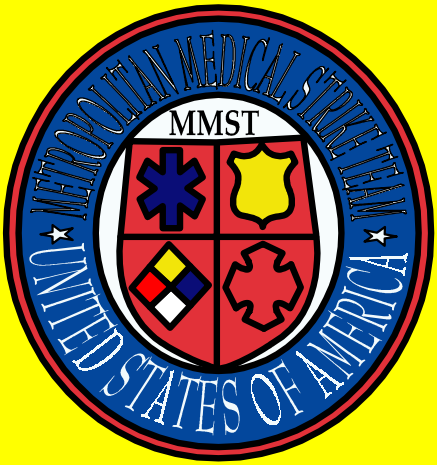

The Metropolitan Medical Response System's

Field Operations Guide

(FOG)

For the
Metropolitan Medical Strike Team (MMST)

NOVEMBER 1998

Type	Symbol/ Common Name	Volatility Persistency	CAS Number	LCt_{50}* (mg-min/m^3)	ICt_{50} (mg-min/m^3)	LCt_{50} ppm	ICt_{50} ppm	IDLH ppm	PEL ppm	Hazard	Symptom	Physical Characteristics
Choking	CG / Phosgene	Non-persistent	75-44-5	3200	1600	791	395	2	1.5	Respiratory	Coughing, Choking	Gas odor: New Mown Hay
	Cl / Chlorine	Non-persistent	7782-50-5	3200	1600	6561	622	30	0.4	Respiratory	Coughing, Choking	Gas odor: Swimmpool
Nerve	GA / Tabun	Non-persistent	77-81-G	400	300 *	60	45	0.08	0.0001	Respiratory, skin, eyes	Pinpointing of the pupils; dimness of vision; runny nose / salivation; tightness of chest; difficulty breathing; twitching or paralysis; tachycardia; vomiting; loss of consciousness; convulsions	Colorless to lightly colored liquid at normal temperature; G-agents slightly less volatile than water; V-agents about as volatile as motor oil
	GB / Sarin	Non-persistent	107-44-8	70-100	35-75 *	12-17	8	0.03	0.0001	Respiratory, skin, eyes		
	GD / Soman	Non-persistent	94-64-0	70	50-300 *	9	8	0.08	0.00003	Respiratory, skin, eyes		
	VX	Persistent	50782-69-9	30-100	24-50 *	3-9	3	0.0018	0.00001	Respiratory, skin, eyes		
Blister	H / HD	Persistent	505-60-2	1500	150 n	231	23	0.0005	0.003	Respiratory, skin, eyes	Reddening of skin; blisters; eye pain and reddening; eye damage; coughing; airway irritation and damage; eye effects may appear in a few hours; respiratory effects and blisters in 2 to 24 hours; can be lethal in large doses	Oily, light yellow to brown liquids with a strong odor of garlic; fishy odor; H and HD freeze at 57°F; all are volatile at room temperature
	HN-1	Persistent	538-07-08	1500	200 n	Approx. Same as H	Approx. Same as H	0.003	0.003	Respiratory, skin, eyes		
	HN-2	Persistent	51-75-2 *	3000	100 n	Approx. Same as H	Approx. Same as H	0.003	0.003	Respiratory, skin, eyes		
	HN-3	Persistent	555-77-1	1500	200 n	Approx. Same as H	Approx. Same as H	0.003	0.003	Respiratory, skin, eyes		
	HT	Persistent	505-60-2 693-07-2	1500	200 n	Approx. Same as H	Approx. Same as H			Respiratory, skin, eyes		
	CX	Persistent	35274-08-9	3200	>3 n	687	0.6	Unknown	Unknown	Respiratory, skin, eyes	Immediate burning; weal-like skin lesions; eye and airway irritation and damage	A solid below 95°F, but vapor can result
	L	Persistent	541-25-3	1200-1500	<300 n	165	Unknown	0.0004	0.003	Respiratory, skin, eyes	Immediate pain or irritation of skin; other symptoms similar to the H-agents	Oily, colorless liquid with the odor of geraniums; more volatile than H
Blood	AC	Non-persistent	74-99-8	2000-4000	Varies *	3600		45	5.0	Respiratory	Cherry red skin or lips; rapid breathing; dizziness; nausea; vomiting; headache; convulsions; death	Rapid evaporating liquids
	CK	Non-persistent	506-77-4	11000	7000 *	4375	2784		6	Respiratory		

* - Respiratory
n - Ocular

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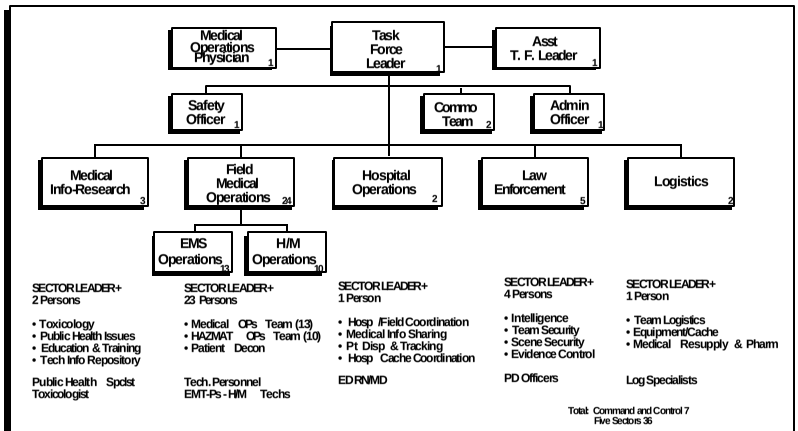
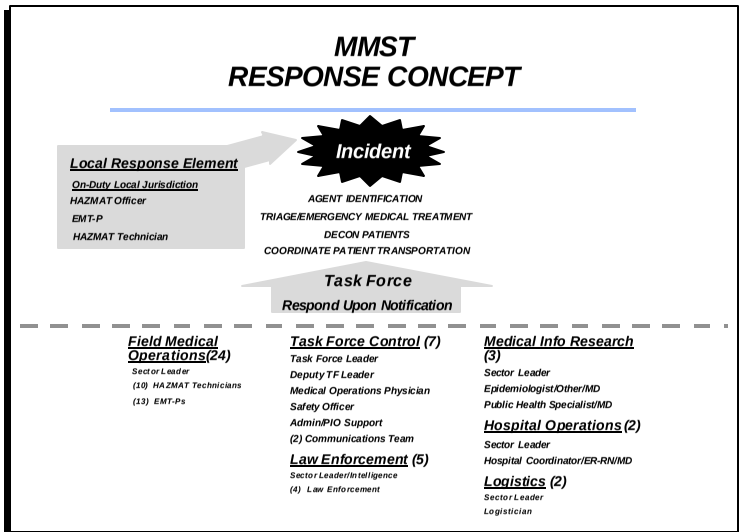
SECTION KEY


Medical Operations Physician 1
Task Force Leader 1
Asst T. F. Leader 1
Safety Officer 1
Commo Team 2
Admin Officer 1
Medical Info-Research 3
Field Medical Operations 24
Hospital Operations 2
Law Enforcement 5
Logistics 2
EMS Operations 13
H/M Operations 10
SECTOR LEADER+
2 Persons
• Toxicology
• Public Health Issues
• Education & Training
• Tech Info Repository
Public Health Spclst
Toxicologist
SECTOR LEADER+
23 Persons
• Medical OPs Team (13)
• HAZMAT OPs Team (10)
• Patient Decon
Tech. Personnel
EMT-Ps - HM Techs
SECTOR LEADER+
1 Person
• Hosp /Field Coordination
• Medical Info Sharing
• Pt Disp & Tracking
• Hosp Cache Coordination
ED RN/MD
SECTOR LEADER+
4 Persons
• Intelligence
• Team Security
• Scene Security
• Evidence Control
PD Officers
SECTOR LEADER+
1 Person
• Team Logistics
• Equipment/Cache
• Medical Resupply & Pharm
Log Specialists
Total Command and Control 7
Five Sectors 36

H45-A


MMST
RESPONSE CONCEPT
Local Response Element
On-Duty Local Jurisdiction
HAZMAT Officer
EMT-P
HAZMAT Technician
Incident
AGENT IDENTIFICATION
TRIAGE/EMERGENCY MEDICAL TREATMENT
DECON PATIENTS
COORDINATE PATIENT TRANSPORTATION
Task Force
Respond Upon Notification
Field Medical Operations(24)
Sector Leader
(10) HAZMAT Technicians
(13) EMT-Ps
Task Force Control (7)
Task Force Leader
Deputy TF Leader
Medical Operations Physician
Safety Officer
Admin/PIO Support
(2) Communications Team
Law Enforcement (5)
Sector Leader/Intelligence
(4) Law Enforcement
Medical Info Research (3)
Sector Leader
Epidemiologist/Other/MD
Public Health Specialist/MD
Hospital Operations (2)
Sector Leader
Hospital Coordinator/ER-RN/MD
Logistics (2)
Sector Leader
Logistician
H48-CC

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METROPOLITAN MEDICAL STRIKE TEAM (MMST)

TEAM OPERATIONS AND FIELD OPERATIONS GUIDE

The United States Public Health Service Metropolitan Medical Strike Team (USPHS MMST) Field Operations Guide (FOG) has been developed to assist Strike Team members during training and on mission assignments. The FOG is a compilation and summary of important strategic and tactical information. Position description summaries and complete operational checklists are outlined for each of the positions that make up the Strike Team.

Use of, and adherence to, the FOG will ensure optimum personal and Strike Team performance standardization of activities and procedures between Strike Teams and will promote safe and effective search and rescue operations.

I. INTRODUCTION

The United States Public Health Service, Office of Emergency Preparedness (USPHS/OEP) has supported the development of a Metropolitan Medical Strike Team (MMST) as a locally available, nuclear, biological, or chemical (NBC) trained incident response team and component of Emergency Support Function (ESF) #8 of the Federal Response Plan (FRP). Within this framework, tactical medical response Strike Teams will be mobilized for large-scale NBC terrorist events on a local, State, and national basis.

A. Integration with Federal Government

Local Incident Commanders (ICs) and the MMST leadership must recognize that the Federal Bureau of Investigation (FBI) has full authority (Presidential Decision Directive #39*)* over NBC terrorist events, but will operate in a unified command structure with the Incident Commander during the response and rescue phase. Once all viable victims have been removed, primary control will shift to the FBI Special Agent In Charge (SAIC), and the local responders will operate in support of the FBI.

The Federal Response Plan has designated that USPHS has Federal responsibility for providing coordinated assistance to supplement State and local resources in response to public health and medical care needs following a significant natural disaster or manmade event when Federal assistance is requested. This support is categorized in the following areas:

- Assessment of health/medical needs
- Health surveillance
- Medical care personnel
- Health/medical equipment and supplies
- Patient evacuation
- In-hospital care
- Food/drug/medical device safety
- Worker health/safety
- Radiological hazards
- Biological hazards
- Chemical hazards
- Mental health
- Public health information
- Vector control
- Potable water/wastewater and solid waste disposal
- Victim identification/mortuary services

Resources are available from the National Disaster Medical System (NDMS), which includes Disaster Medical Assistance Teams (DMATs) that could be mobilized for NBC events.

The Department of Defense (DoD) role is articulated primarily through the FRP in ESF #3, Corps of Engineers and #9; however, there are specialized agencies within the DoD that could serve usefully in NBC events. These include the Technical Escort Unit (TEU) in Aberdeen, MD; the Chemical/Biological Incident Response Force (CBIRF) in Camp LeJuene, NC; and the antiterrorism team attached to the Edgewood Research, Development, and Engineering Center (ERDEC) located in Edgewood, MD. These

teams can only be activated by another Federal agency, such as the FBI or USPHS. Because the teams' response time will likely exceed 2-3 hours, the determination to access them must be made early in the event.

The Federal Emergency Management Agency (FEMA) will assume Federal consequence management and public safety responsibility for NBC events once the Attorney General (AG) has determined that the priority law enforcement goals and objectives have been set or are outweighed by the consequence management concerns. As the primary agency for ESF #5, Information and Planning, FEMA will coordinate the acquisition of Federal resources for incident mitigation and activate urban search and rescue when indicated.

The Department of Energy (DOE) can play a critical role in providing specialized technical support in a nuclear terrorist event. This support may be more appropriate in a long-term scenario for agent/material removal and disposal.

The Centers for Disease Control and Prevention (CDC) are an immediate resource that should be notified as early in the incident as possible; however, it is not likely that CDC personnel can be transported to the site in a timely fashion. Therefore, a reliable communications linkage should be established for the rapid exchange of information and medical consultation. CDC can provide consultation on chemical antidotes, chemical decontamination practices, and medical intervention (both long and short term) actions for chemical and biological poisonings.

The Environmental Protection Agency (EPA) is the primary response agency for ESF #10, Hazardous Materials. Their role is to provide a coordinated Federal response to actual or potential release of hazardous materials. In an NBC scenario, their role would involve the long-term remediation and decontamination of the incident site in coordination with other Federal and State agencies.

The U.S. Secret Service (USSS), as a law enforcement agency with responsibility for protecting the U.S. Government's leadership as well as visiting heads of state and other dignitaries, would have little role in an NBC event unless it jeopardized the safety and well-being of these officials. At that time, the USSS would focus their

efforts in personnel removal and protection; very little effort would be expended in incident mitigation.

In any scenario, it must be recognized that Federal agencies and, therefore, resources will not likely be activated and mobilized prior to the critical elements of an NBC event being addressed by local responders. Only if the event length exceeds the 24- to 36-hour timeframe will most Federal agencies arrive at the Incident Command Post (ICP) to provide support. Most Federal assets can be accessed through the SAIC or USPHS on-site representative.

The Army National Guard (ANG) can be activated by the governor of a State, which requires that a state of emergency be declared. The ANG could be useful by activating their assets to support a local response.

B. Integration with State/Local Government

Once the initial response to an NBC incident has occurred, and the local responders are on-scene and have requested the MMST, State emergency services agencies will be notified by and through the local 911 center or local emergency management agency. Emergency operations centers may decide to provide optimal support and coordination for the locality affected by the incident. The State hazardous materials officer or other appropriate State representative should report to the ICP to coordinate State activities in concert with the Task Force Leader. Similarly, the MMST law enforcement sector should coordinate with on-site law enforcement to accomplish those tasks as assigned by the Task Force Leader and identified in other sections of this plan. Finally, the MMST Medical Operations Sector should coordinate with State and local EMS and public health office and medical community representatives.

II. PROGRAM MANAGEMENT TEAM

A. Introduction

The Program Management Team (PMT), which consists of the Program Director, three Assistant Program Directors (who function concurrently as Task Force Leaders (TFLs)), three Assistant Task Force Leaders, and a Medical Director, is responsible for

overseeing program direction and administrative functions and ensuring continuity between the local Washington Metropolitan Strike Team (MMST) and other local Strike Teams nationwide. The PMT may consist of personnel from several jurisdictions or from the same jurisdiction and will be of such rank and position as the Director of the sponsoring jurisdiction determines. This team may also consist of additional members if the Director of the sponsoring jurisdiction deems it necessary to accomplish the functions listed below.

- The Program Director heads the PMT and is primarily non-operational in nature.

- There are three Assistant Program Directors or TFLs who head each of the three task forces. Each shall have a specific area of responsibility as follows:

  - Assistant Director has responsibility for administrative and personnel functions.

  - Assistant Director has responsibility for operations and training functions.

  - Assistant Director has responsibility for logistics and supply functions.

B. Coordination

Listed below are the duties of the Program Management Team:

- Coordinate in determining the need to add, delete, or replace members to each Task Force.

- Shall represent DC-1 at national meetings.

- Coordinate with Task Force Administrative Section Leaders to ensure continuity between the PMT and Task Forces.

- File the proper Federal forms and applications necessary for deployment on incidents.

- File the necessary documents for financial remuneration for incidents funded by the Federal Government.

- Coordinate to ensure that the MMST response plan is kept current, that all medical and training requirements are met, and that all required forms are current.

- Coordinate to ensure that the MMST Operational System Description and Field Operations Guide are current.

- Coordinate with the Logistics Sector Leader for the procurement of new or replacement equipment and the repair of repairable equipment.

- Maintain regular equipment inventories with the assistance of the Logistics Sector Leader.

- Ensure that all Strike Team members are physically fit and have successfully fulfilled the requirements of their annual physical examinations.

- Coordinate with the Administrative Officers the completion of annual physical examinations for all Strike Team members.

- Ensure that all Strike Team members have completed their required inoculations and that their responder medical information sheet is current.

- Coordinate the development and scheduling of exercises and teamwide training sessions.

- Assure training programs are devised and presented for area first responders (police, fire, and EMS) as well as the local medical community.

- Maintain liaison with local hospitals and medical facilities.

- Coordinate the development and distribution of educational materials concerning the MMST.

- Coordinate credentialling of law enforcement and medical personnel.

- Stay abreast of the latest developments in nuclear, biological, or chemical (NBC) weapons and technical medical treatment protocols and disseminate this information to the appropriate team members.

- Coordinate with the Federal agencies and DoD units for sharing information, for establishing joint exercises, and for other purposes found in the MMST mission statement in Section I.

- Keep the COG Fire and Police Chiefs apprised of team status and pertinent operational and training issues.

III. STRIKE TEAM MANAGEMENT AND COORDINATION

A. Introduction

- A 43-person USPHS MMST Task Force comprises five major functional elements (Medical Information-Research, Field Medical Operations, Hospital Operations, Law Enforcement, and Logistics) and associated supervisory positions.

- The TFL receives direction and coordinates with the local IC, implements strategic and tactical assignments, and provides the necessary information flow for proper incident management.

- When an MMST is mobilized and responds to an affected locality, little reliable information may be known in the early phases of the mission. Despite this fact, the TFL must make strategic and tactical decisions early in the mission and throughout its duration.

B. Arrival at the Assigned Locality

- Upon arrival, the TFL should obtain a briefing from the IC to establish the current situation and determine how the MMST can assist in the incident.

- The existing chain of command and, specifically, to whom the TFL reports must be quickly established to ensure continuity throughout the operation.

- The TFL should address the following points:

  - Physical location of the ICP is appropriate for the problem
  - Location of the Task Force Base of Operations (BASEOPS)
  - Who, by position, is the TFL point of contact (POC)
  - Current situation
  - Agent identification issues
  - Victim decontamination issues
  - Victim transportation issues
  - Fatality processing issues
  - Hospital management issues
  - Facility decontamination issues
  - Local medical system issues
  - Support for the MMST
  - Current meteorologic conditions

- It is imperative that the affected locality have an understanding of the capabilities of the MMST. This information should be disseminated prior to any operational engagement as a part of the jurisdictional training package and should include:

  - Team composition
  - Capabilities
  - Limitations
  - Specific support requirements
  - Integration into the jurisdiction's Incident Command System/Incident Management System (ICS/IMS)
  - Security measures followed

In addition, the locality should identify any political or sensitive considerations specific to the current situation.

C. Locating an Area for Setup of MMST Operations

- While en route to the incident site, the TFL or Assistant Task Force Leader (ATFL) should coordinate with the IC to determine an area for the MMST to set up operations (Task Force BASEOPS).

- Key factors in determining this BASEOPS site include:

  - Travel distance and most favorable routes to the scene
  - Proximity to the ICP
  - Proximity to the hot, warm, and cold zones
  - Personnel shelter
  - Communications
  - Site safety/security

- Once on-scene, MMST personnel must ensure adequate space is available for:

  - Equipment cache setup and maintenance
  - Operations shelter for MMST personnel
  - Medical treatment area
  - Decontamination (victim **and** team members)
  - Toilet and sanitation area (in long-term operations)
  - Rehabilitation area

D. Size Up/Operational Planning

- After being briefed on what actions have taken place, the TFL should continue operational planning:

  - Has Incident Command been established?
  - Determine the physical magnitude of incident: How much square area is affected?
  - Have identification and extent of agent proliferation been established?
  - Has site control been initiated and have physical zone perimeters been established?
  - Have local medical facilities been notified of the event?
  - Has the Command Hospital system been implemented?
  - Are local Hazardous Materials (HAZMAT) teams preparing for entry to determine the type of agent?
  - What level of Personal Protective Equipment/Chemical Protective Clothing (PPE/CPC) is needed?
  - Has a preliminary victim count been taken?
  - Will MMST entry teams be needed?
  - Have hospitals that will receive casualties been determined and notified?
  - Have triage areas been established?

- Has transportation area been established?
- Have emergency decontamination capabilities been established?
- Is law enforcement support in place?

E. Interaction with the Local Command Structure

- Upon arrival at the incident scene, the MMST TFL must become an integral part of the existing command structure:
  - The TFL should be prepared to adapt to different variations of ICS that may be implemented by the authority having jurisdiction.
  - It should be understood by the incident jurisdiction that the MMST is a resource that is available for their use and under their operational direction.
  - This interaction must be conducted in a cooperative manner.
- The TFL must identify to the IC any support needs of the MMST.
  - On-site replenishment of equipment and supplies (decon treatment, etc.)
  - Increased on-site medical expertise
  - Provisions for long-term operations (food, water, sanitary facilities, rest areas)

F. Work Scheduling/Rotations

- When the MMST arrives at the assigned location, it may be necessary to commit all personnel to the initial requirements that must be addressed including:
  - BASEOPS setup
  - Communications equipment setup
  - Equipment/cache setup and breakout
  - Decon setup

- The TFL must consider the magnitude of the event and whether it is a single or multiple site incident. This multiple requirements situation may require mobilizing **all** MMST members (129) to supply adequate personnel resources.

- Activation of **all** team members can be accomplished by paging all members.

- Most NBC events will have a relatively short duration for the successful rescue of viable victims (i.e., usually no more than 3 hours). However, the more expeditious and aggressive the actions taken in the initial stages of the event, the more victims will be recovered and can be decontaminated and transported to medical facilities.

- If it appears that the MMST will be operating on site for more than 4 hours, provisions should be made for rotating personnel through entry, decontamination, and rehab support.

G. Arrival Procedures

- Identify the Incident Commander.

  - Provide a brief overview of the team's capabilities and identify key personnel
  - State the limitations of the team and expected duration of the mission
  - Identify areas where the team can provide assistance
  - Determine the on-site command system

- Obtain information on what activities have taken place since the beginning of the event.

  - Agent identification
  - Estimated size of the agent envelope
  - Potential number of victims

- Plan how the MMST will be deployed.

  - Will entries be necessary?
  - For victim triage, decontamination, and transport
  - For deployment to local medical facilities to support their efforts

- Initiate the Personnel Accountability System (PAS).

  - Members' tags taken at ICP
  - MMST members tracked by Admin Officer and/or Safety Officer at ICP

H. Safety Considerations

- MMST operations constitute one of the most complex and dangerous activities emergency responders may encounter.

- Fundamentally, MMST operations are dependent upon various disciplines working in close concert with each other.

- If any team elements fail to carry out their respective assignment in a safe and professional manner, the risk of injury to, or death of, a team member is greatly increased.

- The TFL should ensure that the team BASEOPS is located an adequate distance upwind and in a position that if evacuation of that site is necessary, it can be done in a timely fashion.

- All team members must adhere to the directives issued by the safety officer.

I. Demobilization Procedures

- Ensure all assigned activities are completed

- Ascertain from IC if other assistance is required of MMST

- Ensure all injured personnel and fatalities are properly processed and transported to appropriate facilities

- Ensure accountability of MMST tools and equipment

- Clean up debris/trash associated with MMST operations

- Ensure any biohazards and other contaminated equipment/ supplies are properly packaged and disposed of

- Coordinate transportation home

- Notify the local IC when the team leaves the site

J. Medical Surveillance

- Team members must have an annual HAZMAT physical with baseline heart, lung, blood, neurologic, and kidney functions documented and in accordance with established standards.

- Team members wearing PPE will have pre- and post-entry monitoring done as outlined in Section II, Medical Surveillance Protocols.

- The TFL will ensure that there is a post-incident debriefing at the completion of each mission.

- The TFL will ensure that post-incident medical evaluations are done as outlined in Section 11, Medical Surveillance Protocol.

K. Media Procedures

- Team members **are not** permitted to release incident information unless coordinated with the MMST PIO and local jurisdiction PIO.

- Media management procedures must be identified early in the incident.

  - This responsibility rests with the IC.

  - All MMST members must clearly understand the procedures established by the local jurisdiction and the TFL for interacting with the different types of media.

  - The local Public Information Officer (PIO) must be identified.

  - The MMST Administrative Officer will act as the task force PIO and work with the local PIO.

- Refer to the **Operational System Description**, Section 7, PIO-Media Relations, for further specifics.

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IV. FIELD OPERATIONS GUIDE

The United States Public Health Service Metropolitan Medical Strike Team (USPHS MMST) Field Operations Guide (FOG) has been developed to assist Strike Team members during training and on mission assignments. The FOG is a compilation and summary of important strategic and tactical information. Position description summaries and complete operational checklists are outlined for each of the positions that make up the Strike Team.

Use of, and adherence to, the FOG will ensure optimum personal and Strike Team performance standardization of activities and procedures between Strike Teams and will promote safe and effective search and rescue operations.

A. INTRODUCTION

- This document outlines the current tactical capabilities and general strategies that should constitute a foundation for productive nuclear, biological, or chemical (NBC) incident mitigation. All Strike Team personnel should have a solid understanding of these guidelines.

- MMST personnel must tailor the general strategy and tactics to fit the specific situation encountered.

- It is incumbent on the Task Force Leader (TFL) and sector officers to implement coordinated tactics and strategy, collect and collate related information, and develop an effective overall task force plan.

1. Tactical Operations

The most effective strategies will blend all viable tactical capabilities into a logical plan of operation. The following general tactical operations are defined:

a. Reconnaissance

- It is critical in NBC incidents that the agent or material be identified as soon as possible to begin early, comprehensive medical intervention.

- Victims signs and symptomology can serve as early indicators of the type of agent involved. As an example, a nerve agent produces convulsions, miosis, and uncontrollable defecation and urination, whereas phosgene may produce irritation and redness of the skin, increased presence of blood in the eyes, and possible ultimate cardiac collapse.

- Presence of a haze, mist in the air, or unusual odors suggests the presence of a chemical agent.

- Using the appropriate detection and monitoring equipment, team personnel must determine the extent of the agent or material envelope in order to establish hot, warm, and cold zones.

b. **Isolation**

- Once an area has been identified as affected, that area(s) needs to be isolated into the three primary zones: hot, warm, and cold.

- Unaffected persons outside the affected area must be prevented from entering the warm or hot zones.

- Consideration must be given to wind direction and speed when establishing critical zones and determining the agent envelope.

- Affected persons inside the hot and warm zones (victims) must be triaged according to the severity of their exposure to the agent or material.

- Obtaining agent or material samples will expedite identification. However, caution should be used if the dissemination device is discovered because it may contain a secondary explosive device.

c. **Work Period and Rehabilitation**

It is extremely important that all team members be cognizant of the weather conditions when operating at NBC incident sites. The protection needed to maintain a safe personal environment can also work against the member by elevating the ambient temperatures to dangerous levels, particularly if the member must remain in an encapsulated garment for long periods of time.

- Entry and decon teams must have vital signs recorded prior to entry and upon exit from the decon area.

- Team members working in any form of personal protective equipment (PPE) will work strictly within the timeframe assigned by the task force Safety Officer for the incident. This decision will take into account environmental considerations (temperature, humidity, barometric pressure, etc.), dangers involved, and personnel resources available.

- Members who have completed their assignment and are exiting the decon area (entry team or decon team) will immediately report to the rehab area for rest, observation, and post assignment examination.

- The rehab area will have the refreshments appropriate to maintain team members' health.

- Resources permitting, members will not be reassigned to an entry team or decon team until a minimum 60-minute rest period has elapsed.

d. **Protective Clothing**

Having the appropriate protective clothing is essential for the safety of team members operating at an NBC incident site.

- Unless otherwise warranted, entry team members will wear only level "A" encapsulated suit ensembles with 4-hour, self-contained breathing apparatus (SCBA) and appropriate boots, gloves, and helmets.

- Team members operating in the decon area will have the appropriate level of protection as determined by the Safety Officer (usually one level below that used by the entry team).

- Members operating in the Command Post area will wear helmets and command vests that denote their team position and have immediately available their "GO" kits, which contain masks, suits, gloves, and nerve agent antidote.

2. Communications

Effective communication is vital to the safe and successful operations of a Strike Team assigned to a mission. The following procedures are identified to promote standardization:

- Task Force Designations
- Communications Procedures Between Team Members

a. Task Force Designations

- Each task force will be identified by a unique radio call sign. The call sign will incorporate the State of origin of the Strike Team and a number to differentiate each Strike Team from that State.
- For example, DC Strike Team One will be used to identify the first Strike Team developed for the USPHS MMST concept. This would be denoted as DC-1 for written correspondence.
- The following Strike Team designations will identify the currently accepted Strike Teams sponsored by the listed organizations:
  - **DC-1** Metropolitan Washington Area Council of Governments
  - **GA-1** Atlanta Area Police and Fire Departments

b. Communications Procedures

- Team members (except entry teams) will communicate on the operational channel assigned upon arrival at the incident site.
- Entry teams, if used, will operate on the operational channel assigned them prior to making entries.
- It is permissible for members to monitor the entry team channel, but they will not transmit on that channel(s) **unless there is an emergency situation that requires that the entry team be immediately notified**. That notification should originate from the entry team sector leader, but may originate from anyone detecting the emergency situation.

- Entry teams will communicate directly with the Hazardous Materials (HAZMAT) Officer who will communicate with the Field Medical Operations Officer on the primary operational channel.

- The Safety Officer can monitor the channels as he/she feels appropriate for the specific situation, but will use the primary operational channel for routine interteam communications.

- Sector leaders will use the primary operational channel for routine interteam communications.

- The TFL and/or Assistant Task Force Leader (ATFL) will operate on the primary operational channel for communications with team members.

- The TFL and/or ATFL will operate on the local jurisdiction's frequency (patched in) when it is necessary to communicate electronically with the Incident Commander (IC) or Command Post.

- The Medical-Information Research Sector (MIRS) will communicate within the team on the primary operational channel and will use cellular phones/fax for communications to organizations and facilities outside the incident geographic area (e.g., Centers for Disease Control (CDC), local area poison control centers, etc.).

- The Hospital Operations Sector will communicate within the team on the primary operational channel and will use cellular phone/fax for communications to medical facilities within the incident geographic area (e.g., local hospitals, medical facilities, etc.).

3. Medical Management

- The task force is organized, staffed, and equipped to provide the best possible pre-hospital and emergency medical care throughout the course of an incident and especially on scene.

- Task force personnel are responsible for minimizing health risks and incidence of Critical Incident Stress (CIS) syndrome.

- Medical personnel are responsible for providing the earliest possible medical intervention for first responders and civilian victims of NBC incidents through early identification of the agent

type and proper administration of the appropriate antidote(s) and other pharmaceuticals as necessary.

- Personnel must be cautious about utilizing persons offering to assist in medical management who claim to be physicians, nurses, or other medical practitioners and who cannot substantiate their claims or provide adequate credentials.

- Practitioners who provide credentials indicating that they have a medical background should be assigned responsibilities only in the cold (support) zone commensurate with their area of medical expertise and in an area working with a known team member.

a. **Treatment Priorities**

- The treatment priorities for medical personnel (including Emergency Medical Services (EMS) members) are:

  - **First,** Strike Team personnel and support staff
  - **Second,** local response personnel who become ill or injured
  - **Third,** victims directly encountered by the Strike Team
  - **Fourth,** other injured/affected persons as practical

- It is not the intent of the Field Medical Operations Sector and Hospital Operations Sector to be a free-standing medical resource at incident scenes. However, they are part of the first line of intervention in a chain of care that stretches to the local hospital medical system.

b. **Triage**

- Triage is the process of doing the most good for the most victims. In NBC incidents, depending upon the purity of the agent, there may be few viable victims within the hot zone and increasing numbers of viable victims near the outer perimeter where the agent is less concentrated.

- Victims should be triaged using the Strike Team triage protocol listed below.

- Patients will be classified as:

  - Priority one, exposed but not symptomatic
  - Priority two, exposed, symptomatic, but salvageable if medical care is rendered within 15 minutes
  - Priority three, exposed, symptomatic, and will require extensive medical intervention to save

- The initial triage priority will be indicated by marking the number indicating the priority on the patient's forehead with a felt pen. A triage tag indicating the patient's priority is to be used as soon as possible.

c. **Decontamination**

- It is extremely important that victims of NBC incidents be, at minimum, grossly decontaminated prior to being transported to medical facilities. Additional decontamination will be conducted as time and resources allow.

- The degree of medical decon that has been performed and what solution was used must be noted on patient care forms (triage tags), which are attached to victims prior to transport.

- Definitive decon (a more intensive scrubbing/cleansing of patients) may have to be completed at receiving medical facilities; this should also be noted on the triage tags.

- Emergency decontamination procedures will be immediately initiated when MMST personnel are injured and/or have a PPE failure.

- Appropriate basic medical care will be initiated during decon and continued in the treatment sector.

- A rapid assessment will be initiated by a decon team member and the findings immediately reported to the HAZMAT Officer and Field Medical Operations Officer.

d. **Treatment**

- Rapid BTLS assessment will be conducted on all victims.
- Medical intervention will be initiated following the MMST protocols found in Appendix I.
- Particular medical attention is to be paid to airway/respiratory support and cardiovascular support.
- Medical care will address the supportive needs of each patient and the specific treatment will be initiated when the agent is identified.
- On-site treatment may include care for injuries sustained as a result of explosions and/or falls.
- Consideration must be given to the medical and logistical implications of multiple doses of an antidote (ex., atropine) being given to a single victim, thereby reducing the total number of patients that can be treated effectively.
- The Poison Control Center should be immediately notified of patient problems being seen and used as a resource for product identification and determining treatment regimens not covered by MMST protocols.

e. **Transportation**

- Transportation of victims who are unconscious must be by an emergency vehicle capable of continuous treatment and emergency response to the medical facility.
- Large numbers of victims who are minimally affected or who are suspected of having psychosomatic symptoms can be transported by public transportation vehicles staffed with an appropriate number of local EMS personnel. These victims would normally be triaged as being among the last victims to be transported.
- MMST personnel arranging for transportation must keep in mind that vehicles used for transport may become contaminated; that fact should be borne in mind when obtaining public transport

vehicles. Vehicles and personnel used for transport that become contaminated must be decontaminated before returning to service.

f. **Casualty Collection Center (CCC)**

- If delay is encountered in transporting decontaminated victims, consideration will be given to establishing a CCC to continue medical treatment until transportation for victims is completed.

- This area should be located as far away from the main operating area of the incident as is possible and adjacent to the transportation sector.

- Staffing will be the shared responsibility of the MMST and local jurisdiction.

- Medical care initiated will be what is necessary to stabilize the patient condition pending transportation.

- Equipment for the CCC will come primarily from the local jurisdiction. MMST equipment will be used only if absolutely necessary.

- Deceased individuals will be separated from the living.

g. **Hospital Support**

- It is likely that in an NBC incident of significant proportions, the local hospital system will be overwhelmed with casualties.

- It may be necessary for the Hospital Operations Sector to contact hospitals by phone/fax to give advice on decon procedures for victims who self-refer, agent treatment protocols, and other information as requested by medical facilities.

- If the TFL determines that there is benefit in providing MMST personnel to local hospitals to assist in the management of incident patients, consideration should be given to the recall of local off-duty emergency medical technicians (EMTs) and paramedics as well as MMST members.

- MMST members can provide assistance to medical facilities in the following areas:

  - Patient tracking
  - Decon procedures for self-referrals
  - Vital-sign monitoring
  - Triage
  - Medical management
  - Communications and coordination between the incident site and hospital

- Because the pharmaceuticals used for NBC incidents are not normally stocked in adequate quantities, it may be necessary to access additional supplies from manufacturers, local Veteran's Administration (VA) hospitals, or the USPHS.

- Once the pharmaceuticals have been accessed, redistribution can be coordinated at the incident site by the Hospital Operations Sector assisted by the Logistics Sector.

- Redistribution of pharmaceuticals to medical facilities is to be accomplished by the use of fire, law enforcement, or hospital personnel.

4. Records and Reports

Attached in Appendices A, B, and C are copies of records, reports, and other forms needed for MMST administration (omitted).

5. Passport Accountability

- All personnel are expected to maintain their personal passport.

- All personnel are to submit their respective passport to the appropriate sector officer.

- During PAR checks, the TFL will indicate to the IC the status of MMST personnel.

B. POSITION DESCRIPTIONS AND OPERATIONAL CHECKLISTS

1. Command and Control

The United States Public Health Service/Office of Emergency Preparedness (USPHS/OEP) Metropolitan Medical Strike Team (MMST) position descriptions and operational checklists establish the guidelines and criteria for attaining operational capability. The purpose of the Strike Team operational checklists are to define the duties and responsibilities of the respective Strike Team positions during a mission assignment. The list is intended to be a general summary of actions. The following should be understood:

- Some required actions may not be listed within these checklists, but must be identified and assumed by the MMST positions.

- Some actions may be the primary responsibility of another Strike Team position, but may require assistance and coordination from this position.

- The actions are listed in a general chronological order, but may necessitate deviation as necessary.

An important precept of the Strike Team is for all members to be sufficiently cross-trained in alternate functions capabilities to ensure depth of capability and integrated Strike Team operations during missions.

The MMST was developed to provide support for, and to provide assistance to, local jurisdictions' first responders in nuclear, biological, or chemical (NBC) terrorist events. This is accomplished by coordinating with the Incident Commander (IC) and members of the advance element to determine how the MMST can be utilized in the incident. The MMST has a strong emergency medical care focus and has the capability to provide rapid and comprehensive medical intervention to casualties of NBC events. Response personnel involved in these incidents must remember that, with the proper agent and near perfect dissemination, the number of casualties will be high and the entire event may persist from hours to several days, from initial response to completion of facility decontamination and certification of re-occupancy.

Jurisdictions needing the MMST will make their request for assistance through their local emergency communications center. The center will request the MMST by calling the MMST ECC (Arlington County ECC) who will then notify the on-duty TFL of the request. The TFL will then decide the appropriate response to the request, in turn activating the on-call task force and determining the **mobilization point(s)** to which task force members should report.

When the MMST is activated, the TFL will notify the USPHS/OEP and appropriate State EOC of the activation and the need to activate the Federal Response Plan (FRP). Federal agencies responding to the incident and/or reporting to the incident site will need to assimilate into the incident in a coordinated fashion to provide assistance in their respective area of expertise.

Upon arrival at the incident scene, the TFL will coordinate with the jurisdiction IC to determine how the MMST can optimally provide assistance. The Strike Team will locate proximally to the Incident Command Post and begin initiating the activities and functions necessary to support a successful incident mitigation.

Incident Commanders must be prepared to coordinate the efforts of many agencies, entities, and disciplines: additional local HAZMAT teams, State resources, and Federal resources. The command system must truly be a *unified command*. Once all viable patients have been removed from the hot zone, and offensive operations have ceased, the Federal Bureau of Investigation (FBI) will assume responsibility for incidents of a terrorist nature. Their role is the recovery of evidence and the investigation of the overall incident. This activity may require the support of the local jurisdiction's personnel as well as the MMST. The transition from local control and command to Federal control and command must be made smoothly, with all participants knowing their roles and responsibilities in both scenarios.

Once the Attorney General has decided a crisis no longer exists and the FBI has completed their on-site investigation, cleanup of the facility will be coordinated as a part of the consequence management efforts under the direction of FEMA. MMST members will gather their equipment, ensuring that contaminated expendables have been containerized in preparation for disposal. The IC, in coordination with the TFL, will determine when the MMST can return to service and depart the incident scene.

a. **Task Force Leader (TFL)**

(1) **Introduction**

The USPHS MMST development is based upon providing a coordinated response to NBC incidents in a metropolitan environment. Special emphasis is placed on the ability to identify the specific agent involved and provide the earliest possible correct medical intervention for victims of these situations.

Strike Team position descriptions and operational checklists are based upon the requirements of all members to meet a 90-minute window for mobilization and response.

The central point of coordination of the Strike Team is the Task Force Leader (TFL). This position must blend the different disciplines within the team into an integrated unit during an event. The TFL must also receive information from local, DoD, USPHS, and other sources; implement strategic and tactical assignments; and provide the necessary information flow for proper event management.

It is imperative that the Strike Team becomes an integral part of the existing local command structure upon arrival at the incident location. The TFL should be prepared to adapt to different variations of the Incident Command System (ICS) that may be implemented by the local jurisdiction. It should be clearly understood by the local jurisdiction command and control staff that the Strike Team is a resource that is available for their use and under their operational direction. This interaction must be conducted in a cooperative manner.

The TFL is responsible for managing and supervising all team activities during a mission assignment. The TFL reports directly to:

- Sponsoring agency
- USPHS/OEP representative
- Program Director

(2) **Description of Duties**

The TFL performs the following duties:

- Addresses the coordination and supervision of all task force activities

- Receives notification of an event

- Initiates the emergency callback of the appropriate Strike Team personnel

- Initiates State and PHS notification

- Directly supervises the following positions:

  - Assistant Task Force Leader
  - Safety Officer
  - Medical Information/Research Sector Officer
  - Field Medical Operations Sector Officer
  - Hospital Operations Sector Officer
  - Law Enforcement Sector Officer

- Maintains personal physical fitness in compliance with home department/agency standards or NFPA 1500 in the case of non-existent home department/agency standards

- Maintains an Emergency Medical Technician (EMT) "B" and Cardiopulmonary Resuscitation (CPR) certification

- Has successfully completed HAZMAT Incident Command NFPA 472/29 CFR 1910.120 ICS training

- Has successfully completed Hazardous Materials Technician Program (NFPA-472, 473, HAZMAT4/5, ICS)

- Possesses flexibility to be available to mobilize on short notice

- Possesses knowledge of the Federal Response Plan (FRP) and how the MMST mission fits into that plan

- Possesses a comprehensive knowledge of Strike Team functions, operations, tactics, strategy, and safety considerations

- Possesses strong interpersonal relations skills

- Possesses competency in the development and use of integrated action planning concepts and processes

- Possesses good interagency coordination skills and the ability to work well with various technical components and other organizations

- Possesses ability to communicate effectively orally and in writing

- Possesses knowledge of the practical application of available technology used to support MMST missions and objectives

- Possesses ability to be flexible, to improvise, share information, resolve conflicts, and solve problems

The TFL has proven expertise at providing decisive and innovative administrative and incident management and:

- Ensures adherence to all safety procedures

- Is responsible for the determination of all task force organizational needs

- Interacts with the USPHS liaison for coordination of all task force support requirements

- Receives briefing and situation reports and ensures that all task force personnel are kept informed of status changes

- Coordinates with the local Incident Commander or designee during an event

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Coordinates team readiness with program director

[ ] Coordinates crisis management activities with appropriate officials

[ ] Develops preliminary response plan based upon available intelligence

[ ] Ensures personal "GO" kit is available and complete

(b) Upon activation:

[ ] Receives notification of assignment and details of the event (as known) from the initiating organization

[ ] Ascertains suitable mobilization site recommendation from Incident Commander

[ ] Obtains Command Post cellular telephone

[ ] Determines if mobilization and deployment are appropriate and initiates State and PHS notification

[ ] Determines the mobilization site to be used and notifies ECC

[ ] Initiates the task force emergency mobilization procedure

[ ] If possible, determines exact incident location, site conditions, magnitude of incident, prevailing endemic conditions, likely resources required, and mobilization site (i.e., fire and police stations, schools, etc.)

[ ] Determines, as well as possible, if the event is a single or multiple site incident. This information will weigh heavily in the decision to split the team for response to multiple sites.

[ ] If a multiple site response is required, consideration should be given to activating additional task force members to respond to these sites.

[ ] Due to the magnitude of the event, particularly if there are multiple sites involved, the team or pertinent members of the team may stage in a central location or Washington area command center to provide technical advice to each of the affected sites.

[ ] Monitors disaster-related information from local sources, such as radio and television

[ ] Disseminates appropriate information to the appropriate sector officers

[ ] Secures police escort for medical cache with ECC

(c) At mobilization site:

[ ] Makes a determination whether to keep all personnel together in one sector or divide personnel by specialty and deploy to two or more sites to work simultaneously. If redeployment of existing personnel is to be done to different locations, each location will have its designated sector officer identified as EMS1, EMS2, etc. If two operational sectors are created, Emergency Medical Technicians/Paramedics (EMT/Ps) will be assigned to both teams.

[ ] Ensures that sector officers are adequately briefed on and understand the following incident details including:

- Site location
- Units currently operating on site
- Actions taken to date (as far as can be determined)
- Agent involved (as far as can be determined)
- Number of persons involved (casualties and non-casualties)
- Probable mission objectives and assignments

[ ] Brings personal ‘‘GO’’ kit

(d) In transit:

[ ] Reviews latest information as it becomes available

[ ] Reviews TFL section in USPHS MMST FOG

[ ] Ensures that all members review the Field Operations Guide (FOG) for information pertinent to their position description

[ ] Discusses and ensures anticipated logistical requirements (i.e., PPE, decon requirements, communications protocols, medical care issues) are met

[ ] Confirms medical cache and decon trailer(s) are enroute

(e) On-site operations:

[ ] Dons TFL vest

[ ] Locates Incident Command Post and coordinates with the IC. (If no Incident Command System (ICS) has been established, it would be prudent at this time to establish one with a designated IC.)

[ ] Determines the operating area for the MMST

[ ] Ensures that the communications personnel are establishing communications linkages

[ ] Determines mission objectives and relays them to sector officers

[ ] Assesses the need for additional resources or teams (Technical Escort Unit (TEU), Chemical Biological Defense Command (CBDCOM), National Guard, etc.) and assists in obtaining their help

[ ] Decides at what point the team begins work activity

[ ] Ensures that each sector leader has established an operating area and is coordinating with the appropriate personnel:

- Field Medical Operations Sector - establishes liaison with on-site HAZMAT team or, if none is operating, designates a reconnaissance team and a decontamination team and formulates a plan of action.

- Hospital Operations Sector - establishes communications linkages with area hospitals, provides them with a situation report, and information on agent identification, and determines pharmacology needs.

- Medical Information/Research Sector - begins to research agent characteristics based upon victim signs and symptoms, victims' descriptions of agent, sample characteristics, and other information as it becomes available. Establishes communication with Poison Control Center.

- Law Enforcement Sector - coordinates with local law enforcement agencies to establish scene security, distributes MMST list to perimeter security personnel, establishes evidence collection areas, and obtains intelligence information.

- Logistics Sector - responsible for picking up equipment cache, assists in off-loading equipment, and oversees equipment allocation.

[ ] Works with IC to identify and address strategic and tactical issues

[ ] Ensures all task force sector officers wear vests

[ ] Ensures ongoing task force needs are identified and met

[ ] Determines work schedules, rest and rotation periods

[ ] Ensures personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Evaluates task force operations; modifies as appropriate:

- Assesses effectiveness of overall strategy and tactics
- Assesses and meets equipment shortages
- Ensures health/welfare needs of personnel are met
- Assesses for fatigue
- Assesses for signs of Critical Incident Stress
- Ensures adherence to established procedures

[ ] Ensures incident logs are being properly maintained

[ ] Works with Poison Control Center to address public information issues

(f) Demobilization:

[ ] Determines the continued need for the MMST and if no further need is identified, recommends to the IC that the team be returned to service

[ ] Assigns members to assist in the breakdown and repacking of equipment, supplies, and materials to return to the equipment cache

[ ] Ensures arrangements for transportation home are made

[ ] Begins collecting notes from team members for compilation for an After-Action Report

[ ] Ensures that sector officers complete their mission reports

[ ] Identifies the need for an after-action Critical Incident and Stress Management (CISM) defusing/debriefing

(g) Post-incident:

[ ] Reports any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Coordinates a critical review of team performance

[ ] Coordinates arrangements for CISM defusing/debriefing

[ ] Makes preliminary incident report to Program Management Team

[ ] Writes the After-Action Report

[ ] Ensures that the Strike Team cache is returned to deployment status

[ ] Makes recommendations for revision of the FOG to the Program Management Team

[ ] Restores personal "GO" kit to deployment status

b. **Assistant Task Force Leader**

(1) **Introduction**

The Assistant Task Force Leader (ATFL) is responsible for assisting the Task Force Leader (TFL) in the management and supervision of all team activities during a mission assignment. The ATFL reports directly to the TFL.

(2) **Description of Duties**

The Assistant Task Force Leader:

- Assists the TFL in the coordination and supervision of all team activities
- Receives notification of an event from ECC
- Directly supervises the Administrative Officer
- Assists the TFL in coordinating the activities of the Logistics and Law Enforcement Sectors
- Maintains personal physical fitness in compliance with home department/agency standards or NFPA 1500 in case of non-existent home department/agency standards
- Maintains an Emergency Medical Technician (EMT) "B" and Cardiopulmonary Resuscitation (CPR) certification
- Successfully completes Hazardous Materials Technician Program (NFPA-472, 473, HAZMAT 4/5, ICS)
- Successfully completes HAZMAT Incident Command NFPA 472/29CFR 1910 ICS training
- Possesses flexibility to be available to mobilize on short notice

- Possesses knowledge of the Federal Response Plan (FRP) and how the mission of the MMST fits into that plan
- Possesses a comprehensive knowledge of Strike Team functions, operations, tactics, strategy, and safety considerations
- Possesses strong interpersonal relations skills
- Possesses competency in the development and use of integrated action planning concepts and processes
- Possesses good interagency coordination skills and the ability to work well with various technical components and other organizations
- Possesses ability to communicate effectively orally and in writing
- Possesses knowledge of the practical application of available technology used to support MMST missions and objectives
- Possesses ability to be flexible, to improvise, share information, resolve conflicts, and solve problems
- Ensures adherence to all safety procedures
- Assists the TFL by planning the future of the event (several hours)
- Assists in overseeing the overall safety of the operation in coordination with the Safety Officer
- Interacts with the USPHS liaison for coordination of all task force support requirements
- Assumes operational responsibility for a portion of the MMST if the team is divided for response to multiple sites

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Works with the TFL to ensure team operational readiness

[ ] Assists the TFL in crisis management training activities

[ ] Assists the TFL in developing preliminary response plans

[ ] Ensures personal ‘‘GO’’ kit is available and complete

(b) Upon activation:

[ ] Receives notification of assignment and details of the event (as known) from the TFL or, in the event the TFL cannot be reached, from the initiating organization

[ ] Disseminates appropriate information to the appropriate personnel, as assigned

[ ] Monitors disaster-related information from local sources such as radio and television

(c) At mobilization site:

[ ] Determines all designated Strike Team members are present

[ ] Ensures the equipment/cache is brought to the designated site

[ ] Consults with the TFL on probable mission objectives and assignments

[ ] Brings personal ‘‘GO’’ kit

(d) In transit:

[ ] Reviews latest information as it becomes available

[ ] Reviews ATFL sector USPHS MMST FOG

[ ] Assists the TFL in ensuring that all members review the USPHS MMST FOG for information pertinent to their position description

[ ] As a team member, discusses and coordinates with appropriate MMST Command staff to assure anticipated logistical requirements (personal protective equipment (PPE), decon requirements, communications protocols, and medical care issues) are met

(e) On-site operations:

[ ] Dons ATFL vest

[ ] Ensures that the logistics personnel are off-loading the required equipment with assistance of other MMST personnel

[ ] Assists the Safety Officer in establishing a site safety plan; implementing a passport accountability system; and establishing hot, warm, and cold zones if not already established

[ ] Coordinates administrative support of MMST function with Administrative Officer

[ ] Ensures personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Performs other duties and assignments as determined by the TFL

[ ] Briefs shift replacement fully on all ongoing operations when being relieved at work cycle rotations

(f) Demobilization:

[ ] Assembles for team briefing on mission status and reassignment/demobilization determinations

[ ] Arranges for transportation home

[ ] Ensures that a preliminary inventory of equipment is performed to ensure all is accounted for and returned intact to cache

[ ] Returns issued items to Logistics personnel

[ ] Ensures that all expendable equipment supplies have been replenished

[ ] Ensures all operational losses or expendables are documented for subsequent replacement or repair (if repairable)

[ ] Assigns members to assist in the breakdown and repacking of equipment, supplies, and materials to return to the equipment cache

(g) Post-incident:

[ ] Reports any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Assists with critical review of team performance

[ ] Assists TFL with writing the mission After-Action Report

[ ] Ensures that the Strike Team cache is returned to deployment status

[ ] Restores personal "GO" kit to deployment status

c. **Administrative Officer**

(1) **Introduction**

The Administrative Officer (AO) is responsible for assisting both the Task Force Leader (TFL) and Assistant Task Force Leader (ATFL) and coordinating the on-scene administrative activities during a mission assignment. As the TFL continually monitors the progress of the team for effectiveness, the AO will be involved in capturing and recording the sequence of events.

The AO is responsible for fulfilling the team Public Information Officer (PIO) function. This function in itself is complex; therefore, it is critical that contact be made with the local PIO early in the event.

At the completion of missions, the AO will be responsible for gathering input from all section leaders for inclusion into the After-Action Report for the TFL.

The AO reports directly to the ATFL.

(2) **Description of Duties**

The Administrative Officer:

- Provides administrative support for the TFL and ATFL
- Records the sequence of events in designated MMST documents
- Is a conduit for information flow to the sector officers
- Fulfills the PIO function for the team
- Gathers input from sector officers for development of the After-Action Report
- Coordinates with the Program Management Team review of the MMST plan for updating
- Ensures that all medical, training, and other team member records are current

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Ensures incident event log is ready for use

[ ] Ensures that MMST Operational System Description and Field Operations Guide (FOG) are administratively current

[ ] Ensures that all team members' medical, training, and other records are current

[ ] Ensures that predeveloped press releases are current and accurate

[ ] Maintains all Federal/State/local required records and documents

[ ] Ensures that current copies of the equipment cache inventory are maintained

[ ] Establishes team administrative file containing, but not limited to, forms, logs, and records necessary to administer the MMST

[ ] Maintains close coordination with the Program Management Team (PMT) on appropriate matters

[ ] Ensures personal ''GO'' kit is available and ready for deployment

(b) Upon activation:

[ ] Receives notification of assignment and team mobilization location

[ ] Reports to mobilization location

[ ] Monitors disaster-related information from local sources such as television and radio

[ ] Assembles the necessary documents for team deployment for subsequent forwarding to the appropriate Federal representatives

(c) At mobilization site:

[ ] Brings personal ''GO'' kit

[ ] Notifies ATFL of arrival

[ ] Receives TFL briefing

(d) In transit:

[ ] Monitors incident on primary communications channel

[ ] Reviews FOG

[ ] Reviews PIO guidelines

(e) On-site operations:

[ ] Dons AO vest

[ ] Assists the TFL in determining the MMST operating area

[ ] Assembles with local PIO to coordinate information release and dissemination

[ ] Ensures incident documentation is completed

[ ] Coordinates with Safety Officer the passport accountability system

[ ] Records pertinent MMST activities on appropriate documents or electronically

[ ] In coordination with the local PIO, establishes a Joint Information Center (JIC) through which all information concerning the event will be released

[ ] Coordinates clinical information to be given to the public with the Medical Information Research Sector and the Poison Control Center

[ ] Ensures personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Performs other duties and assignments as determined by the TFL or ATFL

[ ] Briefs shift replacement fully on all ongoing operations when being relieved at work cycle rotations

(f) Demobilization:

[ ] Returns issued items to Logistics personnel

[ ] Assembles for a team briefing on mission status and reassignment/demobilization determination

[ ] Collects sector reports from sector officers for compilation into the After-Action Report

[ ] Ensures confidentiality of all MMST reports

[ ] Ensures that the equipment cache inventory is taken and submitted prior to leaving the incident scene

[ ] Assists Logistics personnel with completion of the appropriate documents to repair or replace used or broken equipment

[ ] Assists with packaging, movement, and loading of equipment cache

[ ] Assists with breakdown and policing of the task force operational area

(g) Post-incident:

[ ] Reports any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Submits requested After-Action Report information

[ ] Ensures Strike Team cache is returned to deployment status

[ ] Restores personnel "GO" kit to deployment status

d. **Communications Specialist**

(1) **Introduction**

The Communications Specialist is responsible for managing the communications system for the task force during incident operations. The Communications Specialist reports directly to the Administrative Support Officer.

(2) **Description of Duties**

The Communications Specialist:

- Assesses overall needs and develops the incident communications plan
- Ensures frequency management, installation, operation, and maintenance of the task force communications system during incident operations
- Coordinates communications with other appropriate entities
- Ensures the accountability of all components of the task force communications system
- Maintains appropriate records and reports
- Performs additional tasks or duties as assigned during a mission

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Ensures personal ‘‘GO’’ kit is available and prepared for deployment

[ ] Ensures all communications equipment is fully operational including the recharging of radio batteries

(b) Upon activation:

[ ] Monitors disaster-related information from local sources such as radio and television

[ ] Issues communications radio equipment to appropriate task force personnel:

- Identifies the assigned frequency(ies)
- Briefs members on accountability, use, and care
- Ensures personnel are aware of the prohibition of the use of radios where indicated

(c) At mobilization site:

[ ] Advises AO of arrival

[ ] Assembles for a TF briefing from the TFL and appropriate officials

[ ] Assists with the movement and loading of equipment

[ ] Brings personal ‘‘GO’’ kit

(d) In transit:

[ ] Reviews the latest disaster-related information as available

[ ] Reviews the USPHS MMST FOG for information pertinent to position description, operational checklist, operational procedures, and safety procedures

[ ] Takes advantage of available travel time for rest prior to arrival

[ ] Discusses the formulation of the communications plan with the Task Force Leader and the Administrative Support Officer

(e) On-site operations:

[ ] Ensures personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Dons appropriate sector vest

[ ] Assists the Logistics Specialist with the unloading, sorting and setup of the equipment cache and the task force support facilities. Provides for the communications equipment security and protection from the elements.

[ ] Meets with local Liaison and coordinates procedures for communications

[ ] Determines on-site operating frequencies. Initiates the development of the communications plan including the procedures for communications with the local jurisdiction

[ ] Develops communications procedures for use during medical emergencies. Determines medivac capabilities. Identifies other communications systems that could enhance operations.

[ ] Receives initial briefing of tactical assignment from the TFL or designee including:

- Incident situation report
- Task force objectives
- Tactical assignments
- Task force support layout and requirements (Base of Operations)
- Review of emergency signaling and evacuation procedures
- Review of medical treatment and evacuation procedures
- Review of the process for ordering supplies and equipment

[ ] Briefs TF personnel on the TF communications plan

[ ] Sets up communications system for task force operations. Establishes schedule for communications center coverage. Implements equipment accountability system.

[ ] Maintains Communication Log. Tracks the location of appropriate task force personnel

[ ] Carries out tactical assignments as directed. Is prepared to go into immediate rescue operations

[ ] Ensures the use of all proper safety practices and procedures

[ ] Anticipates requirements and evaluates the communications system effectiveness. Modifies to meet changing operational needs

[ ] Monitors tasks force communications for compliance with established procedures

[ ] Monitors electrical and battery supply status and provides replacements as necessary. Inventories and reorders as needed.

[ ] Ensures physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Reports any signs or symptoms of personal critical incident stress in coworkers and advises the AO.

[ ] Keeps the AO Manager apprised of any tactical accomplishments or conflicts, supplies deficiencies, or equipment malfunctions

[ ] Briefs shift replacement fully on all ongoing operations when relieved at work cycle rotations

[ ] Participates in the task force daily briefings

(f) Demobilization:

[ ] Assembles for a team briefing on the mission status and reassignment/demobilization determinations

[ ] Ensures that assigned tools and equipment are inventoried, returned to the cache, and prepared for movement. Ensures that all communications equipment is properly cleaned, calibrated, and repackaged for transport

[ ] Assists with the packaging, movement, and loading of the equipment cache

[ ] Notifies the Logistics Specialist of the losses or potential maintenance requirements of any tools and equipment

[ ] Assists with the breakdown and policing of the task force operational area

(g) Post-incident:

[ ] Reports any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Submits personal notes to the Administrative Support Officer for inclusion in the After-Action Reports. This should include reviewing pertinent position descriptions and operational checklists and procedures for recommended changes.

[ ] Ensures the return of all items issued to Communications Specialist during the mobilization phase. Ensures that all issued radios are returned to the cache

[ ] Ensures communication equipment is ready for next deployment

[ ] Upon return, participates in the task force mission critique and CISM debriefing

[ ] Restores personal ‘‘GO’’ kit to deployment status

e. **Safety Officer**

(1) **Introduction**

The Safety Officer is responsible for monitoring and assessing safety hazards or unsafe situations and developing measures for ensuring personnel safety. It is the Safety Officer’s role to ensure that appropriate safety procedures have been identified and are being strictly followed. Strike Team personnel conducting MMST activities are exposed to many risks and hazards when carrying out assignments. If safety is compromised by anyone at any time, the consequences could be serious. The Safety Officer reports directly to the Task Force Leader (TFL).

(2) **Description of Duties**

The Safety Officer:

- Ensures personnel are following safety procedures

- Keeps the TFL informed of operational problems and potential hazards

- Focuses on the identification of unsafe conditions and practices and ensures that solutions are developed to correct the identified problems

- Has the authority to bypass the chain of command when it is necessary to correct unsafe acts immediately, such as removing all personnel from areas of **imminent** danger

- Has the authority to stop all operations when, in his/her judgment, an unsafe condition or practice exists that could lead to personal injury or death of any personnel

- Has the responsibility to implement an appropriate site safety plan for Strike Team operations in coordination with the local jurisdiction's Incident Command System (ICS). If a site safety plan does not exist, then he/she will ensure that one is established to protect all Strike Team members

- Ensures that the Personnel Accountability System (PAS) has been implemented

- Ensures in coordination with the Emergency Medical Services (EMS) Officer that medical surveillance is initiated on team members who are making entries and/or are suiting up

- Submits all safety-related documentation

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Reviews safety guidelines and is cognizant of changes in the areas of safety practices

[ ] Forwards safety information to all members as received from various sources

[ ] Ensures personal ‘‘GO’’ kit is available and ready for deployment

(b) Upon activation:

[ ] Receives notification of assignment and team mobilization location

[ ] Reports to mobilization location

[ ] Monitors disaster-related information from local sources such as radio and television

(c) At mobilization site:

[ ] Advises TFL of arrival

[ ] Receives TFL briefing

[ ] Monitors loading of the equipment cache

[ ] Ensures that Strike Team members arrive at the mobilization site with ‘‘GO’’ kit

[ ] Assesses, with the Medical Operations Officer, the current mental/physical fitness for duty of task force members

[ ] Emphasizes to equipment drivers the need to choose a direct but safe route of travel to the incident site

[ ] Brings personal ‘‘GO’’ kit

(d) In transit:

[ ] Monitors reports from incident site to determine safety issues to be addressed upon arrival

[ ] Ensures unsafe practices do not occur during transport to the site

[ ] Reviews Safety Officer section in the USPHS MMST FOG

[ ] Emphasizes safety concerns during transport reiterating that all personnel are responsible for their own safety and actions

(e) On-site operations:

[ ] Receives briefing from TFL

[ ] Dons Safety Officer vest

[ ] Ensures that equipment and personnel stage at an appropriate distance and direction from incident epicenter

[ ] Locates Incident Command Post (ICP) and establishes liaison with local Safety Officer

[ ] Informs Strike Team members of hot, warm, cold zone, rehab and ICP locations

[ ] Reviews site plan and passes information along to TFL and team members, noting unusual terrain features and operational hazards

[ ] Reviews site plan for preplanned escape routes and ensures that all members are aware of them

[ ] Ensures that all personnel know the emergency alerting and evacuation system and where to report if the system is activated

[ ] Ensures that all entry team personnel are working in minimum teams of two

[ ] Ensures that all personnel have the appropriate PPE for the type incident and/or agent

[ ] Ensures that all used equipment and supplies are properly decontaminated and/or properly disposed of

[ ] Ensures, with the Medical Operations Officer, that a safe rehab area with food and drink is established for expended team members

[ ] Establishes perimeter observation points to constantly monitor activities/operations for changing conditions and unsafe operations

[ ] Ensures personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Monitors personnel for signs of fatigue, psychological stress, and injury

[ ] Ensures that atmospheric/meteorologic conditions are constantly monitored

[ ] During night operations, ensures that adequate lighting is available and is used effectively

[ ] Ensures air space closure over incident site

[ ] Monitors personnel to ensure that they are not engaged in hot-zone activities beyond limits of their endurance

[ ] Ensures that entry teams can exit the hot and warm zones within the timeframe of the suit and respiratory protection they are using

[ ] Ensures team member compliance with MMST standard operating procedures (SOPs) for their assignment

[ ] Immediately identifies signs of medical or psychological injury to any team personnel and initiates preliminary corrective action

[ ] Conducts PAR check every 30 minutes or more often as necessary

[ ] Briefs shift replacement fully on all ongoing operations when being relieved at work cycle rotations

(f) Demobilization:

[ ] Monitors reloading of MMST cache to assure safe practices are being followed

[ ] Investigates accidents, collects data, and files the appropriate report on any accidents that occurred during the incident

[ ] Completes accident/injury forms per USPHS/U.S. Government and sponsoring organization requirements

[ ] Prepares a Strike Team review (critique) of safety issues

[ ] Ensures that safety concerns are incorporated into the final Strike Team After-Action Report

[ ] Ensures that a Critical Incident and Stress Management (CISM) defusing/debriefing is conducted at an appropriate time and place

[ ] Ensures that safety findings and lessons are incorporated into future training sessions, field exercises, and operational procedures

[ ] Ensures that all personal safety equipment is restocked to original levels

(g) Post-incident:

[ ] Reports any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Submits personal notes to TFL for inclusion in After-Action Report

[ ] Participates in task force mission critique and CISM debriefing

[ ] Restores personal "GO" kit to deployment status

[ ] Sector members will make contact with their employing agency to inform them of the termination of their participation in MMST activation and follow the time and attendance reporting requirements of their home jurisdiction

f. **Task Force Safety Considerations**

(1) **Introduction**

- MMST operations constitute one of the most complex and difficult activities emergency responders may encounter.

- Fundamentally, MMST operations are dependent on various disciplines working in close concert with each other.

- If any TF element (Field Medical Operations, Law Enforcement, Logistics, Hospital Operations, Medical Info Research) fails to carry out its respective assignment in a safe and professional manner, the risk of injury to, or death of, a TF member is greatly increased.

(2) **Description of Duties**

- TF management personnel have the primary responsibility to ensure that good safety practices are identified in their operational action plans, during TF briefings and critiques, and ensure that all operations are monitored for compliance.

- Even though there is a TF Safety Officer, it is important to emphasize that safety is not some other person's exclusive responsibility. It must be equally shared by everyone involved in the MMST mission.

- All members of the TF assume a personal responsibility to conduct their assignments in a professional and safe manner.

- All TF personnel have the responsibility to identify unsafe acts and hazardous conditions, report them to their supervisors, and, if possible, mitigate such situations.

(3) **Special Risks And Hazards**

- Personnel conducting MMST response activities are exposed to many risks/hazards when carrying out assignments, such as these:

  – Chemical, biological, or radiological agents
  – Unstable structures and uneven footing
  – Falling material or flying objects
  – Exposure to hazardous materials
  – Excessive noise, dust, smoke, and fire
  – Confined space operations
  – Contaminated air and water
  – Dangerous equipment
  – Armed thieves and looters
  – Heavy lifting, excessive fatigue, and stress
  – Adverse weather
  – Unfamiliar surroundings to work in

- If safety is compromised by anyone at any time, the consequences could be serious.

(4) **Operational Checklist**

(a) Prior to activation:

[ ] It is necessary to evaluate safety concerns not only prior to an activation but during every phase of TF operations, from the time of activation through deactivation/demobilization.

[ ] Although the risk of injury to TF personnel is greatest during incident operations, injuries can also occur at other times. A number of safety considerations associated with each phase of TF missions are listed below.

[ ] Safety considerations to be covered for the following *general* categories of a mission response are:

  – Preparedness
  – Mobilization
  – Incident operations

- Post-incident activities

[ ] The best way to ensure the proper emphasis on safety is to develop a strong, positive attitude towards such during TF development, training sessions, and field exercises.

[ ] It is important that all procedures and processes receive a thorough review by TF officers to ensure that safety practices are appropriately addressed.

[ ] The equipment cache inventory should be checked to ensure that personal safety equipment is adequate and available to meet the requirements for mission response.

[ ] Issues related to safe and effective use of cache equipment should be assessed such as:

- Tool use and maintenance manuals on file and available in each transport container
- Adequate stock of personal safety equipment
- Cache tools, supplies, and equipment mission ready, properly inventoried, and stock rotated and/or replaced, as required

[ ] Safety concerns for TF personnel are:

- Assessment of their physical fitness
- Successful completion of a physical exam
- Proper inoculations
- Personal gear/day pack organized, available
- Appropriate personal safety equipment on hand

[ ] Training/demonstration of safe operating practices and procedures should be conducted for all TF personnel for:

- Wearing/operating in personal protective clothing
- Power tools and specialized equipment
- Hazard identification/mitigation
- Decontamination
- Lifting/carrying heavy objects
- Emergency signaling
- Confined space operations

- Radio use
- Personal survival and hygiene
- Emergency care

(b) At mobilization site:

[ ] The conduct of safe practices and procedures must be firmly established at the inception of a mission. This sets the tone and impacts all operations throughout a mission.

[ ] If safety is made the prime consideration by the TF management personnel, and emphasized during TF briefings, personnel should react and demonstrate positive attitude toward safety practices and procedures.

[ ] As personnel are processed in for a mobilization, the following issues should be addressed:

- Personnel arrive prepared and with proper gear
- A review of their mental/physical condition
- The removal of jewelry, rings, watches, etc.

[ ] Safety concerns when TF personnel are operating around/near fixed-wing aircraft and/or helicopters are:

- Eye/ear protection in place in ramp area
- Restricted use of portable radios
- Proper attire for cold experienced during flight
- Harness/tiedown for canine during takeoff/landing
- Access/control of TF personnel in pallet buildup/ flight line area
- Safety briefing/use of aircraft hand signals emphasized

(c) On-site operations:

[ ] TF personnel will be most exposed to dangerous risks and hazards during the search-and-rescue and decontamination phases of operation.

[ ] TF personnel must occasionally review all logistics and operational activities to ensure that associated risks are identified and addressed expeditiously.

[ ] Potentially dangerous conditions could occur separately or simultaneously. This may create an undesirable environment that could result in serious injury or death to TF personnel.

[ ] Safety assessments should be identified and factored into:

- Base of Operations site selection
- Operation work area zones and cordons
- TF support facilities locations (rehab, treatment sector, etc.)

[ ] Safety issues should be highlighted during operational briefings to include:

- Rescue site signaling and escape routes
- Emergency decon procedures
- Use of command position vests
- Medivac procedures identified/in place

[ ] Safety concerns related to search/rescue and decontamination work sites are to include:

- Ensure that safety considerations are incorporated in the development of work plans
- Operations, including logistical activities, must be monitored for safe practices and procedures
- Ensure that significant/unique hazards are identified
- Radio communications must be continually monitored
- Enforcement of personnel accountability
- Enforcement of personnel rotation/rest periods
- Personnel monitored for stress/fatigue
- Changing environmental conditions are satisfactorily addressed

[ ] TF management personnel must ensure that all personnel attend to personal hygiene requirements, including:

- Maintaining adequate hydration
- Washing their hands before eating and drinking

[ ] Injury investigations/reports must be completed in a timely manner.

(d) Post-incident:

[ ] TF personnel must identify and document appropriate issues at the conclusion of a mission. Safety considerations should be of paramount importance.

[ ] The consolidation of this information should be conducted as soon as possible after the return home to ensure that detailed information is not lost.

[ ] This information must be included into the mission After-Action Report and the lessons learned incorporated into strengthening:

- Operational procedures
- Equipment requirements
- Training and field exercises

[ ] A critique/evaluation session should be conducted with all TF personnel assigned to the mission to ensure that all facets of the mission receive attention.

[ ] Recommendations specifically related to safety should be included in the After-Action Report. This should include a discussion of how improvement to existing practices and procedures can be made.

[ ] Critical Incident Stress Management sessions should be conducted for all TF personnel.

[ ] Actions should be take to ensure that all personal safety gear and equipment are inventoried and replaced in the cache.

[ ] All reusable equipment items are to have a safety check conducted in accordance with manufacturer recommendations before being returned to the cache.

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2. Field Medical Operations Sector (MOS)

a. Emergency Medical Services (EMS) Operations

(1) Introduction

- The Field Medical Operations Sector (MOS) will be composed of and supported by the following personnel:

  – Field Medical Operations Officer
  – EMS Officer
  – HAZMAT Officer
  – Emergency Medical Technician/Paramedic (EMT/P) (12)
  – HAZMAT Technician (8)

- The MOS will be composed of the EMS Sector and the HAZMAT Sector

- All EMS MOS personnel must meet the training requirements outlined in the EMS training section.

- All EMS MOS personnel report to the Field Medical Operations Officer (FMOO) through the EMS Officer

- The MOS is responsible for initiating victim product sampling/ identification, patient decontamination, and emergency medical care for NBC victims

(2) Description of Duties

EMS MOS personnel:

- Perform victim rescue

- Assist with product sampling and identification

- Perform patient decontamination

- Provide basic and advanced life support to disaster victims

- Assist local HAZMAT Team with incident mitigation

- Are responsible for the implementation of medical operation plans as specified by the Field Medical Operations Officer and/or the EMS Officer

- Are able to properly don/doff and function in all levels of PPE

- Are accountable for all issued equipment

- Provide medical care in accordance with MMST treatment protocols and or on-site MMST MD direction

- Perform additional tasks and duties as assigned during the mission

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Ensure personal ‘‘GO’’ kit is available and complete

(b) Upon activation:

[ ] Report to designated mobilization site

[ ] Monitor disaster-related information from local sources, such as radio and television

(c) At assembly point:

[ ] Advise EMS Officer of arrival and receives briefing

[ ] Assist with movement/loading of equipment cache

[ ] Ensure receipt of the appropriate issue of gear pertinent to position

[ ] Receive notification of assignment and instructions from the EMS officer

[ ] Ensure that sector personnel sign (if they have not done so prior to the deployment) the U.S. Public Health Service Medical Liability Form

(d) In transit:

[ ] Review the latest disaster information

[ ] Review the U.S. Public Health Service (USPHS) MMST Field Operations Guide (FOG) for information pertinent to position description, operations checklist, operational procedures, and safety procedures

[ ] Initiate preliminary assigned tasks, including medical monitoring, to the extent possible

[ ] Take advantage of travel time for rest prior to arrival

(e) At mobilization site:

[ ] Assist the Logistics Specialist with off-loading and security of personal gear and MMST cache

[ ] Assemble for general mission briefing from the Task Force Leader (TFL) and other appropriate local officials

[ ] Assist, as necessary, in the departure to the incident site or assignment destination

[ ] Receive initial briefing of tactical assignments from the Field Medical Operations Officer or EMS Officer including:

- Incident Situation Report
- Mission objectives
- Tactical assignments
- Briefing on the communications plan, frequencies, and radio designations
- Review of emergency signaling/evacuation procedures
- Review of patient decontamination procedures
- Review of medical treatment procedures
- Review of process for procuring additional supplies and equipment

[ ] The TFL will make a determination whether to keep all personnel together in one sector or divide personnel by specialty and deploy to two or more sites to work

simultaneously. If redeployment of existing personnel is to be done to different locations, each location will have its designated sector officer identified as EMS1, EMS2, etc. If two operational sectors are created, EMT/Ps will be assigned to both teams.

(f) On-site operations:

[ ] Assist Logistics Specialist with unloading, sorting, and setup of the equipment cache, medical supplies, and task force support facilities

[ ] Set up the MOS in accordance with the Field Medical Operations Officer's direction

[ ] Product Identification

- The MOS personnel will work with the local HAZMAT team representatives and other consultants in the immediate identification of the product(s) by all available means possible.

- Where appropriate, the HAZMAT Officer will designate team personnel to don the appropriate level of personal protective equipment (PPE) to perform reconnaissance work, including gathering secured specimens that will be tested on site using available technology and/or sent to local labs for further evaluation.

- A Product Information Sheet will be completed in its entirety on each product as it is identified by the Medical Information/Research Sector (MIRS) staff. In turn, a copy of the information will be given to each MMST sector officer as soon as possible.

[ ] Incident Mitigation

- MOS personnel, working in conjunction with the local HAZMAT team(s), will, to the extent necessary, assist with mitigation of the incident by completion of one or more of the following practices appropriate to the situation.

- ♦ Diking
- ♦ Damming
- ♦ Neutralization
- ♦ Vacuuming
- ♦ Recontainerizing
- ♦ Dilution
- ♦ Enhanced dispersion

– Appropriate mitigation practices to be implemented will be the decision of the Field Medical Operations Officer in conjunction with the MOS HAZMAT Officer.

– Appropriate resources for the completion of mitigation procedures will come from both the MMST equipment cache and local HAZMAT team equipment and supplies.

– A record will be kept of all MMST equipment and supplies utilized during the mitigation activity and given to the Logistics Specialist.

[ ] Victim Rescue

– Normally, MMST members will not be involved in the actual rescue of victims from a confined space or other entrapment situation. However, in the event that the situation does occur, the activity in this regard will be coordinated in conjunction with the local HAZMAT team/fire department.

– At no time are MMST members to unnecessarily jeopardize their lives while performing a rescue task.
– No rescue is to be attempted without appropriate PPE. The PPE appropriate to the situation will be determined by the Safety Officer(s).

– Rescue attempts will not be initiated until decontamination is established.

– **The MMST entry/rescue team will initiate gross decontamination procedures on every patient they**

encounter before passing the patient off to the Decontamination Team.

- In a multiple victim scenario, ambulatory patients are to be removed first, followed by near ambulatory patients, then unconscious patients.

- Deceased victims will be removed at the direction of the TFL and decontaminated before release to the local agency mortuary team.

[ ] Patient Decontamination

- A decontamination alley with multiple lanes will be established as soon as possible, upon arrival of the MMST, utilizing Strike Team members.

- All decontamination equipment is to be functional before any personnel make entry to perform a rescue and/or reconnaissance.

- **As a minimum, gross decontamination will be performed on all patients expected or known to be at risk for secondary contamination.**

- Decontamination will be performed in three stages. They are:

  - *Gross decontamination*, which includes the removal of the patient from a high-risk area, followed by clothing removal, then a head-to-toe rinse with the appropriate solution (normally water unless there is heavy metal involvement).

  - *Secondary decontamination*, which includes head-to-toe washing in a systematic fashion using the designated decon solution specified by the Medical Information Officer (MIO), working in conjunction with the Safety Officer and Emergency Medical Services Officer, and followed by rinsing with tepid water or normal saline.

- ♦ *Definitive decontamination* will be done by additional wash and rinse to the point that no additional product is likely to be remaining on the patient. This degree of decon will not normally be conducted in the field, except under extraordinary circumstances. Rather, it will be more routinely done as part of hospital decontamination.

- Emergency decontamination will be done when MMST personnel wearing PPE become ill or injured while working in the hot or warm zone. The procedure includes immediate head-to-toe washing/ rinsing of the PPE followed by the removal of the suit in a fashion that is rapid and minimizes the risk of cross-contamination. The individual will be given a preliminary assessment and indicated medical call by personnel in the cold zone.

- While performing decontamination, reasonable attempts will be made to minimize cross-contaminational spread.

- In cases of mass casualties, all reasonable efforts will be undertaken to decontaminate the exposed and/or injured using the most rapid and efficient practices possible.

- The airway will be cleaned first, then open wounds, then the rest of the body in a systematic head-to-toe fashion.

- Scrubbing will be done utilizing the appropriate brushes and cleaning solution and in a fashion that does not lead to abrading or irritation of the skin.

- Rinsing will be done using tepid water temperatures and in a fashion that minimizes splash, skin irritation, or injury.

- During the decontamination process, decontaminated wounds are to be covered with an occlusive dressing.

- In situations involving multiple patients, or critically injured/ill patients, priority will be placed on performing gross decontamination as soon as possible and, where clinically appropriate, administering the antidotes indicated for the condition before further decontamination is initiated.

- Patients requiring a critical care procedure (e.g., intubation, IV, needle decompression, etc.) will be removed from the decontamination alley for the procedure to be performed safely and so as not to interfere with the decontamination process of remaining personnel.

- Critical care patients will not be taken care of at the expense of those less critically injured, except in the cases where an MMST member is involved.

[ ] Patient Care

- The MOS will not be a freestanding medical resource at the disaster site. Local medical systems will remain the primary providers of general medical care. However, team personnel will be utilized to attend to the needs of:

  ♦ Victims directly encountered by the Strike Team
  ♦ Strike Team personnel and support staff
  ♦ Local responders

- The EMT/Ps will be primarily responsible for rendering medical care under the direction of the Field Medical Operations Officer, EMS Officer, and/or MMST physician.

- The BTLS primary and secondary examination technique is to be utilized on all patients, with treatment emphasis on airway, breathing, and circulatory support.

- The MOS personnel involved with providing preliminary care will hand off unstable patients as soon as possible to local authorities.

- Antidotes are to be administered according to the appropriate NBC medical treatment protocol (see Appendix I). All medications administered and other treatment rendered will be recorded on the NBC Incident Patient Report, which is to be attached to the patient's wrist or ankle.

- The Poison Control Center is to be notified of the signs/symptoms being encountered and consulted for treatment options when needed.

- Deviation from medical protocols may be done only with the permission of the on-site MMST physician.

- As soon as possible, the patients will be prepared for transport and their readiness reported to the Incident Command Post Transportation/ Evacuation Officer.

[ ] Patient Tracking

- MMST personnel will retain information about any patient for whom they perform decontamination or administer medication. This will be done by removing the completed bottom portion of the triage tag from the patient and/or quickly recording information about each patient on the NCB Incident Exposure Report Form (Appendix B). This information will be necessary to maintain proper accountability for the patient population encountered.

[ ] The Hospital Operations Sector (HOS) will assist the local community transportation/ evacuation officer in recording hospital capability for receiving patients, along with determining the number of patients sent to each facility. The information is to be recorded on the MMST Transportation Log by the Hospital Operations Officer (HOO).

[ ] Medical Care for Injured Strike Team Members

- Any Strike Team member requiring medical attention shall have documentation completed, including:

- ♦ The MMST Patient Care Form
- ♦ The sponsoring agency's internal reports and forms
- ♦ Appropriate Federal and local forms

- The Project Management Team will assist with all of the documentation to support followup investigation (Workmen's Compensation, etc.).

- Treatment rendered will be consistent with the Strike Team member's medical needs. Final decisions concerning care will rest with the MMST MOP physician and the EMS Officer.

- The EMS Officer will recommend to the FMOO a decision on the duty status of any ill or injured task force member (including remaining on incident, assigned light-duty status, relieved of duty, and returned home).

- Any injured task force member requiring evacuation from the incident site will be medically stabilized by the MMST medical specialists, prior to transport.

- The EMS Officer will determine the optimal medical destination and method of transport.

- An MMST member may be assigned to escort the injured member to assure optimal care for the injured member.

- The TFL will communicate pertinent details through the local Incident Command Post (ICP) and appropriate government channels back to the injured member's sponsoring organization and the Program Director.

- The TFL or MMST physician will brief all personnel on the accident, the member's condition, destination, and care provided. As appropriate, periodic updates of a task force member's injuries and condition will be conducted as warranted.

[ ] Followup for Injured Team Members

- The EMS Officer will assure that task force members cared for by the medical team receive referrals and followup of their medical problems as indicated.

- The Field Medical Operations Officer will work with the Program Management Team (PMT) to assure all necessary paperwork is submitted to the USPHS in a timely fashion.

[ ] Death of a Task Force Member

- In the event of the death of a task force member, the Assistant Task Force Leader (ATFL) and EMS Officer will verify the identity and confirm the death of the individual. The probable cause of death should be specified, if possible. The information must be provided to the TFL as soon as possible.

- Security should be ensured for the deceased member's personal items, such as wedding rings, jewelry, etc.

- The TFL will assign a task force member to accompany the team member's remains to the medical examiners office. Transfer of the remains will be coordinated with the local incident command staff and the mortuary team.

- The EMS Officer will initiate all appropriate documentation to record the details regarding the cause of death and support the followup investigation.

- The TFL will assess the stress impact of the accident/incident on task force personnel and determine its further operational capability.

- Family notification will be done in coordination with the team member's agency as soon as possible. NO information is to be released to the media until

assurances have been made that proper family notification has been

completed. It will be the responsibility of the individual's agency to initially notify the family. However, upon completion of the mission, the TFL and/or their designee will express the support of the Strike Team to the deceased member's family as soon as possible.

- Primary responsibility for funeral arrangements and family support will rest with the MMST member's employment agency, with additional support provided by the Program Management Team.

- The Program Management Team will work with the MMST employer and family to assure the necessary death benefit paperwork is promptly handled.

(g) Demobilization:

[ ] The Field Medical Operations Officer, in consultation with the TFL, will determine when their sector operations are completed.

[ ] Assigned equipment and supplies will be inventoried, secured, and returned to the cache and prepared for movement.

[ ] Sector personnel will report to the designated demobilization site in a timely manner, bringing with them the MMST equipment utilized.

[ ] All personnel will assemble for team briefing on mission status and reassignment/demobilization determinations.

[ ] All items issued to the MOS personnel from the cache will be returned to the Logistics Specialist.

[ ] The Logistics Specialist will be immediately advised of the loss or potential maintenance requirements of any equipment.

[ ] All MMST personnel will assist with the loading of the cache for the trip home.

[ ] Upon returning home, all MMST personnel will assist with the unloading and restocking of the cache to assure readiness for the next deployment.

(h) Post-incident:

[ ] Personnel will report any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident.

[ ] Personal notes and reports will be submitted to the Field Medical Operations Officer (FMOO) for inclusion in the After-Action Report.

[ ] Personal ‘‘GO’’ kit will be restored to deployment status.

[ ] Medical Surveillance Reports will be completed and returned to the program management team.

[ ] Injury Reports will be completed, where indicated.

[ ] Physical examinations will be conducted, where indicated, by MMST MOP Medical Director and/or designated clinical specialists.

[ ] All team personnel will participate in the mission critique and Critical Intelligence and Stress Management (CISM) sessions when they are held.

[ ] Off-duty MMST members may be mobilized to assist deployed team members in returning the cache to complete readiness for a future deployment.

[ ] Sector members will make contact with their employing agency to inform them of the termination of their participation in MMST activation and follow the time and attendance reporting requirements of their home jurisdiction.

b. **Field Medical Operations Officer (FMOO)**

(1) **Introduction**

The Field Medical Operations Officer (FMOO) is responsible for managing and supervising the Medical Operations Sector (MOS). The FMOO reports directly to the Task Force Leader.

(2) **Description of Duties**

- Ensures for the development and implementation of the MOS plan
- Supervises the EMS Officer and Hazardous Materials Officer
- Ensures that local response personnel are assisted with intelligence gathering, product identification, victim rescue, decontamination, patient care, patient tracking, and scene security
- Ensures that proper medical care is rendered to task force personnel and disaster victims
- Ensures that all equipment issued to the MOS is accounted for and used properly
- Ensures that all on-site activities are done in a safe and coordinated fashion
- Receives briefings and situation reports and ensures that all sector personnel are kept informed of status changes
- Provides situation reports, maintains MOS records and reports, and prepares the MOS After-Action Report
- Performs additional tasks and duties as assigned during the mission

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Ensures ‘‘GO’’ kit is available and ready for deployment

(b) Upon activation:

[ ] Receives notification and location of mobilization site

[ ] Monitors disaster-related information from local sources such as TV and radio

(c) At mobilization site:

[ ] Brings personal ‘‘GO’’ kit

[ ] Advises the Task Force Leader (TFL) of arrival and receives briefing

[ ] Ensures all assigned personnel have arrived

[ ] Assists with movement/loading of equipment cache

[ ] Ensures all sector personnel have signed U.S. Public Health Service NDMS Medical Liability form

[ ] Pulls medical surveillance container from cache if team is going by bus

[ ] Ensures antidote kits are issued if indicated

[ ] Coordinates with logistics personnel the off-loading and security of personal gear and MMST equipment

[ ] Assembles for general mission briefing from the TFL and other appropriate local officials

[ ] As necessary, assists in the departure to the incident site or assignment destination

[ ] Receives initial briefing of tactical assignments from the TFL including:

- Incident Situation Report
- Incident site mission objectives
- Tactical assignments

- Briefing on the communications plan, frequencies, and radio designations
- Review emergency signaling/evacuation procedures
- Review patient decontamination procedures
- Review medical treatment procedures
- Review process for procuring additional supplies and equipment
- Review proper patient documentation and on-site record-keeping procedures

[ ] Determines with the TFL whether to keep all personnel together in one sector or divide them by specialty into two different work groups. If redeployment of existing personnel is to be done to different locations, the FMOO will appoint a designated sector officer for each group. The FMOO will also assure an equal number of specialists are assigned to both teams, unless it is inappropriate to do so.

(d) In transit:

[ ] Reviews the latest disaster information

[ ] Reviews the USPHS MMST FOG for information pertinent to position, operations checklist, operational procedures and safety procedures

[ ] Initiates pre-entry monitoring of personnel if practical

[ ] Establishes communication with local EMS Control Officer to receive updated information

[ ] Takes advantage of travel time for rest prior to arrival

[ ] Works with MIRO to begin product ID procedure

(e) On-site operations:

[ ] Dons Field Medical Operations vest

[ ] Ensures sector personnel are assigned to Logistics to off-load MMST Cache

[ ] Ensures MOS is established

[ ] Receives TFL updated briefing

[ ] Ensures personnel dress-out is initiated

[ ] Ensures emergency decon is established per Appendix G

[ ] Ensures technical decon is established per Appendix F

[ ] Ensures patient decon is established per Appendix E

[ ] Ensures rehab area is established

[ ] Ensures emergency signals are received

[ ] Ensures communication system with various MMST sectors is established

[ ] Ensures interaction with local HAZMAT Team Coordinator to address incident mitigation issues

[ ] Ensures interaction with local EMS Control Officer to address patient care issues

[ ] Ensures safe practices are being followed by all sector personnel

[ ] Ensures PAR Check is done at a minimum of every 30 minutes and more often if warranted

[ ] Establishes work/rest rotation schedule and addresses EMS Officer and HAZMAT Officer

[ ] Ensures needed equipment and supplies are obtained from Logistics

[ ] Evaluates ongoing Team operations for effectiveness and modifies where necessary

[ ] Ensures health and welfare needs of team personnel are met

[ ] Resolves any coordination, communication, or personnel problems within the MOS

[ ] Ensures personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Ensures injured MMST personnel are promptly and properly cared for

[ ] Keeps EMS Officer and HAZMAT Officer abreast of current information and incident management strategies

[ ] Makes periodic progress reports to TFL of accomplishments, conflicts, or operational needs

[ ] Confers with MOP in resolving medical care related problems

[ ] Ensures completion of all patient evaluation/call forms and Control Drug Accountability forms

[ ] Participates in task force strategy sessions with TFL

[ ] Updates shift replacement fully in ongoing operations when relieved at work cycle rotations

(f) Demobilization:

[ ] Reviews the status of the current team assignment and advises the TFL whether continued effort is warranted

[ ] Briefs MOS personnel on mission status and reassignment/demobilization directions

[ ] Ensures followup for any task force member treated by the MMST personnel

[ ] Ensures all assigned tools and equipment are inventoried, returned to cache, and prepared for movement

[ ] Ensures Logistics Sector is advised of broken or missing MOS equipment and tools

[ ] Ensures BASEOPS is broken down and policed

(g) Post-incident:

[ ] Reports any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Coordinates participation of MOS personnel in task force mission critique and CISM mission

[ ] Ensures proper ongoing reports completed and submitted to TFL

[ ] Prepares MOS After-Action Report

[ ] Restores "GO" kit to deployment status

[ ] Makes recommendations for revision to MMST FOG

[ ] Ensures MOS equipment cache is ready for next deployment

[ ] Sector members will make contact with their employing agency to inform them of the termination of their participation in MMST activation and follow the time and attendance reporting requirements of their home jurisdiction

c. **Emergency Medical Services Officer (EMSO)**

(1) **Introduction**

The EMS Officer (EMSO) is responsible for managing and supervising the medical function of the task force during incident operation. The EMSO reports directly to the Field Medical Operations Officer (FMOO).

(2) **Description of Duties**

The EMS Officer:

- Is responsible for the development and implementation of the Medical Management Plan

- Coordinates all medical activities
- Directly supervises the EMT/Ps and ensures adherence to all safety procedures
- Is responsible for the determination of medical organizational logistics needs
- Receives briefings and situation reports and ensures that all medical personnel are kept informed of status changes
- Provides situation reports, maintains records, reports, and evaluations
- Directs medical care delivery to task force personnel and incident victims
- Ensures continuous medical performance, evaluation, and coordination with all available local medical entities
- Performs additional tasks and duties as assigned during a mission

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Ensures ‘‘GO’’ kit is available and ready for deployment

(b) Upon activation:

[ ] Receives notification and location of mobilization site

[ ] Monitors disaster-related information from local sources such as television and radio

(c) At mobilization site:

[ ] Advises the Field Medical Operations Officer of arrival

[ ] Receives TFL briefing

[ ] Ensures that all assigned personnel have arrived

[ ] Briefs assigned personnel

[ ] Reviews pertinent equipment cache readiness status

[ ] Procures the medications as specified on the medical cache list, if needed

[ ] Initiates and maintains the organizational structure and integrity of the medical team throughout all phases of the mission

[ ] Meets with assigned personnel to determine if they are prepared, self-sufficient, and adequately equipped to perform their assignments

[ ] Ensures personnel have designated antidote kit

[ ] Ensures that assigned personnel are adequately briefed on and understand the following:

- Individual/team performance expectations
- Team problems while in process
- Methods for establishing fast changing task force priorities

[ ] Assigns personnel appropriate to assist with the movement and loading of the equipment cache

[ ] Ensures that assigned personnel receive appropriate gear (portable radio, vest, etc.)

[ ] Ensure medical specialist completes the National Disaster Medical System (NDMS) liability coverage form

[ ] Brings personal ‘‘GO’’ kit

[ ] Ensures that personnel have personal ‘‘GO’’ kits

[ ] Briefs task force personnel on the medical support procedures and resources believed to be available

[ ] Assigns responsibilities and supervises personnel on the off-loading and security of personal gear and task force equipment in conjunction with the Logistics Specialist

[ ] Assesses and determines the availability of resources for identified logistical requirements in conjunction with the Logistics Specialist.

[ ] Meets with the FMOO and receives:

- Briefing, when available
- Introduction to local personnel with whom the task force will be working

[ ] Assembles assigned personnel for general missions briefing from TFL and local appropriate officials

[ ] Identifies cache supplies and equipment that should receive priority for initial movement to the assigned area

[ ] Supervises personnel on departure to the assigned jurisdiction or incident site

(d) In transit:

[ ] Reviews the latest disaster-related information as available from radio and TV

[ ] Reviews EMS Officer section of USPHS MMST FOG

[ ] Ensures that all personnel review the FOG for information pertinent to their position description, operations checklist, operational procedures, and safety procedures

[ ] Discusses and coordinates anticipated logistical requirements with the FMOO and Logistics Specialist

[ ] Ensures that all assigned personnel take advantage of available travel time for rest period prior to arrival

(e) On-site operations:

[ ] Dons EMS Officer vest

[ ] Assigns personnel to assist the Logistics Specialist with unloading, sorting, and setup of the equipment cache for medical operations activities

[ ] Assigns personnel to complete pre-entry medical surveillance

[ ] Assigns personnel to become part of decon team, if needed

[ ] Receives initial briefing of tactical assignment from the FMOO and local officials to include:

- The incident situation report
- Task force objectives
- Tactical assignment
- Task force support layout/requirement
- Reporting requirements for situation report
- Designation of the initial communication plan, frequencies, and radio designations

[ ] Ensures personnel are properly using appropriate PPE and respiratory protection

[ ] Reviews emergency signaling and evacuation procedures to be utilized

[ ] Reviews medical treatment/evacuation procedures to be employed

[ ] Reviews process for reordering supplies and equipment

[ ] Reviews local medical capabilities and transport procedures initiated

[ ] Begins overall assessment process to determine the functional requirements/immediate needs, rest, and rotation periods for personnel, adequacy of equipment and support facilities

[ ] Performs needs assessment/locates available resources

- Determines patient hand-off procedures
- Medical resupply

[ ] Conveys information to the FMOO of need for additional resources/special medical capabilities. Information should be passed on through the chain of command to local, State, and EMS officials.

[ ] Evaluates ongoing team operations for effectiveness and modifies as appropriate. This should include appropriateness and effectiveness of tactics, assessment of equipment shortages and needs, assessment of antidote needs/ shortages, and patient transport issues.

[ ] Ensures personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Ensures the health and welfare needs of team personnel, including:

- The need to drink fluids, eat food, and take rest
- Assessment of prolonged fatigue in personnel
- Assessment of signs of Critical Incident Stress syndrome in personnel

[ ] Coordinates with the Field Medical Operations Officer and HAZMAT Officer regarding decontamination procedures to be used for:

- Technical decontamination
- Medical decontamination
- Decontamination triage

[ ] Works with the HAZMAT Officer to ensure the integration of medical personnel in rescue operations for purposes of medical assessment, decontamination, and stabilization of victims prior to pass-off.

[ ] Coordinates the management and treatment of the injury of any task force member, medical evacuation to local care or

return home, patient care form, Federal or local form/report and communication to ICP, local command post, and sponsoring organization.

[ ] Coordinates issues in the event of the death of a task force member, in conjunction with the ATFL:

- Security of personal effects
- Initiates proper documentation
- Communication to TFL, local ICP, and sponsoring organization
- Transfer of remains to medical examiners office
- Coordinates with local command post, USPHS, and funeral home

[ ] Assesses the impact of continued task force operations

[ ] Monitors on-site coordination with other functions within the task force/other rescue team/local officials

[ ] Liaisons with local emergency medical personnel and available support agencies to define appropriate medical support, means of patient evacuation, and communication with the existent medical system

[ ] Provides direct medical care as appropriate to injured task force personnel. This includes intervention of Critical Incident and Stress Management (CISM) for task force personnel, if necessary

[ ] Provides guidance to task force supervisory personnel on self-care matters

[ ] Ensures that proper safety practices and procedures are understood and monitored for compliance

[ ] Evaluates the capacity of assigned resources to complete the assignment/order additional resources, if needed

[ ] Resolves any coordination, communication, or personnel problems within the EMS Sector

[ ] Makes periodic progress reports to the Field Medical Operations Officer of accomplishments/conflicts identified at the completion of assignment and the availability of resources

[ ] Updates shift replacement fully on ongoing operations when relieved at work cycle rotations

[ ] Ensures completion of all patient evaluations/care forms and Controlled Drug Accountability forms

[ ] Participates in task force strategy sessions with task force team officers and the TFL

[ ] Coordinates management of deceased victims with Law Enforcement Sector

[ ] Briefs shift replacement fully on all ongoing operations when being relieved at work cycle rotations

(f) Demobilization:

[ ] Reviews the status of the current team assignment and advises the FMOO whether continued effort is warranted

[ ] Briefs team personnel on mission status and reassignment/ demobilization directions

[ ] Coordinates the necessary followup and care for any task force member treated by the medical personnel

[ ] Ensures all assigned tools and equipment are inventoried, returned to the cache, and prepared for movement

[ ] Records any operational losses and potential maintenance requirements of tools and equipment

[ ] Assigns personnel to assist with the breakdown and policing of the task force Base of Operations (BASEOPS)

[ ] Assigns personnel to assist with packaging, movement, and loading of the equipment cache

[ ] Submits personal notes and documentation to the communications specialist where indicated

(g) Post-incident:

[ ] Reports any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Prepares EMS After-Action Report

[ ] Ensures the return of all items issued to EMS Sector personnel during the mobilization phase

[ ] Coordinates participation of EMS personnel on task force mission critique and CISM session

[ ] Restores personal ‘‘GO’’ kit to deployment status

[ ] Sector members will make contact with their employing agency to inform them of the termination of their participation in MMST activation and follow the time and attendance reporting requirements of their home jurisdiction.

d. **Emergency Medical Technician/Paramedic (EMT/P)**

(1) **Introduction**

The NBC EMT/Ps are responsible for performing the medical care and patient decontamination at an incident operation. The NBC EMT/Ps report to the Field Medical Operations Officer (FMOO) through the EMS Officer.

(2) **Description of Duties**

The EMT/P is responsible for:

- The general health and medical care for all task force personnel and incident victims, while under the supervision of the EMS Officer during a disaster event
- The implementation of the medical action plan specified by the EMS Officer
- Providing medical care in accordance with MMST treatment protocols and/or on-site MMST MOP direction
- All issued equipment
- Additional tasks and duties as assigned during a mission

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Ensures personal ‘‘GO’’ kit is available and ready for deployment

(b) Upon activation:

[ ] Receives notification and instructions for arrival at the mobilization site

[ ] Monitors disaster-related information from local sources such as radio and television

[ ] Reports to the assigned mobilization point in the prescribed time

(c) At mobilization site:

[ ] Brings personal ‘‘GO’’ kit

[ ] Notifies the EMS Officer of arrival

[ ] Signs NDMS liability coverage form

[ ] Assists with the transfer and loading of task force equipment, as necessary

[ ] Assembles for task force briefing from the TFL

[ ] Coordinates the security and accountability of controlled drugs with the Logistics Specialist

(d) In transit:

[ ] Reviews the EMT/P section of the USPHS MMST FOG

[ ] Reviews latest disaster-related information available from TV and radio

[ ] Takes advantage of available time to rest

(e) On-site operations:

[ ] Dons appropriate sector vest

[ ] Assists with the setup of the Medical Operations Sector (MOS) and decontamination alley

[ ] Performs pre- and post-entry medical surveillance on MMST personnel donning PPE

[ ] Assists personnel donning PPE

[ ] Ensures personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Provides medical care to injured local responders and MMST members in accordance with the appropriate MMST Medical Treatment Protocols (see Appendix H) and/or MMST MOP

[ ] Assists with patient decontamination when directed by the EMS Officer or HAZMAT Officer

[ ] Completes appropriate medical records for each patient encountered

[ ] Accompanies injured MMST personnel to the hospital when directed by the FMOO or EMSO

[ ] Briefs shift replacement fully on all ongoing operations when being relieved at work cycle rotations

(f) Demobilization:

[ ] Advises Sector Leader when assignment(s) is(are) completed

[ ] Assists with the breakdown of the EMS MOS

[ ] Ensures collection and return of equipment and supplies to Logistics Officer

(g) Post-incident:

[ ] Reports any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Participates in task force mission critique and CISM debriefing

[ ] Assists with assuring cache is ready for next deployment

[ ] Restores “GO” kit to deployment status

[ ] Sector members will make contact with their employing agency to inform them of the termination of their participation in MMST activation and follow the time and attendance reporting requirements of their home jurisdiction.

e. **Medical Operations Physician (MOP)**

(1) **Introduction**

The EMS MOP is responsible for primary oversight of all medical aspects of MMST operations.

(2) **Description of Duties**

The Medical Operations Physician is responsible for the following:

- Ensuring the general health and medical care for all task force personnel and incident victims
- Serving as the medical advisor to the TFL
- Developing and implementing the medical action plan in conjunction with Field Medical Operations Officer and EMS Officer
- Supervising medical care delivery to task force personnel and incident victims
- Ensuring effective liaison with local EMS agency and medical facilities
- Performing additional tasks and duties as assigned during a mission

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Ensures ‘‘GO’’ kit is ready and available for deployment

[ ] Provides advise and direction on medical aspect of MMST planning and training

(b) Upon activation:

[ ] Receives notification and instructions for arrival at the mobilization site

[ ] Monitors disaster-related information from local sources such as radio and television

[ ] Reports to the assigned mobilization point in the prescribed time

(c) At mobilization site:

[ ] Brings personal "GO" kit

[ ] Notifies the TFL of arrival

[ ] Signs NDMS liability coverage form

[ ] Assists with the transfer and loading of task force equipment, as necessary

[ ] Assembles for task force briefing from the TFL and appropriate local officials

[ ] Coordinates the security and accountability of controlled drugs with the Logistics Specialist

[ ] Ensures personnel have designated antidote kit

(d) In transit:

[ ] Reviews the latest disaster-related information as available from radio and TV

[ ] Reviews the Medical Operations Physician section in the USPHS MMST FOG

[ ] Develops pulmonary medical support plan with TFL and FMOO

[ ] Takes advantage of time to rest

(e) On-site operations:

[ ] Dons MOP vest

[ ] Assists with the setup of the MOS and decontamination alley

[ ] Assists with pre- and post-entry medical surveillance on MMST personnel donning PPE

[ ] Assists personnel donning PPE

[ ] Supervises medical care to injured civilians in accordance with the appropriate MMST Medical Protocol

[ ] Provides medical care to injured local responders and MMST members in accordance with the appropriate MMST Medical Protocol

[ ] Makes final decisions regarding patient treatment when questions arise on scene

[ ] Assists with patient decontamination when requested by the Field Medical Operations Officer or EMS Officer

[ ] Completes appropriate medical records for each patient encountered

[ ] Accompanies injured MMST personnel to the hospital when requested by the TFL

[ ] Briefs shift replacement fully on all ongoing operations when being relieved at work cycle rotations

(f) Demobilization:

[ ] Assists TFL in determining incident management termination for MMST

[ ] Assists with the breakdown of the Command Post

[ ] Ensures collection and return of equipment and supplies to Logistics Officer

[ ] Ensures that hospitals and Poison Control Center is notified of incident termination

[ ] Assists with returning MMST equipment to the cache

(g) Post-incident:

[ ] Reports any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Ensures all personnel attend mission critique and CISM activity

[ ] Writes MOPS After-Action Report

[ ] Makes recommendations for revision of FOG

[ ] Ensures MOPS equipment is operational for next mission

[ ] Ensures personal ‘‘GO’’ kit is ready for next deployment

[ ] Sector members will make contact with their employing agency to inform them of the termination of their

participation in MMST activation and follow the time and attendance reporting requirements of their home jurisdiction.

f. **Hazardous Materials (HAZMAT) Operations**

(1) **Introduction**

This section provides a set of operating guidelines for the HAZMAT Operations Sector.

The primary responsibility during any MMST activation is the overall safety of all members of the team. The actions of the MMST during an activation should comply with all applicable Regulations of the Occupational Safety and Health Administration (OSHA), including the Hazardous Waste Operations and Emergency Response Regulation (HAZWOPER), 29 CFR, 1910.120 subpart q, governing actions of emergency responders to hazardous materials incidents.

The Hazardous Materials Operations Sector is a function of the Field Medical Operations Sector. This subgroup is composed of 9 personnel trained as Hazardous Materials Technicians. The HAZMAT sector will work in conjunction with the EMS Operations Sector.

(2) **Description of Duties**

(a) HAZMAT Operations Sector personnel perform the following duties:

- Assist the local response personnel with:
  - Product ID
  - Victim rescue
  - Decontamination
  - Incident mitigation
- Are responsible for implementation of the HAZMAT Operations Plan as specified by the HAZMAT Officer
- Are knowledgeable on the proper selection of PPE

- Are accountable for all issued equipment

- Perform additional tasks or duties as assigned during the mission
- Are able to properly don/duff and function in all levels of PPE

- Are knowledgeable of the Hazardous Waste Operations and Emergency Response Regulation (HAZWOPER), 29 CFR, 1910.120 subpart q, governing actions of emergency responders to hazardous materials incidents

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Ensure "GO" kit is available and ready for deployment

(b) Upon activation:

[ ] Receive notification and location of mobilization site

[ ] Monitor site disaster-related information from local resources such as TV and radio

(c) At mobilization site:

[ ] Notify HAZMAT Officer of arrival

[ ] Bring personal "GO" kit

[ ] Assist the Logistics Specialist with loading of MMST cache

[ ] Assemble for general mission briefing from the Task Force Leader (TFL) and other appropriate local officials

[ ] Assist, as necessary, in the departure to the incident site or assignment destination

(d) In transit:

[ ] Review the latest available disaster information

[ ] Review the U.S. Public Health Service (USPHS) MMST Field Operations Guide (FOG) for information pertinent to position description, operations, checklist, operational procedures, and safety procedures.

[ ] Initiate preliminary assigned tasks to the extent possible

[ ] Take advantage of travel time for rest prior to arrival

(e) Arrival at incident site:

[ ] Prior to entering the hot or warm zone, determine the following to the extent possible:

- Location of incident
- Topography surrounding the incident
- Special structures (if involved) and layouts of them
- Presence of utilities and their locations
- Possible agent
- Method of agent dissemination
- Target
- Estimated number of victims

(f) On-site operations

[ ] Organize dress-out area

[ ] Assist with setup of MOS and decon alley

[ ] Complete pre- and post-entry medical surveillance

[ ] Don PPE designated by Safety Officer and HAZMAT Officer as being appropriate to agent/situation

[ ] Receive briefing on entry-related mission and/or decon procedures to be followed

[ ] Have final safety check of PPE, respiratory protection, and emergency signals to be used

[ ] Have needed equipment and tools readied for use

[ ] Monitor situation for critical changes

[ ] Advise HAZMAT Officer of problems encountered, when mission objectives are completed, and periodic updates

[ ] Work in pairs
[ ] Isolate the product

[ ] Contain the product

[ ] Work efficiently, quickly, and safely

[ ] Initiate ventilation where indicated

[ ] Direct patients to designated areas

[ ] Perform decon triage

[ ] Use extrication device to evacuate non-ambulatory patients

[ ] Perform patient decon per Appendix E

[ ] Complete technical decon per Appendix F

[ ] Indicate emergency decon when warranted per Appendix G

[ ] Rotate equipment as needed

[ ] Ensure equipment and tools are properly deconned

[ ] Continuously monitor the atmosphere

[ ] Carry out other duties as assigned

(g) Demobilization:

[ ] Receive briefing on mission status and reassignment/ demobilization directions

[ ] Ensure all assigned tools and equipment are inventoried, returned to the cache, and prepared for movement

[ ] Report any operational losses and potential maintenance requirements of tools and equipment

[ ] Assist with the breakdown and policing of the task force Base of Operations (BASEOPS)

[ ] Assist with packaging, movement, and loading of the equipment cache

[ ] Submit personal notes and documentation to the communications specialist where indicated

[ ] Return all unused and/or ‘‘clean’’ equipment to the equipment cache

[ ] Assist in returning the site to original condition as much as possible

[ ] Carry out other tasks as assigned

(h) Post-incident:

[ ] Report any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Attend mission critique and CISM activity

[ ] Assist with preparing MOS for next mission

[ ] Complete designated paperwork

[ ] Ensure personal "GO" kit is ready for next deployment

[ ] Sector members will make contact with their employing agency to inform them of the termination of their participation in MMST activation and follow the time and attendance reporting requirements of their home jurisdiction.

g. **Hazardous Materials Officer (HMO)**

(1) **Introduction**

The HAZMAT Officer reports directly to the Field Medical Operations Officer (FMOO). The Hazardous Materials (HAZMAT) Officer is responsible for supervision of all technical aspects of HAZMAT management including:

- Recon
- Product sampling
- Victim rescue
- Neutralization
- Diking
- Damming
- Decontamination

(2) **Description of Duties**

- Works with the Medical Information Sector to identify the causative agent(s)
- Ensures the ongoing monitoring of environmental conditions during Strike Team operations
- Ensures initial and ongoing surveys are completed for identification of the presence of chemical, biological, or radioactive agents
- Ensures the implementation of defensive mitigation practices when indicated
- Ensures that emergency decontamination procedures are in place for Strike Team members
- Ensures that information regarding the agent(s) and patient symptomatology are passed on to the EMS officer
- Ensures patients are properly deconned
- Ensures personnel wearing PPE are properly deconned upon completion of their work rotation
- Ensures the documentation of all required information
- Identifies operational issues related to work being done in the hot and warm zone and indicates appropriate corrective action
- Oversees the correct operation of all issued HAZMAT equipment
- Performs additional tasks or duties as assigned

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Ensures ‘‘GO’’ kit is ready and available for deployment

(b) Upon activation:

[ ] Receives notification of mobilization and reports to designated mobilization point

[ ] Monitors incident-related information from local fire and police radio frequencies

(c) At mobilization site:

[ ] Advises FMOO of arrival and receives briefing

[ ] Assists with movement/loading of equipment cache

[ ] Brings personal “GO” kit

[ ] Ensures receipt of the appropriate issue of gear pertinent to position

[ ] Receives notification of assignment and instructions from the FMOO

(d) In transit:

[ ] Reviews the latest incident-related information as available from radio and TV

[ ] Reviews the U.S. Public Health Service (USPHS) MMST Field Operations Guide (FOG) for information pertinent to position description, operational checklist, operational procedures, and safety procedures

[ ] Initiates preliminary assigned tasks to the extent possible

[ ] Takes advantage of travel time for rest prior to arrival

(e) On-site operations:

[ ] Dons HAZMAT Officer vest

[ ] Provides assistance to the Logistics Officer with the unloading, sorting, and setup of the equipment cache and the task force support facilities when indicated

[ ] Identifies cache supplies and equipment that should receive priority for initial movement to the assigned area

[ ] Assembles for a general mission briefing from the FMO Sector Officer and appropriate officials from the local jurisdiction

[ ] Assists as necessary in the departure to the incident site or assignment destination

[ ] Ensures personnel have designated antidote kit

[ ] Receives and reviews briefing of tactical assignment from the FMOO including:

- Incident situation report
- Strike Team objectives
- Tactical assignments
- Strike Team support layout/requirements (Base of Operations)
- Briefing on the communications plan, frequencies, and radio designations
- Emergency signaling/evacuation procedures
- Medical treatment/evacuation procedures
- Process for ordering supplies/equipment

[ ] Prepares to initiate immediate reconnaissance operations

[ ] Ensures immediate setup of emergency decon

[ ] Supervises the setup of dress-out area

[ ] Ensures proper safety check is performed on each team member dressed in PPE before entry into warm or hot zone

[ ] Ensures the reconnaissance of affected areas is conducted:

- Conducts rapid assessment of the affected area
- Identifies the location of areas affected
- Identifies potential areas or buildings that require a more detailed assessment or reconnaissance

[ ] Monitors and coordinates reconnaissance procedures with on-site HAZMAT team

[ ] Works with Medical Information Research Sector on product identification procedures

[ ] Coordinates with the FMOO and EMS officers for the evaluation of the local capabilities to treat contaminated or exposed fire/rescue/law enforcement personnel

[ ] Establishes a local site survey for the general area. Sketches the general area and notes the following:

- Location and status of major fixed facilities and transportation lines (e.g., nuclear power facilities, hazardous waste sites, refineries, etc.)
- Topography
- Prevailing short- and long-term weather conditions as monitored by local meteorological devices (i.e., present, 6-hour, 24-hour, and 72-hour forecasts)
- Evidence of smoke, flame, vapor cloud, or obvious dead vegetation, animals, or people

[ ] Determines need/benefit of aerial reconnaissance

[ ] Identifies issues that could require the determination of:

- Conditional entry or
- The cessation of Strike Team operations

[ ] Conducts a site survey of all involved areas to determine the presence of:

- Chemical agents
- Flammable atmospheres
- Radiation levels
- Biological agents or contaminants
- Other specific products as indicated

[ ] Takes appropriate corrective action if the following conditions exist:

- Any positive flammable gas indicator readings
- Oxygen levels below 20% or above 23.5%
- Any toxic material readings within 10% of its immediately dangerous to life and health (IDLH) levels
- Obvious physical dangers (ex., fires, wreckage, etc.) that exist and pose harm/risk to personnel in PPE
- Team member becomes ill or injured

[ ] Works with Medical Information Research Officer to verify agent type and presence by utilizing the appropriate test equipment and further verifies meter

readings with a second means of detection and different operator, if possible. All readings will be documented according to operator and meter unit number and will denote the findings, time, and location.

[ ] Documents all events and forwards documentation to the FMOO. The following documents, as a minimum, are required:

- Site survey
- Site safety plan
- Perimeter and entry readings
- Product identification form
- Decontamination plan

[ ] Monitors ongoing working sites as necessary. Provides technical assistance to the appropriate supervisory position

[ ] Works with the Safety Officer to ensure all proper safety practices and procedures are employed in the use of personal protective clothing and respiratory protection

[ ] Ensures personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Supervises technical decontamination for all Strike Team personnel.

[ ] Supervises patient decon

[ ] Ensures personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Reports any signs or symptoms of Critical Incident Stress in co-workers and advises the FMOO

[ ] Supervise emergency decon procedures

[ ] Keeps the FMOO Sector Leader apprised of any tactical accomplishments or conflicts, supply deficiencies, or equipment malfunctions/needs

[ ] Briefs shift replacement fully on all ongoing operations when being relieved at work cycle rotations

(f) Demobilization:

[ ] Assembles personnel for a team briefing on the mission status and reassignment/demobilization determinations

[ ] Ensures that assigned HAZMAT tools and equipment are inventoried, returned to the cache, and prepared for movement

[ ] Notifies the Logistics Officer of the losses or potential maintenance requirements of any tools and equipment

[ ] Oversees the breakdown and policing of the Strike Team operational area

[ ] Oversees the packaging, movement, and loading of the equipment cache, when indicated

(g) Post-incident:

[ ] Reports any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Submits personal notes to the FMOO for inclusion in the After-Action Reports. This should include reviewing pertinent position descriptions and

operational checklists and procedures for recommended changes.

[ ] Restores personal ‘‘GO’’ kit to deployment status

[ ] Ensures the return of all items issued during the mobilization phase

[ ] Upon return, ensures all personnel participate in the task force mission critique and Critical Incident and Stress Management (CISM) session

[ ] Sector members will make contact with their employing agency to inform them of the termination of their participation in MMST activation and follow the time and attendance reporting requirements of their home jurisdiction.

h. **Hazardous Materials (HAZMAT) Technician**

(1) **Introduction**

Hazardous Materials Technicians are responsible for the safe mitigation of NBC terrorist incidents in coordination with and support of local HAZMAT teams. They will also coordinate with the EMT/Ps in the EMS sector to safely extricate and provide medical care as directed to victims of these incidents. HAZMAT Technicians report to the Field Medical Operations Sector through the Hazardous Materials Officer (HMO).

(2) **Description of Duties**

The Hazardous Materials (HAZMAT) Technician:

- Implements the HAZMAT action plan as specified by the HMO
- Assists with product sampling and identification

- Conducts technical and medical decon

- Performs additional tasks and duties as assigned during a mission

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Ensures ‘‘GO’’ kit is ready and available for deployment

(b) Upon activation:

[ ] Receives notification and instructions for arrival at the mobilization site

[ ] Monitors disaster-related information from local sources such as radio and television

(c) At mobilization site:

[ ] Advises the HMO that he/she is present

[ ] Assists with the transfer and loading of task force equipment as necessary

[ ] Receives necessary briefing information from the HMO as time permits

[ ] Assists in preparation for proceeding to the incident site

[ ] Brings personal ‘‘GO’’ kit

(d) In transit:

[ ] Reviews the latest disaster information

[ ] Reviews the U.S. Public Health Service (USPHS) MMST Field Operations Guide (FOG) for information pertinent to position description, operations, checklist, operational procedures, and safety procedures

[ ] Initiates preliminary assigned tasks to the extent possible

[ ] Takes advantage of travel time for rest prior to arrival

(e) On-site operations:

[ ] Assists with the setup of the HAZMAT Operations Sector (HMOS) as directed by the HMO

[ ] Ensures personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Assists entry team personnel (primary and backup) in donning PPE as directed

[ ] Performs entry team functions as directed

[ ] Assists in establishing, setting up, and operating in decon areas

[ ] Provides medical care to injured civilians in accordance with the appropriate MMST Medical Protocol and direction from HAZMAT Operations or EMS Officer

[ ] Performs other HAZMAT sector functions as directed by the HMO

[ ] Assists in the collection and packaging of contaminated victim clothing and categorization and

packaging of valuable personal belongings (watches, jewelry, wallets, purses, etc.)

[ ] Assists in the packaging and processing of incident fatalities

[ ] Briefs shift replacement fully on all ongoing operations when being relieved at work cycle rotations

(f) Demobilization:

[ ] Assists in the breakdown of HAZMAT Operations Sector upon completion of the incident as determined by the TFL

[ ] Ensures collection and return of equipment and supplies to Logistics Officer

[ ] Ensures that contaminated materials and equipment that cannot be decontaminated are properly disposed of

[ ] Reports any equipment losses or breakages to the Logistics Officer

[ ] Assists in the return of the equipment cache as directed

(g) Post-incident:

[ ] Reports any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Reports any operational deficiencies to the HMO

[ ] Attends after-action critiques as directed

[ ] Ensures that personal ‘‘GO’’ kit is operationally ready for future missions

[ ] Sector members will make contact with their employing agency to inform them of the termination of their participation in MMST activation and follow the time and attendance reporting requirements of their home jurisdiction.

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3. Hospital Operations Sector (HOS)

a. Hospital Operations

(1) Introduction

- This sector will be composed of a total of two personnel, a Hospital Operations Officer and a sector staff member.

- Personnel assigned to this sector will be a combination of two of the following:

  - Emergency Physician
  - Emergency Department Physician Assistant or Nurse Practi-tioner
  - Critical Care or Emergency Department Registered Nurse
  - Paramedic

(2) Description of Duties

- Serve as liaison between the MMST and local medical facilities receiving patients

- Assist the host jurisdiction with communicating vital information to each receiving hospital or the command hospital

- Work with the EMS Officer to provide the medical community via phone, facsimile, or computer the needed patient care information for the agent(s) involved

- Implement a system of patient tracking in concert with the on-scene EMS personnel and facilities receiving patients

- Identify the antidote needs of each facility and assist them in obtaining the needed items from the team cache, regional cache, government agencies, or vendors

- When requested, serve as clinical consultants to the medical staff at each medical facility providing advice on patient care, personnel safety, or facility protection

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Ensure "GO" kit is ready and available for deployment

(b) Upon activation:

[ ] Receive notification and instructions for arrival at the mobilization site

[ ] Monitor disaster-related information from local sources such as radio and TV

(c) At mobilization site:

[ ] Advise TFL of arrival and receive briefing

[ ] Assist with transfer and loading of task force equipment as necessary

[ ] Assist in preparation for proceeding to incident site

[ ] Bring personal "GO" kit

(d) In transit:

[ ] En route to the scene, the Hospital Operations Officer or designee will attempt to gather reconnaissance information from the on-site EMS officer, including:

- Agent(s) involved
- Number of injuries involved
- Treatment being done in the field
- Hospitals receiving patients

[ ] Determine with the TFL whether to go to incident site or Poison Control Center

[ ] Determine how to disseminate preliminary information to the medical facilities

[ ] Determine what information will be given to the medical facilities

[ ] Establish how the patient tracking system should be implemented

[ ] Review the latest disaster information

[ ] Review the U.S. Public Health Service (USPHS) MMST Field Operations Guide (FOG) for information pertinent to position description, operations, checklist, operational procedures, and safety procedures

[ ] Take advantage of travel time for rest prior to arrival

(e) On-site operations:

[ ] Ensure personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Assist Logistics with unloading, sorting, and setting up equipment cache

[ ] Set up HOS in accordance with TFL direction

[ ] The HOO will give specific assignments to sector personnel. If possible, one person each will be assigned to:

- Hospital communications
- Patient tracking
- Hospital supply

When necessary, sector personnel may have to assume more than one role.

[ ] Communications with each receiving facility shall be done by all available means as soon as possible to:

- Ensure that they have been given preliminary information
- Reconfirm facsimile, modem, and phone numbers that can be used for communication
- Identify hospital liaison for future communication
- Identify any preliminary antidote need

[ ] All communications with a medical facility will be recorded on the MMST communication log.

[ ] The HOO shall, via direct communication and listening to the radio, keep abreast of changing conditions and update their personnel when indicated.

[ ] The patient tracker will keep records of all patients sent to a medical facility by maintaining contact with the appropriate Command Post staff and periodic questioning of each receiving facility. Reasonable attempts to reconcile differences in patient counts are to be undertaken. Patient tracking is to be done using the MMST Patient Census Log.

[ ] Receiving treatment facilities may request on-site assistance from the MMST. That request should be addressed to the Command Post. The request will be met if resources permit and the overall mission objectives of the MMST will not be compromised.

(f) Arrival at secondary site/treatment facility:

[ ] Team personnel will, when requested, advise treatment facility personnel in the clinical management

of patients arriving at that location. This assistance could include:

- Making treatment recommendations
- Providing advise on decontamination procedures to be utilized
- Suggesting PPE and hospital protection measures
- Working to acquire vendor assistance for needed equipment and supplies
- Working with the TFL and Logistics Sector to acquire needed inventory from the medical cache
- Normally, MMST personnel will not physically be involved in providing direct patient care or performing decontamination. However, the HOO or his on-site designee will have the prerogative of modifying this practice if patient care interests would be better served by more direct interaction by team personnel.

[ ] Once at the assigned secondary duty location, the HOO will meet with the individual responsible for directing the activities in that area to:

- Give a briefing on team capability and personnel identification
- Report updated incident medical information that is known
- Ascertain how patients at that treatment facility are currently being managed

- Obtain telephone and fax numbers that can be used by the Command Post for communication

[ ] The HOO will work with a liaison from the facility to determine how the team's personnel can best be used.

[ ] Once at the site and after an operational plan has been established, the HOO or his designee will advise the TFL of the team's status by appropriate communication means.

- The HOO will, via face-to-face communication and listening to the radio, keep abreast of changing conditions and update his personnel when appropriate.

- The HOO will work with Command Post personnel (i.e., logistician) to resolve procedure and/or supply issues involving receiving facilities.

- The HOO, Field Medical Operations Officer (FMOO), and TFL will regularly discuss optimum use of Strike Team resources to effectively meet the patient care needs at the incident site and the treatment facilities. These discussions will include:

  - ♦ Redeployment of team personnel to treatment facilities

  - ♦ Distribution of Strike Team pharmacy equipment and/or supplies to treatment facilities

  - ♦ Expedient means to acquire and distribute other stockpiled pharmacy items

- Steps shall be taken to continuously inform each treatment facility of pertinent new information that

will affect their clinical and personnel safety practices. This information is to be sent via fax or modem.

- Medical care items distributed to treatment facilities are to be recorded on the MMST Inventory Log.

[ ] Briefs shift replacement fully on all ongoing operations when being relieved at work cycle rotations

(g) Demobilization:

[ ] The HOO, in consultation with the TFL will determine when their sector operations should be terminated.

[ ] **No** team personnel will leave their duty location without ensuring that the treatment facility has been consulted on the advisability of this decision.

[ ] The HOO will ensure that hospitals and Poison Control Center are notified of incident termination.

[ ] Assigned equipment and supplies will be inventoried, returned to the cache, and prepared for movement.

[ ] Team personnel will report to the designated demobilization site in a timely manner bringing with them Strike Team equipment and supplies that are no longer needed at the treatment facility. If select items are to remain at the treatment facility, equipment inventory numbers are to be noted by the HOO and reported to the logistician who will later make arrangements to recover the items.

[ ] All team personnel will assemble for team briefing or mission status and reassignment/demobilization determinations.

[ ] All items issued to HOS personnel from the cache are to be returned to the Logistics Specialist.

[ ] Logistics Specialists will be notified of the loss or potential maintenance requirements of any tools and equipment.

[ ] Team personnel will assist with the loading of the cache for the trip home.

(h) Post-incident:

[ ] Reports any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Personal notes and reports will be submitted to the HOO for inclusion in the After-Action Report

[ ] Medical surveillance reports are to be completed and returned to the FMOO.

[ ] Injury reports will be completed where indicated.

[ ] Physical examinations will be conducted where indicated by Strike Team medical directors and/or designated clinical specialists.

[ ] All team personnel will participate in both the mission critique and CISM session when they are held.

[ ] Restores “GO” kit to deployment status.

[ ] Sector members will make contact with their employing agency to inform them of the termination of their participation in MMST activation and follow the time and attendance reporting requirements of their home jurisdiction.

b. **Hospital Operations Officer (HOO)**

(1) **Introduction**

The Hospital Operations Officer (HOO) is responsible for coordinating all MMST assistance to area medical facilities and reports to the TFL.

(2) **Description of Duties**

- Coordinates all MMST support to local hospitals and health facilities receiving patients
- Ensures vital incident management information is communicated to each receiving hospital or the command hospital
- Provides essential medical information via available technology to area physicians and health facilities (e.g., clinics, Health Maintenance Offices (HMOs))
- Coordinates, in conjunction with local jurisdiction representatives, patient tracking and record keeping
- Identifies hospital antidote supply needs
- Coordinates with the Logistics Sector antidote distribution to hospitals and health facilities
- Serves as clinical consultant to medical staff at each hospital or health facility

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Ensures ‘‘GO’’ kit is ready and available for deployment

(b) Upon activation:

[ ] Receives notification and instructions for arrival at mobilization site

[ ] Monitors disaster-related information from local sources such as TV and radio

(c) At mobilization site:

[ ] Advises TFL of arrival and receives briefing

[ ] Ensures all sector personnel are at mobilization site

[ ] Brings personal ‘‘GO’’ kit

(d) In transit:

[ ] If possible, initiates preliminary communication with designated receiving hospital(s) MMST associate team member

[ ] Identifies possible treatment problems for hospitals and develops solution list

[ ] Reviews the latest disaster information

[ ] Reviews the U.S. Public Health Service (USPHS) MMST Field Operations Guide (FOG) for information pertinent to position description, operations, checklist, operational procedures, and safety procedures.

[ ] Takes advantage of travel time for rest prior to arrival

(e) On-site operations:

[ ] Ensures personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Reviews briefing from TFL

[ ] Makes assignments to handle hospital communications, patient tracking, and hospital supply

[ ] Obtains product/agent information from MIRO

[ ] Ensures product/agent information is sent via available technology to receiving hospitals and/or health facilities impacted by the incident

[ ] Ensures all communications with medical facilities are recorded on the MMST communication log

[ ] Keeps abreast of changing conditions via listening to the radio and regular communication with TFL

[ ] Identifies appropriate command hospital and establishes liaison

[ ] Determines antidote supply issues and initiates action to resolve problem as soon as possible (ASAP)

[ ] Develops antidote distribution plan in conjunction with the FMOO and Logistics Officer

[ ] Keeps the TFL apprised of activities being conducted and problems encountered

[ ] Briefs shift replacement fully on all ongoing operations when being relieved at work cycle rotations

(f) Demobilization:

[ ] Ensures area hospitals are advised when the last patient is transported and the HOS is shutting down the operation

[ ] Advises all HOS personnel when the assignment is completed

[ ] Coordinates the breakdown of the HOS

[ ] Coordinates collection and return of equipment and supplies to Logistics Officer

[ ] Ensures that all HOS personnel depart scene

[ ] Ensures that all HOS personnel assist with returning cache to the designated depot

(g) Post-incident:

[ ] Reports any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Ensures that HOS personnel attend the mission critique and CISM session

[ ] Writes the HOS After-Action Report

[ ] Ensures that all HOS equipment is operational for the next mission

[ ] Makes recommendations for revisions to USPHS MMST FOG

[ ] Sector members will make contact with their employing agency to inform them of the termination of their participation in MMST activation and follow the time and attendance reporting requirements of their home jurisdiction.

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4. Medical Information/Research Sector (MIRS)

a. Medical Information Research

(1) Introduction

- The Medical Information/Research Sector (MIRS) will be composed of two personnel and supervised by the Medical Information Research Officer (MIRO) who reports to the TFL.

- Personnel assigned to this sector will be an emergency physician; a board-certified toxicologist; and a medical doctor, physician assistant, or nurse who is a public health or emergency medicine specialist.

(2) Description of Duties

- Maintain the MMST research material inventory (books, computers, software)

- Identify needed research materials that will assure optimum access to the most current, complete, and accurate information available on nuclear, biological, or chemical (NBC) agents

- Perform the research needed to identify the agent(s) involved, physical characteristics, appropriate personal protective equipment (PPE), and information about possible signs and symptoms to be observed, treatments to be initiated, antidotes to be utilized, and possible long-term effects. This activity will be completed by assimilating information from the following sources:

  - Local Hazardous Materials (HAZMAT) team
  - FBI HAZMAT Response Unit
  - Computer software (TOMES PLUS, TOXNET, etc.)
  - Reference texts

- National Capital Poison Control Center or another American Association of Poison Control Centers (AAPCC) certified poison control center
- CHEMTREC
- Department of Defense (DoD)
- Centers for Disease Control and Prevention (CDC)
- Department of Energy/Radiation Emergency Assistance Center/Training Site (DOE/REACTS)
- Consultants

- Complete the NBC Agent Research Form on each identified agent

- Communicate vital mitigation and clinical management information to the Task Force Leader (TFL), Field Medical Operations, Hospital Operations, and Law Enforcement Sectors

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Ensure "GO" kit is ready and available for deployment

(b) Upon activation:

[ ] Receive notification and reports to designated mobilization point

[ ] Monitor disaster-related information from local resources such as TV and radio

(c) At mobilization site:

[ ] Advise the TFL of arrival and receive briefing

[ ] Obtain preliminary patient information (number of patients, signs and symptoms) from TFL

[ ] Assist the Logistics Specialist with off-loading and security of personal gear and MMST cache

[ ] Assist, as necessary, in the departure to the incident site or assignment destination

[ ] Bring personal “GO” kit

(d) In transit:

[ ] En route to the scene, the Medical Information Research Officer (MIRO) or designee will attempt to gather advance reconnaissance information from an advance team member or a member of the local response element indicating:

- Agent(s) involved
- Number of injuries involved
- Physical characteristics of agent
- Presenting signs and symptoms
- Weather conditions

[ ] Begin the research activity via notification of Poison Control Center (PCC) and preliminary review of available research materials

[ ] Determine how to disseminate preliminary information

[ ] Review the latest disaster information

[ ] Review the U.S. Public Health Service (USPHS) MMST Field Operations Guide (FOG) for information pertinent to position description, operations, checklist, operational procedures, and safety procedures

[ ] Initiate preliminary assigned tasks to the extent possible

[ ] Take advantage of travel time for rest prior to arrival

(e) On-site operations:

[ ] Ensure personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Receive an updated briefing from TFL

[ ] Secure communication with on-scene and off-site personnel shall be established immediately and maintained at all times.

[ ] Give specific assignments to sector personnel

[ ] Ensure that all communications are recorded on the MMST Event Log

[ ] The MIRS will set up their operations in an area designated by the TFL.

[ ] The MIRO will, via direct communication and listening to the radio, keep abreast of changing conditions and update his personnel when indicated.

[ ] Using physical characteristic data, preliminary test data obtained from Field Medical Operations Sector personnel, and, where necessary, past experience, the MIRO will identify the agent/product involved with as much certainty as possible, using the appropriate MMST research adjuncts (e.g., computer software, PCC, reference texts, expert personnel) and record the information on the NBC Agent Research Form.

[ ] Information must be verified using a minimum of two creditable resources.

[ ] The TFL will be kept abreast by the MIRO of problems encountered and research information results. Vital information will in turn be shared with all appropriate sector leaders in a timely fashion.

[ ] Regular contact with the Poison Control Center will be established to update them on patient signs and

symptoms, assist with product ID, and determine information to release to the public and media.

[ ] Consultation with the MMST member assigned to the PCC (if initiated) will be ongoing and used as an adjunct to on-site identification efforts.

[ ] The MIRS will coordinate the submission of product samples to off-site testing locations and will coordinate secure transportation of the samples with the Law Enforcement Sector.

[ ] Brief shift replacement fully on all ongoing operations when being relieved at work cycle rotations

(f) Demobilization:

[ ] The MIRO, in consultation with the TFL, will determine when sector operations are completed.

[ ] All personnel will assemble for team briefing on mission status and reassignment/demobilization determinations.

[ ] All items issued to the MIRS personnel from the cache are to be returned to the Logistics Specialist.

[ ] The Logistics Specialist will be immediately advised of the loss or potential maintenance requirements of any equipment.

[ ] All MMST personnel will assist with the loading of the cache for the trip home.

[ ] Upon returning home, all MMST personnel will assist with the unloading and restocking of the cache to assure readiness for the next deployment.

(g) Post-incident:

[ ] Personnel will report any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident.

[ ] Personal notes and reports shall be submitted to the MIRO for inclusion in the After-Action Report.

[ ] Medical Surveillance Reports are to be completed and returned to the Program Management Team.

[ ] Personal ‘‘GO’’ kit will be restored to deployment status.

[ ] Injury reports will be completed, where indicated.

[ ] Physical examinations will be conducted, where indicated, by MMST Medical Director(s) and/or designated clinical specialists.

[ ] All team personnel will participate in the mission critique and Critical Incident and Stress Management (CISM) session when they are held.

[ ] Sector members will make contact with their employing agency to inform them of the termination of their participation in MMST activation and follow the time and attendance reporting requirements of their home jurisdiction.

b. **Medical Information Research Officer (MIRO)**

(1) **Introduction**

The MIRO is responsible for coordinating all the MMST Medical Information/Research Sector (MIRS) activities including product/agent identification, research on clinical management information, and mitigation information.

(2) **Description of Duties**

The MIRO:

- Coordinates all product/agent research and identification activities of the MMST
- Interacts with consultants, assists with product identification, and manages clinical activities
- Completes the NBC Agent Research Form
- Ensures timely dissemination of accurate and complete product information to all MMST sectors requiring that information
- Keeps the TFL updated on management information problems and sector activities
- Works with the Field Medical Operations Officer (FMOO) and Hospital Operations Sector (HOS) on patient care activities and mitigation options
- Works with the Law Enforcement Officer on security and product transportation issues
- Works with the Logistics Officer to ensure adequate equipment and supplies are available for the Medical Information Research Sector

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Ensures ‘‘GO’’ kit is ready and available for deployment

(b) Upon activation:

[ ] Receives notification and reports to designated mobilization point

[ ] Monitors disaster-related information from local resources such as TV and radio

(c) At mobilization site:

[ ] Advises TFL of arrival

[ ] Receives TFL briefing

[ ] Ensures all MIRS personnel are at the mobilization site and determines with TFL whether to send personnel to Poison Control Center

[ ] Brings personal ‘‘GO’’ kit

(d) In transit:

[ ] Initiates preliminary product research in conjunction with PCC

[ ] Updates TFL on preliminary product information, proper personal protective equipment (PPE), and medical management recommendations

[ ] Reviews the latest disaster information

[ ] Reviews the U.S. Public Health Service (USPHS) MMST Field Operations Guide (FOG) for information pertinent to position description, operations, checklist, operational procedures, and safety procedures.

[ ] Initiates preliminary assigned tasks to the extent possible

[ ] Takes advantage of travel time for rest prior to arrival

(e) On-site operations:

[ ] Ensures personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Receives briefing from TFL

[ ] Initiates a concerted effort to rapidly but correctly identify vital product information by all available means (e.g., books, computers, consultants)

[ ] Communicates research information by appropriate technology to TFL and designated sector officers

[ ] Coordinates off-site product identification activities with Field Medical Operations Officer (MOO)

[ ] Coordinates product transport off-site to identification facilities in conjunction with the Law Enforcement Sector

[ ] Coordinates all medical consultation with Poison Control Center including:

- Patient signs/symptoms
- Product information
- Product Identification
- Information for release to public and media

[ ] Briefs shift replacement fully on all ongoing operations when being relieved at work cycle rotations

(f) Demobilization:

[ ] Advises all MIRS personnel when assignment(s) is(are) completed

[ ] Coordinates the breakdown of the MIRS

[ ] Ensures collection and return of equipment and supplies to Logistics Officer

[ ] Ensures that all MIRS personnel depart scene

[ ] Ensures MIRS personnel assist with returning MMST cache to designated depot

(g) Post-incident:

[ ] Reports any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Ensures that all MIRS personnel attend mission critique and CISM session

[ ] Restores "GO" kit to deployment status.

[ ] Writes the MIRS After-Action Report

[ ] Makes recommendations for revision of the Field Operations Guide (FOG)

[ ] Ensures MIRS equipment is operational for the next mission

[ ] Sector members will make contact with their employing agency to inform them of the termination of their participation in MMST activation and follow the time and attendance reporting requirements of their home jurisdiction.

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5. Law Enforcement Sector

a. General

(1) Introduction

The Law Enforcement Sector of the MMST is directed by a Law Enforcement Officer, usually of sergeant rank or higher, and four additional police officers.

All law enforcement personnel must meet the training requirements outlined in the law enforcement training section.

(2) Description of Duties

Duties/activities required of personnel assigned to the Law Enforcement Sector include, but are not limited to, the following:

- Obtain pertinent law enforcement information from the following:
  - FBI field office
  - Local law enforcement agencies
  - Local fire and rescue agencies including HAZMAT teams.
  - Local Emergency Operations Centers
  - Pertinent NBC information discussed at intelligence sharing forums
  - Current national and international events and/or terrorist group activities by any media available
- Advise the TFL of law enforcement related issues and latest intelligence information
- Be familiar with local law enforcement resources available in each jurisdiction
- Be familiar with the Incident Command system

- Assist the local jurisdiction in obtaining the needed resources for law enforcement operations including:

  - Develop a working relationship with local assistance agencies such as the Red Cross, Salvation Army, ham radio clubs, and other like groups

  - Develop a working knowledge of local resources for sustained operations (restrooms, sleeping areas, including cots, etc.), and resources for extreme weather conditions (i.e., heat in a cold weather environment)

  - Develop a working knowledge of local transport capabilities, (e.g., cabs, buses, and trucks)

- Ensure security issues for the MMST are identified and addressed including:

  - Determining a safe mobilization area

  - Mapping out the safest and most direct route to the incident scene from the established mobilization area (utilizing a police escort when needed)

  - Providing security for the command post

  - Assisting MMST personnel who are delayed in reaching the incident site

  - Assisting, when needed, in the transport of MMST family members

  - Annually arranging for a driver's license check and a National Agency Check (NAC) on all MMST members (the privacy of this information for all members is to be maintained)

- Notifying MMST members when background checks are being conducted for the purposes of offering to the team member the following options regarding the received information:

  - ♦ The option of turning over the results to the MMST member for their personal use
  - ♦ The option of the information being destroyed

- Bringing to the attention of the Program Management Team (PMT) issues concerning team members' driving records, or other adverse information resulting from the NAC.

- Scene Security and Evidence Control. Provide advice when requested to local law enforcement officials in the following areas:

  - Perimeter security
  - MMST personnel identification
  - Evacuation procedures
  - Traffic flow
  - Evidence identification and collection

    - ♦ Mapping of all evidence locations
    - ♦ Collection of all contaminated evidence once that evidence has been made safe
    - ♦ Collection of all non-contaminated evidence, such as logs, video/audio recordings, notes, etc.
    - ♦ Chain of custody procedure
    - ♦ Evidence safety

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Ensures personal ''GO'' kit is ready and available for deployment

(b) Activation:

[ ] Receive notification and instructions for arrival at mobilization site

[ ] Monitor disaster-related information from local sources such as radio and TV

(c) At mobilization site:

[ ] Advise Sector Leader of arrival and receives briefing

[ ] Assist with movement/loading of equipment cache

[ ] Bring personal "GO" kit

[ ] Ensure receipt of the appropriate issue of gear pertinent to position

[ ] Receive notification of assignment and instructions from the EMS officer

[ ] Ensure that sector personnel sign (if they have not done so prior to the deployment) the U.S. Public Health Service Medical Liability Form

(d) In transit:

[ ] Review the latest disaster information

[ ] Review the U.S. Public Health Service (USPHS) MMST Field Operations Guide (FOG) for information pertinent to position description, operations checklist, operational procedures, and safety procedures

[ ] Initiate preliminary assigned tasks, including medical monitoring, to the extent possible

[ ] Take advantage of travel time for rest prior to arrival

[ ] Assist in securing police escort to mobilization site

[ ] If on duty, notify their employing agency of the MMST activation

(e) On-site operations:

[ ] Ensure personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Ensure security is provided for MMST vehicles

[ ] Ensure security is provided for MMST personnel

[ ] Ensure security is provided for MMST cache

[ ] Meet with law enforcement command personnel at ICP (Incident Command Post) to be briefed on current law enforcement issues and plans

[ ] Gather additional intelligence as it becomes available and update TFL

[ ] Coordinate MMST badging/passes as required

[ ] Hold suspects until local law enforcement can take custody. Under no circumstances are arrests to be made by MMST law enforcement personnel.

[ ] Resolve any problems associated with the arrival and/or departure of MMST assets with local law enforcement

[ ] Offer assistance on crowd management strategy to TFL and the local law enforcement command staff

[ ] Assist with determining best patient transport routes to medical facilities

[ ] Offer operational assistance and recommendations regarding evidence collection, processing and security to local law enforcement

[ ] Offer assistance and/or advice regarding hospital security to local law enforcement and/or the director of hospital security at those medical facilities affected by the incident

[ ] Use any weapon(s) in accordance with the MMST members' home jurisdiction SOPs

(f) Demobilization:

[ ] In consultation with TFL, determine when sector operations should be terminated

[ ] Assigned equipment and supplies will be inventoried, returned to the cache, and prepared for movement.

[ ] Team personnel will report to the designated demobilization site in a timely manner bringing with them Strike Team equipment and supplies that are no longer needed at the treatment facility. If select items are to remain at the treatment facility, equipment inventory numbers are to be noted and reported to the logistician who will later make arrangements to recover the items.

[ ] All team personnel will assemble for team briefing or mission status and reassignment/demobilization determinations.

[ ] All items issued to sector personnel from the cache are to be returned to the Logistics Specialist.

[ ] Logistics Specialists will be notified of the loss or potential maintenance requirements of any tools and equipment.

[ ] Assist with the loading of the cache for the trip home

(g) Post-incident:

[ ] Report any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Sector members will make contact with their employing agency to inform them of the termination of their participation in MMST activation and follow the time and attendance reporting requirements of their home jurisdiction

[ ] Restore "GO" kit to deployment status

b. **Law Enforcement Officer**

(1) **Introduction**

The Law Enforcement (LE) Sector of the MMST is directed by a Law Enforcement Officer, usually of sergeant rank or higher, who oversees personnel (including police officers) with expertise in the activities listed below. Each member of this sector will be cross-trained in two or more of the activities listed below, allowing for the sector to be split into two response elements for a multiple deployment should the TFL require that capability.

(2) **Description of Duties**

Duties and activities required of personnel assigned to the LE Sector include, but are not limited to, the following:

(a) **Intelligence:** An important activity that may provide information to the TFL in the following areas:

- Sufficient advance warning of a potential nuclear, biological, or chemical (NBC) emergency within the MMST sponsoring jurisdiction by obtaining information from a variety of sources:

  – Develop and maintain a working relationship with the local FBI Field Office and an awareness of the resources that can be utilized in an NBC incident

  – Develop and maintain a working relationship with all law enforcement agencies, regardless of size, within the sponsoring jurisdiction and an awareness of the resources that can be utilized in an NBC incident

  – Develop and maintain a working relationship with the local Public Health Official and an awareness of the resources that can be utilized in an NBC incident

  – Develop and maintain a working relationship with the local fire and rescue agencies (including HAZMAT elements) and an awareness of the resources that can be utilized in an NBC incident

  – Develop and maintain a working relationship with such local Emergency Operations Centers as may be available (both civilian and military)

  – Attend regularly any local area intelligence sharing forums, both formal and informal

– Develop and maintain a working knowledge of agent precursor information including but not limited to local manufacturer, storage, and retail sources of precursors

– Keep up-to-date on national and international events and/or groups by any media available (print, television, Internet, police teletype, etc.)

- Sufficient knowledge of resources within the MMST sponsoring jurisdiction in order to advise the Incident Commander (IC) of an affected jurisdiction during an NBC incident (through the MMST Director) in the following areas:

  – Resources that are available to the IC from the local area

  – Intelligence information that may be applicable to the NBC incident

  – Incident Command System (ICS) management capabilities consistent with any area provisions or standing agreements

  – Evidence control procedures required as the result of an NBC incident

(b) **Logistics:** An activity designed to advise or assist the IC of the affected jurisdiction (through the MMST Director) in obtaining sufficient local resources for the care and comfort of law enforcement personnel of the MMST sponsoring jurisdiction.

- Develop a working relationship with local assistance agencies such as the Red Cross, Salvation Army, ham radio clubs, and other similar groups

- Develop a working knowledge of local food and drink resources for the purpose of acquiring sufficient supplies to

maintain an active police presence on scene for an indeterminate period of time

- Develop a working knowledge of local comfort resources for the purpose of acquiring restroom, shower, and sleeping areas (including cots, etc.) as well as sources for the relief of extreme weather conditions (i.e., heat in a cold weather environment)

- Develop a working knowledge of local transport capabilities in order to deliver the above listed items to the incident scene

(c) **Team Security:** Should the MMST be involved in a deployment, members of the Law Enforcement Sector will assist the TFL in the following areas:

- Determine a safe mobilization area

- Map out the safest and most direct route to the incident scene from the established mobilization area

- Determine the location of the incident scene command post and staging area from the IC of the incident scene

- Locate any MMST member who by virtue of their role with the affected jurisdiction are already at the incident scene to facilitate the joining of such members (if possible) with the rest of the MMST upon its arrival at the incident scene

- Maintain an up-to-date listing of MMST member emergency contact information to provide the MMST with such information in the event an MMST member is injured during a deployment in order that the family members of the injured person can be informed

  – Arrange for transport of family members to the hospital of the injured person

- Make notification of the employing agency of the injured MMST member

- Arrange at least annually for a driver's license check and a National Agency Check (NAC) on all MMST members to ensure team reliability and take all steps necessary to protect the privacy of this information

  - Advise the TFL of the records check **prior** to performing the check

– Lapsed driver's license information shall be brought to the attention of the affected team member who will be given an opportunity to comply with local requirements for a period not to exceed 30 days.

♦ Inform the TFL of any MMST member who does not have a valid license after the 30-day grace period

– Advise the TFL of any adverse information (arrests, conviction, etc.) as the result of an NAC

– Advise MMST members when a check is being conducted for the purpose of offering the MMST member the following options regarding the received information:

♦ The option of turning over the results to the MMST member for their personal use

♦ The option of the information being destroyed

(d) **Scene Security and Evidence Control:** At the incident scene and with the concurrence of the MMST Director, coordinate with the law enforcement agency of the affected jurisdiction in order to provide advice on the following:

- Coordination with the senior law enforcement official of the affected jurisdiction at the incident scene for any special access requirements (obtaining special passes, escorts, etc.) for MMST members at the incident scene.

– Advise all MMST components of these requirements

– Act as liaison with the law enforcement agency of the affected jurisdiction responsible for perimeter security at the incident scene to facilitate the arrival and departure of MMST members and equipment through the perimeters

- Inner Perimeter locations
- Outer Perimeter locations
- Considerations regarding traffic flow and the rerouting of traffic near the incident scene
- Advice and necessary assistance regarding evidence procedures:
  - Mapping of all evidence locations
  - Collection of all contaminated evidence once that evidence has been made safe
  - Collection of all non-contaminated evidence, such as logs, video/audio recordings, notes, etc.
  - Establishment of a chain of custody procedure with the ultimate aim of turning evidence over to the FBI or the law enforcement agency of the affected jurisdiction
    - ♦ The exception to this may be items of evidence that cannot be made safe, in which case the items should be filmed, photographed, etc., before being turned over to the agency responsible for mitigation of the contaminated material at the incident scene.

(3) **Operational Checklist**

Law Enforcement (LE) Sector members of the MMST will assist in the deployment of MMST in the following areas:

(a) Prior to activation:

[ ] Ensure personal "GO" kit is ready and available for deployment

(b) Upon activation:

Upon team activation, report to the mobilization center as determined by the MMST Director.

[ ] All LE Sector members will advise the Sector Leader of the estimated time of arrival to the mobilization center upon initial notification of alert.

[ ] All LE Sector members will advise their employing agency of the MMST activation requiring their presence.

[ ] All LE Sector members will proceed to the mobilization center in the quickest and safest mode available.

[ ] All LE Sector members will report to the LE Sector Leader upon their arrival at the mobilization center.

- The exception to this is any sector member in his/her role with the affected jurisdiction who is already at the incident scene.

[ ] The LE Sector Leader will advise the TFL when all LE Sector members are either at the mobilization area or at the incident scene.

[ ] The LE Sector Leader will arrange with law enforcement agencies of the affected jurisdiction expedited transit to the incident scene to include (but not limited to) clearing roadways, police escort, etc.

[ ] The LE Sector will be split into two parts: The first part (including the Sector Leader) will lead the MMST convoy, and the second part will tail the convoy to assist if needed.

(c) Arrival at incident site:

Arrivals at incident site should expect chaotic conditions due to the nature of an NBC incident. The emphasis of the LE Sector during this phase of operations are as follows:

[ ] Identify location of base of MMST operations if established:

- LE Sector Leader will escort the TFL to the Incident Command Post (ICP).

- One LE Sector member will escort the MMST convoy to the staging area and report to the senior official of the affected jurisdiction on scene.

- One LE Sector member will stay with MMST vehicles to provide protection to MMST members and assets.

- One LE Sector member will be prepared to report to the Outer Perimeter upon direction of the LE Sector Leader to coordinate with the senior law enforcement official on scene.

[ ] If a base of MMST operations has not been established:

- LE Sector Leader will escort the TFL to the ICP to await assignment of a Base of Operations (BASEOPS).

- The remaining LE Sector members will stay with the MMST convoy to assist in escorting the convoy to the location of BASEOPS once it is determined.

[ ] LE Sector Leader will remind sector members that their role is advisory in nature and to take no independent law enforcement action without the proper coordination of law enforcement agency of the affected jurisdiction.

- LE Sector members faced with violations of the law will hold suspects until local law enforcement can take custody. Under no circumstances are sector members to make arrests.

(d) On-site operations:

On-site operations for the LE Sector, with emphasis on providing information, advice, and assistance when requested, include the following:

[ ] Ensuring personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Providing intelligence information through the TFL to the IC

[ ] Gathering additional intelligence as it becomes available

[ ] Coordinating the acquisition of any access pass/badge required by the affected jurisdiction and the delivery of such items to MMST members

[ ] Establishing a protective perimeter for the MMST BASEOPS

[ ] Establishing a protective perimeter for MMST vehicles and equipment to ensure that only MMST members gain access to such equipment

[ ] Coordinating with the law enforcement agency of the affected agency to resolve any problems associated with the arrival and/or departure of MMST assets or such other situations as may arise

[ ] Offering assistance and/or advice regarding crown management at the incident scene to the agency of the affected jurisdiction charged with that responsibility

[ ] Offering assistance and/or advice regarding victim/patient tracking to the agency of the affected jurisdiction charged with that responsibility

[ ] Offering assistance and/or advice regarding evidence processing and custody to the agency of the affected jurisdiction charged with that responsibility

[ ] Offering assistance and/or advice regarding hospital security to the agency of the affected jurisdiction charged with that responsibility or the person coordinating movement of victims to area hospitals

- Protective measures for Hospital Security Personnel
- Medical screening for Hospital Security Personnel
- Handling of media inquiries guidelines for Hospital Security Personnel

[ ] Taking all protective measures consistent with the threat posed by the NBC incident including wearing protective clothing

[ ] Going through the decontamination process should an LE Sector member come in contact with contaminated material or if the member becomes contaminated

[ ] Briefing shift replacement fully on all ongoing operations when being relieved at work cycle rotations

[ ] Such other activities as directed by the TFL

(e) Reassignment/demobilization:

[ ] **Reassignment** may occur due to multiple NBC incidents within the MMST sponsoring jurisdiction and may only be done at the direction of the TFL.

- Two members of the LE Sector will be responsible for escorting that portion of the MMST reassigned by the TFL to the new location

- The LE Sector Leader will carefully assign reassignment responsibilities to ensure that the capabilities of the full LE Sector are degraded to the smallest degree possible

[ ] **Demobilization** activities will occur when the TFL has determined that the resources and assets of the MMST are no longer required by the IC of the affected jurisdiction. LE Sector personnel will be responsible for the following:

- Mapping out the most efficient departure route from the incident scene to the original mobilization area

- Maintaining inventory of equipment assigned to the LE Sector to ensure the accountability of all such equipment, including:

  - All equipment (used or unused) that will be returned to MMST storage at the conclusion of the incident (e.g., radios, batteries, evidence kits, etc.)

- ♦ A record of all equipment that by virtue of its use can no longer be returned (evidence bags, etc.)

- ♦ A record of all equipment that has been contaminated and can no longer be returned as it must be either decontaminated or destroyed

– Organize the staging of the MMST convoy for return to the originating mobilization area

– LE Sector Leader will interview all LE Sector members and collect any and all notes for use in preparing an After-Action Report to the TFL and the transfer of notes and information to the appropriate agency should such items have evidentiary value.

– LE Sector Leader will ensure that all LE Sector members complete a medical survey should it be required by the health officials on scene and forward such surveys as required.

– LE Sector Leader will assist the TFL in ensuring that all MMST personnel who arrived for the deployment are accounted for prior to the MMST convoy leaving the incident scene.

(f) Post-incident:

Post-incident activities occur upon return of the MMST to the mobilization area. LE Sector responsibilities are as follows:

[ ] Report any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Transfer all equipment assigned to the LE Sector to the MMST storage facilities

[ ] Attend any incident debriefings that are scheduled for the MMST

[ ] Provide the LE Sector Leader with any suggestions or comments for procedure changes or improvements based on lessons learned during the deployment. This information will be forwarded to the TFL

[ ] Provide such After-Action Reports as required by the TFL

[ ] Make contact with LE Sector members' employing agency to inform them of the termination of their participation in MMST activation and follow the guidance as required by their agency

[ ] Restore "GO" kit to deployment status

[ ] Sector members will make contact with their employing agency to inform them of the termination of their participation in MMST activation and follow the time and attendance reporting requirements of their home jurisdiction.

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6. Logistics Sector

a. General

(1) Introduction

- The Logistics Sector will be composed of a Logistics Officer and one Support Logistics Specialist.

- The Logistics Sector is responsible for managing the equipment cache for the task force.

(2) Description of Duties

[ ] Ensures maintenance of the equipment cache in state of readiness for immediate deployment

[ ] Ensures cache gets to the designated mobilization point or incident location

[ ] Ensures procurement of non-cache items during the mobilization phase or on site as appropriate

[ ] Assists with all distribution needed medical equipment and pharmaceuticals from designated local and regional facilities

[ ] Maintains appropriate records and reports

(3) Operational Checklist

(a) Prior to activation:

[ ] Identifies cache maintenance problems and recommends corrective action

[ ] Maintains a current computerized inventory listing of all equipment and supplies

[ ] Ensures that all equipment testing is current and in compliance with appropriate local, State, and national guidelines

[ ] Ensures equipment cache inventory is in a constant state of readiness for deployment

(b) Upon activation:

[ ] Receives notification and reports to designated mobilization point initiating personnel

[ ] Monitors disaster-related information from local resources such as TV and radio

[ ] Ensures that personal equipment bag is ready for deployment

(c) At mobilization site:

[ ] Ensures that the vehicle containing equipment cache is ready to deploy

[ ] Ensures familiarity with the incident location and best route of travel

[ ] Secures police escort with assistance from TFL

[ ] Ensures personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Issues identified antidote kit if indicated

[ ] Departs for incident site upon direction from TFL

(d) On-site operations:

[ ] Assists with off loading of MMST cache

[ ] Establishes cache setup in MMST designated area

[ ] Coordinates distribution of cache to various sectors

[ ] Keeps records on various equipment and supplies being issued to MMST personnel

[ ] Carries out tactical assignments as directed

[ ] Ensures the use of all safety practices and procedures

[ ] Keeps the Logistics Officer apprised of any equipment deficiencies or malfunctions

[ ] Provides equipment repair and maintenance

[ ] Briefs shift replacement fully on all ongoing operations when being relieved at work cycle rotations

(e) Demobilization:

[ ] Ensures that all equipment is returned to the cache

[ ] Assists with the breakdown and policing of the Strike Team operational area

[ ] Ensures all equipment is properly decontaminated before returning to the cache

[ ] Ensures proper disposal of contaminated items that cannot be decontaminated

[ ] Coordinates the reloading of the equipment cache for return home

(f) Post-incident:

[ ] Reports any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Participates in the Strike Team mission critique and Critical Incident and Stress Management (CISM) session

[ ] Ensures that all replenishables have been replenished

[ ] Ensures needed repairs and preventive maintenance are done on all items before being returned to the cache for the next deployment

[ ] Identifies and documents all operational losses or expendables for subsequent replacement or repair (if repairable)

[ ] Submits personal notes to the Logistics Officer for inclusion in the After-Action Report

[ ] Restores "GO" kit to deployment status

[ ] Sector members will make contact with their employing agency to inform them of the termination of their participation in MMST activation and follow the time and attendance reporting requirements of their home jurisdiction.

b. **Logistics Officer**

(1) **Introduction**

The Logistics Officer is responsible for managing the equipment cache for the task force during incident operations. The Logistics Officer reports directly to the Task Force Leader.

(2) **Description of Duties**

[ ] Ensures the equipment caches in an appropriate state of readiness for immediate deployment

[ ] Ensures cache gets to designated mobilization point or incident location

[ ] Supervises the packaging, transport, distribution, and maintenance of the task force equipment cache during mission assignments

[ ] Coordinates with military and civilian transport officials for all cache logistics

[ ] Procures non-cacheable items, either during the mobilization phase or on-site, as appropriate

[ ] Obtains needed medical equipment and pharmaceuticals from designated local and regional facilities

[ ] Ensures the security and accountability of all components of the task force equipment cache

[ ] Maintains appropriate records and reports

[ ] Performs additional tasks or duties as assigned during a mission

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Ensures personal “GO” kit is ready and available for deployment

(b) Upon activation:

[ ] Receives notification and reports to designated mobilization point

[ ] Monitors disaster-related information from local resources such as TV and radio

(c) At mobilization site:

[ ] Advises TFL of arrival

[ ] Receives TFL briefing

[ ] Inventories the task force cache and supervises the transfer and loading of the task force equipment as necessary

[ ] Reviews the Logistics Specialist Support Kit, which includes:

- Four copies of the cache inventory
- Maintenance manuals
- List of cache weights and measures
- Two copies of the Property Accountability procedures
- Equipment accountability system

[ ] Assists, as necessary, in the departure to the incident site or assignment destination

[ ] Brings personal "GO" kit

[ ] Supervises the transfer and loading of the equipment cache for movement to the point of departure

[ ] Supervises the Logistics Specialist with off-loading and security of personal gear and MMST cache

[ ] If air transport is used, supervises the movement and loading of equipment in coordination with the civilian airport authorities, military loadmaster, and cargo

handlers. Obtains and maintains copies of all manifests

(d) In transit:

[ ] Reviews the latest disaster-related information as it becomes available

[ ] Reviews the U.S. Public Health Service MMST Field Operations Guide for information pertinent to position description, operational checklist, operational procedures, and safety procedures

[ ] Takes full advantage of available travel time for rest prior to arrival

(e) On-site operations:

[ ] Ensures personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Coordinates with the Field Medical Operations Officer and the TFL for selection of an appropriate site for the equipment cache staging area and base setup

[ ] Supervises the unloading, sorting, and setup of the equipment cache and the task force support facilities

[ ] Receives initial briefing of tactical assignment from TFL or designee, including:

- Incident situation report
- Task force objectives
- Tactical assignments

- Task force support layout and requirements (Base of Ops)

- Briefing on the communications plan, frequencies, and radio designations

- Reviews emergency signaling/evacuation procedures

- Reviews medical treatment and evacuation procedures

- Reviews the process for ordering supplies and equipment

[ ] Establishes the equipment cache staging area including:

- Categorizes equipment and supplies

- Ensures the environmental protection of appropriate supplies and equipment

- Coordinates the appropriation of fuels, compressed air, and medical oxygen

- Ensures fuel equipment and tools; tests and makes ready for operation

- Provides security for the equip cache. Coordinates with Field Medical Operations Officer to ensure security and accountability of controlled medical drugs

- Establishes work area for maintenance/repair

[ ] Implements Property Accountability and equipment/tool supply system

[ ] Carries out tactical assignments as directed. Be prepared to go into immediate rescue operations

[ ] Ensures the use of all safety practices and procedures

[ ] Provides support as necessary for task force requirements for on-site equipment support

[ ] Ensures physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Reports any signs or symptoms of CIS to the TFL

[ ] Keeps the TFL apprised of any tactical accomplishments or conflicts; supplies deficiencies or equipment malfunctions

[ ] Briefs shift replacement fully on all ongoing operations when relieved at work cycle rotations

[ ] Participates in the task force briefings

(f) Demobilization:

[ ] Assembles for a team briefing on the mission status and reassignment/demobilization determinations

[ ] Ensures that all cache tools and equipment are inventoried, returned to the cache, and prepared for movement

[ ] Prepares personal belongings for demobilization

[ ] Tracks and maintains a listing of the losses or potential maintenance issues of all tools and equipment

[ ] Supervises the breakdown and policing of the task force operational area

[ ] Supervises the packaging, movement, and loading of the equipment cache

[ ] Submits personal notes to the TFL for inclusion in the After-Action Reports. This should include reviewing pertinent position descriptions and operational checklists and procedures for recommended changes

[ ] Ensures the return of all items issued to Logistic Officer during the mobilization phase

(g) Post-incident:

[ ] Reports any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Upon return, ensures all sector personnel participate in the task force mission critique and CISM debriefing

[ ] Restores "GO" kit to deployment status

[ ] Writes Logistics After-Action Report

[ ] Makes recommendations for revision of Field Operations Guide (FOG)

[ ] Ensures Logistics Sector equipment is operational for the next mission

[ ] Works with Program Management Team to ensure entire MMST cache is restored to readiness for next deployment

c. **Logistics Specialist**

(1) **Introduction**

The Logistics Specialist is responsible for managing the equipment cache for the Strike Team during incident operations. The Logistics Specialist reports directly to the Logistics Officer.

(2) **Description of Duties**

- Maintains the equipment cache in an appropriate state of readiness for immediate deployment
- Ensures correct packaging, transport, distribution, and maintenance of the MMST cache during mission assignments
- Ensures the security and accountability of all components of the cache
- Maintains appropriate records and reports
- Performs additional tasks or duties as assigned during a mission

The Logistics Specialist should have the following specific requirements and criteria:

(3) **Operational Checklist**

(a) Prior to activation:

[ ] Ensures that personal ‘‘GO’’ kit is ready for deployment

[ ] Identifies cache maintenance problems and recommends corrective action

[ ] Maintains a current computerized inventory listing of all equipment and supplies

[ ] Ensures that all equipment testing is current and in compliance with appropriate local, State, and national guidelines

[ ] Ensures equipment cache inventory is in a constant state of readiness for deployment

(b) Upon activation:

[ ] Receives notification and reports to designated mobilization point

[ ] Monitors disaster-related information from local resources such as TV and radio

(c) At mobilization site:

[ ] Ensures that the vehicle containing equipment cache is ready to deploy

[ ] Ensures familiarity with the incident location and best route of travel

[ ] Secures police escort with assistance from TFL

[ ] Ensures personal physical readiness through proper nutrition, water intake, rest, and stress control techniques

[ ] Issues identified antidote kit if indicated

[ ] Departs for incident site upon direction from TFL

[ ] Brings personal "GO" kit

(d) On-site operations:

[ ] Assists with off-loading of MMST cache

[ ] Establishes cache setup in MMST designated area

[ ] Coordinates distribution of cache to various sectors

[ ] Keeps records on various equipment and supplies being issued to MMST personnel

[ ] Carries out tactical assignments as directed

[ ] Ensures the use of all safety practices and procedures

[ ] Keeps the Logistics Officer apprised of any equipment deficiencies or malfunctions

[ ] Provides equipment repair and maintenance

[ ] Briefs shift replacement fully on all ongoing operations when being relieved at work cycle rotations

(e) Demobilization:

[ ] Ensures that all equipment is returned to the cache

[ ] Assists with the breakdown and policing of the Strike Team operational area

[ ] Ensures all equipment is properly decontaminated before returning to the cache

[ ] Ensures proper disposal of contaminated items that cannot be decontaminated

[ ] Coordinates the reloading of the equipment cache for return home

(f) Post-incident:

[ ] Reports any ill or unusual feelings or sicknesses that may be attributable to exposure at the incident

[ ] Participates in the Strike Team mission critique and Critical Incident and Stress Management (CISM) session

[ ] Ensures that all replenishables have been replenished

[ ] Ensures needed repairs and preventive maintenance are done on all items before being returned to the cache for the next deployment

[ ] Identifies and documents all operational losses or expendables for subsequent replacement or repair (if repairable)

[ ] Submits personal notes to the Logistics Officer for inclusion in the After-Action Report

[ ] Restores ‘‘GO’’ kit to deployment status

[ ] Sector members will make contact with their employing agency to inform them of the termination of their participation in MMST activation and follow the time and attendance reporting requirements of their home jurisdiction.

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7. Equipment, Storage, and Utilization

a. Introduction

- The organization and management of a comprehensive equipment cache must not only meet the needs of on-scene operations, but promote efficient packaging, handling, and transportation both to and from the disaster location.

- Efficient packaging, handling and transportation of cache tools, equipment, and supplies are fundamental to meeting the time constraints of response to NBC events.

- In order to meet the 60- to 90-minute response requirement, all tools, equipment, and supplies should be prepackaged into a cache.

- Packaging for the Strike Team cache should be of modular design to provide the transporters options for handling the equipment.

- All United States Public Health Service (USPHS) MMST equipment shall adhere to MMST inventory standards. This standardization will promote more efficient management and transportation of any or all Strike Team caches during multiple team responses.

b. Personal

- Each MMST member is issued a "GO" kit of standard inventory equipment, which will be readily available at all times.

- This kit will consist of personal protective equipment (PPE) (respirator, suit, gloves, boots, glasses, helmet), team jumpsuit, auto-injectors (#), M-295 kit, M-8 paper, TLD badge, and equipment bag.

- It is each member's responsibility to ensure that all personally issued equipment is inventoried regularly (i.e., monthly) and to report to the Logistics Officer any deficiencies.

c. **Medical Equipment**

- A complete inventory of medical equipment can be found in the equipment/cache listing of the operational system description.

d. **Pharmaceutical**

- A complete inventory of pharmaceuticals can be found in that section of the operational system description.

e. **Cache Packing**

- The following standards are required for USPHS MMST caches:

  The cache will be divided into five elements. Color-coding will expedite the sorting of containers during mobilization and on-site activities. The following colors will be used to denote the various elements:

PPE	Red
MEDICAL	Blue
DETECTION/SAMPLING	Yellow
LOGISTICS/COMMUNICATIONS	Green
DECON	White

- The ability to rapidly identify and package supplies and equipment is necessary to efficiently deploy and track cache items. This process is facilitated by stenciling the following information on the lid and two adjacent sides of each container:

  – Inventory number of container
  – Unit name
  – Contents
  – Color-coded stencil of the equipment category

- In order to ensure security and avoid unnecessary damage to cache items, all containers should meet the following requirements:

  – Constructed of high-impact material
  – Weatherproofed
  – Provided with handles or retractable handles

- Provided with stackable corners
- Provided with fasteners to prevent accidental opening
- Weigh not more than 150 pounds (gross weight of container and contents)
- No rolling stock (vehicles)
- Easy to decontaminate

- The packaging of equipment into containers should be done not only for ease of handling during transport, but also with operational considerations in mind.

f. **Cache Ground Movement and Deployment**

- The Logistics Officer must plan for ground transportation requirements according to the cubic space and gross weight of the entire cache. Ground transportation during mobilization and while on site will require manual handling and loose loading of cache containers. Adhering to the container weight and size limitations will ensure overall manageability of the cache and is of paramount importance.

- The Logistics Officer of the organization housing the equipment cache is responsible for the assembly, management, and movement of the cache from its home jurisdiction to the staging area (or other area as directed by the Task Force Leader) during mobilization. This requirement should be fully defined, preplanned, and exercised prior to any actual mobilization. The following issues should be addressed:

  - Process for assembling and packaging all cache tools, equipment, and supplies (should the items not be maintained as a ''stand alone'' cache)

  - Process for identifying, procuring, and packaging short shelf-life items (e.g., batteries, fuels, drugs)

  - Process for generating an inventory of all cache items

g. **Cache Supplementation**

- Equipment may sometimes need to be replenished/replaced during on-site field operations (particularly extended operations). The Logistics Specialist must ensure that this can be accomplished from an on-site command post. This may involve ordering equipment from a local supplier or obtaining equipment from local fire or Emergency Medical Services (EMS) departments.

- In a large-scale NBC event, it is likely that provisions will have to be made to restock local hospitals and medical facilities with critical antidotes and other pharmaceuticals. This may require contacting a pharmaceutical manufacturer for a special delivery or coordinating with DoD medical officials to obtain stocks from them.

- Agreements should be in place with pharmaceutical manufacturers to obtain products rapidly.

h. **Air Movement**

- Air transport may be provided by DoD assets or by civilian agency.

- No flammable liquids can be transported by air. Therefore, fuel tanks must be emptied prior to departure.

- Civilian aircraft may have to be manually loaded in lower cargo holds. Military aircraft will require palletization of all cache containers and personal equipment.

- Team Logistics Specialists should identify the weight and volume of all containers, equipment, and supplies in the cache prior to mobilization.

- Consideration must be given to supplies that must be shipped in pressurized atmospheres.

i. **Accountability/Resources Tracking**

- The MMST must rely on the availability and readiness of equipment to support on-scene operations. A comprehensive property accountability system is essential for ensuring that equipment readiness is maintained. A system for accountability must be developed before any mobilization to ensure cache readiness. Ongoing maintenance and exercise of the cache equipment must be ensured for operational readiness between mobilizations. As such, there must be an organized system of equipment inventory, maintenance, and routine operation to ensure that the cache is ready for immediate response.

- The Logistics Specialist position has primary responsibility for property accountability and resource tracking during the mobilization, mission operation, and demobilization phases. This position tracks, distributes, maintains, and accounts for all equipment for the team.

- Personnel cannot remove equipment from the cache without coordinating with Logistics personnel.

- Post-mission inventory and status check procedures are extremely important for the subsequent readiness of the cache. All items must be inventoried, cleaned, overhauled, and checked for damage prior to return to storage. This information must be transferred to the inventory database.

- The Logistics Specialist(s) will ensure that all inventories are completed annually and after each deployment. Records of deficiency will be forwarded to the MMST Program Management Team and the appropriate replacement equipment obtained as soon as possible.

- Critical equipment that will keep the MMST from operating will be replaced immediately.

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Note: Appendix A — Metropolitan Medical Strike Team Physical Examination Components; Appendix B — Metropolitan Medical Strike Team Incident Exposure Report; Appendix C — Metropolitan Medical Strike Team Pre-/Post-Entry Monitoring Form; and Appendix D — Metropolitan Medical Strike Team Task Force Media Procedures do not lend themselves to the FOG format and therefore are omitted here, but may be found in the complete MMST Operational System Description.

APPENDIX E

METROPOLITAN MEDICAL STRIKE TEAM PATIENT DECONTAMINATION PROCEDURE

I. PURPOSE

To provide a standard operating procedure for performing patient decontamination on ambulatory, non-ambulatory, and deceased patients who have been exposed to an agent posing the risk of secondary contamination.

II. EQUIPMENT NEEDED

A. Decontamination Supplies

- Backpack decon tanks/sprayers 8
- Brushes - soft bristle 4
- Brushes - firm bristle 4
- Toothbrushes 10
- Sponges/Mitts 10
- 5-gallon buckets 20
- Containment basins 2
- Backboards/Reeves stretcher 4
- Ivory soap
- Bleach

- Garden hoses 4-6
- PVC shower 2
- Trash barrels 10
- Marker cones 18
- Line tape
- Towels 500
- Tarps 8
- Cut-All scissors 8
- Saw horses 8
- Decontamination tent 1
- Decontamination trailer 1
- Water supply 1
- Space clothing packs 500
- Spare SCBA/PAPRs 2

B. Medical Supplies

- Oxygen face masks (10)
- 4 x 4's
- 4 x 9's
- ABD dressing
- Suction vac (10)
- Oxygen with regulator (10)
- BVMs (10)
- Triangle bandages
- Cervical collars
- Kling
- 3" tape
- OP Airways (#5,3)
- Antidote Kits (MARK I, cyanide)

III. SETUP

A. Standard Method

1. Procure needed equipment from storage trailer.

2. Locate large 100 x 100 size flat, secure, protected area adjacent to the hot zone and protected from the media and the public.

3. The selected area should be positioned based upon ground/floor control and wind/airflow direction.

4. The decontamination area should be level or sloped toward the entrance.

5. A minimum of two personnel should be assigned to set up the system as per the attached diagram.

6. Cones and/or rope should be used to identify perimeter outline.

7. Entry and exit points should be well marked.

8. Sufficient disposal units should be available and in place for contaminated clothing and equipment dropoff.

9. The system should be laid out to be used for performing medical decontamination, technical decontamination, or both.

10. Designated decontamination solution(s) should be mixed per attachment.

11. Spare respiratory protection should be immediately available.

12. The system may be modified to include the decontamination trailer as one side of the decontamination area **or** be self-standing as a second decontamination sector.

13. The decontamination PVC shower may be used as an alternative to a hose spray wash at one or more of the wash/rinse stations.

14. Towels and clothing packs should be placed in a clean area along with medical supplies.

15. Reasonable efforts for the circumstance should be initiated to control runoff; saving lives is the priority.

IV. PROCESS

A. Every patient believed to have been exposed to an agent with a risk of secondary contamination is to receive at minimum gross decontamination.

B. Gross Decontamination (strip and rinse)

1. *Ambulatory Patients*

a. Will usually be done by entry team personnel.

b. Direct patients by voice, PA amplification and/or hand signals to the gross decontamination area just inside the hot zone but away from the high-risk area.

c. Direct patients to remove their clothing down to their underwear.

d. As often as possible, place all personal effects in trash barrels, separating personal effects (wallets, rings, watches, ID, etc.) into clear plastic bags with the victim's name, or a unique identifying number (ex., triage tag, ticket, etc.) placed on the bags whenever possible.

e. Particulate matter should be vacuumed, brushed, or wiped off all contaminated areas.

f. Using hand-held sprayers containing tepid water and/or a dilute bleach solution perform a 1-minute rinse from head to toe.

g. Have victims close their mouths and eyes while being decontaminated.

h. Proceed to the decontamination sector.

2. *Non-Ambulatory Patients*

a. The entry team shall remove the victim from the high-risk area in the quickest way possible and carry the patient (preferably on a Stokes or Reeves stretcher or backboard) to the peripheral edge of the hot zone, bordering the warm zone.

b. Remove the patient's clothing, cutting it off if necessary, down to the underwear.

c. Place the cloths in the trash barrel.

d. Particulate matter should be vacuumed, brushed, or wiped off.

e. Using the hand-held sprayer or hose line, rinse the patient with tepid water for 1 minute, beginning with the face and airway, then open wounds, followed by head-to-toe rinsing in a systematic fashion.

f. When rinsing the face, close the mouth and pinch the nose shut.

g. Assure axilla, genitalia, and the back are rinsed.

h. Rinse the backboard unless switch to clean basin will be done before transfer to the cold zone.

i. If a C-spine injury is suspected and a C collar is available, apply the collar as soon as possible.

j. Unless secondary decontamination is to be done, pass the patient into decontamination alley to be quickly dried, covered, wrapped in an enclosing blanket, then carried to the cold zone on a backboard.

k. Properly protected cold zone personnel will take the patient and render indicated patient care per MMST protocol.

l. If a radiologic agent is involved, the decontamination team should scan the patient with detection equipment and report the results to the treatment team.

C. Secondary Decontamination (rinse/wash/rinse)

1. *Ambulatory Patients*

a. Depending on the patient's condition, the number of casualties, the environment and personnel resources, the decision may be made to perform secondary decontamination to more thoroughly clean each patient. This will be done in the warm zone decontamination area.

b. The patient will be washed from head to toe using water and Ivory soap (water, with flour or oatmeal, may be used if radiologic agent is suspected) or dilute (.5%) bleach solution.

c. Soft bristle brushes or sponges should be used to clean the patient in a systematic fashion, starting at the head.

d. Brushing should be done in a fashion to remove the product but not lead to abrading or irritation of the skin.

e. The patient should be rinsed in a systematic fashion avoiding overspray and cross-contamination.

f. Cover open wounds with dressings and/or bandages after decontamination is completed.

g. Eye irrigation should be conducted using normal saline running through either a nasal cannula or Morgan Lens (placed over an anesthetized eye). Decontamination solutions other than normal saline is not to be used to decontaminate a victim's eyes.

h. Have the patient dry off and put on a gown; then, direct them to the cold zone - treatment personnel.

i. If a radiologic agent is suspected and detection equipment is available, perform head-to-toe sweep noting the level and reporting it to the HAZMAT officer and/or the treatment team; the HAZMAT officer will determine if further decontamination is warranted before proceeding into the cold zone.

2. *Non-Ambulatory Patients*

a. Depending on the patient's condition, the number of casualties, the environment, and personnel resources, the

decision may be made to perform secondary decontamination to more thoroughly clean each patient.

b. A minimum of two decontamination personnel per patient will be needed to perform decontamination in this situation.

c. Once inside the decontamination alley, the patient, on a backboard, shall be placed atop two sawhorses over a containment basin.

d. The airway should be established and protected and oxygen administered via non-rebreather face masks or with BVM.

e. The patient will be washed from head to toe using water and Ivory soap, or a dilute (.5%) bleach solution (water and flour or oatmeal may be used if a radiologic agent is suspected).

f. Soft bristle brushes or sponges should be used for washing in a systematic fashion.

g. Brushing should be done in a fashion to remove the product but not lead to abrading or irritation of the skin.

h. The patient should be rinsed in a systematic fashion avoiding overspray and cross-contamination.

i. Open wounds should be covered with dressings and/or bandages after decontamination is completed.

j. Assure the back, axilla, and genitalia are thoroughly washed and rinsed.

k. Carefully rinse the backboard, unless a rotation onto a clean board is planned before the patient is taken into the cold zone.

l. Eye irrigation should be conducted using normal saline running through either a nasal cannula or Morgan Lens (placed over an anesthetized eye).

m. If a radiologic agent is suspected and detection equipment is available, perform a head-to-toe sweep noting the level

and report it to the HAZMAT officer and/or the treatment team.

n. Quickly dry off the patient and cover with a blanket in an encapsulatory fashion.

o. Before transferring the patient into the cold zone, remove all treatment equipment used on the patient and dispose of them in the trash barrels.

p. Transfer the patient to properly protected treatment personnel in the cold zone.

V. DECONTAMINATION TRIAGE

A. In cases involving multiple patients, priority will be placed on (1) gross decontamination of ambulatory patients, followed by (2) decontaminating conscious, non-ambulatory patients, after which (3) unconscious, non-ambulatory patients should be decontaminated. Deceased victims are the lowest priority.

B. Patients' triage priority will be written on their foreheads with a felt tip pen by the entry and/or decontamination team. An alternative will be the use of triage ribbons tied to the victim's wrist to indicate their priority. Red is priority 1; yellow is priority 2; green is priority 3; and grey is priority 4.

VI. MASS DECONTAMINATION

A. In cases involving extraordinary numbers of patients, the Task Force Leader may decide to perform any of the following:

1. Use the decontamination trailer and standard decontamination system.

2. Procure 1½ to 1¾ hose lines and use a fine spray to rinse as many people as possible en masse. Their clothing should be left where they stand for eventual collection by law enforcement personnel. Patients should be given a 1-minute rinse and directed to a designated decontamination sector or treatment area.

3. Use a deck gun with wide angle spray and rinse as many patients as possible en masse similar to number 2 above.

4. Use a combination of numbers 1, 2, or 3 above.

VII. RENDERING ADVANCED CARE

A. Patients exposed to suspected nerve gas and symptomatic shall be given Mark I antidotes immediately, preferably through deconned skin, if possible, and continue on through decon.

B. Patients requiring critical (i.e., intubation, needle decompression, etc.) will be removed from the decontamination alley for the procedure to be performed safely and so as not to interfere with the decontamination process of remaining personnel. Once completed, a decision will be made by the EMS Officer whether to return the patient for further decontamination or be wrapped in an encapsulated blanket and sent to the cold zone.

C. Critical care patients will not be taken care of at the expense of those less critically injured except in cases where an MMST member is involved.

D. Decisions concerning the degree of advanced care to be rendered will be made by the EMS Officer in conjunction with the Medical Operation Physician.

VIII. DECONTAMINATION OF THE DECEASED

A. The Task Force Leader, in conjunction with local and State officials, will determine how to handle the deceased.

B. No deceased victim will be removed from the incident scene without first being given both gross and secondary decontamination.

C. A decision will be made by the HAZMAT Officer, in conjunction with the Field Operations Officer, whether to do gross decontamination where the body is found before moving the deceased to decontamination alley.

D. Decontamination of the deceased will occur once decontamination of the living is completed.

E. Victims who are receiving treatment and become deceased (Under Treatment Death) should be placed in a body bag and removed as soon as possible to the grey tag area staffed by the local responders. The Field Medical Operations officer is to be notified when an Under Treatment Death occurs.

APPENDIX F

METROPOLITAN MEDICAL STRIKE TEAM TECHNICAL DECONTAMINATION PROCEDURE

I. PURPOSE

To provide a standard operating procedure for performing decontamination (technical) on personnel wearing personal protective equipment (PPE) who have been exposed to an agent that poses the risk of secondary contamination.

II. EQUIPMENT NEEDED

A. Decontamination Supplies

• Backpack decon tanks/sprayers	8
• Brushes - soft bristle	4
• Brushes - firm bristle	4
• Toothbrushes	10
• Sponges/mitts	10
• 5-gallon buckets	20
• Containment basins	2
• Backboards/Reeves stretcher	4
• Ivory soap	
• Bleach	
• Garden hoses	4-6
• PVC shower	2
• Trash barrels	10
• Marker cones	18
• Line tape	
• Towels	500
• Tarps	8
• Cut-All scissors	8
• Sawhorses	8
• Decontamination tent	1
• Decontamination trailer	1

- Water supply 1
- Space clothing packs 500
- Spare SCBA/PAPRs 2

B. Medical Supplies

- Oxygen face masks
- 4 x 4's
- 4 x 9's
- ABD dressing
- Suction vac
- Oxygen with regulator
- BVM
- Triangle bandages
- Cervical collars
- Kling
- 3" tape
- OP Airways

III. SETUP

A. Standard Method

1. Procure needed equipment from storage trailer.

2. Locate large 100 x 100 size flat, secure, protected area adjacent to the hot zone and protected from the media and the public.

3. The selected area should be positioned based upon ground/floor control and wind/airflow direction.

4. The decontamination area should be level or sloped toward entrance.

5. A minimum of two personnel should be assigned to set up the system as per the attached diagram.

6. Cones and/or rope should be used to identify perimeter outline.

7. Entry and exit points should be well marked.

8. Sufficient disposal units should be available and in place for contaminated clothing and equipment dropoff.

9. The system should be laid out to be used for performing medical decontamination, technical decontamination, or both.

10. Designated decontamination solution(s) should be mixed per attachment.

11. Spare respiratory protection should be immediately available.

12. The system may be modified to include the decontamination trailer as one side of the decontamination area **or** be self-standing as a second decontamination sector.

13. The decontamination PVC shower may be used as an alternative to a hose spray wash at one or more of the wash/rinse stations.

14. Towels and clothing packs should be placed in a clean area along with medical supplies.

15. Reasonable efforts for the circumstance should be initiated to control runoff; saving lives is the priority.

IV. PROCESS

A. Personnel shall enter the decontamination area from the hot zone side.

B. Tools should be dropped on dirty side in the designated area.

C. A decontamination team member should confirm that personnel to be decontaminated are O.K. and have adequate air supply. If a problem exists, emergency decontamination is to be initiated.

D. Remove contaminant(s) as follows:

1. Step into containment basin.

2. Protective clothing should be examined for cuts and breaches.

3. Initiate rinse/scrub/rinse of the PPE, beginning at the head and systematically moving down towards the feet.

4. Avoid overspray and splashing.

5. Assure boots, gloves, kneecaps, and axilla are cleaned.

6. Use a “walker” for stabilization, if needed.

7. Repeat rinse/wash/rinse until item is believed to be cleaned.

8. Use the Decontamination Check if available.

9. Move out of the spray/wash area.

E. Remove/replace respiratory protection.

1. Open suit carefully first if vapor tight suit (Level A) is used.

2. When the suit is unzipped, peel it back so that dirty side is faced inward and, then, fold down.

3. Changeover SCBA/or remove, placing the used item on dirty side. Changeover of SCBA will require a decontamination team member's assistance.

4. Changeover of a complete SCBA will be preferable to replacing just the bottle.

5. The facepiece shall be left in place.

F. **Remove protective clothing.**

1. If possible, have the individual sit down in a chair. Removal should be done primarily by a decontamination team member.

2. Remove duct tape or bands if used.

3. Remove outer glove; turn inside out.

4. Fold down the suit to boot level.

5. Remove boots; place them in the designated boot trash can.

6. Complete the suit removal; place in designated trash can.

7. Remove the face mask and place it in the designated trash can.

8. Remove cold/heat vest, if used.

G. Remove outer personal clothing, if contamination is suspected.

H. Proceed to the decontamination shower, if required.

I. Dry off and redress into clean clothing.

J. Report to the Rehabilitation Sector for rest, rehydration, and medical monitoring.

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APPENDIX G

METROPOLITAN MEDICAL STRIKE TEAM EMERGENCY DECONTAMINATION PROCEDURE

I. PURPOSE

To provide a standard operating procedure for performing emergency decontamination on an MMST member wearing personal protective equipment (PPE) who encounters an illness, injury, or suit breach while working in the hot or warm zone.

II. EQUIPMENT NEEDED

- Backpack decontamination sprayer or
- Hose line with water supply
- Scissors
- Backboard or Reeves stretcher
- Improvised containment basis (if possible)
- Seatbelt cutter

III. PROCEDURE

A. Announce "Strike Team Member Down" (indicate location) on radio and/or PA system. If personnel are in the hot zone, the backup team shall be activated and deployed, if needed, and bring the "downed" MMST member to the Decontamination Sector.

B. Decontamination/HAZMAT officer directs operations.

C. Two decontamination team members will assume responsibility for the decontamination in the warm zone.

D. Attempt to ascertain the nature of the problem (e.g., suit breach, heat illness, etc.)

E. Lay the patient down, if necessary (on a backboard or Reeves stretcher, if available).

F. Perform a quick head-to-toe rinse/wash/rinse of the PPE.

G. Rapidly remove suit, cutting it, if necessary, and in a manner that minimizes contamination spread.

H. Assure patient airway is open.

I. Initiate cool-down of patient with water, if indicated.

J. Apprise treatment personnel of situation and findings.

K. Initiate appropriate preliminary medical care (e.g., O_2, BVM support, etc.) and antidote administration (ex., Mark I) as soon as possible.

L. Transport patient to Treatment Sector.

M. Pass patient over to treatment personnel without stepping into cold zone.

APPENDIX H

METROPOLITAN MEDICAL STRIKE TEAM TECHNICAL DECONTAMINATION SOLUTIONS

(U.S. Environmental Protection Agency)

I. FOR UNKNOWN PRODUCTS

A. Solution A: Five percent (5%) sodium carbonate and five percent (5%) trisodium phosphate. Mix four (4) pounds of commercial-grade trisodium phosphate with each ten (10) gallons of water.

B. Solution B: Solution containing ten percent (10%) calcium hypochlorite. Mix eight (8) pounds with ten (10) gallons of water.

C. Rinse Solution: To be used for both solutions. Five percent (5%) solution of trisodium phosphate with each ten (10) gallons of water.

II. FOR KNOWN PRODUCTS WITHIN THE 10 HAZARD CLASSES

A. Solution A: A solution containing five percent (5%) sodium carbonate and five percent (5%) trisodium phosphate.

B. Solution B: A solution containing ten percent (10%) calcium hypochlorite.

C. Solution C: A solution containing five percent (5%) trisodium phosphate, which can be used as a general-purpose rinse.

D. Solution D: A dilute solution of hydrochloric acid (HCl). Mix one (1) pint of concentrated HCl into ten (10) gallons of water (acid to water only). Stir with wood or plastic stirrer.

III. GUIDELINE FOR SELECTING DEGRADATION CHEMICALS FOR SPECIFIC TYPES OF HAZARDS

A.	Inorganic acids, metal processing wastes	Solution A
B.	Heavy metals: mercury, lead, cadmium, etc.	Solution B
C.	Pesticides, chlorinated phenols, dioxins, PCP's	Solution B
D.	Cyanides, ammonia, and other non-acidic inorganic wastes	Solution B
E.	Solvents and organic compounds such as trichloroethylene, chloroform, and toluene	Solution C (or A)
F.	PBBs and PCBs	Solution C (or A)
G.	Oily, greasy, unspecified wastes not suspected to be contaminated with pesticides	Solution C
H.	Inorganic bases, alkali, and caustic wastes	Solution D

APPENDIX I

METROPOLITAN MEDICAL STRIKE TEAM MEDICAL TREATMENT PROTOCOLS

(For Clinical Settings)

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FACT SHEET

Chlorine

Military Designation: None

Description: Chlorine is found as an amber liquid or greenish-yellow gas with a very characteristic irritating, pungent odor. Chlorine is severely irritating to the skin, eyes, and respiratory tract. Although generally stored as a liquid, when released, the resulting gas is about two times heavier than air.

Non-Military Uses: Chlorine is used widely in industrial settings in the organic synthesis and manufacture of antifreeze agents, solvents, refrigerants, resins, bleaching agents, and other *inorganic chemicals. There is an* exceptionally wide use of chlorine in non-commercial and home settings as a cleaning agent, bleaching agent, bacteriostatic, and disinfecting agent. Storage of this substance in a variety of liquid and granular forms is widespread.

Military Use: Chlorine was first used by the German military on 22 April 1915 in a cylinder-released gas attack that resulted in an estimated 15,000 Allied wounded and 5,000 Allied deaths. Because of its tendency to dissipate rapidly, very large concentrations were required. Chlorine was weaponized in projectiles, mortars, and bombs. There is no current chlorine weaponry.

Health Effects: Chlorine exposure causes an immediate severe irritation to the eyes and mucous membranes. The upper airways are first involved with nose, throat, and sinus irritation. The lower airways are irritated with severe cough and chest pain. There may be nausea, vomiting, and fainting. Very high doses may cause excess fluid to develop in the lungs (pulmonary edema). Wheezing respiration is likely to occur in individuals with previous asthma. Bronchitis often occurs, sometimes progressing to pneumonia. Chronic exposures may

increase the susceptibility to respiratory infections. High concentrations also irritate the skin, causing burning, itching, and occasional blister formation. There is no animal or human epidemiologic data suggesting that chronic chlorine exposure may cause cancer or the occurrence of adverse developmental effects in the unborn fetus.

Environmental Fate: Chlorine is not persistent in surface water, ground water, or soil. Oxidation of environmental organic materials occurs rapidly, reducing its concentration rapidly. Dispersal of chlorine gas is rapid to the atmosphere.

TREATMENT PROTOCOL

Chlorine

I. GENERAL

Chlorine is found as a greenish-yellow gas. There is a pungent, acrid, characteristic odor. Sensitivity to the odor is below toxic levels; however, since some sensory adaptation occurs, repeat exposures are more likely to produce toxic effects. Exposures irritate eyes and central (upper) airways within minutes. Low doses produce some cough and choking sensation. Moderate doses also produce a sense of suffocation, hoarseness, and substernal pain. High doses also produce a severe dyspnea, with pulmonary edema, nausea, vomiting, headache, syncope also seen. Very high doses may produce sudden death without an obvious pulmonary lesion, possibly via laryngospasm. All recognized exposures should be referred for direct observation/care.

II. PATIENT EVALUATION

A. Victims should be immediately removed from the toxic environment by fully masked personnel. Chemical protective clothing is required for liquid/solution exposures.

B. Liquid contamination causes eye and skin burns on contact. Contaminated clothing should be removed/disposed of.

III. TREATMENT *(For Clinical Settings)*

A. Eyes: Liquid exposures should be flushed with copious quantities of water; medical attention should be sought. Gas exposures, if symptomatic, should be flushed with water. Medical attention should be sought if symptomatic.

B. Skin: Liquid exposures should be flushed with copious quantities of water; contaminated clothing should be removed/disposed of. Gas exposures require no specific therapy unless symptomatic. Intense gas exposure produces burns; wash with water.

C. Breathing: Evaluate respiration, cyanosis, bronchospasm.

1. If apneic: CPR with intubation. Be aware that laryngospasm may be present with intense exposures, hence intubation may be very difficult, and tracheostomy could be required. Medical attention should be sought.
2. If stridorous/hoarse: Consider intubation under direct vision since laryngospasm may be imminent (see above). Medical attention should be sought.

3. If dyspnea/cough/chest tightness: Consider intubation for impending pulmonary edema. Also consider possible bronchospasm sufficiently severe to have so little air exchange that wheezes are absent. Medical attention should be sought. Codeine-containing demulcents may help. Be wary of sedation.

> **Note:** The anatomical configuration of infants' and children's airways makes wheezing a less reliable indicator of bronchospasm. Severe smaller airway constriction with resultant hypoxia may be present. Any apparent infant or child distress should be immediately assessed with oximetry.

4. If bronchospasm: Provide aggressive bronchodilation:

Adult:
Inhaled albuterol: unit dose q 2 hr.
Steroids: methylprednisolone, load 120 mg, then 60 mg q 6 hr.
Theophylline: load 150 mg, then 30 mg/hr.

Infants and children (0-12 yr):
Inhaled albuterol: 0.15 mg/kg per nebulized dose
up to 5 mg/20 minutes for first 2 hr.
Steroids: methylprednisolone: 1 mg/kg q 6 hr.
Theophylline: 10 mg/kg/24 hr.

Elderly:
Inhaled albuterol: unit dose q 3 hr.
Steroids: methylprednisolone, load 125 mg, then 60 mg q 6 hr.
Theophylline (occasional use): load 100 mg, then 25 mg/hr.

If asymptomatic: Maintain direct observation for at least 1 hour; if becomes symptomatic, treat as above. If still asymptomatic, lesser observation for additional 12 hours since some bronchospasm may appear late.

If hypoxic from bronchospasm bronchodilators and supplemental oxygen from pulmonary edema: oxygen may be utilized with positive pressure (e.g., PEEP 5-7 cm or intubation).

5. If pulmonary edema (occurs with very severe exposures): Treat as noncardiac pulmonary edema (Adult Respiratory Distress Syndrome or ARDS) with PEEP 5-7 cm and/or intubation. Diuretic therapy risks severe hypotension if intubation is required.

6. If infection: Inhalation exposures may produce pulmonary infiltrates, fever, and white blood cell elevations leading to an erroneous diagnosis of (presumed bacterial) pneumonia. Prophylactic antibiotics are not indicated. Surveillance bacteriologic cultures are obtained anticipating an approximate 50% risk of nosocomial pneumonia at days 3-6.

7. If pain: Airway discomfort may benefit from codeine. Be wary of sedation.

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FACT SHEET

Hydrocyanic Acid, Hydrogen Cyanide and Cyanogen Chloride

Military Designations: AC (hydrocyanic acid) and CK (cyanogen chloride)

Description: Both of these substances are liquids, but they vaporize (evaporate) at about 73°F and 58°C, so they will be in the gaseous form under most temperate conditions. AC has an odor of bitter almonds; CK is pungent. AC vapor is lighter than air, whereas CK gas is heavier than air. Cyanogen chloride is quickly metabolized to cyanide once absorbed into the body, and causes the same biological effects as hydrogen cyanide. In addition, CK is irritating to the eyes, nose, and throat (similar to riot control agents), whereas AC is nonirritating.

Non-Military Uses: Large amounts of cyanide (most in the form of salts) are produced, transported, and used by U.S. industry annually. Cyanide is used in fumigation, photography, extraction of metals, electroplating, metal cleaning, tempering of metals, and the synthesis of many compounds. It is released when synthetic fibers and plastics burn.

Military Uses: The French and the English used small amounts of cyanide during World War I, but the compound was not effective as a weapon because the amount needed is large (and small munitions were used) and because cyanide, being lighter than air, drifted away from the target. Japan allegedly used cyanide against China before World War II, and Iraq allegedly used cyanide against the Kurds in 1988. The U.S. once had cyanide munitions, but the known are believed to have been destroyed. However, some of these munitions may have been abandoned at sites around the U.S. Small amounts of cyanogen chloride were incorporated in chemical agent identification sets, which were also abandoned.

Health Effects: Cyanide blocks the use of oxygen in cells of the body and thus causes asphyxiation in each cell. The cells of the brain and the heart are most susceptible to oxygen lack. High concentrations of vapor may cause a brief increase in rate and depth of breathing (in 15 seconds), seizures (30 seconds), and cessation of breathing (3-5 minutes) and of cardiac activity (4-10 minutes), and death. A smaller concentration will cause headache, flushing, lightheadedness, and other nonspecific effects. (In addition, CK produces irritation of the eyes, the nose, and the airways.) Antidotes (nitrites and thiosulfate) are very effective if administered in time. A large exposure may result in prolonged neurologic damage, probably because of hypoxia. Chronic ingestion of cyanide-containing foods (e.g., cassava, which is a staple in many parts of Africa) has been associated with thyroid and nerve disturbances. Evidence does not suggest that cyanides are carcinogenic.

Environmental Fate: Because of their volatility, these substances are not expected to persist in surface water or soil.

TREATMENT PROTOCOL

Hydrocyanic Acid, Hydrogen Cyanide and Cyanogen Chloride

I. GENERAL

A. Patient should be removed from the toxic environment immediately.

B. These substances are very volatile, so there is little need for decontamination if exposure was to vapor alone. If liquid was present, remove patient's clothing; wash liquid off skin.

C. The effects of vapor from either form of cyanide appear within seconds to a minute. If patient has no or only mild effects when seen 5 to 30 minutes after exposure, he/she will need no treatment.

D. Severe cyanide poisoning produces metabolic acidosis. If cyanide poisoning is suspected in a patient who does not have moderate or severe acidosis, treatment for cyanide poisoning should not be delayed, but the diagnosis should be reconsidered

II. PATIENT EVALUATION (Level of consciousness, respiratory rate, heart rate)

A. Exposure to a high concentration: transient hyperpnea, followed by convulsions (30 seconds after exposure), gradual decrease in respiratory rate and depth to apnea (3-5 minutes), and cessation of cardiac activity (5-8 minutes).

B. Exposure to lower concentration: flushing, headache, anxiety, agitation, vertigo, feeling of weakness, nausea, muscular trembling (cyanogen chloride may cause irritation

of eyes, nose, and airways). Prolonged exposure may lead to effects listed above.

C. Odor of bitter almonds may be detected (half of the population cannot smell this); normal pupils (may be dilated in terminal stage); ‘‘cherry-red’’ skin (may not be present); diaphoresis; venules in fundus are same color as arterioles; cyanosis occurs only after circulatory collapse and apnea.

III. TREATMENT *(For Clinical Settings)*

A. For a mild exposure (conscious and breathing): observe; no antidotes; oxygen may be given to young or old or in presence of heart disease in a patient with mild symptoms.

B. Severe exposure (unconscious, not breathing): should immediately receive 100% oxygen. Cardiac monitoring and evaluation of oxygen saturation should be done when possible. (Saturation will be normal even in severe casualty until terminal stage; however, additional oxygen may assist in therapy.) Antidotes should be administered as soon as possible (see below). It is important to note that pulse oximeter results are completely unreliable in the setting of methemoglobinemia, which is induced by amyl nitrite or sodium nitrite therapy.

1. For a severe exposure: ventilate using bag-valve-mask with one ampule of amyl nitrite (crushed) in bag; after several minutes, add another (crushed) ampule; keep adding an ampule every several minutes. This is a temporary measure until IV drugs can be given, but it may assist in recovery.

2. Administer 300 mg (10 ml) of sodium nitrite IV over 5 minutes. Flush line. [Children's dose: 0.2-0.3 ml/kg, or 6-9 mg/kg of the 3% solution. No separate recommendation for infants. For elderly, use adult dose unless they are small and frail.] Be aware: Nitrites produce orthostatic hypertension, but a patient who can stand does not need them.

3. Follow with 12.5 grams (50 ml) of sodium thiosulfate IV. [Children's dose: 0.4 mg/kg, or 1.65 ml/kg of the 25% solution. No separate recommendation for infants. Adult dose should be used for elderly unless they are small and frail. Use care giving nitrite in a patient with hypertension or heart disease.] (Amyl nitrite, sodium nitrite, and sodium

thiosulfate are in the Pasadena (formerly Lilly) Cyanide Antidote Kit, the latter two in ampules of 300 mg/10 ml and 12.5 grams/50 ml). Use one-half dose in 20 minutes if no improvement. See instructions on top of Antidote Kit box.

C. If patient continues to remain apneic, intubate and continue oxygen through tube with assisted ventilation.

D. Transfer apneic or unconscious patients to medical facility.

E. Patients often recover rapidly unless CNS hypoxia has occurred.

IV. LABORATORY ISSUES

A. Metabolic acidosis is common; should be treated with bicarbonate.

B. Monitor arterial pO_2; should be normal until near-terminal stage.

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FACT SHEET

Methyl Isocyanate, Methylene Bisphenyl Isocyanate, and Methylene Dilsocyanate
MDI

Military Designations or Military Unique Use: None

Description: Methylene Bisphenyl Isocyanate (MDI) is found as a solid in white to yellow flakes. Various liquid solutions are used for industrial purposes. There is no odor to the solid or the liquid solutions. The vapor is approximately eight times heavier than air. This chemical is a strong irritant to the eyes, mucus membranes, skin, and respiratory tract. This chemical is also a very potent respiratory sensitizer.

Non-Military Uses: Very large quantities of MDI are produced, transported, and used annually in the United States. Various industrial processes utilize MDI in production and usage of (poly)urethane foams, lacquers, and sealants. MDI is a commonly used precursor in the industrial production of insecticides and laminating materials. Noncommercial uses of polyurethanes such as in isocyanate paints or in cutting of uncured urethanes may also cause exposure. Thermal degradation of these substances may produce MDI as a combustion by-product.

Health Effects: MDI as either a solid or liquid solution is a strong irritant to the eyes and the skin, resulting in discomfort and burning sensation. Severe inflammation may occur. Irritation of the respiratory tract results in cough, shortness of breath, and chest pain. Very high concentrations may irritate the respiratory tract sufficiently to cause excess fluid accumulation within the lung, resulting in very severe respiratory distress and pulmonary edema. MDI vapor is a strong sensitizer of the respiratory tract. In some individuals, particularly those with prior history of asthma, repetitive exposures, even to very low doses, may trigger an asthmatic episode. Such sensitized

individuals may also experience asthma with subsequent skin or eye exposures. This sensitization may persist indefinitely. Repeated or long-term exposure may result in permanent respiratory problems. Repeated or long- term exposure of the skin may cause a skin rash. There are no animal or human epidemiologic data that suggest that chronic MDI exposure may cause cancer or the occurrence of adverse developmental effects in the unborn fetus.

Environmental Fate: Since the reported vapor pressure of Methyl Isocyanate (MIC) is 348 mm Hg at 20°C, MIC is expected to remain almost entirely in vapor phase when released into the atmosphere. MIC is susceptible to hydrolysis and photooxidation in the atmosphere with a half-life of 11 days at an atmospheric concentration of 5.OE+5 hydroxyl radicals/M^3. In the aquatic media, MIC is rapidly hydrolyzed with half-lives of 20 and 9 minutes at 14° and 25°C, respectively. The products of hydrolysis-N-carboxymethylamine, methylamine, carbon dioxide, and N,N'-dimethylurea are nontoxic. Due to its rapid hydrolysis in aqueous media, MIC is not expected to bioconcentrate or bioaccumulate in the environment. MIC released to soil is hydrolyzed and the degradative process is rapid in the presence of moisture. Hydrolysis minimizes adsorption and volatilization of MIC from the soil, although these conditions are favorable for its mobility. Depending upon the concentration of MIC in soil and prevailing moisture conditions, volatilization from the surface soil may be a significant environmental transport and fate process.

TREATMENT PROTOCOL

Methyl Isocyanate, Methylene Bisphenyl Isocyanate, and Methylene Dilsocyanate - MDI

I. GENERAL

MDI is found as a solid, which has a melting point of 37°C. Vapor exposures occur with liquids containing dissolved solid. Gas exposures may occur with high-temperature volatilization. Thermal decomposition produces carbon monoxide and oxides of nitrogen. Sensitivity to this substance (eye, nose irritation) occurs at concentrations five times higher than OSHA limits (0.2 mglm^3); hence toxic exposures may go unrecognized.

Exposures lead to:

- Irritant effects: Eyes, mucous membranes and skin may be irritated, particularly with prolonged, repetitive, or intense exposures. High concentrations may also produce cough, dyspnea, and lethal pulmonary edema.

- Sensitizing effects: Respiratory sensitization may occur, particularly in individuals with known asthma, allergies, or recognized isocyanate sensitivity (e.g., TDI).

II. PATIENT EVALUATION

Victim should be immediately removed from the toxic environment by personnel in chemically protective clothing. Vapor or gas hazards should be anticipated with full (positive pressure) masks. Liquid/solid contamination should be corrected by clothing removal and soap and water decontamination.

III. TREATMENT *(For Clinical Settings)*

A. Eyes: There is no specific therapy appropriate. Liquid/solid exposures should be irrigated with copious quantities of

water. Subsequently, symptomatic individuals should seek medical attention.

B. Skin: There is no specific therapy appropriate. Liquids/solids should be removed with soap and water. Single exposures are unlikely to create rashes unless previously sensitized. Intense exposure may produce a dermatitis and require referral.

C. Swallowing: Liquids/solids should be removed by induced vomiting in the conscious victim or by lavage otherwise.

D. Breathing: Symptoms due to sensitivity may be delayed up to 8 hr after exposure. Respiratory symptoms may appear with skin, ocular or GI exposure in previously sensitized individual.

1. If apneic: CPR, may require intubation for pulmonary edema. Consider severe bronchospasm in previously sensitized victim.

2. If stridorous/hoarse: Consider intubation under direct vision.

3. If dyspnea/cough/chest tightness: Consider intubation for impending pulmonary edema. Also consider possible bronchospasm sufficiently severe to have so little air exchange that wheezes are absent. Medical attention should be sought. Codeine-containing demulcents may help. Be wary of sedation.

   Note: the anatomical configuration of infants' and children's airways makes wheezing a less reliable indicator of bronchospasm. Severe smaller airway constriction with resultant hypoxia may be present. Any apparent infant or child distress should be immediately assessed with oximetry.

4. If bronchospasm: Treat as asthma with inhaled albuterol. Bronchospasm may be particularly severe, especially in previously sensitized individuals.

   Treat aggressively:
   Adults:
   Inhaled albuterol: unit dose q 2 hr or continuous neb 15 g/hr.
   Steroids: methylprednisolone load 250 mg, then 80 mg q 6 hr.
   Theophylline: load 150 mg, then 30 mg/hr.

Infants and children (0-12 yr.):
Inhaled albuterol: 0.15 mg/kg per nebulized dose
up to 5 mg/20 minutes for first 2 hr.
Steroids: methylprednisolone; 1 mg/kg q 6 hr.
Theophylline: 10 mg/kgl24 hr.

Elderly:
Inhaled albuterol: unit dose q 3 hr.
Steroids: methylprednisolone load 125 mg, then 60 mg q 6 hr.
Theophylline (occasional use): load 100 mg then 25 mg/hr.

5. Upper airway obstruction: This is very rarely seen and only with intense exposures. Hoarseness and stridor suggest impending laryngospasm; consider intubation under direct vision.

a. If pulmonary edema (may rarely occur with intense exposures): Treat as non-cardiac pulmonary edema (Adult Respiratory Distress Syndrome or ARDS see PHOSGENE).

b. If hypoxia (commonly from bronchospasm, rarely from pulmonary edema): Treat with above bronchodilation and oxygen.

c. If cough: Codeine-containing demulcents (tissue-soothing agents) may help. Be wary of sedation.

[Note: cough typically indicates inadequately treated bronchospasm.]

d. If pain: Airway discomfort from irritant effect may benefit from codeine. Be wary of sedation.

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FACT SHEET

Mustard (Sulfur Mustard)

Military Designations: H; HD; HS

Description: Mustard is a "blister agent" that causes cell damage and destruction. It is a colorless to light yellow to dark brown oily liquid with the odor of garlic, onion, or mustard. It does not evaporate readily, but may pose a vapor hazard in warm weather. It is a vapor and liquid hazard to skin and eyes, and a vapor hazard to airways. Its vapor is five times heavier than air.

Non-Military Uses: Sulfur mustard has been used as a research tool to study DNA damage and repair. A related compound, nitrogen mustard, was the first cancer chemotherapeutic agent and is still used for some purposes.

Military Use: Mustard was used extensively in World War I and was the largest chemical casualty producer in that war. Mustard was used by Iraq against Iran in the 1980s. The United States. has a variety of munitions filled with sulfur mustard, including projectiles, mortars, and bombs. It is also in chemical agent identification sets (which may be on abandoned sites) and in ton containers.

Health Effects: Mustard damages DNA in cells, which leads to cellular damage and death. Mustard penetrates skin and mucous membranes very quickly, and cellular damage begins within minutes. Despite this cellular damage, clinical effects do not begin until hours later; the range is 2 to 24 hours, but usually 4 to 8 hours. The initial effects are in the eyes (itching or burning), the skin (erythema with itching and burning), and airways (epistaxis, hoarseness, sinus pain, cough). After high doses, these may progress to more severe effects in the eyes (corneal damage), skin (blisters), and damage to the lower airways (dyspnea and productive cough). After absorption of a

large amount, there may be damage to the gastrointestinal tract (vomiting, diarrhea) and bone marrow (damage to stem cells with cessation of production of white cells, red cells, and platelets). There is no antidote. Epidemiological studies indicate that frequent exposure to mustard over years may cause an increased incidence of cancer of the upper airways. An acute exposure may cause persistent damage to airways (e.g., stenosis) and eyes (keratitis). Animal studies suggest that mustard may have developmental effects.

Environmental Fate: Persistence of mustard in soil will depend on the soil type, the amount of mustard, the depth of contamination, and weather conditions. Mustard contamination of surface soil may persist for weeks, and deeper soil may remain contaminated for years. Mustard is relatively insoluble in water; once dissolved, however, it breaks down into less toxic products. Because of its relatively rapid hydrolysis once in solution, mustard is not thought to be transported through the soil by ground water.

TREATMENT PROTOCOL

Mustard (Sulfur Mustard)

I. GENERAL

A. Mustard causes no immediate effects. The initial clinical effects of mustard (which usually involve the eyes, the skin, and the airways) appear 2 to 24 hours (usually 4 to 8 hours) after exposure to liquid mustard or to mustard vapor. However, liquid or vapor mustard penetrates the skin and mucous membranes and damages cells within minutes of exposure, so decontamination must be done immediately after exposure.

B. The patient should be immediately removed from the toxic environment.

C. If liquid contact, clothing should be removed and skin decontaminated with 0.5% hypochiorite (1 part household bleach mixed with 9 parts water), soap and cool water, or thoroughly flushed with water alone. Eyes should be flushed with large amounts of saline. If exposure is to vapor alone, remove clothing.

D. If there is a history of definite exposure, patient should be taken to medical facility for observation.

II. PATIENT EVALUATION: INITIAL EFFECTS (usually 2 to 24 hours after exposure)

A. Eyes: irritation, feeling of grit in eye, redness.

B. Skin: erythema (will progress to blisters 1 to 4 hours later if exposure was large).

C. Airways: irritation of nose, voice change, sinus pain, hacking cough. (Very rarely a patient might inhale an

extremely large amount and start to have these effects plus dyspnea within 2 hours. This patient should be intubated, and assisted ventilation with oxygen should be started. This patient should be taken to the nearest pulmonary intensive care unit as quickly as possible.)

III. TREATMENT *(For Clinical Settings)*

A. There is nothing to do for these patients until effects appear except to decontaminate. Tissue is damaged within minutes, so decontamination must be done immediately.

B. Eyes: Any commercial eye solution may relieve the irritation from a mild exposure. More severe effects: A mydriatic b.i.d. or q.i.d. (depending on the length of action of the drug): a topical antibiotic b.i.d.; vaseline on lid edges b.i.d.; sunglasses if photophobia is present. Topical steroids within the first 24 hours only may reduce inflammation. Control pain with systemic, not topical, analgesics. Visual loss is usually due to lid edema and blepharospasm, not eye damage.

C. Skin: A soothing lotion (e.g., calamine) for erythema. Leave small blisters intact. Unroof large blisters and irrigate denuded area at least t.i.d. followed by liberal application of topical antibiotic. Watch for infection. Fluid requirements are much less than those for thermal burns; do not overhydrate.

D. Airways: Steam inhalation and cough suppressants will generally relieve mild symptoms. A chemical pneumonitis (increased temperature, white blood count; chest x-ray findings) may develop after large exposure: intubation, assisted ventilation with oxygen (and possibly with PEEP or CPAP); bronchodilators; watch sputum at least daily for organisms (no antibiotics until organism is identified).

E. Systemic absorption of a large amount of mustard may cause bone marrow and gastrointestinal tract damage. Watch WBC, Hct daily; mustard damages bone marrow.

FACT SHEET

Nerve Agents

Military Designations: GA, GB, GD, GF, and VX
Common Names: Tabun (GA); Sarin (GB); Soman (GD). None for GF and VX.

Description: Nerve agents are very toxic organophosphorus compounds that have biological activity similar to that of many insecticides. Their volatilities range from that of water to that of motor oil; they present a hazard from vapor and liquid. Under temperate conditions, the liquids are clear, colorless, and mostly odorless. They cause biological effects by inhibiting acetylcholinesterase, thereby allowing acetylcholine to accumulate and cause hyperactivity in muscles, glands, and nerves.

Non-Military Use: There is no non-military use. Threat of human exposure exists in research laboratories, in storage facilities, and from terrorists.

Military Use: Nerve agents were first synthesized pre-World War II, but were not used in that war. They were used by Iraq in its war with Iran. The United States has a large stockpile of GA and VX in weapons; these are being destroyed.

Health Effects: Nerve agents are the most toxic chemical agents. Initial effects from small amounts of agent differ depending on route of exposure. After a small vapor exposure, there is the immediate onset of effects in the eyes (small or pinpoint pupil (miosis), redness, eye pain, dim vision), the nose (rhinorrhea), and airways (some degree of shortness of breath because of bronchoconstriction and secretions). After a small liquid exposure, there may be an asymptomatic interval of up to 18 hours before the onset of sweating and fasciculations at the site of the droplet, which may be followed by nausea, vomiting, and diarrhea. After exposure to a large amount of nerve agent

by either route, there is sudden loss of consciousness, convulsions, copious secretions, apnea, and death. There is usually an asymptomatic interval of minutes after liquid exposure before these occur; effects from vapor occur almost immediately. Antidotes (atropine and pralidoxime) are effective if administered before circulation fails. There is no evidence that nerve agents cause cancer or developmental effects.

Environmental Fate: GB will react with water to produce toxic vapors. Open-pit burning or burying is prohibited. GB mixes with water and would be mobile in surface and ground water should a release occur; however, because of its rapid hydrolysis, it is not a long-term water contaminant of concern. Most GB spilled will be lost by evaporation; because of this there is no long-term impact on health and environment. VX is moderately persistent in soil, and because it has low water solubility, it could be mobile in surface and ground water systems.

TREATMENT PROTOCOL

Nerve Agents (GA, GB, GD, GF, VX)

I. GENERAL

Nerve agents are extremely toxic chemicals that cause effects by inhibiting the enzyme acetylcholinesterase, allowing excess acetylcholine to accumulate. This excess neurotransmitter then produces overstimulation and causes hyperactivity in muscles, glands and nerves The nerve agents are GA (Tabun), GB (Sarin), GD (Soman), GF, and VX. Their effects are identical.

Remove patient from contaminated atmosphere. If exposure was to vapor, remove clothing; if exposure was to liquid; remove clothing and wash skin with 0.5% hypochlorite (1 part household bleach and 9 parts water), soap and water, or thoroughly flush with water alone.

II. PATIENT EVALUATION

If patient is conscious, note ventilatory status and ask about nausea. If unconscious, note ventilatory status and heart rate (heart rate may be high, low, or normal in a nerve agent casualty).

Initial effects differ depending on whether exposure was to vapor or to liquid.

A. Vapor: Effects start within seconds to a minute or two.

1. Mild to moderate: Miosis (possible redness in eye, eye pain, complaints of dim or blurred vision, nausea), rhinorrhea, excess secretions, dyspnea (mild to severe).

2. Severe: Loss of consciousness, seizures, apnea, flaccid paralysis.

B. Liquid: Effects start in minutes (large exposure) to 18 hours (small exposure) after an asymptomatic interval.

1. Mild to moderate: Sweating and fasciculations at site of exposure; nausea, vomiting, diarrhea; weakness.

2. Severe: Same as for vapor, but after a 1- to 30-minute asymptomatic interval.

III. TREATMENT *(For Clinical Settings)*

A. Initial Management

1. Mild to moderate: Dyspnea should be treated with one or two doses of atropine IM or IV and 1 dose of pralidoxime (IV drip) initially, depending on severity of the dyspnea. (See **paragraph B** below for size of dose.) This should be supplemented with oxygen, particularly in infants, young children, and the elderly; healthy older children and adults will usually do well without it unless they have pulmonary or cardiac disease. Atropine dose should be repeated at 7- to 10-minute intervals until improvement is noted. Failure to respond, (i.e., no dry mouth, no decrease in secretions) confirms the need to administer additional doses of atropine. Gastrointestinal effects after liquid exposure are treated in the same manner. Do not treat for miosis (unless eye pain is severe) or rhinorrhea (unless severe).

2. Severe: Administer three doses of atropine IM (not IV in hypoxic patient) and start one dose of pralidoxime by slow (20 minutes) IV drip. (More rapid administration will cause hypertension.) **(See paragraph B below for size of dose.)** Intubate and ventilate with oxygen (initial ventilation will be difficult because of airway resistance; atropine will relieve this). Administer diazepam if convulsing. Suction for secretions. Repeat 1 dose of atropine (IM until hypoxia is improved, then IV) every 5 minutes until (a) secretions diminish or (b) airway resistance is less or is normal.

Failure to respond,(i.e., no dry mouth, no decrease in secretions) confirms the need to administer additional doses of atropine. Monitor via pulse oximeter; cardiac monitoring should also be done (cardiac arrhythmias are uncommon after atropine is given). Acidosis may develop after seizures or after period of hypoxia and will require therapy. This patient should be transported to a hospital after stabilization (adequate drug therapy and initiation of ventilation).

3. Eyes: Do not treat miosis unless eye/head pain is severe. Use topical, not systemic, anticholinergic to relieve pain.

B. Recommended Doses

Atropine:
Older child and adult: 2 mg
Infant and young child: 0.02 mg/kg

Elderly: Use adult dose unless cardiac or pulmonary disease is present or patient is small or frail; in latter instances, use 1 mg as standard, but be prepared to administer additional amounts more frequently.

Pralidoxime (2-PAM):
Older child and adult: 1 gram
Infant and young child: 25-50 mg/kg

Elderly: Adult dose unless cardiac or renal disease is present, patient has hypertension, or patient is small and frail; decrease dose by half in these patients, but administer the other half 1 hour later if patient has not improved. Pralidoxime can cause hypertension when given rapidly IV. Slow admin-istration over 20 minutes will minimize the hypertensive effect. After rapid administration, hypertension can be rapidly but transiently reversed by phentolamine (adult: 5 mg IV. child: 1 mg, IV).

C. Further Care

1. Mild to moderate: After vapor exposure, a patient who is breathing normally does not need to be hospitalized as he will not worsen. However, miosis should be followed until eyes are normal (4 to 6 weeks). After liquid exposure, a patient should be observed in hospital for 18 hours until all agent is absorbed from skin.

2. Severe: Continue to ventilate and to administer atropine following guidelines above. Treat acidosis if present. If patient has not had prolonged hypoxia, recovery of an unconscious patient will be gradual over l to 3 hours.

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BIOLOGICAL AGENT SUMMARY

Disease	Likely Method of Dissemination	Transmissible Man to Man	Infective Dose	Incubation Period	Duration of Illness	Lethality	Persistence	Hazard Class
Anthrax	Spores in aerosol	No (except cutaneous)	8K to 10,000 spores	1 to 5 days	3 to 5 days (usually fatal)	High	Very stable: spores remain viable for years in soil	6.2
Cholera	1. Sabotage (food and water) 2. Aerosol	Rare	> 10^2 organisms	12 hours to 6 days	≥ 1 week	Low with treatment, high without	Unstable in aerosols and fresh water; stable in salt water	6.2
Pneumonic Plague	Aerosol	High	< 100 organisms	1 to 3 days	1 to 6 days (usually fatal)	High unless treated within 12 to 24 hours	For up to 1 year in soil; 270 days in bodies	6.2
Tularemia	Aerosol	No	1 to 50 organisms	1 to 10 days	≥ 2 weeks	Moderate if untreated	For months in moist soil or other media	6.2
Q Fever	1. Aerosol 2. Sabotage (food supply)	Rare	10 organisms (aerosol)	14 to 26 days	Weeks	Very low	For months on wood and sand	6.2
Ebola	1. Direct contact (endemic) 2. Aerosol (BW)	Moderate	1 to 10 plague forming units for primates	4 to 15 days	Death between 7 to 16 days	High for Zaire strain, moderate with Sudan	Relatively unstable	6.2
Smallpox	Aerosol	High	Assumed low	10 to 12 days	4 weeks	High to moderate	Very stable	6.2
Venezuelan Equine Encephalitis	1. Aerosol 2. Infected vectors	Low	Assumed very low	1 to 6 days	Days to weeks	Low	Relatively unstable	6.2
Botulinum Toxin	1. Aerosol 2. Sabotage (food and water)	No	0.001 µg/kg is LD_{50}	Variable (hours to days)	Death in 24 to 72 hours; lasts months if not lethal	High without respiratory support	For weeks in non-moving water and food	6.1
T-2 Mycotoxins	1. Aerosol 2. Sabotage	No	Moderate	2 to 4 hours	Days to months	Moderate	For years at room temperature	6.1
Ricin	1. Aerosol 2. Sabotage (food and water)	No	3 to 5 µg/kg LD_{50}	Hours to days	Days; death within 10 to 20 days for ingestion	High	Stable	6.1
Staphylococcal Enterotoxin B	1. Aerosol 2. Sabotage (food supply)	No	Clinical illness from picogram range	1 to 6 hours	Hours	< 1%	Resistant to freezing	6.1