

Procedure: Hazardous Materials Medical Support and Rehabilitation Functions

HAZARDOUS MATERIALS MEDICAL SUPPORT

Purpose:

This response procedure requires that a medical support function be designated to the Hazardous Materials Group during all operations within potentially IDLH environments. The role of this group will be to provide for the medical needs of operating HazMat group personnel including:

- Pre-Entry Medical Exam
- Post-Entry Medical Exam
- Rehab
- Medical Emergencies

In the Florida ICS Field Operations Guide the medical support function is provided by the Medical Unit found in the Logistics Section of the ICS structure. However, more commonly in incidents of smaller magnitude, the medical support function is found within the hazardous materials group and reports directly to the HazMat Group Supervisor.

Capabilities and Check-In

HazMat Medical Support shall consist of at least Advance Life Support (ALS)/Toxicological (HazMat Medic or ToxMedic) personnel, equipment and transport capabilities. After checking in with command, the HazMat Medical Support Leader shall report directly to HazMat Group Supervisor.

Location

The HazMat Medical Support Group will generally be located on the cold side of the decontamination corridor. Depending upon the size and complexity of the event, multiple support units may need to be designated.

Informational Needs

Upon assignment, the HazMat Medical Support Leader shall obtain the following incident specific information from available resources:

- Incident overview including current situation, current operational objectives and any injuries or exposures to operating personnel
- Identity of products involved
- Signs and symptoms of exposure
- Number of personnel operating in the HazMat Group
- Appropriate treatment modalities to include appropriate decontamination procedures and medical treatment protocols
- Necessary treatment kits (if available)

Notification Procedures

The HazMat Medical Support Leader shall contact medical control in accordance with their agency policy and advise area receiving facilities of the current situation. If the chemical(s) involved in the incident are known; contact and advise the regional poison control center of the incident and advise them of providing pertinent chemical information. This initial notification may occur through the Medical Transportation Group Supervisor or Medical Communications Coordinator if these ICS functions are established (See Florida Incident Field Operations Guide "Multi Casualty" incident model).

Notify the HazMat Group Supervisor when your function is established and is operational.

If conditions warrant, prepare the transport ambulance to carry a patient with potential secondary exposure/contamination risk:

- Maximize operating ventilation system (vents, windows)
- Appropriate PPE (as a minimum of gowns, gloves and full face-shield eye protection)
- Plastic covering of surface areas is **only indicated** if emergency decontamination procedures will not effectively eliminate secondary contamination risk, or bodily fluids cannot be contained. Ideally, patients with secondary contamination risks should be thoroughly decontaminated prior to transport.

Liaison to Decontamination and Entry Coordinator

The HazMat Medical Support Leader will liaison directly with the Decontamination and Entry Group Supervisors and provide consultation concerning the medical aspects of their tasks.

Considerations for Pre-Entry Medical Evaluations

The most appropriate time to obtain a baseline medical evaluation is during the physician lead annual medical surveillance process as outlined in 29 CFR 1910.120(q). The requirements of the annual medical surveillance process will follow the EPA Hazardous Waste Site Workbook. Pre-Entry medical screening is best achieved in a routine non-emergent work environment (e.g. start of shift, immediately when assigned as an entry team member, etc.).

Pre-Entry Medical Screening normally involves the following evaluation points:

Ideally, the initial medical screening should be conducted prior to dispatch at start of shift or immediately when assigned as part of the entry team.

- Blood pressure
- Neurological status
- Respiratory status
- Recent medical history (e.g. fevers, diarrhea, recent medications, recent alcohol consumption, preexisting medical issues particularly those which would predispose the individual to increased risk of heat stress or chemical exposure)

Pulse and body weight data should be collected on-site and immediately prior to donning PPE.

- Pulse rate
- Body weight (accurate to +/- 0.25 pounds)

With the exception of pulse rate and pre-entry weight, the collection of these evaluation points during pre-entry stages at an emergency scene has limited operational value and is unnecessarily time consuming.

The monitoring of pre-entry pulse rate and post-entry pulse rate recovery time is the primary indicator of the ability to continue work activities. Pre and Post-entry weight is a direct indication of the team member's hydration status. Using the rule of thumb of oral hydration at 800cc per hour (approximately 1.75 lbs.) the medical officer can predict the amount of time needed to reestablish healthy hydration status. In addition, the entry team buddy systems should be encouraged to monitor each other's mental and physical status during operations.

Medical evaluation is best achieved pre-incident and during the rehabilitation function after each entry mission by gathering appropriate vital signs in accordance with the rehabilitation actions contained in this procedure.

REHABILITATION and ONSITE MEDICAL CARE

PURPOSE

Rehabilitation of HazMat team members will insure that the physical and mental condition of the crews operating at the scene will not deteriorate to the point that jeopardizes the responder's safety or the safety and integrity of the overall operation. This is an important function especially during periods of hot or cold weather and during incidents of long duration.

REHAB SITE

The rehabilitation site shall be located in the cold zone, separate from all other HazMat activities. The Rehab site is an area where crews go for rest, nourishment, comfort, and medical evaluation. The Safety Officer must assure that the rehab area site is properly positioned, away from the hazards of the incident. The HazMat Medical Support Group shall assist in medical screening personnel and provide a climate-controlled area as necessary.

REHAB PROCESS

The HazMat Rehabilitation Group shall be established at all incidents. One member shall be designated "HazMat Rehab Group", and will report directly to the HazMat group / branch Supervisor. A list of personnel assigned to the HazMat Group / Branch should be provided to the HazMat Rehab Group as soon as possible.

HAZMAT REHAB PROCEDURES

- The Safety Officer must monitor the working conditions and order crews to rehab based on climactic as well as conditions of activity.
- Rehabilitation of all entry personnel and decontamination personnel will begin immediately upon exit from the decontamination corridor.
- All personnel will check into the HazMat rehab group and their names and unit designation will be recorded on the Rehab Group Check In/Check Out Form.

- Personnel in rehab will be encouraged to drink ample amounts of fluids – water or electrolytic replacement product.
- After Rehab, personnel by unit, group, or task function, should be returned to a designated area for re-assignment.
- The Rehabilitation Group Individual Worksheet will be used to record Time-in to the rehab sector, blood pressure, pulse readings, and body temperature.
- Qualified personnel may perform initial medical evaluation of blood pressure and pulse. Questionable signs and symptoms shall be referred to the HazMat Medical Support Group Leader.
- All personnel shall have 2 (two) sets of vital signs taken prior to release from rehab. These should be done at fifteen (15) minute intervals.
- If the HazMat Group Officer requires personnel on an emergency basis, Rehab will provide all available, physically able personnel.

ONSITE MEDICAL CARE

If exposure or signs and symptoms of a chemical exposure is noted, the hazmat medic must oversee the treatment of the team member. A HazMat Alert should be completed to both the receiving medical facility and to the Regional Poison Control Center. For appropriate treatment of chemical exposures, access the ***Florida Special Incident Hazardous Materials Medical Protocols (approved by SERC 1/2019)***.

Medical Surveillance Form

Medical Officer _____

Date _____

Incident Name:

Medical Officer:

Level of PPE: A, B, C

Assignment (circle mission) Entry

Entry 2nd Entry/Back Up

Decon

Team Members assigned to specific Mission:

Name _____ ID# _____

Name _____ ID# _____

Name _____ ID# _____

Name _____ ID# _____

Name _____ ID# _____

Name _____ ID# _____

Pre-Entry Vitals Time Take:	Member ID#	#	#	#	#	#	#
Preferred that this data is gathered during morning briefing		Any YES answers may be reason for denial of entry					
Shortness of breath in past 72 hours?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Chest Pain in past 72 hours?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Abdominal pain or nausea in past 72 hours?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
New medication within the last 7 days?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Headache or dizziness in the past 72 hours?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Open sores, rash, or sunburn?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Pregnant?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Alcoholic Beverages in the last 6 hours?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Blood Pressure Systolic >150 or Diastolic >100?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Respirations <24?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Temp out of norm? Norm=97.0 to 99.5 F		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
These are recorded prior to donning PPE							
Resting Pulse of >100		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Weight (record value)							
Masimo Rainbow provided CO level? (record value)							
Post-Entry Vitals Time taken:							
Shortness of breath since donning PPE?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Chest Pain since donning PPE?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Abdominal pain or nausea since donning PPE?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Headache or dizziness since donning PPE?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Any problems encountered while in PPE?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Any possibility of contamination?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Blood Pressure Systolic >150 or Diastolic >100?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Respirations <24?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Temp out of norm? Norm=97.0 to 99.5 F		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Resting Pulse of >100		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Weight (record value)							
Rainbow provided CO level? (record value)							
Post-Entry Vitals 15 minutes later Time taken:							
Blood Pressure Systolic >150 or Diastolic >100?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Respirations <24?		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Temp out of norm? Norm=97.0 to 99.5 F		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Resting Pulse of >100		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Weight (record value)							
Rainbow provided CO level? (record value)							

Medical Release to re-enter or returns to duty: HazMat Medic Signature: _____