

<b>East Lake Tarpon Special Fire Control District</b>		
	<i><b>SOP 312 Overhaul and Use of the Multi-Gas Monitor</b></i>	
	<b>Implementation Date: 02/15/2005</b>	<b>Revision Date(s): 02/15/2005</b>
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	<b>Forms or Attachments: None</b>	

**Purpose:**

To provide a means for determining when it is appropriate for personnel to work inside a structure without self-contained breathing apparatus (SCBA) following suppression of an active fire. To ensure that personnel will not be exposed to toxic levels of carbon monoxide (CO) in the post-fire environment. This procedure will also describe guidelines for conducting overhaul operations with the aid of the Multi-Gas monitor.

**Procedure:**

In the post-fire period the Incident Commander (IC) may allow personnel to perform salvage and overhaul procedures without the use of SCBA's. Prior to allowing these procedures, the IC or Safety Officer shall ensure that the following actions are taken:

1. The structure is well ventilated using electric powered positive-pressure ventilation.
2. That a qualified person is monitoring the environment throughout the entire incident.
3. Monitoring of the building is done in full protective clothing including SCBA and reports to the IC or Safety Officer any readings that are in alarm on the multi-gas meter.

**Use of the Multi-Gas Monitor**

1. The monitor will be used according to the manufacturer's guidelines.
2. Testing of the monitor should be performed prior to entering a confined space or hazardous material incident.
3. The person assigned to gas monitoring shall enter the structure wearing full protective clothing including SCBA and monitor levels of CO-02-LEL-Hydrogen Sulfide.

4. Each work area will be monitored to confirm the area is safe based on the alarm levels of the multi-gas meter.
5. The use of SCBA's will continue until all levels are not in the alarm mode.
6. Positive pressure ventilation must be used during the entire operation.
7. IC or Safety Officer may implement compartment isolation or other techniques that allow varying levels of protection in larger buildings.
8. Even though the multi-gas meter shows that environmental levels are safe in the structure, continuous monitoring shall be performed.
9. The monitor should be used in different areas of the structure to ensure that the work areas are safe.

### **Safety Procedures**

1. Personnel assigned to monitor the environment will not enter the structure alone. A minimum of 2 personnel in full protective clothing including SCBAs will enter the building as a team. The monitor readings alone should not be the only factor in determining whether work areas are safe. SCBAs may be removed with the approval of the IC or Safety Officer.
2. A charged hose line will be in place while the monitoring team is inside the structure.
3. Any change in fire conditions will be reported immediately to IC or the Safety Officer so that appropriate action can be taken. Ventilation and SCBA use should be re-evaluated if the multi-gas alarm goes into alarm.
4. Report all monitoring results to the IC or Safety Officer to assist in the selection of the proper level of personal protective equipment.
5. Rotation of personnel is important to limit exposure of personnel and to decrease fatigue injuries.

6. Positive pressure ventilation is a vital component to ensure fresh air is replacing products of combustion during the overhaul process and must be used for the duration of salvage and overhaul.

7. Filter masks (Hepa-N95) and eye protection should be used to protect from particulates when SCBAs are not in use.

8. Eye-irritation or a burning sensation may be a sign that undetected toxins are present and additional ventilation and/or SCBA use may be warranted.

### **Detection of Hidden Fires:**

Overhaul activities must thoroughly detect and extinguish hidden fires or “hot spots” before they rekindle.

1. Consider using the Thermal Image Camera for detecting hidden fires.
2. Class “A” foam may be used to assist in overhaul of hidden and stubborn fires.
3. Schedule post-incident safety checks by fire companies to verify that the fire is completely extinguished.