will be responsible for explosive safety standards and procedures for handling and transporting of ammunition in their possession.

1503. HANDLING

1. In any location or operation involving ammunition/explosives, limit the exposure to a minimum number of personnel, for a minimum time, and to a minimum amount of explosive material consistent with safe and efficient operations.

2. Ammunition/explosives shall not be thrown, dropped, or pulled over other containers. Ammunition/explosives will be handled carefully to prevent shock, friction, or heat that may cause a fire, explosion or damage to the material.

3. All personnel involved in handling ammunition/explosives shall be trained, qualified and certified in accordance with OPNAVINST 8023.2 (series) and MCO 8023.3.3.

4. Any evidence that explosives or ammunition have been dropped, suspected of being damaged or explosive material is exposed will be reported immediately, to the responsible officer or supervisor and EOD will be notified.

MAGTFTC, MCAGCC SOP FOR SAFETY

5. Personnel Protective Equipment consisting of garments and devices necessary to protect individuals against hazards inherent to the performance of specific jobs shall be worn when required.
6. Personnel will wear leather gloves and an appropriate respirator when handling wooden boxes, or packaging material treated with pentachlorophenol (marked with a "P").
7. Forklifts and other mechanical material handling equipment (MHE) used inside of buildings (magazines) to handle ammunition and explosives must be electrically powered, spark enclosed (EE) or explosion proof (EX).
8. Ammunition and ammunition components will not be used as ash trays, trash receptacles, models, ornaments or for any unauthorized purpose.
9. Matches, lighters or other flame/spark producing devices shall not be permitted within 25 feet of ammunition.

1504. STORAGE

1. Ammunition and explosives will be identified and stored according to storage compatibility group. Specific guidelines concerning compatibility, Net Explosive Weight (NEW) limits and mixed storage are found in NAVSEA OP 5, Vol. I.
2. All storage sites will follow Quantity Distance regulations and be assigned NEW limits.
3. Units storing ammunition at Ammunition Issue Points (AIP) and Field Ammunition Supply Point (FASP) will notify the Fire Department of the type, quantity and location of the ammunition and any changes in storage as soon as they occur. All units will provide the Base Explosives Safety Officer a storage plan.
4. Prior to incoming ammunition being stored, all pallets and containers will be inspected for damage, puncture, legibility of markings, stability of pallet and condition of banding straps.
5. Evidence of damage will require reclassification of ammunition condition code, repalletization, remarking and/or replacement of container.
6. When stacking pallets or containers inside of magazines the following steps shall be followed:

MAGTFTC, MCAGCC SOP FOR SAFETY

- a. Assure stacks are stable to prevent toppling over.
(Maximum of two pallets high at the AIP and FASP)
- b. Methods used for stacking must provide for good ventilation to all parts of the stack.
- c. Aisles shall be maintained so that units in each stack may be inspected, inventoried and removed for shipment or issue. Unobstructed aisles shall be maintained to permit rapid egress of personnel.
- d. Loose ammunition or ammunition components, although packed in individual containers, shall not be stored in magazines unless properly packed in shipping containers with lids properly secured.
- e. Ammunition or containers loaded with ammunition or explosives shall not be opened or repaired in a magazine. Loose rounds of ammunition are not permitted for storage in magazines and shall be removed for repackaging in proper containers.

1505. TRANSPORTATION

- 1. Unit Safety Officers and/or NCO's will keep a current list of all explosive vehicle drivers and have access to qualification/certification documents.
- 2. Explosive drivers must meet the following criteria:
 - a. Hold a valid state operator's license, not necessarily California.
 - b. Undergo a physical examination and possess a Medical Examiner's Certificate on the basis of successful completion.
 - c. Hold a U.S. Government Motor Vehicle Operator's Identification Card, OF 346, on which is noted "Explosive Driver" and proof that driver holds a current medical certificate.
 - d. Must be a minimum of 18 years of age for on-station ammunition transportation and a minimum of 21 years of age for off-station ammunition transportation. This course will be given by the Center Safety Office.
 - e. Successfully complete a related mental examination.

MAGTFTC, MCAGCC SOP FOR SAFETY

- f. Successfully complete an explosives driver's training course involving twelve hours of instruction.
3. Ammunition/explosives destined for off-station locations will be blocked and braced by competent, trained and certified personnel. All blocking and bracing shall be per MILSTD-1320 or NAVSEA OP 4461.
4. Ammunition/explosives being transported aboard MCAGCC will be properly confined and/or strapped down to prevent load movement.
5. During loading or unloading of ammunition from any vehicle or trailer, ignition will be turned off, parking brake will be set and at least one wheel will be chocked to prevent forward and backward roll.
6. Vehicles loaded with ammunition shall carry one properly filled, bracket mounted, ten pound ABC type fire extinguisher that is readily accessible.
7. Ensure compatibility is maintained on all ammunition/explosives loaded onto motor vehicles per Appendix D of NAVSEA OP 2239.
8. Motor vehicles carrying ammunition will be properly placarded on four sides per NAVSEA OP 2239.
9. The following forms will be in the custody of the explosives driver when transporting ammunition:
 - a. NAVMC 10627 (SD) 1265, Vehicle and Equipment Operation Record.
 - b. Standard Form 91, Operators Report of Motor Vehicle Accident.
 - c. OF 346, Motor Vehicle Operator's ID card with Explosive Driver authorization.
 - d. DD Form 626, Motor Vehicle Inspection Report.
 - e. Valid medical examiners NAVMC 10970 certificate.
 - f. DD Form 836, Special instructions for off-post ammunition transportation.

MAGTFTC, MCAGCC SOP FOR SAFETY

10. The transporting of class/division 1.1, 1.2, 1.3, and 1.4 ammunition on-station and, with proper authority, over public highways is authorized in trucks, full trailers, semi-trailers and double trailers equipped with closed bodies, flatbeds, stake sides, dromedary containers and open tops. Units must submit for authorization of off base transportation of ammunition through the Base Explosives Safety Officer for the Commanding General's approval.

11. Upon receipt of commercial ammunition shipments, PMO will ensure that the requirements addressed in Chapter 12, paragraphs 12002.13 and 12002.14 have been affected. Additionally, PMO will visually inspect vehicles for damage and tampering (commercial vehicles contain ID locking tags on doors). Vehicles showing signs of damage or tampering will be escorted to the suspect vehicle area. All radio frequency sources (identified in Chapter 12) must be notified to cease transmissions while shipment is enroute to CMA.

12. Vehicles loaded with ammunition/explosives will not pass through troop quarters or residential areas in the main camp area. Ammunition laden vehicles may pass through the main camp area by way of Del Valle Road only.

NOTE: Appropriate quantity of ammunition used for security purposes and military police operations are permitted throughout the MAGTFTC - MCAGCC. Storage of personally owned ammunition will be per Combat Center Orders for Housing and BEQ'S.

1506. TURN IN

1. All unused ammunition/explosives shall be turned in to the CMA when no longer required.

2. All ammunition/explosive containers/boxes will be inspected by a responsible, qualified and certified ammunition handler that they contain no live rounds, unfired primers, or explosives.

3. Original markings on all empty ammunition/explosive containers, cans and boxes will be painted over or covered with a decal and stenciled with the word "EMPTY."

MAGTFTC, MCAGCC SOP FOR SAFETY

4. Under no circumstances will ammunition/explosives be:
 - a. Buried in any area.
 - b. Discarded off-post or unauthorized areas on-post.
 - c. Transported into and kept in offices, shops, quarters or buildings without proper authority.
 - d. Left in containers without identification.
 - e. Left in unguarded or unsecured areas.
 - f. Purposely removed from MAGTFTC - MCAGCC without command authority.
 - g. Turned into DRMO.
5. The turn in of unused ammunition/explosives, components, scrap, containers and boxes will be prepared and accomplished per CCO P8000.4.

1507. MALFUNCTION, MISHAP AND SERIOUS INCIDENT REPORTING. It is essential to personnel safety that all malfunctions, mishaps, and accidents involving ammunition and explosives be immediately reported.

1. Malfunctions involving the use of Class V(W) shall be reported per MCO 8025.1. Malfunctions involving the use of Class V(A) shall be reported per OPNAVINST 8600.2. Non-Aircraft related explosive mishaps shall be reported as a separate report (Serious Incident) per MCO P5102.1.

2. Commanders shall not attempt to determine the cause of the incident as either weapons-related or explosives-related. Rather, report all malfunctions and mishaps and permit qualified investigators to determine the cause.

3. The Center Explosive Safety Officer (ESO), extension 8464, will be informed of all malfunctions and mishaps and provided a copy of all mishap investigations. The ESO shall maintain a record of all malfunctions, mishaps, and serious incident reports, including recommendations for preventive actions.

MAGTFTC, MCAGCC SOP FOR SAFETY

1508. SUSPECT AMMUNITION AND DUDS

1. Do not touch or handle dud ammunition or ammunition suspected of being dangerous in nature, damaged or tampered with.

2. In the event dud or suspect ammunition is discovered, perform the following:

- a. Without disturbing the ammunition, mark the area.
- b. Call Explosive Ordnance Disposal (extension 6885/6046) or Range Control (BEARMAT) by radio.
- c. Maintain a safe distance and prevent other personnel from entering dud/suspect area.

1509. GUIDANCE. Further regulatory guidance governing ammunition and explosives can be obtained from reference (m) and CCO P8000.4.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 16

ASBESTOS ABATEMENT OVERSIGHT	<u>PARAGRAPH</u>	<u>PAGE</u>
PURPOSE	1600	16-2
BACKGROUND	1601	16-2
APPLICATION	1602	16-2
PROCEDURES	1603	16-2
IDENTIFICATION OF ASBESTOS	1604	16-2
EXCEPTIONS	1605	16-2

CHAPTER 16

ASBESTOS ABATEMENT OVERSIGHT

1600. PURPOSE. To provide general requirements for safety during maintenance procedures which at times may involve the handling of Asbestos Containing Materials (ACM's).

1601. BACKGROUND. Asbestos fibers, which are capable of causing the lung disease asbestosis as well as cancer of the lung and Mesothelioma, are among the most dangerous substances on the job site. If asbestos is present or suspected, safe handling procedures will be followed. Employees, as well as occupants and passersby will not be exposed to known sources of asbestos contamination in excess of the permissible exposure levels contained in 29 CFR 1926.58, "Asbestos, Tremolite, Anthrophyelite, and Actinolite."

1602. APPLICATION. Proper asbestos handling procedures apply in all areas undergoing demolition, construction, alteration, repair, maintenance, or renovation of structures containing an identified source of asbestos content.

1603. PROCEDURES

a. Whenever feasible, asbestos operations shall be conducted in a negative-pressure enclosure.

b. Employees engaged in asbestos operations must have completed an approved asbestos handler course.

c. Employees engaged in asbestos operations must be medically qualified and trained in the use of personal respiratory protective equipment.

d. In addition to the above, the supervisor in charge must be trained in all aspects of asbestos abatement, i.e. attendance at an EPA Asbestos Training Center Course or equivalent.

1604. IDENTIFICATION OF ASBESTOS. Prior to commencement of any work in a facility/location suspected to contain asbestos, a survey will be conducted to determine the actual presence of ACM. Assistance in the identification of ACM may be obtained by contacting the Asbestos Program Manager, Facility Management Division or the Industrial Hygiene department, Naval Hospital, MCAGCC.

MAGTFTC, MCAGCC SOP FOR SAFETY

1605. EXCEPTIONS. 29 CFR 1926.58 exempts short scale, short duration operations such as pipe repair, valve replacement, electrical conduit installation, drywall removal and other general building maintenance or renovation.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 17

OFF-DUTY/RECREATION SAFETY OVERSIGHT

	<u>PARAGRAPH</u>	<u>PAGE</u>
GENERAL	1700	17-2

Chapter 17

OFF-DUTY/RECREATION SAFETY OVERSIGHT

1700. GENERAL

1. This Order chapter establishes procedures to eliminate or minimize the probability of mishaps occurring during an off-duty and/or recreation activities. It covers the prevention of mishaps during various off-duty and recreational activities by Marine Corps personnel. In addition this order provides guidance for safety oversight of Marine Corps Community Services (MCCS) Programs.

2. Commanders at all levels are responsible for the planning and execution of command sponsored and Marine Corps Community Services (MCCS) sponsored off-duty and recreational programs and activities that incorporate risk management to lower the risk presented by off-duty and recreational opportunities.

3. RESPONSIBILITIES

(1) Installation Safety Office

(i) Inspect and evaluate all activities and facilities to provide the greatest degree of inherent safety within the facility and the lowest degree of risk during the operation of the program.

(ii) Assess the hazards and risks presented by the activity or facility, determine controls and implement controls.

(iii) 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.

(2) Commanders/Officers-in-Charge

(a) Shall ensure an off-duty and recreation safety policy is established and incorporates all activities and units under their control.

(b) Shall ensure that Operational Risk Management (ORM) training includes an applications portion addressing off-duty activities.

MAGTFTC, MCAGCC SOP FOR SAFETY

(3) Director MCCS. MCCS Director will be consulted when addressing MCCS related safety matters. The Director shall ensure programs are operated as safely as possible. The policy, procedures and guidance for each operation shall meet the requirements of reference (c) and shall conform to state and local laws as applicable.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 18

OPERATIONAL RISK MANAGEMENT(ORM) TRAINING PROGRAM

	<u>PARAGRAPH</u>	<u>PAGE</u>
GENERAL	1800	18-2
RESPONSIBILITY	1801	18-2
PROCEDURE	1802	18-3

FIGURE

18-1 OPERATIONAL RISK MANAGEMENT WORKSHEET	18-5
18-2 DECISION AUTHORITY	18-6

CHAPTER 18

OPERATIONAL RISK MANAGEMENT(ORM)TRAINING PROGRAM

1800. GENERAL. Operational risk management (ORM) is an integral part of the decision-making process for both Marine Corps military and civilian personnel in all operational and non-operational activities. The primary objective of ORM is to avoid unnecessary risk. ORM identifies hazards, provides a means to analyze the hazards and to quantify the degree of risk, weighs risk against benefits, and eliminates unnecessary risk. The aim is to accomplish the mission but maintain the highest level of protection of safety and health for personnel. Ideally, ORM should become a way of life for personnel. All activities will utilize the ORM Worksheet in figure 20-1 to assess hazards and document the process. MCO 3500.27B contains detailed instructions for the ORM process. Leadership at every level will integrate the five-step ORM process into all new, high-risk, and non-routine tasks, processes, operations, and training activities both on and off duty.

1801. RESPONSIBILITY

1. Minimizing risk is the responsibility of everyone in the chain of command from the head of the organization to the subordinate leaders. Managing risk is critical for all work operations and training activities.

2. Commanding General, Directors, Supervisors, Managers and Commanding Officers

a. Integrate proper safety procedures utilizing the ORM process.

b. Set and enforce safety standards.

c. Provide the resources necessary to accomplish the mission safely.

d. Ensure an ORM Worksheet is completed for every new, high-risk, and non-routine task, operation, process, or training activity.

e. Integrate the controls and countermeasures developed by the ORM process into safety briefings, SOPs, letters of instruction, and work instructions.

MAGTFTC, MCAGCC SOP FOR SAFETY

f. Determine the level at which the ORM process will be executed.

g. Determine the acceptable level of risk for an operation.

h. Ensure first-line supervisors and work leaders are trained in ORM.

i. Refer decision-making for operations to appropriate command level consistent with risk level identified.

3. Supervisors and Managers

a. Emphasize adherence to safety standards.

b. Continuously assess and balance risks against operational requirements and production schedules.

c. Recognize and minimize health and safety hazards.

4. Employees

a. Understand individual safety responsibilities.

b. Take the necessary steps to correct unsafe conditions and acts.

c. Perform tasks to standard.

d. Apply ORM concepts in operational and non-operational activities.

5. Military personnel will include ORM concepts in all off-duty situations including leave and liberty.

1802. PROCEDURE

1. ORM is based on the following four principles:

a. Accept risk when benefits outweigh the cost. Whether engaged in a major operation or working around the shop, a certain amount of risk is involved.

MAGTFTC, MCAGCC SOP FOR SAFETY

The inherent risk is usually not considered and the operation is performed. ORM provides a means to analyze the tasks, determine the possible hazards and degree of risk each possess, and decide whether the benefits outweigh the cost.

b. Accept no unnecessary risk. By performing the hazard analysis, identify the risk factors that may be encountered and evaluate the magnitude of risk that each may present.

c. Anticipate and manage risk by planning. When the risks are known, take action to minimize or eliminate the risks.

d. Make risk decisions at the right level. During the hazard analysis process, identify and classify risks. There may be risks that cannot be mitigated, but that should be addressed by persons higher in the chain of command. The decision must be made at the appropriate level. See figure 20-2 for risk decision matrix.

2. ORM Levels

a. The three levels of ORM are time critical, deliberate, and in-depth. These levels all follow the same basic process, differing mainly in the amount of detailed analysis during planning.

(1) Time-Critical ORM An "on-the-run" mental or oral review of the situation using the five-step process without recording the information on paper is often all that time will allow. The time-critical level of ORM is employed by experienced personnel to consider risk while making decisions in a time-compressed situation.

(2) Deliberate ORM This is the basic ORM procedure. It is done step-by-step using the ORM Worksheet in figure 18-1 to identify and assess risk, to identify ways to control risk, and to assist risk decision-making. The level of risk is determined by using the Marine Corps Standard Risk Assessment Matrix outlined in enclosure (1) of MCO 3500.27B.

(3) In-depth ORM This level is similar to deliberate ORM but in greater detail. Working groups will often form to perform in-depth ORM using a variety of techniques. The use of the ORM Worksheet in figure 20-1 is required.

MAGTFTC, MCAGCC SOP FOR SAFETY

a. Leaders will apply the ORM process during the concept, planning, and execution of operations. ORM will also be addressed during after-action reviews. Time-critical ORM is authorized when a hazard has little chance of causing a mishap, if the mishap would not have severe consequences, or if normal precautions suffice. Deliberate or in-depth ORM will be used under all other conditions.

3. The following five-step ORM process will be used to manage risks:

a. Identify Hazards. Determine how the task will be performed step-by-step and then ask what or how things could go wrong.

b. Assess the Hazards. Decide what is the likelihood of each hazard occurring and what is the consequence if it happens, the severity.

c. Make Risk Decisions. Define actions to eliminate or minimize the effects of each hazard and then determine the residual risk.

d. Implement Controls. Put the actions into the plan for the project.

e. Supervise. Enforce the planned procedures and watch for the changes that they cause; then, if necessary, go back to step one.

4. Decision Authority. Risk assessment will identify the overall risk level associated with an operation. The overall risk associated with the operation is the highest remaining residual risk. The decision authority to execute an operation, given its level of risk, is reflected in figure 18-2.

ORM WORKSHEET

TRAINING MISSION:		ORGANIZATION:		PREPARED BY:		DATE:	
OPERATIONAL PHASE	HAZARD	CAUSES	INITIAL	DEVELOP CONTROLS	RESIDUAL	HOW TO IMPLEMENT	
		RAC ASSESSMENT CODE MATRIX		COMMAND REVIEW / APPROVAL			
<p>HAZARD SEVERITY</p> <p>I - CATASTROPHIC - DEATH, PERMANENT DISABILITY, MAJOR PROPERTY DAMAGE</p> <p>II - CRITICAL - PERMANENT PARTIAL DISABILITY, MAJOR SYSTEM OR MINOR PROPERTY DAMAGE</p> <p>III - MARGINAL - MINOR INJURY, MINOR SYSTEM OR PROPERTY DAMAGE</p> <p>IV - NEGLIGIBLE - FIRST AID, MINOR SYSTEM DAMAGE</p> <p>MISHAP PROBABILITY</p> <p>A - FREQUENT</p> <p>B - LIKELY</p> <p>C - OCCASIONAL</p> <p>D - UNLIKELY</p> <p>RISK ASSESSMENT CODE (RAC)</p> <p>1 - CRITICAL</p>		H A Z A R D S E V E R I T Y				M I S H A P P R O B A B I L I T Y	
		I				O I C:	
		II				X O:	
		III				C O:	
		IV				R C O:	

MAGTFTC, MCAGCC SOP FOR SAFETY

Figure 18-2
DECISION AUTHORITY BASED ON THREAT LEVEL

Risk Level	Decision Authority
1 - Critical	Commanding Officer
2 - Serious	Executive Officer
3 - Moderate	Department Director
4 - Minor	Division Head
5 - Negligible	Supervisor

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 19

ERGONOMICS OVERSIGHT	<u>PARAGRAPH</u>	<u>PAGE</u>
ERGONOMICS	1900	19-2
PURPOSE	1901	19-2
INFORMATION	1902	19-2
BACKGROUND	1903	19-2
RESPONSIBILITIES	1904	19-2
ERGONOMICS PROGRAM ELEMENTS	1905	19-5

CHAPTER 19

ERGONOMICS OVERSIGHT

1900. ERGONOMICS

1901. PURPOSE. This Chapter establishes procedures and requirements to implement an ergonomics program. The goal is to prevent musculoskeletal disorders in Marine Corps military and civilian personnel. A competent person with ergonomics training will assess all situations that expose Marine Corps personnel aboard any installation, or unit, to musculoskeletal system risks in order to implement controls.

1902. INFORMATION. Musculoskeletal disorders affect soft tissues of the neck, shoulder, elbow, hand, wrist, and finger. 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. Ergonomics seeks to adapt job and workplace to worker by designing tasks and tools that are within the worker's capabilities and limitations. Finding solutions to these hazards is the most significant workplace safety and health issue of the Marine Corps.

1903. BACKGROUND

1. Musculoskeletal disorders represent 62 percent of all reported illnesses in the private sector, as reported by Bureau of Labor Statistics in their 1995 Annual Survey of Occupational Injuries and Illness.

2. During recent years, there has been an increase in reporting of musculoskeletal disorders such as back injuries and carpal tunnel syndrome for Marine Corps personnel. A part of this increase can be attributed to changes in work processes, such as automated office equipment and associated musculoskeletal risks. Through advanced information technology and training, Marine Corps personnel have an increased awareness of these disorders and more are reported.

1904. RESPONSIBILITIES

1. Commanders, Department Heads, and Directors

a. Ensure personnel exposed to musculoskeletal risks receive appropriate training.

MAGTFTC, MCAGCC SOP FOR SAFETY

b. Designate an ergonomics coordinator and members for an ergonomics team, with advice from local medical personnel, to administer an ergonomics program.

c. Allocate resources to ensure ergonomic considerations become a fundamental aspect of process improvement.

d. Ensure coordination of medical aspects of the ergonomics program with responsible Medical Treatment Facility (MTF).

2. Base Safety Director/Unit Safety Officer

a. Provide ergonomics training and education. Assistance is available from the local Naval MTF.

b. Serve as a member of an ergonomics team or designate a representative from the safety office.

c. Oversee safety aspects of the ergonomics effort.

d. Review injury and illness records related to musculoskeletal disorders, develop trend analyses, and report results to ergonomics team and OSH safety council or committee.

e. Incorporate fundamental ergonomic principles into new or existing workstations through facilities engineering designs.

3. Director, Public Works or Installations and Environment Department

a. Integrate ergonomic considerations into all workplace improvements.

b. Implement ergonomics team recommendations to eliminate or reduce musculoskeletal risks.

c. Appoint an advisory or support representative from engineering or maintenance to ergonomics team.

4. Director, Human Resources Office

a. Ensure newly appointed supervisors, managers, and employees receive appropriate ergonomics training.

b. Appoint at least one representative to serve on ergonomics team. This may be the Injury Compensation Program Administrator (ICPA).

MAGTFTC, MCAGCC SOP FOR SAFETY

c. Use local medical facility recommendations in the assignment of injured workers to light or restricted duty.

d. Provide ergonomics team information on compensation costs associated with musculoskeletal disorders to enable them to perform trend analysis.

5. Director, Business and Logistics Support Department (Director, Contracting and Purchasing)

a. Ensure all equipment (e.g., furniture, tools, work stations, material handling devices) has been evaluated to meet ergonomic requirements or ergonomics team recommendations, prior to purchase.

b. Ensure integration of ergonomic considerations when purchasing new equipment.

c. Appoint an advisory representative from Contracting or Purchasing to serve on ergonomics team.

6. Resident Officer In Charge of Construction (ROICC)

a. Integrate ergonomic considerations into facility modifications and construction.

b. Implement ergonomics team recommendations to eliminate or reduce musculoskeletal risks.

c. Appoint an advisory representative to serve on ergonomics team.

7. Ergonomics Coordinator

a. Receive at least 40 hours of formal training in ergonomics (CIN: A-493-0085).

b. Chair ergonomics team and provide an interface with OSH council or committee.

c. Serve as focal point for Base or unit ergonomics program.

d. Ensure upper management support, recognition of contributions, and availability of resources.

MAGTFTC, MCAGCC SOP FOR SAFETY

e. Develop and implement Base or unit ergonomics plan with assistance of ergonomics team and approval of OSH council or committee.

f. Ensure accurate record keeping of ergonomics team reports.

g. Audit status of implementation of the ergonomic plan annually to include workplace processes, awareness, and documentation.

8. Ergonomics Team

a. Assist in developing and implementing Base or unit ergonomics plan. Set program goals and objectives and develop strategies to address issues.

b. Identify existing and potential musculoskeletal risks.

c. Ensure worksite evaluations are completed. These evaluations may be included in the periodic industrial hygiene surveys.

d. Set priorities for identified musculoskeletal risks for abatement.

e. Implement corrective action plans.

f. Develop methods to evaluate the effectiveness of corrective actions and document results.

g. Evaluate and present new "ergonomic" equipment and maintain a library.

h. Maintain documentation on annual surveys, team meetings, trend analyses, investigations, ergonomic improvements, and associated costs.

9. Supervisors

a. Assist ergonomics coordinator in implementing the ergonomics plan.

b. Ensure personnel receive ergonomics awareness training as described in NAVMC DIR 5100.8

MAGTF/TC, MCAGCC SOP FOR SAFETY

c. Request assistance from the ergonomics coordinator, ergonomics team, and Base or unit safety office for recognizing, assessing, and monitoring musculoskeletal risk factors.

10. Marine Corps Personnel Conducting Work Where Musculoskeletal Risks Can Reasonably Be Expected

a. Request supervisory assistance when assessing potential musculoskeletal risks.

b. Report unsafe work conditions to supervisors.

c. Provide their knowledge and feedback on any job changes proposed or implemented.

d. Communicate issues of concern and suggestions through ergonomics team.

e. Recognize symptoms and causes of musculoskeletal disorders and report them early.

f. Support workplace innovations and changes that reduce the risk of musculoskeletal disorders.

1905. ERGONOMICS PROGRAM ELEMENTS. Further guidance is available in NIOSH PUB. 97-117

1. Management Commitments and Employee 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 key, for preventing musculoskeletal disorders by risk identification and developing an effective means for hazard abatement.

2. Workplace 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 will assist in determining where detailed job analysis and intervention priorities are needed.

MAGTFTC, MCAGCC SOP FOR SAFETY

a. One method of workplace analysis requires a review of mishap logs, compensation claims, personnel complaints and suggestions, safety inspections, and industrial hygiene surveys for musculoskeletal disorders. Analysis will include the body part involved, nature of injury or illness, lost work time (workdays and light or restricted duty days), and medical and compensation case costs. Where mishap and compensation data analysis reveals a prevalence of musculoskeletal disorders, jobs may be prioritized for detailed analysis based on the incident rate, severity of risk, and depth of engineering support needed. Detailed analysis characterizes the risk factors and recommends and prioritizes corrective action.

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 industrial hygiene survey) reveal potential for musculoskeletal disorders and mishap and compensation data analysis is inconclusive, a symptoms or body part discomfort survey will be administered to determine if intervention is warranted. This method provides a proactive approach on collecting information prior to actual injury.

3. Hazard Prevention and Control. The goal of hazard prevention and control is to eliminate, reduce or control the presence of musculoskeletal risk factors. Risk factors commonly associated with musculoskeletal disorders include: repetitive motion, force or mechanical stress, awkward or static posture, vibration, and work organizational or stress factors. Effective design or redesign of a task or workstation is the preferred method of preventing and controlling exposure. Methods of intervention include engineering controls, administration controls, and PPE as described in Chapter 8 of this Manual. Back belts and wrist splints are not considered personal protective equipment. These devices are medical appliances that may be prescribed by credentialed health care providers responsible for medical clearance, monitoring, and proper fit. All risks identified will be assigned a Risk Assessment Code (RAC) and entered into the hazard abatement log as described in Chapter 4.

MAGTFTC, MCAGCC SOP FOR SAFETY

- a. Managers need to understand ergonomic issues to be able to support the program with adequate resources.
 - b. Supervisors need to recognize hazardous work situations.
 - c. Personnel need to recognize and report stressful work situations to their supervisors and cooperate with intervention measures.
 - d. Ergonomics team members need to interpret safety, health, and compensation data to make informed program and management decisions.
 - e. Engineers need to recognize hazardous work conditions to be able to assist with equipment and workstation design.
 - f. Training will be documented per Chapter 5. A copy will be provided to the Base or unit Ergonomics Coordinator and Safety Manager.
 - g. Retraining will be conducted when personnel are assigned to a new job with different risks, or when risks are newly identified in a job.
4. Program Evaluation and Review. The Ergonomics Coordinator will annually assess the implementation progress and effectiveness of the Base or unit ergonomic plan. This audit will reveal gaps in the program and may identify helpful ideas for further program development

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 20

REPORTS OF USAFE OR UNHEALTHFUL WORKING CONDITIONS

	<u>PARAGRAPH</u>	<u>PAGE</u>
PURPOSE	2001	20-2
BACKGROUND	2002	20-2
RESPONSIBILITIES	2003	20-2
INITIAL REPORTS AND ACTIONS	2004	20-2
APPEALS	2005	20-3
STOPPING WORK	2006	20-3
POSTING OF NOTICES	2007	20-3
NOTIFICATION OF HAZARD	2008	20-3
RETENTION OF RECORDS	2009	20-3
CONTENT OF INSTRUCTION OF EMPLOYEE	2010	20-3
GRIEVANCE PROCEDURES	2011	20-4
FIGURE 20-1 NAVMC 11401 REPORT OF UNSAFE/UNHEALTHY WORKING CONDITIONS		20-5
FIGURE 20-2 NAVMC 11400 OSFH DEFICIENCY NOTICE		20-6
FIGURE 20-3 RISK ASSESSMENT CODE DEFINITION		20-7

Chapter 20

Reports of Unsafe or Unhealthful Working Conditions

2001. Purpose. This Chapter provides guidelines for the submission, evaluation, and appeal of reports of unsafe or unhealthful working conditions by Marine Corps Service Members and Civilian Employees.

2002. Background. Early detection of unsafe or unhealthful working conditions and prompts correction of these and related hazards are major elements in the mishap prevention and the OSH Program. This Chapter provides guidelines for the submission, evaluation, and appeal of reports of unsafe or unhealthful working conditions by Marine Corps Service Members and Civilian Employees. Finding, reporting and abating hazards in the workplace are a team effort, and the processes to ensure correction will be made available and simple for everyone.

2003. Responsibilities

a. Unit Commanders and Directors will promptly address reports of unsafe or unhealthful working conditions and promptly abate any deficiency. Many conditions that constitute safety and occupational health hazards can be eliminated as soon as they are identified. Whether initiated verbally or in writing, Commanders will take action to correct all deficiencies upon the earliest notification of a problem, both formal and informal, from anyone in the workplace.

b. Since detection of unsafe or unhealthful working conditions at the earliest possible level is the essence of an effective prevention program, supervisors will encourage Marine Corps Service Members and Civilian Employees to actively seek out and report all unsafe or unhealthful working conditions; ensure prompt investigation and response to all found deficiencies, and implement the procedures for appeal to higher authority as outlined below.

2004. Initial Reports and Actions. Any employee, or representative of such employee, who observes an unsafe or unhealthful working practice or condition, or a violation of a safety or health standard, will advise the workplace supervisor of the condition orally or in writing. In lieu of orally reporting a deficiency to their supervisors, employees may file a written Report of Unsafe Unhealthful Working Conditions, NAVMC 11401, figure 20-1. Those desiring anonymity may file a written ANYMOUSE report.

MAGTFTC, MCAGCC SOP FOR SAFETY

1. The Ground Anonymous Safety Reporting Program (ANYMOUSE) allows Service Members and Civilian Employees to report hazards without fear of reprisal by anyone who may be violating safety policies or have complicity in the conditions that are creating the hazard. The aim of the ANYMOUSE Program is to empower all people down to the lowest level to resolve issues about safety in the workplace. A copy of the Report of Unsafe Unhealthful Working Conditions and ANYMOUSE will be forwarded to the Base Safety Division for evaluation and investigation. These forms are available electronically at https://navalforms.documentservices.dla.mil/formsDir/_NAVMC_11509_EF_9068.pdf and action should be as follows:

a. Within 5 working days after notification, the workplace supervisor will advise the Base Safety Division in writing, via the responsible Unit Commander (or equivalent), of the corrective action taken.

b. The reporting person will be notified in writing within 15 working days of action taken to resolve the condition. The Base Safety Manager or designated representative will sign this notification. If notification to the reporting person cannot be made within 15 days, an interim reply will be made by phone, e-mail or in person.

c. The reporting person will be notified within 15 days if the Base Safety Division determines the condition is not unsafe or unhealthful. This notification will be signed by the Base Safety Manager or his designated representative, and will contain the rationale for the determination.

2005. Appeals. The reporting person is encouraged to first appeal to the Base Safety Division to confer over the determination if further resolution is requested. However, the reporting person may submit a formal appeal by the procedures outlined in reference (a) if more persuasive mediation is required to discuss Base Safety Division's assessment.

2006. Stopping work. In all "Imminent Danger" situations, a condition that immediately threatens to cause the loss of life or serious injury or illness of an employee, the appropriate management official will stop all work then initiate immediate abatement action and notify the Base Safety Division immediately whom will investigate within 24 hours.

MAGTFTC, MCAGCC SOP FOR SAFETY

2007. Posting of Notices. In all cases where employees are exposed to unsafe or unhealthful working conditions, as defined in Chapter 9 of reference (a), verified by the Base Safety Division and issued a Risk Assessment Code (RAC) of 1, 2 or 3, Base Safety will complete a OSH Deficiency Notice, NAVMC 11400, figure 20-3 and 20-4.

A workplace supervisor will post the Notice in the immediate vicinity of the hazardous condition. Information on abatement actions may also be posted. These notices will not be removed until the condition has been corrected or for 30 days, whichever is later.

2008. Notification of Hazard. To minimize the necessity for employees to resort to written reports or appeal procedures, all Unit Commanders will:

a. Ensure that all management and supervisory personnel are clearly apprised of their responsibility for initiating prompt corrective action of unsafe or unhealthful conditions, and for initiating work stoppage where "Imminent Danger" situations exist.

b. Apprise higher authority of "Imminent Danger" or "Serious" situations that are outside the activity's capability to correct.

2009. Retention of Records. In compliance with Department of Labor, Occupational Safety and Health Administration, requirements set forth in reference (g), copies of reports and records of actions taken will be retained from the end of the calendar year to a minimum of up to five years. Upon completion of the minimum holding period, records will be forwarded or disposed of per reference (f).

2010. Content of Instruction to Employees. In addition to posting Notices of Unsafe or Unhealthful Working Conditions, all activities will develop and post in conspicuous places, blank copies of NAVMC 11401, "Unsafe or Unhealthful Working Conditions" with instructions and procedures to be followed, as well as forms, in reporting such conditions. The instructions to be posted for employees' information will include statements which:

MAGTFTC, MCAGCC SOP FOR SAFETY

- a. Encourage employee participation in prompt identification and reporting of unsafe or unhealthful working conditions.
- b. Encourage immediate verbal reports from employees to workplace supervisors for the purpose of identifying hazardous conditions. Specify that such reports may also be made in writing. Identify the location of the Report of Unsafe or Unhealthful Working Conditions and ANYMOUSE Reports.
- c. Set forth step-by-step reporting and appeal procedures.
- d. Emphasize strict adherence to the specified reporting procedures. Emphasize that reports that bypass the established procedures will be returned to the originator, thereby delaying prompt action on the report.
- e. Assure employees they may make anonymous written reports to the Base Safety Division and that these reports will be treated in the same manner as those in which the originator is identified.
- f. Protect the identity of the person making the report if that person so desires.
- g. Clearly state that no reprisals or other punitive action will be taken against any employee originating a report.

2011. Grievance Procedures. Nothing in this chapter is intended to interfere in any way with the prior, simultaneous or subsequent use by any employee of established grievance procedures as a means of requesting correction of alleged unsafe or unhealthful working conditions.

MAGTFTC, MCAGCC SOP FOR SAFETY

UNSAFE OR UNHEALTHFUL WORKING CONDITION NAVMC 11401 (8-98) (EF) SN: 0109-LF-071-1000	
1. I believe a condition exists which is a safety or health hazard to Marine Corps personnel or property. ((check one))	
Civilian: <input type="checkbox"/>	Military: <input type="checkbox"/>
Employee Representative: <input type="checkbox"/>	Other: <input type="checkbox"/>
2. Does this hazard immediately threaten life or health?	
Yes <input type="checkbox"/>	No <input type="checkbox"/>
3. Building, worksite, or other location where you believe the unsafe or unhealthful condition exists.	
4. Supervisor (if know) at this location is:	
and phone number is:	
5. Briefly describe hazard:	
6. Number of employees exposed to or threatened by hazard:	
7. If know, list any safety or health standard which you believe may apply to this condition.	
8. To your knowledge, has this condition been reported to, discussed with, or brought to the attention of a supervisor?	
Yes <input type="checkbox"/>	No <input type="checkbox"/>
9. If yes, please give the results, including any efforts by management to correct condition.	
10. Name (Optional):	
phone number (Optional):	
11. If you, are a representative of employees, provide name of your organization.	
Case) number: (Filled in by Installation or Unit Safety Office).	

Designed using FormFlow 2.15, HQMCARSE, Aug 98

Figure 20-1.--Report of Unsafe/Unhealthy Working Conditions
NAVMC 11401

MAGTFTC, MCAGCC SOP FOR SAFETY

OSH DEFICIENCY NOTICE			
SECTION A - DEFICIENCY INFORMATION			
Command:		ID Number:	
Building or Area:		Specific Location:	
Description of Hazard:			
Standard Violated:			
Work Order Type:		Deficiency Status:	
Personnel Exposed:		Abatement Priority:	
RAC:	Mishap Probability:	Hazard Severity:	
OSH Official:	Date Identified:	Date Issued:	
SECTION B - ABATEMENT STATUS (Complete all applicable parts)			
Responsible for abatement:			
<i>INTERIM CONTROLS</i>			
<i>ABATEMENT PROJECT INITIATED</i>			
Project or Work Order Description:			
Work Order Number:	Cost Estimate:	Work Order Date:	Est. Completion Date:
<i>DEFICIENCY CORRECTED</i>			
Correction Made:			
Labor Cost:	Material Cost:	Other Cost:	
Signature:		Completion Date:	
SECTION C - COMMENTS and RECOMMENDED ACTIONS			
The following interim measure(s) should be applied if the permanent measures cannot be instituted:			
The following permanent measure(s) are recommended to alleviate a hazard:			
Comments:			

NAVMC 11400 (10-98)

Figure 20-2.—NAVMC 11400 OSH Deficiency Notice

RISK ASSESSMENT CODE DEFINITIONS

1. Risk Assessment. An expression of possible loss, described in terms of hazard severity and mishap probability, and exposure to hazard.
2. Hazard. Any existing or potential condition that can result in a mishap.
3. Mishap. An unplanned event or series of events that result in death, injury, occupational illness or damage to or loss of equipment or property.
4. Hazard Severity. An assessment of the expected consequence, defined by degree of injury or occupational illness that could occur from a hazard.
5. Mishap Probability. An assessment of the likelihood that, given exposure to a hazard, a mishap will result.
6. Risk Assessment Code (RAC). An expression of the risk associated with a hazard that combines the hazard severity, mishap probability, and personnel exposure.

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

Hazard Severity

- I - Death or permanent total disability
- II - Permanent partial disability or temporary total disability in excess of 3 months
- III - Lost workday mishap/compensible mishap
- IV - First aid or minor supportive medial treatment, or simple violation of standard

Mishap Probability

- A - Likely to occur immediately
- B - Probably will occur in time
- C - Possibly to occur in time
- D - Unlikely to occur

Risk Assessment Codes

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

Figure 20-3.—Risk Assessment Code Definition

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 21

RADIOLOGICAL SAFETY	<u>PARAGRAPH</u>	<u>PAGE</u>
APPLICATION	2101	21-1

MAGTFTC, MCAGCC SOP FOR RADIATION SAFETY

MAGTFTC, MCAGCC SOP FOR LASER HAZARDS CONTROL

MAGTFTC, MCAGCC SOP FOR RADIO FREQUENCY (RF) PERSONNEL
PROTECTION

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 22

TACTICAL SAFETY PROGRAM

	<u>PARAGRAPH</u>	<u>PAGE</u>
DISCUSSION	2200	22-2
BACKGROUND	2201	22-2
IMPLEMENTATION	2202	22-3
RESPONSIBILITIES	2203	22-3
TRAINING	2204	22-5
UNIFORMS AND EQUIPMENT	2205	22-7

CHAPTER 22

TACTICAL SAFETY PROGRAM

2200. DISCUSSION. This chapter establishes the procedures and requirements for the Marine Corps tactical safety program. The tactical safety program is directed towards aiding in the maximum protection of manpower, material, and equipment through the application of a comprehensive, effective, and continuous safety program support for all Marine Corps activities, units, and personnel. The intent of this chapter is to provide guidance to installation and tenant commanders, installation safety managers, and tactical safety specialists for implementing the tactical safety program both in garrison and in a field environment. The following requirements compliment and are intended to be used in conjunction with the provisions of Marine Corps and other service orders and directives, and other nationally recognized standards that provide more detailed guidance and information on specific safety areas. Commanders may find it necessary to issue additional guidance regarding specific and local safety requirements that are particular to the activities and functions of the command.

2201. BACKGROUND

1. The Marine Corps has had a comprehensive safety program for many years. The focus of the program has traditionally been geared toward safety in garrison, and compliance with the OSH Act of December 1970. Only recently, have trained civilian tactical safety specialists accompanied units on deployment to provide their safety services in an operational environment.

a. The success or failure of a unit's safety program is directly related to the efforts put forth by the commander down to the small unit leaders, and the safety mindset of each member of the unit. Command action is just as essential to success in preventing mishaps as it is to any other assigned mission.

b. Installation Core Safety Service staffing is based on installation population, thus determines the manning level of the Installation Safety Office. The safety office manning level equates to approximately one safety specialist per regimental size organization. When a tactical safety specialist is assigned to a unit, the unit receives a trained professional to focus strictly on safety.

MAGTFTC, MCAGCC SOP FOR SAFETY

By working closely with the officers, SNCO's, NCO's and junior enlisted Marines, the tactical safety specialist gains a unique understanding of the problems and intricacies the unit encounters and contributes unbiased guidance toward resolution. The tactical safety specialist further enhances the safety awareness and mind set throughout the unit and reinforces the commander's commitment to accomplishing the mission safely.

2. The tactical safety specialist supports the unit in the same fashion as the Chaplain and Corpsman communities do. They are non-combatants but play a crucial role to the health, welfare, and well being of the command.

2202. IMPLEMENTATION. The Installation Safety office will assign Tactical Safety Specialist to work with commanders of regimental sized organizations/areas in order to provide essential garrison safety and occupational and health support, i.e. safety training, building/workplace inspections, etc. The commander may desire the Tactical Safety Specialist to accompany the unit during field training evolutions, deployments and operations. If this support will extend off the home based installation, the Tactical Safety Specialist will be assigned TAD orders and will be under the operational control of the supported unit commander. Memorandum of Agreements between the Installation Safety Office and the supported regiments are highly encouraged.

2203. RESPONSIBILITIES

1. Unit Commanders.

a. Ensure all safety personnel are aware of their responsibilities and aspects of the Marine Corps tactical safety program.

b. Provide a written request 90 days prior to the unit operation or deployment, through the appropriate chain of command for a tactical safety specialist.

c. Include the tactical safety specialist as a special staff member of the unit.

d. Provide messing and berthing for tactical safety specialists accompanying the unit on deployment. Messing and berthing will be the same as the Marines of the unit receive. No special courtesies are required.

MAGTFTC, MCAGCC SOP FOR SAFETY

e. Provide ground transportation for the tactical safety specialist to accomplish their duties while on deployment. Typically a HMMWV with a driver or a rental vehicle with 4 wheel drive capabilities will suffice. Some installations may provide the tactical safety specialist with a vehicle for use while on deployment. In such cases, arrange for transporting the vehicle by including it in the load plan with the unit vehicles to and from the deployment location.

f. Include the tactical safety specialist on the T/O for air or ship transportation to and from the deployment location.

g. Validate overtime worked by the tactical safety specialist while on deployment/TAD.

h. Provide standard issue 782 gear if needed for tactical safety specialists accompanying the unit on deployment.

i. Provide medical and dental care to tactical safety specialists if needed while on deployment.

2. Installation Safety Office.

a. Provide a written response to units requesting tactical safety specialist support. The response should include the following as a minimum:

(1) Name, rank, SSN, blood type of the tactical safety specialist being assigned.

(2) Dates of deployment.

(3) Request to validate and verify overtime or compensation time worked while deployed. It shall be determined prior to assignment and deployment how overtime or compensation time will be paid to the deploying tactical safety specialist.

(4) VIN, license plate, gross weight, outside dimensions, and a brief description of the vehicle being transported if applicable.

(5) Amplifying instructions as necessary.

a. Provide fully qualified tactical safety specialists to requesting units. Tactical safety specialist qualifications are provided in paragraph 23004 of this chapter.

MAGTFTC, MCAGCC SOP FOR SAFETY

b. Provide all equipment necessary for the tactical safety specialist to function independently while deployed. Equipment includes computer, cell phone, orders and directives, camera, mishap investigation kit, uniforms and associated gear not provided by the requesting unit, and other equipment as necessary.

c. Ensure the assigned tactical safety specialist has the proper security clearance, DoD Civilian ID, government and personal passport, visa, immunizations and preventative medicines, AT/FP, medical examinations, training, TAD Orders, DD Form 93 Record of Emergency Data, dog tags, and DNA samples or PANOREX dental x-rays.

d. Ensure Tactical Safety Specialists are designated Emergency Essential, requiring the incumbent to execute DD Form 2365, as such the incumbent maybe required incident to a crisis or wartime.

3. Tactical Safety Specialists

a. The goal of the tactical safety specialist is to support the unit's mission. The tactical safety specialist must integrate military unique situations in harmony with the applicable occupational, safety and health requirements and the unit's overall mission to be fully successful. There may be times when safety standard concessions must be made to maintain the scope of the mission while staying within the limits of reality in terms of time and resources available. In such cases, ORM and what is perceived as common sense shall be your guide.

b. Make recommendations to the commander for establishing and maintaining a continuous safety education and mishap prevention effort consistent with the unit's mission

c. Provide the unit commander and staff with regular safety progress reports. Attend daily battle rhythm meetings while deployed and regularly scheduled meetings while in garrison and provide input.

d. Work closely with the unit safety officers to implement and maintain all aspects of the unit's safety and health program.

MAGTFTC, MCAGCC SOP FOR SAFETY

e. Promote safety at all times to keep unit personnel constantly aware of safety aspects in the performance of their duty.

f. Conduct safety training as required to support the unit's mission.

g. Provide detailed mishap and trend analyses and provide recommendations to prevent recurrences.

h. Conduct continuous safety inspections of all sites, support equipment, and evolutions while deployed. Ensure immediate corrective action is taken when possible, or appropriate personnel are notified to correct noted discrepancies.

i. Must be able to deploy for long periods of time while working in living in a field environment.

j. Maintain an accurate record of work hours while deployed. Ensure the designated unit representative validates overtime and compensation time.

k. Provide technical Safety Services during training and operations to include; convoy, explosive, fire protection and prevention, range, HAZMAT and ORM.

l. The tactical safety specialist shall support the unit in garrison on a daily basis assisting with all aspects of managing the unit safety program.

m. The tactical safety specialist supports the unit while deployed by providing guidance in the planning stages, oversight and evaluation during the actual operation, and after action analysis upon completion.

n. Provide tactical safety and/or special training and briefs to requesting unit's prior deployment on a wide variety of safety related topics. Special training may be specific to a foreign country on topics such as driving and traffic requirements, HAZMAT and retrograde disposal, insect and vermin awareness, precautions for infectious disease, etc.

MAGTFTC, MCAGCC SOP FOR SAFETY

2204. TRAINING

1. Tactical safety specialists will be fully qualified when they have completed the following training:

- a. Instructor Certified
- b. MFP Tactical Safety Class
- c. Ground Safety for Marines or MARFORPAC MTT Course
- d. Mishap Investigation Course
- e. ORM Course (Train the Trainer Course preferred)
- f. Range Safety Officer Level II Course
- g. Fire Safety Course
- h. Intro to Industrial Hygiene Course
- i. Construction Safety Standards Course
- j. Electrical Safety Standards Course
- k. Military Map Reading Course
- l. Transportation of Hazardous Material Course
- m. HAZMAT Operations (use, storage, disposal, spill response procedures)
- n. Explosive Safety Officer Qualified/Certified
- o. Basic First Aid
- p. Weapons Training (when appropriate). Annual Qualification with (9mm/M-4)
- q. NBCD Training

2. The tactical safety specialist shall have a comprehensive working knowledge of the following:

- a. Ability to communicate effectively both in writing and orally with all levels of the chain of command.

MAGTFTC, MCAGCC SOP FOR SAFETY

b. Psychological and Physical Factors that Motivate Safe Performance.

- c. Marine Corps Structure and Chain of Command
- d. Marine Corps Customs, Courtesies, and Traditions
- e. Convoy Operations Safety
- f. Maritime Offload/Backload Operations Safety
- g. A&E Combat Destruct training requirements
- h. Aviation weapons operations
- i. Field Ammunition Storage requirements
- j. Weapons Handling Safety
- k. Site Specific Range Safety Procedures
- l. Tent Camp Safety
- m. Recreational Safety
- n. Basic Field Survival Skills
- o. Laws of War/Geneva Conventions
- p. Standards of Conduct
- q. Customs and Courtesies of Host Country

2205. UNIFORM AND EQUIPMENT

- 1. 511 gear tactical clothing is now the standard uniform issue for tactical safety specialists deploying with Marines.
- 2. Tactical safety specialists shall deploy with a complete set of 782 gear. Follow the supported unit gear checklist for each deployment to determine specific requirements, i.e. cold/hot weather, etc.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 23

CONTROLLING OF HAZARDS OF ELECTROMAGNETIC RADIATION

	<u>PARAGRAPH</u>	<u>PAGE</u>
PURPOSE	2300	23-1
BACKGROUND	2301	23-1
PROCEDURES	2302	23-1
SAFETY SOP	2303	23-2

CHAPTER 23

CONTROLLING OF HAZARDS OF ELECTROMAGNETIC RADATION

2300. PURPOSE. To provide information on electromagnetic radiation hazards and establish controlling measures to ward off health or material hazards per reference (n) and (j).

2301. BACKGROUND. High intensity electromagnetic radiation is known to stimulate heating when beamed upon certain materials. This heat may result in combustion or explosion of some materials or in permanent tissue damage in animals or humans so exposed. The degree of hazard depends on many variables but chiefly on the intensity and wave length of the radiation and its duration and on the material arrangement or body areas exposed. For example, high-power radar antennas will emit sufficient radio-frequency energy to ignite mixtures of metal powders and gasoline or explode flash bulbs at considerable distances. Low power radars may accomplish the same effect at reduced distances. Likewise, fields of energy sufficiently intense to produce tissue damage may be found in the immediate vicinity or some distance away from operating antennas depending on the power of the radar. All areas with radio-frequency power densities greater than 0.01 watt/cm², intermittent or continuous operation shall be considered as hazardous to health.

2302. PROCEDURES.

1. The commanding office of the Marine Corps Communication-Electronics School will ensure that radars are never operated in the "high powered" mode.
2. To assure that the personnel hazard density is not exceeded, the commanding officer of the Marine Corps Communication-Electronics School must insure all radars, with continuous antenna rotation mode capability, in the Marine Corps Communication-Electronics School system are operated in rotating antenna mode.
3. Commanding officers must ensure all personnel are aware of the potential dangers of radar radiation in the vicinity of radar antenna.
4. Operating supervisors will insure all personnel observe the minimum, safe distances from operational radar/radio equipment specified in Figure 12-1. Surrounding areas which are subject to ingress/egress by unauthorized personnel shall be posted so as to preclude the possibility of personnel entering hazardous areas.

MAGTFTC, MCAGCC SOP FOR SAFETY

5. Direct visual examination of any microwave radiation, reflectors, or wave guide horn is prohibited while the equipment is in operation.

6. Where test procedures require free space radiation, the radiating device (antenna) must be positioned so as to direct the radiated beam away from inhibited structures or other places where there are personnel. In positioning such radiating devices, care must be taken to avoid reflection of either primary beam or accessory lobes in such a manner as to expose personnel in adjacent areas.

7. The practice of discharging into the surrounding area the radio frequency output of high-power generators producing average power levels of .01 watt/cm² or more will be kept to a minimum. Wherever feasible, dummy loads, water loads, or absorbent materials shall be used to absorb the energy output of such equipment while it is being tested.

2303. SAFETY SOP

8. Commanding officers and other officials responsible for the storage, transportation, use and maintenance of Hazards of Electromagnetic Radiation to Ordnance (HERO) unsafe and HERO susceptible ordnance will insure that the distance from radars and other Electromagnetic Radiating (EMR) devices as shown by Figure 12-1 for personnel and ordnance equipment are maintained.

9. Supervisory personnel operating EMR devices in the field will insure that the distances shown in Figure 12-1 for personnel and ordnance equipment are maintained.

10. During the time ammunition is being transported on Del Valle Road, all mobile and fixed transceivers with a power output of over 35 watts will be secured if they are operating on or within 500 feet of Del Valle Road between the main gate and the ammunition storage areas.

11. All organizations located at Marine Corps Air Ground Combat Center that receive or are about to receive new items of ammunition which is HERO unsafe, will notify the Center Magazine Area (CMA) OIC in order that precautionary measures can be effected. The Center CMA IOC will notify the Base Explosives Safety Officer.

MAGTFTC, MCAGCC SOP FOR SAFETY

12. All organizations located at Marine Corps Air Ground Combat Center that receive new types of electromagnetic radiating devices or change the configuration of existing EMR devices in the medium and high power range will notify the Center Communication Officer so that precautionary measures can be taken.

13. All commercial and government vehicles transporting ammunition will be held at the main gate until they have been cleared by the Provost Marshal's Office to proceed to the ammunition holding or storage area. Prior to transporting ammunition from the ammunition holding or storage area, the Officer in Charge of the CMA will request clearance from the Provost Marshal's Office.

14. Prior to issuing clearance for the transportation of ammunition from the main gate to the CMA ammunition storage area or transporting ammunition from the ammunition storage area to the main gate, the Provost Marshal's Office will insure that the following action has been effected:

a. Notify the units listed below to secure all EMR devices with a power output over 35 watts that are located within 500 feet of Del Valle Road.

(1) Communication Support Co., extension 6247/6680.

(2) Marine Corps Communication-Electronics School:
Safety Officer, ext. 6026; Logistics Chief, ext. 6147;
Maintenance Officer, ext. 5597; after duty hours, MCCES OOD,
ext. 6157/6519.

b. Receive assurance from the units listed above that all EMR devices have been secured and log same.

c. Notify all units along the ammunition route that are set up for training purposes with EMR devices, to secure such devices.

d. Notify secured units when it is safe to commence operation of their EMR devices.

MAGTFTC, MCAGCC SOP FOR SAFETY

15. The Combat Center Communication-Electronics Shop. Upon notification of the arrival of an ammunition vehicle at the main gate, or of the departure of an ammunition vehicle from the ammunition storage area, the Communication-Electronics Shop will secure testing of any radiating items of communication-electronics equipment with a power output of over 35 watts.

16. Marine Corps Communication-Electronics School. Upon notification of the arrival or departure of an ammunition vehicle, transmission of all electromagnetic energy in locations sufficiently close to Del Valle Road so as to present a HERO hazard in accordance with distances noted in Figure 12-1 will be secured.

MAGTFTC, MCAGCC SOP FOR SAFETY

SAFETY PROGRAMS, PROCEDURES AND TRAINING

	<u>PARAGRAPH</u>	<u>PAGE</u>
POLICY	2400	24-1
COMPLIANCE WITH SAFETY REGULATIONS	2401	24-1
SAFETY TRAINING	2402	24-1
ELECTRICAL WORK	2403	24-2
RESPIRATORY PROTECTION	2404	24-2
CONFINED SPACE ENTRY PROGRAM	2405	24-2
CONTROLLING OF HAZARDS OF ELECTROMAGNETIC RADIATION	2406	24-3
BLOOD BORNE PATHOGENS	2407	24-3
VENDING MACHINES	2408	24-3

Chapter 24

SAFETY PROGRAMS, PROCEDURES AND TRAINING

2400. Policy. Safety and risk management will be incorporated in all planning and operating procedures to assure maximum protection for personnel and prevent unnecessary exposure to hazards. Accordingly, it is the responsibility of all concerned to comply with established safety practices, rules, and regulations. Coverage of items in this chapter is limited to basic guidance in some of the essential areas of occupational and safety health that are applicable to a variety of operations on the MCAGCC facility. These items are the basis of a sound safety and health program and do not represent a comprehensive safety program for each operation or department.

2401. Compliance with Safety Regulations

a. All personnel will observe all safety and health rules and regulations.

b. All personnel will warn others upon recognition of danger or a violation of safety and health precautions.

c. All personnel will not disregard safety or health regulations because of the urgency of a particular job. Personnel will take necessary precautions for adequate safety planning.

2402. Safety Training

a. New and reassigned personnel will be instructed by their immediate supervisors on the safe methods of performing particular operations and the hazards/hazardous materials they may encounter. This must be accomplished prior to starting and during the early stages of each new job assignment. Emphasis must be stressed on areas of hazards particular to each job. Supervisors will maintain documentation on all of their personnel's safety training and orientation.

b. Unit Safety Officers (USO's) will attend the Ground Safety for Marines Course (CIN # A-493-0047) within 90 days of being assigned, and will receive no less than eight hours refresher training annually thereafter. This training will be provided in the classroom at the MCAGCC Base Safety Office by qualified and knowledgeable personnel.

MAGTFTC, MCAGCC SOP FOR SAFETY

Collateral Duty Safety Officers (CDSO) will be provided sixteen hours of initial safety instruction provided by the Center Safety Office.

c. All supervisors shall be provided supervisor safety training within 90 days of appointment on safety subjects to include but not limited to recognition and elimination of hazards, mishap reporting and evaluation and program implementation. Supervisors shall also be provided an annual refresher and update to their initial supervisor safety training. The training will be provided by Safety Division.

2403. Electrical Work. Electrical work and wiring to be completed in all construction, self-help and renovation projects aboard the Base shall comply with the standards set forth in references (aa) and (bb). All electrical work will be performed by a qualified and authorized person that possesses the required skills and knowledge of electrical maintenance and who has received safety training on the hazards involved.

2404. Respiratory Protection. The Respiratory Protection Program has been developed to protect personnel where engineering controls are not technically or economically feasible. Standard operating procedures shall be developed for the specific respiratory protection requirements of each shop. Shop SOPs will be posted in the work areas and will include as a minimum: a summary of the command respiratory protection program standard operating procedures, shop-specific details concerning respirator selection, maintenance and inspection procedures, breathing-air quality, if applicable, emergency use respirators and respirator cartridge change out schedules as appropriate. The program is under the supervisory control of the Center Safety Office's Respiratory Protection Program Manager (RPPM).

2405. Confined Space Entry Program. The Confined Space Entry Program is established to ensure that all personnel are protected from hazards when entering or working on any confined or poorly ventilated space. The ISM shall appoint, in writing, a qualified confined space program manager (CSPM) and assistant confined space program manager (ACSPM) responsible for implementing a confined space entry program that is consistent with this Manual and 29 CFR 1910.146. Only the CSPM is authorized to amend the installation's confined space program.

MAGTFTC, MCAGCC SOP FOR SAFETY

2406. Controlling of Hazards of Electromagnetic Radiation Program. The Controlling of Hazards of Electromagnetic Radiation Program is established to ensure the protection, training and education of personnel exposed to radio frequency electromagnetic hazards.

2407. Blood Borne Pathogens. The ISM will ensure that all units that may be exposed to Blood borne Pathogens develop a Blood borne Pathogen Exposure Control Plan that will comply with the Occupational Safety and Health Administration's (OSHA) Blood borne Pathogens Standard, 29 CFR 1910.1030, and to eliminate or minimize employee occupational exposure to blood, certain other body fluids, or other potentially infectious materials

2408. Vending Machines. All vending machines having an empty weight that exceeds 700 pounds and drink vending machines (regardless of weight) will be affixed with a safety label and firmly anchored to the floor or wall with an industry standard stabilizing bracket. The safety label will be displayed near the coin slot and warn about the hazards of tipping or rocking the machine. The type of anchor will be determined based on the material and construction of the wall or floor.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 25

LEAD ABATEMENT OVERSIGHT

	<u>PARAGRAPH</u>	<u>PAGE</u>
DISCUSSION	2500	25-1
RESPONSIBILITIES	2501	25-1

CHAPTER 25

LEAD ABATEMENT OVERSIGHT

2500. DISCUSSION. The intent of the Lead Safety Program is to prevent lead poisoning and related injuries during the use, handling, removal and melting of materials containing lead at MCAGCC-MAGTFTC. The goal is to reduce potential and actual lead exposures to levels as low as reasonably achievable.

2501. RESPONSIBILITIES

1. The Installation Safety Office will oversee the Lead program to ensure all required orders, directives are followed. This includes, but is not limited to correct documentation, procedures, and protocols as they pertain to any demolition, destruction, re-furbishing, re-modeling of any building that could potentially contain lead, and make recommendations accordingly.

2. The Installation Safety Office will be present for all meetings concerning the demolition, destruction, re-furbishing, re-modeling of any building that could potentially contain lead, and make recommendations accordingly.

3. Commanders, department heads, and directors shall ensure work operations using lead or materials containing lead are conducted per this Manual, 29 CFR 1910.1025 and 29 CFR 1926.62. Ensure the Installation Safety Office is notified before commencing self-help projects in which paint removal or sanding will be performed to ensure lead levels are identified and appropriate safety precautions are established.

4. Supervisors of personnel conducting operations with lead or lead containing materials shall:

a. Notify the Installation Safety Office or unit safety officer before beginning operations that may generate any amount of airborne lead. This will ensure all proper PPE is provided and environmental work center containment and monitoring is conducted.

b. Ensure personnel who enter lead controlled boundaries are trained per 29 CFR 1910.1025, 29 CFR 1926.62 and this manual, and are knowledgeable in the provisions of this chapter and the work to be conducted.

MAGTFTC, MCAGCC SOP FOR SAFETY

c. Ensure personnel who are assigned duties inside of lead controlled boundaries receive required medical examinations given by the responsible Medical Treatment Facility.

d. Provide technical support and guidance on written aspects of the Lead Safety Program.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 26

BLOODBORNE PATHOGENS OVERSIGHT

	<u>PARAGRAPH</u>	<u>PAGE</u>
DISCUSSION	2600	26-1
RESPONSIBILITIES	2601	26-1
ASSISTANCE	2602	26-2

CHAPTER 26

BLOODBORNE PATHOGENS OVERSIGHT

2600. DISCUSSION The principal blood borne pathogens of concern in this chapter are human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV). Many others exist but are generally not occupationally transmitted in significant numbers. Due to the rapid spread of Acquired Immune Deficiency Syndrome (AIDS) and its precursor HIV, and to counter HBV and HCV, the Marine Corps has developed a proactive standard to protect Marine Corps personnel from occupational exposure to all blood borne pathogens. The diseases associated with these pathogens are preventable when the appropriate precautions are taken per 29 CFR 1910.1030, Blood borne Pathogens.

1. Personnel at risk include health professionals; first aid providers; fire department and crash, fire, rescue personnel; security personnel, and personnel involved in maintenance or housekeeping work that exposes them to blood or other infectious body fluids. First responders and occupationally exposed personnel, as determined by the responsible industrial hygienist, will be included in a medical surveillance program, and provided appropriate training.

2601. RESPONSIBILITIES

1. Commands shall request IHs, occupational health nurse or personnel from the local Military Treatment Facility (MTF) to assist them in developing an exposure control plan for personnel that directly support their operations.

2. Industrial hygienists shall identify job classifications and tasks where exposure to blood and other potentially infectious materials may occur. Industrial hygienists will assist in training, establishing procedures for implementing engineering and work practice controls, Personal Protective Equipment (PPE) requirements, and housekeeping precautions.

3. Safety personnel shall evaluate the circumstances of an exposure incident, participate in the development of exposure control plan, ensure personnel are trained in the proper precautions for handling blood borne pathogens, and request technical help from the industrial hygienist serving their organization.

MAGTFTC, MCAGCC SOP FOR SAFETY

4. MTFs shall maintain schedules for employees, hepatitis vaccinations, post-exposure evaluation, follow-up and record keeping.

2602. ASSISTANCE. Concerns on blood borne pathogens should be directed to the Installation Safety Office (ISO), MTF, or responsible industrial hygienist. The Installation Safety Director (ISD) is responsible for providing oversight and training with assistance from the MTF.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 27

RODENT BORNE DISEASE PROGRAM

	<u>PARAGRAPH</u>	<u>PAGE</u>
GENERAL	2700	27-1
BACKGROUND	2701	27-1
HAZARD PREVENTION AND CONTROL	2702	27-1
PLANNING	2703	27-2
IDENTIFYING RODENT INFESTATION	2704	27-2
INFESTATION DETERMINATION	2705	27-3
APPLICABILITY	2706	27-4
PERSONAL PROTECTIVE EQUIPMENT (PPE)	2707	27-4
SITE SECURITY	2708	27-5
CLEAN UP PROCEDURE	2709	27-5
POST CLEAN UP PROCEDURE	2710	27-7

CHAPTER 27

RODENT BORNE DISEASE PROGRAM

2700. GENERAL. This document provides guidance on the protection of personnel from rodent borne diseases. Rodents may not only serve as reservoirs for disease but also play a key role in the transmission of those diseases. Hantavirus is a good example of this scenario. The disease-causing agent, which is a virus, is in the saliva, urine and feces of the infected rodent. It is spread to humans via aerosolized excreta, ingestion of excreta, or by direct contact with the rodent itself. Human infection also occurs when the virus or virus-contaminated materials enter the body through broken skin, the conjunctivae, or through mucous membranes.

2701. BACKGROUND. Hantavirus Pulmonary Syndrome (HPS) is an acute viral disease that primarily affects the lungs. The illness, which can cause severe respiratory failure and carcinogenic shock, has a fatality rate of approximately 50 percent. However, there are also cases that are undiagnosed and untreated. Recovery from HPS is rapid with full restoration of lung function. The chance of exposure to HPS is greatest when individuals work, play or live in closed spaces where there is an active rodent infestation. It is important to be aware of possible rodent exposure, for example, when working in buildings or other structures that have been closed for extended periods of time, or when opening or working with pieces of equipment that may be infested by rodents.

2702. HAZARD PREVENTION and CONTROL. Education and awareness about HPS are the best methods of protection. All personnel potentially exposed to rodent droppings or urine should be aware of the possibility of acquiring HPS. Building inspections should be on a regular basis with indications of rodent activity immediately addressed. When controlling rodents, special attention to the following suggestions will reduce the risk of contracting HPS.

a. Control of Rodent infestations bunkers, warehouses and outbuildings will be with the use of snap traps and glue boards.

b. Prevention control is a very important aspect of rodent management. All buildings should be rodent-proofed, if possible.

MAGTFTC, MCAGCC SOP FOR SAFETY

c Sanitation practices are essential in deterring rodents from entering buildings. Eliminating all sources of food and water for rodents with greatly enhance this effort.

2703. PLANNING. When planning a rodent control program, it is necessary to determine the approximate size of the rodent population present and its distribution within the available habitat.

2704. IDENTIFYING RODENT INFESTATION. Resident rodents leave a variety of signs within the areas they frequent. Visual sightings of rats indicate a moderate to high degree of infestation while in areas of low infestation they seldom seen at all. Mice however, more commonly seen in daylight hours, does not necessarily mean a high population. Other signs that occur in direct proportion to rodent abundance are:

a. Sounds of gnawing, scratching, squeaks, and running in walls and across ceilings indicate an infestation by rodents.

b. Droppings High concentrations of droppings indicate frequently used places of mice and rats. Mouse droppings are similar to those of bats and some insects; are larger. Only fresh droppings are soft.

c. Urine Rodent urine is not visible on all materials under natural light. Under ultraviolet light, it is fluoresces bluish white to yellowish white. Unfortunately, other materials such as lubricating oils and the optical bleaches found in many detergents also fluoresce.

d. Smudge Marks Dirt and oil on rodent fur leaves smudge marks where they rub against pipes, beams, and openings during their travels. Rat smudges are much more conspicuous than those left by mice.

e. Runs/Trails Runs occur in sheltered areas where rodents feel secure as they move. They appear as dust-free pathways within buildings or beaten paths outdoors. Like smudge marks, rat trails are more conspicuous than those left by mice.

1. Tracks Dust and mud often reveal footprints.

2. Odor Mice produce a musky odor that an experienced observer can differentiate from rat odor.

MAGTFTC, MCAGCC SOP FOR SAFETY

3. Gnawing - Small piles of wood chips around doors, baseboards, and windows; damage to stored goods and food product containers; and enlarged openings where pipes and wires penetrate walls indicate rodent gnawing.

4. Burrows - Holes and enlarged openings in walls are often burrow entrances.

5. Nests, food Caches - Mice and rat nests will be present when cleaning garages, attics, and other storage areas, or in vehicles that have been left parked for more than a few days: and around refrigerator/freezer motors.

2705. INFESTATION DETERMINATION. The methods described below address levels of infestation involving rodents on military installations. If questions arise when relating to any of these levels, or whenever any obvious major cleanup operation are required, contact MCAGCC Center Safety or the Industrial Hygienist at Naval Hospital Twentynine Palms, for a site survey and recommendations of additional personal protective equipment and procedures.

a. Light infestation: Rodents found in traps, on glue boards along with minimal droppings will be found throughout the facility.

b. Light to moderate infestation: Rodent droppings found inside of warehouses, motor pools, ranges or industrial buildings. Found along walls or inside of equipment, but not in traffic areas.

c. Heavy infestation: Rodent droppings found throughout the room, storage areas, furniture and boxes. Chewing rodent holes in boxes will be evidence of their presents. Musty or pungent smell of urine, visible rodents inside the area upon entering, sounds of activity inside floors, walls or ventilation systems.

MAGTFTC, MCAGCC SOP FOR SAFETY

2706. APPLICABILITY. Personnel on an installation may infrequently be exposed to rodent infested buildings or equipment. Although much of the contact will be incidental, the possibility of encountering heavily infested areas also exists. If visible signs of rodent infestations are present, then all personnel should leave the area immediately, secure the site from entry and request that a qualified person evaluate the contaminated site.

1. Personnel should be trained about the symptoms of Hantavirus and be given detailed guidance on preventative measures. Information should include recognition of rodent infested buildings or equipment.

2. If after contact with a contaminated area, any personnel who develop a febrile or respiratory illness within 45 days of exposure should seek medical attention immediately.

2707. PERSONAL PROTECTIVE EQUIPMENT (PPE)

1. Light or infrequent infestation requires the least amount of PPE. This consists of finding only a minimal amount of droppings or evidence of rodent activity.

a. Coveralls or Tyvek ® type protective coveralls, safety shoes or boots with covers, and gloves should always be worn from not only rodent contamination but from other environmental contaminants as well.

b. Safety goggles are necessary if working in confined spaces (i.e. crawl spaces under buildings).

c. NIOSH approved, particulate respirator with a rating of N95.

d. If rodent-contaminated dust and soil are encountered. Adequate hand washing facilities for sanitation will be provided at the site.

2. PPE requirements for moderate to heavy infestation include:

a. Tyvek®, protective coveralls.

MAGTFTC, MCAGCC SOP FOR SAFETY

b. Gloves must be either disposable or cleanable, reusable (e.g. nitrile). Because leather and cloth gloves difficult to decontaminate they may not be used.

c. Goggles afford eye protection from direct contact with rodent contaminated soil or dust from gloved hands that have handled rodent-contaminated materials.

d. Safety work shoes or boots with covers.

e. Adequate hand washing facilities and sanitation should be provided at the site, especially if rodent-contaminated dust and soil are encountered.

f. Half or full-face respirator with High Efficiency Particulate Air (HEPA) cartridges. This device protects against breathing aerosolized rodent urine or fecal particles containing the virus and provides protection of the mouth and nose from gloved hands that have handled rodent-contaminated materials.

2708. SITE SECURITY. Buildings identified as having rodent infestations should be identified as off limits to unauthorized personnel. This can be done by placing placards and a tape barrier around the structure. All entrances should be closed except for one designated entry/exit point. A decontamination station should be located in the immediate vicinity of the exit door (within the taped boundary) for personnel exiting the cleanup area. Open windows to allow dissipation of contaminants that may have aerosolized inside the building.

2709. CLEAN-UP PROCEDURE. Areas with evidence of rodent infestations should be thoroughly treated with a liquid disinfectant and cleaned to reduce the possibility of exposure to hantavirus-infected materials. Cleaning procedures must be performed in a manner that limits the potential for aerosolization of rodent-contaminated dust and other materials (i.e. wetting down of materials before disturbing). Follow these procedures when cleaning up rodent contaminated materials.

1. A site supervisor should be designated. This individual will act as team leader to ensure that all cleanup personnel are adequately briefed on the risks of acquiring Hantavirus and the proper wearing of personal protective clothing and equipment. The site supervisor will provide a safety briefing to all individuals involved in the cleanup along with a record of training.

MAGTFTC, MCAGCC SOP FOR SAFETY

a. All personnel involved in site cleanup should wear protective equipment and clothing—individually fit-tested respirators (with high-efficiency particulate air (HEPA) filters) or powered air purifying respirators (PAPR), goggles, solvent-resistant gloves, coveralls, and boots.

b. Spray the floors and those portions of the walls where evidence of rodent activity is present with a 10%, (10 parts water to 1 part bleach) general-purpose disinfectant solution. Special attention must be given to dead rodents, rodent nests, droppings, food, or other items that have been contaminated by rodents; thoroughly soak these items with the disinfectant and place them in a double plastic bag. Use a shovel to remove the soaked material*. Seal the plastic bags(s) when full or when the cleanup is completed and dispose of them in accordance with proper installation procedures. No special handling or marking is required.

c. Mop all floors with water containing a general-purpose disinfectant and detergent. Clean carpets and upholstered furniture by steam cleaning or shampooing with commercial-grade equipment.

d. Carpets can be effectively disinfected with household disinfectant, but care should be taken not to damage them with hypochlorite solutions. If rodents have nested inside furniture and the nests are not accessible for decontamination, the furniture should be sprayed with a disinfectant, and then removed. Spray all buildings with dirt floors with a general-purpose disinfectant before use. Remove rodent nests from furniture or equipment and decontaminate. Materials that cannot be decontaminated should be disposed of properly.

e. Disinfect all work surfaces, storage cabinets, drawers, etc., by washing them with a solution of water containing a general-purpose disinfectant and a detergent followed by an additional wiping-down with disinfectant.

f. Launder any potentially contaminated clothing in hot water with a detergent. Use rubber or plastic gloves when handling the dirty laundry. Items that cannot be laundered may be dry cleaned.

NOTE: Clothing should first be treated with a disinfectant to prevent contamination of individuals involved in laundering or dry cleaning.

MAGTFTC, MCAGCC SOP FOR SAFETY

2710. POST CLEAN-UP PROCEDURE. Personnel involved in the direct clean up of material that need to leave the area of operation, for any reason, (i.e. smoke, eat, restroom, etc.) should wash their gloved hands with soap and water or dilute solution of household disinfectant. Then remove gloves and protective suits and respirators. Throw disposable gloves and Tyvek type suites in trash bags, then tie and seal. Clean-up operations should include a decontamination helper to assist in the donning and doffing of PPE for entrants. Other duties can include that all solutions are ready and disposal containers are placed at the proper locations.

1. Assistant should be trained to identify thermal stress (hot, cold) in personnel. Also, to ensure an adequate supply of water is available to personnel. Encourage personnel to stay hydrated and monitor signs for dehydration. Additional duties should include the monitoring of personnel on the correct usage of PPE.

2. Dispose of all material removed. Dispose of any or all unused chemicals through Defense Reutilization & Marketing Service (DRMO), along with used Hazardous Materials (HAZMAT). Report to personnel that area or building has been cleared and ready for normal use by unit.

3. Continue to monitor personnel for 45 days after final clean up of the site for febrile or respiratory illnesses and seek medical attention immediately and inform medical personnel of the potential risk of contracting HPS.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 28

SAFETY PRECAUTIONS FOR THE INSTALLATION AND USE OF ELECTRONIC
DEVICES

	<u>PARAGRAPH</u>	<u>PAGE</u>
GENERAL	2800	28-1
SAFETY PRECAUTIONS	2801	28-1
BATTERY SHOP SAFETY PRECAUTIONS	2802	28-3
LASER MAINTENANCE FACILITY	2803	28-4

CHAPTER 28

SAFETY PRECAUTIONS FOR THE INSTALLATION AND USE OF ELECTRONIC DEVICES

2800. GENERAL. These safety precautions are intended to supplement the Laser Hazards Control Program and the Radio Frequency Personnel Protection Program SOPs. While these precautions should already be an integral part of any unit or directorates operational communications SOP, they are re-emphasized here in this chapter due to the potential for serious injury or death to personnel from careless procedures.

1. Prior to placement or installation of a communication system or mobile, or erection of required antennas/towers, the area must be carefully surveyed for location of power lines, their height above ground level and their proximity to the installation being contemplated must be considered.

2801. SAFETY PRECAUTIONS. (NOTE: A minimum of two personnel are required for the following operations whenever possible.)

1. Whip Antennas

a. NEVER lean against or grasp a whip antenna. Always assume that the system is transmitting.

b. When operating with vehicular equipment, never pass under power lines if there is any doubt as to whether or not there is adequate overhead clearance between the lines and the antenna.

c. Unless mobile operation is mandatory, always tie the antenna in a position so that it will clear all overhead obstructions and power lines.

d. NEVER permit arms or legs to extend over the sides of the vehicle when engaged in cross country operations. If the antenna comes in contact with a power line the body will act as an electrical conductor and serious injury or death may result.

e. NEVER dismount from a vehicle if it is suspected that the antenna may be in contact with a power line. Normally the vehicle is insulated from the ground and personnel are relatively safe in they remain inside the vehicle. However, if the antenna is in contact with a power line, the moment an individual touches the ground that person will be instantly electrically grounded and electrocution may occur.

MAGTFTC, MCAGCC SOP FOR SAFETY

f. When the antennas of vehicular radio systems are lashed into position to clear overhead obstructions, care must be exercised not to create another hazard. Lashed down antennas protrude to the front of the vehicles, thus if they are less than seven feet above the ground is a danger of inflicting puncture type wounds.

2. Mast, Towers and Antenna Assemblies

a. Mast, towers and antennas must be installed as far away as possible from power lines. As a basic guide, a distance of twice the height of the structure from all power lines should be maintained.

b. Guy lines should also be kept as far away as possible from power lines to eliminate the possibility of a downed power line crossing the guy line.

c. All structures (e.g., masts, towers and antenna assemblies) must have adequate lightning arrester protection as prescribed by the appropriate technical manual pertaining to the structure.

d. NEVER engage in work on a structure during and electrical storm or when a storm is imminent.

e. NEVER touch a structure or any connected attachment if, the possibility exist that it may be accidentally energized. The area around a suspected energized structure should be cordoned off and guards posted to prevent anyone from entering the area. Immediately thereafter, proper authority should be notified so that remedial action can be taken.

3. Guy Lines and Hoisting Ropes

a. All ropes and guys must be inspected for worn spots, frays, rotten portions and other imperfections prior to being placed in service. Do not use any ropes or guys that show signs of being unserviceable.

b. NEVER attempt to support an antenna with fewer than the prescribed guys for that antenna.

c. Temporary guys will remain in place until permanent guys are completely secured.

MAGTFTC, MCAGCC SOP FOR SAFETY

d. When erecting an antenna, normal procedure is to attach and anchor the side guys prior to raising the antenna. Care must be taken to allow sufficient margin to prevent the guys from tightening and interfering with the raising operation or damaging the antenna mast by buckling.

e. Erection of structures and mast for the use of antennas or other communication equipment must be planned in advance giving consideration to terrain, structures, wind and personnel available for the project. Only those personnel actually involved with the erection procedures should be permitted in the area describing a circle; the radius being one-third against the height of the structure with the mounting base as the center.

f. Mast, towers and other structures shall never be equipped with other than the intended antennas or other equipment unless sufficient additional support is provided.

4. Basic Rescue Rules. When personnel come into contact with an electrified structure or electrical wire the following procedures are recommended:

a. First, turn off electrical power, if possible.

b. Second, attempt to free the injured person from the electrical circuit using a nonconductive or insulated pole or rope.

c. Third, immediately render artificial respiration if required and first aid if needed.

d. Fourth, immediately request medical assistance.

2802. BATTERY SHOP SAFETY PRECAUTIONS. The following safety precautions will be followed in order to prevent serious injury when charging batteries and handling electrolytes.

1. Charging

a. De-energize circuit. The charging current shall be de-energized before making any repair to terminal connections or before batteries are connected or disconnected for the charging line.

MAGTFTC, MCAGCC SOP FOR SAFETY

b. Sparks and flames. Extreme care shall be exercised to avoid striking sparks and open flame in the vicinity of batteries while being charged. Even when optimum ventilation is provided, the hydrogen concentration immediately above the cells is within the explosive limits when charging at a full rate.

c. Ventilation. Charging shall not be started until it has been ascertained that the battery compartment or charging room is adequately ventilated. Charging shall be stopped whenever ventilation is interrupted and shall not be resumed until adequate ventilation has been restored.

2. Handling. Acid resistant gloves, aprons, chaps, boots and face shields shall be worn whenever servicing batteries with electrolytes.

2803. LASER MAINTENANCE FACILITY

1. Two individuals, both trained and current in CPR procedures, will be present when LASER equipment is maintained due to the high voltages present.

2. LEP (Laser Eye Protection), if required by the procedure, will be worn.

3. All maintenance procedures as set forth by the appropriate TM for the particular item will be followed.

4. Only authorized LASER maintainers will be allowed in the LASER maintenance facility.

5. ALL LASER maintenance equipment shall be de-energized when not in use.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 29

MEDICAL SURVEILLANCE OVERSIGHT

	<u>PARAGRAPH</u>	<u>PAGE</u>
GENERAL	2900	29-1
PROCEDURE	2901	29-1
PROGRAM ELEMENTS	2902	29-1

CHAPTER 29

MEDICAL SURVEILLANCE OVERSIGHT

2900. GENERAL. The purpose of this Medical Surveillance Program Oversight is to provide the Center Safety Directorate with awareness of the individual unit or directorate medical surveillance programs necessitated by the industrial hygiene survey reports.

2901. PROCEDURE. A copy of each unit or directorate survey result is forwarded to the Center Safety Directorate by the NHTP Industrial Hygienist (IH) for inclusion into this program. An annual listing is created of Site Specific programs for each unit or directorate inspected by the IH during the last calendar year. The effectiveness of the mandated programs are evaluated by the Center Safety Directorate Occupational Safety and Health (OSH) inspectors and included as part of the final safety inspection write up evaluating the unit or directorate individual safety program.

2902. PROGRAM ELEMENTS. The individual program elements which comprise this medical surveillance oversight program and their principle references are:

1. HEARING CONSERVATION PROGRAM (HCP). Hearing conservation falls under both Marine Corps (MCO 6260.1E) and Navy (Technical Manual NEHC-TM6260.51.99-2 Sept 2004) orders. The HCP is administered by the NHTP Audiology Department.
2. SIGHT CONSERVATION PROGRAM (SCP). The requirements for this program are found in OPNAVINST 5100.23C Chapter 19 and OPNAVINST 5100.19B, Chapter B5.
3. ASBESTOS CONTROL PROGRAM (ACP). The requirements for this program are contained in NAVSHIPS Technical Manual (NSTM) Chapter 635, OPNAVINST 5100.23C, Chapter 17 and NAVMC DIR 5100.8 Chapter 15.
4. LEAD CONTROL PROGRAM (LCP). The requirements for this program are contained in OPNAVINST 5100.23C Chapter 21, OPNAVINST 5100.19B Chapter B10 and NAVMC DIR 5100.8.

MAGTFTC, MCAGCC SOP FOR SAFETY

5. RADIATION PROTECTION PROGRAM (RADPP). Radiation protection falls under both Marine Corps and Navy publications: MCO 5104.1A LASER Hazards Control, MCO 5104.2A Radio Frequency Protection Safety and MCO 5104.3B for Ionizing Radiation Safety. The Navy publications: OPNAVINST 5100.23C Chapter 22 and OPNAVINST 5100.19B Chapter B9.
6. RESPIRATORY PROTECTION PROGRAM (RPP). The requirements for this program are contained in OPNAVINST 5100.23C Chapter 15, OPNAVINST 5100.19B Chapter B6 and NAVMC DIR 5100.8.
7. CONFINED SPACE. The definitions and regulations pertaining to confined spaces are located in 29 CFR 1910.146, Permit Required Confined Space 29 CFR 1915 Subpart B, OPNAVINST 5100.23B Chapter 27, NAVSEA S6470-AA-SAF-010 Gas Free Engineering and NAVMC DIR 5100.8.
8. HEAT STRESS. This program is outlined in OPNAVINST 5100.19B Series B2.
9. REPRODUCTION HAZARDS. The primary reference is the Technical Manual NEHC-TM-OEM 6260.01A April 2006.
10. BLOOD BORNE PATHOGENS. The program requirements and precautions are contained in OSHA 29 CFR 1910.1030 and NAVMC DIR 5100.8.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 30

MOTORCYCLE SAFETY TRAINING PROGRAM

	<u>PARAGRAPH</u>	<u>PAGE</u>
GENERAL	3000	30-1
DEFINITIONS	3001	30-1
MOTORCYCLE SAFETY TRAINING COURSES	3002	30-1
REFRESHER TRAINING	3003	30-3
PERSONAL PROTECTIVE EQUIPMENT (PPE)	3004	30-3

CHAPTER 30

MOTORCYCLE SAFETY TRAINING PROGRAM

3000. GENERAL. The objective of the Traffic Safety Program is to conserve manpower and equipment through a comprehensive, effective, and continuous Motor Vehicle mishap prevention program encompassing education, licensing, enforcement and engineering.

3001. DEFINITIONS. For the purpose of this Manual, the term "motorcycle" shall mean any two or three wheeled motor driven and required to be licensed for, riding on public highways and streets. This Manual excludes motorcycles designed and utilized for OFF-ROAD use only.

3002. MOTORCYCLE SAFETY TRAINING COURSES. All Marines who plan to purchase or operate a motorcycle (regardless of their intent to register the motorcycle on a Marine Corps installation) and all operators of government-owned motorcycles are required to attend and successfully complete a motorcycle rider safety course approved by CMC (SD). All Marine personnel must obtain a valid state motorcycle license or a motorcycle endorsement on their state drivers' license before operating a motorcycle on any street or public roadway. Training required by this instruction shall be provided to Marines and members of the other Services at no cost and they will not be charged leave. Training may be provided to DoD civilian employees, dependents and retirees at no cost on a space available basis.

a. The Basic Rider Course (BRC) is designed for all street legal motorcycles and not specific to any make, year, or model. The rider must possess current registration and insurance for their motorcycle. A Department of Motor Vehicles permit is not necessary but would be helpful when attending the course. If a participant is under the age of 18, parental or guardian permission must be obtained in writing. Participants must be of legal age to operate a motor vehicle. Participants should also be able to balance a two wheeled bicycle. The Basic Rider Course is a three day evolution that takes a novice rider from basic riding skills to advanced turning, braking and swerving techniques. The rider will spend one five hour day in the classroom and two five hour days on the range. The classroom portion familiarizes the rider with the skills that will be introduced on the range using group and individual adult learning. The range portions helps the rider become more proficient with the skills and helps them gain confidence in their abilities through repetition and professional coaching

MAGTFTC, MCAGCC SOP FOR SAFETY

b. Once a rider has completed the Basic Rider Course and has obtained a motorcycle endorsement from the DMV, they are eligible to attend the Experienced Rider Course (ERC). We ask that the rider have consistent saddle time on "their own" motorcycle and have confidence in their own abilities. If a rider already holds a motorcycle endorsement from the DMV and has never take a Basic Rider Course or any other rider course certified by the Motorcycle Safety Foundation, the rider is still eligible to attend the ERC, granted the rider is proficient with his or her abilities. Any military member who has taken the BRC or holds a motorcycle endorsement and currently owns a motorcycle is required to take the ERC. Military personnel are required to take the ERC within 120 days of completing the BRC. The ERC is open to all street legal motorcycles and not specific to any make, year or model. The ERC is a one day evolution that encourages a rider's confidence and abilities.

c. Any military member that rides a sport bike on or off this military installation must complete the Military Sport bike Course (MSRC). A rider is eligible to attend the MSRC only if they have completed a BRC, ERC, or both. An MSRC rider student should have a high level of confidence in their riding abilities. They should have continuous saddle time and have a firm grasp on the basics as this is a next level of training. Military personnel are required to take the MSRC within 120 days of completing the BRC. The MSRC is designed for all street legal motorcycles classified as "sport bikes." This can include motards and naked sport bikes. Only one day is needed to attend the MSRC and consists of three hours classroom and five hours range time. Riders in the MSRC will be introduced to new techniques that will expand their level of riding.

d. Advanced Rider Course, Sport Bike Techniques (ARC-ST) is a course designed for experienced motorcycle riders that ride non-sport bikes. Riders must possess higher developed skills, judgment, and mental awareness. Special emphasis is given to self-assessment, rider behavior, riding strategies, and overall skill development. Braking, cornering, and swerving are some other aspects where special emphasis is given. Although not yet required, attending the course is highly encouraged.

MAGTFTC, MCAGCC SOP FOR SAFETY

e. The All Terrain Vehicle Course (ATV) is designed for a novice ATV rider. This 4 hour course begins with fundamentals and riding positions and takes the rider from basic riding techniques and graduates to trail riding concepts. The ATV course is available to all Marines, Sailors, DoD Civilian Employees, and military family members.

f. The Dirt Bike School (DBS) is designed for a novice dirt bike rider. This 4 hour course begins with fundamentals and riding positions and takes the rider from basic riding techniques and graduates to trail riding concepts. The Dirt Bike School is available to all Marines, Sailors, DoD Civilians or military family members.

g. Operators of military motorcycles will complete the formal Military Motorcycle (MILMO) off road operators course instructed by certified MILMO Instructors. Operators of government ATV and all Light Utility Vehicles (LUV) will complete an approved ATV/LUV training course.

h. The Installation Safety Office will inspect all motorcycles prior to training to ensure that they are in safe condition.

i. Personnel may register for these courses at the Center Safety Office. The following documents must be presented when registering: DoD identification card, license or permit, valid vehicle registration, proof of insurance, and driver improvement card (military under 26 years of age only).

j. Completion of all motorcycle training shall be recorded in TMS/MCTFS by each unit. All training is provided at no cost.

3003. REFRESHER TRAINING. All military motorcycle riders shall receive refresher training every three years. Either the ERC or MSRC will satisfy the refresher training requirement. Advanced motorcycle training such as California Superbike School, Lee Parks Total Control or other advanced motorcycle training approved by CMC SD may also be used.

3004. REQUIRED PERSONAL PROTECTIVE EQUIPMENT (PPE). The following PPE will be worn by all personnel operating or riding as a passenger on a motorcycle on DoD installations, and for all military personnel operating or riding on a motorcycle off installations.

MAGTFTC, MCAGCC SOP FOR SAFETY

a. A properly fastened (under the chin) protective helmet which meets the standards of the Snell Memorial Foundation (SNELL), the American National Standards Institute (ANSI), or the Department of Transportation (DOT). Novelty helmets are not authorized.

b. Impact or shatter resistant riding glasses or goggles that are ANSI approved or a full face shield attached to the helmet. A windshield, eyeglasses, or fairing alone are not considered proper eye protection.

c. Full fingered riding gloves.

d. Properly worn long sleeve shirt or jacket. Long sleeves shall extend past the elbow when the rider's hands are on the handlebar grips. An armored type riding jacket is highly recommended.

e. Sturdy, full length trousers or pants that extend past the knee and meet the top of the riding boot when seated on the motorcycle under normal riding conditions.

f. 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. Unacceptable foot wear is any shoe or boot that has an open toe, open foot/heel design, extensive heel over 2 inches or a total canvas or rubber material construction.

g. PPE for off road motorcycles and ATV's will include the required PPE with the addition of knee/shin guards, off road boots, and padded, full fingered gloves. The PPE requirements for LUV operators and passengers are the same as above, excluding knee/shin guards. (A DOT approved helmet or service issued Kevlar helmet with chinstrap is required to be worn by all operators and passengers of an LUV when operated off road).

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 31

ELECTRICAL SAFETY TRAINING	<u>PARAGRAPH</u>	<u>PAGE</u>
GENERAL REQUIREMENTS	3100	31-2
QUALIFIED PERSON	3101	31-2
TRAINING	3102	31-2
PROGRAM REQUIREMENTS	3103	31-2
FLASH PROTECTION MARKINGS	3104	31-2
ARC FLASH HAZARD ANALYSIS	3105	31-3

CHAPTER 31

3100. GENERAL REQUIREMENTS. As per CFR 1910.332 and NFPA 70E, qualified workers and supervisors working with exposed parts or circuits of 50 volts and above are required to receive electrical safety training. This specifically includes, but is not limited to: electricians, industrial machine operators, mechanics and repairers, welders, and HVAC installers/repairs.

3101. QUALIFIED PERSON. A qualified person is one who has the skills and techniques necessary to distinguish exposed live parts from other parts of electrical equipment and determine the nominal voltage of the exposed parts.

3102. TRAINING. Personnel shall be trained in and be familiar with specific maintenance procedures and testing required for their assigned duties. Training must be appropriate for the hazards that exist on the work site. Electrical safety training shall include:

- Special precautionary techniques
- Personal Protective Equipment (PPE)
- Arc Flash
- First Aid and CPR (annual qualification)
- Ability to read and understand a single-line diagram
- Testing procedures
- Lockout/Tagout

3103. PROGRAM REQUIREMENTS. A written electrical safety program must be developed and published that specifically addresses all employee exposure to each specific electrical hazard that exists on the work site.

3104. FLASH PROTECTION MARKINGS. All electrical equipment, such as switchboards, panel boards, industrial motors, meter socket enclosures and motor control centers, etc. that are in other than dwelling occupancies are required to be marked with the arc flash hazard showing the "cal/cm2 energy and the minimum safe distances.

3105. ARC FLASH HAZARD ANALYSIS

1. As per NFPA 130.3, an arc flash analysis is required for all electrical equipment mentioned in paragraph 3104 to determine arc flash boundaries and appropriate PPE.

MAGTFTC, MCAGCC SOP FOR SAFETY

2. All arc flash hazard analysis shall be updated when a major modification or a renovation takes place.

3. All arc flash hazard analysis shall be reviewed periodically, not to exceed five years, to account for changes in the electrical distribution system that could affect the results of the arc flash study.

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 32

GOVERNMENT MOTOR VEHICLE OPERATOR TRAINING	<u>PARAGRAPH</u>	<u>PAGE</u>
GENERAL REQUIREMENTS	3200	32-2
MEDICAL CERTIFICATES	3201	32-2
TRAINING	3202	32-2
LICENSING	3203	32-2
COMMERCIAL MOTOR VEHICLES	3204	32-2
BUS OPERATORS	3205	32-3
EMERGENCY VEHICLE OPERATOR TRAINING	3206	32-3
FORKLIFT AND MATERIAL HANDLING EQUIPMENT OPERATION	3207	32-4

MAGTFTC, MCAGCC SOP FOR SAFETY

CHAPTER 32

3200. TACTICAL AND COMMERCIAL VEHICLE TRAINING. The MAGTFTC, MCAGCC Traffic Safety Manager has oversight on the development and implementation of vehicle-specific training programs for operators of government owned tactical and commercial vehicles. Special attention should be paid to up-armored variants of tactical vehicles and all commercial vehicles over 10,000 gross vehicle weight ratings (GVWR).

3201. MEDICAL CERTIFICATES FOR DRIVERS. A valid medical certificate is mandatory for all Marine Corps military and civilian personnel who, by military occupational specialty (MOS) or position description (PD) are required to operate motor vehicles in the performance of their job (e.g. motor transport personnel, facility maintenance personnel, security/Military Police personnel, etc.). A medical certificate shall be required for all personnel, regardless of MOS or PD who are required to operate any vehicle over 12,000 lbs GVWR.

3202. TRAINING RECORD KEEPING. All training received to operate any government vehicle (GOV) will be documented on the operators' OF-346, and all appropriate associated paperwork and documents shall be maintained in the operator's personnel training record or driver's history file.

3203. GOV TRAINING AND LICENSING. Commanders will ensure that all drivers/operators are trained in accordance with references (d) and (t). Personnel assigned as "assistant drivers" should hold a valid license (OF-346) for the vehicle being driven.

3204. COMMERCIAL MOTOR VEHICLES. Commercial vehicles are considered to be in one of two categories: Cargo or Passenger. Each category has multiple subcategories and the training and licensing requirements depend on the vehicle type. The MAGTFTC, MCAGCC Traffic Safety Manager shall develop and provide training to operators of passenger vans and large vehicles over 10,000 lbs GVWR. All licensing programs shall ensure that:

a. All completed training to operate GOVs under 10,000 lbs GVWR is documented.

b. Operators of GOVs over 10,000 lbs GVWR have the appropriate endorsement on an OF-346 for the type, class and weight of vehicle they are qualified to operate.

MAGTFTC, MCAGCC SOP FOR SAFETY

c. All civilians operating vehicles over 26,000 lbs GVWR have the appropriate state Commercial Drivers License (CDL) and appropriate corresponding endorsement on their OF-346 for each of the vehicles they operate.

3205. BUS OPERATORS. Operators of Marine Corps owned or leased buses shall be at least 21 years of age, have a current medical certificate and have successfully completed a bus operator's course which meets Headquarters Marine Corps, federal, state and local requirements.

3206. EMERGENCY VEHICLE OPERATOR TRAINING. The following training is required before being assigned as a Marine Corps Emergency Vehicle driver:

a. All training shall occur during on-duty time and at no cost to the service member or civilian employee.

b. Prior to being assigned to operate police, ambulance, fire, crash and rescue or other emergency response/patrol vehicles equipped with lights and sirens, personnel shall successfully complete a CMC (SD) approved emergency vehicle training course conducted by a certified instructor.

c. Emergency vehicle operators will not, at any time, operate their vehicles at a speed that is not reasonable for weather, visibility, traffic or roadway conditions. Emergency vehicle operators will only respond in the emergency mode to true emergencies.

d. Emergency vehicle training shall include:

(1) Applicable federal, state/local and installation laws and regulations;

(2) Safe operating practices under normal and emergency conditions;

(3) Emergency motor vehicle inspection and primary preventive maintenance.

e. An OF-346 will be issued to personnel who successfully complete the Emergency Vehicle Operators Course (EVOC). A vehicle specific endorsement will be made on the OF-346 for emergency vehicles larger than a standard patrol car (i.e. ambulances, rescue trucks, fire apparatus and all emergency vehicles over 10,000 pounds GVWR).

MAGTFTC, MCAGCC SOP FOR SAFETY

3207. FORKLIFT AND MATERIAL HANDLING EQUIPMENT (MHE) OPERATION.
All MHE operators must have a valid MHE license and medical certificate in their possession when operating MHE. The license must delineate the specific type and safe working load of the MHE the operator is qualified to operate. All appropriate PPE will be worn when operating or within close proximity of working MHE.