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BEST PRACTICE

Incident Site Security: Inner Perimeters

PURPOSE

This Best Practice identifies essential considerations when planning or reviewing inner perimeter procedures for use during emergencies.

SUMMARY

Inner perimeter procedures delineate and maintain inner perimeters or “control zones.” Procedures should include hazardous material (HazMat) detection, personal protective equipment (PPE) standard enforcement, decontamination of out-going personnel, and evidence preservation. Inner perimeter procedures are essential for ensuring the safety of emergency responders and the public, particularly in the context of a terrorist incident.

DESCRIPTION

Inner perimeters are contained within the outer perimeter. They are distinguished by distinctive increases in hazardous conditions or security concerns. This Best Practice divides inner perimeter procedures into four components:

- HazMat detection and inner perimeter establishment
- PPE standard enforcement for entering inner perimeters
- Decontamination of personnel exiting inner perimeters
- Evidence preservation

Inner perimeter security is unique from other perimeter security procedures in that fire service responders will generally have responsibility for all four elements. Inner perimeter security procedures are closely related to incident site safety procedures. Many aspects of inner perimeter security focus on enforcement of inner perimeter safety requirements.

HazMat Detection: Pre-Planning, Detection Capabilities, and Inner Perimeter Establishment

On-scene HazMat detection capabilities are an essential element of inner perimeter procedures. Once an incident has occurred and a response is in progress, responders must quickly determine the HazMat threats and set up inner perimeters accordingly.

[Occupational Safety and Health Administration \(OSHA\) guidelines for PPE standards](#) during HazMat incidents will dictate PPE requirements and the requisite inner perimeters.

Simple HazMat detection capabilities for first-to-scene fire and law enforcement units can be extremely valuable for inner perimeter procedures. This ensures responder safety while allowing them to deliver essential life-saving care to victims as soon as possible. For more, see the *Lesson Learned Information Sharing* Lesson Learned “[Site Evaluation Equipment](#).”

In a suspected HazMat incident, there are typically three control zones demarcated by two inner perimeters: the hot zone, the warm zone, and the cold zone. Inner perimeter enforcement personnel must be familiar with these designations and the security requirements they demand to ensure efficacy of inner perimeter security procedures and, thus, the safety of responders.

The Hot Zone: Also known as the “exclusionary zone.” This area directly surrounds the incident and will require the highest level of PPE.

The Department of Transportation’s [“Guidebook for First Responders during the Initial Phase of a Dangerous Goods/Hazardous Materials Incident”](#) offers material specific guidelines for control zone setup and PPE requirements. The Federal Bureau of Investigation offers device-specific guidelines for incidents involving explosives.

The Warm Zone: Also known as the “decontamination reduction zone.” This area directly surrounds the Hot Zone, in which contamination levels will be lower or non-existent. Decontamination systems are implemented in this zone.

The Cold Zone: Also known as the “support zone.” This is the area(s) within the outer perimeter with no trace of contamination and classified as “safe” for unprotected operations. All response support functions such as reception and staging will take place in this zone.

Pre-planning for high profile targets is an important consideration for inner perimeter issues. Large commercial buildings can contain a vast number of materials that are hazardous to humans when released into the air. Inner perimeter security pre-planning for high profile targets should include:

- Consideration of what HazMats to expect during a response to an attack or emergency
- What level of PPE these materials will dictate
- The number of personnel equipped to the [appropriate PPE standards](#) and consideration of back-filling search and rescue missions to that level

For further discussion on other site-specific pre-planning considerations, refer to *Lessons Learned Information Sharing* Best Practices series [“Pre-Incident Site Planning.”](#)

Inner Perimeter Entry Control: Credentialing and Personal Protective Equipment Standard Enforcement

Credential and PPE enforcement is the second essential aspect of inner perimeter procedures. During the September 11th responses, a large number of responders were exposed to hazards by operating in the “Hot” Zones without the appropriate training or PPE. After-Action Reports from September 11th emphasize the importance of inner perimeter control standard operating procedures that limit inner perimeter access to those personnel in possession of both:

The National Memorial Institute for the Prevention of Terrorism has developed a comprehensive database called the [Responder Knowledge Base \(RKB\)](#). The goal of the project is to provide emergency responders, purchasers, and planners with a trusted, integrated, on-line source of products, standards, certifications, grants, and other equipment-related information. Jurisdictions may find the RKB helpful in making PPE planning decisions.

- Appropriate credentials and
- Appropriate PPE as dictated by the specific control zone.

It is important to note that purely security-based inner perimeters, enclosing areas that are safe but none-the-less off limits for security reasons, will have no PPE requirements. Inner perimeter security personnel must be appraised of and familiar with credentialing and PPE requirements to ensure the maintenance of both the safety and security functions of inner perimeters.

[US Capitol Police](#) is responsible for the sensitive information, materials, and historic documents in the Capitol Building and Members' offices. As such, the US Capitol Police's "[Capitol Buildings Emergency Preparedness Program](#)" includes a pre-planned credentialing system that indicates zones of access as well as mission qualifications, credentials, and security clearance to ensure the protection of these documents and information during a massive emergency response.

Inner Perimeter Exit Control: Decontamination of Outgoing Personnel

The third element of inner perimeter procedures is exit control of outgoing personnel. This element will only be relevant to those inner perimeters cordoned off for HazMat considerations.

Once a HazMat threat is established and an inner perimeter delineated, inner perimeter procedures must include decontamination of exiting victims and personnel. Decontamination procedures are dictated by the nature of the contamination and the resources available to each jurisdiction during a particular response. Some options include:

- Decontamination corridors
- Portable decontamination showers
- Required change of clothes upon exit
- Use of proximate shower/decontamination facilities (if available)

During the Arlington County response to the Pentagon, the Incident Command worked with the Environmental Protection Agency and the Occupational Safety and Health Administration to establish inner perimeter exit procedures that met decontamination requirements while not over-burdening responders or existing resources. For more information on this innovative solution, please refer to *Lessons Learned Information Sharing* Lesson Learned, "[Incident Site Safety: Establishing a Safety Group.](#)"

Inner perimeter security procedures must take the challenges of mass decontamination into consideration. These considerations include securing victims' personal belongings for return after decontamination and safeguarding emergency response equipment such as badges, weapons, and PPE that must be left within the contamination reduction zone.

For discussion of mass decontamination procedures, see the *Lessons Learned Information Sharing* Good Story "[Orange County's Mass Decontamination and Chemical Incident Operations Program.](#)"

Evidence Preservation

Evidence preservation is an important part of every all-hazard response, but it is particularly important in the context of terrorist incidents. Responders' first obligation is to save lives and protect the public. The next priority, however, should be preservation of all evidence associated with the event for the federal investigation that will follow. Inner perimeter procedures are essential to this process. Personnel enforcing inner

The Federal Bureau of Investigation provides the "[Handbook of Forensic Services](#)" as a guideline for developing evidence preservation protocols as part of inner perimeter procedures.

[Orlando, FL](#) has trained a limited number of its forensics experts in Level A PPE use. These forensics personnel are now able to enter incident hot zones early in a response, aiding in evidence preservation and the investigation process.

perimeter security must be familiar with evidence preservation procedures, and enforce these procedures as part of inner perimeter procedure implementation.

RESOURCES

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