

## Confined Space Rescue Team EMS Sector ( Ambulance)

### Roles and Responsibilities

- 1) Establish a safe and secure area for Confined Space Rescue Team members.
- 2) Contact Operations Sector:
  - a) obtain a copy of the MSDS from Operations or Safety Sectors.
  - b) make them aware of the EMS Sector location.
- 3) Prepare and bring equipment necessary for:
  - a. pre-entry and post-entry medical evaluations.
  - b. weight measurement devices.
  - c. temperature sensing devices
  - d. transportation of team members.
  - e. fluid replacement for team members.
  - f. potentially contaminated at Entry Team Members.
- 4) Communicate with second ambulance (dedicated for victims) as to staging location.
- 5) Communicate with Entry Team Sector/Safety Sector about members not meeting criteria for entry or re-entry – **the decision to allow/disallow the resumption of duties is entirely up to the EMS Sector, based on vital signs guidelines on the medical evaluation form.**

### Equipment

- 1) Stretcher.
- 2) Oxygen equipment
- 3) Cardiac monitor
- 4) ALS equipment as needed.
- 5) Communications capable of contacting PCC (Poison Control Center) for comprehensive substance information.
- 6) “Tox-Box” (anti-dote kit).
- 7) Other equipment as deemed necessary for the hazards involved.

### Duties

- 1) Do not allow any member of the confined Space Rescue Team to enter the space until they have received a pre-entry evaluation.
- 2) Do not allow members of the Entry Team(or the Back-up Team) to enter the confined space if their evaluation shows values out of their normal range – relay this information on to the Entry Sector, without compromising the information, or the right to privacy.
- 3) Unless there is a critical emergency, members exiting the confined space shall rehab for a time period no less than 20 minutes, with all extra equipment removed (during this rehab period, they may fulfill other sector functions).
- 4) Prepare a medical evaluation form for each team member entering or preparing to enter the confined space.
- 5) Ensure all CSR Team personnel and support personnel are properly hydrated and rested throughout the course of the incident.

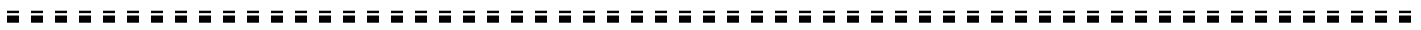
**Confined Space Rescue Team  
EMS Sector  
Medical Evaluation Form**

Location: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Material(s) in confined space: 1). \_\_\_\_\_  
2). \_\_\_\_\_  
3). \_\_\_\_\_  
4). \_\_\_\_\_

Temperature inside confined space: \_\_\_\_\_ @ Time: \_\_\_\_\_

\*\*Note: if the temperature exceeds 85 degrees Fahrenheit, there is a significantly greater risk for heat stress. Contact the Safety Sector and consider reducing the Entry Teams' time limit from 30 minutes.



**C.S.R. Team Member Information**

Name: \_\_\_\_\_ Age: \_\_\_\_\_

Current medications: 1). \_\_\_\_\_  
2). \_\_\_\_\_  
3). \_\_\_\_\_  
4). \_\_\_\_\_  
5). \_\_\_\_\_

Current medical problems: 1). \_\_\_\_\_  
2). \_\_\_\_\_  
3). \_\_\_\_\_

	<b><u>Pre-entry Data</u></b>	<b><u>Post-entry Data #1</u></b>	<b><u>Post-entry Data #2</u></b>
Time:	_____	_____	_____
Blood Pressure:	_____	_____	_____
Pulse:	_____	_____	_____
Respirations:	_____	_____	_____
Temperature:	_____	_____	_____
Weight:	_____	_____	_____



**Vital Signs Guidelines**

- 1) Blood Pressure:
  - a) Systolic shall be no higher than 150, no lower than 100.
  - b) Diastolic shall be no higher than 100.
- 2) Pulse not to exceed 100 before entry or resumption of work assignment.
- 3) Respirations: not to exceed 24 before entry or resumption of work assignment.
- 4) Temperature: document the actual temperature and the method by which it was obtained (oral, axillary, rectal, tympanic membrane).
  - a) To be taken before re-hydration begins.
  - b) If over 99.5 F/37.5 C, continue rest.
  - c) If over 100.5 F/38C, no resumption of any work.
- 5) Weight: to be obtained pre-entry and post-entry in the same equipment and/or clothing. If the body weight drops by more than 2% from pre-entry levels, that member will not be allowed to staff any Entry Team or Back-up team role. They can, however, fulfill other sector roles once cleared by medical personnel.

### **Potential Effects of Oxygen-Deficient and Enriched Atmospheres**

<b>Oxygen Content -- % by Volume</b>	<b>Effects and Symptoms (At Atmospheric Pressure)</b>
<b>23.5% and above</b>	<b>Extreme fire hazard.</b>
<b>19.5%</b>	<b>Minimum permissible oxygen level.</b>
<b>15-19%</b>	<b>Decreased ability to work strenuously. May impair coordination and may induce early symptoms in persons with coronary, pulmonary, or circulatory problems.</b>
<b>12-14%</b>	<b>Respirations increase, pulse increases, impaired coordination, perception, judgement.</b>
<b>10-12%</b>	<b>Respirations further increase in rate and depth, poor judgement, lips blue.</b>
<b>8-10%</b>	<b>Mental failure, fainting, unconsciousness, ashen face, blueness of lips, nausea, and vomiting.</b>
<b>6-8%</b>	<b>8 minutes, 100% fatal; 6 minutes, 50% fatal; 4-5 minutes, recovery with treatment possible.</b>
<b>4-6%</b>	<b>Comas in 40 seconds, convulsions, respirations cease, death.</b>

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## Effects of CO Exposures

<b>CO Level in PPM*</b>	<b>Resulting Condition/Effect on Humans</b>
<b>50</b>	<b>Permissible exposure level, 8 hours (OSHA)</b>
<b>200</b>	<b>Possible mild frontal headache in 2 to 3 hours</b>
<b>400</b>	<b>Frontal headache and nausea after 1 to 2 hours Occipital after 2½ to 3½ hours</b>
<b>800</b>	<b>Headache, dizziness, and nausea in 45 minutes Collapse and possibly death in 2 hours</b>
<b>1500</b>	<b>IDLH</b>
<b>1600</b>	<b>Headache, dizziness, and nausea in 20 minutes Collapse and possibly death in 2 hours</b>
<b>3200</b>	<b>Headache and dizziness in 5 to 10 minutes Unconsciousness and danger of death in 30 minutes</b>
<b>6400</b>	<b>Headache and dizziness in 1 to 2 minutes Unconsciousness and danger of death in 10 to 15 minutes</b>
<b>12,800</b>	<b>Immediate effect unconsciousness Danger of death in 1 to 3 minutes</b>

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## EFFECTS OF VARIOUS H<sub>2</sub>S LEVELS

H <sub>2</sub> S Level in PPM*	Resulting Condition/Effects on Humans
0.13	Minimal perceptible odor
4.60	Easily detectable, moderate odor
10.0	Beginning eye irritation. Permissible exposure level, 8 hours (OSHA, ACGIH)
27.0	Strong, unpleasant odor, but not intolerable
100	Coughing, eye irritation, loss of sense of smell after 2 to 5 minutes
200	Marked conjunctivitis (eye inflammation) and respiratory tract irritation after one hour of exposure
300	IDLH
500-700	Loss of consciousness and possibly death in 30 minutes to one hour
700-1000	Rapid unconsciousness, cessation (stopping or pausing) of respirations, and death
1000-2000	Unconsciousness at once, cessation of respiration and death in a few minutes. Death may occur even if individual is removed to fresh air at once.

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