



MASTER DIRECTIVES

UNITED STATES MARINE CORPS

MARINE AIRCRAFT GROUP 12
FIRST MARINE AIRCRAFT WING, MARFORPAC
UNIT 37300
FPO AP 96603-7300

IN REPLY REFER TO:
GruO P3400.1A
NBCD

OCT 22 1999

GROUP ORDER P3400.1A

From: Commanding Officer
To: Distribution List

Subj: STANDARD OPERATING PROCEDURES FOR NUCLEAR, BIOLOGICAL AND
CHEMICAL DEFENSE (SHORT TITLE: SOP FOR NBCD)

Ref: (a) MCO 1510.69A
(b) MCO 1510.71A
(c) MCO 3400.3E
(d) MarForPacO P3401.3D
(e) III MEFO 3400.1B
(f) WgO P3400.1G
(g) WgO 5041.1L
(h) FMFM 11-9
(i) FMFM 11-10
(j) FMFM 11-17
(k) FMFM 11-18
(l) TI 10010-20/5

Encl: (1) LOCATOR SHEET

Reports Required:

Quarterly NBCD Status Report (Report Control Symbol Exempt),
par. 7000.1

Annual NBC Defense Equipment Inventory for Congress

1. Purpose. To publish, in accordance with the references, the Nuclear, Biological and Chemical Defense (NBCD) Readiness policies and procedures for Marine Aircraft Group 12 (MAG-12).
2. Cancellation. GruO P3400.1.
3. Information. The potential NBC threat requires that Marines and units at all levels of command be familiar with the actions necessary to counter such weapons of mass destruction and continue with their assigned missions. References (a) - (l) provide performance objectives, maintenance procedures, training requirements, and procedures for Marines operating in an NBC environment. The ability of MAG 12 to accomplish its mission under nuclear, biological, and chemical conditions is dependent upon the readiness of the unit, its individuals, and their preparedness wrought through training. No organization can be

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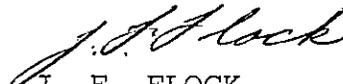
considered combat ready unless they can sustain operations in an NBC environment. It is the unit leader's responsibility at all levels to implement and maintain an effective NBC Defense training program.

4. Action. All units within MAG-12 will conduct NBCD training and operations in accordance with the guidance contained in this order. Additionally, unit commanders will ensure an appropriate SOP is prepared, which incorporates the theme and provisions of this order and any unique details pertinent to their organization.

5. Summary of Revisions. This order contains a substantial number of changes and should be completely reviewed.

6. Recommendations. Recommendations concerning the contents of the SOP for NBCD Readiness are invited and will be forwarded to the MAG-12 NBCD Officer via the appropriate chain of command.

7. Certification. Reviewed and approved this date.


J. F. FLOCK

Distribution: A

Copy to: CG, 1st MAW
CO, MWSS 171

GruO P3400.1A

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LOCATOR SHEET

Subj: STANDARD OPERATING PROCEDURES FOR NUCLEAR, BIOLOGICAL AND
CHEMICAL DEFENSE READINESS (SHORT TITLE: SOP FOR NBCD
READINESS)

Location: _____
Indicate location(s) of the copy(ies) of this order).

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RECORD OF CHANGES

Log completed change action as indicated.

Change Number	Date of Change	Date Received	Date Entered	Signature of Person Entering Change

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GENERAL INFORMATION

0001. GENERAL. The ability of this Command to maintain an effective state of combat readiness in an NBC environment depends upon every unit and individual attaining and maintaining a high degree of NBCD proficiency. Therefore, a sound, realistic and thoroughly integrated training program must be established in garrison, with supporting directives, so that appropriate action is instinctively employed during combat operations.

0002. SCOPE. This order contains instructions for the standardization of tactics and techniques for the following aspects of NBCD; staff, organizational, NBC Defense team, and individual responsibilities, operations, communications, equipment, training, and inspections.

0003. POLICY. U.S. Marine Corps doctrine states that all FMF units must be prepared for possible operations in an NBC environment. This doctrine applies to the entire Marine Aircraft Group. The decision for the United States Armed Forces to use nuclear weapons rests with the President of the United States. Commanders receive specific directives relative to their employment through command channels.

1. The U.S. policy for the use/defense of Nuclear, Biological, and Chemical weapons is as follows:

a. Nuclear - Current policy permits the use of offensive nuclear weapons in a tactical situation when presidential release has been granted. Commanders must be prepared for operations in a nuclear environment following a friendly or enemy nuclear attack. Plainly stated, we will use nuclear weapons first, if necessary, and must be prepared accordingly.

b. Biological (to include toxins) - Current U.S. policy denounces the use of biological or toxicological munitions. Commanders must be prepared to defend against biological and toxicological attacks by hostile forces.

c. Chemical - Current U.S. policy renounces the use of chemical weapons. We will try to deter enemy use or cease enemy use of chemical weapons by conventional and other means.

d. Smoke and Riot Control Agents - May be used only under special conditions. Commanders are currently authorized to use smoke and riot control agents in designated training areas. However, the employment of these agents will be strictly controlled to comply with guidance provided by higher headquarters and the MAG-12 NBCD Officer. The Commander In Chief must approve the use of riot control agents in combat.

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e. Herbicides - May use herbicides under specific conditions. May be used to control vegetation within U.S. bases and installations or around their immediate perimeters. The President must approve the use of herbicides in war.

2. Avoidance of NBC agents and their associated contamination is the most important aspect of the Group NBCD policy. If avoidance is not possible, protective measures necessary to effectively continue the mission will be applied. NBC reconnaissance and surveillance efforts using available NBCD detection equipment are crucial to avoidance and help to ensure the NBC survivability and operability of the operating forces and fixed sites. Thorough decontamination, if required, will be conducted as time and mission permit. Once chemical warfare has been initiated, any threat attack by a chemically capable weapons system will be considered a chemical attack until verified as otherwise.

0004. NUCLEAR WEAPONS. Nuclear weapons are the most powerful weapons in any military's inventory and are effective against virtually all targets. The effects of nuclear weapons are divided into two major categories; initial and residual.

1. Initial effects, which occur within the first minute following the detonation, produce the most casualties and material damage. They include thermal radiation (heat), blast wave, nuclear radiation, electromagnetic pulse (EMP) and transient radiation effects on electronics (TREE) which damage radios, computers and other electronic equipment.

2. Residual effects are classified as radioactive fallout and neutron induced radiation, which can cause sickness and death. Passive measures can be taken to significantly reduce casualties and damages.

0005. BIOLOGICAL WEAPONS. Biological weapons are placed into two classes; germs and toxins. These weapons are capable of producing widespread disease and death among personnel and damage to vegetation. Biological weapons also cause damage and deterioration of materials and can be employed in such a manner as to inflict no apparent physical damage to surrounding terrain, installations or facilities. Immediate detection of their employment is extremely difficult. Only medical personnel can identify where, when, and what type of agent was deployed. Medical personnel must also prescribe appropriate treatment and recommended courses of action for protection/avoidance.

0006. CHEMICAL WEAPONS. Chemical weapons are capable of producing mass casualties over large areas, especially to poorly trained and equipped forces. Chemical weapons can be delivered in gas, liquid, or aerosol forms. Delivery methods are by mines, artillery, rockets, bombs, or aircraft spray. Effects can vary from incapacitation to death. Duration of chemical hazards can vary

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from minutes to weeks to years. Additionally some agents are capable of being used for riot control and training. Detection, identification, casualty avoidance, and mission sustainment can be achieved by properly trained personnel. When intelligence reports that the enemy has a chemical capability, all enemy artillery and air attacks will be considered probable chemical attacks until proven otherwise.

0007. COMMAND RESPONSIBILITY. The commander is responsible for his organization's readiness and effectiveness under conditions produced by NBC weapons. The ability of a unit to survive in an NBC environment can only be attained through training, which must include all personnel in that unit. Training must be continuous and progressive. Additionally, commanders must ensure that designated personnel within their organization receive appropriate training in NBCD team functions to include Control Center, Monitor/Survey and Decontamination operations. To obtain these objectives, each commander must ensure that the unit and individual training enacted, is realistic, integrated whenever possible, and meaningful.

0008. SUPPORTING PUBLICATIONS. All subordinate organizations will maintain a copy of this order, all doctrinal publications that relate to NBCD capabilities inherent to that unit, and all technical publications relevant to that unit's echelon of maintenance for their Table of Equipment (T/E).

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CHAPTER 1

STAFF RESPONSIBILITIES

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CHAPTER 1

STAFF RESPONSIBILITIES

1000. GENERAL. Normal command functions and staff organization which fall under the cognizance of the MAG-12 S-3, will be adhered to during the conduct of NBCD operations. NBCD operations will, however, influence the field of staff responsibilities. To ensure a clear understanding of this influence, the following responsibilities and duties are assigned.

1001. RESPONSIBILITIES

1. Administration Officer (S-1)

a. Coordinate with the NBCD Officer in the assignment of 5702 and 5711 personnel within MAG-12.

b. Supervise the rotation of units and individuals that have been exposed to excessive amounts of radiation.

c. In conjunction with the Medical Officer and NBCD Officer, record the amount of radiation exposure of personnel.

d. Project and provide replacements for casualties incurred from the effects of NBC weapons.

e. In conjunction with the NBCD, Medical, and Logistics Officers, prepare plans for mass casualty evacuations.

f. Update BIR/BTR, as appropriate, with mask confidence training dates and Field Protective Mask (FPM) type and size.

2. Intelligence Officer (S-2)

a. Provide the following weather data:

1) Chemical Downwind Message (CDM). The CDM is a forecast of weather data given every six hours for the following six-hour period. See reference (j).

2) Meteorological Fallout Messages (METFM). If the METFM is not available, request upper wind data from the Air Weather Service in 5,000 foot increments (up to 90,000 ft.). See reference (k).

b. Provide current estimates of the enemy's NBC weapons employment capabilities to include:

1) Enemy nuclear, biological, and chemical weapons and delivery systems.

2) Enemy NBC Defense equipment and training status.

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3) Enemy's current NBCD posture.

c. Rapidly disseminate all information concerning the enemy's probable employment of NBC weapons to the MAG Control Center team, subordinate units, adjacent units, and higher headquarters.

d. Provide map and aerial photos as requested by the NBCD Control Centers.

e. Assist in vulnerability analysis.

f. Familiarize MAG personnel with enemy organization, weapons, equipment, techniques, and activities that would indicate enemy preparation for NBC operations.

g. Coordinate counterintelligence activities in order to degrade the enemy's capabilities to acquire targets for the employment of weapons of mass destruction.

h. Provide other data as required for NBCD operations.

3. Operations Officer (S-3)

a. Prepare all plans, possible/probable courses of action utilizing current estimates of NBC weapons employment capabilities and enemy NBC tactical doctrine.

b. In the event of mass casualties in a subordinate unit, due to an NBC attack, prepare alternate plans for accomplishment of the command's mission.

c. Advise the Commanding Officer on units approaching a predetermined level of radiation exposure that may require replacement. See reference (k).

d. In coordination with the Group Medical Officer and NBCD Officer, recommend Operational Exposure Guidance (OEG) to the Commanding Officer based on Degree of Risk and Radiation Exposure Status (RES). See reference (k) for details.

e. Activate the NBCD Control Center Teams as required in accordance with Chapter 4 of this SOP.

f. Conduct vulnerability analysis.

g. As necessary, establish priorities for fielding of new equipment, decontamination and survey operations.

h. Supervise planning and execution of; (1) detection, (2) warning, (3) contamination control and (4) decontamination operations.

i. Verify enemy's first use of NBC agents.

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j. Supervise the activities of Group NBC Defense Officer.

k. Ensure that adequate and realistic NBC Defense training for individuals, MAG NBC Defense team personnel, and the MAG as a whole, is conducted in accordance with references (c) through (f), and chapter 3 of this order.

4. Logistics Officer (S-4)

a. Plan and supervise logistical operations in an NBC environment to include: damage controls, mass casualty evacuation, emergency transportation, rescue, salvage, and water availability for decontamination operations. Water may be non-potable.

b. Procure and distribute NBCD supplies and equipment as required.

c. Ensure availability and maintenance of NBC Defense equipment.

d. Plan for transportation and hospitalization of an increased number of casualties.

e. Plan for the covering/protection and dispersion of supplies prior to an NBC attack.

f. Plan logistical requirements to conduct large-scale decontamination operations in coordination with the MAG-12 NBC Officer.

g. In coordination with the Group Medical Officer, make recommendations concerning food and water contamination and resupplies.

h. Provide a resupply of clean, uncontaminated, potable water for personnel.

i. Plan for disposal of contaminated remains.

j. Coordinate movement of Group convoys or contact teams along contaminated routes.

5. Marine Wing Support Group/Squadron 17/171

a. Provide contamination inspection stations for the detection of hazards present on supplies, personnel, and equipment entering the airfield/base.

b. Establish, equip, and supervise thorough decontamination facilities in support of the Group.

c. When directed, establish mobile operational equipment decontamination in support of tenant organizations.

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- d. Establish operational decontamination stations at FARP sites.
- e. Provide engineer and 5711 support at all decontamination sites.
- f. Maintain a capability to function as the alternate ACE NBC Defense Control Center.
- g. Provide adequate supplies of potable and nonpotable water for personal use and decontamination sites respectively.
- h. Provide transportation for decontamination equipment, as required.
- i. Provide transportation for the Monitor/Survey and Decontamination Teams, as required.
- j. Establish procedures for the evacuation of contaminated remains at the grave registration point. Contaminated remains must be placed into chemical protective remains pouches.

6. Ground Supply Officer

- a. Coordinate with the NBCD Officer, the acquisition, storage, control, issue, security, recovery, supervision, and redistribution of all NBCD equipment and supplies.
- b. Ensure protective measures are taken to protect all equipment and supplies prior to an NBC attack.
- c. Provide for the proper storage and transportation of NBCD equipment considered hazardous waste/materials.
- d. In the event of Operational or Thorough Decontamination Operations, coordinate with the S-4 the movement of replacement Chemical Protective Overgarments, in the appropriate amount, to the selected MOPP Gear Exchange or Detailed Troop Decontamination site.
- e. In the event of Operational or Thorough Decontamination Operations, coordinate with the S-4 the movement of replacement Decontamination kits to the selected MOPP Gear Exchange or Detailed Troop Decontamination Site.
- f. Upon initiating Operational or Thorough Decontamination Operations, immediately reorder all consumables used during the operation to ensure adequate combat stocks are always available.

7. NBCD Officer

- a. Advise the CO/S-3 Officer on all matters pertaining to NBCD preparedness, equipment, training, and operations.

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b. Provide technical assistance and instruction to all units within MAG-12 to ensure that the provisions of this SOP are adhered to.

c. Coordinate with the S-1 Officer on the assignment of all 5700 personnel to MAG-12.

d. Coordinate with the S-2 on identification, processing, and utilization of captured enemy NBC equipment and material.

e. Prepare the NBCD annex to operations orders.

f. Supervise the decontamination of personnel, equipment, and materials. Exercise operational control over Monitor/Survey and Decontamination Teams.

g. Ensure the Group NBCD Control Center Team personnel maintain proficiency in control center operations at all times. Be prepared to assume twenty-four hour NBC Defense Control Center operations in support of the ACE.

h. Assign in writing, two Group Control Center Teams capable of providing twenty-four hour control center support during NBCD operations.

i. Ensure that all 5711 NBCD Specialists assigned to MAG-12 receive MOS training encompassing all aspects of NBCD.

j. Ensure that all assigned NBCD teams within MAG-12 are properly trained and equipped.

k. Ensure that all Marines within the Group are proficient and provided adequate training on Individual Protective Measures (IPMs) contained in Appendix D.

l. Ensure all NBCD equipment is properly maintained in a serviceable condition and that all allowances are either on hand or on order.

m. Coordinate with the 1st MAW NBCD Officer on the scheduling of NBCD Inspections for MAG-12 units as outlined in Chapter 7.

n. Ensure that all units within MAG-12 properly maintain all NBCD supporting publications.

o. Consolidate unit Quarterly NBCD Status Reports (Appendix A) into the Group Quarterly Report and submit to 1st MAW NBCD Officer NLT 10 Jan, Apr, Jul and Oct.

p. Ensure all the squadrons NBCD SOP's are in compliance with this SOP. Squadron NBCD Officers must route an advance copy of their NBCD SOP through the Group NBCD Officer prior to obtaining

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the squadron Commanding Officer's signature.

q. Ensure proper handling and storage of all hazardous materials.

r. Provide all SORTS information pertaining to NBCD equipment and readiness to the SORTS Officer for preparation of the battalion's SORTS report in accordance with the current edition of MCO 3000.11_

9. Medical Officer

a. Advise the commander and his staff on all matters pertaining to unit capability as affected by previous Radiation exposure and/or specific Chemical, Biological agent exposure.

b. In conjunction with the NBCD Officer and S-4, monitor existing NBC Defense medical supplies to ensure usefulness, serviceability, and conservation.

c. In conjunction with the S-4 and MWSG/MWSS, supervise the establishment of facilities for the care and treatment of contaminated casualties and evacuation of those requiring additional medical treatment.

d. Plan and establish appropriate triage procedures for contaminated casualties, the inherent liquid and vapor hazard lines present in an NBC environment BAS, and routing for all casualties, contaminated or clean, through the aid station to post operative treatment areas and rear echelon medical facilities.

e. Be prepared to assist NBC Monitor/Survey Teams in determining if food and water supplies have been contaminated.

f. Be prepared to expedite the transportation of biological agent samples to diagnostic laboratories.

g. In conjunction with the NBCD Officer, advise the Commanding Officer on safe levels of radiation exposure for MAG-12 units and personnel. See reference (k).

h. Maintain permanent individual radiation exposure records.

i. Ensure medical personnel are properly trained in the handling, treatment, processing, and evacuation of NBC casualties.

j. Ensure all immunizations are up to date as a defense against biological agent attacks.

k. Coordinate with the squadron Medical and S-4 Officers on

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the procurement and distribution of NBC Defense related, pretreatment, antidotes and protective medicants.

1. Monitor all medical records to ensure that personnel with vision less than 20/40 and all aircrews with less than 20/20 have their field protective mask optical inserts either on hand or on order.

10. Group Communication-Electronics Officer

a. Designate and assign appropriate frequencies and call signs for NBCD operations, as required.

b. Provide communications for the Monitor/Survey team dispatched on reconnaissance missions directly under the control of the MAG 12 Headquarters.

c. Provide communications for MAG 12 Decontamination teams when activated.

d. Prepare plans for special communications for mass casualty evacuation.

e. Instruct radio operators in the proper decontamination procedures for their respective equipment.

f. Instruct radio operators on proper procedures for taking and disseminating NBC 1 through NBC 6 reports, Effective Downwind Messages (EDM, Nuclear), and Chemical Downwind Messages (CDM, Chemical).

g. Ensure that communicators within the MAG are familiar with the effects of electromagnetic pulse and procedures to defend against it.

11. Unit Commanders of Attachments

a. Establish the unit NBCD Control Center (NBCCC). The unit NBCCC will be activated when directed or upon notification/determination of an NBC threat, and will be capable of twenty-four hour operations with the ability to:

1) Transmit NBC-1 and NBC-4 Reports. Plot and evaluate NBC-2, 3, and 5 and Strikewarn (NUCWARN) Reports.

2) Advise the commander and his/her staff concerning Mission Oriented Protective Postures (MOPP).

3) Control unit NBC Defense team efforts.

4) Direct unit Monitoring operations.

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5) Direct unit Operational Decontamination procedures as required.

b. When directed, be prepared to provide decontamination teams to conduct thorough decontamination operations to include; casualty decontamination, personnel decontamination, and equipment decontamination. Unit decontamination teams will be consolidated in support of the ACE.

c. When directed, be prepared to provide Monitor and/or Survey Teams in support of the ACE Monitor/Survey operations.

d. Implement all required actions pertaining to established NBCD attack conditions as listed in Chapter 4.

e. Ensure that all squadrons have one (1) officer and one (1) NCO assigned the additional duties of NBCD Officer and NBCD NCO. The officer and NCO shall be assigned in writing utilizing appendix (j). A copy of this letter will be forwarded to MAG 12 NBC Defense every quarter in conjunction with the normal NBC Defense quarterly report.

f. Commanders will assign, train, equip, and evaluate the NBCD teams listed in Chapter 2 of this order. These NBC teams will be assigned in writing utilizing appendix (k). A copy of these letters will be forwarded to MAG 12 NBC Defense every quarter in conjunction with the normal NBC Defense Quarterly report.

g. Commanders will submit an NBC Defense quarterly report in accordance with reference (f), utilizing appendix (a). This report will be forwarded to MAG 12 NBC Defense for compilation and forwarding to 1st MAW NBC Defense. This report will be submitted on the 20th day of the third month of the preceding quarter, to the Commanding Officer of MAG 12 (NBCDO) via the appropriate chain of command.

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CHAPTER 2

ORGANIZATION AND RESPONSIBILITIES

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CHAPTER 2

ORGANIZATION AND RESPONSIBILITIES

2000. GENERAL. Current Tables of Organization (T/O) provide limited primary MOS 5711 personnel at the Group Headquarters only. In an NBC environment these NBCD personnel are dedicated to the manning of the Group Control Center on a 24-hour basis. Subsequently, all units within MAG-12 are required to assign, on a collateral duty basis, personnel who will be specifically trained to fulfill a variety of NBCD tasks. These assignments will enable the unit to reduce the effects of an NBC attack, recover and continue its primary mission in an NBC environment. The senior Group command at an airfield will be responsible for coordinating the contamination control plan in accordance with Chapter 4 of this order.

2001. UNIT NBCD OFFICER/NCO. All units will assign one (1) NBCD Officer and one (1) NBCD NCO in writing utilizing appendix (j) of this order. A copy of this letter will be submitted to MAG 12 NBC on a quarterly basis in conjunction with the quarterly NBC Defense report. These personnel will be school trained in accordance with the references and assist the unit Commanders in all matters pertaining to NBCD.

1. Responsibilities. Responsibilities include, but are not limited to:

- a. Advise the CO on all NBCD related matters.
- b. Ensure that all required NBCD supporting publications are either on hand or on order. All publications must be properly maintained and have all required changes included.
 - 1) Units are required to maintain those publications that support equipment listed on their Table of Equipment (T/E).
 - 2) The SL 1-2 and SL 1-3 list the supporting publications for all Marine Corps equipment. The Publications Library Management System (PLMS) is an authorized computer program to maintain and order publications.
- c. Maintain a turnover folder for the additional duty NBCD Officer/NBCD NCO billets.
- d. Maintain current information on all NBCD Team members. All squadron NBC team personnel will be assigned in writing utilizing appendix (k) of this order. A copy of this letter will be submitted to MAG 12 NBC on a quarterly basis in conjunction with the quarterly NBC Defense report. Update Desktop Turnover File with this new information, as necessary.

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e. Ensure all NBCD Team members accomplish all quarterly training requirements in accordance with Chapter 4.

f. Ensure attendance rosters are maintained for all NBCD training conducted by the unit.

g. Ensure a Quarterly NBCD Status Report is submitted to MAG-12 NBCD Officer in a timely manner and in accordance with Appendix A. One year of past quarterly reports will be maintained on file.

h. Once nuclear warfare has begun, maintain the unit's Radiation Exposure Status (RES) and submit results to the Group S-3/NBC daily. Format is shown in reference (k).

i. Supervise and participate in the unit's Control Center Team.

j. Issue all individual and team equipment. Draw this equipment from MAG-12 NBCD. For resupply coordinate with the Group S-4 section and reissue as appropriate.

k. Coordinate with the Group NBCD Officer for the scheduling of the unit's annual NBCD Inspection.

l. Schedule NBCD training in accordance with Chapter 4.

m. Participate in one hour of sustainment training per quarter in accordance with reference (f)

n. Ensure that the NBCD Control Center ready box is maintained in accordance with references (j) and (k) utilizing appendix (i).

o. Maintain size requirements of all unit personnel for individual protective equipment and resupply purposes.

p. Ensure all Marines with vision of 20/40 or less and all aircrews with less than 20/20 have optical inserts either on hand or on order for their field protective masks. Ensure information is entered in the BIR/BTR.

2002. CONTROL CENTER TEAM

1. Organization. MALS-12, VMFA-212, VMFA(AW), VMA, and VMAQ squadrons will assign, in writing, an NBCD Control Center of at least two (2) members, consisting of the NBCD Officer and NCO. The Control Center Team will be trained and equipped to perform Control Center operations. The MAG/PSD-12 NBCD Control Center Team will be staffed by the Group NBCD Section (5711) personnel.

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2. Responsibilities. General responsibilities include receiving, plotting and transmitting information concerning NBC attacks, determining how those attacks will affect the unit and supervising and controlling NBCD Team operations. Equipment requirements are listed in references (j) and (k). A sample Control Center inventory is included in appendix (i).

3. Hazard Prediction and Warning. For this functional area there are two types of capabilities, MAG-12 NBCD Control Centers and the Squadron NBCD elements.

a. MAG-12 NBCD Control Centers.

1) MAG-12 will establish and train squadron NBCD elements. The S-3 will establish the NBCD Control Center for the Group.

2) Duties and standards are per references (j) and (k).

3) Training requirements are per Chapter 4 of this order.

4) Procedures are per Chapter 3 of this order.

b. Squadron element.

1) Every unit's NBCD Officer and/or NCO will serve as that unit's NBCD advisor.

2) NBCD advisers will be capable of transmitting NBC-1 and NBC-4 reports, and receiving and plotting NBC-3 and NBC-5 reports. They will also be capable of conducting the following calculations:

(a) Time of arrival of chemical agent.

(b) Work/rest rates for MOPP.

(c) Chemical Agent persistency.

(d) MOPP Analysis.

(e) Radiation Exposure Status.

3) Unit NBCD advisers will be completely familiar with Chapter 3 and will adhere to training requirements established in Chapter 4 of this order.

2003. DECONTAMINATION TEAMS

1. Organization. MALS, VMFA, VMFA(AW), VMA, and VMAQ squadrons will assign two SNCO's as decontamination team leaders. All

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Decontamination Team members will be assigned in writing utilizing appendix (k) of this order. A copy of this assignment letter will be forwarded to MAG 12 NBC quarterly in conjunction with the NBC Quarterly report. All NBC Defense team personnel will be trained in all aspects of decontamination operations to include Personnel, Equipment, Aircraft, Casualty, and Mission Oriented Decontamination. Each squadron will ensure that 20% of the unit's sergeants and below of on hand personnel are school trained in decontamination operations.

2. Responsibilities. General responsibilities are to set up, operate and close out the decontamination sites (DTD, DED, DAD, CCDS, and MOD). These decontamination teams must be cross-trained in all decontamination procedures. Specific responsibilities, equipment requirements, and duties are contained in reference (i).

a. A Detailed Troop Decontamination (DTD) Site processes contaminated personnel. By thoroughly removing contamination from personnel; clean, uncontaminated personnel exit the DTD. These uncontaminated personnel can then be allowed to eat, rest or return to a duty status.

b. A Detailed Equipment Decontamination (DED) Site processes contaminated equipment. By removing or neutralizing the hazard(s); clean, uncontaminated equipment exits the DED.

c. A Detailed Aircraft Decontamination (DAD) Site removes or neutralizes contamination to allow use of the aircraft for combat missions or maintenance functions.

d. A Chemical Contaminated Decontamination Site (CCDS) decontaminates casualties to allow medical personnel to perform life saving procedures.

e. A Mission Oriented Decontamination (MOD) Site processes specific, technical, (i.e. radios, computers) contaminated equipment. By removing or neutralizing the hazard(s); clean, uncontaminated equipment exits the MOD.

3. A Detailed Equipment Decontamination (DED) Site and Operational Vehicle/Aircraft Decontamination Site must have at least two (2) licensed M17 decontamination operators per site. The Group NBC Officer will issue individuals M17 Licenses upon successful completion of the M17 Licensing Course. The unit is responsible for ensuring they have the appropriate number of licensed personnel on hand.

2004. MONITOR/SURVEY TEAMS

1. Organization. MALS, VMFA, VMFA(AW), VMA, and VMAQ squadrons will assign one SNCO as the Monitor/Survey Team leader. All

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Monitor/ Survey Team members will be assigned in writing utilizing appendix (k) of this order. A copy of this assignment letter will be forwarded to MAG 12 NBC quarterly in conjunction with the NBC Quarterly report. All Monitor/Survey Team members will be trained in all aspects of Monitor/Survey operations. Each squadron will ensure 15% of the unit's sergeants and below of on hand personnel strength is school trained in Monitor/Survey operations.

2. Responsibilities. General responsibilities of the Monitor/Survey Team are to check personnel, equipment and the unit's area for contamination. Team personnel will be cross-trained in both Monitor and Survey operations. Specific responsibilities, duties and equipment required are contained in references (j) and (k).

2005. DESIGNATED OBSERVERS. Designated observers are used during nuclear warfare only. They are not used for chemical attacks. Aircraft provide an excellent observation platform for obtaining cloud parameters (cloud height and cloud bottom). Extreme caution must be used during aerial observation due to airframe degradation or other effects from a nuclear detonation. An aircraft in flight is extremely susceptible to the electromagnetic pulse and other inherent effects of a nuclear blast. However, an aircraft offers the advantage of height for obtaining the necessary designated observers' data.

1. Organization. All squadrons will be considered designated observers when in an area of nuclear operational concern. These squadrons have the responsibility of recording all information required for a NBC-1 Nuclear Report. Squadron NBCD Control Centers will report this information to the Group NBCD Control Center immediately, using a "FLASH" precedence.

2. Responsibilities. Designated observers must report to the squadron NBCD Control Center the type of attack (surface, sub-surface or airburst), when and where the attack occurred, cloud parameters, location of ground zero, direction from which measured, and estimated crater width. All units must record the information for the NBC-1 Nuclear Observers Report in the format listed in Appendix B. Units will report this information to the Group NBCD Control Center immediately.

2006. UNIT DEPLOYMENT - NBCD PERSONNEL. Squadron deployments will take place under different conditions and to different locations. Deployments to the Indian/Pacific oceans upon an aircraft carrier or assault ship will have as a minimum one 5711 MOS Marine with the unit. This 5711 will have the same duties and responsibilities as the Group 5702 Officer. Planning for the forward deployment of a squadron to an expeditionary airfield must also be taken into account. It is paramount that the squadron commanding officer and the additional duty NBC Officer realize that the primary responsibility for initial

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decontamination of equipment and personnel resides with the individual squadrons. MAG 12 NBC personnel will be available to assist in the supervision and conduct of such operations, but initially the resident knowledge and personnel must come from within the squadron.

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CHAPTER 3

OPERATIONAL PROCEDURES

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OPERATIONAL PROCEDURES

3000. GENERAL. All enemy attacks, particularly air attacks, are assumed to be NBC attacks once NBC warfare has been initiated. Due to the capabilities of potential enemies and the magnitude of the effects from NBC attacks, it is essential that all units be prepared and trained to defend themselves. To accomplish this, all units must train in accordance with Chapter 4 of this order. Units must also possess all required NBCD supplies and equipment in an operational status. This chapter establishes the operational procedures that will be taken by MAG-12 units to reduce the effects of NBC weapons, which will allow for the recovery, as well as the continuance of the unit's mission.

1. Successful individual and unit protection against NBC hazards will be attained through NBC discipline, utilization of protective equipment and the proper application of accepted tactical principles. Success is guaranteed only through ingrained immediate actions brought about by a *realistic* and *thorough* NBCD training program.

2. Personnel will be issued individual protective equipment to guard against hazardous agents when under the threat of an NBC attack. Unit commanders must ensure that through proper training, Marines are knowledgeable in the proper use of the protective equipment.

3. During operations in which enemy employment of chemical or biological agents is probable, Marines will mask automatically when their area is affected or suspected of being contaminated. Marines will remain masked until the command "All Clear" is given. The senior Marine will give the command once the MAG headquarters has granted approval.

4. NBC attacks/contamination are classified into three different categories:

a. Suspected: On order, monitor/survey teams will conduct operations to identify if a hazard exists. This may be directed by Battalion, Company, or Attachment Commanders. A rapid analysis is necessary so that immediate dissemination of information can be accomplished to higher/subordinate units.

b. Detected: This category evolves from the suspected phase where *positive detection* of a Chemical or Biological hazard is made by any method.

c. Evaluated: This category evolves from the detected phase when a *positive identification* of the hazard is concluded

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and fixation of contamination is complete.

3001. ACTIONS PRIOR TO DEPLOYMENT

1. Appendix 2 to Annex C. This is the NBCD Appendix to the Operations Annex of every operations plan. The MAG NBC Defense Officer will be complete this appendix. The appendix will, at a minimum, contain the following:

- a. Description of threat NBC agent delivery capability.
- b. Designation of an NBC Control Center (NBCCC) capable of 24 hour operations for every airfield.
- c. Identification of alternate communication means for the NBCWRS, as available.
- d. Establish responsibility for the dissemination of Chemical Downwind Messages (CDM) or Effective Downwind Messages (EDM).
- e. Initiate contamination control planning.

2. Manifest NBC Defense Team Personnel. As the MAG continues to update and improve its deployment and contingency procedures, the question of what personnel and equipment to move forward, and when to move it forward in support of deployed operations, is a constant issue. Squadrons will identify NBC trained personnel when manifesting for deployment, and attempt to move them forward proportionally based on mission analysis. This will be accomplished to ensure adequate coverage of each individual squadron in the event of operations in an NBC environment. The primary responsibility for initial decontamination of equipment and personnel resides with the individual squadrons.

3002. INDIVIDUAL PROTECTION. MOPP Levels are varying degrees of protection against chemical and biological attacks. In regard to nuclear attacks, MOPP gear will keep radioactive particles off an individual's skin and out of the respiratory tract, however, the same can be accomplished with any clothing and a wet handkerchief over the nose and mouth. For this reason, if the threat is limited to nuclear, it is recommended that MOPP gear not be used. The Group Commander will establish the minimum MOPP Level to be maintained by all MAG-12 units. Unit Commanders will have the option of establishing a higher MOPP Level within their unit based on the immediate threat. Unit Commanders will never lower the established MOPP Level without proper authority.

1. MOPP Ready. This level will be set when the enemy has NBC capabilities, but has not employed them yet.
2. MOPP Level 0. This level would be set when the enemy has NBC

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capabilities, but has not employed them as yet in the area of operations or enemy weapons are out of range.

3. MOPP Level 1. MOPP Level 1 would be set when an enemy has the capabilities and has stockpiled NBC weapons, but conditions are such that it is highly unlikely that the weapons will be employed, or the enemy has used NBC weapons in an area of operation or the threat has risen.

4. MOPP Level 2. This level is set during Condition Yellow when it is likely that an NBC attack will occur.

5. MOPP Level 3. This level would be set under Conditions Yellow or Red when an attack is imminent.

6. MOPP Level 4. This level is set when attack is imminent or occurring and will be maintained until it has been determined that the area is clear.

7. Additional Protective Posture. This posture consists of the individual donning his wet weather gear or poncho over MOPP Level 4. If time and situation permits all openings will be taped shut.

8. Mask Only Posture. In an environment contaminated with a nonpersistent agent, Marines do not need to wear full protective overgarments or rubber gloves as long as they are protected from direct skin exposure to liquid or solid contamination (transfer hazards). Do not use a mask-only posture when blister agents or any type of nerve agent is present. Detailed entry/exit procedures must be followed to prevent the spread of contamination into clean areas where a mask-only posture is being used. Marines must assume the appropriate MOPP Level prior to exiting any shelter.

3003. NBC WARNING AND REPORTING SYSTEM (NBCWRS)

1. The NBCWRS consists of four elements; the NBC Control Center (NBCC), every units NBCD Advisor, the communications means that ties those entities together, and NBC alert conditions.

a. The NBCC will be the primary hazard evaluation center and will establish alert conditions for that airfield based on the threat.

b. Each squadrons NBC Defense Officer/NCO will serve as that units NBC Advisor. This advisor will provide that units interface with the NBCWRS and will ensure that those NBC defensive measures required by the prescribed alert condition are accomplished by their respective commands.

c. The primary means of communication will be the MAG

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Command Net.

d. NBC alert conditions are a series of three colors (yellow, red, and black) with corresponding levels of threat and procedures to be accomplished for each alert condition. When an alert condition is indicating a nuclear threat it will be followed by the phrase NUKE. When an alert condition is upgraded it is disseminated in a FLASH priority throughout the airfield by all means of communication. Subordinate commands may upgrade alert conditions of their own volition when they observe a threat NBC activity that justifies the upgrade.

1. Local Alarms. All units will establish a local alarm system within their area of responsibility. The primary device utilized will be the hand-cranked siren - TAMCN C6140. The attack alarm will be an interrupted (i.e. five seconds on and five seconds off) warbling sound on the siren.

a. Care must be taken so that this alarm can be differentiated from the uninterrupted one minute warbling siren that indicates an air attack.

b. Once NBC warfare has been initiated all threat attacks with a means of delivery known to be NBC capable are to be considered NBC attacks until verified otherwise. Sirens will not be utilized to sound the all clear for NBC attacks.

c. Once an alarm has been initiated, personnel will immediately go to MOPP Level 4 and remain at that level until further notice. An alternate alarm system will also be available, such as metal on metal or verbal.

d. A vocal "All Clear" with the appropriate unmasking instructions will be sounded when it is validated that an assumed attack did not take place or when delivered agents have dissipated.

2. General Warning. Any unit observing an NBC attack gives a general warning. The Group/ACE Control Center will evaluate and disseminate information pertaining to this attack.

3. NBCD Reports. When using the reports addressed in Appendix B of this order, elements of the Group will utilize the following procedures.

a. NBC-3 reports will be constructed only by Group NBCCC.

b. Only the Group NBCCC or its designated representative will construct and disseminate NBC-5 or NBC-6 reports.

c. Group units of a Squadron size or larger will be expected to pass on all NBCD related information in the

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appropriate message format. Refer to Appendix B of this order for format.

d. Every command will ensure that all elements under their operational control are connected via communications to the reporting system.

e. All commands will identify the communication means to be used to pass NBCD reports within their NBCD SOP.

f. All initial NBC attacks will be reported using the NBC-1 report format using the "FLASH" precedence. To avoid confusion and the overload of communications assets, each detachment or unit will submit only one consolidated report per attack. Additional reports are submitted to correct erroneous information, provide information not previously known, or to report additional attacks. All additional NBCD reports, to include NBC-1 Follow up reports, are sent via "IMMEDIATE" precedence.

g. Commands receiving NBC-1 reports will pass the reports to all subordinate, higher, and adjacent commands.

h. The Group NBCCC will designate the responsibility for dissemination of Chemical Downwind Messages (CDM) or Effective Downwind Messages (EDM).

3004. UPON ARRIVAL IN THEATER. The following actions will be conducted by the designated units upon arrival in theater.

1. The NBCCC at each airfield will ensure that all subordinate commands are aware of the NBCWRS communication means and the local alarm procedures for that airfield.
2. Every command will ensure that all elements under their operational control are tied into the NBCWRS.
3. Upon arrival in theater, the NBCD advisor of all incoming units will check in with the NBCCC for that airfield within 24 hours of arrival. The procedures contained in Figure 3-1 will be conducted.
4. The operations section of each command will designate the circumstances under which Monitor/Survey teams will be activated, their relief schedule and method of employment. As each command reports this information up the chain of command, the Group detection plan will incorporate it.
5. Detachments will be briefed on and incorporated into a unit's detection plan upon reporting to that command.

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CHECK-IN PROCEDURES

1. IDENTIFY TYPES/QUANTITIES OF NBCD EQUIPMENT ON HAND, INCLUDING MEDICANTS. IDENTIFY SHORTFALLS AND OVERAGES.
2. ASCERTAIN CURRENT ATTACK CONDITION.
3. REVIEW ACTIONS REQUIRED BY ATTACK CONDITION.
4. REVIEW ALARM PROCEDURES FOR THAT LOCATION
5. IDENTIFY MONITORING REQUIREMENTS FOR WORKSPACES AND BILLETING.
6. REPORT 57XX MOS, ADDITIONAL DUTY NBCD OFFICER/NCO AND NBCD AUGMENTEE STRENGTH TO NBCC.
7. REVIEW AIRFIELD DECONTAMINATION AND CONTAMINATION CONTROL PLANS.
8. REQUEST A COPY OF APPLICABLE AIRFIELD SUPPORT PLAN OR APPENDIX 2 TO ANNEX C OF THE OPERATIONS ORDER.
9. EXCHANGE MEANS OF COMMUNICATION WITH MAG NBCCC (PHONE NUMBER, FREQUENCY ETC...).

FIGURE 3-1

6. When NBCD attack conditions are established, each condition will have a minimum prescribed MOPP Level. Subordinate commanders may upgrade these established levels based on the criteria found in reference (h) but they may not lower them.

7. The NBCCC at each airfield will initiate a detailed contamination control plan upon arrival at each airfield. At a minimum, the Contamination Control Plan (CCP) will consist of:

a. Decontamination. This includes identifying the potential sites and support necessary to conduct operational decontamination for personnel, to include contaminated casualties, and equipment that require exit from a contaminated area.

(1) The responsibility for providing technical expertise for the planning, coordination and execution of these operations belongs to the MWSG element in support of the airfield. Overall responsibility and supervision belongs to the command providing the NBCCC to that airfield.

(2) The decontaminants, equipment, and augmentees to operate these sites will be identified to the NBCCC supporting the airfield. The NBCCC will in turn source those requirements from throughout the tenant commands at that airfield.

(3) The NBCCC will identify to the supporting MWSG element the primary and alternate locations for the staging of contaminated remains and the primary and secondary contaminated casualty collection point.

b. Traffic Control Points. Points at which traffic must be warned of the transfer of possible contamination, vapor hazards, or other points where traffic must be diverted to alternate routes are identified within the plan and provisions made for

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their manning. Any equipment requirements for this purpose will also be identified and obtained.

c. Alternate Routes. Alternate routes are necessary in order to avoid possibly contaminated main routes and will be identified. Each airfield NBCCC will identify to the supporting MWSG element the alternate routes necessary for that airfield.

d. Communications. The communications nets or means by which each unit receives and disseminates NBCD reports will be identified. This allows mobile elements to tie into the NBCWRS regardless of their potential location.

e. Casualty Evacuation Zones. Zones where aircraft will land and disembark contaminated casualties will also be identified. In addition, the personnel and equipment required to decontaminate those casualties before further evacuation will be identified and obtained.

8. For decontamination the following planning will be conducted.

a. Immediate and operational decontamination (minus vehicle washdown) is planned for in detail at all levels with organic resources.

b. The NBCCC at each airfield will identify to the supporting MWSG element the location of prospective primary and secondary decontamination sites and any other information necessary for the MWSG element to construct the decontamination plan for that airfield.

c. The supporting MWSG element at each airfield will conduct site reconnaissance and will finalize a decontamination plan for the airfield that will include which commands will support and process through each site, in what priority, and with what equipment support.

d. The supporting MWSG element will identify to the NBCCC at each airfield the personnel and equipment necessary to support each site, to include medical personnel.

e. The NBCCC at each site will task subordinate units with support requirements.

f. All levels of command will familiarize themselves with the decontamination sites available for their location. If a unit must continue its mission in contaminated environment, relief personnel must be identified who will be decontaminated and then sent forward to relieve other personnel at a later time.

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3005. ATTACK CONDITIONS

1. Condition White (Attack Unlikely). This condition establishes that the enemy possesses NBC capable weapons, or has the ability of attaining NBC weapons, but has not shown any intention of deploying or attaining them. Once intelligence indicates that the enemy has an NBC weapon capability, all units will take the following actions:

- a. Activate unit NBCCC.
- b. "Mask Carried", may be established by the Group/ACE.
- c. Selected units may establish MOPP Level 0. All MOPP Levels are described in detail in appendix (m) of this order.
- d. Monitor/Survey teams are identified and briefed.
- e. Units will identify personnel and equipment that are required for contamination control operations.
- f. The location, serviceability, and operation of decontamination equipment is verified.
- g. Units plan decontamination requirements.

2. Condition Yellow (Attack Probable). An NBC attack is possible when; enemy aircraft is in the general area and/or enemy weapons systems are within range. MOPP Level 2 should be established in accordance with appendix (m) of this order. Once intelligence indicates that the enemy has an NBC weapon capability, the following actions will be taken:

- a. All Units.
 - 1) NBC Control Centers activated on a 24-hour basis.
 - 2) Alert Monitor/Survey Teams. Ensure that pre-operational checks are performed on all equipment and ready for issue.
 - 3) Alert decontamination teams.
 - 4) Each unit will submit its expected detection survey requirements to the MAG NBC Control Center. Requirements will include the exact boundaries where the presence or absence of contamination will need to be verified and the reason why verification is absolutely necessary.
 - a) Based on these requirements the NBCC will begin planning and will prioritize survey requests.

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b) The NBCC will identify augmentation and equipment necessary to conduct the surveys to its subordinate elements and will also designate a muster site.

c) All biological detection will be considered a survey. If the threat possesses a biological agent the NBCC will divide the airfield into a number of areas each approximately 100 x 100 meters. For each area, a biological sampling team of two augmentation personnel and a medical representative will be assigned.

5) The ACE Control Center will establish the minimum MOPP level the units must attain. Units can increase the MOPP level but cannot decrease the MOPP level unless authorized by higher authority.

6) In conjunction with the threat, ensure all personnel begin Nerve Agent Pyridostygmine Pretreatment (NAPP) if directed by higher competent authority.

7) In conjunction with the threat, ensure all personnel have Nerve Agent Antidote Kits (NAAK) in their possession.

8) In conjunction with the threat, ensure all personnel have Chemical Agent Nerve Antidote (CANA) in their possession.

9) Ensure all personnel have complete M291 Decontamination kits in their possession.

10) Ensure all fixed wing aircraft have canopy covers on and that the canopy has tape over the openings.

11) Cover all supplies, especially food and water containers.

12) Ensure medical personnel are prepared to receive contaminated casualties.

13) Establish procedures to segregate incoming contaminated aircraft.

14) Establish a Mission Oriented Decontamination (MOD) Site in the unit area.

15) All nonessential aircraft will be flown to a safe area to prevent becoming contaminated.

16) All equipment on the flight line that can be stowed in the hanger or under cover, will be stowed.

17) All hanger and building openings that can be closed, must be closed.

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18) Fill all M-11s with DS-2 or appropriate nonstandard decontaminate and ensure nitrogen cylinders are present in sufficient quantity.

19) For a nuclear threat the Group Commander establishes an Operational Exposure Guidance (OEG).

20) Take the following protective measures to protect against Electromagnetic Pulse (EMP):

a) Unplug all transistorized and solid state equipment, i.e. computers, radios, etc...

b) Disconnect all large antennas from radios, down to the bare essential minimum.

c) Use short whip antennas as much as possible.

d) Use batteries for power to the maximum extent possible.

e) Ensure proper grounding of all equipment.

f) Use surge protectors to the maximum extent possible.

21) Ensure the following shelter requirements are met:

a) Each building/shelter has one person assigned as an NBCD coordinator.

b) Designated coordinator must make liaison with NBCD representative of parent command.

c) Entry/exit points must be limited with designated attendants for each exit/entrance.

d) Detection paper, decontamination means (kits, buckets with sponges, etc.) and decontaminants for a shuffle pit must be at each designated exit/entrance.

e) Chemical protective equipment for each occupant of the shelter must still be available.

f) Entry/exit procedures are established and rehearsed by building/shelter occupants.

b. MWSG/MWSS

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1) Select primary and alternate thorough decontamination sites within area designated by the ACE Control Center.

2) Stage and perform pre-operational checks of decontamination equipment and supplies.

3) Establish Operational Decontamination coordination procedures and inform the ACE Control Center.

4) Provide engineer and 5711 support at each site.

5) Prepare to assume responsibilities as Control Center.

c. Fixed Wing Pilots. It is unlikely that any agent will enter the cockpit due to pressurization and the high temperature, the bleed air, used in ECS, reaches. However, the following will be used as a precaution.

1) Carry Nerve Agent Antidote Kits (NAAK) during flights.

2) Wear M-9 Detection Paper on flight suits.

3) Place M-8 Detection Paper and/or M-9 Detection Tape in cockpit where it can be easily seen and is exposed to ECS vents.

4) Avoid smoke clouds.

5) If M-9 or M-8 Detection Paper shows a positive reaction during flight or if agent symptoms appear;

a) Abort mission.

b) Turn off ECS.

c) Switch on seat pan oxygen.

d) Stay on seat pan oxygen until depleted.

e) Go below 10,000 feet and breathe cabin air (if situation allows).

f) Administer NAAK if nerve agent symptoms appear.

g) Notify base of situation.

h) Return to base.

i) Perform Pilot Ingress/Egress procedures.

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3. Condition Red (Attack Imminent). This attack condition establishes that enemy threat activity indicates that an NBC attack is imminent. All units will take the following actions:

a. Ensure all "Attack Probable" (Condition Yellow) actions have been completed.

b. Selected units establish MOPP Level 2 in accordance with appendix (m) of this order.

c. The buddy system is initiated. Commanders will not detail individuals to duty by themselves.

d. Continuous monitoring techniques initiated.

e. Follow automatic masking procedures.

f. Cover a minimum of two days food and water to protect them from possible contamination.

g. For fixed installations plan for the rotation of personnel or the use of alternate locations.

h. Unit Monitor/Survey Teams and detectors are continuously employed.

i. Survey teams will be mustered and briefed on the basic survey plan.

j. Biological sampling teams will be required to keep their sampling equipment with them at all times and make their location known to the NBCC representative that is in charge of coordinating airfield surveys.

k. Assemble and prepare to employ contamination control equipment and personnel.

l. Decontamination equipment and personnel are assembled and readied for employment.

4. Condition Black (Attack Occurring). NBC attack is in progress. MOPP Level 4 is established. The attack alarm will be sounded. If this condition is passed over an unsecured means of communication, it must be authenticated. All units will take the following actions:

a. Sound the alarm and assume MOPP 4 or alternate protective posture as the situation dictates. A detailed listing of equipment for MOPP levels 1 through 4, is included in appendix (m) of this order.

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h. MWSG/MWSS will establish contamination inspection stations.

i. All decontamination teams will report to MWSG/MWSS when directed by the ACE Control Center.

j. Conduct thorough decontamination as mission and situation dictates.

k. Units that have been exposed to high doses of radiation will be rotated or replaced.

l. Determine if units can be relocated to clean areas where personnel can operate at reduced MOPP Levels.

m. Decontamination of personnel must be prioritized: casualties first, aircrews second, and all remaining personnel based on type and level of contamination.

n. Continue the mission. Evaluate expenditures of assets.

o. Within 24 hours of their initial exposure to radiation, all units will report their initial Radiation Exposure Status (RES) up the chain of command utilizing appendix (j) and (k). Thereafter, RES will be reported only when the RES category is increased or reclassified.

p. For nuclear contamination, all commands will report at a minimum their initial readings, peak readings, and their last reading if they vacate a contaminated area. A reading, which will indicate that a unit will exceed its Operational Exposure Guidance (OEG) limit within the next six hours, will also be reported and annotated as such.

3006. MARKING OF CONTAMINATED AREAS. All contaminated areas will be marked with standard NATO contamination markers as depicted in references (j) and (k). If the supply of standard markers are depleted, any means of marking contaminated areas is acceptable. Signs must be marked with the date and time of detection and type of contamination. This information must be facing the clean area and the signs must be within sight of each other (15 meters spacing depending on terrain/vegetation). All marked areas must be reported to the Squadron Control Center and this information forwarded to the Group Control Center.

3007. NUCWARN. NUCWARN warnings received by the Group will be disseminated by secure means in a "FLASH" precedence. When in receipt of this warning, all commands will relay it by secure voice to all adjacent, subordinate and senior commands. Units will take appropriate action as described in reference (k).

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3008. DESIGNATED OBSERVERS. Designated observers will report information in the NBC-1 Nuclear report format to their unit NBCD Control Centers using the format listed in Appendix B. This report will be transmitted to the Group NBCD Control Center immediately using a "FLASH" precedence.

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b. Alert all personnel with particular attention to those who may be sleeping, working in areas of isolation or excessive noise.

c. Ensure all "Attack Probable and Attack Imminent" actions have been completed.

d. Administer self/buddy aid, as necessary.

e. Only mission essential operations should be conducted. Limit movement to minimum requirements.

f. Units observing the attack will prepare and transmit the NBC-1 Observers Report to adjacent and next higher headquarters using a "FLASH" precedence.

g. If aircraft must land in a contaminated area, they must be informed to remain in the aircraft with their field protective masks on and the canopies closed. Pilots and ground crews will utilize the procedures for pilot ingress/egress.

h. Secure all hatches, windows and canopies not previously closed.

i. If possible, all personnel must remain in covered, concealed and protected positions until the attack is over.

j. The Contamination Control Plan will be executed as directed by the NBC Control Center.

k. When applicable, report Radiation Exposure Status.

l. When an NBC attack is suspected, initiate continuous monitoring, report contamination, and for a nuclear threat report initial and peak readings.

m. Monitor food.

n. Conduct NBC reconnaissance per the direction of the NBCCC.

o. Mark contaminated areas.

p. Decontamination site set-up coordinated/initiated.

5. Condition Green (Attack Over). This condition establishes an all clear following an NBC attack. This condition is also set for an attack that has been validated as a non-NBC attack. Of primary importance when establishing this condition is that the NBC attack is completed and there are no additional rounds impacting and/or enemy aircraft have departed the general area. Following the attack, commands will utilize this condition once

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it has been verified that all blast waves and shrapnel hazards have passed for nuclear attacks, liquid agents have stopped falling or following verification that delivered chemical agents have dissipated. The following actions need to be taken by all units:

a. The Group/ACE Control Center will not set Condition Green. Each unit must set Condition Green within their area. The Group/ACE Control Center will inform units when to begin selective unmasking procedures. Once selective unmasking has been completed, the unit involved will request permission to unmask the unit. MAG 12 NBC will give the authorization upon determination that no further hazard exists and only then, when the remainder of the unit will be unmasked incrementally. An appropriate MOPP Level, depending on the threat, and not lower than that established by the Group/ACE Control Center, will be established.

b. Submit NBC-1 Reports. After additional information is gathered from monitors, submit an NBC-1 Follow-up Report using an "IMMEDIATE" precedence.

c. Conduct individual decontamination and personal wipedown procedures (Skin Decontamination, Personal Wipedown and Operator Spraydown).

d. Conduct vehicle washdown/aircraft spot-decontamination as necessary, in coordination with MWSG/MWSS, as soon as possible.

e. Conduct MOPP Gear Exchange within 24 hours. MOPP Gear Exchange should only be conducted when personnel have been exposed to a persistent agent.

f. Conduct survey operations as directed by the ACE Control Center.

g. For airborne aircraft, the following actions must be taken:

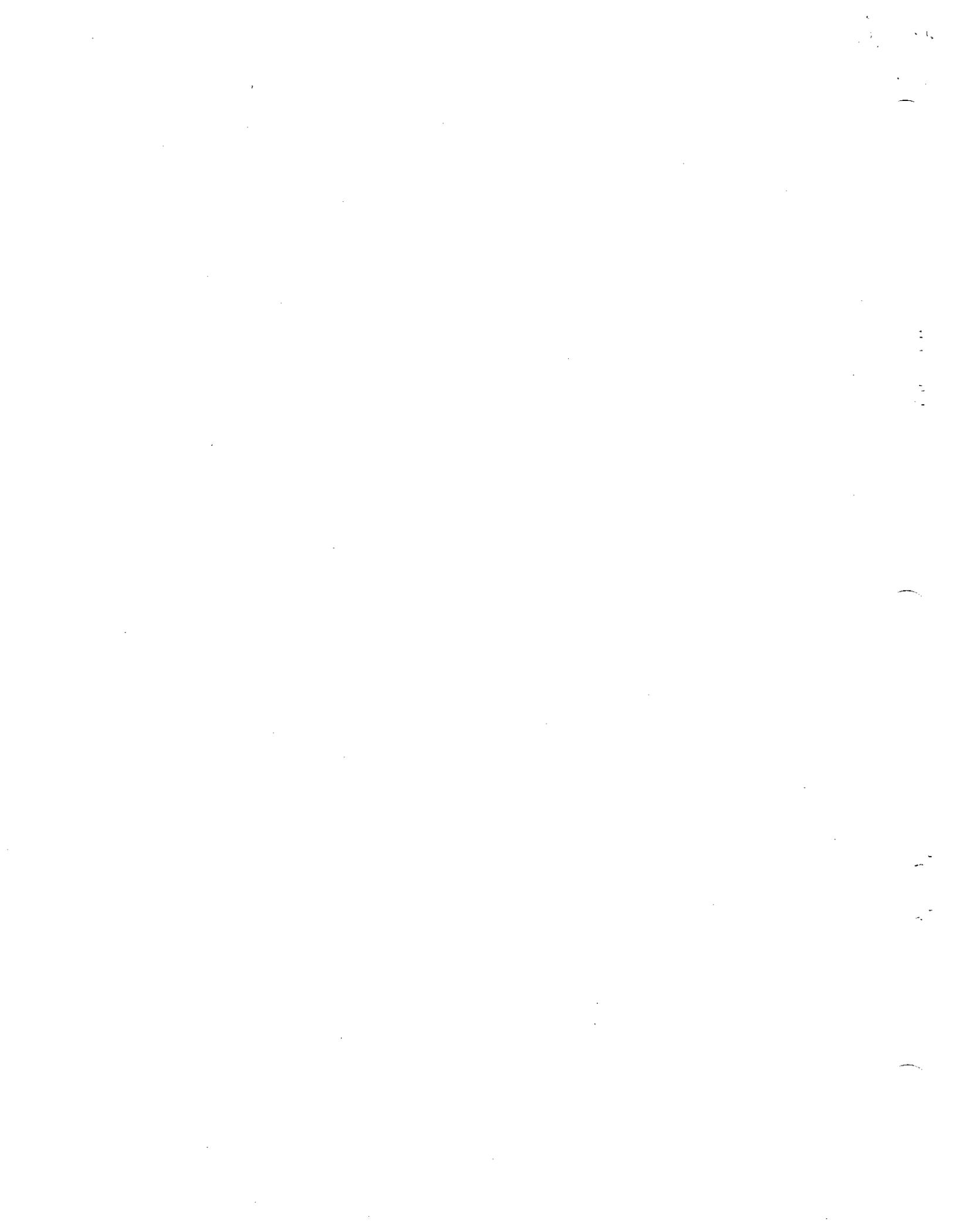
1) Brief pilots on contaminated land areas. Fixed wing pilots will fly as high as the mission allows.

2) Information on contaminated areas will be passed via the TACC or DASC.

3) Pilots returning to base, which have flown in a contaminated area, will inform the base the aircraft may be contaminated.

4) Once the aircraft has returned, ensure pilot ingress/egress procedures are followed.

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CHAPTER 4

TRAINING

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CHAPTER 4

TRAINING

4000. GENERAL. The primary objective of NBCD training is to ensure survival of the individual Marine in order to accomplish the unit's mission. With the continuing advances in NBC weapons technology, it is essential that every commander, section head, and individual Marine thoroughly understand the importance of NBCD training. Training must be integrated into all levels of individual, MOS, and unit training.

4001. INDIVIDUAL TRAINING. To ensure minimum reduction of combat effectiveness, each Marine, regardless of rank, must be trained to achieve proficiency in NBC Defense Individual Protective Measures (IPMs) IAW reference (c) and as contained in Appendix D and reference (h).

1. The ability of the individual Marine to continue to carry out his/her assigned mission in an NBC environment is of paramount importance, therefore, it is imperative that each section OIC/NCOIC evaluate the effects that an NBC attack will have upon that particular job specialty and develop work-around procedures to reduce/recover from those effects.

a. These work-around procedures must be integrated into the on-going MOS technical training program. Any innovative techniques should be forwarded to the Group NBCD Officer for inclusion into the Group's NBCD training program.

b. Additionally, these problem areas and work-around procedures must be entered in the unit's desktop procedures and turnover folder for each section.

2. Since the current chemical protective overgarment is both a cumbersome and heat retaining ensemble, it is necessary that all personnel conduct normal work operations in increasing levels of Mission Oriented Protective Posture. The goal is to acclimatize personnel by repeated exposure. This will ensure that individual Marines will be able to function in MOPP Level 4 for extended periods of time. Squadrons will emphasize acclimatization of personnel by training in a MOPP level for eight (8) hours annually. Every MOPP level from 1 - 4 will be exercised for two (2) hours each in accordance with reference (f).

3. All Marines within MAG-12 will attend an annual (calendar year) Mask Confidence Exercises/Individual Protective Measures (IPMs) class for requalification. A written and practical application NBCD Proficiency Test must be taken annually (calendar year) and passed with a score of 80% or better.

4. All Marines within MAG 12 are required to participate in two

hours of practical application in individual survival measures (ISM) every quarter.

5. Specific objectives for individual training will include but not be limited by the guidelines found in Appendix D and MCO P1500.44B (MBST).

4002. INDIVIDUAL PROFICIENCY STANDARDS

1. Survival Standards. Those standards the individual Marine must master in order to survive an NBC attack.

2. The individual must be able to:

a. Perform operator's maintenance on an M40 series field protective mask.

b. Exchange the filter on an M40 series field protective mask.

c. Properly don and clear an M40 series field protective mask in nine seconds, and complete the adjustment of the hood in an additional six seconds, for a total time limit of fifteen seconds.

d. Identify a chemical agent using an M256A1 Chemical Agent Detection Kit.

e. Demonstrate visual and vocal alarms for an NBC attack.

f. Protect self against a nuclear hazard utilizing immediate action procedures.

g. Initiate and properly conduct unmasking procedures in accordance with this order.

h. Put on and properly wear Chemical protective clothing.

i. Cross a Contaminated area.

j. Know the proper procedures for eliminating bodily wastes while in Chemical Protective Clothing.

k. Decontaminate self and individual equipment.

l. Administer first aid to a chemical agent casualty.

m. Perform artificial respiration on a chemical agent casualty utilizing the back or chest pressure arm lift method.

n. Recognize the existence of a chemical hazard, and indications of a biological attack and take protective action.

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- o. Properly use the NBC reporting system.

4003. TEAM TRAINING. Competent NBCD teams are a major factor in the restoration of the unit's mission following an NBC attack. To achieve and maintain this required level of competence, each NBCD Officer, NBCD NCO and every team leader will be school trained.

1. 25% of the unit's sergeants and below must be school trained at a certified 1st MAW Course in decontamination and monitor/survey operations.
2. 25% of UDP squadron's sergeants and below must be school trained at a certified Formal NBCD School in decontamination and monitor/survey operations.
3. Each tenant unit must have a minimum of six school trained and licensed M17 LDS Sanator operators.
4. Each UDP squadron must have a minimum of two school trained and licensed M17 LDS Sanator operators.
5. Each team member will receive at a minimum, two hours of NBC team training per quarter. This is considered sustainment training. Each team member must achieve and maintain the appropriate proficiency standards as per references (h) - (k).
6. Once the assigned team members have reached the required level of proficiency, substitute personnel may be sent to training. This will allow the unit to have a larger number of trained personnel for replacements. This will supplement the units overall pool of NBC trained personnel, increasing the units overall NBC knowledge, thus maintaining a high state of combat readiness.

4004. UNIT TRAINING. The objectives of unit NBCD training is to attain and maintain individual and team member proficiency standards so that their combined effort leads to the accomplishment of the unit's mission in an NBC environment. The key to a successful NBCD training program is the integration of NBCD into the unit's daily routine and field exercises. The following are the minimum training requirements for all units within MAG-12.

1. On an annual (fiscal year) basis each unit will ensure that a minimum of fifty percent of on hand personnel conduct decontamination and MOPP ensemble training. Decontamination training will consist of MOPP Gear Exchange and instruction on processing through thorough decontamination sites. MOPP ensemble training consists of spending a minimum of 8 hours in MOPP levels 1-4 (2 hours in each MOPP level).

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2. NBCD training will be integrated into at least one field exercise annually on a fiscal year basis. These exercises will attempt to focus on unique MOS tasks normally conducted by the unit. Group NBCD will be informed of every exercise at least two weeks in advance. Field NBCD training only requires an entry to the command training schedule for validation.

4005. UNIT PROFICIENCY STANDARDS

1. Survival Standards. Those standards that each unit must meet to survive a nuclear, biological, or chemical attack. Units must be able to:

a. Take immediate action when warned of an imminent Nuclear, Biological or Chemical attack.

b. Determine the presence and nature of NBC hazards in the immediate area and take effective measures for protection and decontamination.

c. Properly use unit NBCD protective equipment and supplies, maintaining them in a high state of serviceability and readiness.

d. Enforce and maintain a high order of health, hygiene and sanitation to minimize the spread of disease following a biological attack.

2. Basic Operating Standards. Those standards that each unit must meet to develop and maintain a capability for successful accomplishment of its mission under nuclear, biological or chemical conditions, having attained survival proficiency. Units must be able to:

a. Practice a high degree of protection while continuing to conduct the primary mission of the unit.

b. Perform necessary decontamination of supplies, equipment and areas for which the unit is responsible in the performance of its mission.

c. Cross, by-pass, or function in contaminated areas with minimum loss of efficiency, decontaminating where necessary.

d. Identify and mark contaminated areas using standard signs in accordance with current directives and this order.

e. Operate efficiently over extended periods of time with personnel wearing full protective clothing (MOPP 4).

f. Report nuclear detonation, radioactive fallout and biological and chemical attacks in accordance with current directives.

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g. Assign NBCD personnel based on the standards of proficiency described herein.

4006. MOS 5700 TRAINING. To ensure MOS development, it is imperative that all MOS 5700 personnel receive technical training that encompasses the entire spectrum of NBCD. This training must include: control center operations, operational and thorough personnel and equipment decontamination operations, Monitor/Survey operations, mission oriented training, equipment serviceability, calibration and maintenance, publications, individual protective measures, embarkation and hazardous material handling and waste disposal. Subsequently, MOS 5700 training must be conducted on a continuous and progressive basis utilizing reference (b) as the guideline.

4007. TRAINING ASSISTANCE

1. The Group NBCD section is staffed and equipped to train and assist all units in all areas of NBCD.

2. Formal NBCD schools for FMFPAC units are located at MCAS Iwakuni and MCAS Futenma, Okinawa. These schools are available through the Group NBCD Officer.

3. All NBCD training to include team training, must be scheduled on the unit's training schedule or on separate bulletin/memorandum.

a. The training requirements stated above are established as the minimum to be scheduled.

b. Any classes or exercises, including integrated NBCD training, which are conducted and did not originally appear on the schedule can be added by a pen change.

c. A class roster must be maintained for all NBCD classes and team training. The class roster must contain the following, length of class, date/time of class, description of class, and name of the instructor.

d. The unit NBCD officer is responsible for collecting this data and will have it available at all times. Rosters and training schedules must be maintained for one fiscal year.

4008. SCHEDULING. Requested training dates, to include all minimum training requirements, are due to the NBCD section at least two (2) weeks prior to the training date.

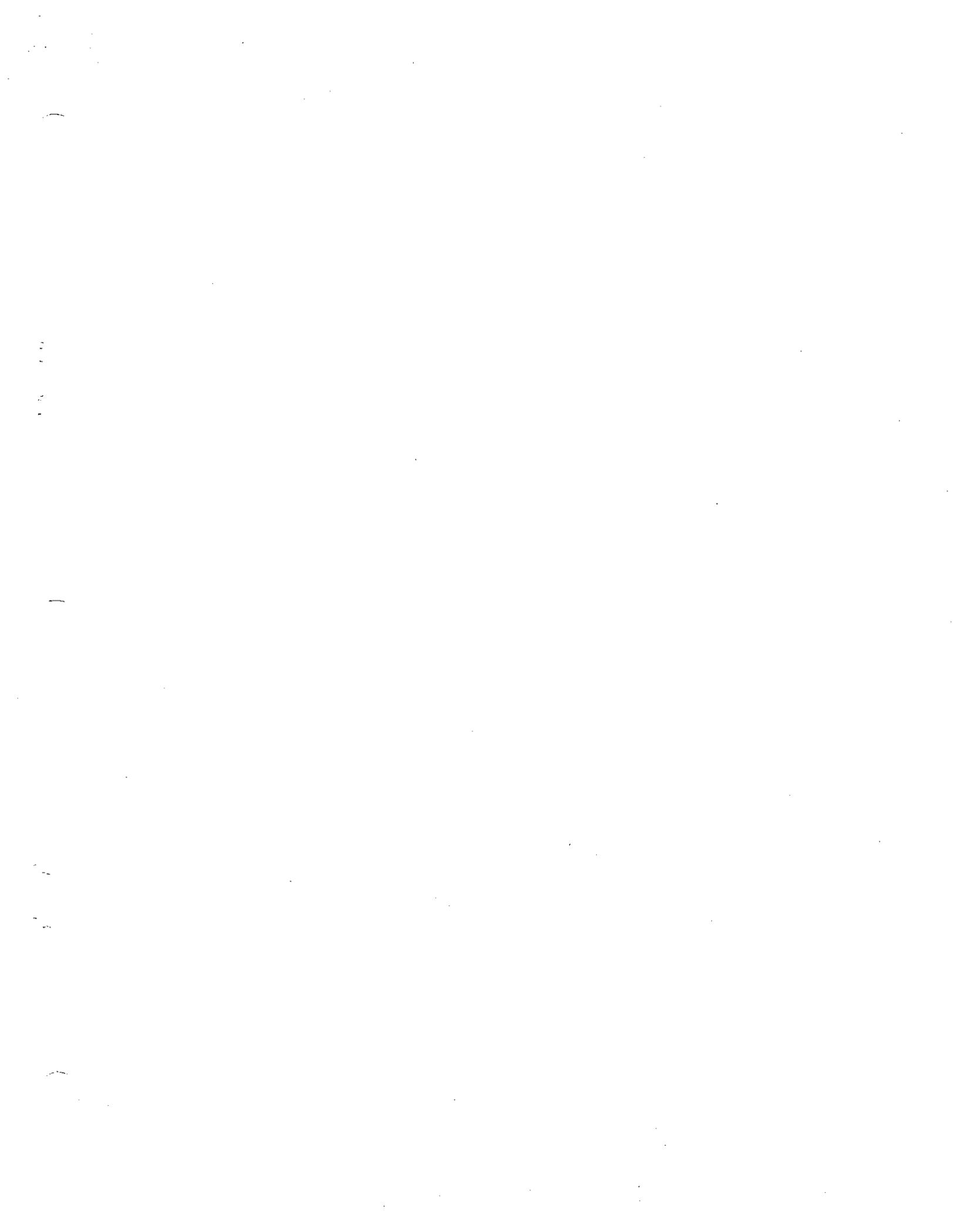
4009. SAFETY PRECAUTIONS. As MOPP Levels increase from 0 to 4, the varying amounts of MOPP gear create different and varying hazards to individual Marines. These hazards can be reduced through periodic training.

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1. Chemical Protective Overgarment - Can cause heat-related injuries; loose garments and strings may become caught in machinery; suit is not fire retardant.
2. Overshoes - A potential tripping hazard may occur because of the bulkiness of the boots.
3. Field Protective Mask - Interferes with vision and hearing; heat buildup from the hood may cause heat casualties.
4. Chemical Protective Gloves - Can become caught in machinery; will not insulate against electrical hazards; are not resistant to fuel and other petroleum oil lubricants (POLs).
5. Heat Casualties - Heat is the main problem when personnel are dressed in MOPP Levels 3 and 4. The best solution is to slow down the pace of work and use relief personnel as much as possible. Personnel must drink water continuously. The average Marine will lose one quart of water every three hours at temperatures below 80°, and one quart every two hours when temperatures are above 80°.

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CHAPTER 5

EQUIPMENT

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CHAPTER 5

EQUIPMENT

5000. GENERAL

1. NBCD equipment presents the means for individual survival and unit recovery/continuance of the mission. Although training equivalents are available for some NBCD equipment, most training must be performed using organizational equipment. To enhance a realistic training program, MAG-12 NBCD is authorized to retain for training, any NBCD item that becomes unserviceable for combat. Any unserviceable equipment utilized for training will be clearly marked "FTO", which stands for "For Training Only", IAW current directives. This equipment will not be considered as meeting T/E requirements or as unauthorized excess.

2. In addition to standard equipment, each unit must fabricate an NBCD Control Center Box. An NBCD Control Center Box can be constructed of any material and conform to any configuration that meets the needs of the NBCD Control Center Team. Standard field desks or cruise boxes/footlockers are suggested. Contents of boxes are found in references (j) and (k). This ready box will be maintained at the Group/Squadron and used during NBCD Control Center Team training and operations.

5001. SERVICEABILITY INSPECTIONS. MAG-12 NBCD will conduct the appropriate serviceability inspections on all NBCD equipment for the initial issue to ensure proper serviceability and storage. These inspections will be conducted utilizing the appropriate technical manuals and reference (l) for guidance.

5002. STORAGE/ISSUE - COMBAT EQUIPMENT

1. MAG-12 NBCD will store and maintain all of the squadrons' T/E NBCD equipment in accordance with all technical manuals and supply orders. Although the gear is consolidated in one warehouse, it will be physically separated by squadron/unit. This equipment will be ready for embarkation at all times. The only exception to the equipment packed for embarkation will be the field protective masks, which are issued on an individual basis.

2. When the need arises to issue this equipment, the squadron NBCD Officer and NCO will inventory, sign for and transport the equipment to the unit location for embarkation or individual issue.

3. Individual units are responsible for procurement, maintenance, and distribution of NBCD equipment needed following the initial issue from Group NBCD. Equipment is ordered directly from MSSG/BSSG/FSSG in coordination with Group S-4.

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a. Group/ACE NBCD Section is not responsible for NBCD logistics after the initial issue. This is a supply function. Logistical support in an NBC environment is essential to the continued efficiency of the ACE. The principles of logistics are unchanged by the employment of enemy NBC weapons. However, considerable planning and additional resources are required when operations in an NBC environment occur.

b. Special consideration should be given to the resupply function. For example, the limitations of individual protective equipment and availability of both potable and non-potable water. The following planning factors are provided to assist in the timely resupply of NBCD equipment and materials.

1) Individual Equipment. The following list of equipment requires special consideration for resupply. A list of these consumables is provided for planning purposes in appendix (e) of this order. This list does not contain all items of NBCD equipment, but those considered essential for the continuation of the mission.

a) The Saratogas/JSLIST (OG) are good for 30 days in an uncontaminated environment and 24 hours in a contaminated environment. Normally, after the 24-hour period, MOPP Gear Exchange or removal of the overgarment in a clean environment, such as a Detailed Troop Decontamination (DTD), is required. Two Saratogas/JSLIST (OG) suits are issued per individual.

b) In a chemical environment, the canister filter of the field protective mask must be changed every 30 days or as directed by the unit commanding officer. Additionally, it must be replaced every two months in tropic/desert environment, twelve months in a temperate climate and twenty-four months in an Arctic climate.

c) Resupply of skin decontamination kits is necessary each time overgarments are reissued.

d) Chemical protective gloves are issued at two pair per individual or one pair for each set of chemical protective overgarments. When ordering the overgarment, ensure the gloves are contained in the request.

e) Chemical protective boots are issued at two pair per individual or one set per chemical overgarment. When ordering the overgarment, ensure the boots are contained in the request.

2) Additional Resources. The effects of an NBCD environment may result in the use of additional supplies/resources that may not normally be required. The following is a partial list of additional resources to consider;

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a) Water (both potable and non-potable). Heat conditions will cause individuals to drink considerably more water when operating in MOPP. Moreover, the use of water (non-potable) substantially improves the speed and efficiency of decontamination operations.

b) Decontaminants. Standard decontaminates (STB, DS2, Sodium Carbonate, HTH, Sodium Hypochlorite, and Detergent) help to neutralize the contamination on equipment. Each command will develop a decontaminate employment plan including but not limited to the following;

1) List of all Combat Essential Equipment (CEE).

2) List of all authorized cleaning solvents by name for each type of CEE.

3) Procedures used to decontaminate/clean equipment under NBCD conditions.

4) List of all decontaminants held by the unit by type and quantity.

3) Request Procedures. Procedures for requesting resupply will remain unchanged. Requests must be made in a timely manner to ensure the prompt resupply of essential NBCD items.

5003. STORAGE/ISSUE - TRAINING EQUIPMENT. Group NBCD will maintain all NBCD training equipment. Subordinate commands will have access to training MOPP ensembles for all of their personnel at any given time. All training gear will be accounted for and stored separate from combat assets.

5004. EMBARKATION. Every unit will possess adequate embark for all combat equipment. Embarkation cube, weight and contents are to be properly registered with the S-4/Embarkation section in accordance with MDSS-II. The NBCD section will maintain a copy of the current MDSS-II data sheet. The NBCD Officer will ensure that all requirements outlined in Chapter 3 of this order for embarkation are met. All equipment that is Level "A" packed and has appropriate documentation will not be required to be opened during Wing NBCD FAI's.

5005. RECORDS AND PREVENTIVE MAINTENANCE. Records will be maintained and preventive maintenance of all required equipment will be performed in accordance with appropriate technical manuals. All C and K TAMCN equipment will be entered into the NBC Defense Equipment Management Program (NBC DEMP) in order to satisfy all requirements for an automated shelflife control system.

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5006. MARINE CORPS INTEGRATED MAINTENANCE MANAGEMENT SYSTEM (MIMMS). MAG-12 NBCD will utilize all applicable portions of MIMMS to maximize NBCD equipment readiness. MCO P4790.2_ provides additional guidance.

5007. QUALITY DEFICIENCY REPORTS (QDR). MCO 4855.10_ requires a QDR be submitted when any deficiency in product quality occurs. When conducting serviceability inspections, faulty and/or defective equipment will be reported.

5008. REPORT OF DISCREPANCY (ROD). The ROD is used to describe certain deficiencies in material at the time of receipt. Normally the ROD must be submitted within 15 days of receipt. Refer to MCO 4430.3_ for additional guidance.

5009. RADIATION IDENTIFICATION AND COMPUTATION (RADIAC) EQUIPMENT

1. RADIAC equipment will be stored in a cool, dry and secure area. The equipment will be calibrated and ready for issue at all times. Batteries will be on-hand, but will not be stored inside the equipment unless the equipment will be used in the near future.

2. Preventive maintenance and operational checks will be scheduled in accordance with the applicable technical manuals. Current technical manuals and operator's manuals will be used for guidance.

3. MAG-12 NBCD will ensure that all maintenance, operational checks/PMS, record jackets, and calibration is conducted per appropriate manuals. All RADIAC equipment will be entered into the calibration (TMDE) section of the Defense Equipment Management Program (NBC DEMP) in order to satisfy all requirements for an automated calibration control system.

5010. PROCUREMENT. Care must be taken when requisitioning NBCD equipment to ensure tariff sizes are considered and proper NSN's are utilized. MAG-12 NBCD Officer and MCP Officer will coordinate the ordering of all NBCD equipment.

1. MAG-12 NBCD Officer and MCP Officer will ensure that allowances of Type 1 NBCD items are either on-hand or on order.

2. Requisitions for Type 2 items necessary to support MAG-12's mission will be procured.

5011. REVIEW OF T/E'S. MAG-12 NBCD will periodically review all T/E's to ensure they meet the requirements for each unit regarding NBCD matters. Appropriate changes will be requested via the chain of command.

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5012. STORAGE OF DS-2 AND STB. MAG-12 NBCD will ensure that these items are not stored within close proximity of each other. Physical contact between these items will cause spontaneous fire and explosion. In the event a DS-2 spill is discovered, notify the Fire Department, Natural Resources Environmental Affairs Officer and the Group Hazardous Waste Coordinator.

1. DS-2 is highly toxic to skin, eyes and it is very corrosive.
2. Protective clothing to include the mask, gloves and aprons, must be worn when handling DS-2.
3. To neutralize DS-2 - DO NOT USE WATER. Neutralize with sodium bisulfate, absorb with vermiculite and containerize for hazardous disposal.
4. Protective mask and gloves must be worn at all times when handling STB.
5. Calcium Hypochlorite (HTH) will be used as a substitute for DS-2 and STB whenever possible. The same safety standards apply to HTH as to STB. HTH will also be issued to each individual marine as an additional personal decontamination item. One teaspoon of HTH will be mixed with one canteen of water as an additional decontamination solution.

5013. HAZARDOUS WASTE. When items of NBCD equipment are identified as unserviceable and are considered hazardous waste, MAG-12 Ground Supply/HAZMAT Coordinator will be notified. Place equipment in a sealed drum and mark IAW ASO 6280.1.

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CHAPTER 6

INSPECTIONS

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CHAPTER 6

INSPECTIONS

6000. GENERAL. Each permanent unit within MAG-12 will be inspected annually in NBC Defense Readiness. The objective of these inspections is to evaluate the unit in applicable NBCD readiness requirements and to inform the squadron commander of the results.

6001. Commanding General's NBCD Inspection. 1st MAW NBCD personnel conduct the inspection and the results are sent to 1st MAW Inspector's Office.

6002. III MEF Nuclear, Biological, Chemical Defense Readiness Assessment Program (NBCRAP). This assessment is conducted utilizing a no-notice/ Short-notice format. All III MEF units are subject to the NBCD RAP.

1. The RAP consists of all, or elements of, the following:

- a. Written Individual Survival Measures (ISM) test.
- b. Practical Application Test of ISM.
- c. Written test on Decontamination Operations/Procedures for the Decontamination teams and Augmentees.
- d. Written test on Monitor/Survey Operations/Procedures for the Monitor/Survey teams and Augmentees.
- e. Operational checks on selected pieces of NBC Defense Equipment.
- f. Random Checks of NBCD Training and Equipment record jackets.
- g. Execution of a unit Mission Oriented Task (MOT) under NBC conditions.

2. The NBC Defense RAP will consist of a series of monthly unit assessments conducted at three levels.

a. Level One (No-Notice). Level One consists of a written individual survival measures test administered to select personnel as designated by the assessment team and a random check of NBC Defense training and equipment records.

b. Level Two (12-24 hour notice). Level Two assessment will consist of a recall of unit personnel with their assigned field protective mask. Level Two will include a written and practical individual survival measures test being administered to selected

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personnel as designated by the assessment team and a separate written test being administered to assigned unit decontamination and monitor survey team members. At the discretion of the assessment team, operational checks on select NBC Defense equipment will be conducted.

c. Level Three (24-48 hour notice). Level Three assessment will consist of a written individual survival measures test being administered to select individuals as designated by the assessment team and the execution of a unit mission-oriented performance task during NBC conditions.

6003. Functional Area Inspection (FAI). The NBCD section of each group/element/squadron will receive a Functional Area Inspection (FAI) in every other fiscal year in accordance with references (f) and (g). Staff Assistance Visits (SAV) will be conducted in those years when there is not an FAI. An SAV will be conducted under the same format and with the same checklist as the FAI.

a. Units permanently assigned. These units will be subject to inspection in all areas outlined in this chapter.

b. Unit Deployment (UDP) Squadrons. Per reference (g), these units will not be inspected, because evaluations are conducted prior to deployment. Upon arrival in Iwakuni, each UDP squadron is required to submit the completed results of its last NBCD evaluation and a copy of their unit NBC Defense SOP to MAG-12 NBCD.

6004. FIELD SUPPLY AND MAINTENANCE ANALYSIS OFFICER INSPECTION (FSMAO).

a. NBCD equipment is evaluated by FSMAO teams to ensure compliance with supply, maintenance management, and calibration directives.

b. FSMAO inspections are conducted annually, with units to be inspected notified approximately 30 days prior, via the chain of command.

c. Group NBCD will stand the FSMAO inspection for the areas that relate to NBCD.

6005. AREAS TO BE INSPECTED

1. Administratively Evaluated

a. Administration and Training Records.

b. NBCD Publications.

c. Equipment Maintenance and Serviceability.

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- d. Calibration Control.
- e. Embark.
- f. Individual Protective Measures (IPMs).
- g. 57XX Military Occupational Specialty Test.
- h. Augmentee Proficiency Test.

2. Operationally Evaluated

- a. SOP validation.
- b. Mission Oriented Task (MOT).
- c. NBCD Control Center/Hazard Assessment Operations.
- d. Individual Protective Measures (IPMs).
- e. Detection Operations.
- f. Contamination Control.
- g. MOPP Gear Exchange.
- h. Thorough Decontamination.

6006. SCHEDULING INSPECTIONS

1. The Group NBCD Officer, in coordination with the Group TEEP Officer and Squadron Operations Officers, will submit an inspection schedule for each squadron. This schedule will be acceptable to all parties involved. Group NBCD will require one working week to prepare the unit in all areas listed in paragraph 6001. The following guidance applies:

a. The administrative portion of the evaluation for each command will be scheduled for one day per command. If more than one command is involved in the evaluation, only the IPMs, MOPP Gear Exchange, 57XX MOS test and augmentee proficiency testing can be scheduled concurrently.

b. The use of night crews or night operations to meet the criteria for the evaluation is at the evaluated command's discretion.

c. The operational portion of the evaluation, with the exception of thorough decontamination, will be scheduled for a four-hour period of time regardless of the number of commands involved. This is in addition to the day scheduled for the administrative portion of the evaluation.

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d. For the operational portion of the evaluation, thorough decontamination will be conducted simultaneously by multiple commands as follows.

(1) MAG-12, MALS-12, VMFA-212 and MWSS-171 will operate a combined thorough decontamination site. To facilitate the operation of this combined site MAG-12, MALS-12, VMFA-212 and MWSS-171 will coordinate their evaluations to fall during the same week. Other portions of the evaluation may be conducted concurrently at the involved commands' discretion. MAG-12 is required to take the lead in coordinating the simultaneous portions of this schedule.

2. FAI Coordination/Timelines

a. Unit(s) to be inspected will provide Group NBCD a letter with a tentative schedule and three proposed MOT's a minimum of twenty working days prior to the evaluation.

b. Fifteen working days prior to the evaluation Wing NBCD will provide the evaluated unit(s) a letter confirming the schedule and chosen MOT. At this time all pertinent threat and scenario information will also be provided.

c. Eight working days prior to the evaluation the evaluated unit(s) will provide Group NBCD with a roster of all personnel available for the evaluation. Personnel with a 57XX MOS and personnel who are unit augmentees will be annotated as such.

d. The FAI team leader will conduct an inbrief with the commanding officer, or his designated representative, prior to the commencement of any portion of the evaluation. If the operational portion of the evaluation is scheduled first the orientation brief may be used to conduct the evaluation inbrief.

e. Within three working days of the inbrief or once the evaluation is completed the inspection team leader will conduct a formal outbrief with the unit commanding officer or his designated representative. The unit will receive a completed copy of the checklist, ratings for each functional area evaluated, an overall evaluation recommendation, and the proposed recommendations for corrective action.

f. Within five working days following the evaluation, the checklist will be forwarded to the Wing Inspector for final approval per reference (g).

3. FAI Checklist

a. A Wing NBCD FAI checklist will be published at the beginning of each fiscal year for use throughout that year.

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b. The checklist will contain all evaluation criteria for each portion of the evaluation.

c. Each command to be evaluated will ensure that the documents called for by the checklist are on hand prior to the evaluation.

6007. ADMINISTRATIVE OVERVIEW

1. Administration and training records, NBCD publications, equipment maintenance and serviceability, calibration control and embark are scheduled to be evaluated in sequence.

2. IPMs, MOPP Gear Exchange, the 57XX MOS proficiency test and the augmentee proficiency test will be scheduled to be evaluated in sequence/concurrently, at the unit's discretion. Specifics of this portion of the evaluation are as follows;

a. Individual Protective Measures (IPMs)

(1) Either ten percent (10%) or twenty of the available unit personnel, whichever number is greater, will be selected for IPM evaluation.

(2) The FAI team leader will identify selected unit personnel (from the available Alpha roster) one hour prior to the scheduled start of the IPM evaluation. Selected personnel will reflect the grade distribution of the evaluated unit and will not be 57XX MOS or unit NBCD augmentee personnel.

(3) Half of the selected personnel will take a 25 question written test and the remainder will undergo practical examination. The level of tests will be for sergeants and below, staff noncommissioned officers, and officers. Neither part of the testing will take over one half-hour.

(4) The evaluated unit will be required to provide the following equipment for the practical examination.

- (a) One Field Protective Mask per person.
- (b) Complete training MOPP ensemble per person.
- (c) One canteen with NBCD cap and water per person.
- (d) Two ponchos.
- (e) One training M11 with four nitrogen cylinders and water.

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- (f) One training M13 with water.
- (g) One M256 sampler-detector and one roll of M9 tape.
- (h) One set of NBCD contamination markers.

b. MOPP Gear Exchange

(1) Either ten percent (10%) or twenty available personnel, whichever number of personnel is greater, will be selected for MOPP Gear Exchange. These personnel can either be the same personnel selected for IPMs or the FAI team leader can identify additional personnel, at the evaluated unit's discretion. If new personnel are selected they will be identified one hour prior to the scheduled start of the MOPP Gear Exchange evaluation.

(2) One hour will be allotted for MOPP Gear Exchange. If only one of each buddy team's members does the Exchange, only one half hour will be allotted. Whether one or both members of each buddy team executes the exchange, the exchange will be evaluated based on demonstrated proficiency and will be at the discretion of the FAI team leader.

(3) The following equipment will be required to be provided by the evaluated unit for MOPP Gear Exchange.

- (a) One Field Protective Mask per person.
- (b) Two complete MOPP ensembles per person. One of the two ensembles will be in plastic bags (suit, boots and gloves separate).
- (c) One M258 training kit or M291 kit per person. Buckets with water and one sponge per buddy team can be substituted for a decontamination kit.
- (d) Buckets, brushes and water necessary for individual gear decontamination prior to initiating the MOPP Gear Exchange.

c. 57XX MOS test. Every Marine within an evaluated unit possessing the 57XX MOS will be required to take a fifty-question MOS test. Each test will consist of questions pertaining to those tasks required by reference (b). The level of tests will be for sergeants and below, staff noncommissioned officers and for officers. At least one detailed hazard evaluation problem will be included. There will be a two-hour time limit on the test.

d. Augmentee test. Twenty-five percent (25%) of an

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evaluated unit's NBCD augmentees will take a twenty-five question written proficiency test. There will be a different test for detection and for decontamination augmentees. Augmentee personnel selected to take the test will be identified at the same time as the personnel selected to take the IPMs test. The level of tests will be for sergeants and below, staff noncommissioned officers. Testing for augmentees will run concurrently with IPMs testing.

6008. OPERATIONAL OVERVIEW. With the exception of thorough decontamination, all portions of the operational evaluation will be conducted within a four-hour time period. Thorough decontamination operations will be scheduled independently from the operations portion of the evaluation. For the purposes of the FAI, MAG-12 will be considered the senior Wing command at an airfield.

1. Orientation Brief. As stated in paragraph 6000 of this chapter certain information will be given to the evaluated unit by Wing NBCD prior to the evaluation. Based on that information the staff of the evaluated unit will initiate the operation portion of the evaluation with the orientation brief.

a. If the operation evaluation being conducted involves more than one command, a single brief will be given at the senior command's location.

b. The friendly situation in the brief will contain, at a minimum, the following;

(1) Each involved command's NBCD personnel and equipment status.

(2) Actions taken by each involved unit up to that point in time, which in the context of the evaluation scenario will be all actions prior to NBCD attack condition "YELLOW."

(3) Those actions required by SOP that involved commands deem not practical or prudent to actually execute during the evaluation. Examples would be placing all equipment in the most protected positions possible and the procurement and covering of two day's food and water.

(4) Identification of unit personnel that will be in the unit's work area, but, due to real world requirements, cannot participate in the operational portion of the evaluation. An example would be personnel conducting actual flight operations.

c. The threat situation in the brief will contain the threat synopsis provided by Wing NBCD and any other information the command deems appropriate.

SOP FOR NBCD

d. The brief will be given to the commanding officer, or his designated representative, of the evaluated unit and will be attended by a representative of supporting and subordinate commands (i.e. supporting MWSS-171 representative and possibly a subordinate representative from MALS-12 and VMFA-212 for a combined MAG-12 evaluation), where applicable.

e. Upon conclusion of the orientation brief the NBCD attack condition "YELLOW" will be established.

2. Standing Operating Procedures. This part of the evaluation will last no longer than four hours and will involve the entire command (with the exceptions noted in the orientation brief) regardless of how the individual is assigned to that unit. The purpose of this portion of the evaluation is to both validate and to judge a unit's ability to conform to established SOP's. Unit personnel not otherwise involved in other aspects of the operational portion of the evaluation will attain the MOPP Level appropriate to the established NBCD attack condition but will otherwise conduct their daily routine.

a. To drive the scenario for this portion of the evaluation the unit NBCD advisor or NBCCC (depending on the evaluated command) will be given scenario events by the FAI team. These events will cause various NBCD attack conditions to be established and/or (again depending on the evaluated unit) will cause the command to respond to established NBCD attack conditions. For example, MAG-12 would be given an event that would cause them to establish an NBCD attack condition for a fictional airfield, while a squadron would be given an NBCD attack condition established by a fictional NBCCC at an airfield.

b. If more than one command is involved in the evaluation, actual communications between these units will in some circumstances take the place of pre-scripted scenario events. For example, if a MAG and squadron are both involved, the MAG will actually communicate the established NBCD attack condition to the squadron. The squadron may in turn be required to report an NBC attack to the MAG.

c. When SOP requires a command to interact with a senior or subordinate command that is not actually involved in the evaluation, the FAI team will represent that command.

d. Only those SOP actions in response to a chemical threat will be actually conducted by the evaluated command.

3. Mission Oriented Task. The MOT will consist of members of, or a section within, the evaluated command conducting a mission, when required, the MOT may be conducted at an expeditionary airfield. The MOT will be conducted simultaneously with the SOP portion of the evaluation.

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a. Personnel conducting the MOT will be conducting a "tactical" (versus "daily routine") mission. The mission to be accomplished, number of participating personnel and equipment to be involved in the MOT will be specific and in writing.

b. MOT's will require a minimum of ten personnel.

c. Allowances will be made prior to the evaluation for commands that do not have a section, or individual personnel, whose mission on a daily basis would differ from a "tactical" one.

d. The MOT for each unit must differ from year to year.

4. Hazard Prediction. The requirements for hazard prediction will differ between those units required to establish an NBCCC and those commands that are not required to do so. When an NBCCC is involved in an evaluation with more than one command it will have communication with the NBCD advisor(s) of the subordinate command(s) involved. Although units are not required to react to scenario events involving a nuclear threat, nuclear hazard prediction will still be required of the unit's NBCCC or NBCD advisor.

a. NBCCC. NBCCC operations will be done in conjunction with the SOP portion of the evaluation. The NBCCC will conduct detailed hazard evaluation as well as coordinate the unit response to established NBCD attack conditions. All equipment, references, materials, etc., for this portion of the evaluation must come from the unit's Control Center box.

b. NBCD Advisors. For commands without an NBCCC the NBCD advisor of the unit will be evaluated in his/her hazard prediction duties in conjunction with the SOP portion of the evaluation. In addition to coordinating unit response to established NBCD attack conditions and advising the operations officer or commander on pertinent tactical information, the NBCD advisor will also be required to send NBC-1 and NBC-4 reports and to plot incoming NBC-3 and NBC-5 reports.

5. Detection

a. Every unit must physically conduct this portion of the SOP scenario. To muster, prepare and employ their monitoring teams in response to the appropriate NBCD attack conditions, is a necessity. For the purposes of the evaluation, this will only be required in work, and not billeting, areas.

b. When a unit with an NBCCC is evaluated, a portion of the SOP scenario that must be conducted is for the NBCCC to muster the personnel for, coordinate and supervise the physical conduct of a chemical route and an area survey. Augmentees for the

SOP FOR NBCD

survey can come from any subordinate command desired.

6. Contamination Control

a. This is the portion of the SOP scenario that is physically conducted. Every unit must control the spread of contamination into or within their workspaces.

b. An NBCCC will be required to produce in writing the contamination control requirements that the command deems necessary for the fictional airfield described within the SOP scenario.

c. MWSS-171 will be given written contamination control requirements for a fictional airfield and will be asked to describe in writing; how those requirements would be best met, and the augmentation of personnel and equipment that would be necessary to execute those requirements.

7. Thorough Decontamination

a. MAG-12 will coordinate the thorough decontamination portion of the evaluation with MWSS-171.

b. MWSS-171 will provide the equipment and 57XX supervision necessary to run each site, MALS-12, VMFA-212 and participating squadrons will be responsible for providing the decontamination augmentees to man each station as well as provide the personnel to process through the site.

c. Inspection results for supervision and equipment will be assigned to MWSS-171 and results for augmentation and processing will be assigned to MAG-12/MALS-12/VMFA-212.

d. MAG-12 can use personnel from any subordinate command they desire.

e. A minimum of thirty evaluated unit personnel will process through the detailed troop decontamination portion of the site.

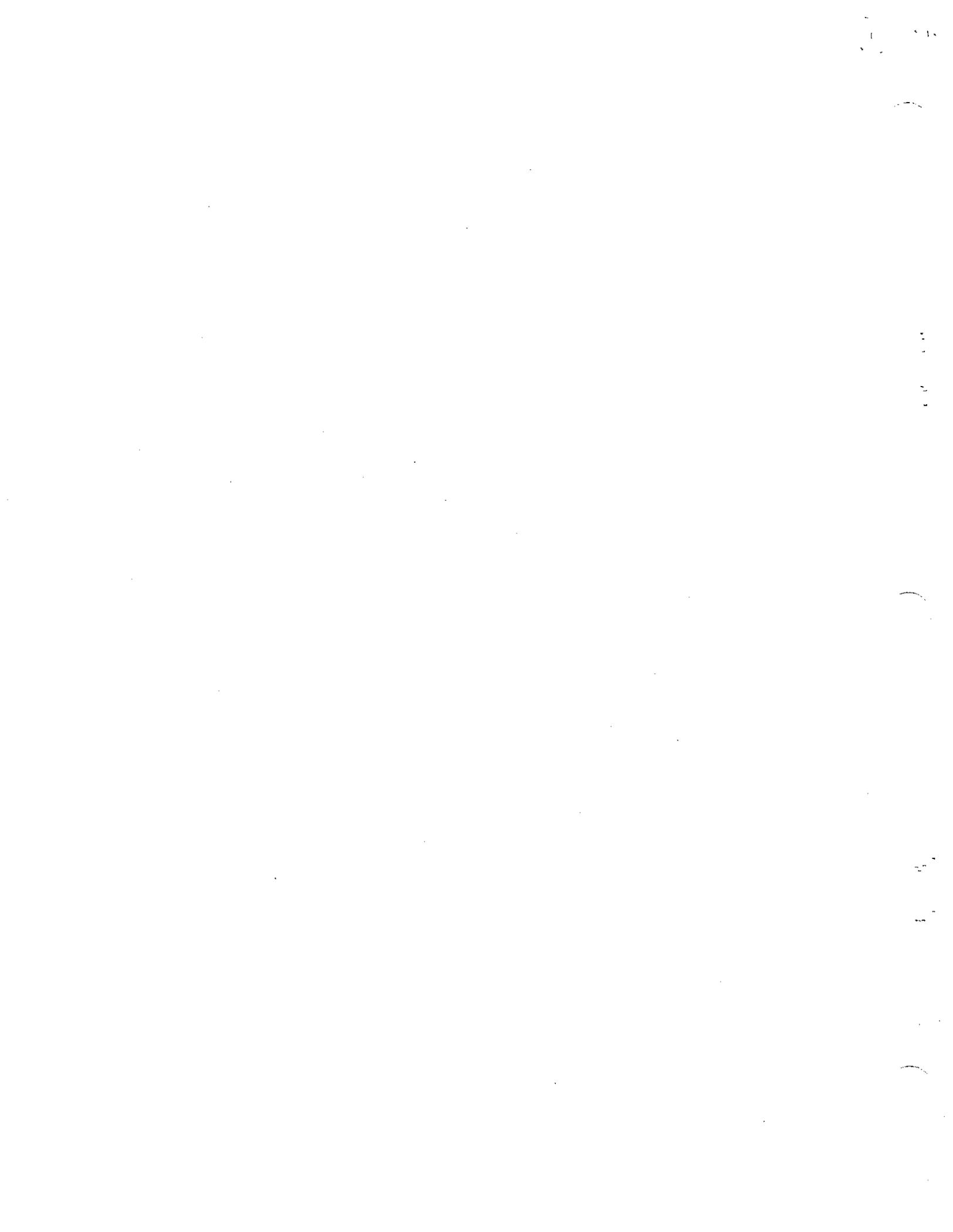
f. A minimum of two vehicles will be processed through the detailed equipment decontamination portion of the site.

g. A minimum of five casualties will be processed through the casualty decontamination portion of the site.

6009. INSPECTION REPORTS. Upon completion of all inspections, the inspecting command will provide the unit with an initial inspection report. Within sixty days the unit will receive a formal inspection report. The squadron NBCD Officer will maintain two years of inspection results on hand in the turnover jacket.

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APPENDIX A

QUARTERLY NBCD STATUS REPORT

1. Each squadron will submit a Quarterly NBCD Status Report in the format example provided in this Appendix.
2. All reports will be submitted by the 20th day of the third month of the preceding quarter to the CO, MAG-12 (NBCDO) via the appropriate chain of command.
3. For equipment, only the MAG-12 report will cover the preceding quarter, i.e., the January report will cover the months of October, November and December.
4. Squadrons should complete paragraphs 1, 2, 4, and 5.
5. For training, with the exception of the CS/NBCD Ensemble Confidence Exercise, the report will forecast the next quarter, i.e., the January report will cover January, February and March.
6. The January report of each year will contain a total of personnel required to, and personnel that actually conducted, a CS/NBCD Ensemble Confidence Exercise for the preceding annual year.

SOP FOR NBCD

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STATES MARINE CORPS

MARINE AIRCRAFT GROUP 12
FIRST MARINE AIRCRAFT WING, MARFORPAC
UNIT 37300
FPO AP 96603-7300

IN REPLY REFER TO:
GruO P3400.1A
NBCD

From: Commanding Officer Marine Fighter Attack Squadron _____
To: Commanding Officer Marine Aircraft Group Twelve

Subj: NBC DEFENSE STATUS REPORT FOR _____ QUARTER, CY _____

Ref: (a) WgO P3400.1_

Encl: (1) Unit NBCD Equipment Database

1. Per the reference, the follow information is submitted.

2. Personnel Status

a. Group/Squadron NBCDO

- (1) Name/Rank/SSN/MOS
- (2) Section assigned to and phone number
- (3) Date Current Tour Began (DCTB)
- (4) Rotation Tour Date (RTD)

b. Group/Squadron NBCD NCO (report same information as in paragraph 2a above).

c. Additional NBCD Personnel (report same information as in paragraph 2a above for all other 5702/5711 personnel in unit).

d. Collateral-duty assigned NBCD Team Personnel.

<u>Unit</u>	<u>Name</u>	<u>Rank</u>	<u>SSN/MOS</u>	<u>RTD</u>	<u>School/Date Attended</u>
-------------	-------------	-------------	----------------	------------	-----------------------------

3. Unit Personnel Status (On-Hand strength at time of report submission)

Total# Unit O/H Personnel Strength: _____

Total# Unit O/H Cpl & below: _____

4. Individual/Unit training.

NBCD SOP

#Personnel Attended Date Hours

d. Decontamination Team (4 hrs per quarter)

#Personnel Attended Date Hours

e. NBCD Team Equipment Operators (this section lists the quantity of trained and qualified personnel to operate the below listed equipment items).

<u>TAMCN</u>	<u>Item</u>	<u>#Trained/Qualified</u>
B1291	M17 LDS Operators (min. of 5 licensed req.)	_____
C2032	Chemical Agent Monitor	_____
C5825	Remote Sensing Chemical Agent Alarm	_____
H2365	AN/VDR-2 Radiacmeter	_____

6. Equipment

a. NBCDEMP Database attached as Enclosure (1). (Unit must ensure that non-TAMCN SL-3 support items are included on the database, such as; C-2 Canister Filters, CAM Batteries, Nitrogen Cylinders, etc.)

b. Equipment Status

<u>TAMCN</u>	<u>Item</u>	<u>Authorized Possess</u>	<u>Deadline/In Cal</u>	<u>%Operational</u>
B1291	M17 LDS	_____	_____	_____
B2130	Bladder	_____	_____	_____
C2032	CAM	_____	_____	_____
C5825	RSCAAL	_____	_____	_____
H2365	AN/VDR-2	_____	_____	_____

c. Aviator Crewman CBR Protective Equipment

(1) This section is for MAG-12, MAG-36, and ASEK.

(2) List to include all Above-the-Neck (ATN) and Below-the-Neck (BTN) items rated by the QH-2. This equipment can be submitted as a separate enclosure, and at a minimum, ensure it

NBCD SOP

provides the following information).

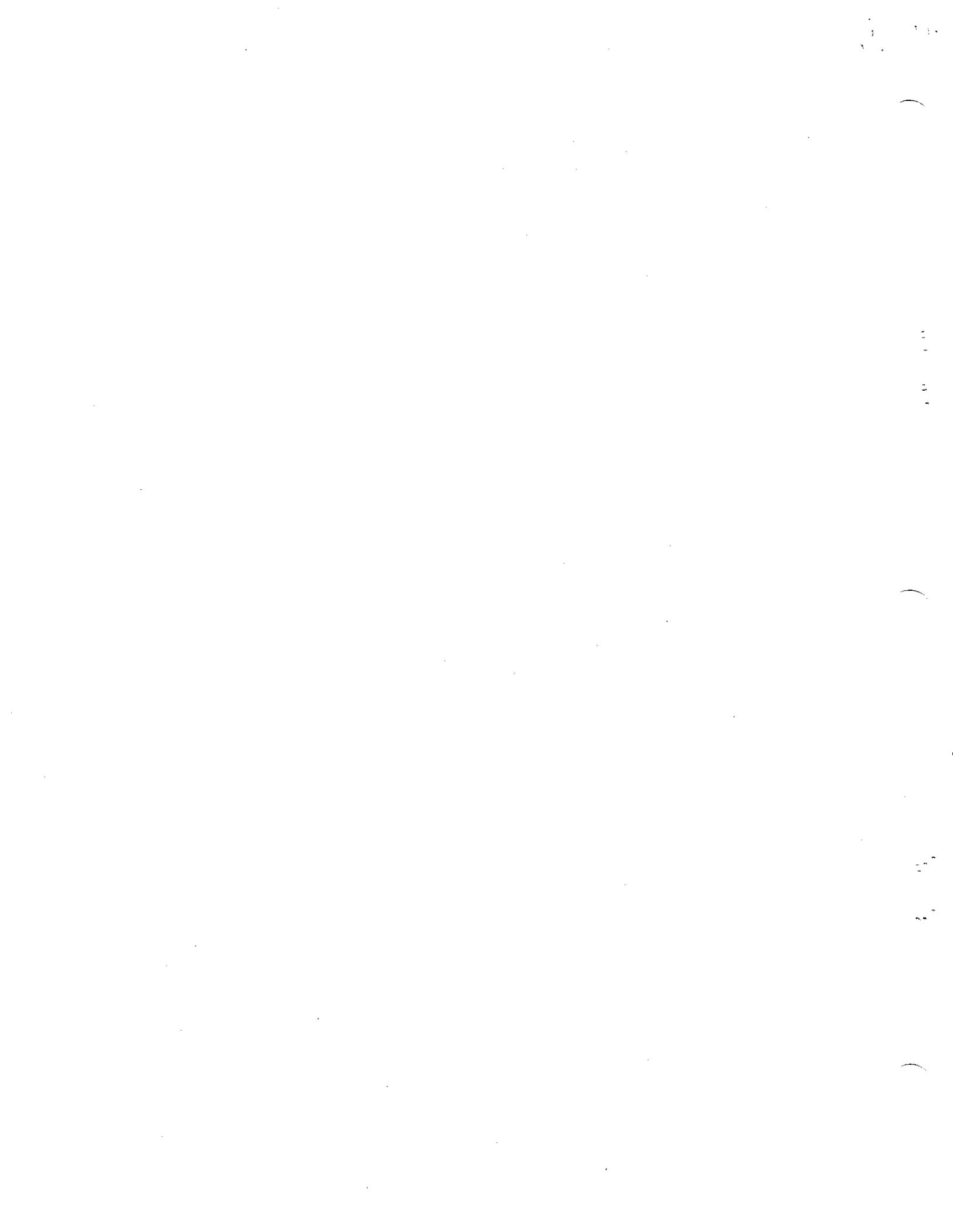
<u>Item</u>	<u>NSN</u>	<u>Qty Authorized</u>	<u>Qty Possessed</u>	<u>%On-Hand</u>
-------------	------------	-----------------------	----------------------	-----------------

7. Remarks.

8. (Unit Point of Contact information).

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SOP FOR NBCD

APPENDIX B

REPORTS

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NBC-2 VOICE TEMPLATE.....	B-8
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NBCD SOP

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SOP FOR NBCD

APPENDIX B

REPORTS REQUIRED

NBC Warning and Reporting System (NBCWRS). In order to enable commanders at all levels to assess the impact of NBC attacks on plans and decisions, they must be provided with timely, accurate and evaluated information on these attacks. Collection, evaluation and exchange of information on NBC attacks form an extremely important part of NBCWRS. Below is a brief description of each of these reports.

a. NBC-1 Observers Report. All observing units of an NBC attack complete this report. It basically states that an attack has occurred. NBC-1 reports are sent to this headquarters, S-3/NBC using the most expeditious means available with a "FLASH" precedence. All other reports are sent with an "IMMEDIATE" precedence.

b. NBC-1 Follow-up Report. This report provides any updated information about the attack and/or the type of agent.

c. NBC-2 Report. This report is used for passing evaluated data.

d. NBC-3 Report. This report is used for immediate warning of expected areas of contamination.

e. NBC-4 Report. This report is used for reporting monitor/survey results.

f. NBC-5 Report. This report shows the areas of actual contamination.

g. NBC-6 Report. This report shows detailed information on the attack hazard and is done by the Group NBCD Control Center only. Submitted to higher headquarters on request.

h. Chemical Downwind Message (CDM). This report is used to relay valuable weather information to control center personnel. This information will then be used in the Chemical and Biological Hazard prediction process. This report consists of generally three lines of information containing twelve digits. It is paramount that all radio operators/communicators ensure that these three lines consisting of twelve digits or eleven digits and a slash, dash, or tac, are recorded accurately so that accurate predictions can be made. The CDM is essentially a compact weather report relating such things as wind speed, wind direction, temperature, air stability, and humidity measurements to the control center.

NBCD SOP

i. Effective Downwind Message (EDM). This report performs the same functions as the CDM except that it is used by the control center team for nuclear hazard predictions. It is a report consisting of essentially eight lines, the first being the Date Time Group (DTG) when the winds were measured for that particular report. Lines (2) through (8) consist of six or nine digits that correlate to a measured Yield Rate for a specific nuclear detonation. As with the CDM, it is paramount that this report is taken accurately by radio operators/communicators so that the subsequent predictions made from it, are accurate.

SOP FOR NBCD

NBC-1 REPORT (OBSERVER'S REPORT).

Line	Nuclear	Chemical and Biological
B*	Position of Observer	Position of Observer
C*	Direction of Attack from Observer	Direction of Attack from Observer
D*	Date & Time of Detonation	Date & Time Attack Started
E	Illumination Time	Date & Time Attack Ended
F*	Attack Location (EST/ACT)	Attack Location (EST/ACT)
G	Means of Delivery	Type of Attack
H*	Type of Burst	Type Agent, Persistent/NonPersistent (P/NP)
J	Flash-to-Bang Time	N/A
L	Cloud Width at (H+5) minutes	N/A
M	Stabilized Cloud Top or Bottom Angle or Cloud Top or Bottom Height at (H+10) minutes.	N/A
AZ	N/A	Actual Weather Conditions
*NOTES:	<ol style="list-style-type: none"> 1. Lines B,D,H, and either C or F must always be reported. 2. Observers are encouraged to report as much information as possible, using lines J, L, and M. 	

NBC-1 VOICE TEMPLATE

(ADDRESSEE) THIS IS (ORIGINATOR) NBC-1 REPORT. OVER
 THE ORIGINATOR RESPONDS: THIS IS (ORIGINATOR)

FLASH IMMEDIATE PRIORITY ROUTINE (CIRCLE & TRANSMIT)
 TOP SECRET SECRET CONFIDENTIAL UNCLASSIFIED (CIRCLE & TRANSMIT)

NBC-1 REPORT:

- LINE 1 (OR) EVENT: _____ (TYPE OF ATTACK: NBC)
- LINE 2 (OR) BRAVO: _____ (LOCATION OF OBSERVER)
- LINE 3 (OR) CHARLIE: _____ (DIRECTION OF ATTACK)
- LINE 4 (OR) DELTA: _____ (DTG OF DET/START OF ATTACK)
- LINE 5 (OR) ECHO: _____ (ILLUMINATION TIME IN SECONDS)
- LINE 6 (OR) ECHO BRAVO: _____ (END TIME FOR BIO/CHEM ATTACK)
- LINE 7 (OR) FOXTROT: _____ (ACT/EST LOCATION OF GZ/AA)
- LINE 8 (OR) GOLF: _____ (MEANS OF DELIVERY)
- LINE 9 (OR) HOTEL: _____ (TYPE OF NUCLEAR BURST)
- LINE 10 (OR) HOTEL BRAVO: _____ (TYPE OF BIO/CHEM AGENT)
- LINE 11 (OR) INDIA BRAVO: _____ (NO. OF MUNITIONS OR AIRCRAFT)
- LINE 12 (OR) EFFECTS: _____ (EFFECTS ON PERSONNEL)
- LINE 13 (OR) JULIET: _____ (FLASH-TO-BANG TIME IN SECONDS)
- LINE 14 (OR) LIMA: _____ (CLOUD WIDTH AT {H+5} MINUTES)
- LINE 15 (OR) MIKE: _____ (STABILIZED CLOUD TOP/BOTTOM
 ANGLE; CLOUD TOP/BOTTOM HEIGHT
 AT {H+10} MINUTES)
- LINE 16 (OR) ZULU ALPHA: _____ (ACTUAL WEATHER CONDITIONS)

T. O. R.	
OPERATOR'S INITIALS	FREQ USED DTG

T. O. D.	
STATION(S) CALLED OPERATOR'S INITIALS	FREQ USED TIME OF DELIVERY

NBC LOG SERIAL NUMBER: _____

SOP FOR NBCD

NBC-2 REPORT (EVALUATED DATA)

Line	Nuclear	Chemical and Biological
A	Strike Serial Number	Strike Serial Number
D	Date & Time of Detection	Date & Time Attack Started
F	Attack Location (EST/ACT)	Attack Location (EST/ACT)
G	Means of Delivery	Type of Attack
H	Type of Burst	Type Agent, Persistent/Nonpersistent (P/NP)
N	Estimated Yield	N/A
Y	Direction of Left/Right Radial Lines	Downwind Direction Hazard and Windspeed
ZA	N/A	Actual Weather Condition

NBC-2 VOICE TEMPLATE

(ADDRESSEE) THIS IS (ORIGINATOR) NBC-2 REPORT. OVER
 THE ORIGINATOR RESPONDS: THIS IS (ORIGINATOR)

FLASH IMMEDIATE PRIORITY ROUTINE (CIRCLE & TRANSMIT)
 TOP SECRET SECRET CONFIDENTIAL UNCLASSIFIED (CIRCLE & TRANSMIT)

NBC-2 REPORT:

- LINE 1 (OR) EVENT: _____ (TYPE OF ATTACK: NBC)
 - LINE 2 (OR) ALPHA: _____ (STRIKE SERIAL NUMBER)
 - LINE 3 (OR) DELTA: _____ (DTG OF DET/START OF ATTACK)
 - LINE 4 (OR) FOXTROT: _____ (ACT/EST LOCATION OF GZ/AA)
 - LINE 5 (OR) GOLF: _____ (MEANS OF DELIVERY)
 - LINE 6 (OR) HOTEL: _____ (TYPE OF NUCLEAR BURST)
 - LINE 7 (OR) HOTEL BRAVO: _____ (TYPE OF BIO/CHEM AGENT)
 - LINE 8 (OR) INDIA BRAVO: _____ (NO. OF MUNITIONS OR AIRCRAFT)
 - LINE 9 (OR) EFFECTS: _____ (EFFECTS ON PERSONNEL)
 - LINE 10 (OR) NOVEMBER: _____ (ESTIMATED YIELD IN KT)
 - LINE 11 (OR) YANKEE BRAVO: _____ (EFFECTIVE DWD AND WIND SPEED)
 - LINE 12 (OR) ZULU ALPHA STABILITY: _____ (AIR STABILITY INDEX)
 - LINE 13 (OR) ZULU ALPHA TEMP: _____ (SURFACE AIR TEMPERATURE)
 - LINE 14 (OR) ZULU ALPHA HUMIDITY: _____ (RELATIVE HUMIDITY INDEX)
 - LINE 15 (OR) ZULU ALPHA WEATHER: _____ (ACTUAL WEATHER CONDITIONS)
 - LINE 16 (OR) ZULU ALPHA COVER: _____ (CLOUD COVER)
 - LINE 17 (OR) NARRATIVE: _____
- OVER

T. O. R.	
OPERATOR'S INITIALS	FREQ USED
	DTG

T. O. D.	
STATION(S) CALLED	FREQ USED
OPERATOR'S INITIALS	TIME OF DELIVERY

NBC LOG SERIAL NUMBER: _____

SOP FOR NBCD

NBC-3 REPORT (IMMEDIATE WARNING/EXPECTED HAZARD AREA)

Line	Nuclear	Chemical and Biological
A	Strike Serial Number	Strike Serial Number
D	Date & Time of Detection	Date & Time Attack Started
F	Attack Location (EST/ACT)	Attack Location (EST/ACT)
H	Type of Burst	Type Agent, Persistent/Nonpersistent (P/NP)
N	Estimated Yield	N/A
PA	Coordinates of External Contours of Radioactive Cloud	Coordinates of Predicted Hazard Area
PB	Downwind Direction Wind Is Blowing From	Duration of Hazard in Attack & Hazard Area
Y	Direction of Left/Right Radial Lines	Downwind Direction Hazard and Windspeed
Z	Effective Wind Speed / DWD	Zone 1/Cloud Radius
ZA	N/A	Actual Weather Condition
ZB	Additional Remarks	Additional Remarks

***NOTES:**

1. Observer is not restricted to using the above lines. Other line items can be used as needed.
2. If effective windspeed is <8 km/h, the NBC-3 NUC Report will consist of lines A, D, F, and Z. Line Z will consist of three digits only which will be the radius of Zone I.
3. If downwind speed is 10 km/h or less, line PA of the NBC-3 CHEM report will consist of three digits instead of coordinates. The three digits will be the circle radius in KM around the center of the attack.
4. The NBC-3 report is also used to pass immediate warning of predicted radiological contamination from friendly bursts.

NBC-3 VOICE TEMPLATE

(ADDRESSEE) THIS IS (ORIGINATOR) NBC-3 REPORT. OVER
 THE ORIGINATOR RESPONDS: THIS IS (ORIGINATOR)

FLASH IMMEDIATE PRIORITY ROUTINE (CIRCLE & TRANSMIT)
 TOP SECRET SECRET CONFIDENTIAL UNCLASSIFIED (CIRCLE & TRANSMIT)

NBC-3 REPORT:

- LINE 1 (OR) EVENT: _____ (TYPE OF ATTACK: NBC)
- LINE 2 (OR) ALPHA: _____ (STRIKE SERIAL NUMBER)
- LINE 3 (OR) DELTA: _____ (DTG OF DET/START OF ATTACK)
- LINE 4 (OR) FOXTROT: _____ (ACT/EST LOCATION OF GZ/AA)
- LINE 5 (OR) GOLF: _____ (MEANS OF DELIVERY)
- LINE 6 (OR) HOTEL: _____ (TYPE OF NUCLEAR BURST)
- LINE 7 (OR) HOTEL BRAVO: _____ (TYPE OF BIO/CHEM AGENT)
- LINE 8 (OR) INDIA BRAVO: _____ (NO. OF MUNITIONS OR AIRCRAFT)
- LINE 9 (OR) EFFECTS: _____ (EFFECTS ON PERSONNEL)
- LINE 10 (OR) NOVEMBER: _____ (ESTIMATED YIELD IN KT)
- LINE 11 (OR) YANKEE BRAVO: _____ (EFFECTIVE DWD AND WIND SPEED)
- LINE 12 (OR) ZULU ALPHA STABILITY: _____ (AIR STABILITY INDEX)
- LINE 13 (OR) ZULU ALPHA TEMP: _____ (SURFACE AIR TEMPERATURE)
- LINE 14 (OR) ZULU ALPHA HUMIDITY: _____ (RELATIVE HUMIDITY INDEX)
- LINE 15 (OR) ZULU ALPHA WEATHER: _____ (ACTUAL WEATHER CONDITIONS)
- LINE 16 (OR) ZULU ALPHA COVER: _____ (CLOUD COVER)
- LINE 17 (OR) NARRATIVE: _____

OVER

T. O. R.		T. O. D.	
	FREQ USED		FREQ USED
OPERATOR'S INITIALS	DTG	OPERATOR'S INITIALS	TIME OF DELIVERY

NBC LOG SERIAL NUMBER: _____

SOP FOR NBCD

NBC 4 REPORT (MONITOR/SURVEY RESULTS)

Line	Nuclear	Chemical and Biological
H	Type of Burst	Type Agent, Persistent/Nonpersistent (P/NP)
Q	Location of Reading	Location of Sample & Type
R	Dose Rate or Actual Value of Decay Exponent	N/A
S	Date & Time of Reading	Date & Time of Detection

***NOTES:**

1. Lines H, Q, R, and S may be repeated as often as necessary.
2. Dose rates are measured in the open, one meter above the ground.
3. The Monitor/Survey Team is not restricted to using only these line items.

NBC-5 REPORT (AREAS OF ACTUAL CONTAMINATION)

Line	Nuclear	Chemical and Biological
A	Strike Serial Number	Strike Serial Number
D	Date & Time of Detection	Date & Time Attack Started
H	Type of Burst	Type Agent, Persistent/Nonpersistent (P/NP)
U	1000 cGyph Contour Line Plot (Red)	N/A
V	300 cGyph Contour Line Plot (Green)	N/A
W	100 cGyph Contour Line Plot (Blue)	N/A
X	30 cGyph Contour Line Plot (Black)	N/A

***NOTES:**

1. This report is most effective if sent as an overlay.
2. It is not necessary to report all four contour lines. Four are provided if necessary.

NBC-6 REPORT (DETAILED REPORTS FOR CHEM/BIO ATTACKS)

Line	Chemical and Biological
A	Strike Serial Number
D	Date & Time attack Started
E	Date & Time attack Ended
F	Attack Location (EST/ACT)
G	Type of Attack
H	Type Agent, Persistent/NonPersistent (P/NP)
I	Number of Munitions or Aircraft
K	Description of Terrain & Vegetation
M	Enemy Actions Before & After the Attack. Effects on the Unit
Q	Location and Type of Sample
S	Date & Time of Detection
T	Date & Time of Last Survey of Contaminated Area
X	Actual Areas of Contamination
ZA	Remarks

***NOTES:**

1. This report is prepared at the Group level or higher and is submitted on request only.
2. This report is to be prepared in narrative form, providing as much detailed information as possible under each line item.

NBC-6 VOICE TEMPLATE

(ADDRESSEE) THIS IS (ORIGINATOR) NBC-6 REPORT. OVER
 THE ORIGINATOR RESPONDS: THIS IS (ORIGINATOR)

FLASH IMMEDIATE PRIORITY ROUTINE (CIRCLE & TRANSMIT)
 TOP SECRET SECRET CONFIDENTIAL UNCLASSIFIED (CIRCLE & TRANSMIT)

NBC-6 REPORT:

- LINE 1 (OR) EVENT: _____ (TYPE OF ATTACK: NBC)
 - LINE 2 (OR) ALPHA: _____ (STRIKE SERIAL NUMBER)
 - LINE 3 (OR) DELTA: _____ (DTG OF DET/START OF ATTACK)
 - LINE 4 (OR) ECHO BRAVO: _____ (DTG ATTACK ENDED)
 - LINE 5 (OR) FOXTROT: _____ (CODE USED TO REPLACE LOCATION OF ATTACK ACT/EST)
 - LINE 6 (OR) GOLF: _____ (MEANS OF DELIVERY)
 - LINE 7 (OR) HOTEL BRAVO: _____ (TYPE OF BIO/CHEM AGENT)
 - LINE 8 (OR) INDIA BRAVO: _____ (NO. OF MUNITIONS OR AIRCRAFT)
 - LINE 9 (OR) KILO BRAVO: _____ (DESCRIPTION OF TERRAIN & VEGETATION))
 - LINE 10 (OR) MIKE BRAVO: _____ (ENEMY ACTION BEFORE & AFTER ATTACK & EFFECTS)
 - LINE 11 (OR) QUEBEC BRAVO: _____ (LOCATION/TYPE OF SAMPLE)
 - LINE 12 (OR) SIERRA: _____ (AIR STABILITY INDEX)
 - LINE 13 (OR) TANGO BRAVO: _____ (DTG OF LATEST SURVEY)
 - LINE 14 (OR) XRAY: _____ (AREA OF ACTUAL CONTAMINATION)
 - LINE 15 (OR) YANKEE BRAVO: _____ (DWD AND WIND SPEED)
 - LINE 16 (OR) NARRATIVE: _____
 - LINE 17 (OR) TIME: _____ (MESSAGE HR-MIN-ZONE)
 - LINE 18 (OR) AUTHENTICATION: _____ (MSG AUTH IAW JTF PROCEDURES)
- OVER

T. O. R.	FREQ USED
OPERATOR'S INITIALS	DTG

T. O. D.	FREQ USED
STATION(S) CALLED OPERATOR'S INITIALS	TIME OF DELIVERY

NBC LOG SERIAL NUMBER: _____

SOP FOR NBCD
CHEMICAL DOWNWIND MESSAGE (CDM)

DATE AND TIME COMPLETED: _____ DATE AND TIME EFFECTIVE: _____

AREA OF VALIDITY: _____ WEATHER AGENCY: _____

LINE	[]	[][][]	[][][]	[]	[][]	[]	[]	[]	ANTICIPATED ENEMY USAGE	
									FAVL	FAVV
LINE	[]	[][][]	[][][]	[]	[][]	[]	[]	[]	[]	[]
LINE	[]	[][][]	[][][]	[]	[][]	[]	[]	[]	[]	[]
LINE	[]	[][][]	[][][]	[]	[][]	[]	[]	[]	[]	[]

DOWNWIND WINDSPEED
DIRECTION IN KMPH

AIR STABILITY CODES
1= VERY UNSTABLE (U)
2= UNSTABLE (U)
3= SLIGHTLY UNSTABLE (U)
4= NEUTRAL (N)
5= SLIGHTLY STABLE (S)
6= STABLE (S)
7= VERY STABLE (S)

TEMPERATURE CODE

CODE	TEMP
05	= 5C
04	= 4C
03	= 3C
02	= 2C
01	= 1C
00	= 0C
51	= -1C
52	= -2C
53	= -3C
54	= -4C
55	= -5C

HUMIDITY CODE

0= 0 - 9%	5= 50 - 59%
1= 10 - 19%	6= 60 - 69%
2= 20 - 29%	7= 70 - 79%
3= 30 - 39%	8= 80 - 89%
4= 40 - 49%	9= 90 - 99%

CLOUD COVER CODE

0= SKY LESS THAN HALF COVERED BY CLOUDS

1= HALF THE SKY IS COVERED BY CLOUDS

2= MORE THAN HALF OF THE SKY IS COVERED BY CLOUDS

SIGNIFICANT WEATHER PHENOMENA CODE

3= BLOWING SNOW OR SAND

4= FOG, ICE FOG OR THICK HAZE

5= DRIZZLE

6= RAIN

7= LIGHT RAIN OR SNOW

8= SHOWERS OF RAIN, HAIL, OR A MIX OF BOTH

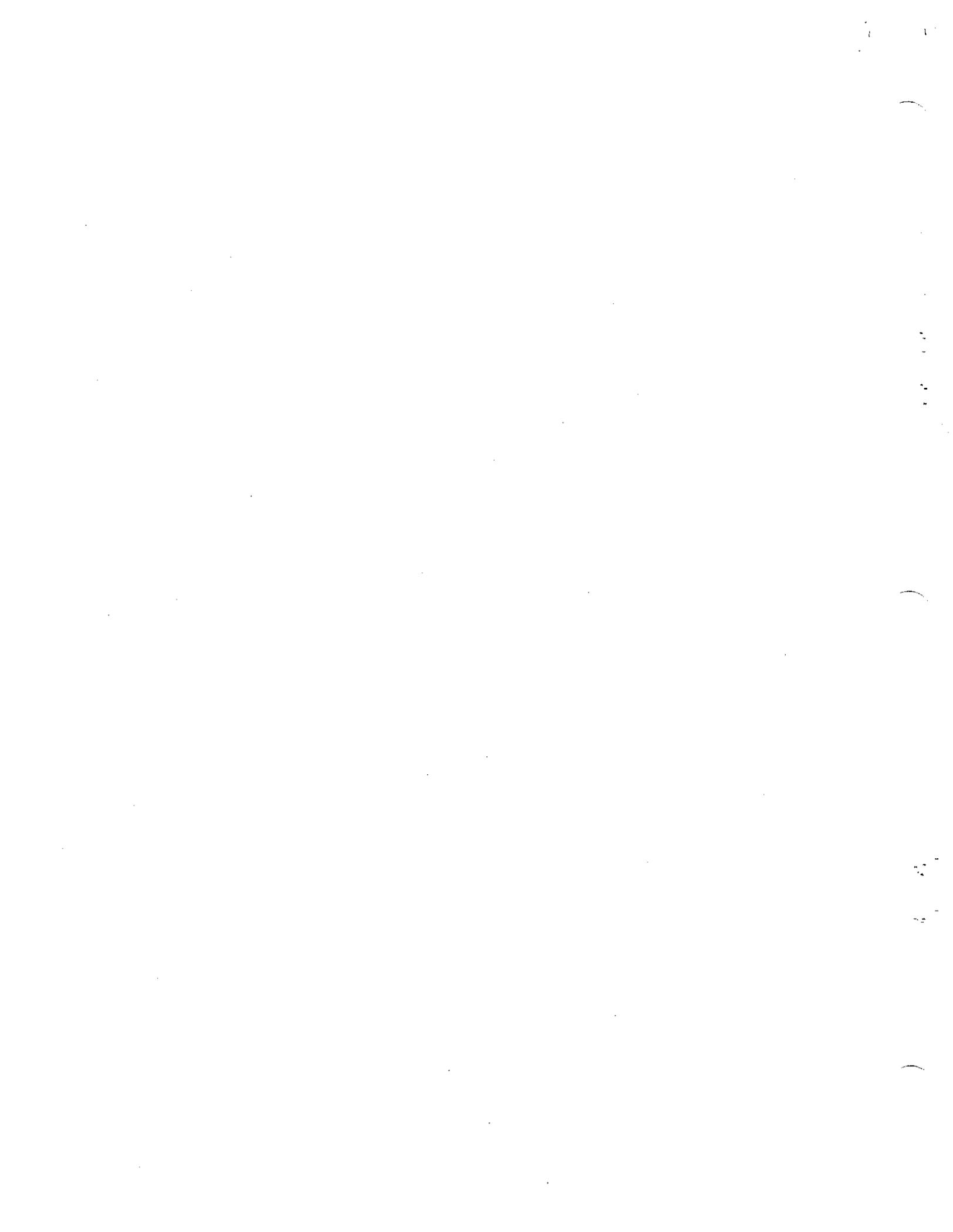
9= THUNDERSTORMS

EFFECTIVE DOWNWIND MESSAGE (EDM)

ZULU	EFFECTIVE DOWNWIND MESSAGE						DTG WINDS MEASURED		
	WIND DIRECTION DEGREES			WIND SPEED IN KMPH			EXPANDED ANGLE IN DEG		
ALPHA (0 TO 2 KT)									
BRAVO (2 TO 5 KT)									
CHARLIE (5 TO 30 KT)									
DELTA (30 TO 100 KT)									
ECHO (100 TO 300 KT)									
FOXTROT (300 KT TO 1 MT)									
GOLF (1 MT TO 3 MT)									

- NOTES:**
1. The first three digits give the EFFECTIVE WIND DIRECTION in degrees from grid north.
 2. The second three digits give the EFFECTIVE WIND SPEED in kilometers per hour (Km/Hr).
 3. The last three digits give the expanded angle in degrees. These last three digits will only be given if the prediction mandates it.

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APPENDIX C

MASK CONFIDENCE EXERCISE

1. General. Per the reference, all Marines and Sailors assigned to the 1st Marine Aircraft Wing are required to participate in the Mask Confidence Exercise (MCX) annually on a calendar year basis. This appendix outlines the procedures for preparing and conducting a proper confidence exercise within MAG-12 NBC Defense.

2. Purpose. The Mask Confidence Exercise is designed to promote confidence in the Field Protective Mask's integrity as well as the individual's ability to properly protect his or her self in a contaminated environment. The responsibility of the Chamber Safety Officer/Range Safety Officer (CSO/RSO) and the Chamber Instructor (CI) is to ensure that the MCX is conducted in a manner that is both safe and beneficial to qualifying personnel.

3. MCX Logistics

a. A CSO/RSO will be present for all confidence chambers conducted within MAG-12 NBC Defense. They will ensure:

(1) The exercise is conducted properly.

(2) All safety issues have been addressed and all safety guidelines adhered to.

(3) The Chamber Instructor and assistant instructor are trained in proper chamber exercise techniques.

b. The Chamber Instructor and Assistant Chamber Instructor are responsible for the logistics in preparation of the MCX as well as the actual operations during the exercise.

c. Follow proper procedures for the requisition/turn-in of CS capsules.

(1) MAG-12 NBC Defense is authorized to draw CS to support the current exercise only. CS may not be stored in the MAG-12 NBC Defense administrative office spaces or the NBC warehouse.

(2) Requests must be submitted to MAG-12 S-4 Ammunitions Clerk at least 72 hrs prior to requested pick-up date.

(3) Use the following equation to determine the number of CS capsules required for each MCX.

SOP FOR NBCD

$$\frac{\text{L x W x H (meters)} + (1 \text{ per } 10 \text{ Personnel}) - 1}{2} = \# \text{ of Capsules}$$

(4) Ensure ammunition is picked up from Station Ordnance in time for MCX.

(5) Unused CS must be returned to Station Ordnance with proper documentation.

(6) Complete expenditure report and submit to MAG-12 Ammo clerk (MAG-12 S-4).

d. A corpsman, safety vehicle and source of potable water must be present.

4. Exercise Preparation

a. Chamber Charging Procedures:

(1) Ensure the following items are present:

- (a) CS Capsules.
- (b) Propane tank.
- (c) Burner attachment.
- (d) Starter flint.

(2) Place necessary amount of capsules to charge the chamber in burner dish and light propane burner.

b. Safety Brief: This is to be conducted by the attending corpsman.

(1) Ensure personnel about to enter the chamber do not have any of the following medical problems:

- (a) Open cuts/wounds.
- (b) Pregnant.
- (c) Clinically diagnosed claustrophobia.
- (d) Contact lenses.
- (e) Oral surgery in last 24 hrs.

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(f) Personnel possessing ailments that might disqualify them from participation in this exercise, may consult the corpsman in private.

(2) The Corpsman will make final determination on all medical problems.

c. Chamber Brief: This is to be conducted by the Chamber Instructor.

(1) Brief personnel on the hazards present inside of the Confidence Chamber.

(a) CS Burner.

(b) Low ceilings.

(c) Tripping hazards.

(d) Low lighting/limited visibility.

(2) Ensure all personnel are briefed on the activities that will occur once inside the chamber to eliminate/minimize confusion and misunderstanding.

(3) Brief post chamber activities.

(a) Taking a cold shower.

(b) Washing utilities.

5. Exercise Procedures

a. Divide personnel into groups (sticks) of 10-20 personnel depending on class size.

b. Usher each group into the chamber through the first hatch and have them walk single file clockwise around the bulkhead. The first person to enter will walk completely around the chamber and stop next to the hatch that they entered through.

c. Introduce yourself as the Primary Instructor for the Mask Confidence Exercise. State that the exercise will accomplish two things; it will build an individual's confidence in the integrity of the mask and in their ability to use it properly.

d. Instruct personnel to check for leakage. Have Marines/Sailors put up their hand if their mask is leaking and attempt to fix their seal inside the confidence chamber. If the seal remains insufficient, usher them out of the chamber. Outside, the Assistant Chamber Instructor will check, repair and

SOP FOR NBCD

refit the FPM and send them back in for qualification.

e. Explain to the personnel that they will perform exercises that will simulate light work. Have personnel bend over and shake their head moderately from side to side for approximately five (5) seconds. This will simulate light work.

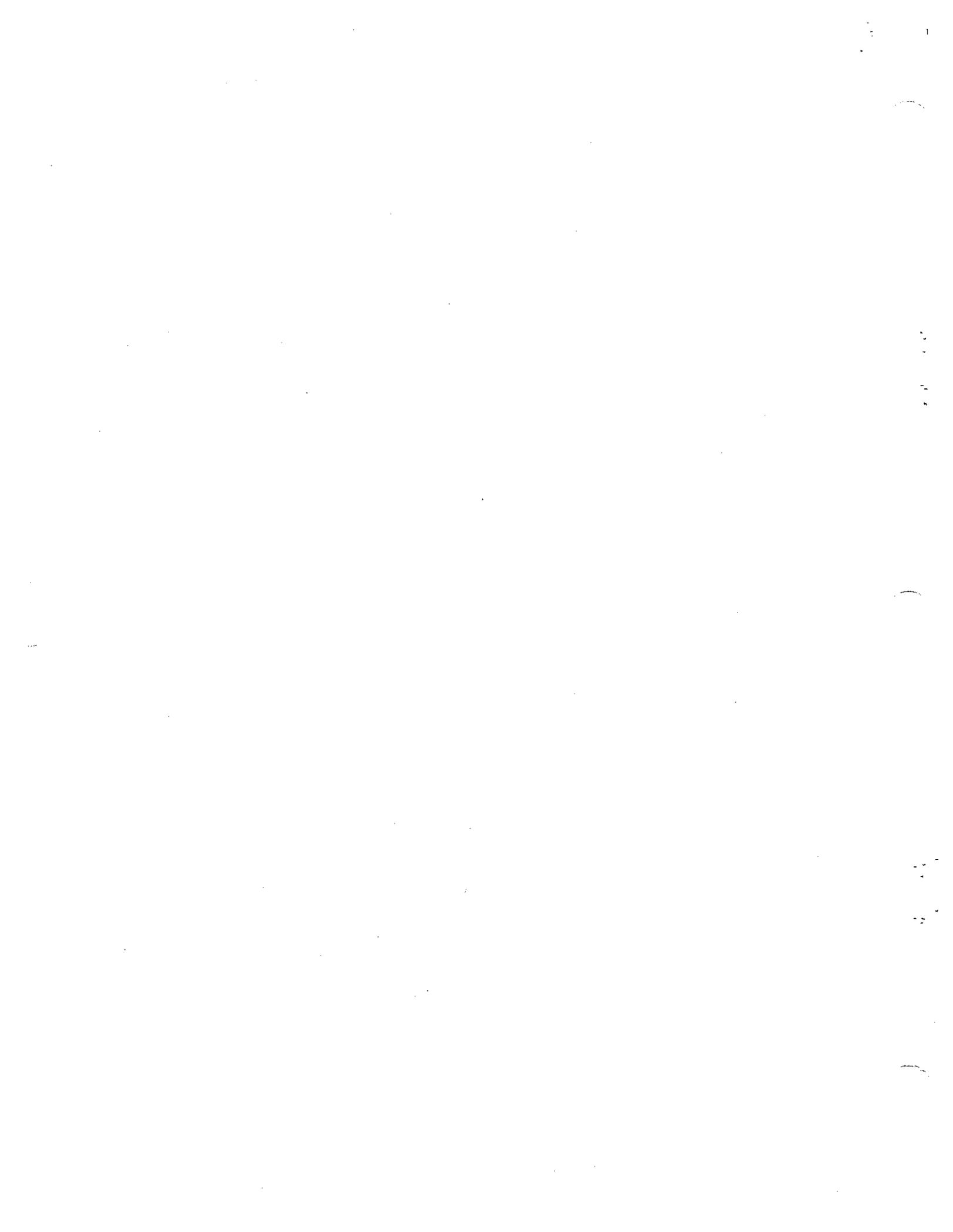
f. Instruct the personnel to place one hand on the front voicemitter and loosen the bottom two head harness straps. Have them pull the Field Protective Masks away from their face approximately four inches. Once you have verified that all personnel have removed their FPM, have them don and clear.

g. While personnel perform the MCX, verbally walk them through each step (i.e. seal off the outlet valve cover, exhale sharply).

h. Conclude the MCX by reminding the personnel to watch their head and step as they exit the chamber. Instruct them to unmask once they have exited the chamber and walk/face into the wind. Remind the Marines and Sailors not to rub their eyes.

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APPENDIX D

INDIVIDUAL SURVIVAL MEASURES (ISM's)

General. Every Marine must be able to survive on the NBC battlefield. This survival depends on the Marine having a firm understanding of those basic procedures necessary to save lives. The procedures concerning survival in an NBC environment are called Individual Survival Measures (ISM's). References (c) and (f) of the original order provide general guidance in this area.

1. The following ISM's are found in Marine Battle Skills Book #2 (PVT to LCPL):

a. Identify all NATO NBC Markers and give any additional information found on the markers.

b. Properly don and clear the M40 field protective mask.

c. While wearing the M40 field protective mask, properly drink water.

d. Don protective clothing within eight minutes.

e. Personnel must know how to relieve themselves in MOPP levels 3 and 4.

f. Personnel must know the initial and advanced symptoms of nerve agent poisoning.

g. Personnel must know the first aid for nerve agent poisoning.

h. Personnel must know the procedures for administering the NAAK Mark 1 kit.

i. Personnel must know the symptoms of blood agent poisoning.

j. Personnel must know the first aid for blood agent poisoning.

k. Personnel must know artificial respiration for a casualty wearing the field protective mask.

l. Personnel must be able to identify all MOPP levels.

m. Personnel must know the first aid for a blister agent.

n. Personnel must know the symptoms of choking agent poisoning.

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o. Personnel must know the immediate actions for a nuclear explosion.

p. Personnel must be able to give three examples of excellent protection against imminent nuclear attack.

q. Personnel must know the number of steps in MOPP gear exchange.

r. Personnel must be able to state three protective measures against a biological attack.

s. Personnel must be able to state three protective measures against a chemical attack.

t. Personnel must be able to conduct a serviceability check on the M40 field protective mask.

u. Personnel must be able to demonstrate the use of the M256A1 kit.

v. Personnel must be able to perform MOPP gear exchange.

w. Personnel must be able to react properly to a spray attack.

x. Personnel must know the first aid for a choking agent.

y. Personnel must be able to decontaminate equipment using the M11 decontamination apparatus.

2. The following ISM's are found in Marine Battle Skills Book #3 (CPL and Above):

a. Personnel must be able to prepare an NBC-1 Report.

b. Personnel must be able to prepare an NBC-4 Report.

3. The following is found in MCO 3400.3E [reference (c)]

a. Personnel must be aware of the effects of a biological attack.

b. Personnel must be able to recognize NBC alarms and signals.

c. Personnel must be able to carry out immediate individual decontamination drills.

d. Personnel must be able to follow procedures for unmasking with or without the M256A1 Chemical Detection Kit.

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e. Personnel must be able to properly perform their assigned missions/tasks while wearing protective clothing.

f. Personnel must be able to properly operate chemical agent detection equipment.

4. Detailed procedures for decontaminating the eyes is found in NAVMED P-5041.

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APPENDIX E

DECONTAMINATION OPERATION CONSUMMABLES MATRIX

CONSUMABLES MATRIX				
CONSUMABLES	QTY PER INDIVIDUAL	QTY PER M/S TEAM	QTY PER VEHICLE	QTY PER CREW SERVED WPN
M258A1 KITS **	1 KIT			
M291 KITS **	1 KIT			
M280 KITS				3 KITS
M9 TAPE	1 ROLL		1 ROLL	
NAAK MARK I KITS	3 KITS			
M256A1 KITS		1 KIT		
DS-2 5 GALLON CAN			1 CAN	1 CAN PER SECTION
SARATOGA / JSLIST	1 SUIT (COMPLETE)			
CHEMICAL PROTECTIVE GLOVES	1 PAIR			
CHEMICAL PROTECTIVE BOOTS (GVO'S)	1 PAIR			

** The individual Marine will be issued (1) M258A1 kit or (1) M291 kit, not both.

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APPENDIX F

RADIATION STATUS REPORTING PROCEDURES

1. In the event of a nuclear attack, the radiation status of personnel within the MAG/Tenant Squadrons will be maintained at the unit level. To provide a rapid means of evaluating exposure, the radiation dose chart will be submitted daily utilizing the example in this Appendix. If and when changes occur, each unit will submit a copy of this chart to the MAG NBCD Officer in conjunction with the Medical Officer.
2. Radiation doses will be measured using the IM-143/PD dosimeters issued on the basis of one per squad or section. If the CP 696 (watch type individual total dose meter) is issued, it will be issued one per individual. Each watch and its wearer will be tracked using the serial number annotated on the back of the watch. The information contained in these charts will be compiled by the MAG NBCD Officer and the Medical Officer, then forwarded up the chain of command on a daily basis.
3. Dose criteria for the different radiation status categories is used to determine threat to friendly forces in subsequent operations in a radioactive area and are described below:
 - a. Radiation Status Category 0 (RS-0). RS-0 indicates that a unit has not received or been exposed to nuclear radiation.
 - b. Radiation Status Category 1 (RS-1). RS-1 indicates that a unit has been exposed to radiation or has a negligible radiation exposure history. Total dose received is greater than 0 cGy, but less than 70 cGy.
 - c. Radiation Status Category 2 (RS-2). RS-2 indicates that a unit has received a significant but not dangerous dose of radiation. Total dose received is greater than 70 cGy, but less than 150 cGy.
 - d. Radiation Status Category 3 (RS-3). RS-3 indicates that a unit has been exposed to a dose greater than 150 cGy. Further exposure would be extremely dangerous and should only be considered if it is absolutely mission essential.
4. Operational Exposure Guidance. Degree of risk is based on the previous radiation history of a unit. An operational exposure guide (OEG) must be established for each operation based upon the radiation exposure status of the unit at the time, and with assistance from the flight surgeon and NBC Officer, will determine an operational exposure guide with regards to mission viability and survivability using the degree of risk concept. Degrees of risk are defined in terms of percent incidents of

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either casualties or performance degradation. From a radiation standpoint, the effect considered to cause performance degradation (but not casualties) is vomiting, which is commonly termed a nuisance effect.

5. Degree of Risk. The three "Degrees of Risk" which the Battalion Commander must weigh in determining the overall Operational Exposure Guidance for a mission are as follows:

a. Negligible Risk. Troops receiving a negligible risk dose will not experience more than a 2.5% incidence of vomiting. This dose will cause no casualties. The Negligible risk level has been measured at .33 cGy/h measured one inch from the surface for a total dose of 50 cGy for units with no previous dose (RS-0 units) and appropriately less for previously exposed units. A negligible risk is acceptable in any case in which the use of nuclear weapons is desirable. Negligible risk should not be exceeded unless a significant advantage will be gained.

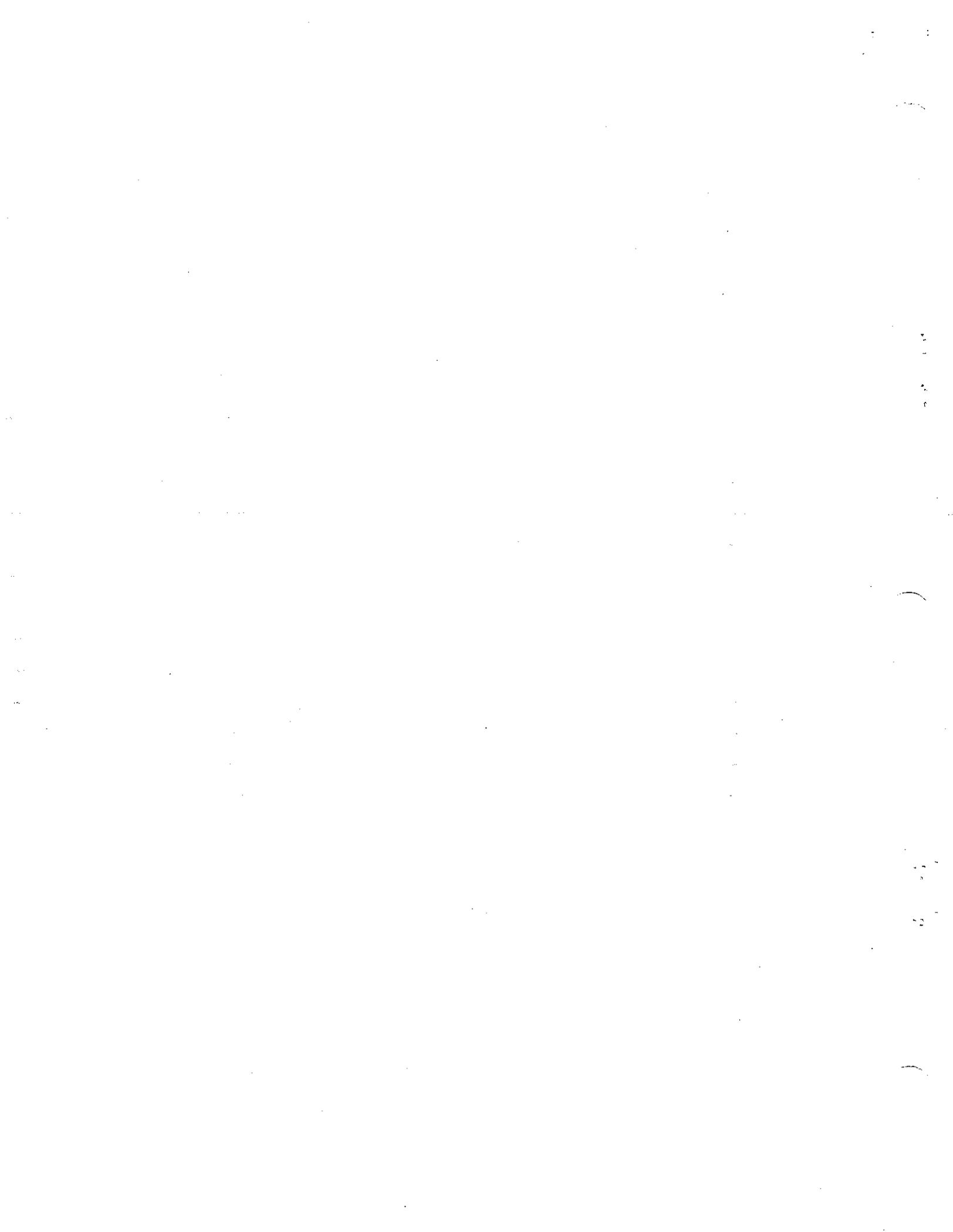
b. Moderate Risk. Troops receiving a moderate risk dose will not experience more than 5% incidence of vomiting. This dose will cause no casualties. A moderate risk dose is 70 cGy for units with no previous dose, and appropriately less for previously exposed units. Moderate risk should not be exceeded if troops are expected to operate at full efficiency after a friendly burst.

c. Emergency Risk. Troops receiving an emergency risk dose will not experience more than 5% incidence of casualties, but the incidence of vomiting may be higher. An emergency risk dose is 150 cGy for units with no previous exposure, and appropriately less for previously exposed units.

6. The degree of risk concept furnishes guidance to assist the commander in establishing an operational exposure guide for an operation. It also should aid in reducing the number of radiation exposure casualties. By using the radiation status categories of each unit, and deciding the degree of risk he is willing to accept, the commander can most accurately employ his forces with the least amount of residual radiation casualties.

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RADIATION STATUS CATEGORY MATRIX (TABLE K-1)						
RADIATION STATUS CATEGORY OF SQUADRON OR MARINE AIRCRAFT GROUP	NUMBER OF SECTIONS IN SQUADRON OR NUMBER OF SQUADRONS IN MAG					
	2	3	4	5	6	7
	SUM OF RS NUMBERS OF ALL SQUADRONS OR SECTIONS					
RS - 0	0	0-1	0-1	0-2	0-2	0-3
RS - 1	1-2	2-4	2-5	3-7	3-8	4-10
RS - 2	3-4	5-7	6-9	8-12	9-14	11-17
RS - 3	5-6	8-9	10-12	13-15	15-18	18-21

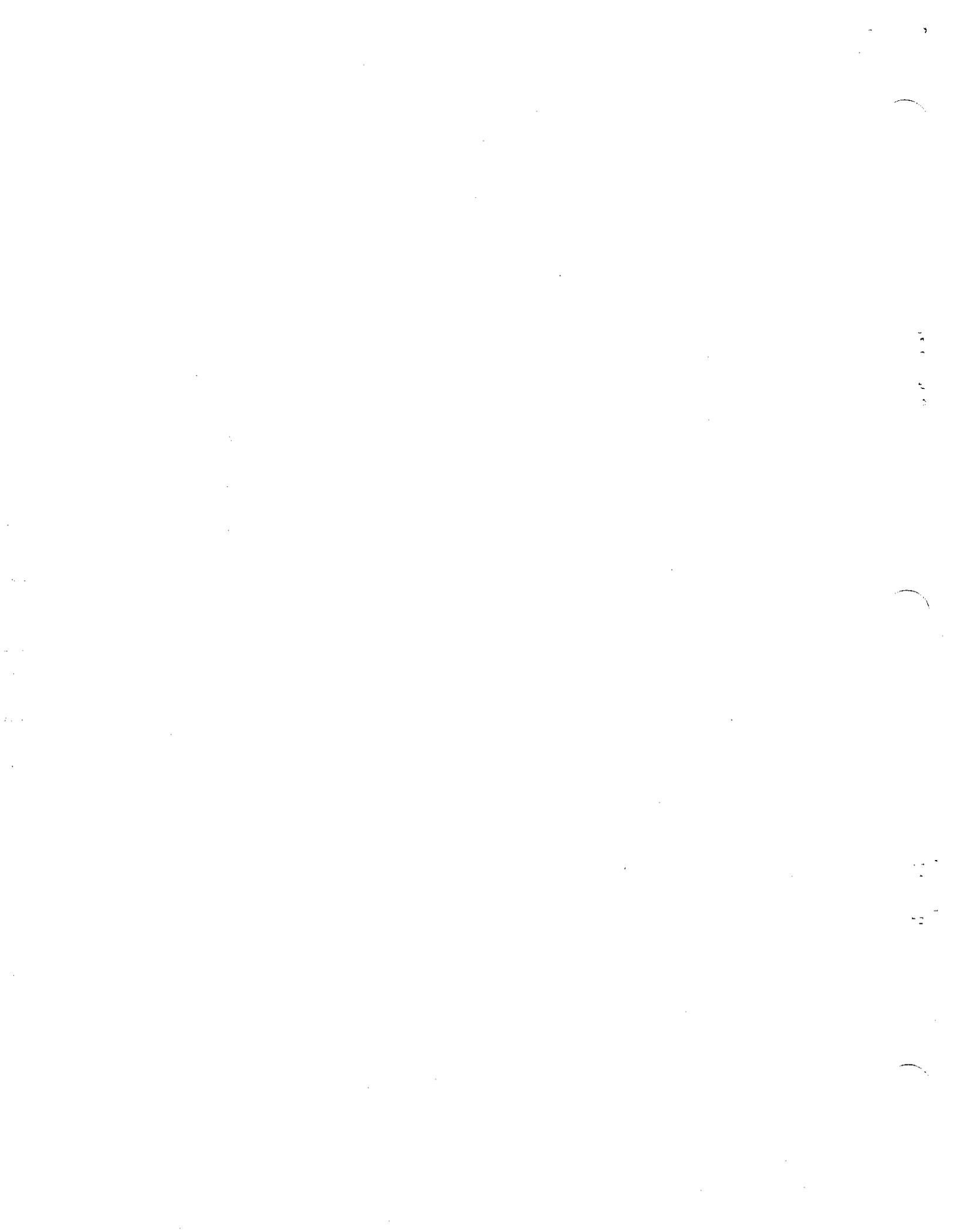
INSTRUCTIONS FOR USE OF THIS TABLE ARE AS FOLLOWS:

Fill out the Radiation Status Chart for your unit utilizing the readings taken from the individual squad/section IM-143B/PD or the individual DT 236 watches. Using the unit's previous total, compute each individual unit's new total exposure. Calculate the total RS level (as stated in this appendix) for each individual unit (section or squadron). Now, total up the amount for the entire unit (squadron or MAG) and take this total to Table K-1 above. Find the total number of elements (units) in the overall unit the RS level is being calculated for and read straight down until you enter the level your units Total RS category falls into. Then read across to the left to find the total unit's **OVERALL RS** category.

EXAMPLE: If your squadron consists of 5 sections and the total RS # of your squadron is 12, you would go to the 5 at the top of the chart, read down until you hit the block "8-12" and then read across to the appropriate RS level. In this case you should come up with a total RS Category of 2 for the unit. Therefore the unit is RS-2 overall as defined in this appendix.

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APPENDIX H

SAMPLE CONTROL CENTER INVENTORY

ITEM #	NOMENCLATURE	QTY	MONTHS													
			J	F	M	A	M	J	J	A	S	O	N	D		
MONOGRAM, SCALES, GRAPHS																
1	FIG 2-3 YIELD ESTIMATION	2														
2	FIG 2-4 YIELD ESTIMATION	2														
3	FIG 3-1 DA FORM 1971-R	50														
4	FIG 4-3 DA FORM 1971-1-R	50														
5	FIG 4-4 LOCATION OF SURVEY METER	10														
6	FIG 5-1 RESIDUAL RADIATION DECAY	2														
7	FIG 5-2 TOTAL DOSE	2														
8	FIG 5-3 TRANSMISSION FACTORS FOR RESIDUAL RADIATION	10														
9	FIG 5-6 CORRECTION FACTORS FOR NONSTANDARD DECAY	2														
10	FIG 5-7 CORRECTION FACTORS FOR NONSTANDARD DECAY	2														
11	FIG 5-8 RESIDUAL RADIATION DECAY	2														
12	FIG 5-9 TOTAL DOSE	2														
13	FIG F-1 MULTIPLICATION FACTOR GRAPH	2														
14	FIG 4 DETAILED FALLOUT WKSHT	50														
15	FIG 30 RADIOACTIVE CLOUD AND STEM PARAMETERS	5														
16	FIG 31 ZONE 1 DOWNWIND DISTANCE SURFACE BURST	5														
17	FIG 32 HEIGHT OF BURST ADJUSTMENT FACTOR <i>KT</i>	5														
18	FIG 33 HEIGHT OF BURST ADJUSTMENT FACTOR <i>MT</i>	5														
OFFICE SUPPLIES																
1	PENCIL, GREASE <i>RED</i>	2														
2	PENCIL, GREASE <i>YELLOW</i>	2														
3	PENCIL, GREASE <i>BLUE</i>	2														
4	PENCIL, GREASE <i>BLACK</i>	2														
5	PENCIL, GREASE <i>GREEN</i>	2														
6	OVERLAY PAPER, SHEET 24" X 30"	12														
7	PENCIL, LEAD No1 OR No2	12														
8	RULER, WOOD 12"	1														

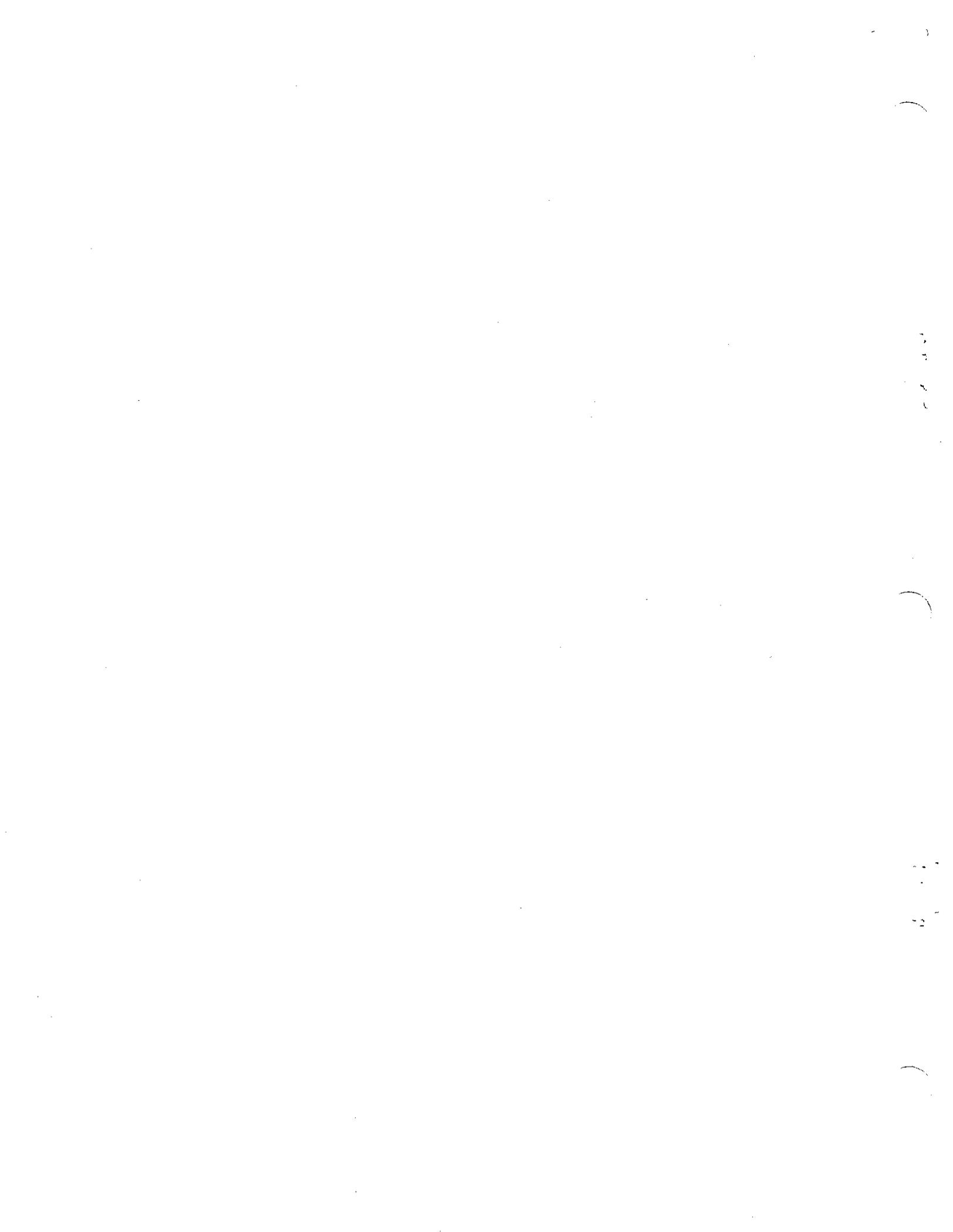
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SAMPLE CONTROL CENTER INVENTORY (continued)

ITEM #	NOMENCLATURE	QTY	J	F	M	A	M	J	J	A	S	O	N	D
OFFICE SUPPLIES (CONTINUED)														
9	RULER, WOOD 18'	1												
10	SCISSORS, PAPER	1												
11	PAD, WRITING, LINED 8" X 10 1/2"	5												
12	COMPASS, DRAFTING	2												
13	THUMB TACKS (BOX)	1												
14	TAPE, MASKING 1/2" (ROLL)	2												
15	PAPERCLIPS (BOX)	1												
16	FILE, FOLDER, MANILA	15												
17	CARBON PAPER, SHEET	15												
18	PEN BALLPOINT, BLACK (BOX)	1												
19	NOTEBOOK, STENO	2												
20	ENVELOPE, 8 1/2" X 11 1/2"	15												
21	PENCIL SHARPENER	1												
22	POCKET CALCULATOR	1												
23	FIELD MESSAGE BOOK	4												
24	CALCULATOR, YIELD M28	1												
25	AREA PREDICTOR, RADIOLOGICAL A2	1												
26	FLASHLIGHT, W/RED LENSE	1												
27	BATTERIES (D CELL)	6												
28	OVERLAY, PLASTIC 24" X 30"	12												
29	PENCIL ERASER	2												
30	APPROPRIATE AREA MAPS	2												
31	HAIRLINES	10												

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APPENDIX I

Sample NBC Officer/NCO Assignment Letter

UNITED STATES MARINE CORPS

UNIT TITLE _____
MARINE AIRCRAFT GROUP _____
MARINE AIRCRAFT WING, MARFOR _____
UNIT 37300 _____
FPO AP 96603-7300

IN REPLY REFER TO:
3400
CO/ini
DATE

From: Commanding Officer, VMFA/VMA/VMAQ/MALS _____
To: Officer being appointed

Subj: APPOINTMENT OF ADDITIONAL DUTY NBC DEFENSE OFFICER

Ref: (a) WgO P3400.1_
(b) GruO P3400.1_

1. In accordance with the references, you are hereby appointed as the Squadron Additional Duty Nuclear, Biological, and Chemical Defense Officer (NBCDO) for VMFA/VMAQ/MALS _____.

Commanding Officer's Signature

FIRST ENDORSEMENT

From: Officer being appointed
To: Commanding Officer, VMFA/VMAQ/MALS _____

1. I have read and am cognizant of the contents of the references. I hereby assume the duties as the NBC Defense Officer for VMFA/VMAQ/MALS _____.

NBCD Officer's Signature

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SOP FOR NBCD READINESS

APPENDIX J

Sample NBC Defense Team Assignment Letter

UNITED STATES MARINE CORPS

UNIT TITLE
MARINE AIRCRAFT GROUP _____
MARINE AIRCRAFT WING, MARFOR _____
UNIT 37300
FPO AP 96603-7300

IN REPLY REFER TO:

3400
NBC/ini
DATE

From: Commanding Officer, VMFA/VMA/VMAQ/MALS _____
To: Commanding Officer, MAG 12 (Attn: NBC Defense Officer)
Subj: ASSIGNMENT OF VMFA/VMA/VMAQ/MALS SUADRON NBC DEFENSE TEAM
PERSONNEL

Ref: (a) WgO P3400.1_
(b) GruO P3400.1_

1. In accordance with the references, the personnel listed below have been assigned to the following positions:

<u>NBCD OFFICER</u>	<u>SCHOOL TRAINED</u>	<u>DATE</u>	<u>M17 LIC</u>
Name	Y or N		Y or No
<u>NBCD NCO</u>	<u>SCHOOL TRAINED</u>	<u>DATE</u>	<u>M17 LIC</u>
Name	Y or N		Y or No
<u>MONITOR /SURVEY TEAM</u>	<u>SCHOOL TRAINED</u>	<u>DATE</u>	<u>M17 LIC</u>
Name	Y or N		Y or No
<u>DECONTAMINATION TEAM</u>	<u>SCHOOL TRAINED</u>	<u>DATE</u>	<u>M17 LIC</u>
Name	Y or N		Y or No

2. Point of contact is NBC Defense Officer at extension xxx-xxxx.

Commanding Officer's Signature

SOP FOR NBCD READINESS

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SOP FOR NBCD READINESS

APPENDIX K

Sample Control Center Team Assignment Letter

UNITED STATES MARINE CORPS

UNIT TITLE
MARINE AIRCRAFT GROUP _____
MARINE AIRCRAFT WING, MARFOR _____
UNIT 37300
FPO AP 96603-7300

IN REPLY REFER TO:
3400
NBC/ccr
DATE

From: NBC Defense Officer
To: Battalion Control Center Team

Subj: APPOINTMENT OF VMFA/VMA/VMAQ/MALS CONTROL CENTER TEAM

Ref: (a) WgO P3400.
(b) GruO P3400.1
(c) FMFM 11-17

1. In accordance with reference (a), the below listed individuals have been appointed as VMFA/VMA/VMAQ/MALS Control Center Team:

<u>Rank</u>	<u>Name</u>	<u>Billet</u>
Advisor		Control Center OIC/NBC
		Recorder
		Plotter

2. These personnel will be guided in the performance of their duties by references.

3. Point of Contact is NBCD Officer at extension xxx-xxxx.

NBC Officer's Signature

SOP FOR NBCD READINESS

APPENDIX L

Mission Oriented Protective Posture Levels (MOPP)

MOPP LEVEL	OVERGARMENT	OVERBOOTS	MASK W/HOOD	GLOVES
MOPP READY	AVAILABLE W/IN 2 HOURS.	AVAILABLE W/IN 2 HOURS	AVAILABLE W/IN 2 HOURS	AVAILABLE W/IN 2 HOURS
0	CARRIED OR W/IN ARMS REACH	CARRIED OR W/IN ARMS REACH	CARRIED OR W/IN ARMS REACH	CARRIED OR W/IN ARMS REACH
1	WORN OPEN OR CLOSED BASED ON TEMP/WORKLOAD	CARRIED	CARRIED	CARRIED
2	SAME AS MOPP 1	WORN	CARRIED	CARRIED
3	SAME AS MOPP 1	WORN	HOOD WORN UP OR DOWN BASED ON TEMP/WORKLOAD	CARRIED
4	WORN CLOSED	WORN	WORN DOWN	WORN

** The Marine Aircraft Group Commander can alter the prescribed MOPP levels for various reasons pertaining to the current tactical situation.

** There is also a **Mask Only Posture** which may be prescribed by the Battalion Commander in the case of nonpersistent agents that do not constitute a liquid contamination hazard.