SECTION 236440 - REFRIGERANT MONITORING

SYSTEMS

1.1 SECTION INCLUDES

A. Qualitative requirements for refrigerant monitoring equipment and breathing apparatus.

1.2 SUBMITTALS

A. Submittals are required and shall include product data noting materials, sizes, and dimensions.

1.3 QUALITY ASSURANCE

A. Products and installation shall comply with requirements of ASHRAE Standard 15.

1.4 COMPONENTS

A. Gas Detection System

1. System shall be capable of detecting presence of any HCFC, CFC, or HFC refrigerant. Provide the appropriate sensors for the refrigerant being used.
2. The system shall indicate alarm and shut down the refrigeration equipment and start the refrigerant ventilation fan system.
3. Oxygen deprivation monitoring shall not be used in lieu of TLV-TWA monitoring for human safety exposure.
4. Sequential sampling and multi-point monitoring shall be required as defined in the latest issue of ASHRAE Standard 15.
5. The analyzer shall be microprocessor based and employ infrared (IR) sensor technology and shall accurately provide sensing down to 1 part per million.
6. Unit shall be factory calibrated for the refrigerant and sensors.
7. Sensors shall be capable of being installed up to 500 feet from the microprocessor.

B. Breathing Apparatus

1. Self-contained with 30 minutes of air. Provide with full face mask, breathing tube, air tank, controls and harness. Provide with wall mounted storage cabinet.

1.5 INSTALLATION

A. Provide refrigerant monitoring/alarm system for refrigeration equipment located inside the building.

B. The monitoring system shall shut-down all refrigeration equipment in the room, start the refrigerant emergency exhaust system, and sound the alarm.

C. Locate the breathing apparatus in a protective wall mounted enclosure immediately outside of the refrigeration room.

D. Mount and wire the remote audible alarms inside the room containing the refrigeration equipment and immediately outside of the refrigeration room.

END OF SECTION