



## MASON COUNTY FIRE DISTRICT #4

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TITLE: HAZARDOUS MATERIALS RESPONSE

CHAPTER: 4000 NUMBER: 4070 DATE: 10-07-08

APPROVED: Signature on file Bob Burbridge, Chief

1. PURPOSE: To identify the Washington State Patrol or the Squaxin Tribe as the Area Commander for hazardous materials responses and to provide minimum guidelines necessary to handle the incident safely.
2. RESPONSIBILITIES: It is the responsibility of each member of the Mason County Fire District #4 to ensure they are in compliance with this guideline. It is the responsibility of the Chief to enforce this guideline.
3. GUIDELINE:
  - 3.1 Mason County Fire District #4 shall be known as the First Responder to any hazardous materials incident. The first responding unit arriving on the scene from Mason County Fire District #4 shall assume Command until relieved by the on-duty Command Officer from the Washington State Patrol or tribal official. Area or unified command may be used in the incident.

If the incident requires response other than First Responder level, a Chief Officer shall be notified.

A hazardous materials incident is any incident involving a substance or material, including radioactive material, which when uncontrolled can be harmful to people, animals, property or the environment. In all instances, the Washington State District of Ecology or Mason County Health District should be notified.

### 3.2 Operations

All operations shall be addressed on two levels: The fire district first responders to the incident, and notification to MACECOM requesting mutual aid with a Hazardous Materials Response Team and all required authorities, depending on the level of the incident. MACECOM can make all necessary calls relative to the incident.

All hazardous materials operations should be conducted in accordance with the following seven-step incident management system procedure.

- A. Identify, Isolate and Deny entry.
- B. Attempt to determine the type of product involved through the Recognition and Identification Process. This is one of the most critical duties of the On-Scene



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Officer, as this process will help determine which path the remainder of the incident will follow. Attempt to identify the product or shipper (using binoculars if necessary) through placards, ID numbers, the Emergency Response Guidebook.

- C. Evaluate hazards and risks.
- D. Notify MACECOM and request mutual aid with a Hazardous Materials Response Team and all required authorities, depending on the level of the incident. MACECOM can make all necessary calls relative to the incident.
- E. Coordinate information and resources from the command post.
- F. Decontaminate (only if trained to do so). Decontamination trailer is located at station 5-3.
- G. Terminate (debrief, document, critique).

### **3.3 Hazardous Materials Emergencies**

- A. The rules of this guideline shall apply with respect to any and all activities, operations and equipment involved in providing fire protection and basic life support system
- B. Training for response involving hazardous substances should meet competencies set forth in NFPA 472 for the responder level. The training should include recognition and operation procedures at the incident scene. Personnel that have not been trained at the operations level shall not participate in offensive actions.
- C. Guidelines for handling emergency incidents are as follows:
  - 1) The Command Officer responding to an incident involving hazardous substance or waste shall establish an "Incident Command System" (ICS). All emergency responders and their communications should be coordinated through the Incident Area Commander or Operations Officer.
  - 2) The Incident Commander should identify, to the extent possible, all hazardous substances or conditions present and begin a Hazardous Materials Notification Worksheet.
  - 3) Based on the hazardous substance and/or conditions present, the Incident Commander may request mutual aid for a Hazardous Materials Response Team through MACECOM. The situation may warrant defensive action by the first responders, and the only action taken would be to deny entry to the scene until the Hazardous Materials Special Operations Response personnel arrive.
  - 4) Members engaged in emergency response and exposed to hazardous substances presenting an inhalation hazard or potential inhalation hazard shall wear positive pressure self-contained breathing apparatus while engaged in emergency response, until such time that the individual in charge of the ICS



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- determines through the use of air monitoring that a decreased level of respiratory protection will not result in hazardous exposures to members.
- 5) The Incident Commander should limit the number of personnel at the emergency to those who are actively performing emergency operations. The buddy system, in groups of two or more, shall be used for operations in any hazardous atmosphere. No person shall operate beyond the level of their training and shall not be asked to do so.
  - 6) Back-up staff shall stand by with equipment ready to provide assistance or rescue. ALS shall be on scene with transportation capability before operations begin.
  - 7) The Incident Commander **SHALL** designate a Safety Officer, who is knowledgeable in firefighting or rescue operations and hazardous substances, with the specific responsibility to identify and evaluate hazards, direct safety operations, and complete a Site Safety Plan.
  - 8) The Incident Commander should consider calling out the County “Command Assistance Team” (CAT) for incident management assistance.
  - 9) When activities are judged by the Safety Officer to be unsafe and/or involve imminent danger, the Safety Officer shall have the authority to alter, suspend, or terminate those activities. The Safety Officer shall inform the Incident Commander of all actions taken.
  - 10) After the emergency operation is terminated, the Incident Commander should implement decontamination procedures. Decontamination shall be in place and maintained prior to any offensive action by the entry team. This should be coordinated by the Operations Officer and approved by the Safety Officer. Only trained personnel shall perform decontamination.

### **3.4 Incident Commander Duties**

- A. Recognize the hazardous condition and advise MACECOM of the hazardous materials incident.
- B. Establish operations uphill, upwind, upstream, and a safe distance from the emergency scene.
- C. Establish a protected area for personnel away from adverse conditions.
- D. Establish site security and control.
- E. Define evacuation routes and procedures for civilians and emergency staff.
- F. Notify all appropriate local, state, and federal agencies. Initiate the Mason County Emergency Plan. MACECOM can coordinate all necessary agencies. The Department of Emergency Management will also assist you.



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- G. Consider assigning an Operations Officer and other ICS positions as needed.
- H. Complete the Hazardous Materials Response Packet forms as required for the level of the incident, or assign to the contract agency to complete their response forms.
- I. Contact the National Response Center and/or Chemtrek if the product exceeds reportable quantity.
- J. Attempt to identify the spiller (company name) and advise of situation found. Request they contact the National Response Center.

### **3.5 Incident Command Process**

- A. The Incident Commander should assign one or more staff from their agency or other responding agencies as information and data recorder to document the activities.
- B. The Incident Commander should establish a Technical Advisory Board (unified command), in conjunction with the appropriate local, state, and federal agencies, to define the precise roles and to offer technical recommendations on response action to the emergency. Assignments shall be made for:
  - 1) Personal Injury
  - 2) Fire Protection
  - 3) Traffic
  - 4) Environmental Pollution
- C. The Fire Officer at this meeting may accept that the fire District no longer is the exclusive authority in managing the hazardous material emergency.
- D. The Incident Commander should determine individual or unified command, based on the following criteria:
  - 1) Which agencies have a legal, financial, and/or political interest before, during, and after the emergency.
  - 2) The contribution that each agency can make in expertise and resources.
  - 3) How these interests, short term and long term, fit the priorities necessary to control the Hazardous Materials Incident.
- E. When establishing the lead organization, the Incident Commander will determine:
  - 1) Who will be in charge.
  - 2) Will area or unified command be used.
  - 3) What will be the chain of command.
  - 4) Who will maintain the command post.
  - 5) Who will have advisory roles.
  - 6) Who will make technical recommendations to the lead agency.



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- 7) How the participants will keep each other informed.
  - 8) Who will have veto power.
- F. Incidents involving hazardous materials may have tremendous impact in terms of the immediate danger and long term environmental damage, due to the nature of some materials.
- G. The Fire District's critical role will be to provide public safety and the safety of the firefighter. The protection of the environment will follow.

### **3.6 Rehabilitation**

EMS staff will be utilized to perform appropriate physical evaluations and establish an appropriate level of care during and subsequent to the event.

A. A rehabilitation station shall be established by the incident commander when the environment, workload, and/or atmospheric temperature indicates the probability of injury or temperature-related illness to staff, i.e., working fires, hazmat incidents when encapsulating suits are worn, etc.

B. EMS staff shall perform the following functions:

1) The first-in medic or aid unit may be assigned to the rehab/staging area to provide mental and physical evaluation for those on-scene firefighters who may be returned to the staging area. Firefighters requiring medical intervention are normally transferred to the treatment unit

2) The second medic or aid unit may be utilized as a treatment unit. Treatment of patients is performed via current EMS guidelines and protocols.

C. The rehab unit will normally be located adjacent to or close proximity to the staging area. Rehab and staging should be separated during multiple alarm incidents or under special circumstances when such a separation is deemed appropriate by the incident commander or staging officer. In the event a rehab officer is required, he/she may also be designated along with the staging officer. The Incident Commander may establish multiple rehab sites during hazardous materials or large-scale incidents.

D. Staff members may be released from rehab after the incident commander has conferred with the staging officer. The Incident Commander should confer with both staging and rehab officers when the rehab unit has recommended that staff members not be released. The rehab officer shall see to it that all staff reporting to rehab from



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tactical operations are evaluated and documented on the rehab tracking form. Unit strength and designator shall also be recorded on this form.

E. All spare SCBA bottles will be brought to the rehab/staging area. Fire line tape should be used when necessary to identify and direct flow of staff through rehab.

F. The following guidelines may be utilized for establishing the mental and physical condition of firefighters returning from tactical operations.

1) The staff member will be asked to answer the following:

- a. Mental status
- b. Name
- c. Assignment (including unit number)
- d. Team members' names
- e. Date
- f. Location and purpose

2) Physical examination

a. Core temperature:

A core temperature of 101 degrees Fahrenheit or over may require transfer of the staff member to the treatment area for immediate instigation of cooling techniques, i.e., removal of clothing, cooling spray or cooling towel, IV fluids such as normal saline for dehydration, and cardiac monitoring.

b. Pulse:

A pulse greater than 160 may require transfer to the treatment unit for further evaluation.

c. Blood Pressure:

A systolic blood pressure of less than 100 and/or a diastolic blood pressure greater than 90 may require immediate transfer to the treatment area.

A systolic blood pressure of over 160 and/or a diastolic blood pressure over 90 may require transfer to the treatment area.

d. The employee's name shall not be recorded. A number is to be assigned to each person instead.

e. Cerebellar examination:

1. Romberg - feet together standing erect, facing forward.
2. Finger to nose.
- 3 Tandem gait (heel-to-toe walking)



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f. Initial rehab screening will include at least a mental status and heart rate check, with documentation of findings recorded on the rehab tracking form.

1) Ventilation

a. Removal of personal protective equipment should be considered in order to allow the body's temperature-regulating mechanism to function properly. The duration of the ventilation process will depend upon workload and atmospheric air temperatures.

b. The use of tarps for shade and electric fans to provide airflow may be necessary during hot weather.

4) Fluid Replacement

Staff members are urged to drink one liter of water or more per hour in order to replace fluids lost due to dehydration. After one hour, electrolyte additives should be added to the water source.

Caffeinated beverages should be avoided during the emergency incident due to their diuretic affects. At the conclusion of the incident, some members may wish to consume caffeinated beverages.

G. Upon arrival at staging from the operations area, the company officer and team leaders shall:

- 1) Report the unit designator and staffing level to the recorder.
- 2) Notify the rehab officer of any possible heat illness, burns, and or injuries.
- 3) Assure that the unit members participate in the rehabilitation process, if necessary.
- 4) Replace air cylinders and report for reassignment.
- 5) Keep the unit together at all times unless specifically ordered otherwise.

Subsequent to the incident, the rehab officer shall review the data on the rehab tracking form with the Incident Commander.

### 3.7 Decontamination (Contamination Reduction)

#### 3.8

##### A. Decontamination Plan:

At every incident involving Hazardous Materials (to include blood and body fluids), there is a possibility that response personnel and their equipment may become contaminated. The contaminant poses a threat, not only to the persons contaminated, but to other personnel who may subsequently have contact with them or the equipment. (Only trained personnel shall perform decontamination, with the exception of gross decontamination.)



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### **B. Personal Protective Equipment:**

Before personal protective equipment is removed, it should be decontaminated. During doffing of personal protective equipment, the clothing should be removed in such a manner that the outside surfaces do not touch or come in contact with the wearer. A log of personal equipment used during the incident should be maintained. Personnel wearing disposable protective equipment should go through the decontamination process, and the disposable protective equipment should be disposed of in accordance with established procedures.

### **C. Decontamination:**

Decontamination consists of removing the contaminants by chemical or physical processes. The conservative action is always to assume contamination has occurred and to implement a thorough, technically sound decontamination procedure until it is determined or judged to be unnecessary.

Procedures for all phases of decontamination must be developed and implemented to reduce the possibility of contamination to personnel and equipment. Assuming protective equipment is grossly contaminated, use appropriate decontamination methods for the chemicals and/or contaminants encountered.

Outer clothing should be decontaminated prior to removal. The outer articles of clothing, after removal, should be placed in red plastic bags for later additional decontamination, cleaning, and/or inspection. In some cases, they may have to be over packed into containers for proper disposal. Water or other solutions used for washing or rinsing may have to be containerized and analyzed prior to disposal.

Initial procedures should be upgraded or downgraded as additional information is obtained concerning the type of hazardous materials involved, the degree of hazard, and the probability of exposure of response personnel. If an exposure should occur, be sure to notify your immediate supervisor and follow up with an exposure form.

### **D. Decontaminating Solutions:**

Using solutions containing chemicals to alter or change contaminants to less hazardous materials should only be done after consultation with persons experienced and familiar with the hazards involved. The use of detergent, water-washing solutions is more prevalent, but its effectiveness against certain contaminants may be low. It is less risky, however, than using chemical solutions.



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### **E. Decontamination of Equipment:**

Many types of equipment are very difficult to decontaminate and may have to be discarded as hazardous wastes. Whenever possible, other pieces of small equipment should be disposable or made of nonporous material. Monitoring instruments and some types of sampling equipment can be placed in plastic bags (with only the detecting element exposed) to minimize potential contamination problems.

Large items of equipment, such as vehicles and trucks, should be subjected to decontamination by high-pressure water washes, steam, or other special solutions. Water or other solutions used for washing or rinsing may have to be contained, collected, containerized and analyzed prior to disposal. Consultation with appropriate sources should be utilized to determine proper decontamination procedures.

### **F. Decontamination Team (Special Operations Team):**

Personnel assigned to the decontamination team should wear an appropriate level of personal protective equipment, including self-contained breathing apparatus and may require decontamination themselves.

Whenever possible and based on the circumstances presented, every effort shall be made to preserve the privacy of any person whose decontamination and/or treatment requires the removal of any and all clothing.

Under no circumstances shall anything contaminated leave the scene without approval from the Incident Commander. A decision for proper decontamination and/or disposal of contaminated materials must be evaluated.

The Mason County Fire District #4 should not participate in any hazardous waste cleanup.

## **4 DEFINITIONS**

Confinement:	Procedures taken to keep a material in a defined local area.
Containment:	Procedures taken to keep a material in its container.
Contaminant/ Contamination:	A substance or process that poses a threat to life, health or the environment.
Control:	The procedures, techniques and methods used in the mitigation of a hazardous materials incident, including containment, extinguishment and confinement.



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**Control Zones:** The designation of areas at a hazardous materials incident based upon the degree of hazard. Many terms are used to describe the zones involved in a hazardous materials incident. For purposes of this standard, the zones shall be designated as hot, warm and cold.

**Decontamination (Contamination Reduction):**

The physical and/or chemical process of reducing and preventing the spread of contamination from persons and equipment used at a hazardous materials incident.

**Environmental Hazard:** A condition capable of posing an unreasonable risk to air, water or soil quality and to plants or wildlife.

**Hazardous Material:** A substance (gas, liquid, or solid) capable of creating harm to people, property and the environment. Bombs and explosives will be referred to the Washington State Patrol Explosives Unit.

**Incident:** The release or potential release of a hazardous material into the environment.

**Incident Command System:**

An organized system of roles, responsibilities, and standard operating procedures used to manage and direct emergency scene operations.

**Incident Commander:** The person responsible for all decisions relating to the management of the incident. The Incident Commander is in charge at the incident.

**Interlocal Agreement:** An outside Government Agency which the Mason County Fire District #4 has contracted with for Hazardous Materials Special Operations, known as the Yakima Fire District Haz-Mat team.

**Mitigation:** Actions taken to prevent or reduce product loss, property damage, human injury or death due to the release or potential release of a hazardous material.

**Personnel Protective Clothing Equipment:**

The equipment to shield or isolate the person from the chemical, physical and thermal hazards that may be encountered at a hazardous materials incident.



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Recognition and Identification (R&I):

The process of recognizing the presence of hazardous materials and identifying them, using specific sources of information.

Response:

That portion of incident management in which personnel are involved in controlling a hazardous materials incident.

Special Operations Team: The Washington State Patrol, Department of Emergency Management, and the Military may all be resources for provide Special operations Teams.