

# Alton Fire & Rescue Department Standard Operating Guidelines (SOG)

SOG 2.3.3 Response to Hazardous Materials Incidents (Reference SOP 2.3.3)

**PURPOSE:** To ensure safe responses to incidents involving the release or potential release of any hazardous material.

**SCOPE:** All incidents involving hazardous materials

**SPECIFICS:**

- The Department shall respond to incidents for the purpose of protecting nearby persons, property, or the environment from the effects of the release of hazardous materials.
- The Department's mission is:
  - to contain the release of hazardous materials from a safe distance,
  - to keep it from spreading and prevent exposures.

**DATE:** Approved 8/28/2006 Revised November 24, 2009

# Alton Fire & Rescue Department

## Standard Operating Procedures (SOP)

SOP 2.3.3 Response to Hazardous Materials Incidents

**PURPOSE:** To ensure safe responses to incidents involving the release or potential release of any hazardous material.

**SCOPE:** All incidents involving hazardous materials

**SPECIFICS:**

### Incident Responses:

1. Reduced Response – Closest Engine and additional apparatus as needed for the following:
  - a. Natural/LP gas odors – outside a building
  - b. Gasoline spills No fire – Outside less than 20 gallons
  - c. Fuel Oil/Petroleum Spill – Outside less than 55 gallons
  - d. Unknown odor outside a building
  - e. Carbon Monoxide Alarm
2. Full Response – Closest Engine, Rescue, 1 Ambulance and additional apparatus as needed for the following:
  - a. Natural/LP gas leak – inside or outside
  - b. Natural/LP gas Fire – inside or outside
  - c. Gasoline spill – outside over 20 gallons
  - d. Gasoline spill – inside a building
  - e. Fuel Oil/Petroleum spill – outside over 55 gallons
  - f. Unknown odor – inside a building
  - g. Chemical Release – any chemical not listed above
  - h. Chemical Release – fixed facility moving off site
  - i. Confined space/below grade rescue
  - j. Any fire involving hazardous chemicals
3. Incident Command (IC) shall notify the Communications Center of any hazardous materials incident.
4. Any member receiving a direct report at any fire station should obtain as much information as possible and notify the Communications Center, so the appropriate response can be dispatched.

### Initial Response

The Departments responses to a confirmed or suspected hazardous materials incident shall follow guideline established for hazardous materials incident management.

a. The first arriving fire department apparatus/personnel shall stop at least 200 feet prior to the reported incident address. Unless specifically directed to by the I.C. All other units should stage.

b. No fire department personnel shall approach closer to the scene until an evaluation determines that the approach is safe to make.

c. No fire department personnel will enter any vapor cloud, spilled or pooled material, enclosed/confined space or otherwise contaminated area until the chemical and its hazards have been identified and it can be shown the proper protective clothing is available and in use.

### Site Management

- As soon as practical the IC shall establish control zones designated as follows to provide for worker safety.

- Hot Zone
  - The areas of product release where chemical is present or suspected of being present.
  - This zone may initially be established visually by the first arriving apparatus. The zone may be redefined using metering, monitoring or Site Specific Pre-Plans.
  - Initially, any visible vapor cloud, spilled or pooled material, enclosed or confined spaces, shall be considered as the Hot Zone.
- Warm Zone
  - The area outside the Hot zone. This area is not considered contaminated. However, it provides a buffer zone around the hot zone should a wind shift occur.
  - The decontamination lone should be located in this area. Only those personnel wearing full structural fire fighters protective clothing and S.C.B.A. may operate in this area.
- Cold Zone
  - The outer most area at the scene. This area is considered as non-contaminated.
  - The command post, staging area, rehab, EMS treatment area, and other support functions should be located in this area.

- The IC shall evaluate the situation with guidance references, levels of response, and determine the incident level. The level shall be reported to all members and the Communications Center who shall make the appropriate notifications.

-Any activity required to control the product/situation or to perform a rescue. Shall be conducted using the buddy system. All teams shall consist of a minimum of two (2) members.

- When any team is involved in any activity in a hazardous area, a back-up team of at least two (2) members shall stand-by to provide for rescue should the initial team experience problems.
- If the I.C. determines that additional resources/personnel will be required, the next level of staging area should be designated.

#### Product Identification/Risk Assessment

- The I.C. shall use all available means to identify the chemical involved before allowing personnel to work in areas where contamination could occur.
- The I.C. should consider the following information to assist in identification:
  1. Occupancy/Location
  2. Container Shapes
  3. Markings/Colors
  4. Placards/Labels
  5. Shipping Papers/MSDS's
  6. Metering/Monitoring
- The IC shall determine the physical and health hazards of the chemicals involved and determine the appropriate level of protective clothing and respiratory protection.

#### Protective Clothing

- All members responding to an incident involving the release of or potential release of hazardous chemicals, shall don and wear full protective clothing that has been issued to them.

##### Full Protective Clothing

- a. Helmet
  - b. hood
  - c. Bunker Coat
  - d. Bunker Pants
  - e. Gloves
  - f. Boots
- Any member responding to an incident presenting an inhalation or potential for inhalation hazard, shall wear S.C.B.A. until such time as the IC determines, through the use of appropriate air monitoring equipment, that a lower level of respiratory protection will not result in hazardous exposure.
  - Access to the Hot Zone shall be limited to those personnel who are wearing appropriate Protective Clothing.

#### Product Control

- Members shall attempt to confine chemicals to the smallest area possible using defensive techniques. Defensive techniques include:

1. Diking
2. Damming
3. Diversion
4. Vapor Suppression
5. Vapor Dispersion

- With the exception of Incidental spills of gasoline or fuel or incidental releases of natural/LP gas, members of the department shall not attempt any aggressive actions or make a close approach to a leaking container for the purpose of plugging or stopping the leak.
- Response to the release of gasoline/fuel oil/petroleum products should follow procedure set forth in other SOG/SOPs
- Response to the release of natural/LP gas products shall follow procedures set forth in other SOG/SOPs.
- In cases where aggressive action is required in order to perform a rescue, the IC shall utilize all appropriate action (i.e. mechanical ventilation, fog streams, etc.) to reduce the concentration of the hazardous atmosphere. The IC shall provide for constant air monitoring during the operations.
- The IC should ensure that the control method used is compatible with the chemical released:
  1. Water reactivity
  2. Appropriate foam selection
  3. Compatibility of diking material
- The Department is not responsible for clean-up activities at the scene of a hazardous chemical release. Clean up activities are the responsibility of the parties causing the spill and the property owner, and shall be accomplished by a licensed clean-up contractor under the guidance of E.P.A. The E.P.A. shall make all notifications for clean-up.

#### Decontamination Activity

- Basic decontamination procedure should be instituted anytime there is a potential for exposure to a hazardous atmosphere or there are victims who may have been exposed.
- No member of the Department shall leave the scene if a chemical release without proper decontamination if there is the possibility that there was exposure to chemical products.
- Contaminated victims should not be released for ambulance transport until appropriate decontamination has been performed.
- The IC shall appoint a "DECON" officer to supervise the set-up and operation of the decontamination line.

#### Termination Activity

- Following the emergency phase of a hazardous chemical emergency/release, the IC shall ensure that the following activities are completed:
  1. On-Scene Debriefing
    - a. All responders shall be advised of the chemicals involved and symptoms of exposure
    - b. Any damaged equipment shall be documented.

## 2. Medical Monitoring

- a. Any personnel with the possible or actual chemical exposure should have their medical condition evaluated.

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