



UNITED STATES MARINE CORPS
MARINE CORPS AIR STATION YUMA
BOX 99100
YUMA, ARIZONA 85369-9100

IN REPLY REFER TO:
StaO P5100.4A
DSS
22 Jun 15

STATION ORDER P5100.4A

From: Commanding Officer
To: Distribution List

Subj: OCCUPATIONAL SAFETY AND HEALTH (OSH) PROGRAM

Ref: (a) 29 CFR 1910
(b) 29 CFR 1926
(c) 29 CFR 1960
(d) Executive Order 12196
(e) Public Law 91-596
(f) NAVSEA-50420-AA-RAD-010
(g) NAVMED P-5055
(h) OPNAVINST 4110.2
(i) OPNAVINST 5100.23G
(j) NAVMC DIR P5100.8
(k) MCO P5100.19F
(l) MCO P11000.5G
(m) MCO 5100.29B
(n) MCO 3500.27B
(o) MCO P5102.1B
(p) DOD 4715.6R
(q) MCO 5110.1D
(r) MCO 6260.1E
(s) MCO 5104.1 series
(t) MCO 11240.66D
(u) EM 385-1-1
(v) NIOSH PUB 97-117
(w) DUSD Memo dated 4 Feb 97
(x) Federal Standard 313D
(y) 10 CFR 20
(z) 49 CFR 173
(aa) DD Form 2365
(bb) API Standard 2015
(cc) Energy Reorganization Act of 1974
(dd) OPNAVINST 8000.16C
(ee) MCO 5104.3B
(ff) DoD 6050.5G
(gg) DoD 6050.5G-1
(hh) DoD 6050.5H
(ii) DoD Safety and Occupational Health Program Policy Memo 88-1
(jj) DoD 6050.05
(kk) Solid Waste Disposal Act
(ll) OSHA Act of 1970
(mm) Recovery Act of 1976
(nn) StaO 3710.6 Series

Encl: (1) Notice of Unsafe or Unhealthful Working Conditions
(2) Unsafe and Unhealthful Working Conditions NAVMC 11401
(3) Ground Mishap Worksheet
(4) Ground Near Miss Report

- (5) Lockout/Tagout Program Evaluation Form NAVMC 11402
- (6) Lockout/Tagout Log NAVMC 11404
- (7) Lockout/Tagout Energy Source Determination Checklist
- (8) NAVMC 11509 Anymouse
- (9) Radioactive Material Movement (RAM) Form
- (10) NRC Form 3 "Notice to Employees"

1. Situation. To promulgate an OSH Program for Marine Corps Air Station (MCAS) Yuma, Arizona in accordance with the references.

2. Cancellation. StaO P5100.4.

3. Mission. This order provides guidance in the organization and administration of the OSH Program, and outlines the minimum standards to be maintained in these areas.

4. Execution

a. Commander's Intent and Concept of Operations

(1) Commanders Intent. To eliminate, mitigate, or avoid any unsafe, hazardous, or unhealthy working environments through conscientious application of the references and this order.

(2) Concept of Operations. The Director of Safety and Standardization (DSS) will implement, administrate, and provide oversight of the OSH Program per the references and this order. DSS has been delegated responsibility for all Safety Programs indicated in this order.

b. Subordinate Element Missions

(1) Director of Safety and Standardization shall:

(a) Assist unit Commanding Officers, Department Heads, Supervisors, Officers in Charge (OICs), Staff Non-Commissioned Officers in Charge (SNCOICs), and Commanders (CDRs) by providing training, checklist to familiarize these personnel with their duties, responsibilities and the Safety Program.

(b) Provide oversight and assistance to Commanding Officers, Department Heads, Supervisors, OICs, SNCOICs, and CDRs in the establishment of their OSH Program.

(c) Conduct Annual OSH Inspections (to include no-notice inspections), prepare inspection reports, conduct trend analysis, and submit to higher headquarters as required by the references and this order.

(f) Retain inspection records for five years.

(g) Serve as the focal point for all OSH issues for all the MCAS Yuma organizations.

(2) Commanding Officers, Officers in Charge shall ensure compliance with this order.

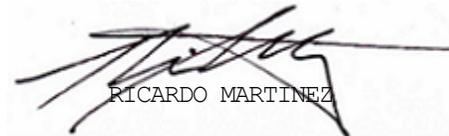
5. Administration and Logistics. Directives issued by MCAS Yuma are published and distributed electronically via website at

<https://intranet.mciwest.usmc.mil/yuma/default.aspx>. For commands without access to the Internet, hard copy versions of MCAS Yuma directives can be obtained through the Directives Control Point at the Air Station Adjutant's office (DSN:269-2253/2918).

6. Command and Signal

a. Command. This order is applicable to all departments, tenant commands, contractors, and personnel aboard MCAS Yuma, including those personnel attached or assigned for temporary duties (including reservist and foreign military units under going training aboard MCAS Yuma), as well as those organizations aboard or using facilities on this installation.

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



RICARDO MARTINEZ

Distribution: A

LOCATOR SHEET

Subj: OCCUPATIONAL SAFETY AND HEALTH (OSH) PROGRAM

Location: _____
(Indicate the location(s) of the Copy(ies) of this Order.)

RECORD OF CHANGES

Log completed change action as indicated.

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

NOTICE OF UNSAFE OR UNHEALTHFUL WORKING CONDITIONS

MARINE CORPS AIR STATION YUMA DEFICIENCY NOTICE

SECTION A - DEFICIENCY INFORMATION		ID NO:	
Organization:		Location:	
Description:			
Recommendation:			
Supervisor:			
Standard Violated:		RAC:	
OSH Official:		Date:	
SECTION B - ABATEMENT STATUS (COMPLETE ONE OF THE FOLLOWING)			
* ABATEMENT PROJECT INDICATED			
		Date	
		Cost:	
		Labor:	Material:
*ABATEMENT PROJECTED INITIATED			
Project Description:		Action Taken (Include Work Orders/Purchase Request numbers and date as appropriate):	
		Supervisor's Signature	
		Cost Estimate:	Completion Date: (Estimate)
* INTERIM CONTROLS			
SECTION C - COMMENTS			

UNSAFE OR UNHEALTHFUL WORKING CONDITION
NAVMC 11401 REV. 7-98

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

Civilian: Military:
Employee Representative: Other:

2. Does this hazard immediately threaten life or health?
Yes No

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

4. Supervisor (if known) at this location is: _____ and phone number is: _____

5. Briefly describe hazard: _____

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

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

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

Yes No

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

10. Name (optional): _____

Phone number (Optional): _____

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

Case Number: _____ (Filled in Installation or Unit Safety Office)

GROUND MISHAP WORKSHEET

To Be Completed by Safety Representative

SERIAL NO: (assigned by command)	# Fatalities:	# Injuries:
Reporting Unit UIC/RUC/MCC:	Reporting Command Name:	
Mishap Type: (Motor Vehicle, Industrial, Explosive, PT, Tactical, Sports and Rec.)	Mishap Sub-Type: (Training, Slip, Trip, Fall, Material Handling, Electrical)	

SECTION A: MISHAP DATA

A. MISHAP LOCATION: (If Mishap Occurred on Base, list the UIC/RUC-MCC of the base or activity where the mishap occurred)

DATE OF MISHAP:	MISHAP TIME:	ON/OFF BASE: MCC/RUC/UIC OF BASE
STATE/COUNTRY:	CITY/CNTY/BASE/SHIP:	
GENERAL LOCATION: (warehouse, roadway, gym, training area, out to sea)		
SPECIFIC LOCATION: (Include Street Name or Highway #, Building #, Nautical Mile, Drop Zone, Name of Training Area – in specific location)		
Was Equipment, Vehicle or Weapon Involved in mishap? (Yes/No) (If yes, complete section G (property involved data))		
Was Alcohol Involved? (Yes/No) (If yes, include alcohol B.A.C. in Section D (personnel data) under person(s) that were drinking)		
Was Drugs (Legal/Illegal) Involved? (Yes/No) (If yes, include drug name in Section D (personnel data) under person(s) that used the drug)		
Was the Environment a Factor in mishap? (If yes, list the environmental conditions – low visibility, noise, rain, temp.)		
Were Chemicals or Hazardous Material involved? (If yes, list Name of Chemical and MSDS Number)		
Were Needle/Sharps Item Involved? (If yes, list Type/Brand of Sharps Involved)		
Was Electrical Equipment Involved? (If yes, List Type/Brand Equipment and Voltage)		
Was Carbon Monoxide a Factor? (If yes list alarm manufacturer, make and model and date last tested and inspected.)		
Was Unit Deployed at the time of the mishap? (Yes or No) (If yes, list command name and MCC/RUC of unit deployed to)		

SECTION B: POINT OF CONTACT INFORMATION

B. Point of Contact Information: (Person responsible for Mishap Tracking/Safety Rep)

POINT OF CONTACT NAME:		UIC/RUC/MCC AND COMMAND NAME:	
DSN:	COM:	FAX:	E-MAIL:

SAFETY INFORMATION:

Name and Rank of the Safety Rep (if different than above), All Safety Training he/she has completed and Date of Completion.

Command's last safety inspection date and type (IG, base, higher hqtrs, site survey)?

Name, Rank , and signature of section/department Supervisor/OIC/Department Head:

Name: (Print) _____ Rank: _____

Name: (Signature) _____ Date: _____

C. MISHAP SUMMARY

C. MISHAP SUMMARY: (Summary of Mishap, WHO, WHAT, WHERE, WHEN, WHY)

Empty space for MISHAP SUMMARY.

*Complete Sections D, E and F on separate sheet for each person involved and Section G for each property involved.

D. PERSONNEL DATA (Use a separate sheet for each Involved and/or Injured Person)

LAST NAME:	FIRST NAME:	LAST FOUR:
RANK/GRADE:	DOB:	GENDER:

Height:	Weight:	Pay Grade: (E-3, GS-7)	BILLET MOS/JOB TITLE:
Marital Status:		No. Dependents:	
TYPE OF PERSONNEL: (mil, civ, non-dod)		SERV STATUS: (active, FEDCIV)	
BRANCH OF SERVICE (Navy, Marine)		MOS/RATE/JOB SERIES:	
Command Name:		MCC/RUC/UIC:	
Was Personnel Deployed? (Yes or No)(If personnel was deployed list the Command Name and UIC/RUC/MCC the personnel was deployed to)			
Command Name:		RUC/UIC:	
If personnel was permanently transferred as a result of injury list command name and UIC/RUC/MCC.			
Command Name:		RUC/UIC:	
DUTY STATUS: (on or off)	INJURY STATUS: (Fatal, Lost time, No injury)		INJURY OR ILLNESS
BODY PART(S) INJURED: (Arm, leg)		INJURY TYPE: (sprain, fracture, burn)	
SOURCE OF INJURY: (Person, Vehicle, Machinery, Ground)	ALCOHOL B.A.C., IF APPLICABLE:		TYPE OF DRUG USED, IF APPLICABLE
Was Initial Medical Treatment on Site? (Yes on no)			
Where was the initial medical treatment given? (Name of dispensary, field clinic, ambulance, hospital)?			
HOSP DAY	Start Date:		End Date:
LOST TIME	Start Date:		End Date:
LIMITED/LIGHT DUTY	Start Date:		End Date:
LIST THE PERSONNEL'S WORK HOURS	Start Time:	End Time:	ACTIVITY ENGAGED IN AT THE TIME OF THE MISHAP
Number of Years/Months Experience in activity engaged in at the time of the mishap:			
Was Personnel Participating in Formal Training? (If so, NAME and CID/CIN OF COURSE or was it unit training or PT)			
Was Personnel Participating in Unit Training? (If so, what type of training was it, i.e. PT, Weapons Training, Obstacle Course)			
POSITION in or on Equipment: (Operator, left front, hatch, bumper)			
<i>If License required to operate equipment/vehicle complete the following information:</i>			
OPERATOR LICENSE: (Yes or No) (Includes Motor Vehicle, HMMWV, Explosives, Forklift, etc., if required for operation)		STATE OF ISSUANCE:	

DATE OF EXPIRATION:	(List any restrictions to license)
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TRAINING (LIST ANY COURSES, CERTIFICATIONS, QUAL, OR LICENSES as they relate to activity engaged in at the time of the MISHAP, and include location of training and date of completion)

Course(s)	Date(s) Completed	Location(s) of Training
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*Complete Sections D, E and F on separate sheet for each person involved and Section G for each property involved.

SECTION E: CAUSAL FACTORS/CORRECTIVE ACTION

1. PERSONNEL CAUSAL FACTORS (i.e. failed to follow procedures, unsafe act, lack of attention to detail, inexperienced)

2. CORRECTIVE ACTION OF SUPERVISOR (Supervisor and Safety Representative should collaborate on the proper corrective action.)



MCAS Yuma



GROUND NEAR MISS REPORT

A ground near miss is a potential hazard or incident that has not resulted in any personal injury . Unsafe working conditions, unsafe employee work habits, improper use of equipment or use of malfunctioning equipment have the potential to cause work related injuries. It is everyone's responsibility to report and /or correct these potential accidents/incidents immediately. Please complete this form as a means to report these near-miss situations.

Location _____ Date: _____ Time: _____

Please check all appropriate conditions:

Unsafe Act

Unsafe equipment

Unsafe Condition

Unsafe use of equipment

Description of incident or potential hazard : _____

Reporting Person Signature _____ Phone # _____

(optional)

NEAR MISS INVESTIGATION

Description of the near-miss condition: _____

Causes (primary & contributing) _____

Corrective action taken _____

Signed: _____ Date _____ Phone _____

(Department/Contractor Representative)

Signed: _____ Date _____ Phone _____

(Safety Department)

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):

3. Following specific procedures were modified (list):

4. Following specific procedures were added (list):

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

6. Following injuries resulted from lockout/tagout related mishaps:

NOTE: Conduct evaluation annually.

LOCKOUT/TAGOUT

NAVMC 11404

DEVICE TYPE & SER #	EQUIPMENT DESCRIPTION	PURPOSE	POS. TAG'D OPEN/CLOSED	DATE & TIME	AUTH WORKER	AUTH BY	REMOVED BY	DATE & TIME REMOVED

SIGNATURE: X _____

SHOP/DEPARTMENT: _____

DD/MM/YYYY: ___/___/___

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

LOCKOUT/TAGOUT PROCEDURE/CHECKLIST
ENERGY SOURCE DETERMINATION

DATE: _____

CONDUCTED BY _____

In order to determine all energy sources for each piece of equipment, all questions must be answered. If the question does not apply, write N/A in the blank. Circle "yes" or "no" or fill in the blank.

Location: _____

Work Center: _____

Line: _____

Equipment No: _____

Equipment Name: _____

Model: _____

Specific Procedure No. Assigned: _____

Serial No: _____

List of authorized employees:

- 1.
- 2.
- 3.
- 4.

TRAINING NOTE: A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing servicing or maintenance covered under this section.

List of affected employees:

TRAINING NOTE: An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.

List of other employees:

TRAINING NOTE: Where tagout systems are used, all other employees whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure, and about the prohibition relating to attempts to restart or reenergize machines or equipment which are locked out, blocked out, or tagged out.

Does this equipment have?

Electric power (including battery)?

Yes

No

If yes, Motor Control Center (MCC) or power panel and
breaker number _____

Does it have a lockout device? Yes No

Battery location: _____

Battery disconnect location: _____

Mechanical power? Yes No

Mark each type of energy source that applies:

1). Engine driven? Yes No

If yes, switch or key location: _____

Is lockout device installed? Yes No

If no, method of preventing operation: _____

2). Spring loaded? Yes No

If yes, is there a method of preventing spring activation?

Yes No

If no, how can spring tension be safely released or
secured: _____

3). Counter weight(s)? Yes No

If yes, does it have a method of preventing movement?

Yes No

If yes, can it be locked? Yes No

If no, how can it be secured? _____

4). Flywheel? Yes No

If yes, does it have a method of preventing movement?

Yes No

If yes, can it be locked? Yes No

If no, how can it be secured? _____

Hydraulic power? Yes No

If yes, location of main control/shut off valve _____

Can control/shut off valve be locked in "off" position?

Yes No

If no, location of closest manual shutoff valve _____

Does manual shutoff valve have lockout device?

Yes No

If no, what is needed to lock valve closed? _____

Is there a bleed or drain valve to reduce pressure to zero?

Yes No

If no, what will be required to bleed off pressure?

Pneumatic energy? Yes No

If yes, location of main control/shut off valve

Can control/shut off valve be locked in "off" position?

Yes No

If no, location of closest manual shutoff valve _____

Does manual shutoff valve have lockout device?

Yes No

If no, what is needed to lock valve closed? _____

Is there a bleed or drain valve to reduce pressure to zero?

Yes No

If no, what will be required to bleed off
pressure?_____

Chemical system?

Yes No

If yes, location of main control/shutoff valve

Can control/shutoff valve be locked in off/closed position?

Yes No

If no, location of closest manual shutoff valve

Does manual shutoff valve have lockout device?

Yes No

If no, what is needed to lock valve closed?

Is there a bleed or drain valve to safely reduce system
pressure and drain system of
chemicals? Yes No

If no, how can system be drained and neutralized?

What personal protective clothing or equipment is needed
for this equipment? _____

Thermal energy?

Yes No

If yes, location of main control/shutoff valve

Can control/shutoff valve be locked in "off" or closed position? Yes No

If no, location of closest manual shutoff valve

Does manual shutoff valve have lockout device?

Yes No

If no, what is needed to lock valve closed?

Is there a bleed or drain valve to safely reduce system pressure and temperature and drain system?

Yes No

If no, how can system pressure and temperature be reduced and drained? _____

What personal protective clothing or equipment is needed for this equipment? _____

Special precautions not noted above (i.e., fire hazards, chemical reactions, required cool down periods etc.):

Recommendations or Comments:

Completed by: _____

Reviewed by: _____

Approved by: _____

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

- | | |
|--|--|
| : Supervisory condition (i.e. inadequate SOP, etc.) | : Violation (i.e. breaking SOP, breaking TM, etc.) |
| : Medical condition (i.e. fatigue, stress, etc.) | : Maintenance/material issues |
| : Crew coordination (i.e. conflict, assertiveness, etc.) | : Facilities issues |
| : Inattention (i.e. missed radio call, forgotten check list, etc.) | : other |

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

options should be selected.

- Block 2. This is a unique tracking number and is locally generated by the command initiating the movement.
Suggested format: USMC-M67004-01-001
This format identifies the agency, the Unit AAC, the year, and the movement number. The year rolls forward on January 1st, the movement number resets to 001.
- Block 3. This block contains the name and address and of the unit that is offering the item for shipment or transfer. (This unit will show a decrease in their RAM inventory as a result of the transaction).
- Block 4. This block contains the name and address of the location intended to be the final destination of the item being shipped or transferred. (This unit will show an increase in their RAM inventory as a result of the transaction).
- Block 5. This is specific information related to the device being shipped or transferred. All blocks are to be completed as accurately as possible. (Contact the USMC Radiological Control Office at DSN 567-5590 if you have any questions). (Activity for the CAM is 555MBG/15 mCi and 1.11 GBq/30 mCi for the ACADA).
- Block 6. The specific mode of transport should be checked. (Do NOT use the US Postal Service or Military Postal Service).
- Block 7. This information can typically be found in equipment technical manuals. **To determine specific characteristics, a good rule of thumb is that devices containing H-3 will usually be Normal Form, Gas; devices containing Ni-63 are Normal Form, Solid; and devices containing Am-241 are Special Form, Solid.**
- Block 8. Radiation surveys generally do not apply for USMC devices. For guidance concerning the necessity of acquiring radiation survey data, contact the USMC Radiological Controls Office at DSN 567-5590.
- Block 9/10. Completion of these blocks is mandatory. See guidance for conducting pre-shipment and receipt inspections as Provided on the Radiological Controls website at <http://www.logcom.usmc.mil/radcon/>. Complete only the blocks for the type inspection performed, blocks not used should be left blank.
- Block 11. This is a general description of the device and is the basis for claiming applicable exemptions from marking and labeling of the shipping package. Almost all USMC packages fall into the first category, **Radioactive Material, Excepted Package - Instruments or Articles, 7, UN 2911. Pick either Instrument or Article and mark out the other one.**
- Block 12. Marked as "Exempt" unless otherwise directed by the local Transportation Officer or the RCO.
- Block 13. For UN 2910, select "Radioactive" and fill in the UN #, for UN 2911 mark "exempt" and fill in the UN #, if the material is an RQ mark the RQ space. Place these marking on the outside of the marking on the outside of the shipping package. Contact the USMC Radiological Control Office at DSN 567-5590 if you have any questions.
- Block 14. Marked as "Exempt" for on-site transfers. For off-site transfers a shipping manifest and bill of lading maybe required, contact the local Transportation Officer for guidance and ensure the "Included & Complete option is checked. Contact the USMC Radiological Control Office at DSN 567-5590 if you have any questions.
- Block 15. If a package is shipped under a different basic description, other than what is provided, the certifying statement must be in accordance with 49 CFR 172.204. Contact the USMC Radiological Controls Office at DSN 567-5590 if you have any questions.
- Block 16. This information must be provided. It should include a local POC and contact phone number as as a minimum. The RCO should be identified in the comments section as an alternative POC in the event the originating CRSO/IRSO cannot be reached.
- Block 17. The printed name of the individual certifying the information on the form is correct and appropriate disposition/authorization to ship or transfer the device has been obtained.
- Block 18. The signature of the individual certifying the information on the form is correct and appropriate disposition/authorization to ship or transfer the device has been obtained.
- Block 19. The date Block 18 is signed.



NOTICE TO EMPLOYEES

STANDARDS FOR PROTECTION AGAINST RADIATION (PART 20); NOTICES, INSTRUCTIONS AND REPORTS TO WORKERS; INSPECTIONS (PART 19); EMPLOYEE PROTECTION

WHAT IS THE NUCLEAR REGULATORY COMMISSION?

The Nuclear Regulatory Commission is an independent Federal regulatory agency responsible for licensing and inspecting nuclear power plants and other commercial uses of radioactive materials.

WHAT DOES THE NRC DO?

The NRC's primary responsibility is to ensure that workers and the public are protected from unnecessary or excessive exposure to radiation and that nuclear facilities, including power plants, are constructed to high quality standards and operated in a safe and secure manner. The NRC does this by establishing requirements in Title 10 of the Code of Federal Regulations (10 CFR) and in licenses issued to nuclear users.

WHAT RESPONSIBILITY DOES MY EMPLOYER HAVE?

Any company that conducts activities licensed by the NRC must comply with the NRC's requirements. If a company violates NRC requirements, it can be **fined or have its license modified, expanded or revoked.**

Your employer must tell you which NRC radiation requirements apply to your work and must post NRC Notices of Violation involving radiological working conditions.

WHAT IS MY RESPONSIBILITY?

For your own protection and the protection of your co-workers, you should know how NRC requirements relate to your work and should follow them. If you observe violations of the requirements or have a safety concern, you should report them.

WHAT IF I CAUSE A VIOLATION?

If you engaged in deliberate misconduct that may cause a violation of the NRC requirements, or would have caused a violation if it had not been detected, or deliberately provided inaccurate or incomplete information to either the NRC or to your employer, you may be subject to enforcement action. If you report such a violation, the NRC will consider the circumstances surrounding your reporting in determining the appropriate enforcement action, if any.

HOW DO I REPORT VIOLATIONS AND SAFETY CONCERNS?

If you believe that violations of NRC rules or the terms of the license have occurred, or if you have a safety concern, you should report them immediately to your supervisor. You may report violations or safety concerns directly to the NRC. However, the NRC encourages you to raise your concerns with the licensee since the licensee has the primary responsibility for, and is most able to ensure, safe operation of nuclear facilities. If you choose to report your concern directly to the NRC, you may report it to an NRC in-

pector or call or write to the NRC Regional Office serving your area. If you send your concern in writing, it will assist the NRC in protecting your identity if you clearly indicate that you would like your concern to be considered by the NRC Allegation Program. The NRC's toll-free SAFETY HOTLINE for reporting safety concerns is listed below. The addresses for the NRC Regional Offices and the toll-free telephone numbers are also listed below. You can also e-mail safety concerns to NRC.Allegation@nrc.gov.

WHAT IF I WORK WITH RADIOACTIVE MATERIAL OR IN THE VICINITY OF A RADIOACTIVE SOURCE?

If you work with radioactive materials or near a radiation source, the amount of radiation exposure that you are permitted to receive may be limited by NRC regulations. The limits on exposure for workers at NRC licensed facilities whose duties involve exposure to radiation are contained in sections 20.1201, 20.1207, and 20.1208 of Title 10 of the Code of Federal Regulations (10 CFR 20) depending on the part of the regulations to which your employer is subject. While these are the maximum allowable limits, your employer should also keep your radiation exposure as far below those limits as is "reasonably achievable."

MAY I GET A RECORD OF MY RADIATION EXPOSURE?

Yes. Your employer is required to make available to you the information in your dose records (as maintained under the provisions of 10 CFR 20.2106). In addition your employer is required to provide you with an annual report of the dose you received in that monitoring year if the dose exceeds 100 millirem, or if you request an annual report.

HOW ARE VIOLATIONS OF NRC REQUIREMENTS IDENTIFIED?

NRC conducts regular inspections at licensed facilities to assure compliance with NRC requirements. In addition, your employer and site contractors may conduct their own inspections to assure compliance. All inspectors are protected by Federal law. Interference with them may result in criminal prosecution for a Federal offense.

MAY I TALK WITH AN NRC INSPECTOR?

Yes. NRC inspectors want to talk to you if you are worried about radiation safety or have other safety concerns about licensed activities, such as the quality of construction or operations at your facility. Your employer may not prevent you from talking with an inspector. The NRC will make all reasonable efforts to protect your identity where appropriate and possible.

MAY I REQUEST AN INSPECTION?

Yes. If you believe that your employer has not corrected violations involving radiological working conditions, you may request an inspection. Your request should be addressed to the nearest NRC Regional Office and must describe the alleged violation in detail. It must be signed by you or your representative.

HOW DO I CONTACT THE NRC?

Talk to an NRC inspector on-site or call or write to the nearest NRC Regional Office in your geographical area (see map below). If you call the NRC's toll-free SAFETY HOTLINE during normal business hours, your call will automatically be directed to the NRC Regional Office for your geographical area. If you call after normal business hours, your call will be directed to the NRC's Headquarters Operations Center, which is manned 24 hours a day. You can also e-mail safety concerns to NRC.Allegation@nrc.gov.

CAN I BE FIRED FOR RAISING A SAFETY CONCERN?

Federal law prohibits an employer from firing or otherwise discriminating against you for bringing safety concerns to the attention of your employer or the NRC. You may not be fired or discriminated against because you engage in certain protected activities, including but not limited to,

- asking the NRC to enforce its rules against your employer;
- refusing to engage in activities which violate NRC requirements;
- providing information or preparing to provide information to the NRC or your employer about violations of requirements or safety concerns; or
- asking for, or testifying, helping, or taking part in an NRC, Congressional, or any Federal or State proceeding.

WHAT FORMS OF DISCRIMINATION ARE PROHIBITED?

It is unlawful for an employer to fire you or discriminate against you with respect to pay, benefits, or working conditions because you help the NRC or raise a safety issue or otherwise engage in protected activities. Violations of Section 211 of the Energy Reorganization Act (ERA) of 1974 (42 U.S.C. 5851) include actions such as harassment, blacklisting, and intimidation by employers of (i) employees who bring safety concerns directly to their employers or to the NRC; (ii) employees who have refused to engage in an unlawful practice, provided that the employee has identified the illegality to the employer; (iii) employees who have testified or are about to testify before Congress or in any Federal or State proceeding regarding any provision (or proposed provision) of the ERA or the Atomic Energy Act (AEA) of 1954; or (iv) employees who have commenced or caused to be commenced a proceeding for the administration or enforcement of any requirement imposed under the ERA or AEA or who have, or are about to, testify, assist, or participate in such a proceeding.

HOW DO I FILE A DISCRIMINATION COMPLAINT?

If you believe that you have been discriminated against for bringing violations or safety concerns to the NRC or your employer, you may file a complaint with the NRC, the U.S. Department of Labor (DOL), or appropriate state office. If you desire a personal remedy, a complaint may be filed with the DOL pursuant to Section 211 of the ERA or with appropriate state enti-

ties. Your complaint to the DOL must describe in detail the basis for your belief that the employer discriminated against you on the basis of your protected activity, and it must be filed in writing either in person or by mail within 180 days of the date of the alleged discriminatory action or the date you received any notice, in writing or otherwise, of an adverse personnel action, whichever occurred first. Additional information is available at the DOL web site at www.ehpa.gov. Filing an allegation, complaint, or request for action with the NRC does not exhaust the requirements to file a complaint with the DOL within 180 days. To do so, you may contact the Allegation Coordinator in the appropriate NRC Region, as listed below, who will provide you with the address and telephone number of the correct DOL-USA Regional office to receive your complaint. You may also check your local telephone directory under the U.S. Government listings for the address and telephone number of the appropriate OSHA Regional office.

WHAT CAN THE DEPARTMENT OF LABOR DO?

If your complaint involves a violation of Section 211 of the ERA by your employer, the DOL provides a process for obtaining a personal remedy. The DOL will notify your employer that a complaint has been filed and will investigate your complaint. If the DOL finds that your employer has unlawfully discriminated against you, it may order that you be reinstated, receive back pay, or be compensated for any injury suffered as a result of the discrimination and be paid attorney's fees and costs.

Relief will not be awarded to employees who engage in deliberate violations of the Energy Reorganization Act or the Atomic Energy Act.

WHAT WILL THE NRC DO?

The NRC will evaluate each allegation of harassment, intimidation, or discrimination to determine whether sufficient information is provided to initiate NRC involvement. To assist in this evaluation, an investigator from the NRC's Office of Investigations (OI) may interview you and gather any applicable documentation in your possession. If the NRC determines that the allegation falls within its purview, NRC's OI will initiate an investigation of your allegation of discrimination unless, prior to the initiation of such investigation, you choose to engage in mediation with your employer in an attempt to settle your allegation of discrimination. If a settlement is reached and the NRC is provided such agreement for review and finds it acceptable, the NRC will close your allegation of discrimination and will not perform an investigation. However, any settlement agreement between you and your employer on your discrimination claim will not impact, in any way, the resolution of the underlying technical issues or any other allegation you may have filed or will file with the NRC. Alternatively, if an acceptable settlement is not reached, NRC's OI will initiate an investigation.

If the NRC or the DOL finds that unlawful discrimination has occurred, the NRC may issue a Notice of Violation to your employer, impose a fine, or suspend, modify, or revoke your employer's NRC license.

UNITED STATES NUCLEAR REGULATORY COMMISSION REGIONAL OFFICE LOCATIONS

A representative of the Nuclear Regulatory Commission can be contacted by employees who wish to register complaints or concerns about radiological working conditions or other matters regarding compliance with Commission rules and regulations at the following addresses and telephone numbers.

REGIONAL OFFICES

REGION	ADDRESS	TELEPHONE
I	U.S. Nuclear Regulatory Commission, Region I 475 Allendale Road King of Prussia, PA 19406-1415	(800) 432-1156
II	U.S. Nuclear Regulatory Commission, Region II 245 Peachtree Center Avenue, NE., Suite 1200 Atlanta, GA 30303-1257	(800) 577-8510
III	U.S. Nuclear Regulatory Commission, Region III 2443 Warrenville Road, Suite 210 Lisle, IL 60532-4352	(800) 522-3025
IV	U.S. Nuclear Regulatory Commission, Region IV 612 E. Lamar Blvd., Suite 400 Arlington, TX 76011-4125	(800) 952-9677

To report safety concerns or violations of NRC requirements by your employer,

telephone:

NRC SAFETY HOTLINE

1-800-695-7403

To report incidents involving fraud, waste, or abuse by an NRC employee or NRC contractor,

telephone:

OFFICE OF THE INSPECTOR GENERAL

HOTLINE

1-800-233-3497



• - Callaway Plant Site in Missouri and Grand Gulf Plant Site in Mississippi are under the purview of Region IV. The Portsmouth Gaseous Diffusion Plant in Ohio is under the purview of Region II.

Chapter 1

Introduction: Program Administration1. Purpose

a. To provide MCAS Yuma military and civilian personnel with a ready reference supporting the Marine Corps Safety Program.

b. To define responsibilities for Commanding Officers, Director, Department of Safety and Standardization (DSS), Officers in Charge (OIC), Staff Non-Commissioned Officers in Charge (SNCOI), department heads, supervisors and non-supervisory personnel.

2. Policy. To fully support the Marine Corps Ground Safety Program that meets the requirements of references (a) through (nn).

3. Scope. (Comment: this is stated in the cover letter) This order does not apply to aviation safety, explosive safety, or traffic safety where other Marine Corps Orders govern.

4. Responsibilities

a. Commanding Officer, MCAS Yuma, has the overall responsibility to ensure compliance with the references, and implement an all-encompassing Command Safety Program as outlined in reference (m) and . to prescribe and enforce additional safety directives as may be necessary to meet local conditions.

b. The Director, DSS has been delegated responsibility for all matters pertaining to command related non-aviation and safety situations to include, but not limited to:

(1) Plan and develop a comprehensive Marine Corps Ground Safety Program, ensuring command compliance with ref (?- ?) and other applicable safety standards.

(2) Advise and assist Commanding Officers, OICs, SNCOICs department heads, supervisors and non-supervisory personnel which pertain to administration of the MCAS Yuma safety programs. Assist all other personnel by identifying hazards in order to correct unsafe work practices and conditions.

(3) Establish procedures to investigate circumstances involving exposure to hazards, occupational illness, and mishaps. Maintain records of such circumstances to analyze and correlate with prevention and abatement procedures.

(4) Prepare necessary safety related reports, as required by ref. (?-?) and this order. Maintain liaison with the Marine Corps Installations West-Marine Corps Base Camp Pendleton (MCIWEST-MCB CAMPEN) Safety Office, Headquarters Marine Corps Safety Division, Naval Safety Center and other federal and non-federal agencies with safety oriented concerns.

(5) Ensure that all personal protective equipment (PPE) and safety devices used on the air station conform to Occupational Safety and Health Act of 1970 (OSHA) per ref (ll) and other applicable standards. The procedures

aboard MCAS Yuma for procurement, issue, sanitation, maintenance, and use of such equipment shall comply with safety codes/or consensus standards.
(comment: what's the ref for "safety codes and consensus standards?)

(6) Conduct or direct inspections and surveys to ensure compliance with existing OSH rules, regulations, and established safety practices.

(7) Integrate safety required information into command training and new employee orientation programs.

(8) Coordination with the Naval Branch Health Clinic (BHC) and Human Resources Office (HRO), Manpower and Comptroller to establish local criteria for safe placement of personnel per the Federal Employee Compensation Act (FECA).

(9) Conduct safety surveys jointly, as appropriate, with Federal Fire Department and Naval Medical officials. Recommend measures to correct conditions detrimental to the health and safety of employees.

(10) Coordinate with Naval Facilities (NAVFAC) Southwest Division, NAVFAC Engineering Command and MCAS Yuma Installations and Logistics Department (I&L), to review all plans and specifications for new construction or alterations to air station buildings and facilities.

(11) Collaborate with planners and committees to ensure that Station Safety personnel are included in all pre-construction planning and meetings.

(12) Review and analyze all station motor vehicle accidents to determine causal factors to help with accident prevention programs and to formulate appropriate recommendations. (comment: How's this going?)

(13) Initiate and develop training and/or visual aids for safety, health, and accident/mishap prevention programs.

(14) Review, evaluate and advise the Command Incentive Awards/Performance Rating Board concerning beneficial suggestions from a safety point of view.

(15) Represent the Commanding Officer, as appropriate, on committees, at conferences, and other activities involving safety matters.

(16) Take immediate emergency action, as the representative of the Commanding Officer, to stop any job or operation that could place personnel in Imminent Danger to Life or Health (IDLH) or cause damage to equipment or property. Report lesser violations by contractors to the Resident Officer in Charge of Construction (ROIICC), I&L Division and other authorized Contract Officer Representatives (COR), State or Federal OSH Officials.

(17) Provide assistance and/or conduct mishap investigations on all mishaps (e.g., training, industrial, on or off duty recreational or privately owned vehicle mishaps) which occur aboard MCAS Yuma in accordance with (IAW) reference (o).

(this is out of place under "DSS responsibilities")

c. Directors, OICS, SNCOICs, department heads and supervisors are responsible to maintain a safe, healthy and sanitary workplace for all personnel under their cognizance IAW reference (d). They shall:

(1) Ensure that all personnel under their supervision are adequately trained on safety rules, regulations and processes pertaining to each job being performed.

(2) Provide as appropriate, industry approved safety equipment required for each job being performed and ensure that safety precautions are observed.

(3) Investigate and take required action on reports and recommendations received concerning work practices and unsafe/alleged conditions.

(4) Ensure that all injured personnel receive prompt medical attention and complete the appropriate Mishap/Flash Report and follow the appropriate reporting procedures.

(5) Investigate and report per Chapter 9 of this order, all mishaps and occupational illness that affect property or personnel under their jurisdiction.

(6) Conduct workplace safety training per Chapter 3 and references (b and j), for all personnel under their cognizance. Submit a training roster of all workplace safety training to Director, DSS within five business days after the completion of training to officially record such training, in addition to documenting it in the individual's record.

(7) Daily inspect all workplaces under their control for unsafe or unhealthy working conditions and practices. Immediately initiate necessary actions to permanently correct or temporarily abate each deficiency noted.

d. MCAS Yuma military and civilian personnel are responsible to comply with all safety and health regulations and procedures applicable to their workplace. Additionally, they shall:

(1) Report to their immediate supervisor any condition, equipment or material they consider unsafe or likely to develop into a hazard.

(2) Immediately cease the use of any equipment or appliance that malfunctions, or which violates a safety or health standard or regulation. (See Chapter 12 Lockout/Tagout).

(3) Warn others and report to supervisor those who may be endangered by known hazards, who fail to observe safety precautions, or who are involved in any unusual or developing hazardous situations.

(4) Report to supervisory personnel, any "near miss", mishap/injury, or evidence of impaired health, which occurs during the course of work processes. (See Chapter 9 Occupational Mishap/Illness Reporting).

Chapter 2

Councils and Committees

1. Occupational Safety and Health Policy Council

a. Purpose. To consider, define, study and establish policies, abatement processes and programs pertinent to safety matters per reference (j), and other related directives.

b. Membership. The MCAS Yuma Safety Council shall be chaired by the Commanding Officer, MCAS Yuma or the Executive Officer in the absence of the Commanding Officer. Members shall be appointed in writing and include Commanders, Tenant Commander, key departmental personnel on the installation, as well as safety and health professionals. A Marine Corps Community Services (MCCS) and MCCS Semper Fit Representative shall also be included in the membership.

c. Meetings. The council shall meet quarterly and when necessary as directed by the Chairperson.

d. Meeting Minutes. The Safety Director shall prepare, publish, and retain the minutes of all such meetings.

2. Safe Driving Council

a. Purpose

(1) Help the Commanding Officer, MCAS Yuma, establish and maintain a motor vehicle mishap prevention Program IAW references (j), (k) and (s).

(2) Evaluate and recommend establishment of command policies concerning motor vehicles.

(3) Help unit Safety Managers carry out their duties.

b. Membership. This council shall consist of the same members as the Commanding Officer's Safety Council and any such other members as the Commanding Officer may deem appropriate (e.g., Medical Officer, Legal Officer, Personnel Officer, Training Officer, Public Affairs Office (PAO), tenant unit representatives, civilian employees' representative, etc).

c. Meetings. Meetings of the Safe Driving Council will be held quarterly or more frequently as needed. The Safe Driving Council may be consolidated with the Safety Council at the direction of the Commanding Officer provided the duties herein prescribed for the Safe Driving Council are accomplished.

d. Meeting Minutes. The Director, DSS will prepare, publish, and retain the minutes of all meetings.

3. Occupational Safety and Health Unit Safety Committee

a. Purpose. Assist the OSH Policy Council by identifying existing or potential OSH hazards and deficiencies, recommend corrective measures to the council, promote and ensure an effective continuing OSH Program aboard MCAS Yuma per reference (l).

b. Membership. The Unit Safety Committee is a department or tenant command level function and as such should represent the particular command to which it belongs. Members will be designated in writing. Membership will include all unit Collateral Duty Safety Representatives (CDSR). The committee chairperson shall represent the department or tenant command on the OSH Policy Council.

c. Meetings. Committee meetings will be held monthly at a time and a place designated by the Committee Chairperson.

d. Meetings Minutes. The Unit Safety Committee Chairperson will prepare, publish and retain the minutes of all meetings.

Chapter 3

Education and Training1. Safety is Paramount to Mission Readiness

a. The Safety and Occupational Health Mishap Prevention Program is based on safe working procedures. If safe procedures are routinely established and followed and a safe work environment is provided, the work will be accomplished safely and efficiently.

b. Through an effective education and training program in safe and proper methods and procedures, not only can mishap costs be reduced, but mission readiness can be enhanced.

2. Education Versus Training

a. Education develops positive safety attitudes and imparts knowledge necessary for the safe and efficient performance of various jobs, operations, or activities.

b. Training develops skills to the levels necessary for safe and efficient performance.

c. Both functions are important responsibilities of supervisory personnel, who must possess a high degree of knowledge and skill, as well as positive attitude toward safety.

3. Unit/Organization on Safety Section Training Responsibilities.

Directors, department heads, and commanding officers shall ensure that all personnel in their organization receive safety training as required by reference (j) and higher directives. All personnel can benefit from safety education and training, and will receive at least the following:

a. Initial Safety Indoctrination. A program must be organized wherein all newly-assigned personnel receive initial training in the safe performance of their duties, including the use of PPE, the proper use of tools and equipment, the hazards of their particular work environment, etc.

b. Individual Training. Each service member or civilian employee will receive at least six hours of safety-oriented training annually. This training shall include at least the following:

(1) On-The-Job Training (OJT). Mishap prevention must be introduced into all OJT Programs, whether formal or informal. DSS personnel will provide technical assistance when requested.

(2) Technical Training. Technical training is one of the most efficient forms of safety education and training in that little time is lost and the trainees are in their own environment. The CDSRs shall help supervisors prepare safety-orientation lesson plans and will provide support as required. Training schedules must include safety and occupational health topics on a regular basis and records of lesson plans, syllabi, and rosters of attendees will be maintained by the CDSRs for three years. These sessions must be monitored by the CDSRs or in the absence of the CDSR the GSM can monitor the session.

(3) Supervisor Training

(a) Employees appointed to a supervisory position shall receive initial safety training within 90 days of appointment and receive a minimum of four hours of safety supervisor instruction. This instruction will be completed by the Station DSS. Training will be conducted quarterly by the Station DSS. Civilian supervisors and CDSRs are required to attend the initial and annual refresher training.

(b) The immediate job of preventing mishaps falls upon supervisors because mishap prevention is directly related to workplace efficiency. The civilian supervisors and CDSRs are responsible for the following:

1. Work Methods. Establish work methods that are easily understood and consistently followed.

2. Job Performance Instruction. Provide job performance instruction following established work methods and procedures, with necessary emphasis on aspects of safety. Follow-up evaluations must be made to ensure that individuals understand and adhere to instructions.

3. Assignment of Personnel. Personnel must be qualified to perform assigned tasks and must understand the methods and follow them as a matter of routine.

4. Equipment and Work Spaces. Safety and efficiency require proper maintenance of working spaces, tools and such equipment. Poor housekeeping results in hazards such as fire, slips/trips or falls, damage to facilities, etc. Improper storage of flammables can create a fire hazard or cause an explosion. Poorly maintained electrical systems and equipment are shock and fire hazards. Broken or dirty tools, poorly maintained or improved work stands, unauthorized "home-made" tools, etc. are all hazards.

5. Supervision. Supervision is the key to an effective safety program. All of the above responsibilities are functions of good supervisory techniques. Deviations, short-cuts, unauthorized modifications cannot be tolerated. Supervisors must recognize and eliminate unsafe practices and conditions in order to minimize hazards in the work environment.

4. Safety Program Training Requirements. Per reference (j), each of the programs has certain Education/Training requirements. These requirements must be incorporated IAW references (a),(d),(j),(k), and (r):

- a. Motor vehicle safety.
- b. Recreation/Off Duty Safety (RODS).
- c. Work place inspections/hazard abatement.
- d. Hearing conservation.
- e. Personal Protective Equipment (PPE).
- f. Hazard Communication (HAZCOM).

g. General industrial safety and health.

5. Director, DSS Training Responsibilities. The Director shall coordinate and support unit/organizations safety training programs and ensure that the above requirements are met. Specifically, DSS shall:

a. Provide initial training and orientation for newly assigned unit safety personnel and ensure that a smooth transition is made between unit/organization safety personnel. Ensure command assigns untrained personnel to the first available training session.

b. Provide instruction and material support for unit/organization safety training programs. Procure and maintain educational materials such as videos, posters, signs, stickers, manuals, texts, power point presentations, etc for check-out during unit training by appointed CDSRs.

c. Monitor driver improvement/remedial driver training programs to ensure fulfillment of requirements and effective use of quotas.

d. Monitor unit/organization safety training sessions on a random basis to ensure effective instruction, adequate coverage of required subject areas, and realistic participation by personnel.

e. Coordinate and ensure that adequate facilities, equipment, and visual aids are available for OSH trainers from both internal and external training providers.

f. Ensure that each commander, program manager, CDSR and supervisor creates procedures for documenting safety training. These procedures will ensure that all safety and health training is documented and is readily available.

Chapter 4

Safety Standard Operating Procedures (SOP)

1. Purpose. The purpose of a written SOP is to document necessary safety procedures for personnel to follow in accomplishing their duties. For this, supervisors must assess hazards and implement a program to abate or control hazards.

2. Dutiesa. Director, DSS

(1) Provide technical assistance to MCAS Yuma and tenant commands when assessing hazards.

(2) Interpret regulations for MCAS Yuma and tenant commands.

(3) Review and approve all safety SOPs.

b. Commanders/Department Heads/Directors. Commanders, directors, and department heads shall require that SOPs be implemented within their commands to control hazards at a level that meet regulatory guidelines from higher authority (OSHA, DoD, DON, CMC or consensus standards).

c. Tenant Command Safety Representatives. Tenant Command Safety Representatives shall implement a safety program using this chapter as a guide in writing their own SOPs. SOPs promulgated by parent commands are acceptable if they are specific to the task and meet the requirements of this order.

d. Supervisors. Supervisors shall provide task specific SOPs and ensure that a safe and healthy work place is provided for all employees.

3. Definitions

a. OSH. Occupational Safety and Health. This is an acronym to describe the safety Program adopted from the Department of Labor.

b. Deficiency. Identification of a safety violation written in a formal report. See Chapter 7.

c. Mishap. Any unplanned or unexpected event causing personal injury, occupational illness, death, material loss or damage. See Chapter 9.

d. Industrial Hygienist (IH). A specialist trained to accomplish stressor sampling of hazardous operations.

e. Industrial Hygiene Report. A report that the IH writes. This is used to perform operational risk management or hazard analysis surveys.

f. Operational Risk Management/Job Hazard Analysis. The process of dealing with and analyzing risks associated with operations which include risk assessment, risk decision making, and implementation of risk controls. Results shall be implemented into work processes and specific task/job SOPs.

g. Lockout/Tagout Program. A Program to ensure that there is no start-up or release of any type of energy while performing repairs or maintenance. See Chapter 12.

h. Personal Protective Equipment (PPE). Equipment provided to employees for protection from hazards that cannot be engineered out of the job. It is provided at no expense to the employee. Employees must be trained before using any PPE device. See Chapter 13.

i. Confined Space Entry. There are numerous confined spaces that may require entry by personnel. All confined spaces are considered to be permit required. See Chapter 14.

j. Hazcom. This stands for Hazard Communication Program. It includes the use and storage of all hazardous materials aboard MCAS Yuma. See Chapter 15.

k. Safety Specialist. Persons who meet the Office of Personnel Management Standards for Safety and OSH/Manager GS-0018, through formal/informal educational or training.

4. Responsibilities

a. Director, DSS. The Director will ensure that the tenant commands safety programs are sufficient to control hazards and is responsible to inspect all facilities aboard MCAS Yuma.

b. Tenant Command CDSRs. Tenant command CDSRs are responsible to ensure that their SOPs and safety programs meet the requirements of this order and are sufficient to control hazards. They must report any deficiencies to the cognizant Commanding Officer.

c. Supervisors. Supervisors must ensure that all cognizant employees are trained in all aspects of their job and the associated hazards. This training will include the safety requirements found on the operational risk management (ORM)/job hazard analysis.

Chapter 5

Respiratory Protection

1. Purpose. To provide written requirements and guidelines for the Respiratory Protection Program at MCAS Yuma IAW with reference (b) and (j).

2. Background. OSHA, American Conference of Governmental IHs, Navy Occupational Safety and Health Program (NAVOSH), as well as consensus standards specify permissible limits for exposure to airborne concentrations of potentially hazardous dusts, fumes, mists, vapors, and gases, above which employees must not be exposed. At all times, the Director, DSS must use the most stringent exposure limits available and direct that, where feasible, engineering controls be implemented to reduce employee exposure to hazardous substances to below these exposure limits. Where engineering or administrative controls are not feasible, or while these controls are being instituted, employees must use appropriate respirators to protect their health. In such cases, a written Respiratory Protection Program will be established by the cognizant command and approved by the Director, DSS, which governs the selection, use, and maintenance of these respirators.

3. Scope. This manual applies to all uses of respiratory protection equipment at MCAS Yuma, including all tenant organizations. Contractors and vendors shall adhere to applicable Marine Corps Orders/NAVOSH, or OSHA requirements for respiratory protection.

4. Responsibilities

a. The Respiratory Protection Program Manager (RPPM) for MCAS Yuma shall be a qualified safety specialist or IH assigned to the DSS. The RPPM is responsible to coordinate all aspects of the Respiratory Protection Program and has full authority to make necessary decisions to ensure the success of the Program for the base and tenant organizations.

b. The RPPM shall:

(1) Use pertinent statutes and consensus standards as guides.

(2) Approve and authorize in writing all purchases of non-standard respiratory protective equipment.

(3) Ensure that respiratory protection recommended by the IH is provided to personnel by their organizations.

(4) Ask the IH to conduct a health hazard evaluation of new or modified work operations to ensure that appropriate respirators are specified.

(5) Ensure that central maintenance facilities are established by tenants for respirator storage issue, cleaning, and maintenance.

(6) Ensure that personnel assigned to the respirator central maintenance facility are adequately trained.

(7) Ensure that all respirator users and their supervisors receive annual training.

(8) Ensure that all respirator users receive a respirator physical before being fit-tested.

(9) Ensure that all users of negative pressure respirators are fit-tested annually. Ensure that Self Contained Breathing Apparatus (SCBA) wearers are fit tested with a quantitative fit-tester.

(10) Maintain all records pertaining to respirator training, fit-testing, and employee exposures.

(11) Conduct an annual audit of the Respiratory Protection Program.

(12) Ensure that all respirator users have a Respirator Fit Card.

c. All Base and tenant organizations using respirators shall:

(1) Assign a command RPPM in writing, and make this person available for training.

(2) Set up an area for respirator issue, storage, and maintenance.

(3) Issue respirators to qualified respirator users only. User must show current Respirator Fit Test Card as proof of qualification.

(4) Clean, disinfect, inspect, and repair all respirators before issue.

(5) Maintain an adequate supply of respirator replacement parts.

(6) Publish a written Respirator Protection Program document.

d. Supervisors shall:

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

(2) Ensure that respirators are used in accordance with this order.

(3) Ensure that personnel have a current Respirator Fit-Test Card on their person before they use respirators

e. Supply Department will only purchase respiratory protective equipment that has been approved and authorized by the MCAS Yuma RPPM.

f. Respirator users shall:

(1) Use respirators in accordance with this order.

(2) Immediately report worksite problems involving the use of respirators to their supervisors.

(3) Carry a current Respirator Fit-Test Card at all times when a respirator is being used.

5. Respirator Selection

a. Respirators will be selected by the MCAS Yuma RPPM IAW references (b), (i), and (j) or other regulations or consensus standards.

b. The IH shall specify respirators in the annual IH evaluation and upon request by the RPPM.

6. Respirator Use

a. Use only respiratory protective equipment authorized by the RPPM.

b. Use respirators as issued. No modifications or substitutions to equipment are permitted.

c. Respirators will be used only by the person to whom they are issued.

d. Respirators with tight-fitting face pieces will not be worn by individuals with interfering facial hair.

e. The wearing of contact lenses with a respirator will be authorized on a case-by-case basis by MCAS Yuma or command RPPM.

f. Users shall inspect respirators before donning.

g. A respirator fit-check must be performed each time a respirator is donned.

h. If, while using respiratory protection, odor or taste from the work process is detected, difficulty in breathing is encountered or other sign of leakage is present, the user shall leave the area without delay. Re-entry will not be permitted until the problem has been solved by replacing cartridges, filters, adjusting respirator fit, or by other means.

i. When respirators are temporarily removed during breaks in work operations, removal must be done away from the work area in order to prevent personnel exposure and to keep the interior of the respirator face piece clean. Protect respirators from contamination before re-donning.

7. Respirator Inspection

a. Inspect all respirators before and after each use.

b. Inspect respirators and SCBAs kept for emergency use monthly. Maintain written records of inspection dates and findings.

8. Respirator Cleaning and Disinfecting. Clean and disinfect respirators after each use.

9. Storage of Respirators

a. Store clean respirators in sealed plastic bags or approved containers, away from sunlight, heat, extreme cold, excessive moisture, or damaging chemicals. The storage area will be clean and sanitary.

b. Store respirators in such a way as to prevent crushing which can result in deformation of the face piece.

10. Repair And Maintenance

a. Respirator assembly and repair may only be performed by trained and qualified personnel.

b. Repair respirators with the appropriate parts designated by the respirator manufacturer. Do not use parts from one Manufacturer on another manufacturer's respirator (including filters and cartridges).

c. Do not attempt to replace components or to make adjustments or repair beyond the manufacturer's recommendations.

11. Medical Examinations

a. All respirator users shall be medically evaluated by a physician to ensure they can wear a respirator and do the required work without any adverse health effects.

b. These medical examinations must be conducted IAW references (b) and (i).

c. Users of prescription eyewear who must wear a full-face respirator shall be fitted with respirator spectacles approved by the manufacturer and prescribed by an optometrist.

12. Training

a. Fit test all users of negative pressure respirators in a test atmosphere to ensure proper respirator fit.

b. Perform fit tests annually, IAW references (b), (i), and (j), after the training. Those individuals who work with or may be exposed to arsenic, acrylonitrile, lead, asbestos, or other materials require semi-annual testing.

c. Perform fit-tests IAW references (b), (i), and (j).

d. Provide a Respirator Fit-Test Card to individual users at the time of Fit-tests.

Chapter 6

Inspections and Corrective Action

1. Purpose. This section provides guidance in carrying out workplace safety inspections aboard MCAS Yuma IAW reference (j).

2. 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.

a. Safety and health surveys and inspections are the most effective way to identify problem areas before they result in mishaps. A properly managed safety inspection program conducted by knowledgeable personnel can yield the following benefits:

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

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

(3) Promote the OSH Program to all personnel.

(4) 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.

(5) 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.

3. Inspection Frequency

a. All workplaces will be inspected at least annually by DSS OSH personnel.

b. Supervisors shall inspect their assigned areas quarterly utilizing the checklist provided by DSS. A copy of all inspection discrepancies and corrective action plans will be forwarded to the DSS.

c. CDSRs will inspect their areas monthly utilizing the checklist provided by DSS. A copy of all inspection discrepancies and corrective action plans will be forwarded to the DSS.

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

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

4. Responsibility

a. Director DSS. The DSS Safety Director is responsible to conduct formal workplace inspections in response to request by persons in authority, reports by employees of unsafe or unhealthy working conditions, and per references (a), (c), (d), and (j). Accordingly the Director, DSS shall:

(1) Conduct formal workplace safety inspections, (when time permits, a 30 day written notice must be provided prior to any scheduled inspection to the appropriate department head, Station Inspector, and the appropriate union representative), prepare written reports, and assign the Risk Assessment Code (RAC) with reference to standards or directives violated.

(2) Post OSH Deficiency Notices (NAVMC 11400), See enclosure (1).

(3) Assist the supervisor of the workplace with inspections and assist in the development of abatement plans for the hazards noted.

(4) Maintain a current status code of OSH deficiencies noted as a result of inspections.

(5) Review, prioritize and endorse as appropriate, all work requests initiated by a supervisor of a workplace concerning OSH deficiencies before submission to Department Heads, Unit Commanders, and OICs.

(6) Appraise the Commanding Officer of all outstanding OSH deficiencies having a RAC of 1, or 2.

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

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

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

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

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

(5) Ensure the commander is informed of the results of any inspection.

(6) Provide in depth information to the commander of any OSH or operational deficiency that may present a high risk to the mission. ORM processes should be used to determine the level of risk per reference (n).

(7) Maintain a list of the work center supervisors and their safety representatives.

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

(9) At the appropriate level, manage the unit safety budget.

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

c. Workplace Supervisors. Workplace supervisors are responsible to ensure a daily safety walk through of their areas is conducted. Additionally, supervisors shall:

(1) Accompany the inspecting personnel to encourage exchange of information, provide access, take notes and ask pertinent questions.

(2) Abate all identified workplace hazards on the spot if within their capability.

(3) Within 30 workdays of a Notification of Posting of such deficiencies, complete the OSH deficiencies form, Section B, and return a copy to the Ground Safety Manager, DSS.

(4) Initiate interim abatement measures at work areas awaiting permanent abatement.

(5) 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 must include the following standard data.

(a) Date the hazard was identified.

(b) Location of the hazard.

(c) Hazard description and the standard violated.

(d) Suggested corrective action.

(e) RAC.

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

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

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

5. Inspection Procedures

a. Inspections will be conducted in a manner to preclude unreasonable disruption of operation of the work center and should be consistent with established operational concepts of command. Inspections may be conducted with or without prior notice. No-notice inspections will be conducted when,

in the judgment of safety and health personnel, they will provide a more meaningful assessment of actual operating conditions and practices, or at the request of unit department heads or tenant commanders. No notice inspections are particularly important when evaluating operations in which the safety and occupational health of individuals depend heavily on work practices or use of personal protective equipment. No-notice inspections shall be used when evaluating reports of unsafe or unhealthful working conditions or an ANYMOUSE report (see chapter 8). Inspectors will always notify organizational commanding officers, directors and department heads before starting any inspections.

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

c. Inspectors shall comply with safety and occupational health rules applicable to the work place being inspected.

d. At the conclusion of the inspection the inspectors will confer with and informally advise the supervisor of the workplace inspected of any apparent unsafe/or unhealthful working conditions discovered during the inspection.

e. Imminent danger situations discovered during an inspection will be brought to the immediate attention of supervisory personnel, including the Commanding Officer or Commanding Officer of the unit, director or department head for necessary action. Additionally imminent danger situations require all affected personnel will be notified of corrective actions to eliminate or abate the imminent danger situation.

f. The supervisor of a workplace is encouraged to exchange information concerning existing or potential unsafe working conditions. Union/employee representatives may accompany the inspector if desired.

6. RAC. Each hazard identified that cannot be corrected immediately will be assigned a RAC by the safety manager. Figure 6-1 provides guidance for determining RACs.

7. Posting Of Notices. In all cases where military or civilian personnel are exposed to unsafe or unhealthy working conditions which are verified by the DSS as being significant (e.g., RAC 1, 2, or 3), an OSH Deficiency Notice (NAVMC 11400) provided by the DSS, see enclosure (1), advising exposed personnel of the unsafe and/or unhealthy working conditions must be posted by the supervisor of the workplace in the immediate vicinity of the hazardous condition. The notice will remain posted until the hazardous condition is abated. Upon notification of abatement, the DSS shall authorize removal of the notice and document the hazard abatement.

8. Interim Controls. Immediate abatement of hazards in work areas may not always be possible, and some temporary abatement methods may be required. Therefore, it is necessary that the supervisor and the DSS establish appropriate interim controls as soon as the hazard is noted. Such controls will be outlined on the OSH Deficiency Notice and adhered to. Interim control measures to be in effect for more than 30 days will be approved by the Director, DSS.

9. Written Reports. Written reports of workplace inspections will be distributed to concerned officials, commanding officers and department heads; to assure rapid and effective remedial action on identified deficiencies. Such reports must reference standards or other directives violated, other unsafe work practices, and management deficiencies observed. The report will also include recommended corrective action when appropriate.

10. Corrective Actions. When corrective actions cannot be accomplished within 30 days due to circumstances beyond the control of the work center supervisor, assistance should be requested from the appropriate higher authority. Records of Actions taken to effect compliance, such as work requests for assistance, will be annotated in Section B of enclosure (1), until corrective measures are implemented. After 30 days, the notice should be annotated with a weekly update unless the interim measures have been deemed to be appropriate for a longer period of time.

11. Hazard Abatement Log. DSS Ground Safety Manager shall establish a hazard abatement log for follow-up of required corrective action to ensure timely and effective controls are implemented.

12. Inspection Follow-Up. Inspectors shall establish procedures for follow-up of required corrective action per reference (j) to ensure timely and effective response by responsible personnel. Documentation and reporting of corrective action will be required of inspected organizations, to include interim controls and abatement procedures implemented within 30 days of receipt of out brief.

13. Unit Safety Officer. Each organization safety representative shall inspect or survey each of its component units at least quarterly per this order. Discrepancies noted will be forwarded to the unit commander for corrective action. Additionally the unit commander shall:

a. 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.

b. Document and report corrective actions to the unit safety section for follow-up for effectiveness and/or adequacy.

c. Assemble and forward discrepancy reports and corrective action reports to concerned management personnel and the Commanding Officer for review, comment or action as appropriate.

d. 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 three years.

RISK ASSESSMENT CODES (RAC)

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

a. Hazard Severity Categories. Hazard severity categories will be assigned by OSH personnel based on the following definitions:

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

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

(3) Category III. May cause minor injury, minor occupational illness, or minor property damage.

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

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

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

(2) Subcategory B. Probably will occur in time.

(3) Subcategory C. May occur in time.

(4) Subcategory D. Unlikely to occur.

c. Risk Assessment Code. Using the matrix shown in figure 6-1, the RAC is expressed as a single Arabic number that is used to help determine hazard abatement priorities.

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

RAC Definition

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

Figure 6-1.--Risk Assessment Codes

Chapter 7

Reports and Appeals Of Unsafe Or Unhealthful
Working Conditions

1. Purpose. To provide guidelines and procedures for the submittal and evaluation of unsafe or unhealthful working conditions aboard MCAS Yuma. To outline an appeal process for individuals who disagree with conclusions concerning such conditions.
2. Background. Reference (d) encourages all military and civilian personnel to participate in OSH Program activities. References (d) and (j) require that workplace hazard reporting and appeal procedures be developed which include safeguards to ensure that Marine Corps military and civilian personnel are not subject to any restraints that preclude their participation in the installation's OSH Program.
3. Discussion. Detection of unsafe or unhealthful working conditions at the earliest possible time, and the prompt correction of them and related hazards are major factors in the OSH Program. Correction at the lowest possible working level is an essential element of mishap prevention. Accordingly, all military and civilian personnel are strongly encouraged to fully participate in the MCAS Yuma OSH Program. Although reporting processes are mandatory, appeals of merit are invited and encouraged.
4. Hazard Reporting
 - a. Any military or civilian personnel who observe unsafe and/or unhealthful work practices, conditions or violations of established OSH standards, are required to advise the workplace supervisor of the condition noted either verbally or in writing.
 - b. The workplace supervisor shall investigate and initiate appropriate corrective action upon the receipt of any oral or written bona fide report of an unsafe or unhealthy work practice or condition. Upon finding a valid unsafe and/or unhealthful work practice or condition, notify the Director, DSS within five working days.
 - c. Any person desiring anonymity may submit a written report to the Director, DSS using the "Employee Report of Unsafe or Unhealthful Working Conditions", see enclosure (2). The blank copies of this form and procedures will be posted on bulletin boards throughout all MCAS Yuma work places.
 - d. If anonymity is requested, the Director, DSS shall delete the originators name and advise the cognizant supervisor that a hazardous condition has been reported.
 - e. The DSS staff shall investigate to validate and correct, or minimize the reported deficiency.
 - f. Within 10 working days of receipt of a hazardous report, the Director, DSS shall respond in writing to the originator with regard to the reported condition as verified by DSS personnel. If the 10 day suspense cannot be met for any reason, an interim reply must be provided.

5. Appeals

a. If the originator of a report is dissatisfied with the final determination or corrective action taken, confer with the Director, DSS and attempt resolution.

b. If, after a discussion with the Director, DSS the originator remains dissatisfied, an appeal to the Commanding Officer (Attn: Base Inspector) may be made as follows:

(1) The appeal will be in writing, with a detailed description of the hazardous condition.

(2) The OSH standard violated (if known).

(3) How, and to whom, the original report of the condition was given.

(4) What action resulted?

(5) An explanation of the dissatisfaction and any recommendation for correction.

(6) The appeal must be delivered to the Base Inspector and reviewed and investigated promptly. The originator shall be notified of a decision within 10 working days after receipt.

(7) Further appeal rights are outlined in reference (j).

6. Notices. A notice advising employees of the unsafe or unhealthful working conditions must be posted by the workplace supervisor in the immediate vicinity of the hazardous condition. This notice will not be removed until the condition has been corrected. Only a Safety Officer/Inspector may remove to verify abatement of hazardous condition.

7. Retention Of Reports. The DSS shall retain copies of unsafe or of unhealthful working condition reports and records of abatement actions taken for five years. (asbestos and lead records will be retained indefinitely).

8. Adherence To Procedures. Strict adherence to the above reporting procedures and the chain of command for appeal procedures is essential.

Chapter 8

Mishap and Occupational Injury/Illness Reporting

1. Background. Record keeping and reporting is vital to provide safety information to Department of the Navy (DON) and Department of Defense (DoD). These records and reports are required by federal law and provide information to identify unsafe acts and conditions, and apply corrective measures. Mishap records include work-related injury and illness logs, Safety Investigation Reports (SIREP), Hazard Reports (HAZREP), investigation records, mishap logs, and other files maintained in any format that summarize mishaps involving injuries or property damage, track safety reports and corrective actions, and provide a single reference for trend analysis. With the inception of electronic reporting, all mishaps or incidents are now in the reportable category. Besides material damage, fatalities and disability mishaps, data must also be collected on lost work time, light, limited, and restricted duty injuries and occupational illnesses for preventive efforts. The investigation procedures, reports, and records required by this manual are designed to assist all leaders/supervisors in identifying causal factors and formulating corrective measures to prevent mishap recurrence.

2. Purpose. To establish the requirements and procedures for mishap and safety investigation reporting and record keeping aboard MCAS Yuma IAW reference (o).

3. Scope. The following areas are within the scope of this manual (see reference (o) for amplification):

a. Injuries, occupational illnesses, and fatalities occurring to:

(1) Military personnel (on or off duty).

(2) Civilian employees, when resulting during the course of employment.

(3) All damage to government material (property or equipment).

b. Injuries and damage caused by explosive mishap.

c. Motor vehicle mishaps.

4. Definitions

a. Mishap. Any unplanned or unexpected event causing death, injury, occupational illness, including days away from work, job transfer or restriction, and material loss or damage.

b. Mishap Investigation. An investigation, conducted per reference (o), into the facts surrounding the causes of a mishap.

c. Marine Corps Employees. For the purpose of this manual, Marine Corps employees include all military and civilian DoD personnel.

d. Unsafe Conditions. A condition which, if allowed to go unchecked or if not corrected, has the potential to cause a mishap. This includes faulty equipment and structures, poorly written procedures, environmental conditions, etc.

e. Unsafe Acts. Personnel acting in such a manner if allowed to go unchecked or if not corrected, has the potential to cause a mishap. This includes not following procedures, not using a piece of equipment properly, horse play, not paying attention to the job at hand, etc.

f. Injury. A traumatic wound or other condition of the body caused by external force including stress or strain. Injuries include cases such as, but not limited to, a cut, fracture, sprain, or amputation.

g. Occupational Injury. Bodily harm, (as defined above) arising out of, or in the course of employment or performance of duty.

h. Occupational Illness. A non-traumatic physiological harm or loss of capacity produced by: systemic infection; continued or repeated stress or strain; exposure to toxins, poisons, fumes, etc.; or other continued and repeated exposure to conditions of the work environment over a long period of time (greater than a single day or work shift). For practical purposes, an occupational illness or disease is any reported condition that does not meet the definition of an injury.

i. On Duty. Navy and Marine Corps military and civilian personnel are considered on duty if they are physically present at any location where they are to perform officially assigned work. This includes those activities incident to normal work activities that occur on DoD installations. On duty includes:

(1) Being transported by Marine Corps or commercial conveyance to perform officially assigned work. (This includes travel in POV or commercial conveyances while performing official duty, but not routine travel to and from work).

(2) On temporary duty or temporary additional duty. Personnel on assignment away from the regular place of employment are covered 24 hours a day for any injury that results from activities essential or incidental to the temporary assignment. However, when personnel deviate from the normal incidents of the trip and become involved in activities, that are not reasonably incidental to the duties of the temporary assignment contemplated by the employer, the person ceases to be considered on-duty for investigation and reporting purposes of occupational injuries or illnesses, even though such injuries may be compensable.

j. Off Duty. Off Duty activities typically include recreation/personal physical training, part-time employment, hobby shop activities, and home projects. Military personnel are off-duty when they:

(1) Have departed their official duty stations at the end of their normal work schedule.

(2) Are on leave or liberty.

(3) Are engaged in travel before reporting for, and after being secured from, official duties (except while traveling under official orders).

k. Lost Time Case. A non-fatal traumatic injury that causes any loss of time from work after the day or shift on which it occurred; or non-fatal non-traumatic illness and/or disease that causes any loss of time from work.

l. Lost Workdays or Days Away From Work. The total number of full calendar days, weekends included, that a person was unable to work as a result of an injury or occupational illness, excluding the day of the mishap and the day returned to duty or work.

(1) For military personnel, these include days hospitalized, sick-in-quarters, or on convalescent leave as a result of injury or work-related illness.

(2) For civilian personnel, this includes Continuation of Pay (COP) leave, annual leave, sick leave, days hospitalized, and leave without pay granted, or a full work shift missed because of a work-related illness or injury.

m. No Lost Time Case. A non-fatal injury or illness and/or disease that does not meet the definition of a day away from work case, or is considered a first aid case. These are cases usually created by compensation claim or Marine Corps employee who has been awarded restricted work activity (light duty for Marines).

n. Reportable Mishap. The following mishaps must be investigated and reported under this manual:

(1) Class A, B, and C government property damage mishaps. This includes property damage caused by a government evolution, operation or vehicle to other government or non-government property.

(2) Class A, B, and C on duty DoD civilian mishaps and military on/off-duty mishaps.

(3) Any other occupational illness or injury that involves medical treatment beyond first aid, if it results in days light duty or limited duty for on/off duty military personnel, or days of job transfer or restricted work for on-duty civilian.

(4) Other reportable mishaps:

(a) Class A mishaps that occurred within one hour of a command-sponsored Physical Training (PT) session, or Physical Fitness Test (PFT).

(b) DoD caused Class A or B, of a dependent or guest of military.

(c) Conventional ordnance mishaps.

(d) On-duty diving cases and those with hyperbaric treatment.

(e) All government motor vehicle (GMV) or government vehicle other (GOV) mishaps resulting in \$5000 or more property damage, or injury.

(f) Any mishap involving Helicopter Rope Suspension Technique, Cargo Air Drop, or Parachuting, regardless of damage costs or extent of injuries.

(g) Work-related mishap involving DON-supervised contractor caused by DON evolution or operation.

(h) Any medically diagnosed work-related injury or illness, such as Cumulative Trauma Disorder (CTD) or musculoskeletal disease; with or without lost work time or further medical treatment.

(i) Work-related Significant Threshold Shift (STS) in hearing.

(j) Any work-related needle stick injury or cut from a sharp object that is contaminated with another person's blood or other potentially infectious material.

(k) Any Work-related Tuberculosis (TB) infection.

(l) Any case requiring a military member or civilian employee to be medically removed from work under the requirements of an OSH standard.

o. Explosive Mishaps. An accident or incident involving conventional ordnance, ammunition, explosives, explosive systems and devices resulting in an unintentional detonation, firing, deflagration, burning, launching of ordnance material (including all ordnance impacting off-range), leaking or spilled propellant fuels and oxidizers (less OTTO fuel II), or chemical agent release. Accidents and incidents defined as explosive mishaps and meeting a severity classification of class A, B or C., will be reported as Explosive Mishap Report (EMR) using Web Enabled Safety System (WESS), even if an ordnance system works as designed, and human error contributed to an incident or accident. Any explosive event not meeting one of these severity classifications will be reported as an Explosive Event Report (EER) per reference (dd).

5. Mishap Classifications. Mishaps are classified by their degree of severity. The initial classification of a mishap may change as more accurate information on the severity of the mishap is obtained.

a. Class A Mishap. The resulting total cost of damages to DoD or non-DoD property in an amount of \$2 million or more; a DoD aircraft is destroyed; or an injury and/or occupational illness result in a fatality or permanent total disability.

b. Class B Mishap. The resulting total cost of damages to DoD or non-DoD property is \$500,000 or more, but less than \$2 million. An injury and/or occupational illness result in permanent partial disability or when three or more personnel are hospitalized for inpatient care (beyond observation) as a result of a single mishap.

c. Class C Mishap. The resulting total cost of damages to DoD or non-DoD property is \$50,000 or more, but less than \$500,000; a nonfatal injury that causes any loss of time from work beyond the day or shift on which it occurred; or a nonfatal occupational illness that causes loss of time from work or disability at any time.

d. Any other work-related illness or injury that involves medical treatment, beyond first aid (includes light or limited duty and job transfer or restricted work, time away from work or higher severity).

6. Applicability. For purposes of this manual, a mishap may involve one or more of the following personnel:

a. On-Duty and Off-Duty Military. All active duty, reserves, National Guard, cadets, midshipmen, Reserve Officer Training Corps, and foreign national military assigned to DoD components, on-base or off-base.

b. Civil Service Employees. All Navy and Marine Corps civilian employees in an on-duty status.

c. Non-Appropriated Funded (NAF) Civilian Employees. To include full and part time NAF employees.

d. Contractors. Any contract employee when DON provides the day-to-day supervision and a means to change the work environment. This does not pertain to contractors at DON sites not under the direct supervision of DON.

7. Procedures

a. Supervisors/leaders. Shall report all mishaps as defined in this order to the DSS Office using the Ground Mishap Worksheet, see enclosure (1), or can access the form at www.yuma.usmc.mil/services/safety/default.htm. The mishap reporting form must be completely filled out, signed, and delivered to the DSS office no later than five working days from the date of the incident.

b. MCAS Yuma command and tenant GSMS. Will investigate and report all mishaps that meet the criteria of "reportable" using WESS. Safety representatives will provide a hard copy of mishap reports to the DSS Office for installation-wide trend analysis purposes.

c. Explosive Mishaps. Accidents and incidents defined as explosive mishap and meeting a severity classification of class A, B, or C, will be reported as an EMR using WESS. Any explosive event not meeting one of these severity classifications will be reported as an EER per reference (dd). All explosive accidents and/or incidents will immediately be reported to the installation Explosive Safety Officer, at DSS.

d. MCAS Yuma Appropriated Funded Civilian Employees will comply with the following:

(1) Notify the HRO immediately of injury.

(2) Complete a CA-1 Form, Federal Employees Notice of Traumatic Injury. Send the completed CA-1 Form to Civilian Personnel Office (CPO) (Attn: Compensation) within 48 hours.

(3) Send dispensary slips and/or doctor's papers covering employee absences (and any doctor's return to work slips) when received, to CPO.

e. MCAS Yuma NAF Civilian Employees will comply with the following:

(1) All non-appropriated fund MCCA employees shall report on the job injuries to the MCCA Human Resources Office, via their supervisor. MCCA HRO shall maintain an injuries/illness record for all non-appropriated fund MCCA employees and shall provide injury/illness information to the DSS for reporting to Navy Safety Center.

8. Mishap Investigations

a. The purpose of mishap investigations is to identify mishap causes to prevent recurrence.

b. All mishaps will be investigated IAW reference (o).

c. The following steps are guidelines for a mishap investigation:

(1) Get to Mishap Scene Promptly. To obtain accurate information, it is essential to get to the scene of the mishap before "the trail gets cold." The more time that elapse, the more chance the evidence will be removed or changed.

(2) Interview the Injured. If conditions permit, interview injured persons. Note physical and mental conditions which may have contributed to or resulted from the mishap. Record injuries as noted or reported by medical personnel.

(3) Interview Witnesses. Segregate and obtain statements from all witnesses. Interview key witnesses, allow each witness to relay what happened.

(4) Obtain Physical Evidence. Note extent and nature of damage. Note any equipment safety defects, measure distances, and dimensions. Record the scene by photographs.

(5) List Other Evidence. Record all other evidence concerning factors that may have contributed to the mishap such as weather conditions, location and type of traffic signs and signals, adequacy of lighting, machine conditions, work surfaces, operating instructions, and other pertinent information.

(6) Record Data Accurately. To make further study and analysis easier, tabulate information accurately and legibly.

(7) Analyze Data. To determine the unsafe conditions and acts that caused the mishap. Refer to paragraph 4, below, to help analyze data. Refer to appendix A contained in reference (o) as a guide.

(8) Recommend Corrective Action. Make recommendations to appropriate authority to prevent recurrence of mishap. Refer to appendix A contained in reference (o) as a guide.

9. Mishap Reports Required by the Commandant of the Marine Corps Safety Department (CMC SD)

a. MCAS Yuma commands shall comply with reference (o) with regards to mishap reports required by CMC SD. Per reference (o) and enclosure (3), provides an overview of the types and circumstances under which safety reports are to be prepared and transmitted.

b. Immediate Notification. Marine Corps Commanders shall notify CMC SD and the Commander, Naval Safety Center (COMSAFECEN) within eight hours of the following types of mishap by telephone or electronic means (may use WESS

Immediate Notification Report). All Class A mishaps (on duty DoD civilian, and all on/off-duty military).

(1) Hospitalization of three or more people.

(2) The DSS is responsible for notifying OSHA within eight hours of a fatality of a DoD civilian. The DSS will also provide technical assistance with reports, safety investigations, and Safety Investigation Boards (SIB).

10. Ground Near Miss Report. A near miss is a potential hazard or incident that has not resulted in any personal injury. Unsafe working conditions, unsafe employee work habits, improper use of equipment or use of malfunctioning equipment have the potential to cause work related injuries. It is everyone's responsibility to report and/or correct these potential accidents/incidents immediately. Utilize enclosure (4) as a means to report these near-miss situations.

Chapter 9

Prevention and Control Of Workplace Hazards1. Discussion

a. Although reference (e) applies to installations and garrison environments, there are provisions that also apply to those areas that are military unique. Reference (d) establishes the requirement for commanders to provide all Federal employees with a safe and healthful place of employment. In both garrison and operational environments, identification of hazardous conditions may be accomplished at the planning and design stage, as a result of annual or more frequent inspections, industrial hygiene reports, or by personnel reporting hazards NAVMC 11509 ANYMOUSE in enclosure (8) or NAVMC 11401, Unsafe/Healthful Working Conditions in enclosure (2). DSS ANYMOUSE boxes are located in the following locations aboard MCAS Yuma: Building 710 (Chow hall), Building 888 I&L, building 545 (Gymnasium) and Building 720 (H&HS Headquarters). All recognized hazards must be eliminated or controlled as quickly as possible subject to prioritization based upon risk assessment and assignment of RACs See figure 6-1.

b. The preferred method of hazard abatement will be through the application of engineering controls or substitution of materials, tools, equipment, and improved work procedures identified in SOPs, Professional Manuals (PMs), Technical Manuals (TMs). The use of administrative controls, possibly in conjunction with personal protective equipment (PPE), is acceptable only when engineering control methods are proven not technically or economically feasible or when waiting for engineering controls to be implemented.

2. Responsibilities

a. Commanding Officers shall establish and maintain an effective Operational Risk Management program as described within reference (n). This process is an effective approach to hazard identification, risk assessment, and monitoring the effectiveness of controls. RACs are used as the basis for developing risk decisions and controls.

b. Installation safety managers shall:

(1) Manage the program for abatement of work center hazards.

(2) Ensure an annual inspection is conducted of all work centers, buildings, and facilities owned and occupied by MCAS Yuma and tenant organizations.

(3) Assist tenant commands in the tracking of infrastructure hazards.

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

c. Supervisors shall:

(1) Coordinate with DSS to ensure an annual inspection of each work center is conducted.

(2) Report mishaps in the work center to the unit GSM and the MCAS DSS.

(3) Supervisors shall conduct, document, and maintain a job hazard analysis (JHA). A job hazard analysis is a technique that focuses on job tasks as a way to identify hazards before they occur. It focuses on the relationship between the worker, the task, the tools, and the work environment. Ideally, after you identify uncontrolled hazards, you will take steps to eliminate or reduce them to an acceptable risk level. JHAs will be updated whenever processes or procedures change or if a new hazard presents itself.

(4) Ensure personnel are trained on the hazards associated with work being performed and follow procedures described in command's SOPs, PMs, and TMs.

(5) Ensure an Emergency Action Plan (EAP) is created for each workspace and drilled/rehearsed with all employees on an annual basis. The EAP must be posted in a conspicuous location.

d. Marine Corps personnel shall:

(1) Report unsafe work conditions to supervisors.

(2) Report injuries and illnesses to supervisors.

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

a. Engineering Controls

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

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

(3) Ventilation. Control of potentially hazardous airborne substances by ventilation can be accomplished by one of two methods. The first is termed general ventilation or dilution ventilation; the second is called local exhaust ventilation. General ventilation is the dilution of a hazardous concentration by mixing with uncontaminated air. Local exhaust ventilation is the capture of the hazardous concentration at the point of generation. Local exhaust ventilation is generally preferred and can be a more economical method of hazard control. Properly used, however, general ventilation can be very effective for the removal of large volumes of heated air, or for the removal of low concentrations of nontoxic or low toxicity contaminants.

b. Administrative Controls. This method of hazard control depends on effective operating practices that reduce the exposure of individuals to chemical or physical hazards. These practices may take the form of limited access to hazardous areas, preventive maintenance programs to reduce the potential for leakage of hazardous substances, or adjusted work schedules which limit work in high interest areas. Industrial hygienists or safety specialists should be consulted for current standards. The most stringent regulation or consensus standard must be applied in all instances.

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

4. Hazard Control Applications

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

b. Design Reviews. OSH requirements will be considered, designed, and engineered into all facilities that are acquired, constructed, or modified for use by Marine Corps personnel. OSH requirements will be considered during systems planning, design, development, acquisition, operation, and disposal (life cycle). Facility design engineers in many instances are not totally familiar with potential health hazards created by various materials, equipment and operations used in industrial facilities, nor are they aware of the special design considerations required to control these hazards. To ensure that appropriate hazard control techniques are applied, commanders are encouraged to contact the installation safety, fire prevention, and environmental managers, and the responsible industrial hygienist to review

plans and specifications for all projects. All projects must be evaluated for lead, asbestos, or other hazards requiring specific abatement procedures prior to commencement of the project. The ISM will sign off on all plans at the 35 percent and 100 percent design stages.

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

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

e. Interim Hazard Abatement Measures. During the time needed to design and implement permanent hazard control measures, immediate temporary measures may be needed. Where engineering controls are not immediately applicable for use, interim control measures must be employed. They will be noted on the OSH Deficiency Notice, abatement logs, and posted hazard notices as described in chapter 7.

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

5. Hazard Abatement

a. Some projects developed to address work center hazards may exceed the funding capability of the local command and may qualify for centrally managed funds. Applications for these funds should be submitted per chapter 3 and reference (1).

Chapter 10

Industrial Hygiene Program

1. General. Industrial Hygiene (IH) is the practice of anticipating, recognizing, evaluating, and making recommendations to control exposures from work place stressors (i.e. airborne chemical vapors, dust, fumes, and fibers; dermal contact and absorption of chemical compounds; noise; vibration; heat/cold; etc.). The IH at the Branch Health Clinic manages the Industrial Hygiene Program at MCAS Yuma, and provides baseline and periodic comprehensive Industrial Hygiene Surveys to each unit permanently assigned to MCAS Yuma. Unit Commanders and Supervisors shall ensure recommendations outlined in the IH Surveys are followed to minimize exposure health risks to their personnel.

2. Industrial Hygiene Survey

a. Baseline Surveys. The IH will provide an initial comprehensive unit exposure assessment for new units assigned to MCAS Yuma.

b. Periodic Surveys. Based on the level of exposure risks at a unit, which is usually determined by their amount of industrial-related activity, a unit will receive a periodic survey update every one, two or three years.

c. Special Assessments. If processes at a specific unit significantly change before the next periodic survey, unit Safety Officers can request a special assessment to determine the risks and recommended controls for the new process(es). These special assessments will then be incorporated into the next periodic survey.

d. IH Surveys will include:

(1) Workplace Exposure Assessment. The Industrial Hygienist will evaluate all operations and work practices that take place within the unit (welding, painting, etc.). Exposure assessments are based on the duration and frequency of the exposures and the existing engineering or administrative controls or Personal Protective Equipment used. Additional controls may be recommended to minimize the health risks.

(2) Exposure Monitoring Plan (EMP). Some processes require work place and personnel sampling to characterize the eight hour average airborne concentrations in worker breathing zones or noise levels in worker hearing zones. The EMP lists those work centers and personnel that require some type of sampling. Unit Safety Officers should contact the IH enough in advance of these processes so that exposure monitoring can be performed. Work place sampling data provides better determination of the extent of exposure hazards and more appropriately determine the level of protection needed.

(3) Occupational Health and Medical Surveillance. While conducting the Industrial Hygiene Survey, the IH will recommend certain workers involved in specific at-risk processes to be enrolled in associated Medical Surveillance Programs. Certain occupational work may also require medical certification prior to performing it (i.e. forklift or crane operation, firefighters and police, etc.), and periodic follow-up evaluations.

(4) The IH shall also review and approve all new chemical product or Hazardous Material (HAZMAT) requests through the Hazardous Materials

Management System (HMMS). Unit HAZMAT Coordinators shall ensure pertinent information fields in the Authorized Use List (AUL) request in HMMS are completed prior to this review so that proper assessment of the exposure risks can be determined.

3. Record Keeping. All IH surveys, assessments, and work place sampling data will be retained a minimum of 40 years.

a. IH Surveys will be peer-reviewed by Naval Hospital Camp Pendleton prior to signature of the OIC at Branch Health Clinic Yuma. Once signed, the original survey is forwarded to the unit Commander or Director. Copies are kept in the IH Department, Occupational Health and Base Safety for reference and archival requirements.

b. Exposure monitoring results will be forwarded to the employee and be entered into the employee's health record.

Chapter 11

Lockout/Tagout Energy Control Program

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

2. Policy. All machinery/equipment must be locked out and tagged out to prevent accidental operation when such operations may cause injury to personnel performing maintenance, servicing, repairing, and/or modifications to machinery/equipment. This program complies with reference (b).

3. Scope. This chapter covers the policies for avoiding the "unexpected" energizing or start-up of machines and equipment or release of stored energy which could cause injury to personnel or damage to equipment. This program applies to all MCAS Yuma commands, contractor and vendor operations.

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

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

b. An employee is required to place any part of their body into an area on a machine or piece of equipment where work is actually performed upon the material being processed (point of operation).

c. Where an associated danger zone exists during a machine or equipment operating cycle.

5. Definitions

a. Lockout. The placement of a lock-out device on a piece of equipment making so the equipment being controlled cannot be operated until the lock-out device is removed.

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

c. Tagout. The placement of a tagout 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 Tagout device is removed.

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

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

f. Lockout/Tagout Log. These logs are the records of authorization for each Lockout/Tagout action on systems or equipment.

g. Lockout/Tagout Coordinator. One or more individuals trained and designated in writing by the Commanding Officer, department head, or director to control the Lockout/Tagout Program in their area of cognizance. A Lockout/Tagout Coordinator may be an authorized employee when that employee's duties include performing servicing or maintenance covered under this chapter.

6. General. All equipment and machinery will be locked out or tagged out to protect against accidental operation during any servicing or maintenance activity.

a. OSHA has promulgated two standards that require Lockout/Tagout of machinery and equipment. They are:

(1) Reference (b), on Control of Hazardous Energy (Lockout/Tagout).

(2) Reference (b), Lockout/Tagout of Electrical Safe Work Practice Standard.

7. Responsibilities

a. Director, DSS

(1) Provide or coordinate initial and annual lock-out/tag-out training.

(2) Maintain documentation of training and instruction including employee's name and job title.

(3) Ensure an annual evaluation of the Lockout/Tagout Program is conducted.

(4) Designate in writing a Lockout/Tagout Control Program Manager for MCAS Yuma.

b. Commanding Officers and Department Heads

(1) Ensure formal training is provided to all personnel who could be exposed to hazardous energy sources in the purpose and function of the Lockout/Tagout Program.

(2) Conduct internal monthly audits of the Lockout/Tagout Log.

(3) Evaluate the Lockout/Tagout Program annually, using the Annual Evaluation Report per enclosure (5), and forward a copy to Director, DSS.

(4) Designate in writing, a Lockout/Tagout Coordinator who is delegated the responsibility and authority to control and administer the Lockout/Tagout Program.

c. Lockout/Tagout Coordinators. Lockout/Tagout Coordinators are responsible for administering the Program within their respective organizations. They shall:

(1) Be responsible for the writing and updating of their unit/department Lockout/Tagout procedures.

(2) Enforce Lockout/Tagout Procedure compliance and ensure that an ample supply of standardized locks and tags are available.

(3) Maintain the Lockout/Tagout Log per enclosure (6), in accordance with this manual. Ensure a particular locking device can be traced to a specific employee.

8. Specific Lockout/Tagout Written Procedure. This procedure establishes the minimum requirements for the Lockout/Tagout of energy isolating devices. Machines and equipment will be evaluated per enclosure (7), Energy Source Determination Checklist.

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

(1) The machine has no potential for stored or residual energy or the re-accumulation of stored energy after shutdown, which could endanger employees.

(2) The machine or equipment has a single energy source, which can be readily identified and isolated.

(3) The isolation and locking or tagging out of that energy source will completely de-energize and deactivate the machine or equipment.

(4) The machine or equipment is isolated from that energy source and locked or tagged out during servicing or maintenance.

(5) A single device will achieve a locked or tagged out condition.

(6) The Lockout/Tagout device is under the exclusive control of the authorized employee performing the service or maintenance.

(7) The servicing or maintenance does not create a hazard for other employees.

(8) 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.

9. Lockout/Tagout Requirements For Contractors And DoD Personnel From Outside Activities

a. Contractor performing servicing or maintenance on MCAS Yuma equipment shall comply with reference (b). The 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/Tagout Program.

b. Personnel from other DoD activities performing servicing or maintenance on MCAS Yuma equipment will comply with the respective activity's Lockout/Tagout Program.

c. Commanding Officers/department heads will ensure their cognizant personnel understand and comply with restrictions and prohibitions of the outside activities Lockout/Tagout Program.

10. Periodic Evaluation. The DSS Lockout/Tagout Control Program Manager shall evaluate the effectiveness of the entire program at least annually.

11. Training

a. Training will be provided to all authorized, affected and other personnel as required by reference (b) or other consensus standards.

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

(1) A change in affected/authorized employee job assignments.

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

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

(4) Whenever periodic inspections reveal that there are deviations from or inadequacies in employee knowledge or use of the energy control procedures.

12. Electrical Lockout/Tagout

a. 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.

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

(1) Only one circuit or piece of equipment is de-energized.

(2) The lockout period does not extend beyond the work shift.

(3) Employees exposed to the hazards associated with re-energizing the circuit or equipment are familiar with this procedure.

c. 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 must 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 must be checked for proper operation immediately before and after this test.

13. Mishaps Related To Lockout/Tagout. Supervisors are responsible to fully investigate mishaps, and report the cause of such mishaps to the Director, DSS, MCAS Yuma.

14. Disciplinary Action. Any employee found, through investigation, to have knowingly violated the procedures stated within this manual may be subject to disciplinary action, as a result of that violation.

Chapter 12

Personal Protective Clothing and Equipment

1. Purpose. The Personal Protection Equipment (PPE) Program is designed to comply with DoD and Federal regulations regarding the employer's and employee's responsibilities to provide, enforce and use personal protective clothing and equipment.
2. Policy. The issue, maintenance, and use of protective equipment is necessary for personnel (military and civilian) protection, and to protect property, materials, and equipment. Expenditure of funds for protective equipment is economical, since injuries, compensation claims, and loss of materials and equipment are reduced. All MCAS Yuma units, departments, and tenant activities will provide and maintain personal protective clothing/equipment per this section, including prescription safety glasses for military and Civil Service personnel.
3. Scope. This manual applies to all MCAS Yuma personnel and tenants. Contractors and vendors shall comply with references (b), (c), and (u). The ROICC may also refer to other references for safety and health compliance.
4. Methods. Engineering and administrative controls will be the primary methods to eliminate or minimize hazard exposure in the workplace. When such controls are not practical, PPE must be employed to reduce or eliminate personnel exposure to hazards. PPE will not be a substitute for engineering or administrative controls.
5. Procedure. The Director, of DSS is responsible to designate hazardous work areas, processes, and occupations which require the use of PPE.
6. Training. Because of the possible serious consequences of misuse, it is imperative that safety equipment is properly used. Therefore, training in the proper use, limitations, care and maintenance of PPE is mandatory for each individual prior to being allowed to use it.
7. Enforcement Of Program. Each supervisor is responsible to enforce the proper use of PPE consistent with applicable rules and regulations.
8. Government-Furnished Items. PPE will be furnished to the employee by the government at no cost to the employee. Items include but are not limited to:
 - a. Respirators.
 - b. Eye protection and face shields.
 - c. Hearing protection.
 - d. Hard hats.
 - e. Welders helmets.
 - f. Safety shoes and specialty footwear.
 - g. Aprons, protective suits and gloves.

9. Employee-Furnished Items. PPE furnished by the employee is not authorized.

10. Personal Attire

a. When specific items of personal attire are judged to be hazardous to an employee based upon the operation or work environment, their use will be prohibited. Provision of everyday suitable attire is the responsibility of the employee and must be considered a condition of employment.

b. Violators of OSH regulations or instructions are subject to disciplinary action per Civilian Manpower Management Instruction (CMMI) or the Uniform Code of Military Justice. Such violations or below average performance pertaining to the OSH Program will be dealt with in accordance with established procedures and guidelines.

Chapter 13

Confined Space Entry Program1. Discussion

a. Confined Spaces. Numerous confined spaces can be found aboard MCAS Yuma. Examples include storage tanks, pits, boilers, fuel cells, sewers, underground utility vaults, tunnels, and manholes. Hazards encountered in these spaces are often compounded by poor illumination. The definition of a confined space is a space that:

(1) Is large enough and so configured that an employee can enter and perform assigned work.

(2) Has limited or restricted means for entry or exit.

(3) Is not designed for continuous employee occupancy.

b. Permit Required Confined Space. Confined spaces with any of the following conditions meet the OSHA definition of Permit-Required Confined Space:

(1) Any Space with a lack of sufficient oxygen (less than 19.5 percent).

(2) Any space that has excessive oxygen which increases the danger of fire or explosion (greater than 23.5 percent).

(3) Any space with the presence of flammable gas in excess of 10 percent of the Lower Explosive Limit (LEL), or has potential to present an explosive atmosphere as a result of materials or processes occurring within the space.

(4) Any space with the presence of toxic atmospheres or materials that exceed Permissible Exposure Limits (PEL), short-term exposure limits (STEL-15 minutes), or time-weighted average (TWA-over an eight hour period) for a given gas or vapor. The toxic gas must be known or if not known, identified, and these limits must be verified via National Institute for Occupational Safety and Health (NIOSH).

(5) Physical hazards such as:

(a) Slippery surfaces.

(b) Deteriorated or unstable ladders.

(c) Machinery and electrical devices that may require an energy isolation (Lockout/Tagout) procedure.

(d) Potential for engulfment from loose materials (sand, sawdust, etc.).

(e) Potential for entrapment from configuration of inwardly sloping walls.

2. Policy. MCAS Yuma policy is that all confined spaces must be considered hazardous and entry into or work on the boundaries of such spaces is prohibited until the space has been evaluated by a qualified person to establish appropriate safety precautions, all spaces are to be considered as permit required confined spaces. This chapter outlines the program to implement this policy in accordance with references (b) and/or (c).

3. Program Management. Commanding Officer, MCAS Yuma, shall appoint in writing a qualified Confined Space Program Manager (CSPM) who will be responsible to implement a confined space entry program per this order. The CSPM shall normally be assigned to the Station Fire Department. Tenant commands shall use the services of the MCAS Yuma CSPM or develop a program that is certified by the MCAS Yuma CSPM to be at least as stringent. Contractors and other non-DoD agencies shall provide their own Confined Space Program that is equivalent or more stringent, and must liaison with the MCAS Yuma CSPM before commencing operations.

4. Responsibilities

a. Commanding Officer. Commanding Officer is responsible to establish, conduct, and evaluate a comprehensive Confined Space Entry Program which meets the intent and specific requirements of this order. To help fulfill these responsibilities, the commanding officer shall appoint, in writing, a qualified CSPM and Assistant CSPM (ACSPM). Appointed ACSPMs shall possess the same qualifications/certifications as the CSPM. This appointment will not be delegated.

b. CSPM Qualification/Certification. The designated CSPM and ACSPM must successfully complete course number A-494-0030 (Confined Space Entry), conducted by the Naval Occupational Safety and Health Environmental Training Center (NAVOSHENVTRACEN), or equivalent.

c. Confined Space Program Manager. The CSPM is responsible to implement the activity Confined Space Program consistent with this order. The CSPM shall train personnel whose job description requires them to perform work in or around confined spaces aboard MCAS Yuma.

d. Employee Training. All government employees' whose job includes entry into or work on or around confined spaces shall attend initial and subsequent annual refresher training. This initial and annual refresher training must formally included in the employee's official training record. This training will include at a minimum, the following topics:

- (1) Confined Space Hazard.
- (2) Applicable regulations, OSHA, NAVMC, OPNAVINST.
- (3) Confined Space Classifications.
- (4) Procedures for requesting a Confined Space Entry.
- (5) Atmospheric testing.
- (6) Entrant responsibilities.
- (7) Entry Supervisor responsibilities.

- (8) Attendant responsibilities.
- (9) Personal Protective Equipment.
- (10) Ventilation.
- (11) Emergency response procedures.

e. Commanders/Directors/Department Heads. Commanders, OIC's, Directors, and department heads shall ensure that:

(1) Confined spaces under their control are identified and properly evaluated by the CSPM/GFET or a qualified assistant under the direction of the CSPM, before commencing of operations within the space.

(2) The requirements of this order are fully met.

f. Supervisory Personnel. Supervisors shall be familiar with this order as it relates to personnel or operations under their supervisory control. They shall act positively to eliminate any potential hazards control and shall:

(1) 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.

(2) Strictly enforce observance of the safety and health requirements of this manual and the specific instructions issued by the CSPM (or the qualified assistant under the direction of the CSPM) on entry permits.

(3) Promptly report to cognizant management and the MCAS Yuma CSPM any unsafe conditions of procedures and, where warranted by the severity of such conditions, cease all operations until corrective action has been completed.

(4) Prohibit unauthorized entry into confined spaces under their control.

5. Contractor Operations. Where contractors are performing confined space operations aboard MCAS Yuma installations, the following provision must be observed:

a. The contractor shall provide a competent person per references (b) and (c), and as recommended by the NIOSH Criteria Document for Confined Spaces or reference (u), or State OSH requirements, as applicable.

b. The contractors shall provide to the Installation CSPM, a copy of the contracting company's Confined Space Entry Program. The Installation CSPM shall conduct a comprehensive review of this program to ensure that it is consistent with OSHA, DoD and DON regulations. The contractor's Confined Space Entry Program must include a safety and rescue plan. Contractors are prohibited from performing any confined space operation without first obtaining the approval of the Installation CSPM.

c. Once the contractor's program has been reviewed and approved, and prior to entry into any confined space, the contractor shall coordinate with the CSPM to have an evaluation performed at the work site. This evaluation

is to ensure that contractors have all the necessary PPE, atmospheric monitoring equipment, communication equipment and rescue procedures in place to perform a safe operation.

d. The appropriate laws and regulations make no provision for Marines Corps personnel to issue permits for contractor operations. Performance of such functions may involve assumption of liability by the Marine Corps in the event of a mishap. Marine Corps personnel shall not certify spaces or issue confined spaces entry permits for contractor operations or personnel, except where failure to do so would create an extreme emergency and would endanger personnel and property, therefore causing even greater potential liability. Such cases must be authorized by the Commanding Officer and will be conducted and supervised by the CSPM, except where the nature of the emergency is so extreme that delays created by seeking the Commanding Officer's approval or services of the CSPM would create a greater danger.

e. Where MCAS Yuma and contractor personnel are to occupy the same space at the same time, the Installation CSPM and the appropriate contractor representative shall issue separate permits and the contractor shall be informed of the MCAS Yuma findings. However, the contractor shall be informed by the Contracting Officer or ROICC that the contractor retains legal obligation for the safety of contractor personnel.

f. In all cases involving contractor operations, the Contracting Officer shall inform the appropriate contractor that the contractor's confined space entry personnel must be adequately qualified and that all operations are to be conducted under all requirements, since MCAS Yuma personnel, equipment and facilities may also be at risk.

Chapter 14

Hazard Communication (HAZCOM) Program

1. Purpose. To establish a Hazard Communication (HAZCOM) program for MCAS Yuma in accordance with references (j), (x), and other DoD, DON, and Marine Corps regulations.

2. Policy And Scope. It is the policy of this command to ensure that all personnel properly handle, use, and dispose of any Hazardous Material (HAZMAT) required to accomplish their mission, by ensuring that information and training is available to all personnel. This manual does not apply to:

a. Administrative personnel who encounter HAZMAT only in non-routine, isolated instances.

b. Work operations related to retail sales.

c. Any hazardous waste as defined by the Solid Waste Disposal Act per reference (kk) and amended by the Resource Conservation and Recovery Act of 1976 per reference (mm), when subject to regulations issued under that Act by the Environmental Protection Agency.

d. Tobacco or tobacco products.

e. Wood or wood products.

f. Food, drugs, cosmetics, or alcoholic beverages in a retail establishment for sale to consumers.

g. Food, drugs, or cosmetics intended for personal consumption or use by employees in the workplace.

h. Any consumer product or hazardous substance where the employer can demonstrate it is used in the workplace in the same manner as normal consumer use.

3. Responsibilities

a. Commanding Officer. As the senior safety and health official, the commanding officer has the authority, responsibility, and liability to establish and maintain an effective and comprehensive safety and health program consistent with reference (b) and other OSHA standards, DoD, Navy and Marine Corps regulations.

b. Director, DSS. The Director, DSS, is the Commanding Officer's designee for overall management, implementation, and enforcement of this manual and all MCAS Yuma OSH Programs. The Director, DSS shall:

(1) Maintain a list of HAZMAT used at all Station and tenant commands.

(2) Update the HAZMAT Inventory List annually in cooperation with all Station and tenant activities.

(3) Distribute the HAZMAT Inventory List to the following local response departments:

- (a) Federal Fire Department, Station #8.
 - (b) Branch Health Clinic, MCAS Yuma.
 - (c) I&L Environmental Protection and Compliance Department.
 - (d) Military Police.
- (4) Provide Station commands with MSDS' upon request.
- (5) Conduct annual inspections of all Station, tenant, and contractor activities to ensure Hazard Material (HM) are properly labeled, used and stored by trained employees, and Material Safety Data Sheet (MSDS) are readily available and maintained at the work site for employees.
- (6) Provide technical guidance in interpreting MSDS' for HM.
- (7) Provide technical guidance and recommendations for PPE.
- (8) Provide initial and refresher HAZCOM training for MCAS Yuma military, civilian, and tenant command personnel IAW reference (oo).
- (9) Assist supervisors, designated safety representatives, and ground safety officers in job-specific HAZCOM training for employees.
- (10) Maintain training records for appropriated fund civil service employees for a minimum of five years. Retain records of former employees for at least three years from the date the employee last worked at MCAS Yuma.
- c. Commanders, Directors and Department Heads shall:
- (1) Ensure designated Safety Officers and their alternates receive required HAZCOM training.
 - (2) Provide HAZCOM training to all required personnel before they use HAZMAT.
 - (3) Maintain HAZCOM training records for a minimum of five years. Retain records of former employees for at least three years from the date the employee last worked at MCAS Yuma.
 - (4) Ensure that each container of HAZMAT is labeled, tagged, or marked with the identity of the material, the appropriate hazard warnings, and the manufacturer's name, per reference (j).
 - (5) Ensure HAZMAT is properly stored.
 - (6) Establish and maintain a HAZMAT Inventory List.
 - (7) Forward updated HAZMAT Inventory Lists annually to the Director, DSS.
 - (8) Maintain MSDS' at each worksite where a HAZMAT is being used.

d. Supply Officer

(1) Identify to Navy Supply Systems Command (NAVSUPSYSCOM) unlabeled HAZMAT, standard HAZMAT stock item shipment or shipments without MSDS' via the Quality Deficiency Reporting System IAW reference (h).

(2) Upon receipt of all open purchase HAZMAT items, inspect for chemical manufacturer labels and MSDS'. Initiate action with the chemical manufacturer or distributor to obtain proper labels and/or MSDS's for unlabeled shipments or shipments without MSDS'.

(3) Place all HAZMAT shipments without proper labels and/or MSDS' in a temporary holding area until chemical manufacturer-supplied labels, MSDS, or appropriate substitutes are obtained.

(4) Notify the Director, DSS if assistance is required to:

(a) Identify unlabeled or improperly labeled HAZMAT shipments or shipments without MSDS'.

(b) Ensure proper storage compatibility for temporary hold HAZMAT.

(c) Expedite processes to obtain manufacturer supplied labels and MSDS'.

(d) Provide technical data through the HAZMAT Information System, upon request.

4. HAZCOM Training Elements. HAZCOM training will emphasize the elements listed below.

a. A summary of the OSHA HAZCOM Standard and the program described in this chapter.

b. Job-specific HAZMAT and hazardous chemicals to which personnel have exposure, the chemical properties of the HAZMAT, including visual appearance and odor, and methods that can be used to detect the presence or release of hazardous chemicals.

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

d. Procedures to protect against hazards such as PPE, work practices, and emergency procedures.

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

f. MSDS locations, how to understand their content, and how employees may obtain and use appropriate hazard information.

Chapter 15

Asbestos and Thermal Insulation Program

1. Purpose. To establish and promulgate an Asbestos program IAW references (b), (c), (i) and (j).
2. Scope. This applies to all military and civilian personnel aboard MCAS Yuma, including contractors. This addresses asbestos operations conducted at MCAS Yuma buildings, grounds, and structures.
3. Background. Asbestos is a general term used to describe several mineral silicates, which are separable into fibers. Although there are many asbestos minerals, only six are of commercial importance. They are chrysolite, amosite, crocidolite, tremolite, anthophyllite, and actinolite. Major uses of asbestos are for asbestos cement sidings, floor tiles and mastic, fireproofing, high temperature insulation, asbestos cloth, friction materials such as brake linings and clutch facings, various gasket materials, and other miscellaneous products. Materials with more than one percent asbestos are called Asbestos Containing Materials (ACM).
 - a. Hazard. Asbestos exposure is a major health hazard. Inhalation of asbestos fibers can produce severe lung damage in the form of disabling or fatal fibrosis of the lungs. Asbestos has also been found to be a causal factor in the development of carcinoma of the lung and malignant mesothelioma, as well as cancer of the gastrointestinal tract. A long latency period of 20-40 years between first exposure to asbestos and the appearance of a malignancy is frequently noted.
 - b. Detection. Asbestos fibers cannot be seen without a microscope, and have no odor or taste. The fibers are so light that once disturbed may float in the air for 24 hours or more. Only trained personnel using special air-sampling techniques and equipment can detect these fibers.
 - c. Exposure. Some examples of tasks which can generate concentrations of airborne asbestos having potential to exceed Permissible Exposure Limits (PEL) are the fabrication, installation, repair or removal ("rip-out") of asbestos insulation materials, power sawing of asbestos-containing fire retardant building materials, brake relining and repair work, and removal of floor tiles or mastics containing asbestos.
 - d. Substitution. Although asbestos-free substitute materials are being developed, asbestos material continues to be used in the Marine Corps in such applications as gaskets and pipe hanger liners.
4. Asbestos Operations. Asbestos removal or containment operations can be controlled so that they are not hazardous to MCAS Yuma personnel. However, they must be identified to the Director, Environmental (ENVL) and properly monitored and evaluated by an Asbestos Inspector and Program Manager (APM). Control of asbestos fibers is a mandatory requirement.
5. Permissible Exposure Limit(PEL)
 - a. The PEL for asbestos is 0.1 fibers per cubic centimeter (f/cc) of air, calculated as an eight hour TWA exposure. Fibers are rod shaped particles having a length-to-width ratio of three (or more) to one (3:1), and an overall length greater than five micrometers.

b. Notify any individual found to have been exposed at any time during the course of their employment/assignment to airborne concentrations of asbestos fibers in excess of the PEL in writing of their exposure as soon as possible but not later than five days after the finding. Notification will contain the corrective action being taken to reduce employee exposure below the PEL.

6. Responsibilities

a. The Director, Environmental shall:

(1) Appoint an APM in writing. The APM shall manage all asbestos related activities aboard MCAS Yuma.

(2) Coordinate the MCAS Yuma Asbestos Program through the APM.

(3) Provide asbestos awareness training for personnel who do not ordinarily work with asbestos in performance of their duties.

(4) Coordinate Asbestos Hazard Emergency Response Act (AHERA) asbestos training for personnel who will be directly involved with asbestos removal or containment projects.

(5) Maintain records of all required training.

(6) Coordinate laboratory asbestos analyses.

(7) Record the results of asbestos surveys for all facilities aboard MCAS Yuma and hold these records indefinitely.

(8) Require contracting officials to receive Health and Safety Plans (HASP) from contractors before any work operations begin which may generate asbestos hazards. Evaluate HASPs to ensure MCAS Yuma personnel and property will not be endangered by contractor operations.

(9) Require environmental monitoring and verify compliance with the requirements for asbestos operations.

(10) Notify individuals of asbestos exposure.

(11) Coordinate the asbestos medical surveillance program with occupational health personnel from the Branch Health Clinic.

(12) Provide technical support and guidance for asbestos hazard operations.

b. Commanders/Department Heads/Directors shall

(1) Take prompt action to contain and correct asbestos discrepancies when notified of their existence.

(2) Provide AHERA approved training (or as determined by the Director, ENVL) for all supervisors and workers involved in asbestos removal operations. Provide a copy of this training to the Director, ENVL (Attn: APM) upon request.

c. Supervisors. Supervisors of personnel conducting operations with asbestos or asbestos containing materials shall:

(1) Verify that bulk samples have been properly obtained and written clearance to begin work is received from the APM, MCAS Yuma before beginning work on suspected Asbestos Containing Material (ACM).

(2) Coordinate with the APM to plan and schedule asbestos removal operations.

(3) Ensure that personnel are trained and qualified respirator users (per Chapter 6), and are trained and certified asbestos workers.

(4) Ensure that all required equipment and tools are provided for the operation.

(5) Ensure that proper containment as prescribed by the APM, MCAS Yuma is used to protect workers and the general public from asbestos hazards that may be generated.

(6) Ensure that the work area is visually free of any debris or residual insulation and other types of non-fibrous insulation (e.g. cork, rubber, etc.) after the rip out operation is completed. Ensure certification (clearance monitoring) that the space is free of asbestos fibers is received from a qualified IH or safety specialist before removing containment and provide copy to APM.

(7) Verify that area is visually clean.

(8) Ensure that all tools are vacuumed thoroughly with a High Efficiency Particulate Air (HEPA) Filter and wiped with a clean damp cloth.

(9) Ensure only HEPA vacuums are used at ACM worksites.

(10) Ensure that all asbestos waste is properly disposed of (confer with MCAS Yuma ENVL Protection and Compliance Department for guidance).

(11) Complete the checklist provided by the APM for asbestos removal operations and provide a copy to MCAS Yuma ENVL (Attn: APM).

d. Commanding Officer, Naval Medical Center (NMC), MCAS Yuma. NMC will provide the following services as required by reference (i) and other BUMED documents:

(1) IH branch will provide health hazard evaluation for asbestos monitored operations and conduct exposure evaluations for personnel who may have been inadvertently exposed in an asbestos spill.

(2) Occupational Health department will provide medical examinations as required.

(3) Advise Director, ENVL on any additional precautions or requirements needed to protect the health of personnel.

e. Contracting Officers/ROICC. Contracting Officers responsible for projects aboard MCAS Yuma that will disturb or remove asbestos must coordinate such projects with the MCAS Yuma APM, before awarding the

contract, to ensure that contractor operations will not endanger MCAS Yuma personnel. The ROICC shall monitor all contractor operations for contract compliance.

f. Employees/Personnel Working with Asbestos. Each asbestos worker shall:

- (1) Comply with work control procedures.
- (2) Properly wear/use the prescribed PPE.
- (3) Report to immediate supervisor any observed unsafe work conditions.

7. Control Methods

a. Work Clearance. Due to the inability to detect and contain asbestos without specialized monitoring and training, organizations aboard MCAS Yuma shall not initiate any maintenance, renovation, demolition, or self-help project without first contacting the APM for work clearance. Samples of suspected ACM will be analyzed, and results will normally take three weeks to process. Supervisors are responsible for compliance.

b. Containment. If suspected ACM is discovered and it is broken, chipped, or in friable condition (can be crumbled by hand), personnel will evacuate the area, seal the room to prevent entry, and immediately contact the APM.

c. Work Protocol. The MCAS Yuma APM shall prescribe work practices for all clean-up and containment operations conducted by MCAS Yuma personnel. Contractors must submit a HASP detailing the procedures they will employ to protect MCAS Yuma personnel. At no time may suspected ACM be dry-swept. Only specialized HEPA filter equipped vacuums are authorized to vacuum asbestos.

8. Requirements

a. Asbestos Controls in the Workplace Environment. The basic principles for controlling asbestos hazards in the occupational environment include substitution with less HAZMAT, engineering controls (e.g., isolation, ventilation), administrative controls, and the use of PPE. Employee rotation as a means to keep the exposure below the PEL is prohibited. Employees involved in asbestos related activities will not eat, smoke, chew tobacco or gum, or apply cosmetics in the work area.

b. Training

(1) Employees and their supervisors who are currently exposed to asbestos or have the potential to exceed the allowable limit shall receive detailed indoctrination and annual refresher instruction. Personnel working in asbestos controlled areas are in this category. This training will be conducted by an outside source. Supervisors must coordinate with the APM to schedule the training. Shop supervisors are also responsible to schedule asbestos training before its expiration date. Training will include the following:

- (a) The health effects/hazards of asbestos.

(b) Association between the use of smoking tobacco products and asbestos exposure in producing lung cancer.

(c) Uses of asbestos, which could result in an exposure.

(d) Engineering controls and work practices associated with the work assignment.

(e) Purpose, proper use, and limitation of PPE.

(f) Purpose and description of the asbestos medical surveillance program.

(g) Description of emergency and clean-up procedures.

(h) Overall review of this chapter and references.

(2) Personnel and their supervisors who work with ACM and are not exposed above the AL shall receive training annually. This category includes personnel who handle, cut, or otherwise work on fixed ACM. The training will include the above topics and will be conducted by the shop instructors. Shop instructors will be trained by the DSS and receive annual refresher training. Training records will be forwarded to and maintained by the Director, DSS.

c. Warning Signs and Labels

(1) Display warning signs at each location where airborne asbestos fiber may exceed the PEL. An example of the warning sign is:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS
AREA
FOR ACCESS CALL MCAS YUMA SAFETY OFFICE AT 269-5966

(2) Obtain approval of the signs from the APM, DSS, before displaying them.

(3) Affix warning labels to containers of raw materials, mixtures, scrap, waste, debris and other products containing asbestos fibers if, in any foreseeable way, levels of airborne asbestos could be produced which might constitute a threat to health. Print the warning labels in letters of sufficient size and contrast as to be readily visible and legible. These labels will comply with reference (b) requirements and include the following information:

DANGER

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

CANCER AND LUNG DISEASE HAZARD

d. Medical Examinations Medical examinations will be conducted IAW reference (i).

e. Disposal

(1) Use only approved six mil poly bags marked with the standard asbestos warning label to dispose of asbestos waste (e.g. waste generated from an asbestos rip-out operation, scrap material from asbestos gaskets or asbestos contaminated PPE). Do not use poly bags marked in this way to carry clean PPE or tools, to dispose of general trash or to store asbestos material.

(2) Asbestos waste must be wet down, placed in a poly bag, goose-necked, sealed, double bagged, and sealed. Bags will be sealed with duct tape.

(3) Deposit asbestos waste bags in the specially marked white asbestos dumpsters located at the job site.

9. Asbestos Spills and/or Uncontrolled Asbestos

a. Definitions

(1) Asbestos Spill. An asbestos spill is the inadvertent or uncontrolled release of asbestos fibers into the atmosphere. For example, personnel removing a piece of equipment may damage and break open pipe insulation on the overhead causing pieces of insulation to fall to the ground and fibers to be released into the atmosphere.

(2) Uncontrolled Asbestos. Uncontrolled asbestos is asbestos material which is not properly sealed, stored, or contained, but from which there is no obvious evidence of release of fibrous material into the atmosphere. For example, small tears in the asbestos cloth covering on pipe insulation or asbestos gaskets or broken pieces of vinyl asbestos tile lying loose on the deck.

b. Asbestos Spills Requirements and Responsibilities. Any individual that causes or discovers a spill shall:

(1) Secure work and move out of the area to a distance of at least 15 feet.

(2) Warn others in the area of the spill and secure the space or have it guarded to prevent other personnel from entering the area.

(3) Ensure that any ventilation or air condition affecting the immediate spill area is secured.

(4) Contact the immediate supervisor. If the supervisor is not available, contact the APM at 269-5275. Report spills occurring after normal work hours, or during weekends and holidays to the MCAS YUMA Command Duty Officer.

(5) The CDO shall contact personnel from the ENVL Office in event of any calls involving asbestos.

Chapter 16

Lead Safety Program

1. Purpose. To establish MCAS Yuma procedures and requirements to control industrial exposure to lead-containing materials and to establish precautionary measures and health practices for lead removal projects per references (b), (c) and (i).

2. Background. This chapter describes compliance programs, which include engineering and work practice controls (including administrative controls) to reduce and maintain employees' exposure to lead below the PEL.

a. The goal of this chapter is to prevent lead poisoning and related injuries during the use, handling, removal, and melting of materials containing lead.

b. Lead as used in this chapter means metallic lead, all inorganic lead compounds, and organic lead soaps. All organic lead compounds are excluded. The abundance, low melting point, high molecular weight, high density, and malleability of lead make it a useful structural material. When added to resins, grease, or rubber, lead compounds acts as antioxidants. Common uses for lead and lead compounds include ballast, radiation shielding, paint filler and hardener, rubber antioxidant, an acoustical insulation component, solder for electrical components and pipe joints, high voltage cable shielding, small arms ammunition, batteries, roof, flashing and weights. While not an absolute indicator, red, forest green, chrome yellow, "school bus" yellow, and "OSHA" yellow paints typically contain lead components such as lead oxides and lead chromates. Lead is also found in varnish polyurethane and water based paints.

c. In recognition of the serious health hazards associated with and the numerous sources of potential lead exposure, the Marine Corps has established strict controls to limit both occupational and environmental exposures.

3. Policy. To prevent lead exposure to personnel in excess of the permissible exposure limit and to reduce potential and actual exposure to levels as low as reasonably achievable.

4. Scope. This chapter applies to all lead work performed by MCAS Yuma personnel.

5. Responsibilities

a. Commanders/Department Heads/Directors. Ensure that work operations with lead or materials containing lead are conducted per the requirements of this chapter or other written control procedures.

b. Supervisors

(1) Notify the Lead Program Manager (LPM) before commencing operations believed to generate any amount of airborne lead. This will ensure all of the PPE is provided and environmental workplace containment and monitoring is conducted.

(2) Ensure that personnel who enter lead controlled boundaries are trained per references (b), (c) and (i), and know the provisions of this chapter and the work to be conducted.

(3) Ensure that personnel assigned duties inside of lead controlled boundaries receive the required medical examinations given by the Branch Health Clinic (BHC).

(4) Provide required PPE for personnel involved in the operation.

c. Director, Environmental

(1) Appoint in writing a LPM who has received appropriate Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) training.

(2) Evaluate work operations involving lead and conduct air sampling.

(3) Establish lead controlled boundaries based on air sampling data.

(4) Required PPE training for personnel involved in the operation. The PPE ensures personnel do not breathe, absorb or ingest lead or lead contaminated materials or contaminate others by exposure to lead on clothing, hands, etc.

(5) Provide technical support and guidance on written controls.

(6) Identify to LPM, any personnel entering or working inside of lead controlled boundaries.

d. The Officer in Charge (OIC), BHC, MCAS Yuma will provide the following services as required by reference (i) and other BUMED documents:

(1) Medical examinations.

(2) Laboratory services and technical support.

(3) Health hazard evaluation of lead operations and individual exposures to the Environmental Director.

e. Employees/Personnel Working with Lead

(1) Comply with established work control procedures.

(2) Properly wear/use the prescribed PPE.

(3) Report to supervisor any observed unsafe work conditions.

(4) Ensure they have received the required medical examinations.

6. Lead Exposure Controls

a. Mechanical vacuum capture will be the primary means to control exposure. Dust must be collected as much as possible by local exhaust ventilation (shrouded tools) at the point of origin and be captured by High-Efficiency Particulate Air (HEPA) filters. Do not exhaust emissions into

another work space and do not recirculate HEPA filtered air from lead operations.

b. Specific vacuum and ventilation requirements for dust producing operations will be identified by the MCAS Yuma LPM on a case-by-case basis.

c. Ventilation systems used to control personnel exposure to lead must be evaluated by the IH quarterly and within five working days of any significant change in either the work process or equipment. Cognizant supervisors shall notify MCAS Yuma LPM at the ENVL Department of any such changes.

7. Training. Training will be coordinated by the LPM when the need is identified. Initial training and qualification must be conducted before allowing any designated lead worker to work with or be exposed to lead dust or fumes. Training will include the following:

- a. Nature of operation during which exposure is possible.
- b. Purpose, selection, fit testing, use, and limitations of respirators.
- c. Related health effects.
- d. Medical Surveillance Program.
- e. Review of pertinent lead regulations of references (b) and (c).

8. Warning Signs and Caution Labels. Post warning signs at each location where airborne lead may exceed the PEL. These signs may contain a list of the required PPE and must state at a minimum:

WARNING

**LEAD WORK AREA
POISON**

NO SMOKING, EATING, OR DRINKING

9. Housekeeping. Do not use compressed air to clean work surfaces or personnel clothing. Vacuuming with HEPA-filtered vacuum cleaners or washing down with Tri-sodium Phosphate based cleaners are recommended. Use wet sweeping, shoveling, or brushing only when other methods have been tried and found to be ineffective or not feasible. At no time will dry-sweeping be employed. Treat cleaning materials, boundary materials, and waste water as lead contaminated HAZMAT and dispose of per applicable environmental regulations.

10. Employee Notification. Within five working days after receipt of the health hazard evaluation, the command shall notify each employee in writing of his or her exposure. Whenever results indicate an employee was exposed above the PEL without regard to respirator use, the notice will so state, and describe the corrective action(s) to be taken.

11. Lead Medical Surveillance Program. This program consists of three basic elements: pre-placement medical evaluation, semi-annual blood lead monitoring, and follow-up medical evaluation. Inclusion in this program is

based on potential lead exposure without regard to the use of PPE. It is a mandatory requirement before conducting a lead exposure operation.

Chapter 17

Laser Safety and Health Hazards

1. Purpose. To provide policies, guidelines, and precautionary measures for MCAS Yuma military and civilian personnel working with or around lasers or laser systems.

2. Policy. The use or maintenance of laser devices by MCAS Yuma personnel, tenant commands or transient units/personnel shall be in accordance with references (i) (s), and (nn) and any additional applicable references that may apply under the premise that personnel safety is of foremost importance.

3. Scope. This manual applies to all MCAS Yuma personnel, tenant commands, transient units and contractors or manufacturer's technical representatives.

4. Background. The light waves emitted by a laser travel in one direction nearly parallel to each other and therefore, the intensity diminish only slightly with distance. This creates an eye hazard and, to a lesser extent, a skin hazard depending on the exposure time, wavelength output power, beam divergence and distance from the source. The effect of laser radiation can range from an annoying glare to massive damage to the retina and a severe skin burn.

5. Responsibilities

a. Director, DSS

(1) Ensure the installation Laser System Safety Officer (LSSO) is designated in writing by the Commanding Officer in accordance with reference (a).

(2) The installation LSSO shall have direct access to the Commanding Officer, MCAS Yuma in accordance with reference (s).

b. The LSSO.

(1) The installation LSSO shall monitor all units, organizations, contractors, etc., training or operating in MCAS Yuma controlled areas that have Class 3B or Class 4 lasers in accordance with reference (1), (s), (nn) and any additional applicable references that may apply.

(2) The installation LSSO shall be qualified for duties as a Technical Laser Safety Officer (TLSO) in accordance with reference (s) and any additional applicable references that may apply.

c. Commanders/Department Heads/Directors. Commanders, department heads and directors shall comply with this manual.

(1) Tenant organizations or transient units/personnel who are required to have a Laser Hazard Control Program, in accordance with reference (s), shall have a qualified LSSO who has been trained in accordance with reference (s) and designated in writing by their commanding officer.

(2) Laser procurement shall be reviewed and concurred with prior to purchase by the unit and MCAS Yuma Installation LSSO to ensure the laser

system has been approved by the Laser Safety Review Board (LSRB) and fits within the approved laser training area.

d. Supervisors. Supervisors of MCAS Yuma personnel, tenant commands, transient units/personnel or contractors shall have a trained laser supervisor present during laser operations in accordance with reference (s). Supervisors shall ensure all laser operations are conducted in accordance with references (i), (s), (nn) and any additional applicable references that may apply.

6. Training. All personnel who handle, store, maintain, operate, etc., shall received the appropriate level of training required in accordance with reference (i), (s), (nn) and any additional applicable references that may apply.

7. Medical Surveillance. All units, organizations, etc., training or operating in MCAS Yuma controlled areas with Class 3B or Class 4 lasers shall include medical surveillance as part of their laser program in accordance with references (i), (s) (nn) and any additional applicable references that may apply.

Chapter 18

Flammable and Combustible Liquid Safety Program

1. Purpose. To promulgate information and guidelines concerning the safe handling, storage, and compatibility of flammable and combustible (F/C) liquids aboard MCAS Yuma.

2. Policy. To maintain an effective and aggressive flammable and combustible Liquid Safety Program consistent with reference (bb), and OSH Standards to safeguard MCAS Yuma property.

3. Responsibilities

a. Director, DSS. The Director, DSS shall administer the F/C Liquid Safety Program. The Safety Director's responsibilities are as follows:

(1) Establish, prepare, revise, and disseminate regulations regarding F/C liquid safety practices.

(2) Act in an advisory capacity on F/C liquid safety matters to all committees, councils, all levels of supervision, department/heads and tenant units.

(3) Provide information and guidance on matters pertaining to the F/C Liquid Safety Program.

(4) Conduct inspections/surveys on all work spaces/buildings to ensure compliance with all regulations and those practices contained in this chapter.

b. Commanding Officers/Department Heads/Directors

(1) Use the services of the DSS (as required).

(2) Ensure that personnel under their cognizance are trained in the proper handling, use, and storage of F/C liquids.

c. Supervisors

(1) Have an MSDS for each F/C material on hand.

(2) Ensure that all personnel are familiar with the hazards and special instructions for handling these materials as listed in the MSDS.

(3) Provide and enforce the use of proper PPE and workplace practices per MSDS. Industry standards, or as prescribed by the Director, DSS to minimize the hazards posed by these materials.

(4) Ensure all F/C materials are stored properly in approved flammable storage cabinets (call Fire Protection Specialist, DSS for additional guidance.)

d. Employees. All personnel working with F/C materials shall:

(1) Strictly observe all F/C liquid safety practices, and comply with all provisions of this chapter.

(2) Be familiar with the hazards and special instructions for handling these materials as listed in the MSDS.

(3) Immediately report all unsafe acts to their supervisors.

4. Spills

a. When F/C liquids are spilled, they must be wiped-up immediately and rags or material used will be disposed of properly.

b. If a spill cannot be wiped up immediately the senior person present shall:

(1) Notify the Fire Department (269-2285) and MCAS Yuma ENVL Department (269-3201) by telephone.

(2) Attempt to prevent the spill from entering waterways or sewers by berming, surrounding with absorbent material, or other suitable means.

(3) Alert nearby workers/work spaces to the spill and of the possible need to evacuate.

(4) Remain in the area at a safe distance until emergency response personnel arrive.

Chapter 19

Fall Protection Program

1. Discussion. 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.

2. Policy. MCAS Yuma policy is that all situations that expose employees aboard MCAS Yuma to fall hazards of four feet or greater must be assessed by a competent person with fall protection training in order to control the hazard.

3. Scope. This manual applies to all commands, directorates, and work centers aboard MCAS Yuma. Contractors working aboard MCAS Yuma will abide by reference (b) and (c). Military unique situations (SPIE Rigging, Rappelling, etc.) will be governed by the appropriate Technical Manual (TM), Field Manual (FM), Fleet Marine Force Manual (FMFM), or SOP as approved by the Commanding Officer, MCAS Yuma or other competent authority.

4. Responsibilitiesa. Commanders/Department Heads/Directors

(1) Comply with the policies and responsibilities of this chapter.

(2) Ensure safety officers and supervisors assess worksite hazards, review pertinent regulations and update organization SOPs regarding fall protection policies.

(3) Ensure personnel who are exposed to fall hazards receive appropriate training and fall protection equipment.

b. Director, DSS

(1) Provide fall protection training material and instruction for supervisors and employees.

(2) Provide recommendations for appropriate fall protection.

(3) Stop any work operations that are not in compliance with this order.

c. Director, Facilities Department

(1) Evaluate structures and materials for suitable anchor points when fall protection systems are required to protect the safety of MCAS Yuma employees. Provide these recommendations to the Director, DSS or tenant organizations upon request.

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

d. ROICC

(1) Ensure that contractors performing work aboard MCAS Yuma are aware of this manual and other pertinent standard, and when applicable, require inclusion of a written Fall Protection Program within their scope of work.

(2) Check contractors for compliance with this Program and stop work if non-compliance becomes evident.

e. Supervisors

(1) Request assistance from the organization safety officer or Director, DSS or other competent persons when assessing potential fall hazards.

(2) Provide employees/subordinates with a written SOP or HASP detailing steps necessary to control fall hazards.

(3) Provide employees with stable work platforms, scaffolds, or ladders.

(4) Provide employees with appropriate fall protection equipment.

(5) Require employees/subordinates to use provided fall protection equipment properly.

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

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

f. Employees. MCAS Yuma personnel conducting work where fall hazards can reasonably be expected shall:

(1) Comply with the requirements of the Fall Protection Program.

(2) Request supervisory assistance when assessing potential fall hazards.

(3) Use fall protection techniques and equipment properly. When fall arrest systems are damaged or/have been shock-loaded report to supervisor immediately.

(4) Report unsafe work conditions to supervisors.

5. Principles of Fall Protection

a. The type of work that may expose MCAS Yuma 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:

(1) Construction. All new construction, modification, or repairs to existing structures, as well as painting or repainting of structures fall under reference (c).

(2) Maintenance. Maintenance and spot painting of structures falls under reference (b).

6. Training

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

b. Training will be documented to include the class roster, date, name of the instructor, and kept on file. A copy must be provided to the Director, DSS.

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

Chapter 20

Hazardous Material and Environments

1. Purpose. To identify and control the use of HAZMAT aboard MCAS Yuma and to provide safety precautions IAW pertinent regulations, standards, and policies.
2. Policy. All MCAS Yuma personnel, tenant organizations, and contractors aboard MCAS Yuma shall handle HAZMAT in a manner consistent with the policy of safeguarding personnel, property, and the environment.
3. Scope. This chapter applies to all MCAS Yuma personnel, tenant commands, and contractors who transport, store or use HAZMAT aboard MCAS Yuma. Hazardous ordnance materials are not within the scope of this chapter unless they have become hazardous waste.
4. Background. The need to use hazardous and potentially HAZMAT during the course of fulfilling mission essential operations requires effective application of procedures, equipment and materials to prevent overexposure and provide protection for exposed personnel and property. Materials or waste products should be considered hazardous if container labels or MSDS include precautions for handling, storage and/or use (e.g. CORROSIVE, EXPLOSIVE, FLAMMABLE, OXIDIZER, POISON, DANGER, DO NOT MIX WITH ACIDS), or fit in the category of these materials listed in paragraph 5 of this chapter.
5. Terms and Definitions
 - a. Ammunition. A device charged with explosives, propellants, pyrotechnics, or initiating composition or chemical material for use in connection with defense or offense, including demolitions, training, ceremonial, or non-operational purposes.
 - b. Hazmat. A solid waste that is hazardous, as defined in section 3 of reference (ff) or applicable state/local requirements.
 - c. Hazmat Military Munitions. Military munitions that meet the definition of HAZMAT as defined in section 3 of reference (ff) or by applicable state/local requirements.
 - d. Military Munitions. Defined in section 10 of reference (gg) or applicable state/local requirements. The Federal regulatory definition means all ammunition products and components produced or used by or for the DoD or the U.S. Armed Services for national defense and security, including military munitions under the control of the DoD, the U.S. Coast Guard, The U.S. Department of Energy (DOE), and National Guard Personnel. The term, "military munitions", includes: confined gaseous, liquid, and solid propellants; explosives; pyrotechnics; chemical and riot control agents; smokes; and incendiaries used by DoD components, including bulk explosives and chemical warfare agents, chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, and devices and components thereof.

Military munitions do not include wholly inert items, improvised explosive devices, and nuclear weapons, nuclear devices managed under DOE's Nuclear Weapons Program after all required sanitization operations under reference (hh) as amended, have been completed.

e. Military Range. Defined in section 201 of reference (ii) or by applicable state/local requirements. The Federal regulatory definition means designated land and water areas set aside, managed, and used to conduct research on, develop, test, and evaluate military munitions and explosives, other ordnance, or weapon systems, or to train military personnel in their use and handling. Ranges include firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, and buffer zones with restricted access and exclusionary areas.

f. Operational Range. A military range that is used for range operations and activities, or a military range that is not currently being used, but that is still considered to be a range, is under jurisdiction, custody, or control of the DoD, and has not been put to a new use that is incompatible with range activities. Operational ranges include both "Active Ranges" (i.e., currently in service or use) and "Inactive Range" (i.e., not in current use or service) as these items are defined in section 201 of reference (ii) or by applicable state /local requirements.

g. Range Residue. Any residual material left on a range after a training exercise (e.g., hard targets, bunker construction material, concertina wire, sandbags, lifting plugs, and packaging material such as wooden boxes, pallets, strapping, and cardboard containers).

h. Solid Waste. Discarded material as defined in section 2 of reference (ff) or by applicable state/local requirements.

6. HAZCOM

a. Before working with HAZMAT, personnel must receive HAZCOM training. Civilian personnel shall receive HAZCOM training within 30 days of initial employment.

(1) Develop an SOP for each HAZMAT used in each work center. This SOP will include normal handling and use procedures, PPE, emergency procedures and phone numbers. SOPs will be approved by the Director, DSS for technical content, and must be posted where personnel can routinely read and become familiar with the contents.

(2) Departments, tenants, divisions and work centers shall carry out an intensive examination of each workplace and develop an inventory of all HAZMAT on hand. The inventory must include both open-purchase and government stock items. It will also include miscellaneous cleaning materials and chemicals not used in the main shop production.

(3) Supervisors shall examine all work processes and materials with the intent of substituting less HM whenever possible.

(4) MSDS' must be obtained for the HMs stored and/or used in each work center and must be located in the user's work center. A list

of all the HMs within the work center, along with the location and quantity must be provided to the Director, DSS annually or when significant changes occur.

(5) Maintain all HAZMAT in approved properly labeled containers.

(6) Dispose of all used or outdated HAZMAT or hazardous waste in accordance with federal, state and MCAS Yuma regulations through the MCAS Yuma Environmental Compliance and Inspections Division.

(7) No eating, drinking, or smoking is permitted in any work center where HAZMATs are stored or used, nor will food be stored in these work areas.

(8) Do not store food in any refrigerator that is used to store industrial products or HAZMAT. These refrigerators must be clearly marked "NO FOOD ALLOWED IN THIS REFRIGERATOR" (Batteries are considered to be HAZMAT).

(9) Personnel who work with HAZMAT shall have access to facilities to wash their hands and faces before taking breaks to eat or smoke.

7. LITHIUM BATTERIES

a. Policy. It is the policy of MCAS Yuma to store, use, and dispose of all lithium batteries in a manner which will minimize the danger of fires, explosions or toxic exposures to personnel, as well as prevent the release of hazardous materials into the environment. Full compliance with all applicable regulations and laws is expected, and all organizations will operate in compliance with the requirements in this chapter. Any violation or non-compliance is subject to military or civilian disciplinary procedures.

b. Battery Mishap Reporting. All mishaps involving lithium batteries must be immediately reported to the Director, DSS at 269-5966, and the Director, Base Environmental Department at 269-3201. This includes ruptures, venting, fires, short circuits, smoke, etc.

Chapter 21

Radiation Safety Program

1. Purpose. As directed by references (f) through (h), this order provides the station policy, assigns responsibility, establishes instructions, and sets forth requirements for the administration of the MCAS Yuma Radiological Affairs Support Program (MCASYRASP) as a component of the Station Safety Program implemented by reference (j). This order delineates and enacts the program elements necessary to assure compliance with federal regulations, U.S. Nuclear Regulatory Commission (NRC) licenses, the DON's NRC Master Materials License (MML), the Radiological Affairs Support Program (RASP) and specific Naval Radioactive Materials Permits (NRMPs) issued to Marine Corps commands.

2. Personnel. All personnel who work with radioactive materials or devices containing radiation sources shall be made aware of the hazards or potential hazards that may exist in their workplace from the use of these items.

3. Assignment of Personnel

a. Installation Radiation Safety Officer (IRSO). The IRSO is the individual appointed to provide consultation and advice regarding controls for hazards associated with radioactive commodities and sources directly to the Commanding Officer. Assignment of the IRSO will be from the DSS. An Assistant IRSO will be assigned to provide continuity for program management and oversight during periods of absence of the primary IRSO. Specific tasks assigned to the IRSO are as follows:

(1) Be technically qualified by virtue of education, training, or professional experience to ensure compliance with applicable regulations governing control and disposal of radioactive materials and to carry out the IRSO responsibilities listed in reference (f).

(2) Manage the MCAS Yuma RASP for radioactive materials and radiation sources used, stored or handled by all units physically located aboard MCAS Yuma, with the specific exception of x-ray radiography operations.

(3) Establish, where necessary, written general procedures to ensure radioactive materials are properly received, stored, shipped, handled and/or disposed by subordinate commands as established in the various commands Standard Operating Procedures (SOP).

(4) Maintain liaison with subordinate Radiation Safety Officer (RSO), Command Radiation Safety Officer (CRSO), and Radiation Protective Assistant (RPA) and coordinate RASP training for all RSOs. Also, IRSO shall assist RSOs to provide guidance, training and assistance in the proper control and handling of radioactive materials and sources as necessary to their respective subordinate commands.

(5) Establish a RASP Safety Committee (RSC) and utilize this forum to conduct annual RPA refresher training, and pass on program management initiatives, changes and tasking. Meetings will be held at least quarterly. Membership of this committee will include:

a. IRSO as Committee Chair.

b. All subordinate and tenant RSOs/CRSOs/RPAs. Tenant commands are: MAG-13, MWSS-371, VMFT-401 and CLC-16.

c. All RSOs/CRSOs of major commands. Major commands are identified as, I Marine Expeditionary Force (HQ), 1st Marine Logistics Group and 3rd Marine Aircraft Wing.

d. Fire Department representative.

(6) Ensure an audit is completed for all local subordinate command radiation safety Programs to ensure full compliance with all federal, state and local regulations at least bi-annually and retain records of these audits indefinitely.

(7) Advise Marine Corps Logistics Base (MCLB), Albany Logistics Radiation Safety Officer (LRSO), respective RSOs, as well as, Base Fire Departments and emergency response personnel on the locations where radioactive materials and commodities are stored or used. Compile an inventory list of all radioactive commodities currently in-place on aircraft, on-shelf awaiting maintenance, on-shelf in supply stock, or in-storage awaiting proper waste disposal semi-annually for each subordinate command. This list will include part name; National Stock Number (NSN) and serial or part number; radioisotope of concern; total number "on hand"; location stored (i.e. building or aircraft type; custodian name; Reporting Unit Code (RUC) number; and, last wipe test date (if required). Forward a compiled report with all required information to the LRSO, or appropriate RSO, no later than 30 March and 30 September electronically (email with spreadsheet attached).

(8) Identify available sources of radiological expertise for additional assistance and technical support for handling on-base radiological incidents.

(9) Advise respective RSOs, as well as station Fire Departments and emergency response personnel, where radioactive materials are stored and/or used.

(10) Liaison with the local Defense Reutilization Marketing Office (DRMO) to ensure radioactive material is not directly or inadvertently delivered to the DRMO.

b. Command Radiation Safety Officer (CRSO). A CRSO will be assigned at each of the major commands that use, possess, receive, distribute, transport, transfer and dispose of radioactive materials to ensure full compliance with this program throughout the station. Duties for assigned CRSOs will be similar to those of the IRSO, but are restricted to compliance activities for use, maintenance and storage of radioactive commodities within each individual's specific command. At a minimum, CRSOs shall:

(1) Be at least an E-6 or above in rank, and be professionally experienced enough to ensure compliance with applicable regulations governing control and disposal of radioactive materials and to carry out the CRSO/RSO responsibilities listed in section 1.3.9 of reference (f). Attendance to the Naval Sea Systems Command Detachment, Radiological Affairs Support Office (NAVSEADET RASO), Radiation Safety Officer Course at Naval Weapons Station Yorktown, Virginia is the minimum level of training that the CRSO must have

completed. This training will be unit funded, but coordinated through the IRSO.

(2) When necessary, assist subordinate commands to establish local command directives and maintenance safety procedures to ensure radioactive materials are properly received, stored, shipped, handled and/or disposed as required per Federal, state, and Marine Corps regulations, as well as, with host Station Radiation Safety Program policies. CRSOs should seek assistance from the IRSO to develop these procedures.

(3) Maintain liaison with subordinate commands and provides initial and annual training for their subordinate RPA as required in reference (f). Request assistance from the IRSO for program guidance and/or training in the proper control and handling of radioactive materials and sources as necessary.

(4) Audit all local subordinate Command RASPs to ensure full compliance with all regulations at least annually and retain records of these audits indefinitely. A copy of each audit performed will be forwarded to the IRSO to be kept in a master file, pending periodic inspections by the Marine Corps RCO, MCLB Albany and NAVSEADET RASO.

(5) Identify available sources of radiological commodities expertise for additional assistance and technical support for handling on-base radiological incidents.

(6) Advise the IRSO and/or respective Assistant Installation Radiation Safety Officer (AIRSO), as well as, the Station Department and emergency response personnel on the locations where radioactive materials and commodities are stored or used. Compile an inventory list of all radioactive commodities currently in-place on aircraft, on-shelf awaiting maintenance, on-shelf in supply stock, or in-storage awaiting proper waste disposal semi-annually for each subordinate commands. This list will include part name; NSN and serial or part number; radioisotope of concern; total number "on hand"; location stored (i.e., bldg or aircraft type); custodian name; RUC number; and, last wipe test date (if required). Utilize form located in enclosure (9). Forward a compiled report with all required information to the IRSO no later than 15 March and 15 September electronically (email with spreadsheet attached).

(7) Maintain liaison with the local DRMO and station organizations to ensure radioactive materials are not directly or inadvertently delivered to the DRMO.

c. Radiation Protective Assistant (RPA). A RPA shall be designated in writing by the Station Commanding Officer to ensure radiation safety practices and procedures are continuously observed. Specifically, the RPA shall:

(1) Be knowledgeable in the radiation safety requirements contained in all technical manuals or other applicable documents for the specific items in their unit that contain radioactive materials.

(2) Coordinate with the appropriate CRSO and/or IRSO to ensure compliance with the MCAS Yuma RASP procedures. Ensure completion and documentation for the following:

(a) Provide the CRSO with periodic inventory listing of all radioactive materials or commodities held at the unit. The inventory should be conducted at least semi-annually, and an updated hardcopy sent to the CRSO no later than 15 March and 15 September. The inventory will list all radioactive commodities currently in-place on mobile or stationary equipment, aircraft, "on-shelf awaiting maintenance", "on-shelf in supply stock", or "in-storage awaiting proper waste disposal" in the command. This list shall include part name; NSN and serial or part number; radioisotope of concern; total number "on hand"; location stored (i.e., building or aircraft type and); custodian name; RUC number; and, last wipe test date (if required).

(b) Where not covered in other pertinent directives, i.e., Naval Aircraft Maintenance Program (NAMP) Manual, develop written local command safety procedures for proper acquisition, handling, storage, wipe-testing (when applicable), maintenance activities, disposal and emergency response for all radioactive commodities or sources that are present within their respective unit.

(c) Conduct informal radiation safety training for all maintenance personnel within their unit to ensure that exposures to radioactive sources or commodities remain as low as reasonably achievable. See specific training requirements below.

(d) Promptly notify the CRSO and IRSO in the event of a radiological occurrence involving broken, damaged or missing radioactive sources or whenever any radioactive contamination has occurred or is suspected.

4. Training

a. IRSO/CRSO

(1) Attendance to the Naval Sea Systems Command (NAVSEADET) RASO Radiation Safety Officer Course at Naval Weapons Station Yorktown, Virginia is the minimum level of training that the BRSO and all CRSOs must complete.

(2) All CRSO training will be coordinated with NAVSEADET RASO via the IRSO. Other supplemental training courses in radiation protection and control programs are available within the Army and Air Force radiation safety programs. Attendance to any or all of these schools is encouraged, but not required. However, none of these supplemental training programs can be substituted for RASO training.

b. Radiation Protection Assistants (RPA). Formal radiation safety school training is generally not required for RPA, except at commands conducting x-ray radiography or directly issued Naval Radioactive Material Permits (NRMP) for certain types of radiation sources.

c. Users. Users of Marine Corps equipment containing radioactive sources shall be indoctrinated, and then further instructed at least annually, to safely use or maintain the equipment in accordance with published technical manuals that apprise the operator of the hazards associated with these devices and precautions to be observed. This training must be provided and documented by the command RPA, and records of all training provided will be retained for at least three years. Specific instruction topics will include, but not be limited to:

- (1) Presence and locations of the radioactive components;
- (2) Types of radiation emitted by these sources;
- (3) Safety precautions and hazards associated with these equipment items;
- (4) Restrictions necessary to maintain Marine Corps compliance under the applicable Naval Radioactive Materials Permit (NRMP) or Nuclear Regulatory Commission (NRC) license for those specific commodities handled by the user, i.e., "wipe" or "leak" test requirements for certain radioactive commodities.

5. Protection of Personnel Handling Radioactive Commodities. Minimization of radiation exposures and control of radioactive materials are shared responsibility of the IRSO, CRSO and the unit RPA, as well as, unit commanders, supervisors, and individuals. This responsibility includes: orientation of personnel who are subject to occupational exposure to ionizing radiation; promulgation of applicable directives and standing operating procedures; provision for personnel dosimetry and medical examinations; Radiation Detection, indication and computation instrumentation; and, the fostering of a work environment that encourages an emphasis on maintaining occupational radiation exposure as low as reasonably achievable. The following are considered mandatory in each unit radiation safety program:

a. All personnel who handle radioactive commodities shall be trained and records maintained as required by reference (ee).

b. Control procedures shall be developed and written for the protection of personnel handling radioactive commodities (e.g. shipment, inspection, storage, use, maintenance, and disposal operations). These procedures shall be tailored to the operation being performed and the type of commodities handled. Additionally, these procedures shall include the proper steps for handling leaking sources, and emergency incident response.

6. Personnel Dosimetry Requirements

a. Personnel dosimeters should only be used when necessary as described in Chapter 6 of reference (g).

b. Pocket dosimeters must be zeroed at the start of each shift during which personnel will be conducting operations involving radioactive commodities.

c. Pocket dosimeters must be read often during the shift. The initial, final and net readings for pocket dosimeters shall be recorded in a pocket dosimeter log.

d. Pocket dosimeters determined to go off-scale or have drifted prior to the start of a shift will be treated as defective and will not be used.

e. Pocket dosimeters found to be off-scale during or after a shift will cause immediate action to be taken to evaluate and minimize possible personnel exposure.

7. Medical Surveillance. All personnel designated as "radiation workers" (NOT including personnel who simply store, handle or maintain radioactive

commodities), as defined in reference (g), will be medically evaluated by the Radiation Health Officer at the nearest supporting Medical Treatment Facility (MTF). Radiation workers will receive a medical examination to establish a radiation baseline and evaluate an individual's health status to determine if the individual is medically qualified to work with ionizing radiation.

8. Radioactive Commodities. Marine Corps equipment items containing radioactive components are generally referred to as radioactive commodities or devices. In most cases, an individual commodity presents little or negligible external radiation exposure. However, large quantity storage of individual items may concentrate sufficient quantities of radioactive material to produce "radiation-restricted areas". In addition, spread of radioactive contamination as a result of improper maintenance or shipping procedures, carelessness, fire and explosions at storage areas, or aircraft mishaps can cause adverse environmental and community concerns and expensive cleanup efforts.

9. Definition of a Commodity. As general practice, items are considered to be radioactive if:

a. The item is marked as radioactive or labeled with the three-bladed (trefoil) radiation symbol.

b. The item is identified as radioactive in technical manuals, maintenance instructions, or other similar publications as:

(1) Table 1 through 4 of reference (f).

(2) Reference (hh) or reference (jj) (microfiche or CD-ROM) HAZMAT Information System.

(3) Technical Bulletin (TB) 43-0116, Identification of Radioactive Items in the Army Supply System.

c. The item's radiation characteristics meet or exceed any of the conditions of radioactivity specified in enclosure (2) of reference (f), or section 7.3 of reference (ee).

10. Control Practices. Enclosures (1) of reference (ee), provide specific requirements for controlling radioactive commodities in the following program sub-groups: "in storage"; protection of personnel handling commodities; shipments of radioactive materials; and emergency actions.

a. Administrative Control Requirements. All activities storing, stocking or performing maintenance on radioactive commodities shall develop administrative controls to:

(1) Ensure safe handling, storage and shipment of radioactive commodities.

(2) Ensure safe operation of repair and maintenance facilities handling radioactive components.

(3) Ensure procedures are prepared for handling credible emergencies during receipt, storage, maintenance and shipment.

(4) Report defective radioactive commodities to Supply, IRSO and CRSO.

(5) Comply with all applicable directives for the disposal of excess surplus and condemned radioactive commodities and/or radioactive waste.

(6) Conduct a physical inventory of all radioactive commodities at least semi-annually.

(7) In conjunction with compilation of each physical inventory, audit the general radioactive material accountability system. This audit will be completed by the CRSO. The audit must include a comparison of the results of the previous inventory after deletion of all items transferred or shipped from the organization and addition of all items received by the organization with the current inventory results. This audit must also include a visual search for marked radioactive material that has not been accounted. The audit report must state the results of the comparison and search. A copy of the audit will be forwarded to the IRSO and the unit Commanding Officer. All discrepancies will be investigated and resolved. Complete audit reports together with reports of any corrective action taken must be retained indefinitely.

(8) The supplier, and where appropriate, the stocking activity shall establish a computer inventory program for radioactive commodities. The program will be able to printout all radioactive commodities in storage by NSN, hazard code, name, and if available, quantity and type radioisotope, activity, location and status. The CRSO shall be able to obtain this printout upon request and distribute to emergency support elements as required.

(9) All loses of radioactive material must be reported in accordance with instructions contained in the control literature for that commodity and as required by Federal Regulations.

(10) All radioactive commodities will be marked with a label or sign containing the three-bladed radiation symbol and the words "CAUTION - RADIOACTIVE MATERIALS" along with the isotope and activity if known; military standard marking for shipment and storage applies.

11. General Storage Areas

a. All storage areas containing radioactive materials and all entrances to such areas must be labeled with signs containing the three-bladed radiation symbol and the words "CAUTION - RADIOACTIVE MATERIALS." All signs, either permanent or temporary, shall be securely fixed to barriers, walls, doors, fences, or ropes. Additionally, copies of the following documents will be conspicuously posted at all radioactive materials storage sites:

(1) NRC Form 3 - "Notice to Employees", see enclosure (10).

(2) Section 206, Energy Reorganization Act, 1974 of reference (cc).

(3) Location where supporting documents (i.e., NRMPs for all sources stored, local written safety SOPs, and any applicable directives, orders or references) can be found.

b. Areas used for storage of radioactive commodities must be kept to the minimum for adequate control.

c. Radioactive commodities will not be stored in the same warehouse section with explosives, flammable materials, photosensitive items (e.g. photographic film), food products or other incompatible commodities.

d. Radioactive materials will be stored so that they are protected from adverse weather or conditions that may deteriorate the packaging materials.

e. Commodities that contain radioactive gasses, tritium containing devices, or radium will be stored in ventilated structures.

f. Removable loose radioactive contamination in all areas will not exceed the limits of Table 4 of reference (ee).

g. Smoking, eating, drinking and use of chewing gum or oral tobacco products will be prohibited in areas where radioactive materials are stored or handled.

h. Storage of food, beverages, tobacco products and materials, cosmetics, and eating and drinking utensils will be prohibited in areas where radioactive materials are stored or handled.

12. Fire Protection Requirements. Proper selection of a fire resistant storage area for radioactive material will minimize release of radioactivity to the environment in the case of a fire. The following considerations and practices must be observed when selecting storage areas for radioactive material.

a. Whenever feasible radioactive materials must be stored in fire resistant containers to minimize contamination spread.

b. A current list of locations where radioactive materials are stored will be available to fire fighting personnel. This list should also identify unusual hazards located at the storage site.

c. Semi-annual inspections of radioactive material storage areas will be made to identify fire hazards by personnel trained in fire protection procedures. Deficiencies must be promptly corrected.

13. Contamination Control. Contaminated items are often stored in plastic bags that can break. Liquids inadvertently left in a container may leak out, and condensation of moisture from the atmosphere may drip on exposed, contaminated surfaces. Unless all contaminated surfaces of stored materials are appropriately wrapped or contained to prevent the spread of contamination, the entire storage location must be considered potentially contaminated. When all contaminated surfaces are appropriately wrapped, personnel may walk through these areas without anti-contamination clothing. The basic requirements for good contamination control are:

a. Personnel in potentially contaminated storage areas, particularly if they handle contaminated materials, must wear necessary anti-contamination clothing.

b. Reasonable care will be taken in packaging and storing contaminated items to prevent the spread of contamination and to ensure that entry to

areas where such storage is permitted does not result in the contamination of personnel or other areas.

14. Storage of Calibration Sources and Devices. Radioactive materials, particularly calibration and test sources, which contain more than one millicurie of radioactivity and can easily be stolen or mishandled because of their small size, require special attention. The following rules apply:

a. Small radioactive sources containing more than one millicurie of activity must be stored in locked areas or cabinets, access to which is limited to authorized individuals.

b. Small Radiation Detection, Indication and Computation (RADIAC) calibration or test sources will be attached to encumbering devices such as large rings, mounting boards or storage boxes to the extent practical so as not to interfere with normal use of the source.

15. Radiation Survey Requirements

a. Surveys of all areas where quantities of radioactive materials in excess of those listed in Table 3 of reference (f), are used or stored will be performed at least every six months and records maintained for three years.

b. Radiation protection surveys must document:

(1) Location and extent of any radioactive contamination and radiation levels, appropriateness of boundaries, signs, markings, and protective equipment and procedures.

(2) Corrective action(s) taken to mediate observed deficiencies.

(3) RADIAC model, serial number, and date of calibration, date of survey, and name and signature of the surveyor.

c. Results of surveys must be reported to operating supervisors with recommendations for corrective actions as necessary.

d. Closeout radiation surveys will be made and documented for all storage and maintenance locations when operations involving radioactive commodities have terminated. Limits of Table 4 in reference (f) must be met. Surveys must be forwarded to MCLB Albany RADCON Office for review and approval, and will be kept on file indefinitely.

16. RADIAC Instrumentation. Various RADIAC instruments and dosimeters are used to detect and quantify radiation exposures. Most Marine Corps RADIAC equipment has been fielded for protection and decontamination recovery actions from nuclear warfare.

17. Leak (wipe) Testing. Certain radioactive commodities require periodic "leak testing" as a condition of the governing NRC license or NRMP to verify the integrity of the radioactive source. Generally, such commodities do not require leak tests while remaining in storage, but are required to be leak tested or have a current leak test prior to being used or shipped to a using activity. User activities are responsible for ensuring fielded items have current leak tests and maintaining leak test records. Items failing the wipe test must be immediately removed from service. The RADIAC calibration

facility at MCLB, Albany (RADCON) has low-level radiological scintillation counting equipment and established counting procedures to analyze leak (wipe) tests for radioactivity. Individual unit RPAs shall contact MCLB, Albany (RADCON), the CRSO or the IRSO for leak test sample kits as needed. Enclosures (2) and (3) of reference (ee), and reference (f) delineate which radioactive commodities require wipe tests.

18. Commodity Disposition/Disposal Instructions

a. Transfer. Transfer of radioactive commodities between commands or Major Support Command (MSC) is not authorized without prior consent of the item manager at MCLB, Albany and the CRSO and IRSO. Any time a transfer of commodities has been authorized by letter or email, the appropriate radioactive material movement forms, see enclosure (9), must be completed by the transferring unit, then reviewed and signed by the cognizant CRSO or IRSO. At minimum, a copy of this report form will be provided to the IRSO for inventory control purposes. Do not transfer radioactive commodities or radioactive materials to DRMO. DRMO is prohibited by reference (ee) from accepting any radioactive items. However, transfer of radioactive commodities to other DoD activities may be made through DRMO, but DRMO will not accept physical custody of radioactive sources.

b. Disposition

(1) The CRSO and IRSO will coordinate together with the item (commodity) manager and the NAVSEADDET RASO to request disposition instructions for excess, defective, or non-serviceable radioactive items. The owning unit must provide quantity, NSN, serial numbers, condition codes, applicable NRC license or NRMP numbers, and other identifying or amplifying information. State in the remarks if the item contains "Tritium Sources" or "Radioactive Materials". If the sources are broken or radioactive contamination is known or suspected, also state "Broken Radioactive Sources" or "Possible Radioactive Contamination."

(2) When the disposition instructions are received, the IRSO will execute all instructions exactly as the commodity manager at NAVSEADDET RASO has provided them and within the guidelines set forth below. If the owning unit has any questions on the disposition instructions, they shall immediately consult the CRSO and the IRSO. The individual unit RPA shall provide a summary listing of items to be disposed and associated radioactive quantities to the IRSO and the CRSO for disposal.

c. Radioactive Waste Disposal. Radioactive waste generated by MCAS Yuma units is normally limited to disposal of equipment items due to age, damage or inoperability. Procedures for proper disposal of radioactive waste involve complex military, state and federal regulations. The unit RPA shall notify the CRSO and IRSO anytime radioactive waste is to be disposed. The IRSO and/or the CRSO will contact the item manager, if appropriate, to receive final disposition instructions for all radioactive commodities. If units are directed to waste out a commodity, the unit RPA shall defer to installation policy, and contact the respective IRSO to coordinate proper waste disposal. Reference (p) governs the Low Level Radioactive Waste Disposal Program within the Marine Corps. This instruction should be referenced when disposal issues are unable to be resolved by the item (commodity) manager, the IRSO, or the local CRSO.

19. General Packaging, Shipping and Receiving Guidance. Transportation of radioactive materials must comply with military, NRC and Department of Transportation (DOT) packaging and shipping regulations. The following paragraphs provide general guidance that is applicable in many cases involving Marine Corps radioactive commodities, but does not supersede or replace published HAZMAT shipment regulations. Table 5 of reference (f) and reference (g) also provide specific regulations that apply to transportation of radioactive materials or commodities. All shipments must go through the IRSO so that they can fill out the radioactive material, survey, etc.

a. Intact radioactive commodities in the Marine Corps, unless otherwise specified, are to be shipped as radioactive material, excepted packages instruments or articles under the provisions of DOT Regulations in reference (hh).

b. Broken, leaking or contaminated radioactive commodities, unless otherwise specified, can be shipped as Limited Quantities of radioactive materials under the provisions of reference (z).

c. In either case, DOT regulations must be consulted prior to any shipment of radioactive material to ensure current regulations are being followed. The shipper of record is ultimately responsible for compliance with DOT regulations for shipment of HAZMAT.

d. Shipment of radioactive material must be by traceable means. Shipment via the U.S. Mail should be avoided in most cases since U.S. Postal Service regulations governing mailing of radioactive materials are much more stringent with lower radioactivity limits than shipment under DOT regulations. Shipment via an independent overnight carrier, i.e. Federal Express, is recommended.

e. Major equipment end-use items with normally installed radioactive components, unless otherwise specified, can be transported or moved as military equipment without regard to radioactive shipping regulations. Reference (z) allows movement of radioactive material by DoD, exempt from the regulations of parts 170.189, when the material is escorted by personnel specifically designated by or under the authority of DoD for the purpose of national security.

f. Each radioactive commodity will be packaged for shipment in accordance with individual packaging data sheets (PDS), Special Packaging Instruction (SPI), or in accordance with the requirements of reference (z), if the PDS/SPI do not meet these requirements. The PDS/SPI is in the packaging data master file (PDMF), listed by NSN.

g. Radioactive commodities with broken or leaking sources, or which are contaminated or suspected of being contaminated, must be sealed in two plastic bags. Wear rubber or plastic gloves to prevent skin contamination.

(1) Clearly label the outside of the plastic bag and can with identifying information as to its content and whether it contains contaminated material or a broken or leaking radioactive source.

(2) Double pack the defective radioactive commodities with the same identifying information placed on the inner package and add the phrase "Contact CRSO Before opening". Items shipped under the provisions of

reference (z) as "Limited Quantities of Radioactive Materials" do not require any external radiation markings or radiation labels if the inner package bears the appropriate warnings and information.

h. Outside surfaces of the package must have removable contamination levels that are less than 2,200 disintegrations per minute (DPM) per 100 cm² of beta/gamma radiation or 220 DPM/100 cm² for alpha radiation. This requirement can be met either by conducting a verification wipe test using appropriate low-level scintillation counting systems, or where such radiation counting equipment is not available, by using packaging material that is new or is known to not be contaminated.

i. All packages known to contain a radioactive material quantity in excess of Table 5 of reference (ee) that are received by any unit must be checked for leakage or contamination with a wipe test within three hours from actual receipt time if the package is crushed, wet or damaged in any way. If the commodity is received over a weekend when no one is present to actually take positive control, the item will be wipe tested within three hours after the start of the next regular workday. Once wipe samples are collected, submit samples in overnight mail to MCLB, Albany for analysis as directed in section 4 7.3, enclosure (1) of reference (ee), and reference (b). Should this action become necessary, notify the CRSO and the IRSO for assistance.

j. Include the appropriate certification statement on the shipping papers or Government Bill of Lading:

CONSIGNOR: (shipping unit's name)

"THIS PACKAGE CONFORMS TO THE CONDITIONS AND LIMITATIONS SPECIFIED IN 49 CFR 173.422 FOR RADIOACTIVE MATERIAL, EXCEPTED PACKAGE, INSTRUMENTS OR ARTICLES, UN 2910."

Or

"THIS PACKAGE CONFORMS TO THE CONDITIONS AND LIMITATIONS SPECIFIED IN 49 CFR 173.421 FOR EXCEPTED RADIOACTIVE MATERIAL, LIMITED QUANTITY, N.O.S., UN 2910."

CERTIFICATION (name & signature)

k. Ensure a copy of the shipping papers is attached to the outside of the package. For broken or contaminated radioactive items, add the following warning on the shipping papers: "Contact CRSO before Opening".

20. General Emergency Guidelines. In the case of a mishap involving radioactive material, the senior person present shall take immediate steps to control the emergency and request assistance from the unit RPA, the CSO, the IRSO, and any other emergency personnel necessary for lifesaving support. Specifically, follow emergency precautions.

21. Initial Mishap/Radiation Incident Response. The initial objective of any mishap response involving radioactive materials is to regain control over the event and prevent further spread of any radioactive contamination produced. However, actions to save life, aide the injured, fight fires, or control further spread of damage, takes precedence over concerns for contamination that may arise from fielded Marine Corps equipment.

a. To minimize personnel exposure from possible internal contamination, the following general steps should be taken:

(1) Sound an alarm. Notify personnel in the immediate area to move away.

(2) In the case of tritium gas, vacate the immediate area, and stay upwind for at least 30 minutes. If in a building, open doors and windows and operate fans to increase ventilation.

(3) In the case of fire, stay away from the downwind smoke. The self-contained breathing apparatus worn by fire fighters will provide short-term protection against inhalation of airborne radioactive contamination.

b. Should any aircraft mishap occur, i.e. broken Forward Looking Infrared Radiometer (FLIR), notify the RPA and CRSO via normal flash reporting system and a follow-up phone call. Additionally, the respective IRSO shall also be notified as soon as possible to ensure proper follow-up action taken. Refer to reference (f), section 7.7.

22. Contamination Control

a. The Environment Department will clean up or collect commodities with a broken source and must wear rubber or plastic gloves, apron and goggles. Any release must be reported to CRSO and IRSO.

b. Devices with broken sources and any resulting debris should be double wrapped in two plastic bags and sealed with tape. Clearly label the package as containing a radioactive contaminated device or materials. Refer to this chapter for guidance in obtaining disposition instructions.

c. Personnel who may have received contamination on bare skin should wash with a mild soap and plenty of lukewarm water. References (g) and (h) offer technical guidance for handling radioactively contaminated personnel and monitoring procedures for various radioisotopes.

d. Possible contamination of the immediate area or on the major end item is a judgment call based on the circumstances of the incident and on radiological measurements. Potentially contaminated areas are not to be opened for normal access. Potentially contaminated equipment cannot be returned to service until it has been resolved by the CRSO/IRSO that radioactive contamination did not occur or that contamination levels have been reduced to below the allowable limits.

23. Technical Assistance. Radiation incidents may result in situations that are beyond the capabilities of the individual command to abate and outside assistance may be necessary. However, a request for external assistance can only be made by the IRSO. If an incident does occur, consultation, technical guidance and proper abatement procedures can be obtained from:

a. MCLB, Albany GA, Radiation Control (RADCON) Office.

b. NAVSEADDET RASO.

24. Reporting of Lost Radioactive Materials or Radioactive Contamination Events

a. Loss of control of radioactive materials can result in contamination of personnel or equipment. In general, such situations would be the release of radioactive material from a device through accidental breakage, leakage, explosion or fire.

b. The loss, theft or destruction of devices containing radioactive materials or radiation sources that could pose a potential hazard to other personnel.

c. Radiation mishaps and incidents which require reporting, as defined in sections 2.10 and 4.10 of reference (f), as NRC-licensed materials or x-ray radiography.

d. The purpose for reporting the loss of radioactive materials or contamination occurrences is to initiate actions by addressees if necessary, and if required, notify the NRC. In the event that a serious threat to health or adverse publicity may exist, the IRSO shall submit an Operational Report-3, Serious Incident Report per reference (o).

(1) For radiation mishaps and incident situations defined in sections 2.10 and 4.10 of reference (f), the IRSO will submit reports as specified and include Headquarters Marine Corps Safety Department as an addressee.

(2) For abnormal occurrences involving loss, theft or damage of radioactive sources, or contamination events not covered by sections 2.10 and 4.10 of reference (f), the CRSO shall submit notification reports by message or letter within five working days to: CMC (SD); the appropriate NRMP or NRC license manager; and, MCLB (882/170) Albany. Informational copies must also be sent to other appropriate addressees in the chain of command, containing the following minimum information:

- (a) Type of occurrence: loss, theft or breakage.
- (b) NSN and quantity of devices lost, stolen or broken.
- (c) Description of the circumstances of the loss, theft or damage.
- (d) Current disposition of the devices.
- (e) CRSO/IRSO assessment of radiation exposures to individuals and the extent of possible hazards to other personnel if applicable,
- (f) Other amplifying information as deemed pertinent to the incident.
- (g) Point of contact and phone numbers.

25. MCLB Albany Notification. MCLB Albany will notify the IRSO and originating units when incoming shipments have been received that contain radioactive devices that were not expected to arrive as contaminated or broken commodities, or whenever the exterior surfaces of the package shipped are found to be "contaminated". Commands originating such shipments must take and document follow-up actions to determine if an extensive

contamination problem exists where the items were stored, handled or packaged. Special timely notification requirements are specified in reference (y), including immediate notification of the final delivery carrier, when removable contamination levels in excess of 0.01 micro curies (22,000 DPM) per 100 cm² are found on external surfaces.

Chapter 22

Ergonomics Program

1. Purpose. This chapter establishes procedures and requirements to implement an Ergonomics Program per references (v) and (w).
2. Scope. The goal is to prevent musculoskeletal disorders in military and civilian personnel working aboard MCAS Yuma. All situations that expose any personnel to musculoskeletal system risks must be assessed by a competent person with ergonomics training in order to implement controls.
3. Background. 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.
4. Discussion. 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. Some 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 thus more are reported.
5. Responsibilities
 - a. Commanders, Department Heads, and Directors shall:
 - (1) Ensure personnel exposed to musculoskeletal risks receive appropriate training.
 - (2) Designate an ergonomics coordinator and members for an ergonomics team, with advice from local medical personnel, to administer an ergonomics program.
 - (3) Allocate resources to ensure ergonomic considerations become a fundamental aspect of process improvement.
 - (4) Ensure coordination of medical aspects of the ergonomics program with responsible medical treatment facility.
 - b. Director, DSS shall:
 - (1) Provide ergonomics training and education.
 - (2) Serve as a member of the ergonomics team or designate a representative from safety office.
 - (3) Oversee safety aspects of the ergonomics effort.
 - (4) Review injury and illness records related to

musculoskeletal disorders, develop trend analyses, and report results to the ergonomics team.

(5) Incorporate fundamental ergonomic principles into new or existing workstations through facilities engineering designs.

c. Director, Base Services Department shall:

(1) Integrate ergonomic considerations into all workplace improvements.

(2) Implement ergonomics team recommendations to eliminate or reduce musculoskeletal risks.

(3) Appoint an advisory or support representative from engineering or maintenance to ergonomics team.

d. Director, Human Resources Office shall:

(1) Ensure newly appointed supervisors, managers, and employees receive appropriate ergonomics training.

(2) Appoint at least one representative to serve on the ergonomics team.

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

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

e. Director, Installation & Logistics Division (Contracting and Purchasing) shall:

(1) 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.

(2) Appoint an advisory representative from contracting or purchasing to serve on ergonomics team.

f. Resident OIC of Construction shall:

(1) Integrate ergonomic considerations into facility modifications and construction.

(2) Implement ergonomics team recommendations to eliminate or reduce musculoskeletal risks.

(3) Appoint an advisory representative to serve on ergonomics team.

g. Ergonomics Coordinator shall:

(1) Receive at least 40 hours of formal training in ergonomics and 24 hours in workplace back injury prevention.

- (2) Chair ergonomics team and provide an interface with OSH council or committee.
- (3) Serve as focal point for installation ergonomics program.
- (4) Ensure upper management support, recognition of contributions, and availability of resources.
- (5) Develop and implement installation ergonomics plan with assistance of ergonomics team and approval of OSH council or committee.
- (6) Ensure accurate record keeping of ergonomics team reports.
- (7) Audit status of implementation of the ergonomic plan annually to include workplace processes, awareness, and documentation.

h. Ergonomics Team shall:

- (1) Assist in developing and implementing installation ergonomics plan. Set Program goals and objectives, and develop strategies to address issues.
- (2) Identify existing and potential musculoskeletal risks.
- (3) Ensure worksite evaluations are completed. These evaluations may be included in the periodic IH surveys.
- (4) Set priorities for identified musculoskeletal risks for abatement.
- (5) Implement corrective action plans.
- (6) Develop methods to evaluate the effectiveness of corrective actions and document results.
- (7) Evaluate and present new "ergonomic" equipment and maintain a library.
- (8) Maintain documentation on annual surveys, team meetings, trend analyses, investigations, ergonomic improvements, and associated costs.

i. Supervisors shall:

- (1) Assist ergonomics coordinator in implementation of the ergonomics plan.
- (2) Ensure personnel receive ergonomics awareness training.
- (3) Request assistance from the ergonomics coordinator, ergonomics team, and installation or unit safety office for recognizing, assessing, and monitoring musculoskeletal risk factors.

6. Ergonomics Program Elements. This includes the following:

- a. Management Commitments and Employee Involvement.
- b. Workplace Analysis.

- c. Hazard Prevention and Control.
- d. Facility Modification.
- e. Medical Program.
- f. Training.
- g. Program Evaluation and Review.

Chapter 23

Bloodborne Pathogen Program1. Discussion

a. The OSH Act requires safe practices for personnel occupationally exposed to bloodborne pathogens. Pathogens carried in bodily fluids can cause serious illness and death. A Bloodborne Pathogens Program must be established that implements reference (b) and DoD, SECNAV, and BUMED instructions.

b. This chapter applies to all activities aboard MCAS Yuma in which occupational exposures to potential bloodborne pathogens occur. Occupational job classifications include: healthcare workers, law enforcement personnel, firefighters, lifeguards, crash, fire and rescue personnel and other designated first aid responders. Personnel that may have occupational exposure will be determined by the IH Department, MCAS Yuma. Generally, employees with specific duties in maintenance, housekeeping, and laundry services that involve exposure to contaminated materials or regulated medical waste may be considered occupationally exposed. However, those personnel are mostly individuals who work in healthcare. As required, all individuals in designated job classifications considered to be at risk for occupational exposure will be placed in a Medical Surveillance Program and provided appropriate training.

c. Any employee, whether enrolled in the Medical Surveillance Program or not, that feels they have had an occupational exposure incident shall immediately report to the Branch Health Clinic for evaluation.

2. Background. Principal bloodborne pathogens of concern in this chapter are Human Immunodeficiency Virus, and Hepatitis B and C viruses. Many others exist, but generally are not occupationally transmitted in significant numbers.

3. Exposure Control Plan

a. All worksites identified by the IH Department as having employees at risk to bloodborne pathogen exposure requires a specific written exposure control plan. All activities aboard MCAS Yuma with staff that have been identified to be at risk for exposure to bloodborne pathogens must develop an exposure control plan specific to their work area. Those commands shall consult reference (b) and or the Branch Health Clinic Health Department, when developing exposure control plans. Finalized Exposure Control Plans must be submitted to the DSS for oversight management of this program. Common elements of an effective exposure control plan are:

(1) A list of all job classifications in which all employees in those job classifications have occupational exposure.

(2) A list of all job classifications in which some employees have occupational exposure and a list of all tasks and procedures or groups of closely related tasks and procedures in which occupational exposure occurs.

(3) The schedule of how and when provisions of the standard will be implemented, including:

(a) Methods of Compliance.

(b) Hepatitis B vaccination and post-exposure evaluation and follow-up.

(c) Communication of hazards to employees, ie. Training.

(d) Recordkeeping.

(4) Procedures for evaluating the circumstances of an exposure incident.

(5) Procedures for implementing engineering and work practice controls, PPE requirements, and housekeeping precautions.

b. Commands activities with staff, with potential occupational exposure shall ensure that a copy of the Exposure Control Plan is accessible to all potentially exposed staff.

c. The Exposure Control Plan must be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure. The review and update will also:

(1) Reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens;

(2) Document annually consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.

d. Input from non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps in the identification, evaluation, and work practice controls and shall document that solicitation in the exposure control plan review. Input from non-managerial staff shall be documented by:

(1) Listing the employees involved and describing the process by which input was requested.

(2) Other documentation including minutes of meetings or copies of documents used to request employee participation, or records of responses received from employees.

4. Work Practice Controls. Ensure work practice controls of reference (b) and the following precautions are implemented.

a. Eating, drinking, handling contact lens, or applying cosmetics are prohibited in areas where occupational exposures to blood or potentially infectious materials exist.

b. Food or drink must not be kept in refrigerators or freezers, shelves, cabinets, or on countertops where blood or other potentially infectious materials are present.

c. Containers of body fluids for transport or shipping must be leak-proof, puncture-proof, labeled with a biological hazard label, and taped securely prior to being transported or shipped.

d. Equipment that may become contaminated with blood or other infectious materials will be inspected prior to servicing or shipping, and decontaminated as necessary.

e. Individuals who are exposed or suspect that they were exposed to blood or other infectious materials shall wash the potentially contaminated skin with soap and water as soon as possible after exposure. When washing facilities are not readily available, an alcohol-based hand sanitizer may be used.

f. Individuals who are exposed or who suspect contact of body areas with blood or other potentially infectious materials shall immediately flush mucous membrane with copious amounts of water for a minimum of 15 minutes.

g. Personnel who clean-up bodily fluids, including vomit and blood shall do so by donning PPE to include gloves and eye protection. Cleaning includes wiping the area down, applying disinfecting bleach solution, and disposing of clean-up material in accordance with their Medical Waste Management Plan. If an activity has no Medical Waste Management Plan, activities should contact the Branch Health Clinic for further information and assistance.

h. The workplace must be maintained in a clean and orderly fashion at all times.

5. Engineering Control. These are devices (e.g., sharps disposal containers, self sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.

6. Personal Protective Equipment (PPE)

a. In the absence of effective engineering controls, PPE will be worn by all personnel when there is a possible occupational exposure to blood or other potentially infectious materials. PPE must be provided by the command at no cost to the employee.

b. PPE must be accessible and readily available in appropriate sites. PPE also must be kept clean and in good repair.

c. Single use gloves must be replaced as soon as possible after they are contaminated, torn, or punctured, and will not be re-used under any circumstances.

7. Housekeeping Precautions

a. Housekeeping personnel may be occupationally exposed to potentially infectious material if they clean up after some first aid incidents. Therefore, housekeeping personnel need to follow the

written cleaning procedures that outline the proper method of decontamination to be used, and describes their Medical Waste Management Plan if available.

b. Equipment and work areas must be cleaned and decontaminated as soon as feasible after contact with any blood or potentially infectious fluids.

c. Protective coverings must be removed and replaced when overtly contaminated, or at the end of each work shift, if there is a possibility of contamination during the shift.

d. Contaminated laundry should be handled as little as possible. Contaminated wet laundry must be placed in leak-proof bags that are colored red or marked with a biohazard label under the requirements of reference (b). Routine laundry practices are adequate to decontaminate clothing that has been soiled since water heated between 140 and 160 degrees Fahrenheit kills most pathogenic organisms. All personnel who handle contaminated laundry must wear protective gloves.

8. Exposure Incident. Exposure incident means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious material which results from the performance of an employee's duties, including providing first aid as a responder. All exposures will be reported, and an immediate confidential medical evaluation will be provided by MCAS Yuma BHC Occupational Health. The MCAS Yuma Branch Health Clinic is responsible for initial medical evaluations and counseling. Post exposure medical care management shall be obtained through the Workmen's Compensation claim process.

9. Assistance. Concerns on bloodborne pathogens should be directed to the DSS, the BHC, or the Naval Hospital Infection Control, Occupational Medicine or IH Departments. The Director of Safety will provide training as requested when necessary. Bloodborne pathogens training is required at least annually for all personnel who are designated to be in this program or who may be occupationally exposed to blood or other body fluids. Additional assistance may be requested from any medical treatment facility.

Chapter 24

Tactical Safety Program

1. 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 orders and directives 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.

2. Background

a. 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 reference (11). Only recently, have trained civilian tactical safety specialists accompanied units on deployment to provide their safety services in an operational environment.

(1) 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.

(2) 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.

(3) When a tactical safety specialist is assigned to a unit, the unit receives a trained professional to focus strictly on safety. By working closely with the officers, SNCO'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.

b. 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.

3. Implementation. The Installation Safety Manager will assign a TSS 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 TSS to accompany the unit during field training evolutions, deployments and operations. If this support will extend off the home based installation, the TSS 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.

4. Responsibilities

a. Unit Commanders

(1) Ensure all unit personnel are aware of their responsibilities and are held accountable for all aspects of the Marine Corps Tactical Safety Program.

(2) Provide a written request 90 days prior to the unit operation or deployment, through the appropriate chain of command for a TSS.

(3) Include the TSS as a special staff member of the unit.

(4) Provide messing and berthing for TSS accompanying the unit on deployment. Messing and berthing will be the same as the Marines in that unit receive. No special courtesies are required.

(5) Provide ground transportation for the TSS to accomplish their duties while on deployment. Typically a High Mobility Multipurpose Wheeled Vehicle with a driver or a rental vehicle with four wheel drive capabilities will suffice. Some installations may provide the TSS with a vehicle for use. 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.

(6) Include the TSS on the T/O for air or ship transportation to and from the deployment location.

(7) Validate overtime worked by the Tactical Safety Specialist while on deployment/TAD.

(8) Provide standard issue 782 gear if needed for Tactical Safety Specialists accompanying the unit on deployment.

(9) Provide emergency medical and dental care to Tactical Safety Specialists if needed while on deployment.

b. Installation Safety Managers

(1) Provide a written response to units requesting TSS support. The response should include the following at a minimum:

(a) Name, rank, SSN, blood type of the TSS being assigned.

(b) Dates of deployment.

(c) Request to validate and verify overtime or compensation time worked while deployed. It must be determined prior to assignment and deployment how overtime or compensation time will be paid to the deploying TSS.

(d) Vehicle identification number, license plate, gross weight, outside dimensions, and a brief description of the vehicle being transported if applicable.

(e) Amplifying instructions as necessary.

(2) Provide fully qualified TSS to requesting units. TSS qualifications are provided in paragraph 5 of this chapter.

(3) Provide all equipment necessary for the TSS 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.

(4) Ensure the assigned TSS has the proper security clearance, DoD Civilian ID, passport, visa, immunizations and preventative medicines, anti-terrorism/force protection training, medical examinations, training, TAD Orders, DD Form 93 Record of Emergency Data, dog tags, and DNA samples or PANOREX dental x-rays.

(5) Ensure TSS are designated Emergency Essential, requiring the incumbent to execute in reference (aa), as such the incumbent maybe required incident to a crisis or wartime.

c. Tactical Safety Specialists

(1) The goal of the TSS is to support the unit's mission. The TSS must integrate military unique situations in harmony with the applicable OSH 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 will be your guide.

(2) Make recommendations to the commander for establishing and maintaining a continuous safety education and mishap prevention effort consistent with the unit's mission.

(3) 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.

(4) Work closely with the unit safety officers to implement and maintain all aspects of the unit's safety and health program.

(5) Promote safety at all times to keep unit personnel constantly aware of safety aspects in the performance of their duty.

(6) Conduct safety training as required to support the unit's mission.

(7) Provide detailed mishap and trend analyses and provide recommendations to prevent recurrences.

(8) 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.

(9) Must be able to deploy for long periods of time while working and living in a field environment.

(10) Maintain an accurate record of work hours while deployed. Ensure the designated unit representative validates overtime and compensation time.

(11) Provide technical safety services during training and operations to include; convoy, explosive, fire protection and prevention, range, HM and ORM.

(12) The TSS shall support the unit in garrison on a daily basis assisting with all aspects of managing the unit safety program.

(13) The TSS 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.

(14) 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, HM and retrograde disposal, insect and vermin awareness, precautions for infectious disease, etc.

5. Training

a. TSS will be fully qualified when they have completed the following training:

(1) Satisfactorily complete the Career Program (CP-12) Fort Rucker, Al.

(2) Ground Safety for Marines.

(3) Range Safety Officer Level II Course.

(4) Radiation Safety Officer Course.

(5) Military Map Reading Course.

(6) Explosive Safety Training.

(7) Basic First Aid.

(8) Weapons Training (when appropriate).

(9) Nuclear Biological Chemical Defense Training.

b. The TSS shall have a comprehensive working knowledge of the following:

(1) Ability to communicate effectively both in writing and orally with all levels of the chain of command.

(2) Psychological and physical factors that motivate safe performance.

(3) Marine Corps structure and Chain of Command.

(4) Marine Corps customs, courtesies, and traditions.

(5) Convoy Operations Safety.

(6) Maritime Offload/Backload Operations Safety.

(7) Ammunition and Equipment Combat Destruct training requirements.

(8) Aviation weapons operations.

(9) Field Ammunition Storage requirements.

(10) Site Specific Range Safety Procedures.

(11) Tent Camp Safety.

(12) Basic field survival skills.

(13) Laws of War/Geneva Conventions.

(14) Standards of Conduct.

(15) Customs and courtesies of host country.

6. Uniform and Equipment

a. TSS will be authorized to wear 5.11 type clothing and is required for TSS personnel deploying.

b. TSS 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.

Appendix AGLOSSARY

1. Abate. To eliminate or control permanently an unsafe or unhealthful working condition into compliance with Marine Corps OSH standards.
2. Administrative Control. Any procedure, which limits daily exposures to toxic chemicals or harmful physical agents by controlling the work schedule.
3. Bloodborne Pathogens. Pathogenic microorganisms present in human blood that can cause disease in humans. These include, but are not limited to, the Hepatitis B Virus (HBV) and Human immunodeficiency Virus (HIV).
4. Confined Space. Space not designed for routine or continuous occupancy, is large enough and configured to allow worker entry, and is poorly ventilated or has limited or restricted means for entry or exit.
5. Contractor Employee. An employee of a contractor performing work at a contractor workplace under a Marine Corps contract.
6. Contractor Workplace. Any place on a Marine Corps Installation, within the United States, its territories, or possessions, where work currently is being, recently has been, or is scheduled to be performed by contractor employees, including a reasonable access route to and from the workplace. Contractor workplace does not include any structure, machine, apparatus, device, equipment, or material therein, which a contractor employee is not required or reasonably expected to have contact with nor include any working condition for which OSHA Jurisdiction has been preempted under section 4(b)(1) of OSHA Act.
7. Energized. Connected to an energy source or containing residual or stored energy.
8. Energy Isolating Device. A mechanical device that physically prevents the transmission or release of energy including but not limited to a manually operated electrical circuit breaker; disconnect switch; manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors and no pole can be operated independently; a slide gate; a slip blind; line valve; line block; and any similar device used to block or isolate energy. Item does not include a push button, selector switch, and other control circuit type devices.
9. Energy Source. Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy source.
10. Ergonomics. The field of study that seeks to fit the job to person, rather than fit the person to job. This is achieved by the evaluation and design of workplaces, environment, jobs, tasks, equipment, and processes in relationship to human capabilities and interactions in the workplace.

11. Explosive or Flammable Limits. The range of concentration of a material, expressed in percent in air, which will burn or explode if, ignited. Lower explosive limit is the minimum percent by volume of a gas or vapor that, when mixed with air at normal temperature and pressure, will form a flammable mixture.
12. Exposure Incident. A specific eye, mouth, other mucous Membrane, non-intact skin, or parietal contact with blood or other potentially infectious material that may result from doing one's job.
13. Hazard. A workplace condition that may result in injury, health impairment, illness, disease, or death to any worker who is exposed to the condition, or damage or loss to property or equipment.
14. Hazardous Chemicals. Hazardous materials used in the workplaces that are regulated under 29 CFR 1910.1200.
15. Hazardous Materials. For preparing a Material Safety Data Sheet (MSDS), a material with one or more of the following characteristics:
 - a. A flash point below 2000F (93.30C) closed cup, subject to spontaneous heating, or subject to polymerization with release of large amounts of energy when handled, stored, and shipped without adequate control.
 - b. Has a Threshold Limit Value R equal to or below 1,000 ppm for gases and vapors, below 500 mg/m³ for fumes, and equal to or below 30 million particles per cubic foot (mppcf) or 10 mg/m³ for dusts (equal to or below 2.0 fibers/cc, greater than 5 micrometers long for fibrous materials).
 - c. A single oral dose, which will cause 50 percent fatalities to test animals when administered in doses of less than 500 mg/kg of test animal weight.
 - d. Is a flammable solid or a strong oxidizing or reducing agent?
 - e. Causes first degree burns to skin after a short time exposure or is systematically toxic through skin contact.
 - f. In the course of normal operations, may produce dusts, gases, fumes, vapors, mists, or smokes that have one or more of the above characteristics.
 - g. Produces sensitizing or irritating effects.
 - h. Has special characteristics, which in the opinion of the manufacturer could cause harm to personnel if used or stored improperly.
 - i. Is regulated under 29 CFR 1910, 49 CFR 171-179, or the Environmental Protection Agency (40 CFR).
16. 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 apparatuses. It is commonly used to replace or add sections of pipeline

without interruption of service for air, gas, steam, and petrochemical distribution systems.

17. Immediately Dangerous to Life or Health (IDLH). Any atmosphere that poses an immediate hazard to life or produces immediate irreversible debilitating effects on health.
18. Lockout. The placement of a lockout device on an energy-isolating device in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.
19. Lockout Device. A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and preventing energizing of a machine or equipment.
20. Lockout/Tagout Log. The control document for administering the lockout/tagout procedures. These logs are the records of authorization for each lockout/tagout action on systems or equipment.
21. Lockout/Tagout Coordinator. One or more individuals trained and designated in writing by the Commanding Officer, Commanding Officer, or Department Head to be in control of administering the lockout/tagout Program in their area of cognizance.
22. Occupational Exposure. A reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious material that may result from doing one's job.
23. Parenteral. Piercing of the mucous membranes or skin barrier by a Needlestick, human bite, cut, or abrasion.
24. Potential Energy. A function of a height of an object above some datum plane. This datum plane is usually considered to be where that object would come to rest if the restraint holding the object were released. For example where the upper die in a punch press is positioned if the restraining device holding the upper die in place was to be removed the potential energy of the upper die would be converted into KINETIC energy resulting in the upper die being propelled downward, coming to rest on the lower die. This motion can cause a crushing, cutting, lacerating, amputating or fracture injury to an employee's arm, hand or some other part of the body which occupies the space between the dies.
25. Potentially Infectious Materials include the following:
 - a. The following human body fluids: blood, semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.
 - b. Any unfixed tissue or organ (other than intact skin) from a human (living or dead).

c. HIV-containing cell or tissue cultures, organ cultures and HIV-, HBV-, or HCV-containing culture medium or other solutions, and blood, organs, or other tissues from experimental animals infected with HIV, HBV, or HCV.

26. 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).

27. Servicing or Maintenance. Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. Activities include lubrication, cleaning, or clearing machines or equipment and making adjustments or tool changes, where the employee may be exposed to "unexpected" start-up of the equipment or release of hazardous energy.

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

29. Tagout. The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

30. Tagout Device. A prominent warning device, such as a tag and a means of attachment which can be securely fastened to an energy isolating device in accordance with an established procedure to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

31. Universal Precautions. An infection control approach whereby all human blood and certain body fluids are treated as if they were known to be infectious for HIV, HBV, HCV or other bloodborne pathogens.

32. Workplace Risk Factors (Ergonomic). Actions in the workplace, workplace conditions, or a combination thereof, that may cause or aggravate a work-related musculoskeletal disorder. Workplace risk factors include, but are not limited to, repetitive, forceful or prolonged exertions, frequent or heavy lifting, pushing, pulling, or carrying heavy objects, a fixed or awkward work posture, contact stress, localized or whole body vibration, cold temperatures, and poor lighting (leading to awkward postures). Workplace risk factors can be intensified by work organization characteristics such as inadequate work-rest cycles, excessive work pace or duration, unaccustomed work, lack of task variability, machine work, and piece rate.

33. Work-Related Musculoskeletal Disorder (Ergonomic). An injury or illness of the muscles, tendons, ligaments, peripheral nerves, joints, cartilage (including intervertebral discs), bones and supporting blood vessels in either the upper or lower extremities, back, or neck, that is associated with musculoskeletal disorder workplace risk factors and are not limited to cumulative trauma disorders, repetitive strain injuries or illnesses, repetitive motion injuries or illnesses, and repetitive stress injuries or illnesses. Refers collectively to signs, persistent symptoms, or clinically-

diagnosed work-related musculoskeletal disorders when they are caused or aggravated by exposure to workplace risk factors.