


## SHELBYVILLE FIRE & RESCUE STANDARD OPERATING PROCEDURES

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### ***Purpose:***

The purpose of this document is to set minimum standards in the area of response, operational coordination, equipment, communications, and training, for hazardous materials incidents the STF responds to

### ***Scope:***

The Shelby Task Force (STF) shall perform hazardous material response utilizing members of Shelby County Fire Departments, EMS, EMA and Shelby County Dispatch.

The STF shall perform any hazardous material operation to the standards set fourth under the Shelby County Emergency Response Plan, OSHA, and NFPA guidelines.

The STF shall operate under the Unified Command System while functioning at all hazardous materials incidents.

The STF shall establish a Safety Officer that works closely with the fire department's on-scene Safety Officer at all incidents. This position is concerned directly with the materials involved and should not replace the Fire Department on-scene Safety Officer.

It should be the policy of the STF to apply the Shelby Task Force Accountability System while working at emergency incidents.

### **Hazardous Materials Level of Response**


Levels based on the potential threat of the material.

1. Potential Life Safety Risk (public and responders)
2. Potential Environmental Impact
3. Potential Evacuations
4. Potential Leak Size
5. Potential for Specialized Personnel (Level A Entry Teams)

### **LEVEL 1**

1. Level 1 is an incident requiring investigative activities and/or mitigation of incidents involving the ***reportable quantity/release of a low potential material.***
  - Small to Medium spill/release.
2. Potential for life safety and environmental impacts are minimal.
3. Public Protection, if needed is localized to the facility and immediate area.

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### LEVEL 2

1. Level 2 is an incident involving the *release of a medium to higher potential material*.
  - Medium to Large spill/release.
2. Potential for life safety and/or environmental impact are **moderate**.
3. Personal Protective Equipment (PPE) other than structural firefighting gear **will** be required.
4. Public protection beyond point of origin. Off-site consequences.

### LEVEL 3

1. Level 3 is an extensive incident involving a *large quantity/release of high potential material and/or extremely hazardous substance [EHS chemical]*.
  - Ammonia
  - Chlorine
  - Fluorine
  - Phenol
2. The potential life safety and/or environmental impact are *severe*.
3. *Evacuation and/or shelter-in-place* may be required to include *mass evacuation and/or shelter-in-place* of a *large area*.
4. Additional resources **will** be requested as necessary to include agencies other than those located in Shelby County.

### IMPORTANT NOTE

1. Regardless of the HAZMAT Level, additional resources are requested as required by the Incident Commander.


### Qualifications

All personnel that are members of the STF shall be certified to the Technician or Operations Level in compliance with OSHA and NFPA standards through a curriculum established by the Command Staff. All team members must attend four of six team trainings annually to maintain member status.

#### **1 Incident Command**

- 1.1 Incident command shall always remain the responsibility of the fire district where the incident originated. Unified command procedures will be implemented when multi agency response is requested. All agencies shall adopt and use the National Incident Management System.
- 1.2 Use of the incident command system should include the use of a command structure in which each leader is responsible for no more than five individuals/tasks whenever practical.
- 1.3 At no time shall a team member arrive on the scene of an emergency unless called for by the Incident Commander.


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### 2 *Callout and Response Groups*

- 2.1 Command Staff members shall respond to all incidents.
- 2.2 The first arriving STF Command Officer will report to the Command Post. If a Safety Officer or Hot Zone Officer arrives before a Command Officer, that Command officer will proceed to Command post until arrival of Command Officer. All other Staff members will stage at the Agency Response Area (ARA)
- 2.3 When STF team members are called to the incident, team members shall report to the ARA upon arrival.
- 2.4 Upon notification, Shelbyville Fire Department will send a unit to tow the Haz Mat 1 Trailer at SCEMA to the scene. Shelby County Fire Department will respond the Haz Mat 2 trailer from Shelby County Fire Station #1.
- 2.5 If needed, the STF Command Officer may request the Incident Commander call for the other team for assistance. (Oldham, Jefferson)
- 2.6 The STF Command Officer shall stay at the Command Post and assist the IC in the Unified Command of the Incident Command System.
- 2.7 If a Safety Officer has not been assigned, First arriving Safety Officer will assume Safety for the operation.
- 2.8 STF Command may assign a Medical Officer, Decontamination Officer, and Hot Zone Officer before entry is made.
- 2.9 Decontamination Officer shall notify Hot Zone Officer when proper Decontamination line is set up and ready for operation.
- 2.10 Hot Zone Officer shall log the following information: Entering member's name, SCBA cylinder pressure, time member goes on air, enters the Hot Zone, exits the Hot Zone and time off air.
- 2.11 When a team enters the Hot Zone, The Hot Zone Officer shall announce this on the assigned operations channel. Additional, the Hot Zone Officer shall advise the entry team at ten (10) minute intervals beginning at the time the entry team goes on air.

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- 2.12 Entry team shall consist of at least two trained Haz-mat technicians. There shall be a backup team that consists of same number of members as Entry team (Example two entry team, two backup; three entry team, three backup).
- 2.13 It shall be the responsibility of the Hot Zone Officer to ensure the back-up team is ready before the entry team is allowed to enter Hot Zone.
- 2.15 The Entry Team Priorities should be as follows:  
**Rescue** of victims should take top priority. The Entry Team should locate and retrieve any viable victims of the incident, using medically accepted triage techniques. An exception to the triage system may be the practice of "First Found, First Out" for victim rescue. Medical treatment in the Hot Zone may be limited.
- Reconnaissance** (recon) is the next priority; the Entry Team should report their findings by radio to the Hot Zone Officer upon finding any information on product, quantity, and vessel condition/damage. The Entry Team shall attempt to recover shipping documents, and place these documents in a zip-lock bag, which allows decontamination upon return to the Warm Zone. If victims are encountered during recon operations, the Entry Team will revert back to the Rescue mode. Upon completion of the Reconnaissance assignment, if air supply is sufficient to do so, the Entry Team shall begin Patching Operations. Otherwise, the Entry team shall exit the Warm Zone through the Responder Decontamination line.
- 2.16 **Patching/Plugging** may consist of any patching, plugging or sealing of pipes, tanks, and valves or diking of releases only if release presents an immediate or future risk to human life, or; property if the destruction of the property would endanger human life. It is felt that any other placement of STF personnel in a control mode for the preservation of property is best left to the services of a spill contractor, who is in the business of property spill control. This policy shall be evaluated on an individual incident basis, and may be altered if necessary by the STF Commander Officer.
- 2.17 If at any time a team member suit is breached and contaminants are present, the responder should return to Decontamination line and exit the hot zone.

### 3 *Command Assignments and Roles of STF*

- 3.1 Command Officer - The Incident Commander of the AHJ shall be in charge of the overall incident. The STF should assist the IC by providing a Command Officer for the hazardous materials incident.
- 3.2 The STF Command Officer will be the liaison to the IC for the incident, and shall be in charge of all STF members at the scene.

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- 3.3 The STF Command Officer should assign personnel for all functional positions related to the HAZMAT operations.
- 3.4 STF Safety Officer - will start the Site Safety Plan and maintain that report throughout the incident.
- 3.5 The STF Safety officer will assign a member of the STF to coordinate with the fire department's Accountability Officer.
- 3.6 The STF Safety Officer shall ensure that STF members working in the Hot Zone have been properly trained for the task they have been assigned.
- 3.7 STF Hot Zone Officer - should manage the actions of entry teams into the Hot Zone, including inspection of PPE of personnel prior to entry, selection of control devices and strategy and tactics of Hot Zone activities.
- 4** ***On Scene Assignments Roles of STF***
- 4.1 STF Medical Surveillance Officer – Shall monitor the Hot Zone Entry, and Decontamination personnel before and after their entry into PPE. The Medical Surveillance Officer may deny personnel to wear PPE based on their findings. A worksheet should be provided for use.
- 4.2 STF Decontamination Officer - Shall manage the setup and operation of the decontamination line.
- 4.3 STF Research Officer - Shall gather information on proper PPE to be used, and to research information specific to the material(s) involved in the incident.
- 5** ***Personal Protective Equipment***
- 5.1 Levels of Personal Protective Equipment shall be chosen as follows, using EPA guidelines:
- LEVEL A* - If the product involved is unknown, or if splash contamination is suspected, or if the material poses a high skin hazard risk, or if entry involves a confined space, or if in the opinion of the Entry Team/Command Officer, maximum protection is warranted; then Level A shall be worn
- LEVEL B* - If the product has been identified, and has a high respiratory effect but low skin effect, or the atmosphere is less than 19.5% oxygen, or IDLH levels of a respiratory hazard chemical are present, or the chemical does not meet the criteria of air purifying respirators; then Level B protection shall be worn.

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*LEVEL C* - If the product has been identified, and the product will not adversely affect the skin, and an air-purifying respirator is available that will filter the product, and the % of product is below IDLH, and the atmospheric oxygen level is above 19.5%; then Level C protection shall be worn.

*LEVEL D* - If in a safe area, and no product contact is anticipated, Level D protection shall be worn.

5.2 If the product involved has a fire hazard, then consideration should be made for flash protection.

### **6** *Emergency Communications*

6.1 The Safety Officer shall have an air horn immediately available for use if an emergency arises.

6.2 Emergency Signals are as follows:

One blast of the air horn:	<b>STOP</b>
Two blasts of the horn:	<b>GO</b>
Three blasts of the horn:	<b>BACK OUT</b>
<b>Continuous 15 second blast:</b>	<b>EMERGENCY EVECUCATION</b>

### *Hand Signals*

6.3 The following hand signals shall be used in the event of radio failure:

Hand on top of head	<b>OK</b>
Arm across chest	<b>Low On Air</b>
Hand across throat	<b>Out Of Air</b>
Arms up and waving	<b>Need Help</b>
Thumbs up	<b>Yes/OK</b>
Thumbs down	<b>No</b>


### **7** *Scene Operations*

7.1 The tasks of the STF at a Hazardous Materials incident include: Decontamination, Hot Zone entry, to include hazard identification, reconnaissance, victim retrieval, diking, patching, plugging of vessels, pipes and other actions necessary to control the incident. Other tasks may arise at the request of the Incident Commander or other agencies due to the sometimes-unusual circumstances found at Hazardous Materials incidents. The on site STF Command Officer will review any operation for approval before the start of that operation.

7.2 Responder Decontamination shall be in place prior to Hot Zone entry.



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- 7.3 An ALS ambulance shall be on site and dedicated to the entry personnel prior to Hot Zone entry.
- 7.4 Control Zones shall be put in place by the STF Command.
- 7.5 At the discretion of the Hot Zone officer, the Backup Team may be dressed with air disconnected and suits open to minimize heat stress and conserve air.
- 7.6 Entry Team time in the Hot Zone shall be limited to twenty (20) minutes of time, with a extension to thirty (30) minutes at the discretion of the STF Safety and Hot Zone Officers.
- 7.7 Control Zones

*HOT ZONE* - Area immediately surrounding the incident, which extends far enough to prevent adverse effects from a release to personnel outside the

zone. Access into the Hot Zone should be limited to those personnel necessary to control the incident and who are properly trained to do so.

*WARM ZONE* - Area where personnel and equipment decontamination, and Hot Zone support takes place. The zone includes control points for the entry/exit corridors. Access to the Warm Zone should be limited to those personnel necessary for support operations.

*COLD ZONE* - Area that contains the Command Post and other support functions to control the incident. A Support Zone should be established in this area and be limited too necessary personnel involved in the incident operations.

## 8 *Decontamination*

- 8.1 Decontamination has three categories; Responder, victim, and equipment.
- 8.2 The Decontamination line shall be easily identified.
- 8.3 Assistance from Health Department, EMS and Fire Department personnel trained to the Operations Level may be used to staff the decontamination line.
- 8.4 The Decontamination line shall be set up according with team policies and procedures. This may be altered with the approval of the Unified Command team.
- 8.5 Diking shall be in place to control runoff.

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- 8.6 Members of decontamination line shall wear PPE equal to or one level less than entry/backup team.
- 8.7 If adequate team members allow, two Decontamination team members should be placed at each station.
- 8.8 In the event of the collapse of a Responder while in the Hot Zone, the Hot Zone Officer should follow the outline of the Responder Rescue Flow sheet
- 8.9 Patient/Victim Decon line, if needed should be established.
- 8.10 Once patient/victim has been decontaminated, care will be transferred to EMS.

### ***9 Medical Support at Haz-Mats***

- 9.1 An ALS transport ambulance will be dedicated to the Haz Mat entry team. Additional ambulances are utilized at this discretion of the EMS Commander.
- 9.2 EMT and/or paramedic personnel may assist in rehabilitation sector operations.
- 9.3 SCEMS will provide and maintain SOG's in Hazardous Materials Operations.

### ***10 Team Positions***

#### ***10.1 Hazardous Materials Team Leader***


Hazardous Materials Team Leaders are those who respond to releases or potential releases for the purpose of leading the team and provide expertise to the IC of the effective fire districts. The Leaders will fill the following roles when responding to area incidents. Hazmat Leader, Hazmat Safety, Hot zone officer, research officer, team accountability, decontamination officer, finance officer, logistics officer and other needed positions.

They are required to:

1. Respond on an emergency basis to all releases they are requested for
2. Be able to function in an assigned role in the incident command system
3. Know how to read shipping papers, MSDS, DOT guidebook and other research material
4. Understand how to complete incident safety plan
5. Be able to communicate via radio, phone, and computer



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### 10.2 *Hazardous Materials Technician*

Hazardous materials technicians (HMT) are those who respond to releases or potential releases for the purpose of stopping the release. An HMT is trained in the use of personal protective equipment, an HMT is also trained in how to read labels and make use of available resource material and test kits to identify unknown materials. An HMT is trained in spill containment, over packing of leaking drums, "lab-packing" of hazardous materials into drums and other containers, and etc.

They are required to:

1. Know how to implement the employer's emergency response plan
2. Know how to identify materials by using field survey instruments
3. Be able to function in an assigned role in the incident command system
4. Know how to select and use specialized personal protective equipment
5. Understand hazard and risk assessment techniques
6. Be able to perform advanced control and containment operations within the resources and equipment available
7. Understand and implement decontamination procedures

### 10.3 *Hazardous Materials Specialist*

Hazardous materials specialists (HMS) are individuals who respond with and provide support to hazardous materials technicians. Their duties parallel those of the hazardous materials technician, however their duties require a more directed or specific knowledge of the various substances they may be called upon to contain. Those personnel seeking certification by their employers to the HazMat Specialist Level must first satisfy the initial training requirements at the HazMat Technician competency.

### 11. *Qualifications to be an active team member*

1. Be a member in good standing and with approval of the agency Chief or Director of a Shelby County Fire District, SCEMS, SCEMA, Dispatch or Law Enforcement.
2. Show proof of current technician certification
3. Complete team application
4. Must have attended a 40 hour Shelby Task Force or equivalency (approved by HazMat Leadership Team) Technician Program or a 16 hours Haz Mat Ops Program.
5. Be fit tested annually to wear the appropriate type of respiratory protection. (Scott and Survivair systems)
6. Attend four of six STF team trainings annually.
7. Meet NFPA and OSHA medical and physical standards.