

### 3.4.2.2 Hazmat Personal Safety



YOUR ORGANIZATION  
STANDARD OPERATING PROCEDURES/GUIDELINES

**TITLE:** Hazmat Personal Safety

**SECTION/TOPIC:** Hazardous Materials Response Risk

**NUMBER:** 3.4.2.2

**ISSUE DATE:**

**REVISED DATE:**

**PREPARED BY:**

**APPROVED BY:**

X

Preparer

X

Approver

These SOPs/SOGs are based on FEMA guidelines FA-197

#### 1.0 POLICY REFERENCE

CFR

NFPA

NIMS

#### 2.0 PURPOSE

This standard operating procedure/guideline addresses identifying chemical emergencies, incident levels, chemical safety, general precautions for hazardous materials incidents, roadway operations.

#### 3.0 SCOPE

This SOP/SOG pertains to all personnel in this organization.

#### 4.0 DEFINITIONS

These definitions are pertinent to this SOP/SOG.

#### 5.0 PROCEDURES/GUIDELINES & INFORMATION

##### 5.1 Identifying Chemical Emergencies:

The purpose of the contamination reduction procedure is to assure that any potentially harmful or dangerous residues on persons, equipment, or apparatus are confined within the Hot Zone.

SOP Center

Contamination reduction is intended to prevent the spread of contaminants beyond the defined area - particularly to avoid carrying contaminants back to the fire station or to other environments.

All personnel should make every effort to avoid contaminating themselves and equipment.

The specific measures required to decontaminate personnel, equipment, or apparatus will vary with the contaminant, the circumstances, and the level of contamination. These factors must be considered on a case-by case basis within the guidelines described in this procedure.

Command is responsible for assuring that a Decontamination Sector is implemented at incidents which involve a potential decontamination problem. This sector should be assigned to personnel from the Hazardous Incident Response Team. It must be integrated into the management of the Hot Zone.

The Decontamination Sector officer is responsible for determining the most appropriate contamination reduction procedures and managing the contamination reduction process. This should be done in conjunction with advice from the Poison Control Center.

The initial assessment of decontamination requirements must be based upon the specific needs of the situation. This must take into account the specific methods. The assessment will require research and may involve consultation with toxicology resources.

The Decontamination Sector officer must assume that all personnel and equipment leaving the Hot Zone are contaminated. Three courses of action are available:

1. Confirm not-contaminated - using instruments or investigation based on the nature of the situation.
2. Decontaminate (as appropriate to the situation) and release.
3. Retain and package items for removal from the site for disposal or decontamination at a different location.

In all cases the primary objective must be to avoid contaminating anyone or anything beyond the Hot Zone. When in doubt about contamination, decon all affected personnel, equipment, and apparatus.

The Contamination Reduction Corridor should be established within the Warm Zone perimeter adjacent to the entrance/exit (Lobby Control). Personnel, equipment, and apparatus shall not be permitted to leave the Hot Zone without approval from the Decontamination Sector officer.

The contamination reduction area should provide a corridor leading away from the source of

contamination toward the exit (contamination reduction corridor) with stations along the way for the deposit of tools, equipment, protective clothing, and other items. Monitoring personnel and equipment should be appropriately placed along the path. A person traveling along the path should experience a decreasing level of contamination along the way. When showers or spray nozzles are used, adequate space must be provided to avoid contamination of other areas or persons. All contaminated items must remain within the perimeter of the Hot Zone until decontaminated or safely packaged for removal. The Hazardous Materials Sector officer or Decontamination Sector officer will be responsible for supervising proper removal of these items. Personnel should be assigned to inspect persons and/or equipment before they can be released from the Decontamination Area. This inspection may be visual or may involve the use of the monitoring instruments, when available. It must be assumed that items or persons are contaminated, unless their non-contamination can be confirmed.

### **DECONTAMINATION AREA PRECAUTIONS**

During the decontamination process, all personnel working in the Decontamination Area must be adequately protected from contaminants. The Decontamination Sector officer will identify and require the appropriate protective equipment. These individuals and their equipment may also require decontamination after use.

Any runoff or residue from decontamination procedures must be contained within the Hot Zone and retained for proper disposal. Contaminated runoff must not be allowed to spread or escape. Diking may be necessary and should be directed back to the Hot Zone.

### **CONTAMINATED PATIENTS**

Patients in need of medical treatment should be removed from the source of contamination as quickly as possible, but remain within the Hot Zone perimeter. These patients must not be allowed to contaminate further areas or persons. It may be necessary to bring treatment personnel (with adequate protective clothing) into the Hot Zone to deal with these patients, unless they can be rapidly and effectively decontaminated. After decontamination, the patients and treatment personnel may leave the Hot Zone. Most situations will allow for treatment of contaminated patients in a separate treatment area in the Warm Zone adjacent to the Cold Zone.

### **TRANSPORTATION**

Transportation of Immediate patients should not be delayed for complete decontamination. Patients should be quickly treated for life-threatening injuries simultaneously with decontamination efforts. Once treatment is completed and the patient is ready for transport, the patient should be covered and transported. The ambulance should be brought to the Warm Zone perimeter for loading. When feasible, the ambulance should be prepared by draping exposed surfaces with sheets or polyurethane

covers. Patients should be wrapped or covered to lessen off-gassing of the products within the ambulance. Ambulance and treatment personnel may still have to wear protective garments and SCBA while en route.

If it is necessary to transport contaminated patients to medical facilities, the receiving hospital must be notified in advance of the nature of the contamination, in order to make necessary preparations. The ambulance used will be considered contaminated and will have to be decontaminated before being used to transport any non-contaminated persons. Helicopters will not be used for transporting any contaminated patients due to off-gassing effects on the pilot and flight crew.

### **DECONTAMINATED PERSONS**

When persons are decontaminated at a contamination reduction area, they may be released to leave the Warm Zone. This includes Fire Department personnel, other emergency personnel, civilians, and patients. The Decontamination Sector officer will determine when it is appropriate to release custody of protective clothing, personal effects, and equipment after consulting appropriate medical personnel (i.e., health center physician or Poison Control Center physician). The Decontamination Sector officer may release individuals who are substantially decontaminated and direct them to medical facilities for further evaluation or decontamination. Individuals may also be directed to shower, change clothes, or take other secondary decontamination measures.

Fire Department personnel should complete an exposure form. The health center's exposure control officer will initiate contact and follow-up measures.

### **PROTECTIVE EQUIPMENT/PERSONAL EFFECTS**

When feasible, protective clothing and personal effects should be decontaminated and released from the Warm Zone with the individual. If the Decontamination Sector officer determines this is not feasible, these items will be impounded in the Decontamination Area. Personal effects will be carefully guarded by Decontamination Sector personnel until a determination can be made regarding their final disposition.

### **TOOLS AND EQUIPMENT**

The Decontamination Sector officer will determine when tools, equipment, and apparatus may be released from the Hot Zone. No item shall be removed without approval. The Decontamination Sector officer may impound equipment for later evaluation and have it packaged for storage or transportation. This impoundment will be accomplished following the consultation of medical and technical assistance.

### **5.2 Incident Levels:**

**5.3 Chemical Safety:**

**5.4 General Precautions for Hazardous Materials Incidents:**

**5.5 Roadway Operations:**