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## UNITED STATES MARINE CORPS

3D MARINE DIVISION (-) (REIN), FMF  
UNIT 35801  
FPO AP 96602-5801

DivO P3400.2B  
G-3/NBC  
8 Sep 94

### DIVISION ORDER P3400.2B

From: Commanding General  
To: Distribution List

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

Ref: (a) MCO 3400.3E  
(b) MCO 1510.71A  
(c) FMFPacO P3401.13A  
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(h) FMFM 11-9  
(i) FMFM 11-10  
(j) FMFM 11-17  
(k) FMFM 11-20  
(l) FM 3-3  
(m) OH-11  
(n) TI 10010-20/5  
(o) SL-8-09996A  
(p) NAVMED P-5041

Encl: (1 Locator Sheet)

Report Required: Semi-Annual NBCD Training Report, par. 4003.1

1. Purpose. To promulgate, per references (a) through (p), the Nuclear, Biological and Chemical Defense (NBCD) requirements for the 3d Marine Division (3d MarDiv).

2. Cancellation. DivO P3400.2A

3. Background. This SOP assigns responsibilities and establishes standard procedures for organization, equipment, training and management of NBCD operations within 3d MarDiv.

4. Action. Commanding officers will ensure that NBCD operations and training are conducted in accordance with the requirements of this Manual.

5. Summary of Revision. This revision contains a substantial number of changes and should be reviewed in its entirety.

DivO P3400.2B

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6. Recommendations. Recommendations and comments concerning the contents of this SOP are encouraged. Submit comments and recommendations to the CG, 3d MarDiv (Attn: G-3/NBC) via the appropriate chain of command.

7 Certification. Reviewed and approved this date



W. G. FORD  
Chief of Staff

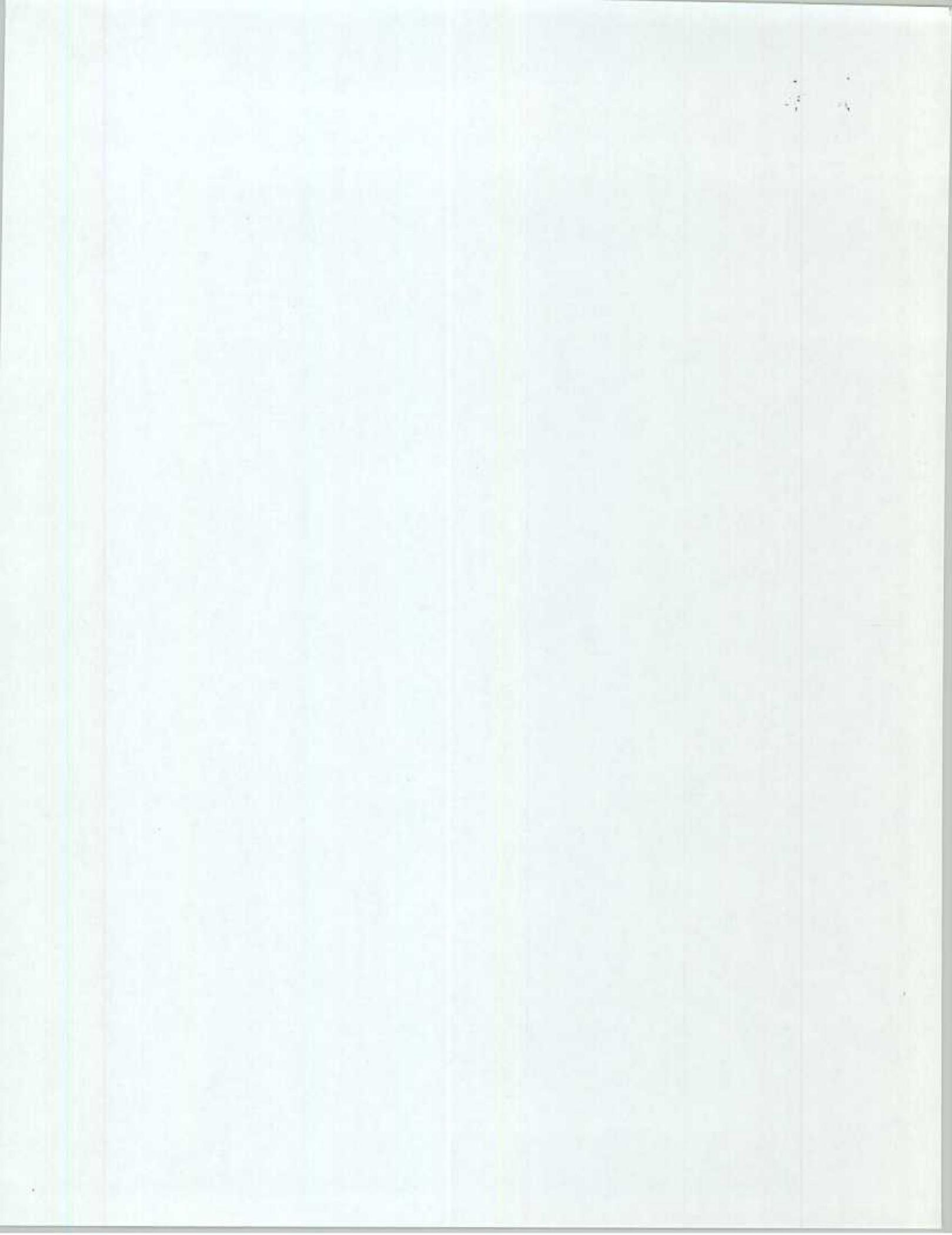
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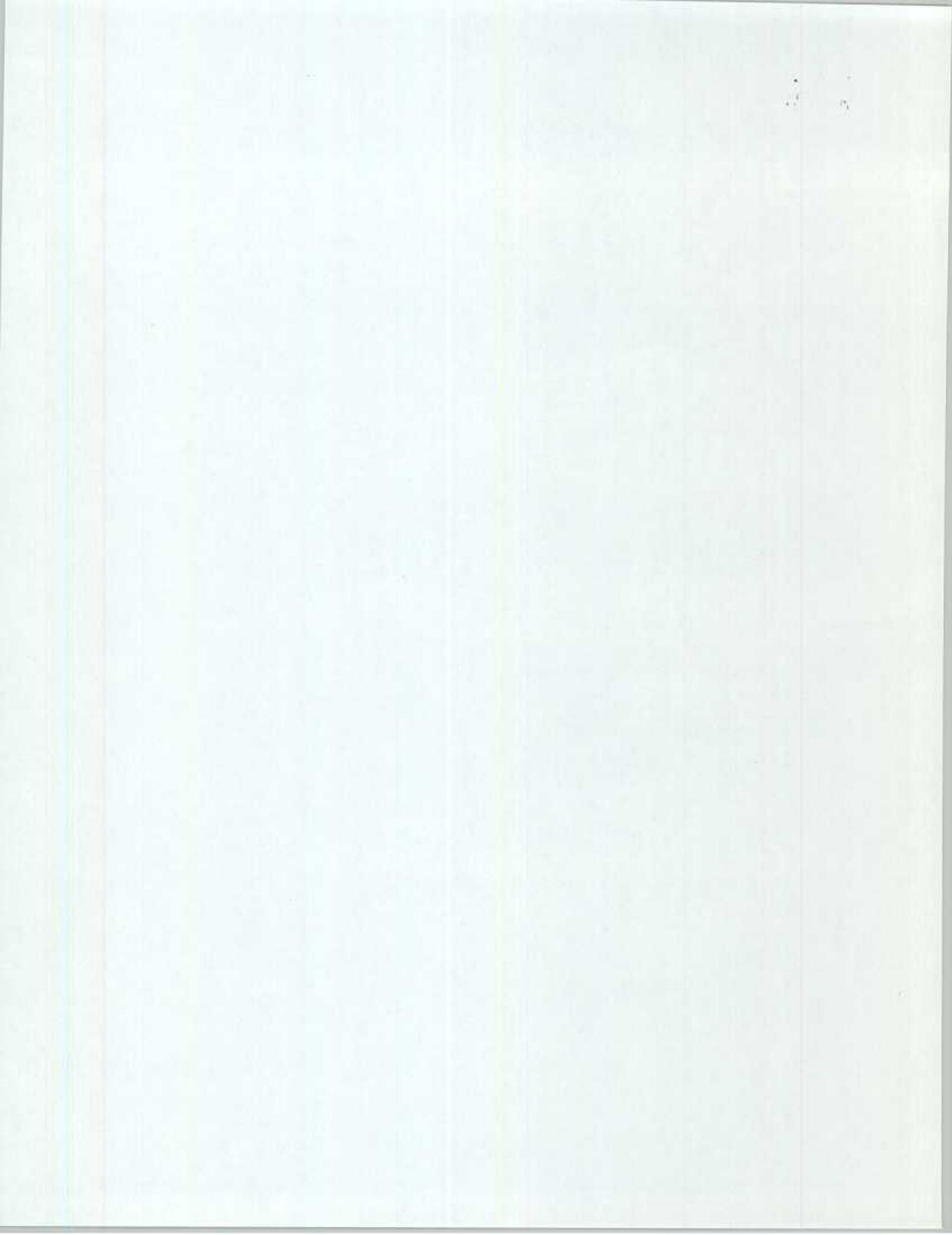
LOCATOR SHEET

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

Location: \_\_\_\_\_  
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# SOP FOR NBCD

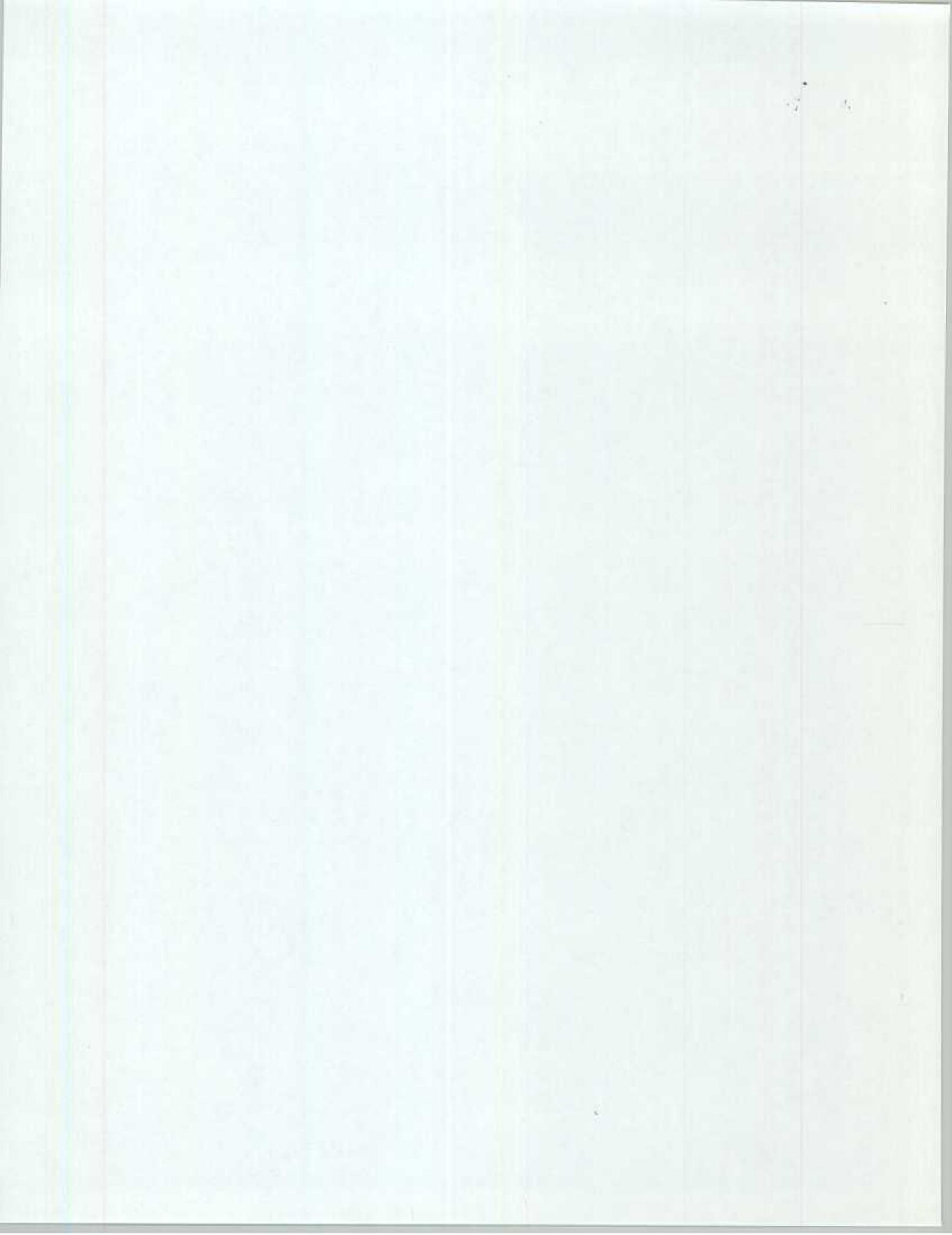
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## SOP FOR NBCD

### INTRODUCTION

0001. GENERAL. The ability of this command to survive and maintain effectiveness after a NBC attack is dependent upon units and individual Marines attaining and maintaining a high degree of readiness. Operational NBC Defense procedures must be exercised in order that appropriate action is instinctively employed.

0002. SCOPE. This Manual contains instructions and guidance for the standardization of NBCD operations and training to include staff responsibilities, NBCD organization, proficiency standards, training requirements, operational procedures, NBCD equipment, and inspections.

0003. CONCEPT OF OPERATIONS. The 3d MarDiv NBCD Concept of Operations will be governed by the policies and procedures listed and outlined in this SOP and other applicable publications and directives as required.

0004. COMMAND RESPONSIBILITY. All subordinate commanders are responsible for their unit's organizational readiness and effectiveness under conditions resulting from employment of nuclear, biological, and chemical weapons. The ability to direct and supervise individuals during NBCD operations and training must be continuously practiced to achieve and maintain a high state of readiness. All personnel must receive appropriate training in NBCD procedures and protection. All commands will publish and maintain an effective NBCD SOP.

0005. POLICY. The decision for the United States Armed Forces to use nuclear weapons rests with the President of the United States. Commanders will receive specific directives relative to their employment through command channels. Biological weapons are not maintained or utilized by the United States nor will toxic chemical weapons be used by U.S. forces. Commanders are authorized to use certain chemical agents such as smoke, incendiaries, and riot control agents as reflected by current directives. This Manual shall not be interpreted in any other manner as authority for the use of any chemical agent other than capsule-packed CS for use in a mask confidence exercise (CS chamber).

0006. NUCLEAR WEAPONS. Nuclear weapons produce mass casualties and material damage from three primary effects: heat, blast, and radiation. The effects of nuclear weapons employment depends primarily on the weapon type, yield, delivery, height of burst and weather/terrain in the target area. Radiation as a casualty producer is of primary importance in the form of fallout; however, electromagnetic radiation may also temporarily interrupt the operation/calibration of electronic equipment in the general area of detonation. Detection of radiological hazards in the field can be accomplished by Marines with minimal training.

0007. BIOLOGICAL WEAPONS. Biological warfare is the employment of living organisms, toxic biological products, and biological plant growth regulators to produce death or casualties in man, animals, or plants. The considerable advances in microbiology have vastly refined and enlarged any nation's ability to deliberately spread diseases through the production and employment of biological agents. Biological agents are not readily detectable in a field environment.

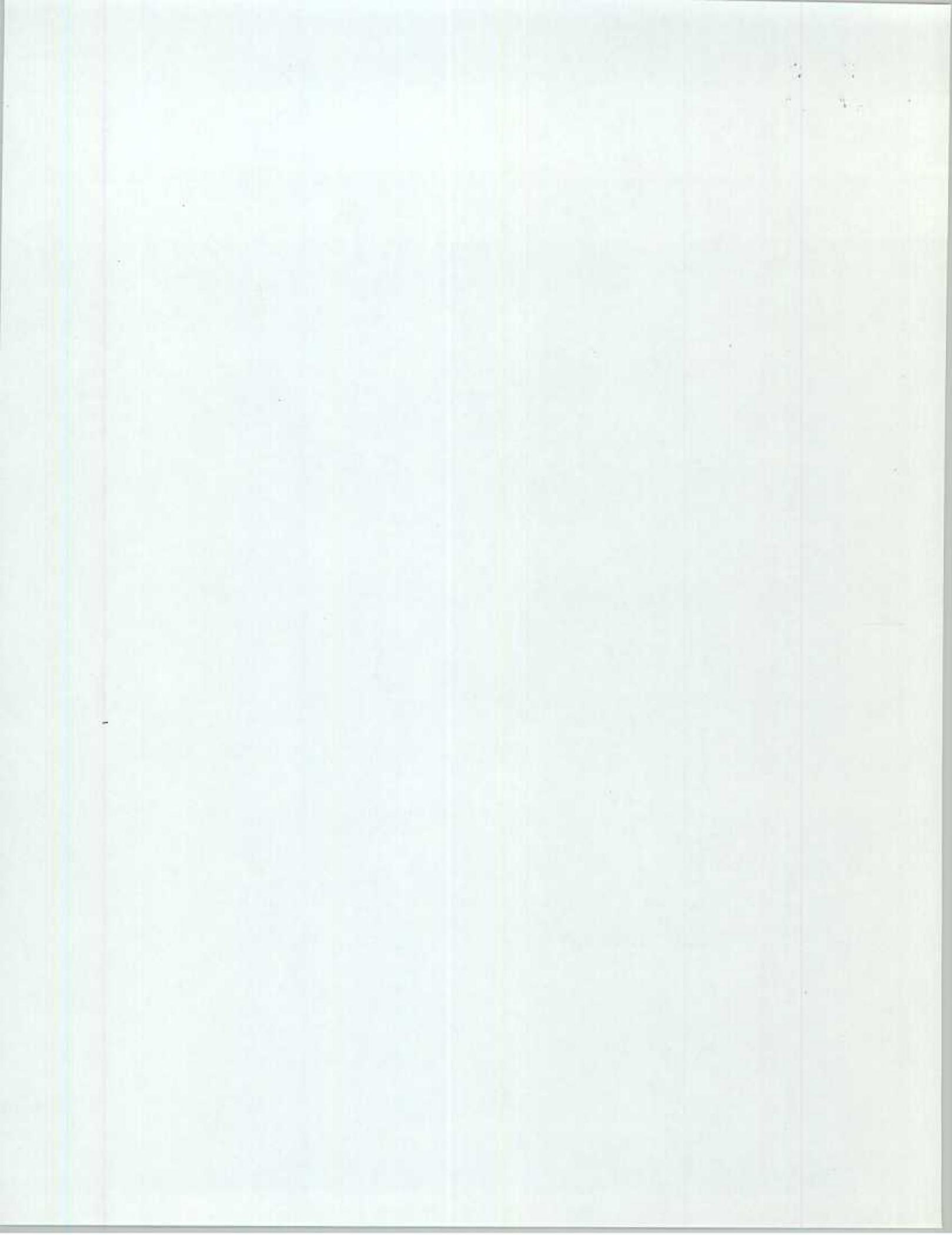
0008. CHEMICAL WEAPONS. Chemical weapons are capable of producing mass casualties over large areas. They also have the capability of being used as riot control and training agents. They can be employed so as not to cause damage to surrounding terrain, installations, or facilities. Detection/identification procedures can be accomplished in the field by Marines with minimal training.

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CHAPTER 1

STAFF RESPONSIBILITIES

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## SOP FOR NBCD

### CHAPTER 1

#### STAFF RESPONSIBILITIES

1000. GENERAL. The Assistant Chief of Staff (AC/S), G-3 has general cognizance over NBCD efforts. The principles of staff procedures and functions remain basically unchanged by NBCD operations. These operations do, however, influence the fields of staff responsibilities. To ensure clear understanding of this influence, specific additional responsibilities and duties pertaining to NBCD are assigned.

1001. GENERAL/EXECUTIVE STAFF FUNCTIONS IN NBCD OPERATIONS. Staff officers need to understand the characteristics and effects of NBC weapons as they relate to specific functions. These staff considerations of NBC warfare must become a matter of routine concern in the planning and training phases of the Division's preparation for combat operations.

1. AC/S, G-1/S-1

a. Coordinates radiation exposure status of subordinate organizations with the G-3/S-3 and medical officer.

b. Determines straggler control measures.

c. Oversees graves registration efforts of contaminated remains.

d. Provides for handling of contaminated prisoners of war (POW's)

(1) Coordination must be made with the NBCD Officer to prepare plans, orders, and instructions to provide POW's with NBCD protective equipment when needed as specified in current international agreements and treaties.

(2) Coordinates with the NBCD Officer to plan the use of POW's in self-decontamination operations as permissible under the Geneva Convention.

e. Coordinates with the G-3/S-3 that appropriate priority is given to the assignment of personnel to NBCD billets.

2 AC/S, G-2/S-2

a. Effects the production and dissemination of intelligence in the following areas:

(1) Enemy NBC production capabilities, weapons and delivery systems.

(2) Enemy intent to use NBC weapons.

b. Develops a collection plan to identify and locate targets appropriate for attack with nuclear weapons as applicable.

c. Provide to the CG/CO and AC/S,G-3/S-3 command security advice and counterintelligence advice and operations in support of friendly counter-NBC operations.

d. Provides current weather data every 6 hours as required for use by the NBCD Officer to effect accurate hazard predictions.

3. AC/S, G-3/S-3

a. Prepares operation plans/orders to implement the commander's guidance for NBC operations. Appendix A gives format.

b. Conducts tactical NBCD planning as applicable.

c. Plans and coordinates NBCD training and inspections.

d. Ensures the Division NBCD SOP is reviewed and updated as required

e. Activates the NBC Center (NBCC) and coordinates its activities with other staff sections when required.

f. Considers the NBC threat when determining the general location of the command post, maneuver elements and combat service support elements (CSSE).

g. Initiates activities to degrade and counter the enemy's ability to acquire targets for NBC attack.

h. Determines priorities for replacements required due to NBC warfare, including unit replacements, in coordination with G-1/S-1.

i. Establishes the minimum NBC condition and minimum MOPP level in coordination with the NBCD Officer and approval of the Commanding General or Commanding Officer.

4. AC/S, G-4/S-4

- a. Disperses logistic support facilities to reduce vulnerability to NBC weapons.
- b. Plans for increased transportation requirements due to the dispersion of units, increased demand for NBCD replacement equipment, and decontamination logistics requirements.
- c. Ensures availability of NBCD equipment.
- d. Oversees maintenance of NBCD equipment.
- e. Develops plans to transport contaminated casualties.
- f. Plans for large-scale thorough decontamination operations in response to NBC attacks as required.
- g. Prepares plans for use of personnel shelters, decontamination sites, emergency power plants, and laundry facilities as required.

5 Medical Officer

- a. Prescribes treatment procedures and ensures that facilities for treatment of NBC casualties are available
- b. Supervises inspection of food and water supplies for contamination.
- c. Makes recommendations to prevent, and takes actions to detect, contamination of food and water supplies.
- d. Coordinates with the G-4/S-4, NBCD officer and appropriate construction units in the preparation of plans for the building of thorough patient decontamination sites with emphasis being on the utilization of existing structures if possible.
- e. Advises the commander and pertinent staff officers on the impact of radiation exposure of units.
- f. Directs collection and processing of all biological samples for identification.
- g. Oversees necessary monitoring of all individual health records to ensure up-to-date immunizations of all personnel against potential biological agents.
- h. Ensures training of medical personnel in the treatment of NBC casualties.

- i. Coordinates procurement and distribution of medical supplies required for pretreatment and treatment of NBC casualties.
- j. Develops plans, in coordination with the G-4/S-4, for the handling and movement of contaminated casualties.
- k. Plans and supervises medical treatment for POW's and civilian internees/detainees who have been exposed to NBC agents.
- l. Ensures personnel requiring optical inserts for protective masks have them.

#### 6. Engineer Officer

- a. Coordinates with the G-4/S-4, NBCD Officer and construction units in the preparation of plans for the building of decontamination sites with emphasis being on the utilization of existing structures if possible.
- b. Plans for construction of fortifications, installations, and facilities providing maximum protection against NBC weapons.
- c. Prepares plans for emergency tasks. This includes water decontamination and restoration of tactical facilities.
- d. Recommends traffic regulations for routes of communications as impacted by physical and contamination conditions.
- e. Coordinates well drilling operations as required to support NBCD operations.
- f. Oversees maintenance of NBC decontamination engineer equipment.

#### 7 Motor Transport Officer

- a. Oversees the decontamination of motor transport equipment as required.
- b. Coordinates mass evacuation of personnel and material as necessary under NBC conditions with the G-4/S-4.
- c. Coordinates the possible use of maintenance facilities as decontamination sites with the G-4/S-4 and NBCD Officer.

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### 8. Supply Officer

a. Coordinates the acquisition, storage, control, issue, security, recovery, supervision, and redistribution of all NBCD equipment and supplies with the G-4/S-4 and NBCD Officer.

b. Provides advice and supervises NBC supply procedures to include property accounting responsibilities.

c. Ensures that supply stocks are protected from contamination to the maximum extent possible.

### 9. Communications Officer

a. Provides a communications-electronics annex to operation orders/plans that includes appropriate net utilization for NBCD traffic.

b. Provides communication capability for NBCD teams directly under the control of the command element.

c. Prepares special communications plans for mass casualty evacuation.

d. Plans to counter the effects of electromagnetic pulse (EMP) on communication equipment resulting from the use of nuclear weapons.

### 10. NBCD Officer

a. Advises the commander on NBC defense readiness

b. Advises the commander on radiation operational exposure guidance (OEG).

c. Prepares NBC defense plans, orders, and instructions necessary to implement the commander's policies. This includes SOP's for NBCD, NBCD orders/annexes, and NBCD inspections.

d. Determines and recommends requirements for NBCD supplies and equipment.

e. Estimates personnel, equipment, and supply requirements to support NBCD appendix of operation orders.

f. Coordinates and develops NBCD training exercises.

g. Evaluates command NBCD readiness

h. Supervises operation of the NBCC as applicable

- i. Conducts/supervises NBCD equipment inspections
- j. Provides recommendations for the training of the command and for the training of NBCD specialists to include formal school quotas.
- k. Provides technical assistance in examination of captured enemy NBC equipment.
- l. Plans and makes recommendations for NBC decontamination and reconnaissance operations.

11. NBC NCO'S

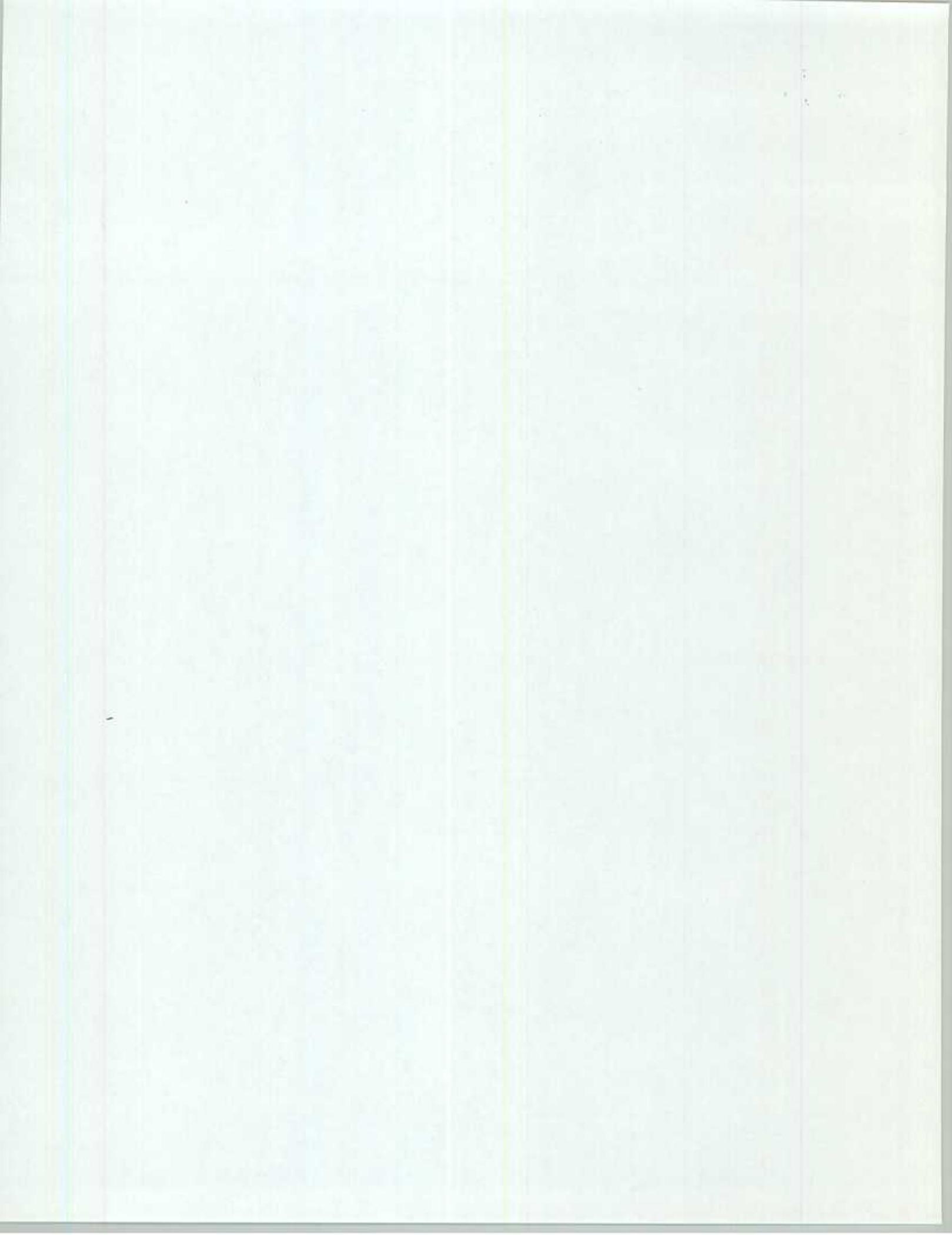
- a. Assists the NBCD Officer in the execution of his duties
- b. Assists the NBCD Officer in ensuring that NBCD SOP's are up-to-date and effectively promulgated.
- c. Maintains NBCD publications
- d. Recommends unit NBCD training requirements.
- e. Plan NBC reconnaissance/survey operations
- f. Plan NBC surveillance/monitor operations.
- g. Prepare messages for NBC reports.
- h. Oversee decontamination operations

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CHAPTER 2

NBC DEFENSE ORGANIZATION

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SMOKE OPERATIONS	2005	
COMBAT SERVICE SUPPORT PLANNING .	2006	
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## SOP FOR NBCD

### CHAPTER 2

#### NBC DEFENSE ORGANIZATION

2000. GENERAL. Each command within 3d MarDiv must assign Marines as required to specialized NBC Defense teams to perform those actions necessary to preclude loss of combat effectiveness while operating in a NBC environment.

#### 2001 NBC CENTER (NBCC)

1. The NBCC for 3d MarDiv will be comprised of Watch Teams from the Division NBC Platoon and will be collocated with the G-3 in the Division Command Post (Main).

2. Any subordinate command of 3d MarDiv operating independently from the Division Command Element and acting as a Command Element in a NBC warfare environment will form a fully capable NBCC. Additional personnel/support in these efforts are available from the Division NBC Platoon as required.

3. NBCC functions are to prepare and supervise the following NBCD operations:

a. Receive and disseminate NBC reports listed in Appendix B as applicable or directed by higher authority when the enemy has initiated employment of NBC weapons, or when employment is considered imminent.

b. Determine or interpret fallout prediction data, in order to inform the commander and subordinate units of expected radiological effects in the Division area of operations.

c. Evaluate and disseminate NBC contamination information.

d. Maintain current NBC contamination overlays for the Division/Unit situation maps.

e. Maintain and report radiation exposure status information listed in Appendix C on all elements of the Division/Unit as required.

f. Broadcast a Chemical Downwind Messages (CDM) every 6 hours as required.

g. Broadcast an Effective Downwind Message (EDM) every 6 hours as required when there is a possibility of nuclear attack

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### 2002. UNIT NBCD ORGANIZATION

1. Each unit down to Company/Battery level will have an assigned NBCD Officer and NCO performing primary or additional duties with the following responsibilities:

a. Specific duties for unit NBCD Officers are given in OH-11, however, the most important duty is ADVISING THE COMMANDER. It is imperative that the Officer assigned to this billet be knowledgeable and in a position that will allow him to perform NBCD duties in a combat environment. Additional duty NBCD Officers will be assigned in writing.

b. The NBCD Officer of each command within 3d MarDiv will maintain, at a minimum, the capability to report NBC attacks, advise the Unit Commander on any NBC attack for which information is received, and supervise unit NBCD measures.

c. The duties of the NBCD NCO or Specialist, like those of the NBCD Officer, vary with the level of command. The NBCD NCO or Specialist should be prepared to assist the NBCD Officer in his duties as previously delineated. Additional duty NBCD NCO's and Specialists will be assigned in writing.

### 2. NBC Detection Equipment Operators

a. NBC Detection Equipment Operators will be trained and assigned in all units down to Company/Battery level throughout the Division based on the quantity of AN/VDR-2 RADIAC Meters rated by T/E. In addition to operation of the AN/VDR-2 RADIAC Meter, they will also be responsible for employment of the following NBC detection equipment:

(1) M256A1 Chemical Agent Detection Kit.

(2) Biological Sampling Kit (BSK).

b. NBC Detection Equipment Operators will be trained in all aspects of employing their assigned equipment to conduct monitor/survey operations as required and reporting same through all available communication means.

c. All Marines must also be trained in the use of the M256A1 Chemical Agent Detection Kit, M8/M9 Chemical Detector Paper and personal dosimeters.

### 3 Decontamination Teams

a. All 3d MarDiv units down to Company/Battery level will organize and train a decontamination team consisting of at least 6 Marines and one NCOIC.

b. Teams should be organized and trained with regard to unit organization and mission. Final determination of personnel to meet NBCD team requirements listed rests with the unit; however, team cohesion, stability and capability are the key to permanent readiness in additional NBCD duties.

c. Decontamination teams must possess full operational decontamination capability and thorough decontamination capability with augmentation. Teams must also be capable of performing patient decontamination if so assigned.

d. All decontamination team members must be proficient in NBC monitoring techniques as they pertain to decontamination operations.

e. Each decontamination team must have a minimum of three licensed operators assigned for the M12A1 or M17E1 Decontamination Apparatuses rated, depending on unit Table of Equipment.

f. Third Combat Engineer Battalion/Combat Engineer Company, Combat Support Group must be prepared to establish a thorough decontamination site and provide utility support in a general support or a direct support role for the Division. The decontamination operations will be conducted by the contaminated unit(s) and augmentation will come from the Division NBCD Platoon.

4. NBCD Team Requirements Matrix. Figure 2-1, shown below, lists 3d MarDiv NBCD NBCC, detection, decontamination and patient decontamination capability requirements:

UNIT	NBCC	DETECTION	OPERATIONAL DECON	THOROUGH DECON	PATIENT DECON
CO/BTRY		X	X		X (3)
BATTALION		X	X	X (2)	X (3)
REGIMENT (HQ)	X (1)	X	X	X (2)	X (3)
DIVISION (HQ Bn)	X	X	X	X (2)	X (3)

FIGURE 2-1

- Notes:
- (1) When operating independently
  - (2) When augmented by supporting elements or consolidation of Company Teams.
  - (3) When specifically tasked

### 5. Designated Observer System (Nuclear Attacks Only)

a. When the possibility exists of an enemy nuclear attack, certain units will be tasked as designated observers.

b. Designated observers provide accurate data about nuclear bursts. They are not used for chemical attacks which all units will report.

c. Observers are selected to provide total coverage over the entire area of interest.

d. The designated observer system provides the essential data necessary to prepare hazard location predictions and nuclear damage assessments. It provides raw observer data using a standard report format (NBC-1/NBC-1 Followup).

e. Artillery units are best suited as designated observers. They possess the optical equipment required for sighting measurements of a nuclear burst. This equipment in order of preference follows:

M2 aiming circle

M65 or M43 battery command periscope.

T2 theodolite.

M2 pocket transit.

f. Any other unit possessing the above equipment may also be designated as observers (such as mortar platoons).

g. Training in designated observer techniques for nuclear bursts must be conducted. Accurate data is required to properly predict all hazards emanating from a nuclear burst and the potential effects upon the Division.

### 2003. NBC WARNING AND REPORTING SYSTEM (NBCWRS) COMMUNICATIONS PROCEDURES

1. Rapid communication is critical for the NBCWRS to effectively warn and report NBC attacks and hazards. A dedicated net is desirable for the speed necessary. NBC hazards can extend up to 50 km downwind for chemical hazards and 200 km or more for biological hazards. The tops of nuclear burst clouds can extend thousands of feet into the air with fallout debris drifting vast distances downwind. Units in downwind hazard areas must be warned immediately to preclude contamination and casualties.

2. If a dedicated net is not available to support the NBCWRS following procedures will be utilized:

a. NBCWRS messages will be transmitted over normal operations nets or "Ops Talk" as required.

b. Initial NBC-1 reports will be sent with a "Flash" precedence.

c. Any other NBCWRS messages that are time critical in nature will be sent as "Immediate" precedence.

3. As a supplementary means the Position Location and Reporting System (PLRS) may be utilized. PLRS offers an effective means of transmitting instantaneously all NBCWRS messages when utilized by trained operators. The PLRS Master Station (MS) can establish warning zones of downwind NBC hazards. All PLRS equipped units in downwind hazard areas can be effectively and immediately notified when they penetrate an established NBC zone. Messages sent via PLRS are supplementary to regular communications nets. PLRS communication capability is limited only by the proficiency level of operators. The following procedures apply:

a. Established NBCC's should be equipped with PCPLRS capability.

b. All PLRS Basic User Unit (BUU) operators will be thoroughly trained in NBCWRS message formats

c. All BUU operators at Battalion level or higher within the Division must have the MILID of the supporting NBCC.

d. Company/Battery BUU operators under NBC attack or observing an NBC attack will transmit NBC-1 and NBC-1 follow-up reports to the Battalion NBCDO.

e. The Battalion NBCDO will direct the forwarding of NBC-1 reports received via PLRS to the Regt or Division NBCC. Simultaneously the Battalion should be transmitting NBC-1 reports at appropriate precedence via normal communications nets.

f. Upon receipt of an NBC-1 report from a Battalion or Regimental BUU operator, the NBCC will plot the hazard area.

g. The NBCC will approximate the downwind hazard area with a PLRS zone.

h. Grids of the PLRS zone will be sent to the PLRS MS via PCPLRS

i. The PLRS MS Operator will enter the NBC downwind hazard zone into the PLRS community.

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j. The MS Operator will send broadcast messages to BUU's within the PLRS community warning users of the newly created NBC zone.

k. All units within, approaching or departing the NBC downwind hazard zone can be tracked and analyzed visually on the NBCC PCPLRS computer screen.

1. The entire sequence of events from BUU transmission of an NBC-1 report, to plotting, to zone designation and broadcast warning can effectively take place in 10 minutes or less when all elements are properly trained.

### 2004. NBC STRIKE SERIAL NUMBERS

1. Strike serial numbers will be assigned by the Division NBCC. Regimental NBCC's will assign strike serial numbers when established.

2. Nuclear strike serial numbers starting with N2001 will be assigned to enemy nuclear attacks.

3. Biological strike serial numbers starting with B2001 will be assigned to enemy biological attacks.

4. Chemical strike serial numbers starting with C2001 will be assigned to enemy chemical attacks.

### 2005. SMOKE OPERATIONS

1. Smoke operations are designed to attack enemy reconnaissance, surveillance and target acquisition efforts and can also aid in maneuver and deception.

2. NBCD Officers and Specialists can greatly assist in the effective employment of smoke utilizing weather data transmitted every 6 hours in the Chemical Downwind Message or by determining local weather factors when a CDM is lacking.

3. Support for smoke operations may be available from the Army in a Joint Task Force (JTF) environment or provided through the use of smoke pots employed by unit Marines and NBCD Specialists.

4. Figure 2-2, lists smoke planning factors:

SMOKE PLANNING FACTORS

STATIC SMOKE	NUMBER OF SMOKE SYSTEMS	NUMBER OF POINT SOURCES	AVERAGE CLOUD PARAMETERS			
			CROSSWIND WIDTH		DOWNWIND DEPTH	
			HAZE	BLANKET	HAZE	BLANKET
	24	24	1.00-3.40	0.50-1.70	0.65-10.0	0.65-10.0
	24	24	0.50-1.70	0.30-0.90	0.65-10.0	0.65-10.0
	12	6	0.30-0.90	0.15-1.20	0.65-10.0	0.65-10.0
MOBILE SMOKE	12	6	0.55-1.40	0.50-1.20	0.15-3.60	0.05-1.40
	14	7	0.60-1.50	0.55-1.30	0.15-3.60	0.05-1.45

NOTE: Width and depth are in km. FIGURE 2-2

2006. COMBAT SERVICE SUPPORT PLANNING. Combat service support (CSS) planning in an NBC environment presents operational dilemmas. CSS must be thoroughly thought out and planned to ensure successful mission completion. The NBC environment severely drains CSS systems. Supplies and equipment are lost because of destruction or contamination. Decontamination of equipment prior to repair increases maintenance time. Water requirements increase because of increased water consumption by individual Marines and support for medical and decontamination operations. Issue and exchange of protective clothing and equipment creates logistics overload. Whereas it is impossible to predict exact or even approximate combat losses in an NBC environment, logistics planners must be aware of the potential for damage due to the mass destruction nature of NBC weapons. Enemy capability and intent must be examined closely. Worst case estimates must be made to ensure logistics sustainability of operations and successful mission completion.

1. General Supply. NBC operations require more supplies than normal operations. Replacement factors and consumption rates must be increased, especially those used for decontamination supplies. Protection of personnel and logistics installations are necessary. To anticipate requirements and forestall shortages, logistics officers must consider experience factors, known effects of NBC weapons, and enemy NBC capability. Precise and detailed planning must provide for initial requirements on-hand with a gradual build-up of supplies to fulfill later requirements. Assault unit supplies should initially be limited to a 2 to 3 day level. The

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buildup is limited to the minimum required. Build-up depends on the size of the force involved, size of the area available for logistics installations, tactical situation, and future plans. Provisions must be made to fill emergency requirements resulting from NBC attack. This is accomplished by:

a. Providing a readily available supply reserve.

b. Arranging for emergency air delivery of supplies from rear area supply installations.

(1) Water. Operating in protective clothing increases individual potable water consumption. The use of non-potable water and nonaqueous decontaminates substantially improves the speed and efficiency of equipment decontamination operations.

(2) Ammunition. More reliance is placed on indirect fire support in an NBC environment because of degraded ability to accurately aim direct fire weapons in MOPP gear. This, coupled with the problems of locating targets accurately in MOPP gear greatly increases artillery ammunition requirements.

(3) NBCD Equipment. Considerable planning must be given to supplying and maintaining NBC protection equipment (class II and class IV). The following equipment requires special resupply considerations:

(a) Chemical Protective Ensemble. The chemical protective ensemble is serviceable in a chemical environment for 24 hours. MOPP exchange in a contaminated environment or removal of the overgarment in a clean environment is required.

(b) Decontamination Kits. Decontamination kits are limited in their decontamination capability. Small areas, a few small items of personal equipment, or partial decontamination of an individual is all that is possible with one kit. These kits are necessary in large quantities.

(c) Chemical Protective Gloves. Individuals are issued one pair of chemical protective gloves for each set of chemical overgarments. Gloves must be replaced when exchanging MOPP gear.

(d) Chemical Protective Boots. Individuals are issued one pair of chemical protective boots. Boots must be replaced when exchanging MOPP gear.

(e) Resupply Requests. The order for resupply of protective overgarments should include requests for protective gloves, protective boots and personal decontamination kits.

2. Transportation. Planning must address maximum effective utilization of transportation. The movement of units and equipment offers concentrated targets easily detected by the enemy unless carefully planned and executed. Movement planning should consider the following factors:

- a. Movement over multiple routes or by echelon to decrease concentrations.
- b. Assembly and movement under cover of darkness or during periods of reduced visibility.
- c. Use of covered and concealed routes.
- d. Speed of execution, particularly during loading and unloading.
- e. Use of smoke to screen assembly and movement
- f. Scheduled movement to limit unit separation.
- g. Factors affecting the transportation of troops and supplies include:

- (1) NBC contamination increases transportation requirements because of the time required to decontaminate equipment prior to its repair.

- (2) Mass casualty evacuation demands increased motor transport assets.

Overhead covers for vehicle operators.

- (4) Operators trained to avoid unnecessary concentration of vehicles and to perform decontamination operations.

- (5) Rerouting traffic to avoid contamination and reduce the ratio between the amount of supplies delivered and the miles traveled by transportation units.

- (6) Multiple POL transportation and storage facilities, such as port discharge facilities and tank farms, may be required

Plans to recover equipment from contaminated areas.

3. General Engineering. Protective measures prior to, and damage resulting from, NBC attack may require additional engineer efforts. Because of possible wide unit separation, Division engineers assist in erecting obstacles and installing minefields and barriers. Reinforcement of Division engineers by Force engineer units may be essential to effect successful engineer operations in forward areas.

Engineer personnel and equipment will be used to support provisional thorough decontamination operations as required.

4. Services. The service function involves the provision of construction, salvage, and other services required by the Division. Requirements for service support are derived from the composition of the Division, characteristics of the objective area, and MAGTF requirements for NBCD oriented support. Increased mobility, protection, and decontamination requirements are the primary service requirements induced by NBC warfare. Requirements for miscellaneous services (e.g., fumigation, bath, and laundry) increase sharply during NBCD operations. Disaster recovery planning and operations dictate the degree to which units are able to continue assigned assault missions.

5. Maintenance. Units continue to perform organizational maintenance of organic equipment. The maintenance process may require more time because of the need to decontaminate prior to the performance of maintenance.

2007. HEALTH SERVICE SUPPORT (HSS) OPERATIONS IN CONTAMINATED AREAS. By virtue of their primary close support mission, HSS personnel located with combat forces are the ones most likely to be functioning in a contaminated environment. Higher echelons of HSS may be able to locate in uncontaminated areas where the primary threat will be contamination hazards drifting downwind from the point of attack.

1. Initial battlefield collection, evacuation, and subsequent triage of patients, when both patient and HSS personnel are wearing chemical protective equipment, will be difficult. Health care provided to a contaminated patient may be limited prior to decontamination because of the danger to both the patient and HSS provider. Each procedure carried out before patient decontamination, or in the presence of a continuing hazard, must be carefully weighed with due consideration to both the patients' and HSS personnel welfare.

2. Operational principles and procedures are basic to all HSS facilities operating in a NBC warfare environment. Since each echelon of HSS may experience a different level and type of NBC threat, it is necessary for individual HSS facilities to modify basic procedures to best enable them to carry out their mission in a contaminated environment.

3. NBC warfare has the potential for generating enormous workloads for the HSS system. The most obvious impact is increased numbers of patients to be treated and/or evacuated. Equally important is the operational degradation of HSS units caused by the use of NBC weapons. Large demands are placed on the medical supply system. The effects of reduced treatment capability in units caring for

contaminated casualties is further compounded by reduced evacuation capability caused by possible restrictions on air evacuation and limited shipboard space for evacuated NBC casualties. In no instance however, shall casualties be denied access to medical treatment or transportation based on their contamination.

4. The HSS system must accomplish its mission in spite of these difficulties. As such, the following complex factors must be carefully balanced:

- a. The need to maintain maximum simplicity
- b. Protection of patients and staff from unnecessary exposure to NBC hazards.
- c. Decontamination of incoming patients.
- d. Rapid sorting of incoming patients.
- e. Unit mobility.
- f. Control of contamination within medical facilities.

5. Assuming that initial battlefield patient collection is successful, aid stations can expect large surges in patient workload when a NBC attack occurs in their area of support. NBC attacks can produce high casualty rates over short periods. Treatment facilities should expect to receive large numbers of NBC casualties in surges, dependent on the type and effects of NBC attacks.

6. The most time-consuming task is decontamination of NBC casualties. This should be accomplished before medical treatment can be started if possible. Depending on the tactical situation, nonchemical casualties may also be high.

7. Supported units must augment aid stations and other supporting HSS facilities with additional nonmedical decontamination personnel to sustain operations in a contaminated environment. These personnel establish and operate patient decontamination facilities. While these nonmedical personnel need not have medical training, they must be designated, trained, and rehearsed in their augmentation role. Without this additional manpower to assist in decontamination of patients, medical facilities are greatly restricted in the number of patients they can treat and in the treatment they can render.

8. When NBC casualties are received at a treatment facility, they may also have traumatic wounds or illnesses. The results of NBC exposure must be treated without aggravating other injuries or

illnesses. The most frequent problem requiring clinical judgement is a decision as to which injury, wound, illness, or NBC exposure receives priority for treatment and/or evacuation.

9. Procedures to control hemorrhage, shock, respiratory, or other clinical condition may equal or surpass the urgency to treat the NBC agent exposure. It may be necessary to carry out required treatments in rapid sequences by simultaneous team action. Contaminated casualties who have traumatic injuries or other illnesses should be decontaminated as early as possible. However, the general principle "better contaminated and living than decontaminated and dead" must be followed. Lifesaving measures may be given priority over decontamination, despite the possibility of increased NBC injury caused by delay in specific treatment. When a contaminated casualty suffers another condition resulting in respiratory difficulty, hemorrhage, or shock, the recommended order of treatment priority is as follows:

- a. Restore/assist respiration.
- b. Control hemorrhage.
- c. Administer appropriate antidote/medication.
- d. Remove contaminated clothing as soon as possible.
- e. Decontaminate, where required, as conditions permit.
- f. Protect from the elements as required
- g. Treat shock, wounds, and illnesses which may endanger life if treatment is delayed.
- h. Evacuate patient as soon as possible.

10. Patient decontamination techniques are contained in FMFM 11-10, NBC Decontamination, and NAVMED P-5041, Treatment of Chemical Agent Casualties and Conventional Military Chemical Injuries. Decontamination is necessary to prevent spread of contamination and to protect personnel who must come in contact with contaminated patients. Decontamination is normally accomplished in the following sequence: self-aid, buddy aid, aid station, and medical unit decontamination facility.

a. During the ship-to-shore phase of an amphibious assault, medical care ashore is limited to the medical sections organic to combat units. Medical care for the assault force is provided by Corpsmen who land with the platoons. Since few medical personnel are ashore at this time, initial treatment by self-aid and buddy aid is an extremely important element of care. Casualties can be evacuated from point of wounding/injury to a Battalion Aid Station (BAS), evacuation station, or directly to a Casualty Receiving

Treatment Ship (CRTS). Since decontamination operations are extremely difficult during this period, all casualties coming from an area where NBC weapons have been employed should be considered contaminated.

b. At the BAS, casualties are triaged and stabilized. HSS personnel will likely be working in full protective gear. Decontamination may be attempted at an evacuation station only if facilities, manpower, and time are available. Triage must be performed prior to decontamination to conserve medical manpower and to ensure that casualties are properly categorized and prioritized for further evacuation.

c. After establishment of a Collecting and Clearing Company or Surgical Support Company ashore, a majority of casualties evacuated from a BAS will likely flow through the Medical Battalion treatment facility. This is likely to be the first potential location for a thorough casualty decontamination facility. Such thorough casualty decontamination sites must involve elements of the entire CSS organization, not just HSS elements. In order to function effectively, Medical Battalion treatment facilities should have collective protection shelters where medical care can be delivered to decontaminated casualties in an uncontaminated environment. To achieve the objective of decontaminated patients in an uncontaminated treatment facility, patient decontamination facilities manned by personnel from supported units and supervised by trained NBC personnel are required. Decontaminated casualties who have been stabilized and triaged are evacuated to a CRTS or to other rear areas for further treatment and disposition. If an airfield capable of handling fixed-wing aircraft is available, evacuation may be out of the amphibious objective area. NBC protection may be required for aircrew and casualties being evacuated.

d. The use of NBC weapons may change the type of casualties and how they are handled, but basic HSS doctrine does not change. Management of the NBC casualty ashore, afloat, and in transit is an all-hands evolution which must never be viewed as solely a Health Service Support function.

11. Management of patient evacuation should be accomplished as follows:

a. Hospital Corpsmen in a NBC environment endeavor to render appropriate emergency medical care to the wounded. Corpsmen must initiate procedures unique to a NBC environment. They should attempt to determine if an antidote has been administered, the number of doses, and whether or not more is needed. The total number of doses given must be entered on the Field Medical Card (DD Form 1380). A Corpsman must also attempt to determine if a casualty is contaminated and, if so, provide decontamination within his capability. He seldom has the time or resources to accomplish

significant decontamination. The primary means of decontamination at this level will therefore be self-aid or buddy aid. It is extremely important that Corpsmen in the field utilize the DD Form 1380 to record all treatment and decontamination procedures carried out at their level.

b. Air evacuation of contaminated casualties by helicopter is possible. Helicopters afford sufficient ventilation to prevent vapor buildup. Aircrews use protective masks while transporting contaminated casualties. Aircraft used to transport contaminated casualties must be decontaminated before transporting uncontaminated personnel. For this reason, air evacuation could be impractical in the tactical scenario. Planning for contaminated casualty evacuation to aid stations and CSSE medical facilities should be based on utilizing ground transportation should terrain permit.

c. Even though an aid station may not be the target area of a NBC attack, it is considered to be operating in a contaminated environment due to the danger of contamination by foot and vehicular traffic. All equipment exposed to contamination is assumed contaminated and used accordingly. Patients and HSS personnel must be protected from contact with contaminated equipment and personnel.

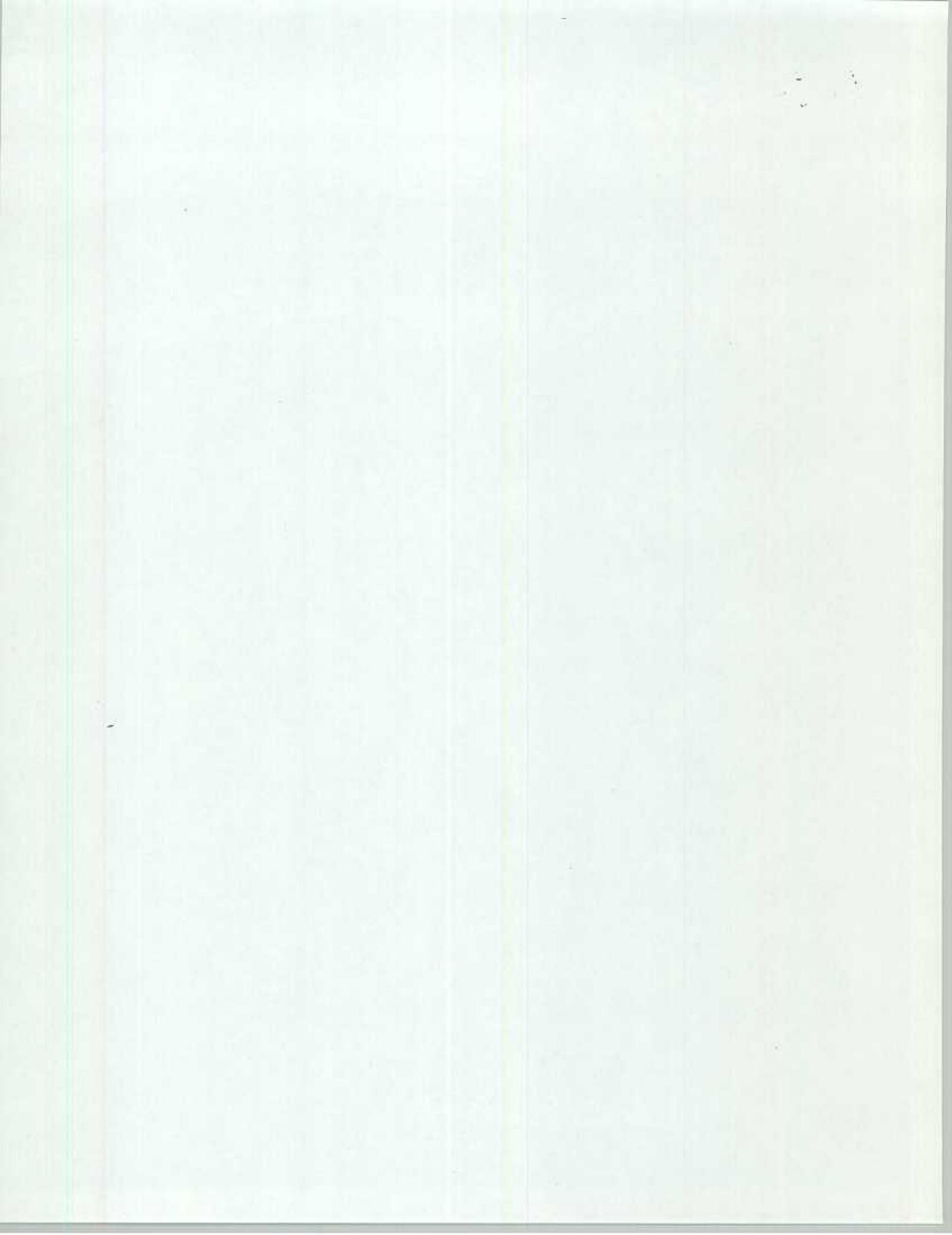
d. HSS facilities above BAS level should be located in uncontaminated areas with uncontaminated access to higher levels of medical support. If such areas cannot be found, a Collecting and Clearing Company functions in a contaminated environment at reduced effectiveness, provided collective protection shelters are available and utilized. Ambulances used to evacuate patients from supported units in contaminated areas must be considered contaminated. Even when operating in uncontaminated areas, both the Collecting and Clearing Company and the Surgical Support Company must be organized to receive contaminated casualties. No contaminated vehicle should be allowed into the clean area without decontamination nor should a clean vehicle be allowed into a contaminated area unless it is to be decontaminated upon exit from the area. Selection of clean routes must be coordinated with Regimental and Division headquarters to ensure that other vehicles do not contaminate the routes. This requirement is not unique to medical units. Details for this coordination should be included in unit SOP's.

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CHAPTER 3

NBC DEFENSE OPERATIONS

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### CHAPTER 3

#### NBC DEFENSE OPERATIONS

3000. GENERAL. This chapter prescribes the establishment of NBCD conditions, conduct of the NBCWRS and specified operational procedures pertaining to NBCD and continuation of unit missions under NBC conditions.

#### 3001. NBC ALERT CONDITIONS

1. NBC alert conditions will be assigned during any contingency operations. Basis for the assignment of NBC alert conditions will be indications of enemy capabilities and/or employment of NBC weapons/agents. The NBC alert conditions are a set of four color codes with corresponding levels of threat and condition procedures.

a. NBC White. The enemy does not possess NBC weapons and the Division should plan accordingly.

b. NBC Yellow. The enemy does possess NBC weapons but there are no indications of enemy preparations for NBC weapons employment.

c. NBC Red. The enemy is deploying NBC resources and elements of the Division are within range of enemy means of delivery. Enemy intent to employ NBC weapons is probable or imminent.

d. NBC Black. Enemy NBC activity indicators establish that NBC attack on elements of the Division is imminent or an enemy attack is in progress against all or parts of the Division.

2. The following procedures will be utilized to establish and change NBC alert conditions:

a. If a condition is set regarding a specific enemy NBC capability only, that capability will be transmitted with the established condition, i.e., NBC Yellow "Chem" or NBC Red "Nuc". If a specific capability is not set, the NBC alert condition established covers the entire spectrum of potential NBC threats.

b. NBC alert conditions will be disseminated throughout the Division by all means of communication. Priority will be situation dependent. Each command is responsible for establishing procedures whereby all elements, to include attachments, are aware of established conditions. NBC alert conditions may be visually posted by means of signs or flags if practical, provided a means to rapidly change the visual means is established.

c. Subordinate commanders may upgrade the Division NBC alert condition in their local area as necessary. Subordinate commands will report condition upgrades and enemy activity causing same. The Division Commander establishes the minimum NBC alert condition which will not be downgraded by subordinate commanders without approval.

d. Conflicting NBC alert conditions may be received. The condition established by the senior commander within whose boundaries the receiving unit is operating will be the minimum condition adhered to.

e. When "NBC Black" is passed via unsecure voice communications means, the source will be authenticated.

### 3002. NBC ALARMS

1. NBC alarms will be established and checked for operation when NBC alert condition "Yellow" is established. At NBC "Red" or higher, procedures will be established for the constant manning of established NBC alarms.

a. Audible alarms are the preferred means of alarm. The following are audible alarm procedures:

(1) If sirens are utilized, a warbling sound (i.e., 10 seconds on, 10 seconds off) will be utilized. This alarm must be given in a manner that can be differentiated from other established siren alarms. All air attack alarms sounded after initiation of NBC warfare will be considered NBC alarms also until verification is received otherwise. Sirens will not be utilized to sound "all clear" after NBC attacks.

(2) Vehicle horns may be utilized to signal NBC attacks by a succession of short signals on a one-to-one basis.

(3) Metal objects may be set up as alarms which will be beat in a rapid and continuous manner to signal NBC attacks.

(4) Vocal alarms may be utilized, preferably to supplement other audible NBC attack alarms. The vocal alarms authorized are; "gas, gas, gas" or "spray, spray, spray" or "fallout, fallout, fallout" for nuclear attack. Vocal alarms will be repeated throughout unit areas and NBC alert condition "Black" will be established by the local commander.

b. The visual NBC hand and arm signal with arms outstretched bringing fists towards head in an up and down fashion is the standard NBC visual alarm signal.

2. "All Clear" after NBC attacks will only be passed vocally after appropriate unmasking procedures have been conducted in all local areas affected by the attack.

3003. NUCWARN. NUCWARN warnings received by the Division will be disseminated by secure means using "Flash" precedence. The executing commander is responsible for disseminating the appropriate warning. Upon receipt of a NUCWARN message, commands will relay their content to all adjacent, subordinate and higher commands by secure means. Procedures and formats for these warnings are shown in Appendix B. NUCWARN code words and respective brevity codes will be published in the Division Communications Electronics Operating Instruction (CEOI) as necessary.

3004. NBC DEFENSE OPERATIONS. Specific actions must be taken at each established NBC alert condition level to ensure readiness, survivability and continuance of mission capability after a NBC attack. The following actions are to be taken as a minimum at each listed NBC alert condition:

1. NBC White. When an enemy is validated as having no NBC capability, NBC alert condition "White" will be established and the Division will plan/act accordingly. Possible enemy NBC capability will be continually assessed though to ensure the Division can react in a timely manner should an NBC capability be obtained by the enemy.

2. NBC Yellow. When validated that an enemy possesses NBC attack capabilities, NBC alert condition "Yellow" will be established. All actions specified will be carried out unless the NBC "Yellow" condition only specifies a certain capability which will then only require those actions necessary to negate the specified enemy NBC capability.

a. Activate unit NBCC (where required), check NBCWRS nets transmit CDM/EDM messages every 6 hours as required.

b. Notify all personnel of established NBC alert condition

c. Establish and check all NBC alarms

d. Position personnel and equipment with regard to enemy NBC threat.

e. Ensure each Marine carries their Field Protective Mask has MOPP gear, decontamination kits and NBC antidotes readily available. Each mask must have a serviceable combat filter.

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f. Verify serviceability of all personal protective equipment initiate resupply action to replace initial MOPP gear issue.

g. MOPP Level 0 or 1 will be established. Ensure names and ranks are readily visible on outside of MOPP suit.

h. Ensure automatic masking criteria is known and followed

Plan unit monitor/survey and decontamination requirements

j. Account for, brief and equip all NBCD teams. Verify serviceability of teams' equipment.

k. Verify locations of and/or establish decontamination sites with regard to readily available water sources. Locations will be reported to the NBCC

l. Plan for handling of NBC casualties and ensure medical facilities/personnel are fully prepared for same.

m. Emphasize additional NBC defense training and procedures and conduct drills as necessary/practicable.

3. NBC Red. This condition is established when enemy indicators show a possible intent to carry out NBC attacks against the Division. The following actions are to be taken in addition to those actions specified for NBC "Yellow."

a. Notify all personnel of higher NBC threat level.

b. Man NBC alarms on a 24-hour basis.

c. Cover all supplies/equipment as practical and restrict opening of supplies to minimum necessary.

d. Reposition personnel and equipment as necessary in regard to higher NBC threat and utilize terrain for protection to maximum extent possible.

e. For a "NUC" threat, prioritize engineer construction and establish maximum amount of shelters possible with at least 18 inches of overhead earth cover.

f. Establish MOPP levels 1 or 2 and "buddy system" for all personnel.

g. Place all NBCD teams on standby status.

h. Establish decontamination sites and store and/or ensure adequate water supply if not done previously.

i. Fill and issue all portable decontamination apparatuses

j. Request additional stocks of personal protective equipment (i.e. MOPP gear, gloves, boots, decon kits, mask hoods, filters) as necessary.

k. Establish patient decon sites at designated medical facilities and ensure contaminated casualty evacuation scheme is known to all personnel.

l. Review NBC pre-treatment options and initiate pre-treatment at this time as necessary.

4. NBC Black. This condition is established when an enemy NBC attack against the Division is considered imminent or has occurred. All actions specified previously for NBC alert conditions "Yellow" and "Red" are to be continued and the following additional actions taken:

a. Prior to attack

(1) Notify all personnel of higher NBC threat level.

(2) Establish MOPP levels 2 or 4 as required

(3) Initiate periodic monitoring for radiological hazards and utilize all available automatic chemical alarms.

(4) Ensure protection from any contamination, a minimum 2-3 day supply of food and water.

(5) Continuously man decontamination sites

(6) Plan for possible unit movements which may be dictated by contamination/hazard levels.

(7) For fixed installations, plan for rotation of personnel or utilization of alternate locations.

(8) Initiate all NBC agent pre-treatments available.

b. Upon attack

(1) Mask/go to MOPP level 4/seek cover

(2) Sound all alarms and vocally alert all personnel

(3) Check on all sleeping personnel to ensure they are alerted.

(4) Send NBC 1 reports to higher, and adjacent commands immediately.

(5) Determine type of contamination and send NBC 1 follow-up reports. For "NUC," designated observers will transmit nuclear burst cloud measurements in NBC-1 follow-up reports.

(6) For "NUC," begin continuous monitoring of dose rate and begin recording unit Radiation Exposure Status. Dose rate peak reports will be submitted to the supporting NBCC.

(7) Continuously monitor local area for chemical and biological contamination by manual means or with available automatic chemical alarms. In the event of a seemingly obvious chemical attack after which no known chemical agent is detected, ensure NBC-1 follow-up reports denotes "suspect bio."

(8) Evacuate contaminated casualties to nearest medical facility with patient decontamination capability. Perform individual decon of casualty to maximum extent possible prior to or during evacuation.

(9) Produce, transmit, and/or interpret NBC 2 reports for commanders as required.

(10) Produce, transmit, and/or interpret NBC 3 reports commanders.

(11) Plan necessary NBC survey operations and transmit NBC 4 reports to supporting NBCC when required.

(12) Mark contaminated areas and equipment as required

(13) Carry out contamination control measures

(14) Carry out decontamination plan as required by situation.

(15) Individual, operational, and/or thorough decontamination is continuous.

(16) Produce, transmit and/or interpret NBC 5 reports commanders.

(17) Produce, transmit and/or interpret NBC 6 reports, in detailed narrative form, when directed by supporting NBCC.

(18) If required to occupy a contaminated area, clean areas must be located for feeding/rest.

(19) Enforce additional fluid intake while operating in MOPP Level 4, at least 1 canteen per hour or more in warm weather.

(20) Review unit mission and make adjustments necessary for mission continuation with regard to NBC contamination levels.

c. After attack

(1) Marines cannot function in MOPP level 4 for prolonged periods of time, particularly in hot climates.

(2) Commanders must quickly determine a solution to the dilemma of continuing operations in a contaminated environment.

The basic choices are:

(a) Find clean areas for rest, recovery and feeding while continuing to occupy contaminated terrain.

(b) Find clean areas from which to operate in consonance with the overall tactical situation.

(4) In either case, NBC reconnaissance, monitoring and decontamination as required must be performed when moving from a contaminated area to a clean area.

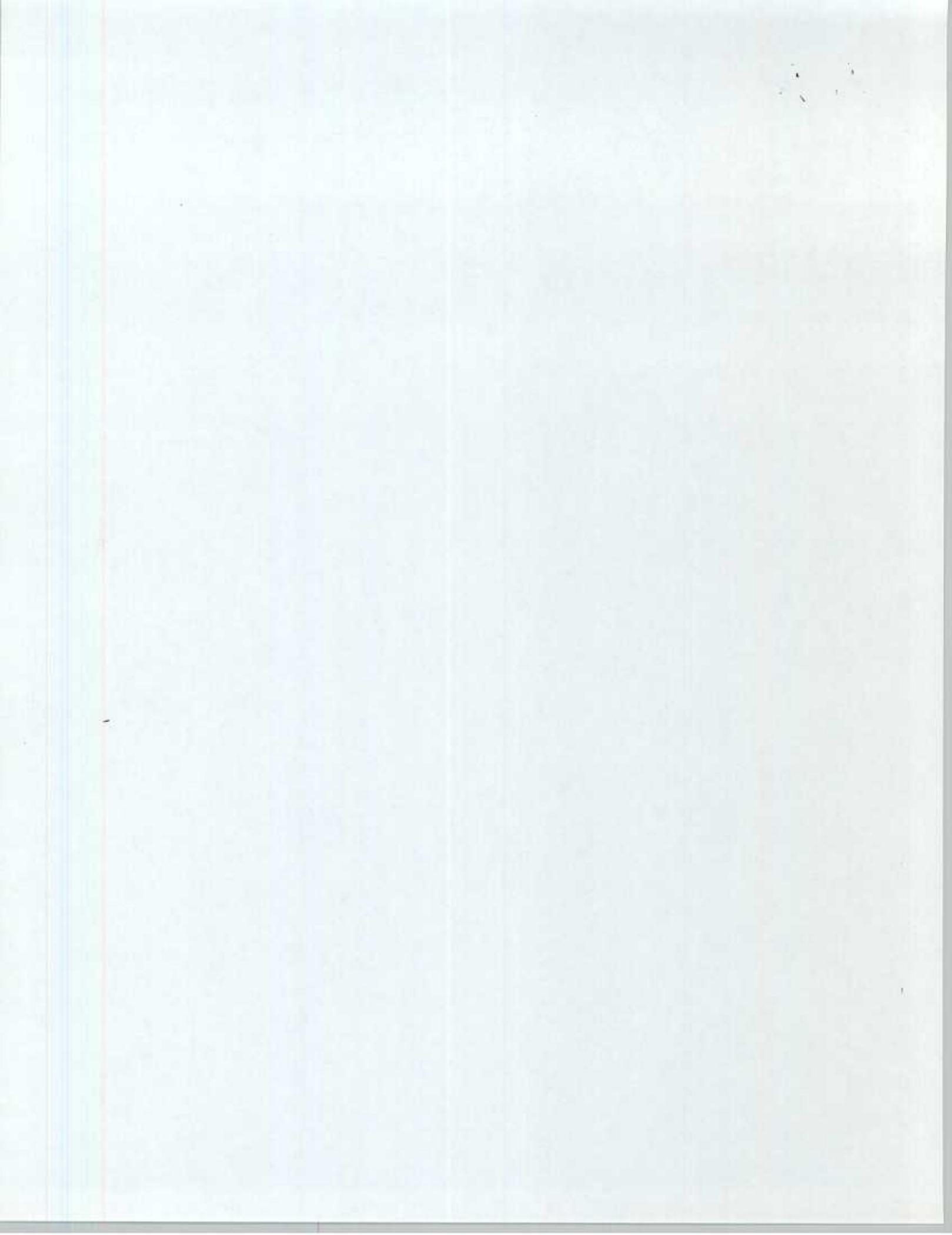
(5) Attacking and maintaining close contact with the enemy may be the best way to find clean areas, for merely moving around from friendly terrain that is contaminated to friendly terrain that is clean can invite repeated enemy NBC attack, reducing our operations to nothing more than surviving NBC attacks, NBC reconnaissance, monitoring, decon, move, and repeat same.

(6) Maintaining close contact with the enemy can keep the enemy within the hazard envelope of his NBC weapons and force them to also operate encumbered by protective gear should they choose to continue with NBC warfare.

(7) Encumbering the enemy in protective gear, as a result of their own NBC attacks, can help preclude the enemy from gaining significant tactical advantage through the use of NBC weapons.

(8) As a general guideline, our superior NBC protective clothing can return the tactical advantage to us so long as we maneuver and operate in a manner that ensures NBC attack effects affect the enemy also.

(9) Throughout NBC operations in contaminated areas though, Marines must be fed, receive adequate water resupply and rest. NBC survey parties must be constantly conducting reconnaissance to find safe areas for these vital activities.

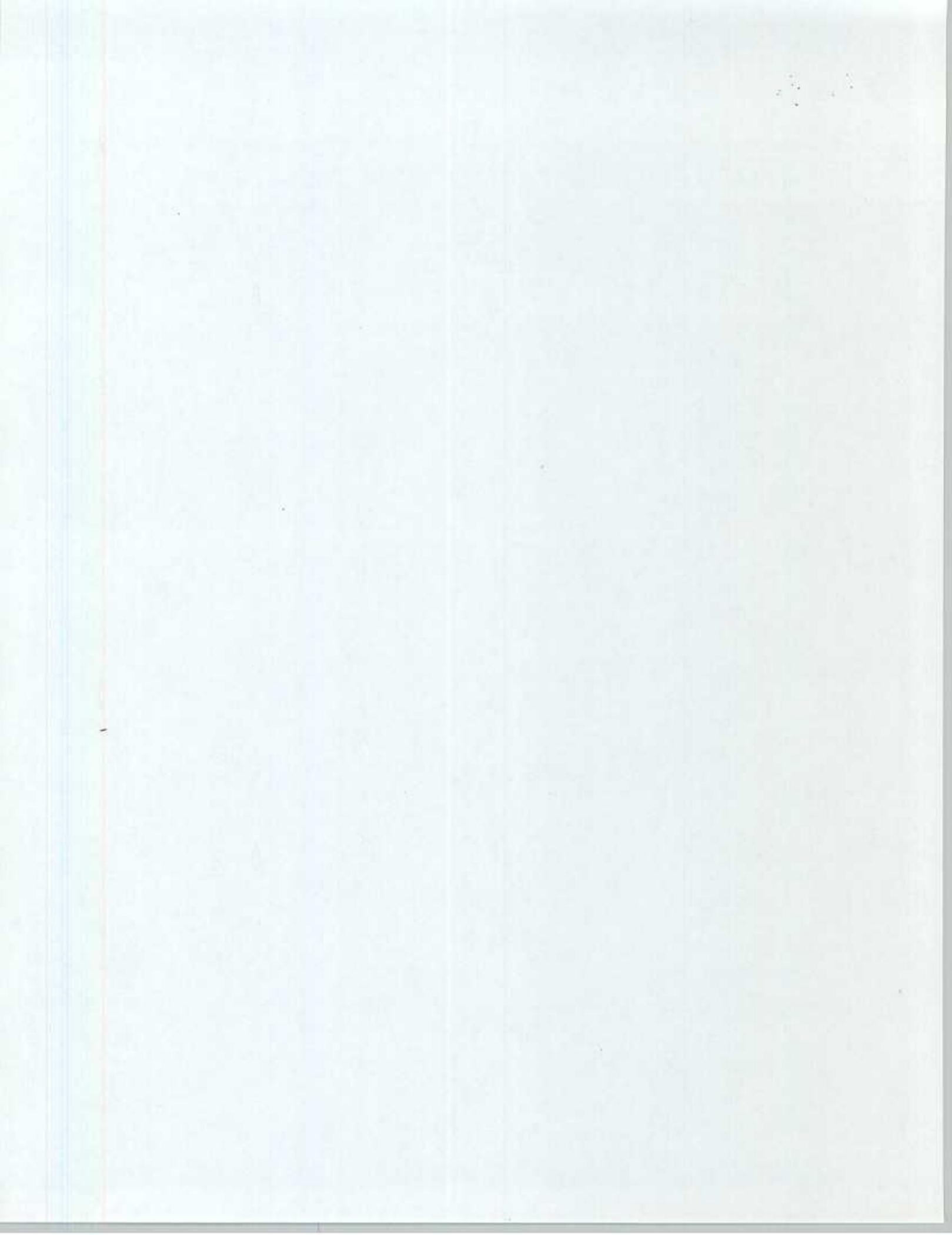


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CHAPTER 4

NBCD TRAINING REQUIREMENTS/PROFICIENCY STANDARDS

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### CHAPTER 4

#### NBC TRAINING REQUIREMENTS

4000. GENERAL. Adequate training must be conducted to accomplish all potential combat missions to include operations in an NBC contaminated environment. Individual NBCD training in specific tasks is required, however, the most important NBC training is that which integrates NBC defense into routine training. NBC warfare is an environment.

#### 4001. 3D MARDIV NBCD TRAINING REQUIREMENTS

1. All personnel must participate in a CS chamber mask confidence exercise with their personally assigned field protective mask annually. Appendix D specifies CS chamber exercise requirements.
2. All personnel will fire their T/O weapon while in MOPP level 4 annually.
3. Crew-served weapons crews will fire their assigned weapons in MOPP level 4 annually.
4. ITS requirements for MOS 5702/5711, NBC Officers and Marines will be accomplished and documented per appendix E.

#### 4002. NBCD PROFICIENCY STANDARDS

##### 1. Individual

- a. Recognize nuclear and chemical attacks and take protective action.
- b. Be aware of the effects of biological attack.
- c. Recognize NBC alarms and signals.
- d. Recognize the existence of a chemical hazard and indications of a biological attack and take protective action
- e. Properly don, seat, clear and check the field protective mask within 9 seconds and complete the adjustment of the hood within 6 seconds for a total of 15 seconds following an alarm or recognition of a chemical or biological attack.

f. Take protective measures against thermal radiation (light, flash, heat), blast, and nuclear radiation effects of nuclear explosions.

g. Carry out immediate individual decontamination.

h. Follow proper procedures for field protective mask removal.

i. Properly don protective clothing.

j. Be familiar with procedures for relieving oneself while wearing protective clothing.

k. Properly perform assigned missions/tasks while wearing protective clothing.

l. Properly perform first-aid (self and buddy aid), to include assisted ventilation techniques when possible, and the use of appropriate components of first-aid/personal decontamination kit for injuries caused by chemical agents or nuclear weapons.

m. Properly operate chemical agent detection equipment

## 2. Additional Duty NBCD Teams

### a. Decontamination Teams

(1) Operational decontamination techniques for personnel and equipment.

(2) Thorough decontamination techniques for personnel and equipment.

(3) Patient decontamination.

(4) Use of decontaminants, standard and nonstandard.

(5) Monitor techniques for all types of NBC contamination to determine requirements for, or completion of, decontamination.

(6) Capability to employ all decontamination equipment rated by T/E.

(7) Marking of contaminated equipment and decontamination sites.

### b. NBC Detection Equipment Operators

(1) Monitor Techniques.

(2) Survey Techniques.

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- (3) AN/VDR-2 RADIAC operation.
- (4) Personal dosimeter operation
- (5) Personal dosimeter reader/charger operation
- (6) M256A1 Chemical Agent Detector Kit operation.
- (7) M8/M9 chemical detector paper usage
- (8) Biological Sampling Kit (BSK) usage
- (9) NBCWRS formats/communication.

### c. Designated Observers (Nuclear Attacks Only)

- (1) NBC-1/NBC-1 Follow up report for nuclear bursts.
- (2) Illumination time determination.
- (3) Flash-to-bang time determination.
- (4) Measurement of cloud width at H+5.
- (5) Stabilized cloud top or bottom angle at H+10
- (6) Type of burst (air or ground)

3. Training Documentation. Accomplishment of the NBCD training requirements listed in this manual must be properly documented to ensure all personnel in each and every unit are receiving adequate NBCD training. A sound, well-founded, and continuous unit level training program that incorporates NBCD MBST and scenarios during routine field training is required.

### 4003. 3D MARDIV SEMI-ANNUAL NBCD TRAINING REPORT

1. Accomplishment of NBCD training will be reported semi-annually using the format shown in Appendix F. Reports are due on 15 April and 15 October each year for the preceding semi-annual period.
2. UDP Battalions will conduct, document and report NBCD training while attached to 3d MarDiv.
3. A feedback report on accomplishment of NBCD training will be provided to the Division listing NBCD training conducted by all reporting commands after each reporting period.

4004. CHEMICAL, BIOLOGICAL DEFENSE (CBD) SORTS REPORTING

1. All commanders are required to provide general text remarks in SORTS reports which assess their unit's ability to conduct combat operations in a NBC environment.
2. Appendix G provides general criteria for commanders to use in assessing NBCD equipment and training readiness. These criteria are not prescriptive and do not constitute a formula for determining readiness ratings. They are general guidelines to assist commanders in their subjective reviews.
3. Commanders should carefully consider their personnel status, equipment deficiencies and condition in deriving their readiness assessments. Existing "T" reason codes will be used to reflect training readiness and "R" codes for equipment readiness.

4005. DECONTAMINATION APPARATUS LICENSING

1. The Division NBCD Officer is a licensing authority for the M17E1 and M12A1 Decontamination Apparatus. Licensing is available as follows:
  - a. Units will request licensing through the Division NBC Platoon at least 2 weeks in advance for scheduling purposes.
  - b. The Division NBC Platoon will task a Mobile Training Team (MTT) to conduct licensing in the unit area.
  - c. Licensing takes 1 day (0730-1600)
  - d. The requesting unit must provide a classroom and a serviceable, SL-3 complete decon apparatus with operator's manual, safety equipment (earplugs, fire extinguisher), fuel and water supply. Decontamination apparatuses must be set up where they can be operated for extended periods of time.
  - e. Not more than four Marines can be trained per day for each decontamination apparatus available.
  - f. Marines to be licensed must have a complete engineer equipment license application package; to include completed medical checks.
  - g. Upon successful completion of the licensing training, the MTT will provide results to the licensing authority and licenses will be completed and forwarded back to the unit within 5 working days.

h. This licensing training is designed to supplement, not replace decontamination apparatus licensing authority for subordinate units within the Division.

2. Only licensed operators will operate M12A1 and M17E1 Sanator decontamination apparatuses within 3d MarDiv.

3. Decontamination apparatus licensing accomplishment will be reviewed within each command during scheduled NBCD command evaluations.

#### 4006. NBCD SCHOOL TRAINING

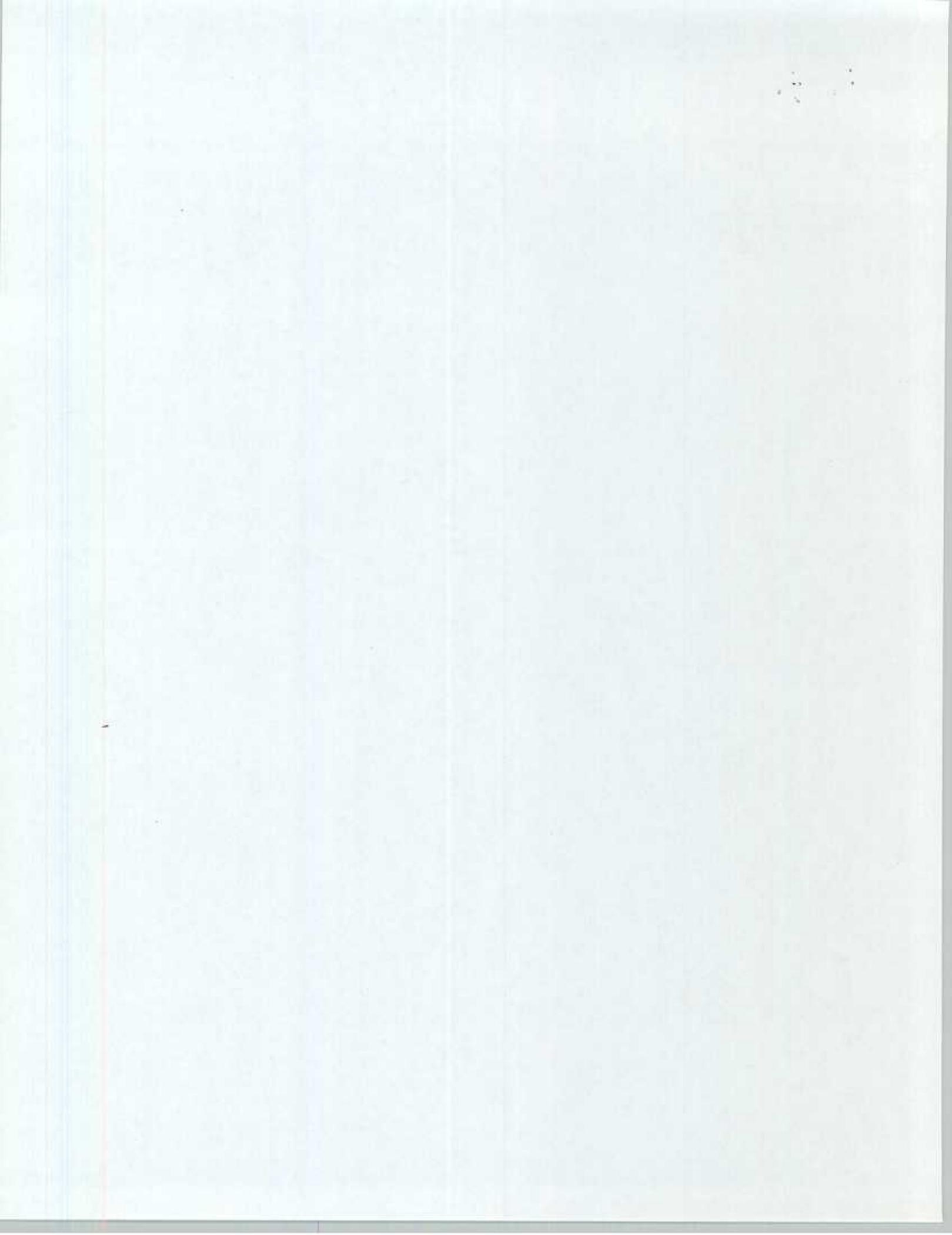
1. 3d MarDiv does not have a command NBCD school and there is no set requirement for Marines assigned additional NBCD duties to be school trained. NBCD school training is available, however, for commands desiring this training from the following sources:

a. First Marine Aircraft Wing has a NBCD school at MCAS Futenma that provides school seats to 3d MarDiv which are funded and distributed by G-3 Training.

b. There are occasional quotas available to formal NBC Schools external to 3d MarDiv on a unit funded basis, i.e., Tech Escort, NETOPS, etc. Contact G-3 Training regarding use of these schools as required.

c. MTT Support may be requested as needed from the Division NBC Platoon on a first come/first served basis. Due to personnel limitations, support cannot be guaranteed and Regiments/separate Battalions must establish self-sufficient NBCD training programs utilizing organic NBCD Specialists.

2. It is imperative that any Marine assigned additional NBCD duties receives adequate training through scheduled unit training or an available NBCD school external to the Division.

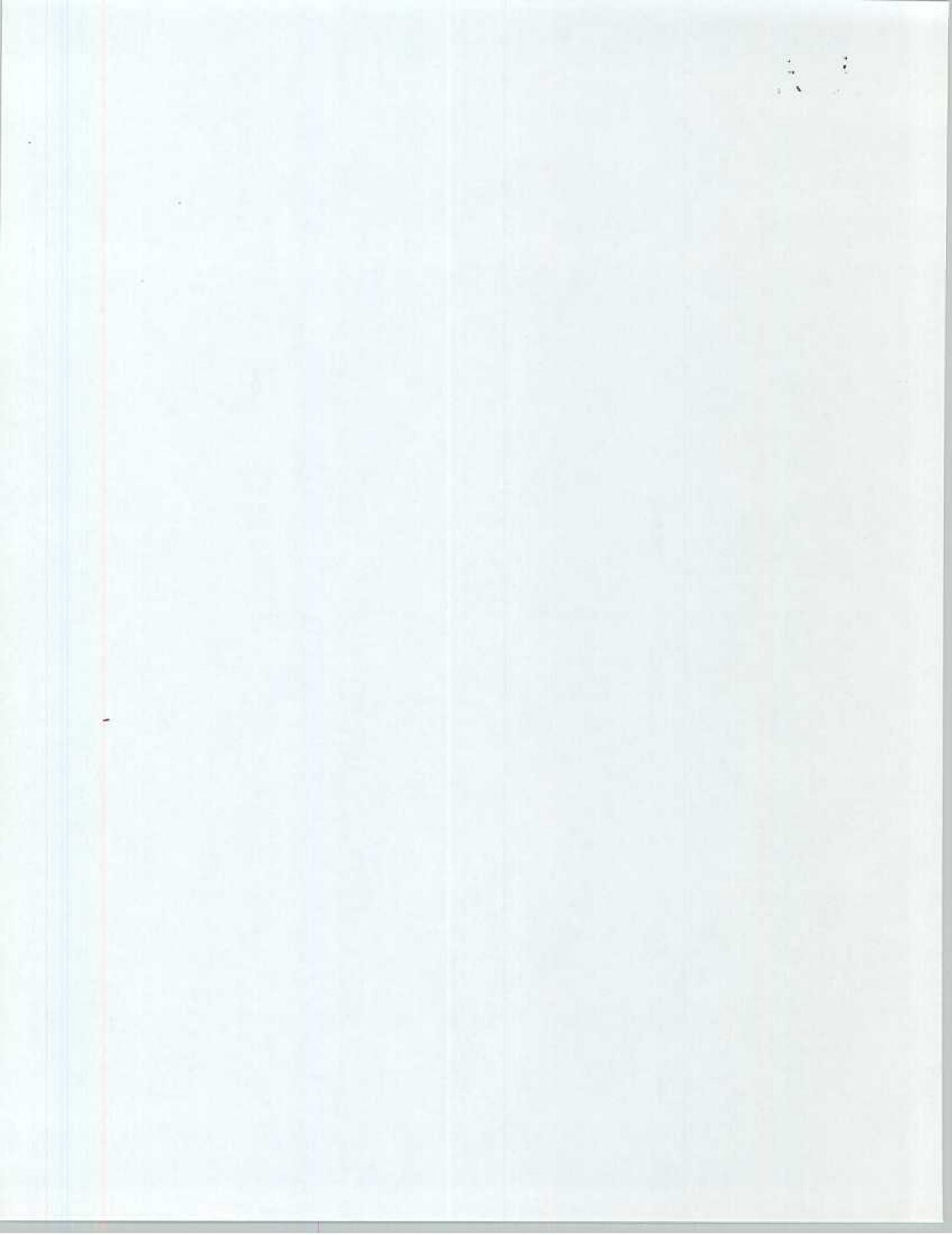


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### CHAPTER 5

#### LOGISTICS AND EQUIPMENT

5000. GENERAL. NBCD personnel are responsible for the operational readiness of equipment which supports the NBCD mission. It is beyond the scope of this manual to specify all actions NBCD personnel must perform to ensure equipment readiness. With regard to unit supply, maintenance management, embarkation, communications-electronics, medical, and motor transport personnel, their responsibilities and relationships remain unchanged. Accordingly, each unit NBCD Officer/NCO must coordinate with these other commodity managers to adequately fulfill their equipment readiness responsibilities.

5001. SHIPPING DEFECTS. Equipment found to be deficient in quantity or damaged at the time of receipt as a result of shipping/handling should be reported on a Report of Discrepancy (ROD). Damage can be that of the container or item itself.

5002. QUALITY DEFECTS. Equipment found to be deficient or defective based upon a visual inspection or a functional test should be reported by a Product Quality Deficiency Report (PQDR)

5003. SERVICEABILITY. Serviceability standards for equipment which supports NBCD operations are found in TI 10010-20/5. Unit NBCD personnel should conduct serviceability inspections at least annually throughout the life of each item and should be careful not to open containers which have been specially packaged to preserve the contents of deteriorative items. A shelf life program, either manual or automated is required to monitor shelf life of NBCD combat stocks.

5004. STORAGE. Where and how equipment is stored is at the discretion of the commanding officer under the guidance of applicable warehousing and hazardous material requirements and regulations. It is a responsibility of NBCD personnel to advise the commander of any restrictions or special requirements applicable to the storage of equipment which supports NBCD operations. NBCD supply accounts will not be consolidated above Battalion level. All units in 3d MarDiv will store and maintain all NBCD supplies and equipment rated by T/E.

## SOP FOR NBCD

5005. EMBARKATION. Embarkation of equipment which supports NBCD operations remains the responsibility of the unit embarkation officer. It is the responsibility of NBCD personnel to advise the commander of any special considerations regarding the embarkation of equipment which supports NBCD operations.

5006. DISPOSAL/REPLACEMENT. SL-8-09996A will be used in conjunction with established T/E allowances to reorder all expended items as applicable. Hazardous waste items must be disposed of properly.

### 5007. MAINTENANCE/CALIBRATION

1. Third FSSG (ELMACO) provides maintenance/calibration support for all NBCD RADIAC equipment.
2. A calibration control program must be established to ensure calibration of all NBCD RADIAC equipment. Refer to local/unit Maintenance Management Standing Operating Procedures (MMSOP) for further guidance.

### 5008. DECONTAMINATION APPARATUSES

1. Unit NBCD personnel must have operator licenses and will ensure that 1st echelon maintenance is performed on unit Decontamination Apparatuses, M17E1 or M12A1 as rated.
2. Third CEB will provide overflow 2d echelon maintenance support for 3d MarDiv regarding M12A1/M17E1 Decontamination Apparatuses as required.
3. Third FSSG provides 3d echelon maintenance support for M12A1/M17E1 Decontamination Apparatuses.
4. Engineer equipment record jackets will be properly maintained.
5. Decontamination Apparatuses must be maintained SL-3 complete and operated adequately to ensure readiness.

5009. FIELD PROTECTIVE MASK (FPM) MAINTENANCE AND ACCOUNTABILITY PROGRAM. In order to maintain the serviceability and accountability of field protective masks, a comprehensive program that tracks the FPM from initial receipt to individual issue is needed to maintain unit and equipment readiness. The below listed steps are the minimum requirements necessary to establish this program:

### 1. Initial Receipt

- a. Receipt Inspection (accuracy of count/ shipping damage)
- b. SL-3 complete.
- c. Report of Discrepancy (ROD) as required
- d. Product Quality Deficiency Report (PQDR) at any time.
- e. Record Contract/Lot/MFD and shelf life file card (SLFC), only one contract # per SLFC.

### 2. Issue

a. Log Book or Card/Automated System (name, rank, SSN, section, mask and form #, mask Lot #, size, date of issue and return.

b. Fitting done by 5711's using appropriate technical manuals and/or Mask Fit Validation Device (MFVD) will be performed.

c. Face form will be issued and used at all times when mask is not being carried or utilized.

d. FPM Carrier will be marked only in white plastic area

### 3. Maintenance

a. Dry brush carrier only

b. Mask cleaning with soapy water only.

c. Sanitize on turn in (monitored by NBC using 1/2 teaspoon of calcium Hypochlorite in 1 gal. water).

d. Filters checked for holes, dents 1/4 inch or larger, wetness or rust.

e. Rubber preservatives such as Armor-All will not be utilized on any FPM or component there of.

f. A repair parts Pre-Expended Bin (PEB) for FPM maintenance is required to ensure adequate parts availability.

### 4. Storage

a. When stored by an individual, the "D" hook should be used to hang mask in a locker.

b. When stored in a warehouse, use the original box on a shelf no more than three high.

c. When stored out of the box on a shelf, FPM's cannot be stacked.

d. FPM's may be hung properly in a warehouse by the "D" hook if not stored on a shelf.

#### 5010. GENERAL SUPPLY ITEMS REQUIRED FOR NBC DEFENSE

1. There are numerous general supply type items not associated with a TAMCN that must be held to support NBCD training and operations. Doctrinal manuals and directives must be consulted to determine each unit's specific requirements. The following types of items must be procured and prepared for embarkation in sufficient quantities to support each unit's mission in a NBC environment:

- a. Trash cans.
- b. Buckets
- c. Swabs
- d. Brushes
- e. Sponges
- f. Soap/detergent products to support decontamination.
- g. NBC markers or marking kits.
- h. Plastic trash bags
- i. Tape/grease pencils for marking names and ranks on MOPP suits.
- j. HTH for mask sanitization.
- k. Paper towels.
- l. 2 Cycle Oil for M17E1 Lightweight Decon Appartus.
- m. Nonstandard decontaminants (when required for contingency purpose).
- n. Scissors (for removing casualties protective clothing)
- o. Biological Sampling Kits (BSK), two per Battalion minimum.
- p. A minimum of two unopened serviceable combat filters per mask.

## SOP FOR NBCD

g. A one week supply of batteries for all RADIAC instruments rated by T/E.

r. 1st echelon maintenance related items and consumables.

2. All items listed above must be procured with unit funds and should be readily available prior to a contingency as availability of these types of items cannot be guaranteed in an expeditionary environment.

### 5011. NBCD TRAINING AIDS

1. Adequate quantities of NBCD training aids must be held to ensure realistic and worthwhile training can be conducted that closely approximates a NBC warfare environment.

2. Serviceable combat stock items of NBCD equipment will not be opened for utilization as training aids.

3. Decontamination kits, chemical agent detection kits, and decontaminants that are hazardous materials or waste will not be utilized for training purposes (HTH, DS-2, STB, M256A1, M258A1, etc.).

4. Numerous items of NBCD equipment may be utilized as designed for training purposes. The following types of equipment are readily available:

a. RADIAC meters

b. NBCD Marking Kits (training stocks only)

c. Decon Apparatuses (portable and power driven, spraying simulants only).

d. TAP aprons.

e. Personal Dosimeters/Reader-chargers.

f. M291 Decon Kit (training stocks only).

g. Biological Sampling Kits.

h. Field Protective Masks.

5. There are training simulators available to support NBCD training that are environmentally safe. The following items should be procured and utilized to the maximum extent possible:

a. Chemical agent detection training kits.

b. Environmentally safe decontamination simulants (PEG-200 Polyethylene Glycol, liquid detergents, etc.).

c. M13 DAP trainers.

d. Nerve Agent Antidote Kit (NAAK) trainers.

6. Expired shelflife or unserviceable items of combat NBCD stocks may be opened for training use. When used for training, they will be marked appropriately to distinguish these items from combat stocks. Local TAMCN's and NSN's will be utilized to account for expired and unserviceable items of NBCD equipment used as training aids. The following expired or unserviceable items are readily available:

a. MOPP suits.

b. Chemical protective gloves.

c. Chemical protective overboots.

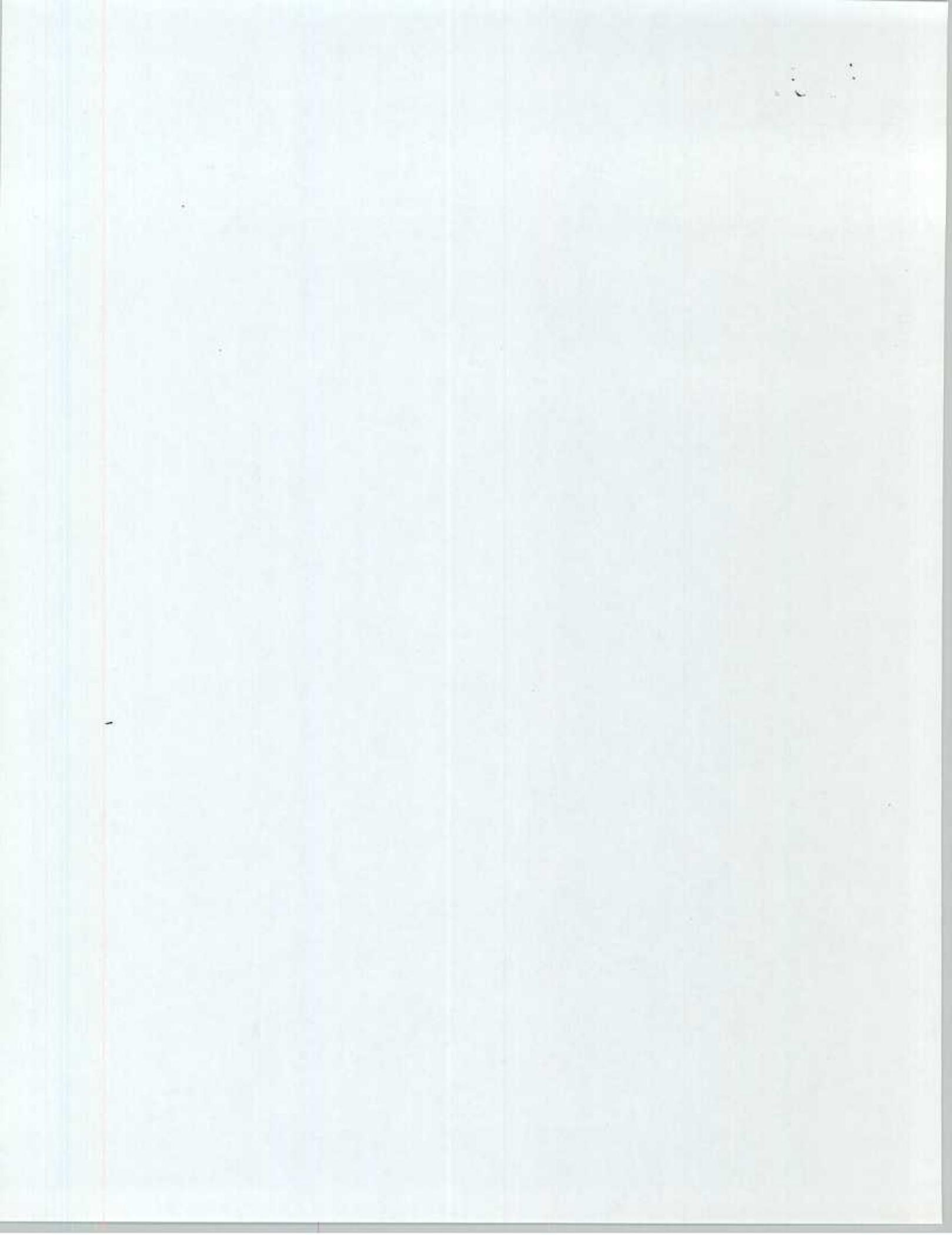
d. M8/M9 chemical detector paper.

SOP FOR NBCD

CHAPTER 6

NBCD INSPECTION PROCEDURES

	PARAGRAPH	PAGE
GENERAL .	6000	6-3
EVALUATIONS .	6001	6-3



SOP FOR NBCD

CHAPTER 6

NBCD INSPECTION PROCEDURES

6000. GENERAL. Annual NBCD evaluations provide the Commanding General with a continuing indication of NBCD readiness within the Division. These evaluations are designed to ensure NBCD operational and equipment readiness of all major subordinate commands.

6001. EVALUATIONS

1. NBCD Operational Readiness

a. All units organic to the 3d MarDiv will be evaluated annually. Scheduled MCCRES evaluations or a Division Functional Area Inspection (FAI) during years in which a MCCRES is not conducted will be utilized.

b. Inspections will be conducted on a fiscal year basis. UDP Battalions should be inspected prior to deployment.

c. UDP Battalions may be inspected by 3d MarDiv if required.

d. UDP Companies will be evaluated in NBCD with their parent 3d MarDiv command if that command undergoes a NBCD FAI during the Company deployment period.

e. The 3d MarDiv NBCD FAI is to be conducted in two parts; Part I in a field environment over a period of 24 hours, and Part II in garrison within 14 days of completing Part I, taking approximately 4 hours.

f. The Part I field evaluation may be conducted during routine field exercises or scheduled separately. Full unit participation is required.

g. NBCD FAI's are conducted under the cognizance of the AC/S,  
G-3

h. NBCD FAI checklists are available from Division NBC.

## 2. NBCD Logistics Readiness Inspections (LRI)

a. NBCD equipment and supplies are to be evaluated as part of the overall Commanding General's Logistics Readiness Inspection Program (LRIP).

b. Division NBC will provide evaluators for this inspection acting under the cognizance of the AC/S, G-4.

c. NBCD LRI Checklists are available from Division NBC.

## 3. Staff Assistance Visits (SAV)

a. Informal NBCD SAV'S are available by scheduling with Division NBC. Any specific areas may be requested for informal evaluation.

b. NBCD SAV's should be requested as far in advance as possible to ensure desired SAV date.

## 4. Evaluation Scheduling

a. In August of each year, the 3d MarDiv NBCDO will solicit NBCD FAI dates from all units organic to the 3d MarDiv for the following fiscal year.

b. Requested dates are to be submitted NLT 1 Sep of each year at which time inspection dates will be verified or date adjustments made with units as required.

c. LRI inspection dates are scheduled and published quarterly by the AC/S, G-4.

SOP FOR NBCD

APPENDIX A

NBC DEFENSE APPENDIX

Copy no \_\_\_\_\_ of \_\_\_\_\_ Copies  
Issuing Headquarters  
Place of Issue  
Date/Time Group  
Message Reference Number

Appendix 2 (NBC Defense) to Annex C (Operations) to Operation  
Order \_\_\_\_\_

Ref

Time Zone:

1. SITUATION

a. Enemy. (Refer to Annex B (Intelligence). Discuss enemy capability and probability of employment of NBC weapons).

b. Friendly. (List the units providing specific NBC Defense support)

c. Assumption. (State any assumptions on which NBC Defense support of the overall mission is based).

2. MISSION. (State the mission to be accomplished by NBC Defense in support of the overall mission).

3. EXECUTION

a. Tasks. (In separate numbered sub-paragraphs, assign NBC Defense tasks)

b. Coordinating Instructions

4. ADMINISTRATION AND LOGISTICS

a. Logistics. (Refer to Annex P (Combat Service Support) Provide instructions for logistics considerations of NBC defense to include storage and handling NBC Defense supplies and equipment and evacuation policies and instructions).

b. Administration. (State any requirements for special reports).

SOP FOR NBCD

5. COMMAND AND SIGNAL. (Refer to Annex K (Communications-Electronics) and include any special instructions relating to communications. Note command matters such as command post locations).

/s/ \_\_\_\_\_  
\_\_\_\_\_

SOP FOR NBCD

APPENDIX B

NBC WARNING AND REPORTING SYSTEM

1. General. The following reports will be utilized for dissemination of NBC attack information and warning of friendly Nuclear, Biological or Chemical strikes:

- a. NBC 1 Report - Observer's Initial Report
- b. NBC 2 Report - Evaluated Data Report
- c. NBC 3 Report - Immediate Warning of Expected Contamination
- d. NBC 4 Report - Monitoring and Survey Report
- e. NBC 5 Report - Area of Actual Contamination
- f. NBC 6 Report - Detailed Information on Chemical or Biological Attacks
- g. NUCWARN - To warn of friendly use of nuclear weapons

2. The following chart shows the flow of information as per FMFM 11-17 for NBC Defense Reports:

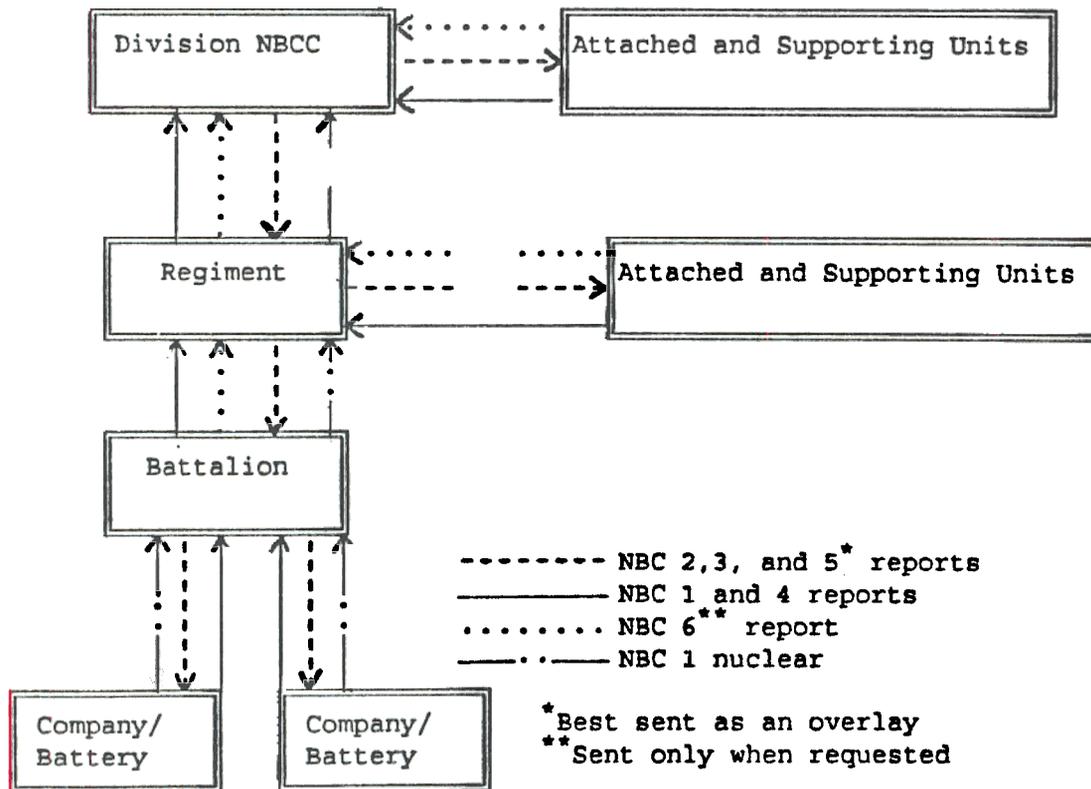


Figure B-1

3. Remainder of Appendix gives format to be used for NBC Reports and warnings to include weather information reports as required and NBC contamination marker descriptions.

SOP FOR NBCD

NBC 1 OBSERVER'S INITIAL OR FOLLOW - UP REPORT		
FROM	TO	
PRECEDENCE <input type="checkbox"/> FLASH <input type="checkbox"/> IMMEDIATE	SECURITY CLASSIFICATION	
DATE-TIME (ZULU, LOCAL, OR LETTER TIME ZONE)		
TYPE OF REPORT <input type="checkbox"/> CHEMICAL <input type="checkbox"/> NUCLEAR <input type="checkbox"/> BIOLOGICAL	CATEGORY OF REPORT <input type="checkbox"/> INITIAL <input type="checkbox"/> FOLLOW-UP	
INSTRUCTIONS		
1. Line items DELTA and HOTEL are mandatory for NBC 1 Reports. 2. Line items ALPHA, ECHO, GOLF, INDIA, KILO, LIMA, MIKE, SIERRA, YANKEE, AND ZULU ALFA are optional for NBC 1 Reports. 3. Line items BRAVO, CHARLIE, FOXTROT, PAPA ALPHA ROMEO, and PAPA BRAVO ROMEO are reported if data is available.		
Section 1 -- Chemical or Biological Only		
Description	Line	Data
Strike Serial Number, if Known (assigned by NBCC)	ALFA	
Position of Observer	BRAVO	
Azimuth of Attack from observer (state degrees or mils)	CHARLIE	
Date and time attack started (ZULU, LOCAL, OR LETTER ZONE)	DELTA	
Time attack ended, if known	ECHO	
Location of attack(UTM or place) (state actual or estimated)	FOXTROT	
Means of delivery, if known	GOLF	
Type of Agent and Height of burst, if known	HOTEL	
Type and number of munitions or aircraft (state which)	INDIA	
Description of terrain(bare, scrubby vegetation, wooded, urban or unknown)	KILO	
Date and time contamination detected (ZULU, LOCAL OR LETTER ZONE)	SIERRA	
Representative Downwind Direction, 4 digits (state degrees or mils), windspeed, 3 digits (state kmph or knots)	YANKEE	
Temperature(centigrade), 2 digits Cloud Cover, 1 digit, significant weather phenomena, 1 digit, air stability, 1 digit	ZULU ALFA	
REMARKS	ZULU BRAVO	

NBC 1 Section II-- Nuclear Only								
Description	Line	Data						
Strike Serial Number, if Known (assigned by NBCC)	ALFA							
Position of Observer	BRAVO							
Azimuth of Attack from observer (state degrees or mils and grid or magnetic)	CHARLIE							
Date and time attack started (ZULU, LOCAL, OR LETTER ZONE)	DELTA							
Location of attack(UTM or place) (state actual or estimated)	FOXTROT							
Means of delivery, if known	GOLF							
Type of burst, (state air, surface, or unknown)	HOTEL							
Flash to bang time (seconds)	JULIET							
Crater diameter (meters), if known	KILO							
Cloud width at H+5 Minutes (degrees or mils)	LIMA							
Cloud angle (top or bottom) or cloud height (top or bottom) at H+10 Minutes (state degrees, mils, meters, or feet)	MIKE							
Location of Radioactive Cloud Outline (UTM)	PAPA ALFA ROMEO							
Downwind Direction of Radioactive Cloud(state degrees or mils)	PAPA BRAVO ROMEO							
REMARKS	ZULU BRAVO							

NBC 2 Evaluated Data Report									
FROM					TO				
PRECEDENCE <b>IMMEDIATE</b>					SECURITY CLASSIFICATION				
DATE-TIME (ZULU, LOCAL, OR LETTER TIME ZONE)									
TYPE OF REPORT <input type="checkbox"/> CHEMICAL <input type="checkbox"/> NUCLEAR <input type="checkbox"/> BIOLOGICAL					CATEGORY OF REPORT <input type="checkbox"/> INITIAL <input type="checkbox"/> FOLLOW-UP				
INSTRUCTIONS									
1. Line items ALFA, DELTA, FOXTROT, HOTEL, and NOVEMBER are mandatory for NBC 2 reports. 2. Line items ECHO, GOLF, INDIA, KILO, YANKEE, and ZULU ALFA are optional for NBC 2 reports.									
Section 1 -- Chemical or Biological Only									
Description	Line	Data							
Strike Serial Number (assigned by NBCC)	ALFA								
Date and Time Attack Started (ZULU, LOCAL, OR LETTER ZONE)	DELTA								
Time attack ended, if known	ECHO								
Location of attack (UTM or place) (state actual or estimated)	FOXTROT								
Means of delivery, if known	GOLF								
Type of Agent and Height of burst, if known	HOTEL								
Number or shells in attack	INDIA								
Description of terrain (bare, scrubby vegetation, wooded, urban or unknown)	KILO								
Representative Downwind Direction, 4 digits (state degrees or mils), windspeed, 3 digits (state kmph or knots, state which)	YANKEE								
Temperature (centigrade), 2 digits Cloud Cover, (1 digit), significant weather phenomena, (1 digit), air stability, (1 digit)	ZULU ALFA								
REMARKS	ZULU BRAVO								

SOP FOR NBCD

NBC 2 Section II -- Nuclear Only								
Description	Line	Data						
Strike Serial Number (assigned by NBCC)	ALFA							
Date and time attack started (ZULU, LOCAL, OR LETTER ZONE)	DELTA							
Location of attack(UTM or place) (actual or estimated, state which)	FOXTROT							
Means of Delivery, if known	GOLF							
Type of Burst (air, surface, or unknown, state which)	HOTEL							
Crater Diameter (meters), if known	KILO							
Estimated Yield (KT or MT)	NOVEMBER							
REMARKS	ZULU BRAVO							



SOP FOR NBCC

NBC 3 Section II-- Nuclear Only									
Description	Line	Data							
Strike Serial Number (assigned by NBCC)	ALFA								
Date and time attack started (ZULU, LOCAL, OR LETTER ZONE)	DELTA								
Location of attack(UTM or place) (state actual or estimated)	FOXTROT								
Estimated Yield (KT or MT)	NOVEMBER								
Direction of Left and Right Radial Lines (state degrees or mile)	YANKEE								
Effective Wind speed (3 Digits -- kmph or knots) Downwind Distance of Zone 1 (3 Digits--km) Cloud radius (2 digits--km, see Instruction 1)	ZULU								
REMARKS	ZULU BRAVO								

NBC 4 Radiation Dose Rate Measurements or Chemical/Biological Areas of Contamination										
FROM	TO									
PRECEDENCE <b>IMMEDIATE</b>	SECURITY CLASSIFICATION									
DATE-TIME (ZULU, LOCAL, OR LETTER TIME ZONE)										
TYPE OF REPORT <input type="checkbox"/> CHEMICAL <input type="checkbox"/> NUCLEAR <input type="checkbox"/> BIOLOGICAL	CATEGORY OF REPORT <input type="checkbox"/> INITIAL <input type="checkbox"/> FOLLOW-UP									
INSTRUCTIONS										
1. Line items QUEBEC, ROMEO, And SIERRA may be repeated as often as necessary. 2. Line items HOTEL, QUEBEC, ROMEO, and SIERRA are mandatory for NBC 4 reports. 3. Line items ALFA and KILO are optional for NBC 4 reports.										
Section 1 -- Chemical or Biological Only										
Description	Line	Data								
Strike Serial Number (assigned by NBCC)	ALFA									
Type of Agent	HOTEL									
Description of terrain (bare, scrubby vegetation, wooded, urban or unknown)	KILO									
Location of Reading (UTM) (state whether test was air or liquid)	QUEBEC									
Date and Time of Reading (ZULU, LOCAL, OR LETTER ZONE)	SIERRA									
Type of Agent	HOTEL									
Description of terrain (bare, scrubby vegetation, wooded, urban or unknown)	KILO									
Location of Reading (UTM) (state whether test was air or liquid)	QUEBEC									
Date and Time of Reading (ZULU, LOCAL, OR LETTER ZONE)	SIERRA									
Type of Agent	HOTEL									
Description of terrain (bare, scrubby vegetation, wooded, urban or unknown)	KILO									
Location of Reading (UTM) (state whether test was air or liquid)	QUEBEC									
Date and Time of Reading (ZULU, LOCAL, OR LETTER ZONE)	SIERRA									
REMARKS	ZULU BRAVO									

SOP FOR NBCD

NBC 4 Section II-- Nuclear Only									
Description	Line	Data							
Strike Serial Number (assigned by NBCC)	ALFA								
Crater Diameter (meters) if known	KILO								
Location of Reading (UTM)	QUEBEC								
Dose Rate (cGyph) (the words "Initial", "Peak", "Increasing", or "Decreasing" may be added)	ROMEO								
Date and time of Reading (ZULU, LOCAL, LETTER ZONE)	SIERRA								
Location of Reading (UTM)	QUEBEC								
Dose Rate (cGyph) (the words "Initial", "Peak", "Increasing", or "Decreasing" may be added)	ROMEO								
Date and time of Reading (ZULU, LOCAL, LETTER ZONE)	SIERRA								
Location of Reading (UTM)	QUEBEC								
Dose Rate (cGyph) (the words "Initial", "Peak", "Increasing", or "Decreasing" may be added)	ROMEO								
Date and time of Reading (ZULU, LOCAL, LETTER ZONE)	SIERRA								
REMARKS	ZULU BRAVO								

NBC 5 Contamination Area Report	
FROM	TO
PRECEDENCE <b>IMMEDIATE</b>	SECURITY CLASSIFICATION
DATE-TIME (ZULU, LOCAL, OR LETTER TIME ZONE)	
TYPE OF REPORT <input type="checkbox"/> CHEMICAL <input type="checkbox"/> NUCLEAR <input type="checkbox"/> BIOLOGICAL	CATEGORY OF REPORT <input type="checkbox"/> INITIAL <input type="checkbox"/> FOLLOW-UP
INSTRUCTIONS	
1. Line items HOTEL, TANGO, and XRAY are mandatory for chemical/biological NBC 5 reports. 2. Line items TANGO is reported if available for nuclear NBC 5 reports. 3. Line item XRAY is optional for nuclear NBC 5 reports. 4. Line items ALFA, DELTA, FOXTROT, ROMEO, SIERRA, UNIFORM, VICTOR, and WHISKEY are optional for NBC 5 reports. 5. When a contour closes to form a completed ring, the first coordinate is repeated. 6. When requested, decay rates are to be transmitted according to line item ROMEO.	
Section 1 -- Chemical or Biological Only	
Description	Line      Data
Strike Serial Number(s) Causing contamination	ALFA
Date and time attack started (ZULU, LOCAL, OR LETTER ZONE)	DELTA
Type of Agent; Height of burst	HOTEL
Date and time contamination initially detected (ZULU, LOCAL, LETTER ZONE)	SIERRA
Date and time of latest survey of contamination in the area (ZULU, LOCAL, OR LETTER ZONE)	TANGO
Area of tactical significance of Toxic contamination (UTM) (coded yellow on overlay)	XRAY
REMARKS	ZULU BRAVO



SOP FOR NBCD

Chemical/Biological Sample Documentation																	
<b>INSTRUCTIONS</b> Place the biological sample inside a refrigerator, ice chest, or insulated container; and keep it as cool as possible at all times.																	
Sample Identification Number: _____ Date and Time Sample Collected: _____																	
Reason for Collection (check those that apply):																	
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><input type="checkbox"/> Chem/Bio Attack</td> <td style="width: 50%; border: none;"><input type="checkbox"/> Chem/Bio Alarm Activated</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Positive M256 Chemical Detection</td> <td style="border: none;"><input type="checkbox"/> Positive Recon Team Findings</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Marines becoming sick</td> <td style="border: none;"><input type="checkbox"/> Marines Dying</td> </tr> <tr> <td colspan="2" style="border: none;"><input type="checkbox"/> Other _____</td> </tr> </table>		<input type="checkbox"/> Chem/Bio Attack	<input type="checkbox"/> Chem/Bio Alarm Activated	<input type="checkbox"/> Positive M256 Chemical Detection	<input type="checkbox"/> Positive Recon Team Findings	<input type="checkbox"/> Marines becoming sick	<input type="checkbox"/> Marines Dying	<input type="checkbox"/> Other _____									
<input type="checkbox"/> Chem/Bio Attack	<input type="checkbox"/> Chem/Bio Alarm Activated																
<input type="checkbox"/> Positive M256 Chemical Detection	<input type="checkbox"/> Positive Recon Team Findings																
<input type="checkbox"/> Marines becoming sick	<input type="checkbox"/> Marines Dying																
<input type="checkbox"/> Other _____																	
Location of Attack _____ (UM or place) Date and Time of Attack _____	Unit Identification _____ (Co, Bn, Bde, Div, Corps)																
Terrain Description (check those that apply)																	
<table style="width: 100%; border: none;"> <tr> <td style="width: 12.5%;"><input type="checkbox"/> Flat</td> <td style="width: 12.5%;"><input type="checkbox"/> Hills</td> <td style="width: 12.5%;"><input type="checkbox"/> Mountains</td> <td style="width: 12.5%;"><input type="checkbox"/> Desert</td> <td style="width: 12.5%;"><input type="checkbox"/> Jungle</td> <td style="width: 12.5%;"><input type="checkbox"/> Forest</td> <td style="width: 12.5%;"><input type="checkbox"/> Urban</td> <td style="width: 12.5%;"><input type="checkbox"/> Grassy</td> </tr> <tr> <td colspan="4" style="border: none;"><input type="checkbox"/> Sparse Trees/Shrubs</td> <td colspan="4" style="border: none;"><input type="checkbox"/> Other _____</td> </tr> </table>		<input type="checkbox"/> Flat	<input type="checkbox"/> Hills	<input type="checkbox"/> Mountains	<input type="checkbox"/> Desert	<input type="checkbox"/> Jungle	<input type="checkbox"/> Forest	<input type="checkbox"/> Urban	<input type="checkbox"/> Grassy	<input type="checkbox"/> Sparse Trees/Shrubs				<input type="checkbox"/> Other _____			
<input type="checkbox"/> Flat	<input type="checkbox"/> Hills	<input type="checkbox"/> Mountains	<input type="checkbox"/> Desert	<input type="checkbox"/> Jungle	<input type="checkbox"/> Forest	<input type="checkbox"/> Urban	<input type="checkbox"/> Grassy										
<input type="checkbox"/> Sparse Trees/Shrubs				<input type="checkbox"/> Other _____													
Weather (check those that apply)																	
<table style="width: 100%; border: none;"> <tr> <td style="width: 12.5%;"><input type="checkbox"/> Clear</td> <td style="width: 12.5%;"><input type="checkbox"/> Cloudy</td> <td style="width: 12.5%;"><input type="checkbox"/> Rain</td> <td style="width: 12.5%;"><input type="checkbox"/> Fog</td> <td style="width: 12.5%;"><input type="checkbox"/> Snow</td> <td style="width: 12.5%;"><input type="checkbox"/> Dust</td> <td style="width: 12.5%;"><input type="checkbox"/> Mist</td> <td style="width: 12.5%;"><input type="checkbox"/> Other _____</td> </tr> </table>		<input type="checkbox"/> Clear	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Rain	<input type="checkbox"/> Fog	<input type="checkbox"/> Snow	<input type="checkbox"/> Dust	<input type="checkbox"/> Mist	<input type="checkbox"/> Other _____								
<input type="checkbox"/> Clear	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Rain	<input type="checkbox"/> Fog	<input type="checkbox"/> Snow	<input type="checkbox"/> Dust	<input type="checkbox"/> Mist	<input type="checkbox"/> Other _____										
Wind at Collection Site (check only one)																	
<table style="width: 100%; border: none;"> <tr> <td style="width: 25%;"><input type="checkbox"/> None/Calm</td> <td style="width: 25%;"><input type="checkbox"/> Mild Breeze</td> <td style="width: 25%;"><input type="checkbox"/> Windy</td> <td style="width: 25%;"><input type="checkbox"/> Gusts</td> </tr> </table>		<input type="checkbox"/> None/Calm	<input type="checkbox"/> Mild Breeze	<input type="checkbox"/> Windy	<input type="checkbox"/> Gusts												
<input type="checkbox"/> None/Calm	<input type="checkbox"/> Mild Breeze	<input type="checkbox"/> Windy	<input type="checkbox"/> Gusts														
Odor (check those that apply)																	
<table style="width: 100%; border: none;"> <tr> <td style="width: 12.5%;"><input type="checkbox"/> None</td> <td style="width: 12.5%;"><input type="checkbox"/> Sweet</td> <td style="width: 12.5%;"><input type="checkbox"/> Fruity</td> <td style="width: 12.5%;"><input type="checkbox"/> Irritating</td> <td style="width: 12.5%;"><input type="checkbox"/> Pepper</td> <td style="width: 12.5%;"><input type="checkbox"/> Flower</td> <td style="width: 12.5%;"><input type="checkbox"/> Changing</td> </tr> <tr> <td colspan="7" style="border: none;"><input type="checkbox"/> Other _____</td> </tr> </table>		<input type="checkbox"/> None	<input type="checkbox"/> Sweet	<input type="checkbox"/> Fruity	<input type="checkbox"/> Irritating	<input type="checkbox"/> Pepper	<input type="checkbox"/> Flower	<input type="checkbox"/> Changing	<input type="checkbox"/> Other _____								
<input type="checkbox"/> None	<input type="checkbox"/> Sweet	<input type="checkbox"/> Fruity	<input type="checkbox"/> Irritating	<input type="checkbox"/> Pepper	<input type="checkbox"/> Flower	<input type="checkbox"/> Changing											
<input type="checkbox"/> Other _____																	
Symptoms (check those that apply)																	
<table style="width: 100%; border: none;"> <tr> <td style="width: 25%;"><input type="checkbox"/> None</td> <td style="width: 25%;"><input type="checkbox"/> Skin Swelling</td> <td style="width: 25%;"><input type="checkbox"/> Difficulty Breathing</td> <td style="width: 25%;"><input type="checkbox"/> Blurred Vision</td> </tr> <tr> <td><input type="checkbox"/> Dizziness</td> <td><input type="checkbox"/> Skin Rash</td> <td><input type="checkbox"/> Nausea</td> <td><input type="checkbox"/> Dry Mouth</td> </tr> <tr> <td><input type="checkbox"/> Fever</td> <td><input type="checkbox"/> Dark Skin Blotches</td> <td></td> <td><input type="checkbox"/> Unconscious</td> </tr> <tr> <td><input type="checkbox"/> Headache</td> <td><input type="checkbox"/> Bleeding Sores</td> <td colspan="2" style="border: none;"><input type="checkbox"/> Other _____</td> </tr> </table>		<input type="checkbox"/> None	<input type="checkbox"/> Skin Swelling	<input type="checkbox"/> Difficulty Breathing	<input type="checkbox"/> Blurred Vision	<input type="checkbox"/> Dizziness	<input type="checkbox"/> Skin Rash	<input type="checkbox"/> Nausea	<input type="checkbox"/> Dry Mouth	<input type="checkbox"/> Fever	<input type="checkbox"/> Dark Skin Blotches		<input type="checkbox"/> Unconscious	<input type="checkbox"/> Headache	<input type="checkbox"/> Bleeding Sores	<input type="checkbox"/> Other _____	
<input type="checkbox"/> None	<input type="checkbox"/> Skin Swelling	<input type="checkbox"/> Difficulty Breathing	<input type="checkbox"/> Blurred Vision														
<input type="checkbox"/> Dizziness	<input type="checkbox"/> Skin Rash	<input type="checkbox"/> Nausea	<input type="checkbox"/> Dry Mouth														
<input type="checkbox"/> Fever	<input type="checkbox"/> Dark Skin Blotches		<input type="checkbox"/> Unconscious														
<input type="checkbox"/> Headache	<input type="checkbox"/> Bleeding Sores	<input type="checkbox"/> Other _____															
Symptoms:																	
Time of Onset: _____	Duration (of Symptoms): _____																

SOP FOR NBCD

Delivery Method(check those that apply)

- Unknown       Artillery       Mortar       RPG/Grenade       Rocket  
 Aircraft       Aerosol       Generator       Other \_\_\_\_\_

State of Agent at Time of Collection(check only one)

- Liquid       Vapor       Powder       Solid       Smoke       Mist  
 Dust (cloud)       Gel       Other \_\_\_\_\_

Description of Sample (check only one)

- Vegetation       Soil       Other \_\_\_\_\_
- Biomedical:  
 Urine       Blood       Tissue

Color of Sample \_\_\_\_\_

Size of Sample \_\_\_\_\_

Other \_\_\_\_\_

Additional Remarks:

RADIOLOGICAL DATA SHEET- MONITORING OR POINT TECHNIQUE						DATE	PAGE NO.	NO OF PAGES	
MONITOR OR SURVEY TEAM NUMBER				MONITOR (PRINT NAME)					
MAP USED				TYPE OF VEHICLE OR OTHER SHIELDING			INSTRUMENT TYPE		
Reading No.	Location	Time	Dose Rate (cGyph)	Do Not Use*	Reading No.	Location	Time	Dose Rate (cGyph)	Do Not Use*
1					16				
2					17				
3					18				
4					19				
5					20				
6					21				
7					22				
8					23				
9					24				
10					25				
11					26				
12					27				
13					28				
14					29				
15					30				
REMARKS									
* DO NOT USE. For control party only.									
CORRELATION FACTOR DATA									
Location	Reading No.	Dose Rate (cGyph)		CP*	Location	Reading No.	Dose Rate (cGyph)		CP*
		Inside	Outside				Inside	Outside	

SOP FOR NBCD

RADIOLOGICAL DATA SHEET- ROUTE OR COURSE LEG TECHNIQUE					DATE		PAGE NO.		NO OF PAGES				
SURVEY PARTY DESIGNATION				MONITOR (PRINT NAME)									
MAP USED				AIRCRAFT OR VEHICLE			INSTRUMENT TYPE						
Route or Leg Designation													
Time at start of Leg or Route													
Time Route Completed (ground) or Survey Height (air)													
Distance or Time interval used													
Remarks              * Times of start and stop are reported for each route or portion of route completed at one time by ground survey. If a route is done in parts, use a separate column for each part. **DO NOT USE. For control party use only.**					Reading No.	Dose Rate cGyph	Do Not Use*	Reading No.	Dose Rate cGyph	Do Not Use*	Reading No.	Dose Rate cGyph	Do Not Use*
					1			1			1		
					2			2			2		
					3			3			3		
					4			4			4		
					5			5			5		
					6			6			6		
					7			7			7		
					8			8			8		
					9			9			9		
					10			10			10		
					11			11			11		
					12			12			12		
					13			13			13		
Air-Ground or Vehicle Correlation Factor Data					14			14			14		
Location	Height (feet) Air Only	Dose Rate (cGyph)		CP**	15			15			15		
		Inside Air	Outside Ground		16			16			16		
		17				17			17				
					18			18			18		
					19			19			19		
					20			20			20		

NUCWARN FORMAT

LINE	MEANING	REMARKS
A	Target number or code.	Use target number, such as AF001, for single attack. Use code, or nickname such as Hot Candle, for multiple attacks.
D	Date-Time groups.	Single: Date and time attack will begin and the date and time attack will end. Multiple: Date and time attack will begin and time when all bursts will be complete. This line should be encoded.
F1	Minimum safe distance (MSD 1) and location of single attack.	If all troops are outside MSD 3, only F3 is transmitted. This line should be encoded.  Multiple: Appears as a series of coordinates that defines an MSD box plotted around the MSD for each burst in the group. Single: Distance in meters from ground zero to the edge of zone 1, followed by grid coordinates for attack location.
F2	MSD 2	Same as F1 except information pertains to MSD 2.
F3	MSD 3	Same as F1 except information pertains to MSD 3.
H	Type and number of bursts (surface or subsurface only).	If there is any chance the strike will be a surface or subsurface burst this line is sent.
I	Number of bursts.	For multiple bursts only.

**NOTE:** If the burst is to be a surface burst, an NBC 3 (Nuclear report (containing line ZI) should be prepared for separate transmission.

SOP FOR NBCD

PROTECTION REQUIREMENTS FOR FRIENDLY NUCLEAR STRIKE

AREA	NEGLIBLE RISK TO	ZONE OF WARNING	PROTECTION REQUIREMENT
DGZ TO MSD 1	N/A	1	Evacuate all personnel.
MSD 1 TO MSD 2	Warned, protected personnel	2	Personnel in buttoned-up tanks or foxholes with overhead cover.
MSD 2 TO MSD 3	Warned, exposed personnel	3	Personnel prone on ground with all skin covered.
MSD 3 AND BEYOND	Unwarned, exposed, personnel	N/A	No protective measures except dazzle.

SIGNIFICANCE OF PREDICTED FALLOUT ZONES

Exposed, unprotected people may receive the following doses from fallout.

Zone I--Immediate operation concern. More than 150 cGy within 4 hours.

Zone II--Secondary hazard. Less than 150 cGy within 4 hours. More than 50 cGy within 24 hours.

Outside the predicted area--No more than 50 cGy in 24 hours  
No more than 150 cGy for an indefinite period.

## NBC WEATHER/WIND MESSAGES

## EFFECTIVE DOWNWIND MESSAGE

ZULU	DDTTTT	DATE-TIME GROUP WINDS WERE MEASURED (ZULU)
ALFA	dddsss---	Over 0 thru 2 KT
BRAVO	dddsss---	Over 2 thru 5 KT
CHARLIE	dddsss---	Over 5 thru 30 KT
DELTA	dddsss---	Over 30 thru 100 KT
ECHO	dddsss---	Over 100 thru 300 KT
FOXTROT	dddsss---	Over 300 thru 1 MT
GOLF	dddsss---	Over 1 thru 3 MT

- NOTES:
1. The first three digits (ddd) give the effective wind direction, in degrees, from grid north.
  2. The second three digits (sss) give the effective wind speed in kilometers per hour.
  3. The last three digits (---) give the expanded angle in degrees.

CHEMICAL DOWNWIND MESSAGE  
CDM

110500 Zulu	110600 Zulu
I Corps	
WHISKEY	120010 418742
XRAY	125919 416742
YANKEE	130005 518642

- NOTES:
1. CDM is only valid for 6 hours.
  2. Area affected may be a mapsheet number or an area such as I CORPS.
  3. Lines WHISKEY, XRAY, and YANKEE each contain coded weather information. Line WHISKEY is only valid for the first two hours, line XRAY for the next two and line YANKEE for the last two hours.

HOW TO READ THE WEATHER INFORMATION IN A  
CHEMICAL DOWNWIND MESSAGE

WHISKEY : 120 01 4 18 7 4 2

Downwind direction  
in degrees.

Windspeed in kmph

Air stability code  
 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)

Code	Temp
05	5° C
04	4° C
03	3° C
02	2° C
01	1° C
00	0° C
51	-1° C
52	-2° C
53	-3° C
54	-4° C
55	-5° C

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

Cloud cover code  
 0 = Sky less than half covered by clouds.  
 1 = Half the sky covered by clouds.  
 2 = More than half the sky covered by clouds.

Significant weather phenomena code  
 3 = Blowing snow or sand  
 4 = Fog, ice, or thick haze.  
 5 = Drizzle  
 6 = Rain  
 7 = Light rain or snow  
 8 = Showers of rain or snow, hail or a mix.  
 9=Thunderstorms

SURFACE OF MARKER FACING  
MINEFIELD  
(BACK)



CHEMICAL AGENT IN MINE  
DATE OF EMPLACEMENT  
SURFACE OF MARKER FACING  
AWAY FROM MINEFIELD  
(FRONT)



RED BACKGROUND WITH YELLOW  
LETTERING AND STRIPE

CHEMICAL MINEFIELD  
(UNEXPLODED MINES)

SURFACE OF MARKER FACING  
CONTAMINATION  
(BACK)



DOSE RATE  
DATE AND TIME OF READING  
DATE AND TIME OF BURST  
(IF KNOWN)  
SURFACE OF MARKER FACING  
AWAY FROM CONTAMINATION  
(FRONT)



WHITE BACKGROUND WITH  
BLACK LETTERING

RADIOLOGICAL

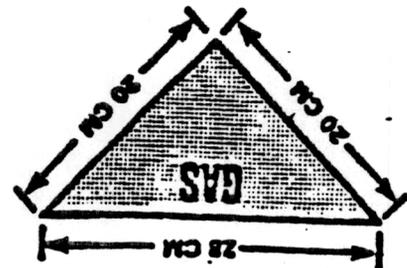
NAME OF AGENT (IF KNOWN)  
DATE AND TIME OF DETECTION



BLUE BACKGROUND WITH  
RED LETTERING

BIOLOGICAL

NAME OF AGENT (IF KNOWN)  
DATE AND TIME OF DETECTION



YELLOW BACKGROUND WITH  
RED LETTERING

CHEMICAL



SOP FOR NBCD

SOP FOR NBCD

APPENDIX C

RADIATION STATUS REPORTING PROCEDURES

1. In the event of a nuclear attack, the radiation status of all personnel within the Division will be maintained. To provide rapid means of evaluating exposure, Radiation Dose Status Charts will be used. Regiments and separate Battalions will maintain records which will be sent at 1200 local time daily to the supporting NBCC showing the previous 24 hours total radiation dose received.
2. The following are radiation status categories as per the Nuclear Radiation Degree-of-Risk Exposure Criteria Chart (Figure C-1)

NUCLEAR RADIATION EXPOSURE STATUS AND DEGREE OF RISK EXPOSURE		
Radiation Status Category <sup>1,2</sup>	Total Past Cumulative Dose <sup>3</sup> (cGyph)	Possible exposure criteria for a single operation which will not result in exceeding dose criteria for the stated Degree of Risk. 4.5 (cGy)
Res-0 Units	No Exposure	Neglible Risk =< 50 Moderate Risk =< 70 Emergency Risk =< 150
Res-1 Units	Greater than 0 but less than or equal to 70	Neglible Risk =< 10 Moderate Risk =< 30 Emergency Risk =< 110
Res-2 Units	Greater than 70 but less than or equal to 150	Any further exposure is considered to exceed a neglible or moderate risk. Emergency Risk =< 40.
Res-3 Units	Greater than 150	All further exposure will exceed the Emergency Risk.

- 1 Radiation status categories are based on previous exposure to radiation.
- 2 Reclassification of units from one radiation status category to a less serious one is made by the commander upon advice of the surgeon after sample observation of actual state of health of the exposed personnel.
- 3 All exposures to radiation are considered total body and simply additive. No allowance is made for body recovery from radiation injury.
- 4 Risk levels are graduated within each status category to provide more stringent criteria as the total radiation dose accumulated becomes more serious. The exposure criteria given for RES-1 and RES-2 should be used only when the numerical value of a unit's total past cumulative dose is unknown. Otherwise, the criterion for the desired degree of risk should be obtained by subtracting the numerical value of the unit's dose form the RES-0 criterion for the desired degree of risk.
- 5 Each of the degrees of risk can be applied to radiation hazards resulting from enemy or friendly weapons, or both, and from initial nuclear radiation resulting from planned friendly supporting fires.

Figure C-1

SOP FOR NBCC

3. Regiments/separate Battalions are established as the basic reporting units and the supporting NBC Center as the basic recording unit for reporting and recording radiation exposure. Upon notification of a possible nuclear attack, tactical dosimeters will be issued to selected personnel within each unit (issue of dosimeters will be done within the responsible unit) to determine the average total dose. Average readings will be rounded to the nearest ten cGy of the unit daily exposure, and be forwarded to the supporting NBCC.

4. Remainder of Appendix lists the Nuclear Radiation Degree-of-Risk Exposure Criteria and gives the format and example of Radiation Dose Status Charts.

Date: _____		Unit: _____		
Element	Previous Exposure	New Exposure	Total Exposure	RES Category
Total Elements: _____		Overall Status: _____		Category Total: _____

Figure C-2

NOTE: Radiation exposure charts are locally produced. See Figure C-2 for blank chart and Figure 4 for an example of a completed chart.

5. The following instructions are provided to properly record radiation exposure and determine RES status on the radiation exposure chart:

- a. Complete heading on the radiation exposure chart to include date and unit.
- b. List all elements of the unit in the ELEMENT column of the radiation exposure chart (Figure 2).
- c. List all previous exposures in centigray (cGy) for each element in the PREVIOUS EXPOSURE column of the radiation exposure chart (Figure C-2).
- d. List all new exposures in cGy for each element in the NEW EXPOSURE column of the radiation exposure chart (Figure 2).
- e. Compute the total exposure in cGy for each element by adding the element's previous exposure and the element's new exposures, recording this value in the TOTAL EXPOSURE column of the radiation exposure chart (Figure 2).
- f. Compute the category total RES categories, and record it in the space marked "CATEGORY TOTAL" at the bottom right of the exposure chart (Figure 2).

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g. Add elements in ELEMENT column on the radiation exposure chart, and record the total in the space marked "TOTAL ELEMENTS", at the bottom left on the radiation exposure chart (Figure 2).

RADIATION STATUS CATEGORIES

Radiation status category of Battalion or Regiment	Number of companies in Battalion Number of Battalions in Regiment					
	2	3	4	5	6	7
	Sum of all RES numbers of all Companies or Battalions					
RES-0	0	0-1	0-1	0-2	0-2	0-3
RES-1	1-2	2-4	2-5	3-7	3-8	4-10
RES-2	3-4	5-7	6-8	8-12	9-14	11-17
RES-3	5-6	8-9	10-12	13-15	15-18	18-21

Figure C-3

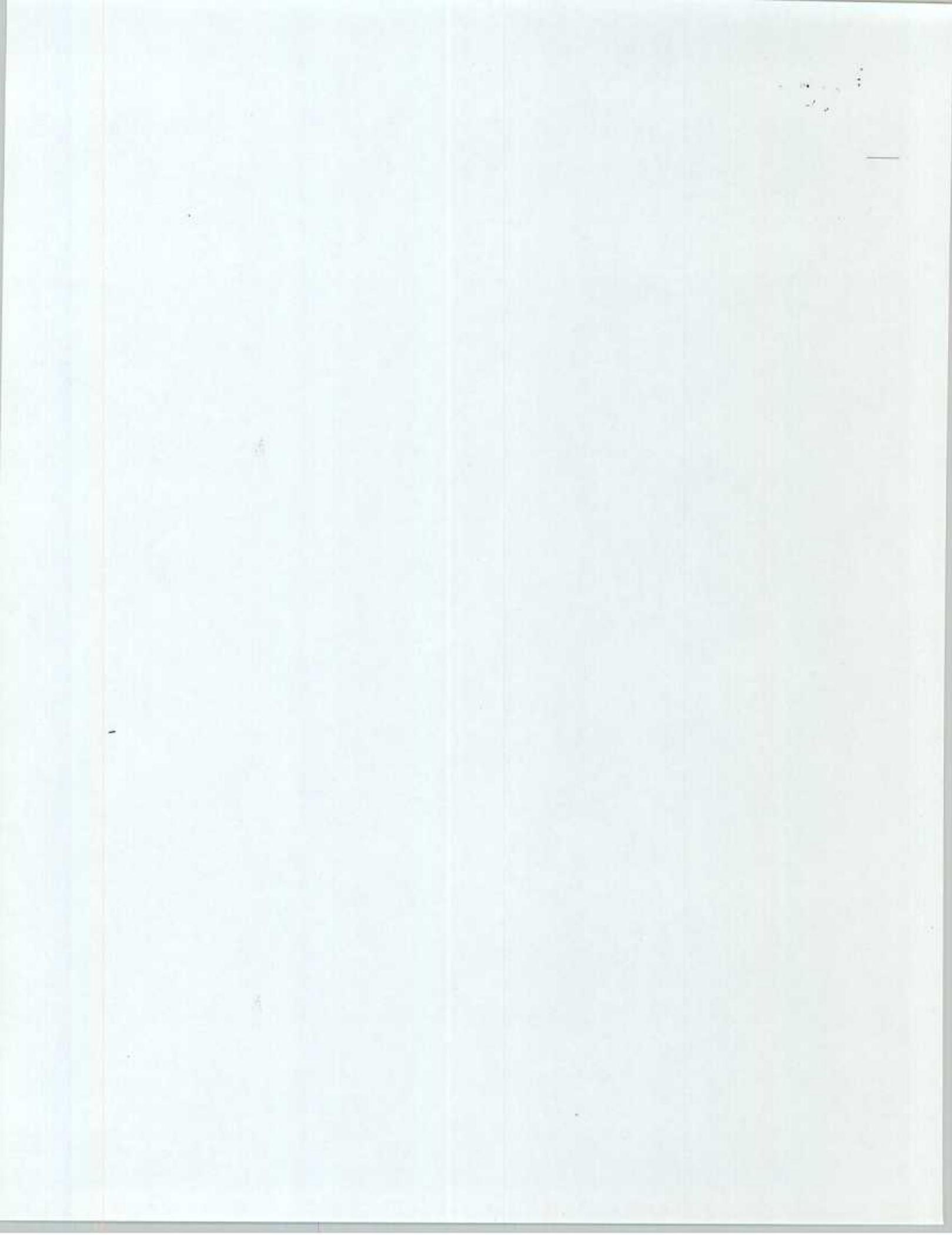
h. Compute the overall status of the unit by using radiation status category chart in Figure 3, and record it in the space on the radiation exposure chart marked "OVERALL STATUS" (Figure C-2).

i. Figure C-4 is an example of a completed daily Radiation Exposure chart to be forwarded to the supporting NBCC at 1200 local time showing unit's previous radiation exposure.

Date: 940302		Unit: 4 <sup>th</sup> Marine Regiment		
Element	Previous Exposure	New Exposure	Total Exposure	RES Category
1/1	25	10	35	1
1/7	10	5	15	1
3/3	30	45	75	2
3/12	20	10	30	1
Regt Hq	25	10	35	1
Total Elements: <u>5</u>		Overall Status: <u>1</u>		Category Total: <u>6</u>

Figure C-4

6. An accurate history of radiation exposure is critical to maintain combat effectiveness and avoid overexposure to radiation which will produce casualties and possible long term adverse health effects.



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APPENDIX D

CS CHAMBER TRAINING PROCEDURES

1. O-Chlorobenzylidene Malonitrile (CS) Mask Confidence Exercise. Each Marine/Sailor will complete a formal CS Mask Confidence Exercise (gas chamber) on an annual basis. This exercise will be accomplished with the individual's assigned mask so that actual fit and adjustment of their personal mask can be checked. Additionally, Marines/Sailors will be required to wear the NBC protective suit during the entire CS chamber exercise.

2. Purpose

a. The purpose of the exercise is to familiarize Marines/Sailors with their masks, MOPP gear and associated equipment that will be needed in an NBC environment.

b. This exercise is designed to accomplish the following objectives:

(1) To test the fit and operation of the individual Marines'/Sailors' protective mask, and crew masks as required by unit T/E or assignment.

(2) To instill confidence in the individual Marine/Sailor in the protection afforded by proper use of the protective mask.

(3) To ensure proper procedures in preventive maintenance of the field protective mask after the exercise.

(4) To ensure that each individual is capable of drinking water while wearing the protective mask.

3. CS Chambers. An approved chamber is necessary when conducting a mask confidence exercise. Approved chambers are located at Camps Courtney, Hansen, Schwab, and MCAS Futenma.

4. Responsibilities and Duties of Personnel Conducting Exercises

a. Officer in Charge. A NBCD Officer/SNCO must be present during all exercises. If necessary, they may also serve as Safety Officer. They will supervise the exercise procedures before, during and after. Additionally, they will ensure that a safety vehicle, Corpsman, communications, and potable water are at the chamber site during the exercise.

## SOP FOR NBCD

b. Chamber Instructor. Unit NBCD Officers/NCO's (MOS 5702/5711) trained in chamber exercise techniques will act as instructors. Instructors will:

(1) Ensure that each Marine/Sailor who undergoes CS chamber training does so with a personally assigned mask.

(2) Arrange in advance for personnel to wear proper clothing (e.g. overboots, overgarment, gloves, and mask).

(3) Check for proper wear of the overgarments.

(4) Supervise the establishment of a safe concentration for CS in the chamber. The utilization of CS grenades in a gas chamber is not authorized under any circumstances. The minimum amount of CS necessary will be used.

(5) Keep exits clear at all times.

(6) Inspect each individual's mask for proper fit and ascertain that all Marines are proficient in protective mask drills before the exercise starts. In addition to inspection by the instructor, it is also recommended that individuals be paired off in the "buddy system" to inspect and check the fit, and seal of each other's masks.

(7) The instructor will assemble the group upwind of the chamber and conduct a brief of the exercise to include the characteristics, effects, and use of CS. Personnel must be advised of the procedures to adhere to once they exit the chamber. Before and after exercises, the instructor and assistants will check the fit and adjustment of each individual's protective masks and suit.

(8) A safety brief will be given to ensure that no one with a dangerous medical condition (heart problems, large open wounds, etc.), anyone wearing contact lenses or pregnant females enter the CS chamber.

### c. Conducting the CS Chamber Exercise

(1) Masked and suited Marines/Sailors are ushered into the chamber in succession and the exit is closed behind them. The Marines/Sailors are instructed to breathe deeply for a minute or so. In the event of a leaking mask, the Marine/Sailor is immediately sent outside the chamber. An assistant will check the individual's mask for fit and adjustment then send the individual back into the chamber. If necessary, the individual(s) will be issued another mask before reentering the CS chamber.

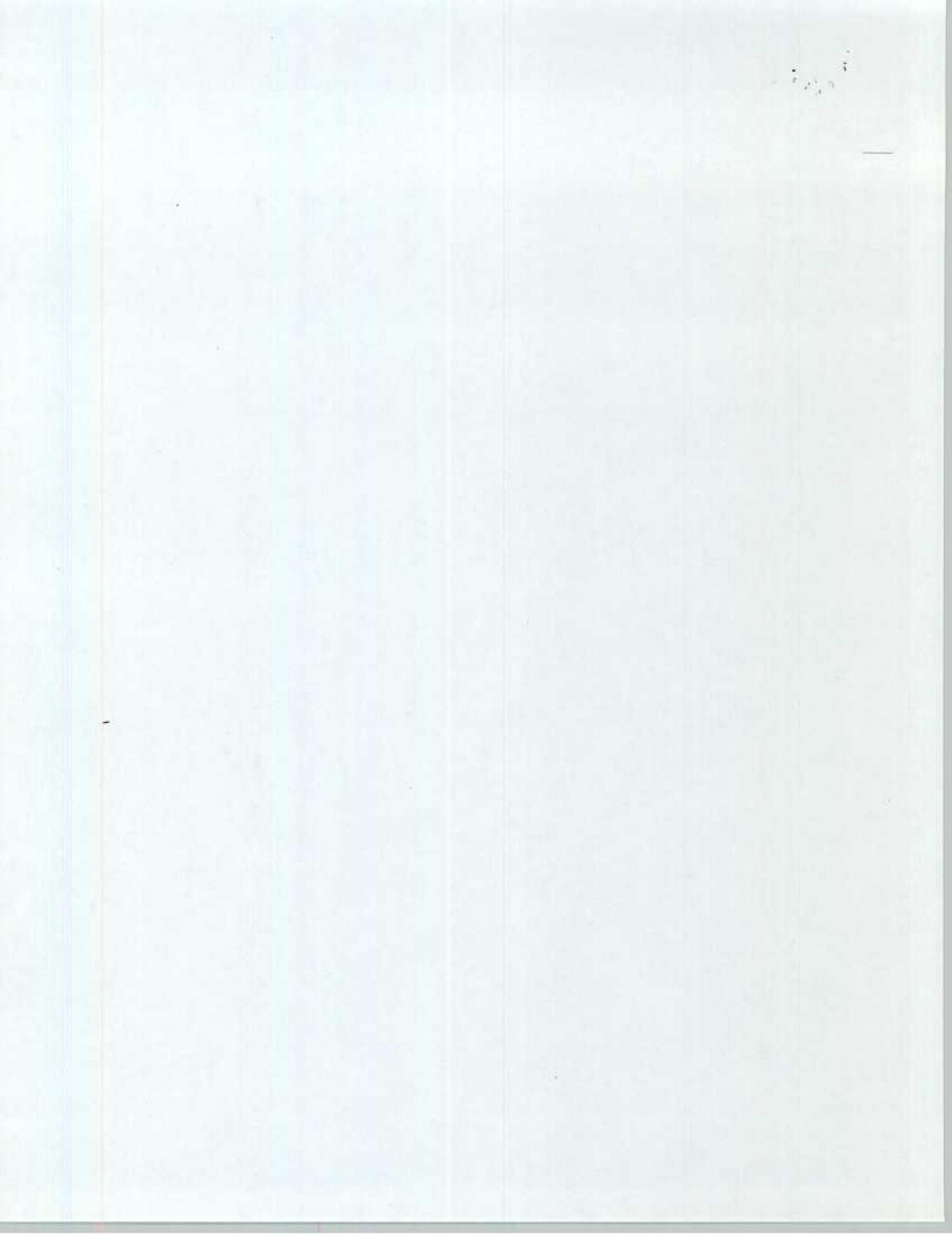
(2) After all Marines/Sailors are checked to ensure that masks are fitted and functioning properly, all Marines/Sailors face the instructor and on command, stop breathing, close eyes,

## SOP FOR NBCD

and unmask. Immediately, each Marine/Sailor will don, clear, and check their individual mask and wait for all Marines/Sailors to establish that their masks function properly.

(3) At this time each individual in the chamber will use their drinking system to ensure it functions properly and to gain confidence in their ability to use it correctly.

d. Procedures Following the Chamber Exercise. Personnel should change clothing upon completion of the exercise. NBC overgarment ensembles used during the exercise should be hung outdoors for a few hours to aerate to avoid establishing a CS concentration in living or work spaces.



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APPENDIX E

MOS 5702/5711 INDIVIDUAL TRAINING STANDARDS (ITS) RECORD FORMS

1. Training record forms shown in this appendix will be utilized to document all MOS training for MOS 5702/5711 officers and Marines. The following procedures will be utilized:

a. Each NBCD Officer, NCO and Specialist will have an ITS training record utilizing the appropriate forms in this appendix.

b. Quarterly, semi-annual and annual ITS requirements will be met and recorded properly.

c. NBCD OIC's/NCOIC's will ensure accomplishment of ITS training and initial/date ITS records when training is accomplished.

2. Regularly conducted ITS training will ensure MOS proficiency for NBCD Officers and Marines.

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MOS 5711 INDIVIDUAL TRAINING STANDARDS RECORD MCO 1510:71A

NAME: \_\_\_\_\_

RANK: \_\_\_\_\_

SSN: \_\_\_\_\_

Task #	Grade	FS	MOJT SECT	Task Description
5711.1.1	PVT	P	S/6	Maintain NBCD Equipment
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX
5711.2.1	PVT	S	6	Instruct MBST NBC Tasks
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX
5711.2.2	PVT	S	6	Instruct Operation of Radiological Detection and Measuring Equipment
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX
5711.2.3	PVT	S	3	Conduct Monitor and Survey Operations Training
Date Completed				
5711.2.4	PVT	S	3	Conduct Decontamination Operations Training
Date Completed				
5711.2.5	PVT	S	12	Conduct Mask Confidence Exercise
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX XXXXXXXXXXXXX
5711.2.6	PVT	S	3	Instruct NBCD Warning and Reporting System
Date Completed				
5711.2.7	CPL		S/6	Evaluate Unit NBCD Readiness
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX
5711.2.8	CPL		S/6	Advise Commander on NBCD Training Requirements
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX

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5711.2.9	CPL		S/6	Supervise NBCD Training Program
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX
5711.3.1	SSGT	P	S/12	Advise Commander on NBCD Operations
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX XXXXXXXXXXXXX
5711.3.2	PVT	S	6	Conduct Control Center Operations (Biological/Chemical)
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX
5711.3.3	CPL	P	S/6	Conduct Control Center Operations (Nuclear)
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX
5711.4.1	SGT	P	S/12	Prepare NBCD SOP
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX XXXXXXXXXXXXX
5711.4.2	PVT	P	S/12	Maintain NBCD Publications
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX XXXXXXXXXXXXX
5711.4.3	SSGT		S/12	Prepare NBCD Appendix to Operations Order or Plan
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX XXXXXXXXXXXXX

SOP FOR NBCD

MOS 5702 INDIVIDUAL TRAINING STANDARDS RECORD MCO 1510.71A

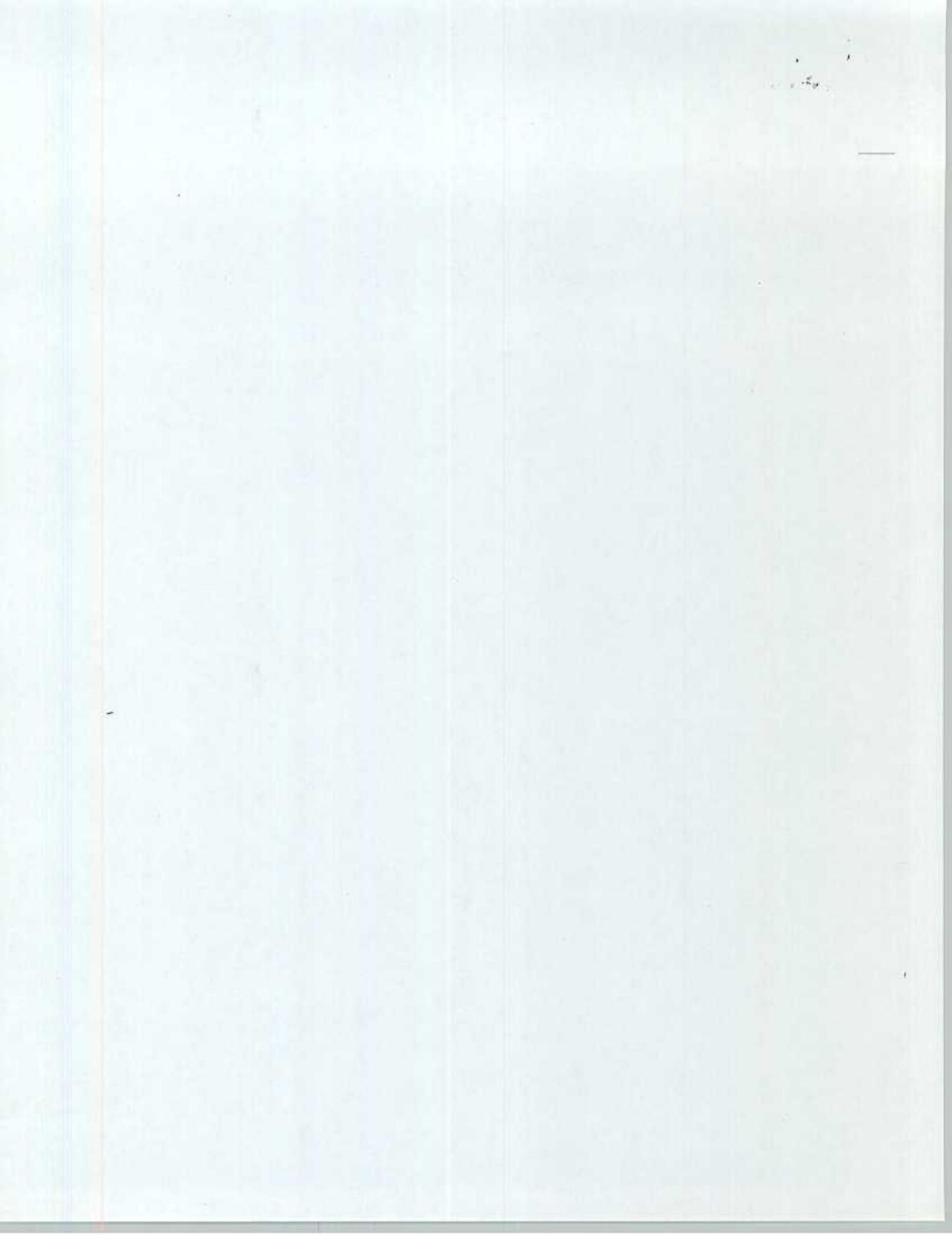
NAME: \_\_\_\_\_

RANK: \_\_\_\_\_

SSN: \_\_\_\_\_

Task #	Grade	FS	MOJT	Task Description
5702.1.1	WO	P	S/6	Supervise Maintenance of NBCD Equipment
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX
5702.2.1	WO	S	3	Conduct Monitor and Survey Operations Training
Date Completed				
5702.2.2	WO	S	3	Conduct Decontamination Operations Training
Date Completed				
5702.2.3	WO		S/6	Evaluate Unit NBCD Readiness
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX
5702.2.4	WO		S/6	Advise Commander on NBCD Training Requirements
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX
5702.2.5	WO		S/6	Supervise NBCD Training Program
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX
5702.3.1	WO	P	S/12	Advise Commander on NBCD Operations
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX XXXXXXXXXXXXX
5702.3.2	WO	S	6	Supervise Control Center Operations (Biological/Chemical)
Date Completed				XXXXXXXXXXXXX XXXXXXXXXXXXX





SOP FOR NBCD

APPENDIX F

3D MARINE DIVISION SEMI-ANNUAL NBCD TRAINING REPORT FORMAT

HEADING

3400  
Originator  
Date

From: Commanding Officer, (Battalion or higher Commands only)  
To: Commanding General, 3d Marine Division (Attn: G-3/NBCD)  
Via: (As Required)

Subj: SEMI-ANNUAL NBC DEFENSE TRAINING REPORT FOR PERIOD DATE-  
DATE (1 OCT-31 MAR, 1 APR-30 SEP; YEAR)

Ref: (a) DivO P3400.2B

1. In accordance with the reference, the subject report is submitted.

2. The following NBCD training was conducted during this reporting period:

a. Gas Chamber. (100% required annually)

(1) Number Trained.

(2) Annual Number Required.

(3) Unit Percentage Completed

b. Individual NBC training. (MBST/IPM)

1 Number Trained.

Total Manhours Trained.

c. Firing of T/O weapons in MOPP Level 4 (required annually).

(1) Total Number of Personnel required to fire.

(2) Total Number Marines who fired.

(3) Unit Percentage Completed.

d. Firing of Crew Served Weapons in MOPP Level 4 (required annually).

Total number of crew served weapons.

(2) Total number of crew served weapons crews fired in MOPP Level 4. \_\_\_\_\_

SOP FOR NBCD

A.

(3) Unit percentage completed.

e. NBC Detection Equipment Operator Training.

(1) Total Number Operators.

(2) Total Manhours Trained

f. Decontamination Team Training Conducted.

(1) Total Number Teams.

(2) Total Number Team Members

(3) Total Manhours Trained.

g. Decontamination Apparatus Licensing Accomplishment

(1) Total Number Licensed Decontamination Operators  
Required by Type. M12A1. \_\_\_\_\_ M17E1. \_\_\_\_\_

(2) Total Number Licensed Decontamination Operators by  
Type. M12A1. \_\_\_\_\_ M17E1. \_\_\_\_\_

Unit Licensing Percentage Accomplished.

3. Amplifying Comments. (if any)

M. A. JONES  
By direction

SOP FOR NBCD

APPENDIX G

CBD SORTS REPORTING WORKSHEET

1. INDIVIDUAL AND COLLECTIVE PROTECTION

- |   | <u>Yes</u> | <u>No</u>  |
|---|------------|------------|
| a. Does the unit possess sufficient quantities of M40/42 Field Protective Masks with hoods to outfit every Marine in the organization?        | <u>T/E</u> | <u>O/H</u> |
| b. Does the unit have sufficient quantities of protective ensembles (suits, gloves, and overboots) to provide two complete issues per Marine? | <u>T/E</u> | <u>O/H</u> |
| c. Does the unit have sufficient C2 canister filters to provide two combat grade filters per Marine?  | <u>T/E</u> | <u>O/H</u> |
| d. Does the unit have sufficient M258A1/M291 decontamination kits to provide two per Marine?  | <u>T/E</u> | <u>O/H</u> |
| e. Does the unit possess any collective protection equipment systems? Types:  | <u>T/E</u> | <u>O/H</u> |
| f. Training conducted using the above equipment during the previous month:  | Hrs.       | #Trnd      |

2. DETECTION

- |   | <u>Yes</u> | <u>No</u>  |
|---|------------|------------|
| a. Does the unit possess sufficient AN/VDR-2 radiacmeters to support its monitor/survey missions?                         | <u>T/E</u> | <u>O/H</u> |
| b. Does the unit possess sufficient M256A1 chemical agent detection kits to detect chemical vapor hazards?                | <u>T/E</u> | <u>O/H</u> |
| c. Does the unit possess sufficient quantities of M8/M9 Paper to detect liquid chemical hazards?                          | <u>T/E</u> | <u>O/H</u> |
| d. Does the unit possess sufficient quantities of biological sampling kits to collect suspected biological agent samples? | <u>T/E</u> | <u>O/H</u> |

SOP FOR NBCD

e. Training conducted using the above equipment during the previous month: Hrs. #Trnd

3. DECONTAMINATION

a. Does the unit possess operational M12A1 decontamination systems to support decontamination operations? Yes  
T/E

b. Does the unit possess operational M17E1 Lightweight decontamination systems to support decontamination operations? T/E O/H

c. Does the unit possess sufficient ABC M11 decontamination apparatus to support decontamination operations? T/E O/H

d. Does the unit possess sufficient Super Tropical Bleach to support decontamination operations? T/E O/H

e. Does the unit possess sufficient Decontamination Solution 2 (DS2) to support decontamination operations? T/E O/H

f. Does the unit possess sufficient M13 decontamination apparatuses to support decontamination operations? T/E O/H

g. Training conducted using the above equipment during the previous month: Hrs #Trnd

4. WARNING AND REPORTING Yes

a. Does the unit possess a NBC Center ready box containing all required materials/equipment and publications as required?

b. Does the unit possess sufficient communication capabilities to support NBC Center operations?

c. Does the unit possess sufficient NBCD alarms?

d. Does the unit have NBCD alarm procedures identified in its SOP?

e. Training conducted using the above equipment during the previous month: Hrs #Trnd

SOP FOR NBCD

5. MEDICAL

- |  | <u>Yes</u> | <u>No</u> |
|--|------------|-----------|
| a. Does the unit possess adequate chemical agent antidotes, pretreatment medicines and vaccines? |            |           |
| b. Training conducted in NBC medical procedures during the previous month:                       | Hrs        | #Trnd     |