Fermilab
ES&H Section

INDUSTRIAL HYGIENE EQUIPMENT PROCEDURES

MSA MINI CO

7/92

PURPOSE

To provide guidance in the use of the MSA Mini CO meter.

DISCUSSION

The Mini CO meter is used to measure carbon monoxide. It has a measuring range between 0 and 500 parts per million (ppm). The Mini CO is used primarily to detect carbon monoxide, however, other chemicals may cause interference. Appendix A lists possible interfering gases and their equivalent concentrations to 1ppm of CO.

EQUIPMENT

- Mini CO Meter
- IH Sampling Notes Form

PROCEDURES

1. Obtain a Mini CO from IMAC area. A daily battery check and alarm calibration must be conducted by IMAC personnel. The alarm should sound at the TLV (25 ppm). Low battery power is indicated by a low pulsating alarm and flashing LED.

2. To operate the Mini CO, remove the red sensor cell plug. Monitoring begins and the preset alarm will sound at the TLV, even if the LCD display is off.

3. The LCD display is powered up when the side button is pressed. This allows the operator to read concentration in ppm.

4. When using the Mini CO, the sensor cell must face the CO source for accurate readings. The operating temperature range of the Mini CO is between 0-40 degrees Celsius. Extreme heat or cold will damage the sensor cell.

5. The LCD display should be watched carefully to determine the highest concentration present. This may occur immediately or take several minutes. Record readings on the IH Sampling Notes form.

6. Whenever the Mini CO is not in use, the red sensor plug should be replaced and the LCD display turned off. Plug replacement should occur after the LCD display reads at background. This will extend the service life of the cell.

7. Return the Mini CO to IMAC area daily.

8. CAUTION

   - If the sensor cell is removed, a 2 hour stabilization period is required before calibration.

   - Cell replacement is necessary when the instrument cannot be calibrated or erratic readings are seen.

   - Inaccurate results may be optioned if there are chemical interferences.