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This section addresses direction and control of emergency incidents where the general Incident Management Team structure may require modification or addition of positions and branches to coordinate particular incident-specific activities. The special incidents addressed in this section include oil spills and hazardous substance releases.

SPECIAL INCIDENT ORGANIZATION

For certain types of incidents, the NIMS Incident Command System must be modified slightly in order to address the unique characteristics of these incidents. The basic ICS structure remains, with the same five major incident functions; however, additional positions and lines of authority are added to the Incident Management Team. Special incidents where incident organization may be modified include, but are not limited to, oil spills and hazardous materials releases.

OIL SPILL INCIDENTS

Due to the complex nature of oil spills, many different agencies with jurisdictional authority and statutorily mandated responsibilities will be involved. In the North Slope Borough, the unified command structure for oil spill incidents includes a Federal On-Scene Coordinator (FOSC) from the U.S. Coast Guard (MSO Anchorage Captain of the Port) or Environmental Protection Agency, a State On-Scene Coordinator (SOSC) from the Alaska Department of Environmental Conservation, a Local On-Scene Coordinator (LOSC), and a Responsible Party On-Scene Coordinator (RPOSC), who represents the spiller. In most cases, the RPOSC becomes the Incident Commander, because under state and federal law the spiller is responsible and liable for containing, cleaning up, and removing the spilled oil. However, in some cases the Responsible Party may be unavailable or unable/unwilling to properly mitigate the spill effects, and in such cases the IC will either be the FOSC or SOSC. Whenever an immediate threat to public health exists, the LOSC will be the IC so long as that threat remains.

For a detailed discussion of the response structure for oil and hazardous substance response, refer to the “Alaska Federal/State Preparedness Plan for Response to Oil and Hazardous Substance Discharge/Releases” (the Unified Plan), and the North Slope Subarea Oil Spill Contingency Plan.

The Unified Plan and Subarea Plan shall be used together and in combination with this Emergency Operations Plan to guide oil spill response in the North Slope Borough. This Emergency Operations Plan will be the primary guidance document only so long as an immediate public health risk exists, which would cause the LOSC to assume control of the incident and implement activities such as evacuation. Once oil spill response operations (i.e. containment, skimming, recovery) begin in earnest, the Unified Plan and Subarea Plan, along with the Responsible Party’s oil spill contingency plan, become the guiding documents.

In an oil spill incident management there may be many agencies and jurisdictions involved, therefore the MAC Group may consist of additional agency representatives in addition to the Emergency Services Council.
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OIL SPILL/HAZMAT RELEASE ORGANIZATIONAL CHART (UNIFIED COMMAND)

Set Incident Objectives

UNIFIED COMMAND
LOSC, SOSC, FOSC, RPOSC

Identify Local Government Incident Priorities

MAC GROUP
(ESC & other agency reps)

Command Staff
Safety Officer
Public Info Officer
Liaison Officer
Legal Officer

Carry Out Incident Objectives

INCIDENT COMMANDER
(Usually RPOSC or RP representative)

OPERATIONS  PLANNING  LOGISTICS  FINANCE/ADMIN

Volume 3, Section 8 of this plan contains additional information about adapting the ICS organization for special incidents.
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HAZARDOUS MATERIALS INCIDENTS

The hazardous materials incident organization is designed to provide supervision and control for the essential functions common to most hazmat incidents. Hazardous materials releases require enhanced control of the tactical operations and personnel/equipment mobilization to provide a greater degree of safety and reduce the probability of spreading contaminants.

For most hazmat incidents, the primary response functions will be directed by the Hazardous Materials Group Supervisor, who reports directly to the Operations Section Chief. All personnel and resources involved in the hazmat response will be supervised by one of the functional leaders or the Hazardous Materials Group Supervisor. The three functional positions within the Hazardous Materials Group are:

- **Entry Leader:** The Entry Leader supervises all personnel operating in the Hot Zone (that area immediately around a hazardous materials release area where contamination does or could occur. Special protection is required for all personnel while in this zone). The Entry Leader has the responsibility to direct all tactics and control the positions and functions of all personnel in the Hot Zone.

- **Site Access Control Leader:** The Site Access Control Leader controls all movement of personnel and equipment between the control zones and has the responsibility for isolating the Hot and Warm Zone and ensuring that citizens and personnel use proper access routes. (Warm Zone = that area between the Hot Zone and the Cold Zone which separates the contaminated area from the clean area and acts as a buffer to reduce contamination of the clean area. This zone contains the personnel decontamination station and may require a lesser degree of personnel protection then the Hot Zone.)

- **Decontamination Leader:** The Decontamination (Decon) Leader ensures all rescue victims, personnel, and equipment have been decontaminated before leaving the incident.

The Hazardous Materials Group Supervisor manages these three functional responsibilities, including all tactical operations carried out in the Hot Zone. The following principles apply to all hazmat incidents.

- All rescue operations will come under the Hazmat Group Supervisor's direction. Other tactical objectives that occur outside of the hazmat control zones (i.e. evacuation) are not the responsibility of the Hazmat Group Supervisor.

- In addition to the three primary functions, the Hazmat Group Supervisor may work with an Assistant Safety Officer, who must be Hazmat trained and present at the hazmat incident site.

- The Incident Safety Officer will have overall incident safety authority, with an Assistant Safety Officer working directly with the Hazmat Group Supervisor, as appropriate. The Group Supervisor may also supervise one or more Technical Specialists. Federal regulations require that a Safety Officer be appointed to all hazmat incidents.
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- Tactical operations outside of the controlled zones, as well as many other hazmat incident functions will be managed by regular ICS positions. In most cases, Division/Group Supervisors will manage the array of tactical objectives such as evacuation, isolation, medical, traffic control, etc. Other needs will be met by activating Command and General Staff positions as appropriate and necessary.

The following pages contain hazmat incident organization diagrams which demonstrate the range of functional positions that may be activated during a hazmat response. A relatively minor response may never progress beyond activation of an initial hazmat response organization, while a major hazardous materials incident may require a multi-branch incident organization. As with all emergencies, the Incident Commander, guided by the Unified Command, will be responsible for activating IMT positions during a hazardous materials incident response. For Hazmat Group position descriptions and position checklists, See Volume 3, EOC Guide.

HAZARDOUS MATERIALS INCIDENT INITIAL RESPONSE

Initial hazmat response resources are managed by the Incident Commander, who may also initially handle all Command and General Staff functions until additional personnel are activated. Once activated, the Hazardous Materials Group Supervisor will assume responsibility for entry, site access, and decontamination until personnel are assigned to these functions.

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If a hazardous materials incident occurs in a fire service area, the fire chief will be the initial Incident Commander. If outside of a fire service area, the ranking Alaska State Trooper will be the initial Incident Commander. Command may be transferred upon activation of the Emergency Operations Center.
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HAZARDOUS MATERIALS INCIDENT REINFORCED RESPONSE

(Fire, Law Enforcement and HAZMAT involved)

At this level of hazmat response, the two Incident Commanders (Fire/Law Enforcement) have joined together to establish a Unified Command. They have established a Hazardous Materials Group to manage all activities around the control zones and have organized law enforcement units into a task force to isolate the operational area. The ICS have decided to establish a Planning Section, a Staging Area Manager, and a Safety Officer.
HAZARDOUS MATERIALS INCIDENT MULTI-DIVISION/MULTI-BRANCH RESPONSE

At this level, the Unified Command/Incident Commander have activated most or all Command and General Staff positions and have established additional functional groups and a total of four branches in the Operations Section. Organization within Planning, Logistics, and Finance/Administration Sections will be the same as for other incidents. See IMT organizational chart, Section 3 of this volume.
ANNEX B: RESPONDING TO TERRORISM AND WEAPONS OF MASS DESTRUCTION (WMD) INCIDENTS
Emergency Operations Guide

The North Slope Borough has not identified any specific targets of national attention that may be the target of terrorist acts. However it does have major government buildings housing state and borough offices as well as the utility companies. In addition there are a number of schools, commercial centers, a port facility, regional hospital, airport, and other large public gathering locations that could be considered potential targets.

Any terrorist attack occurring within the borough, or directly affecting the borough would require a coordinated response consisting of borough resources (first responders) then state, and finally federal authorities and agencies. Therefore it is imperative that borough incident managers know and understand the role of the various state and federal lead agencies who would be involved in a response.

Presidential Decision Directive 39 (PDD-39), “United States Policy on Counterterrorism,” directs that measures be taken to reduce the nation’s vulnerability to terrorism, to deter and respond to terrorist acts, and to strengthen capabilities to prevent and manage the consequences of terrorist use of WMD. To support this goal, the U.S Department of Homeland Security, Federal Emergency Management Agency (FEMA), developed the Terrorism Incident Annex (TIA) to the Federal Response Plan (FRP). The TIA distinguishes between crisis and consequence management as follows.

- **Crisis management** refers to measures to identify, acquire, and plan the use of resources needed to anticipate and/or resolve a threat or act of terrorism. The federal government has primary responsibility to prevent and respond to acts of terrorism; state and local governments provide assistance as required. Crisis management is predominantly a law enforcement response. Based on the situation, a federal crisis management response may be supported by technical operations and by federal consequence management, which may operate concurrently. The Federal Bureau of Investigation is the lead federal agency in the Crisis Management period.

- **Consequence management** includes measures to protect public health and safety, restore government services, and provide emergency relief to governments, businesses, and individuals affected by the consequences of terrorism. The local and state authorities have primary responsibility to respond to the consequences of terrorism; the federal government provides assistance as necessary (see Figure 2-1). The Federal Emergency Management Agency is designated as the lead federal agency during the consequence management phase.
Figure 2-12-1: Crisis and Consequence Management

Source: Department of Health and Human Services
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TERRORISM/WMD RESPONSE PROCEDURES

Responses to and recovery from incidents that involve terrorist use of WMD will involve a Unified Command structure, as described in this section.

CRISIS MANAGEMENT

During the crisis management phase, the Alaska Department of Homeland Security and Emergency Management will activate the State Emergency Operations Center (SEOC) as necessary to support local response and support activities. In order to support federal crisis management operations, ADHSEM will dispatch personnel to the Joint Operations Center (JOC) as requested.

During crisis management, the FBI field office responsible for the incident area will establish and operate a JOC. The JOC is generally composed of a Command Group, Operations Group, Support Group, and Consequence Management Group. Local and state agencies will be requested to provide support and liaison.

The Borough Disaster Coordinator or his/her designee will represent the borough in a Unified Command with state and federal law enforcement agencies.

CONSEQUENCE MANAGEMENT

When consequence management operations are implemented, ADHSEM will activate or continue 24-hour SEOC operations and prepare to coordinate assistance as needed. ADHSEM will use the structures outlined in the state emergency management plans to coordinate support for local response through recovery operations.

As the terrorist incident progresses, FEMA will consult with the Governor's office and the White House. When directed, FEMA may use the authority of the Stafford Act to preposition federal consequence management assets or implement a federal consequence management response.

When consequence management operations begin, FEMA will begin to disengage from the JOC and form Joint Information Centers (JIC) in the field and Washington, DC. The JIC will be the media centers for the release of all information to the press. FEMA will use FRP structures such as regional operations centers, disaster field offices, federal coordinating offices, and so forth to coordinate federal support for state and local recovery operations.

The Borough Mayor or his/her designee will represent the borough in a Unified Command with state and federal agencies involved in the recovery aspect of a terrorism incident.
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LEAD STATE AGENCIES

ADHSEM and the NSB police (NSB) are the lead state agencies for terrorism/WMD response. FEMA and the FBI are the lead federal agencies. FEMA is the lead federal agency responsible for consequence management response to a terrorist incident involving the employment of WMD. The FBI is the lead federal agency responsible for crisis management response to a terrorist incident involving the employment of WMD.

Alaska Department of Homeland Security and Emergency Management (ADHSEM)

ADHSEM is the lead Alaska agency responsible for consequence management response to a terrorist incident involving the employment of WMD. In general, ADHSEM’s key functions include:

- Acting as the primary state agency for information and planning. This includes activating the SEOC, implementing the Emergency Support Function system, maintaining a statewide emergency public information process, and implementing procedures for responding to media and official requests for information and access to the incident site or operations area.

- Coordinating emergency activities in the Governor’s absence and other state-level activities such as damage assessment and reporting, donations management operations, and recovery assistance programs.

- Maintaining communication, warning, and notification capabilities to provide various jurisdictions and agencies with relevant information concerning terrorist events or imminent threats and disseminating warnings or emergency information to the public.

- Assessing the need for additional resources from outside the state and preparing proclamations, executive orders, and requests for emergency or major disaster declarations as necessary to make those resources available.

- Advising the Governor concerning activation of the Alaska National Guard (including the Civil Support Team) for emergency service.

- Providing HAZMAT support from Anchorage or Fairbanks to contain, confine, and control releases of hazardous material. HAZMAT will also:
  - Perform initial estimates of the DWH.
  - Perform surveys and obtain samples to determine the nature and identity of the hazard.
  - Advise the IC on appropriate protective actions and equipment.
  - Monitor the incident area, the boundaries between zones, the DWH area, and the ICP for hazardous material.

- Requesting the US Coast Guard assistance for emergency service within their capabilities.
Alaska State Troopers (AST)
AST is the lead Alaska agency responsible for crisis management response to a terrorist incident involving the employment of WMD. In general, AST's key functions include:

- Serving as the primary state agency for law enforcement and criminal investigations. This includes acting as the state's liaison to the FBI, cooperating with local law enforcement agencies to restrict and control incident site access, and implementing methods to maintain records of persons unaccounted for and presumed involved in the incident.

- Establishing liaison with local and state agencies to assist in traffic control, evacuation of threatened areas, providing security or escorts, and establishing and administering checkpoints to regulate transportation of donated goods.

- Operating the primary state warning point of the National Warning System and, in cooperation with ADHSEM when necessary, disseminating primary warning to local jurisdictions.
WMD EMERGENCY DECONTAMINATION

Following an overt WMD terrorist incident the immediate concern is to identify and isolate the ambulatory victims so that contamination does not spread. Decontamination must begin quickly in order to reduce the duration of human exposure to chemical agents, biological agents, or radiation. Ideally, decontamination should also improve the environment for human health until evacuation can be accomplished. Conversely, since the attack may go unnoticed, decontamination may not be possible following a covert attack using WMD materials.

Decontamination Guidelines

- Attempt to identify, decontaminate, and track the health of all exposed people. Generally, victims of a chemical attack that are able to escape the attack site have not received a lethal dose and are only marginally at risk from the effects of the agent. However, delayed effects can develop as a result of long-term exposure to a low agent concentration. Victims of a biological or radiological attack may not develop symptoms for several hours, days, or weeks, regardless of the dose they initially receive. The same concepts hold true for responders who may have been exposed during response or rescue operations.

- Water is usually available in large quantities and can be used to decontaminate a large number of people quickly. Although it does not neutralize the WMD material, soap and water can help remove contamination. Additionally, the runoff is contaminated and must be controlled.

- The temperature can affect decontamination operations. The wind chill factor can make emergency decontamination an uncomfortable, or even dangerous, undertaking. In addition, some chemical agents may freeze or boil at temperatures within the habitable range. Frozen agents produce little if any vapor hazard. This can reduce inhalation exposures and enhance survival. Boiling agents rapidly convert to vapor. This intensifies inhalation hazards, but reduces residual contamination. However, radiation is unaffected by temperature and many biological agents can remain viable over wide temperature ranges.

For the purposes of this plan, temperatures are defined as hot (>80°F), moderate (60-80°F), cool (>32<60°F), and cold (≤32°F).

Figure 2-12-2 provides a general guideline for determining when various chemical agents may freeze or boil. The actual temperatures vary based on several factors including agent dilution and purity.
Figure 2-12-2: Chemical Agent Freezing & Boiling Points

<table>
<thead>
<tr>
<th>Agent</th>
<th>Freezing point (°C/°F)</th>
<th>Boiling point (°C/°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHOKING AGENTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHLORINE (CL)</td>
<td>-101°C / -150°F</td>
<td>-34°C / -29°F</td>
</tr>
<tr>
<td>PHOSGENE (CG)</td>
<td>-128°C / -198.4°F</td>
<td>8°C / 46°F</td>
</tr>
<tr>
<td>DIPHOSGENE (DP)</td>
<td>-57°C / -70.6°F</td>
<td>127°C / 261°F</td>
</tr>
<tr>
<td><strong>BLOOD AGENTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HYDROGEN CYANIDE (AC)</td>
<td>-13°C / 8.2°F</td>
<td>26°C / 78°F</td>
</tr>
<tr>
<td>CYANOGEN CHLORIDE (CK)</td>
<td>-6.9°C / 19.6°F</td>
<td>12.8°C / 55°F</td>
</tr>
<tr>
<td>ARSINE (SA)</td>
<td>-116°C / -176.8°F</td>
<td>-65°C / -85°F</td>
</tr>
<tr>
<td><strong>NERVE AGENTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TABUN (GA)</td>
<td>-5°C / 23°F</td>
<td>246°C / 475°F</td>
</tr>
<tr>
<td>SARIN (GB)</td>
<td>-56°C / -68.8°F</td>
<td>158°C / 316°F</td>
</tr>
<tr>
<td>SOMAN (GD)</td>
<td>-42°C / -43.6°F</td>
<td>198°C / 388°F</td>
</tr>
<tr>
<td>GF</td>
<td>-30°C / -22°F</td>
<td>239°C / 462°F</td>
</tr>
<tr>
<td>VX</td>
<td>-51°C / -59.8°F</td>
<td>298°C / 568°F</td>
</tr>
<tr>
<td><strong>BLISTER AGENTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SULPHUR MUSTARD (H)</td>
<td>14°C / 57°F</td>
<td>217°C / 423°F</td>
</tr>
<tr>
<td>DISTILLED MUSTARD (HD)</td>
<td>14.45°C / 58°F</td>
<td>217°C / 423°F</td>
</tr>
<tr>
<td>NITROGEN MUSTARD (HN-1)</td>
<td>-34°C / -29.2°F</td>
<td>194°C / 381°F</td>
</tr>
<tr>
<td>NITROGEN MUSTARD (HN-2)</td>
<td>-60°C / -76°F</td>
<td>75°C / 167°F</td>
</tr>
<tr>
<td>NITROGEN MUSTARD (HN-3)</td>
<td>-3.7°C / 25.3°F</td>
<td>256°C / 493°F</td>
</tr>
<tr>
<td>LEWISITE (L)</td>
<td>-18°C / 0°F</td>
<td>190°C / 374°F</td>
</tr>
<tr>
<td>MUSTARD-LEWISITE (HL)</td>
<td>-42°C / -43.6°F</td>
<td>190°C / 374°F</td>
</tr>
</tbody>
</table>

*All temperatures are approximate and vary based on agent dilution and purity.*
The following four steps support emergency decontamination:

**Step 1: Wet or Blot**

- At moderate or hot temperatures:
  - For biological or radiological contamination, wet the victims with a light spray. This will cause biological and radioactive particles to adhere to clothing and skin rather than re-aerosolizing, thus preventing it from being ingested or inhaled. Wet victims before they remove clothing to ensure that the clothes will have captured the greatest possible amount of the hazard.
  - For chemical agent contamination, blot the agent from the skin. Never rub at the agent as this only causes it to spread.
- At hot temperatures, some chemical agents may vaporize very rapidly and not require decontamination.
- During periods of cool or cold weather, blotting and wetting are impractical. Although the wind chill does not affect radiation, biological agents, or the physical state of the chemical agents, it may cause hypothermia among the victims and responders. In addition, many chemical agents may solidify at these temperatures and pose no vapor hazard. However, upon entering buildings, these agents will melt and may pose a significant vapor hazard.
  - Move the victims from the contaminated building to a nearby building.
  - Set up an outdoor decontamination area. Consider the effects of wind chill on the victims.
  - After ensuring victims and responders are not downwind of each other, carefully remove external clothing, taking care to eliminate the possibility of frozen agent being inhaled.

**Do not brush off contamination. This may lead to re-aerosolization of the hazard.**

**Step 2: Strip**

- At moderate or hot temperatures victims should strip to their underwear to remove all contaminated clothing.
- During periods of cool or cold weather:
  - Remove only the outermost layer of clothing. Consider the effects of wind chill on the victims.
  - Immediately move the victims upwind into a heated and well-ventilated indoor processing area following removal of outer garments.
  - Victims should then strip to their underwear to remove all contaminated clothing.
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Step 3: Flush
- After removing clothing, flush or rinse any remaining contamination from exposed skin and hair. Under periods of cool or cold weather, flushing will have to be accomplished indoors, in a well-ventilated area.
  - Spray large quantities of water under low pressure.
  - Soap and water can also help remove contamination.
- Rinsing or flushing does not neutralize the hazardous material so the runoff is contaminated and must be controlled. During periods of cold weather the runoff may freeze.

Step 4: Cover
- To protect victims from the weather or recontamination and to maintain modesty:
  - Provide overhead cover during decontamination.
  - Following flushing, provide cover for each decontaminated victim.

Equipment and Decontamination Station Requirements
Consider the following equipment requirements in order to accomplish the four steps of emergency decontamination.

Self Protection Equipment
First responders working in the decontamination area are at risk for contamination. In order to protect themselves, first responders should wear Personal Protective Equipment (PPE) as directed by the IC.
- Level A: Fully encapsulating chemical-resistant suit with Self-Contained Breathing Apparatus (SCBA) or positive pressure supplied air respirator with an escape SCBA.
- Level B: Chemical splash resistant suit with hood and SCBA.
- Level C: Chemical-resistant suit with hood and air purifying respirator.
- *Body Substance Isolation: High Efficiency Particulate Air (HEPA) filter mask, goggles, surgical gloves, and coveralls. This is not an OSHA PPE level. It is for use only with biological and radiological particulate materials.
Communication Equipment
First responders must be able to communicate to the victims that they have been exposed to an invisible hazard and that they (the victims) need assistance while avoiding touching the victims and contaminated objects. First responders must be able to communicate authoritatively but with clear concern for the victims. Communication measures include:

- Bullhorns and loudspeakers
  - Vehicle-mounted
  - Hand-held
  - Multi-lingual translators
- Instructional signs/placards/handouts
  - Multi-lingual
  - Illustrated

Decontamination Stations
A mass casualty situation may require more than one decontamination corridor. Each corridor requires areas to:

- Wet, blot, or brush
- Strip
- Flush
- Cover
- Triage, treat, and decontaminate non-ambulatory casualties or casualties who become symptomatic while processing through the decontamination corridor.

In moderate weather, all steps can occur outdoors (see Figure 2-12-3). Extremely cold weather (see Figure 2-12-4) requires:

- An outdoor area to:
  - Brush
  - Remove the outer-most layer of clothing
- An indoor processing area including:
  - A pool of 5% chlorine to decontaminate footwear and hands
  - A clothing removal station
  - A rinse area
  - A dressing area
  - A contamination monitoring station

Figure 2-12-3 shows an example layout of an outside decontamination site using fire fighting apparatus and Figure 2-12-4 shows an example of an inside decontamination site during cold weather operations.
Figure 2-12-3: Emergency Mass Casualty Decontamination Corridor

- Elevated master stream
- Pumpers with 2-1/2 inch fog nozzles on side discharges
- To shelter and medical triage

Figure 2-12-4: Cool or Cold Weather Decontamination

- Chlorine Pool
- Wind Direction
- Outer Clothing Removal

Firefighter
Victim
DECONTAMINATION ISSUES

Serious issues of concern to ambulatory victims will be privacy, speed, and the safety of their families (i.e., small children, the elderly, and the handicapped). Responders must consider crowd control, protection for personal property and responder's equipment, and maintaining the chain of custody for evidence. Law enforcement officers wearing appropriate PPE may be required on the decontamination lines to perform these tasks.

Privacy

- Restrict media access to the decontamination lines. Media can be restricted or prevented from gaining access when the individual's personal privacy is at stake.
- Provide covered or at least curtained areas for decontamination when possible.
- When possible, process men and women through separate decontamination stations.
- Separate victims who refuse to cooperate from cooperative victims.

Speed and Safety of Decontamination

- For ambulatory vs. non-ambulatory victims:
  - Use separate decontamination stations for ambulatory and non-ambulatory victims to speed decontamination of ambulatory victims.
  - Concentrate medical resources for treating symptomatic victims in the non-ambulatory line.
  - Remove symptomatic victims from immediate view to calm other victims.
- For first responders vs. victims:
  - Establish a separate decontamination corridor for first responders to facilitate their timely return to operations.
  - Ensure the first responder corridor is clearly marked "Responders Only" and out of view from the victim's decontamination corridors to preclude victims from attempting to use the first responder line and slowing operations.

Rest and Rehabilitation

- Establish rest and rehabilitation areas for responders. These areas should provide adequate private areas to allow responders to exchange, clean, or repair their equipment, rest, eat or drink, and to process the mental and emotional stresses they will be impacted by.

Periodically monitor the decontamination corridors and equipment for a buildup of contamination.

- Close contaminated lines.
- Open new lines upwind, uphill, and upstream.
- Establish procedures to periodically replace workers on the decontamination corridors.
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Cover

- For outdoor decontamination corridors, several options for overhead cover are available, including:
  - Ladder trucks with salvage covers hung from the extended base ladder section.
  - Pike poles, ground ladders, or ropes strung between fire engines and draped with salvage covers.
  - Inflatable tents.
- Local stores, hospitals, hotels, and restaurants may be able to provide post-decontamination personal cover materials. These include:
  - Blankets.
  - Sheets.
  - Tablecloths.
  - Robes.
  - Large, opaque plastic trash bags.
  - Disposable, opaque rain ponchos.
  - TYVECK or other disposable coveralls

Contaminated Item Storage

- All removed clothing or responder equipment should be placed in large, individually identified plastic bags or drums for later decontamination, monitoring, disposal as hazardous material, or use as evidence. The owner of the clothing or equipment should receive a voucher for their belongings.
- Each individual should also receive a small “personal” bag and a voucher for personal articles such as wallets, purses, rings, watches, etc.
  - Return these items following complete decontamination if required, 24-hour monitoring, or
  - Notify the person of the final disposition of their property, i.e., their goods will be destroyed as hazardous material, used as evidence, etc.
- Ensure all containers are marked and responders obtain and document appropriate identification and contact information, such as the owner’s name, home address, primary and contact telephone numbers, etc. This ensures the individual can be contacted later for interviews, medical follow-up, or notification of the disposition of their property.

Runoff Containment

- If time and resources allow, confine the water runoff to an isolated area.
- If runoff goes into the storm drainage system, notify the Department of Environmental Conservation, Public Works, and locations downstream immediately.
- If runoff goes into the sanitary sewer system, notify the Department of Environmental Conservation and the Borough Public Works Director immediately
- If runoff goes into streams, rivers, or the sea, notify the US Coast Guard.
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WMD TRIAGE AND TREATMENT

CHEMICAL AGENTS

The U.S. Army Medical Research Institute of Chemical Defense provides the following suggestions for assessing casualties from a terrorist event involving chemical agents.

To make an initial assessment of the clinical presentation, use the memory aid SOAP. 
- **Subjective** information such as symptoms.
- **Objective** information such as signs.
- **Assessment** or diagnosis.
- **Plan** of treatment such as:
  - Protection.
  - General supportive therapy.
  - Specific antidotal treatment.
  - Decontamination.
  - Evacuation.

For a more detailed assessment, use the memory aid **ASBESTOS**.

- **Agent(s)** What are the agent type and toxicity, the estimated dose, and the potential lethality of the exposure?
- **State(s)** What is the physical state of the agent (solid, liquid, gas, vapor, aerosol, ora combination)?
- **Body site(s)** What were the route(s) of entry and where was the casualty exposed?
- **Effect(s)** What is the distribution of effects, local or systemic?
- **Severity** Are the effects mild, moderate, or severe?
- **Time Course** When did the effects begin? Are they more or less severe now? Will they get better or worse in the future?
- **Other Diagnoses** Is there something else that would account for these effects (differential diagnosis) and are there other effects or symptoms (additional diagnosis)?
- **Synergism** Are there effects from combined or multiple exposures or insults?
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Rescue Operations

The U.S. Army Soldier Chemical Biological Command (SBCCOM) recently published Guidelines for Incident Commanders Firefighter Protective Ensemble (FFPE) Use in Chemical Agent Vapor, Final Report, 2 August 1999. This report was intended to fill some of the knowledge gaps concerning how to safely and rapidly perform rescue operations that had been identified during the BALTEX series of exercises. The report was based on the result of Man-In-Simulant trials (MIST) SBCCOM conducted under the Chemical Weapons Improved Response Program (CW IRP). The MIST tests identified and evaluated how well various standard and field-modified configurations of firefighter turnout gear would protect firefighters in a chemical agent vapor environment. In essence, this report converted the MIST results into useful operational terms.

Report Summation

- Turnout gear provides better protection from aerosols than vapors; therefore, vapors present the greater hazard. For this reason, the report addressed only agent vapors (however, it does caution responders not to contact liquid agents).
  - Since the FFPE provides higher respiratory and ocular protection than percutaneous protection, the tables and graphs in the report concentrated on percutaneous hazards.
  - Although the report mentioned Mustard (HD), Lewisite (L), Sarin (GB), Soman (GD), and VX, it focused primarily on GB vapor.

Key Points

- The principal points of the report are the Level 1 - General Guidelines, which say:
  - Standard turnout gear with self-contained breathing apparatus (SCBA) provides a first responder with sufficient protection from nerve agent vapor hazards inside interior or downwind areas of the Hot Zone to allow 30 minutes rescue time for known live victims.
  - Self-taped turnout gear with SCBA provides sufficient protection in an unknown nerve agent environment for a 3-minute reconnaissance to search for living victims (or 2-minute reconnaissance if HD is suspected).

This information that follows was extracted in its entirety from the SBCCOM report. It was modified with permission by SBCCOM from a document originally developed by the Montgomery County Fire and Rescue Service (MCFRS), Montgomery County, Maryland, December 1998 © MCFRS, Prepared by Deputy Chief Ted Jarboe, District Chief Robert Stephan, and Captain Jack Crowley with technical review by Roger McIntosh, M.D.
MANAGING THE CONSEQUENCES OF A CHEMICAL ATTACK

A SYSTEMATIC APPROACH TO RESCUE OPERATIONS

The guidelines below are intended to help first responders to a chemical agent attack develop an action plan to safely and effectively rescue live victims. The Level A suit represents the highest level of protection to emergency responders against both respiratory and skin hazards of exposure to chemical (and biological) warfare agents. However, if the number of live victims exposed to and impaired by chemical agent(s) exceeds the availability of personnel in Level A suits to rescue in a timely manner, the Incident Commander should consider the use of other acceptable personal protective ensembles. The Incident Commander must consider the safety of the responders, the type of suspected agent, length of time victims have been exposed and the ability to decontaminate and treat responders involved in any rescue act before committing responders in less than Level A protection.

Turnout gear with Self-Contained Breathing Apparatus (SCBA) provides less protection than Level A suits, but will allow short exposures. Configurations of turnout gear with SCBA, listed in order of increased protection, include:

- Standard (no use of duct tape)
- Self-taped
- Buddy-taped
- Turnout gear over Tyvek undergarment

Saving live victims is the rescue mission, while minimizing risk of harm to the rescuers. First responders should gather information about the incident based on:

- Signs and symptoms of casualties
- Comments from casualties and onlookers
- Previous responder reconnaissance or detector readings
- Information available through intelligence provided by law enforcement officers
- Site specific information
- Current and forecast weather conditions

First responders should not assume an incident involves a highly toxic chemical agent. The released material could be a less toxic industrial chemical or a riot control agent such as pepper spray.
RESPONSE DECISION-MAKING

Consider the following key factors and steps to help decide whether rescue is a “Go” or a “No Go” Situation:

- **Weather conditions:** Consider the impact of wind direction and speed, temperature and humidity, and precipitation on the behavior and spread of the chemical agent(s) and on emergency operations. Use on-scene weather monitoring equipment if available.

- **Scene hazard assessment:** Avoid “tunnel vision.” Don’t just assume chemical-related hazards. Also consider the possible presence of biological agents, radiological materials, and/or explosive devices.

- **Reconnaissance (Recon):** Conduct recon using the following steps to determine if live victims are still in the area of the chemical agent release.
  - Preliminary assessment: If available, view the contaminated area through a closed window or an entrance doorway (or other upwind location) to gather victim information. Before entering the building, the Recon team should don at least turnout gear with SCBA. If the following conditions are met, then the Recon mission is over and the Incident Commander can consider immediately starting the rescue mission (no longer than 30 minutes’ exposure for each responder) for live victims:
    - you observe living victims with nerve agent exposure symptoms,
    - victims have been exposed for 15 minutes or more,
    - mustard (HD) is not suspected, and
    - the room the victims occupy is directly accessible without having to transit antechambers, stairwells, or other adjacent rooms.

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<th>If mustard is suspected, rescue can continue at increased risk to rescuers. Testing shows that 50% of rescuers exposed for 2 minutes would experience latent skin reddening in more susceptible areas, such as the groin. Rescuers staying in HD environments of unknown concentration for 30 minutes would not receive the 5% lethal dosage.</th>
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<td>Search: If no living victims are visible from outside the building, the Incident Commander should assume a high concentration of chemical agent likely is present. However, the Incident Commander may consider a rapid reconnaissance by entering the building for no more than three (3) minutes only to look for living victims.</td>
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| Before entry, the Recon team should increase their level of protection by at least self-duct-taping protective clothing openings and closures and continuing SCBA use. Duct-tape the following closures and openings as a minimum: the neck, around the face piece, the fly, wrists, ankles, waist, and the closure down the front of the jacket. |
Emergency Operations Guide

- **Rescue** in conjunction with recon - During a quick reconnaissance inside the contaminated building, the Incident Commander can assume nerve agent concentration is low and perform rescue for up to 30 minutes (see Rescue Team Exposure Time below) if the following conditions are met:
  - you observe living victims with nerve agent exposure symptoms,
  - victims have been exposed for 15 minutes or more, and
  - mustard (HD) is not suspected.

**WARNING!**

Avoid transit of antechambers, stairwells, or adjacent rooms when evacuating victims discovered during Recon. These areas may have vapor, aerosol, or liquid chemical agent contamination that could further injure the victim or contribute to the rescuer’s dosage.

Take special care to avoid contaminating footwear and clothing with liquid chemical agent. Skin contact with liquid chemical agent dosage may be lethal. Liquid contamination is very easy to spread. Spread liquid contamination will “offgas” highly toxic vapors and continue as a skin contact hazard.

- **Without rescue in conjunction with recon** - If no living victims are seen, then leave the building immediately, seal and secure the building, and wait for the HAZMAT team in Level A suits to arrive at the scene.

**Victim information**: collect the following information about victims.

- **Location**: Are casualties visible near an entrance? Are they in the line-of-sight? Can they be heard? Estimate how long it would take to reach and remove them.

- **Number**: If there are enough HAZMAT team personnel in Level A suits available to rescue live victims in a timely manner, use them. Otherwise, consider using personnel who are wearing an acceptable protective clothing alternative (i.e. taped or un-taped turnout gear with SCBA), as approved by the Incident Commander.

- **Condition**: Are casualties ambulatory or non-ambulatory? Signs and symptoms? Traumatic injuries? Entanglement? Mental state?

**Rescue and standby teams**: Select at least two personnel per team with appropriate personal protection. Ensure they are hydrated.

**Chemical agent hazard reduction**: Consider use of positive pressure ventilation (PPV) fans or other fans to reduce or redirect vapor or aerosol concentration. Be sure that use of these fans will not spread chemical agent to endanger other people. If fans are acceptable, they should be placed in service while rescuers are donning their protective ensemble.

**Review information about chemical warfare agents (CWA)**: The higher the vapor pressure of a CWA, the higher its rate of evaporation (volatility). Temperature and humidity can affect CWA properties and exposure risk.
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- **SCBA (positive pressure):** SCBA should be used for all rescue missions. Positive pressure or pressure demand SCBA provide an inhalation Protection Factor (PF) of at least 10,000.

- **Personal protective ensemble (PPE):** Rescue personnel should wear standard turnout gear with SCBA. If the situation permits, PPE closures and openings should be taped with duct tape either by the responder or a buddy.

- **Rescue team exposure time:** Limit the initial exposure time to 30 minutes. No entry team will re-enter the contaminated area unless authorized and extreme circumstances clearly warrant doing so. Based on chemical warfare agent(s) released, the quantity, its properties, the circumstances surrounding its release, vapor suppression measures used, and any symptoms displayed by rescuers, the Incident Commander may allow rescue personnel to operate in the contaminated area for a longer period.

**WARNING!**

Because concentrations of the chemical agent released in a building could result in different concentrations in the rooms and corridors, victims should be removed through doors or windows that lead directly to the outside. If this is not possible, the rescuers should consider the use of escape masks or chemical masks by victims who should leave through other rooms and corridors to reach the outside.

Face piece removal - After exiting the rescue area, rescuers should continue using their SCBA until their decontamination is complete to prevent respiratory harm from “off-gassing” of chemical agent from the protective clothing. If possible, remove the regulator and face piece last (after protective clothing).

- **Emergency decontamination:** Unless delay would compromise rescue, set up the decontamination area before entry is made, locate setup upwind and as close as practicable, and monitor operations. Rescuers should be decontaminated immediately and before they remove their regulator and face piece (to avoid breathing any vapors possibly trapped in their clothing protective clothing) or any of their protective clothing. If possible, remove regulator and face piece last. Use chemical agent monitors.

- **Medical monitoring:** Check vital signs and ECG. Check again for chemical agent signs and symptoms.

- **Rehabilitation (REHAB):** Provide rest and re-hydration. Re-check vital signs as necessary.

Remember this document is a guide. Existing conditions, knowledge of the chemical agents, good judgment, combined with available personnel and personal protective equipment, will greatly influence what level of protection is used by rescuers. The safety of both the rescuers and victims is of paramount concern. When Level A suits are not available, the mission of protected rescuers is to rescue live victims, nothing more.