

WHAT IS REFRIGERANT?

Refrigerants are the substances used in heating, ventilation and air conditioning units (HVAC), motor vehicle air conditioners (MVACs) and MVAC-like appliances, window air conditioning units, small appliances, soda machines, and transformer dielectric fluid that may or may not contain certain ozone-depleting substances. Freeport-McMoRan Morenci Inc. (Morenci) currently uses These regulated R-12, R-22, and R-134a-type refrigerants.

WHY DO WE HAVE TO MANAGE REFRIGERANT?

The Federal Government has established standards to eliminate discharge or release to the atmosphere of refrigerant from HVAC, MVAC and MVAC-like appliances. If released, these compounds can damage the atmosphere's ozone layer.

WHAT DO I NEED TO DO IF I PURCHASE A UNIT THAT CONTAINS REFRIGERANTS?

The following information must be forwarded to Environmental Services Air Quality group:

- Purchase records – showing date, quantity, refrigerant type, supplier
- Location unit will be located

WHAT DO I NEED TO DO IF I NEED TO DISPOSE OF A UNIT THAT CONTAINS REFRIGERANTS?

The unit **must** be delivered to the Environmental Yard for proper management and disposal.

Environmental Services will arrange for refrigerants to be removed by a certified technician.

Once refrigerants have been removed, the unit should be marked as “evacuated” and initialed by the certified technician.

Equipment with evacuated refrigerants should be segregated from equipment still containing refrigerants and sent to the salvage yard.

PERSONNEL CERTIFICATIONS

Individuals repairing or servicing HVACs, MVACs, or MVAC-like appliances containing refrigerant must have proper training and certification by a technician program approved by the State of Arizona Department of Environmental Quality (AZDEQ) and/or United States Environmental Protection Agency (USEPA).

Copies of all personnel certifications shall be submitted to the Environmental Service Department, so documentation may be maintained within the office files. This documentation shall be updated as new employees are hired, or employees transfer.

EQUIPMENT REQUIREMENTS

The technician is required to know, understand, and apply all standards established for service and repair of HVACs, MVACs and MVAC-like appliances as set forth in Appendices A, B, C, E, and F of 40 CFR 82. These standards relate to the service procedures for the containment of refrigerant, extraction equipment, extraction and recycle equipment, and the standard of purity for refrigerant in motor vehicle air conditioners.

Recycle and recovery equipment is designed for the specific type of refrigerant being used. All equipment shall be verified and documented as appropriate for use with the specific refrigerant being used. All equipment must be certified by Underwriters Laboratories (UL) or an equivalent certifying laboratory. The equipment must comply with applicable federal, state, and local requirements on equipment related to the specific refrigerant for that equipment. Safety precautions, notices, or labels related to the safe operation of equipment shall be prominently displayed on the front of the equipment near the controls and should state "CAUTION—SHOULD BE OPERATED BY CERTIFIED PERSONNEL." The equipment must also prominently display the manufacturer's name, address, the type of refrigerant the equipment can be used for, a service telephone number, and the part number for the replacement filter/dryer.

The equipment must be capable of ensuring recovery of the refrigerant from the system being serviced, by reducing the system pressure below atmospheric to a minimum of 102 millimeters (mm) of mercury.

To prevent overcharge, the equipment must be equipped to protect the tank used to store the recycled refrigerant with a shutoff device and a mechanical pressure relief valve.

Portable refillable tanks or containers used must meet applicable Department of Transportation (DOT) or Underwriters Laboratories (UL) Standards and be adaptable to existing refrigerant service and charging equipment.

During operation, the equipment shall provide overfill protection to assure the storage container, internal or external, liquid fill does not exceed 80% of the tanks rated volume at 21.1 °C (70 °F) per DOT standards.

The cylinder valve shall comply with the Standard for Cylinder Valves, UL 1769.

NOTE: HVAC units may have asbestos materials. Refer to **BMP 301 – Renovation-Demolition Notification** for proper procedures for managing these materials.

CONTAINER DISPOSAL

It shall be verified that all containers are empty by attaching the container to the recycle equipment until a vacuum is achieved in the container as evident by the gauge. Once the vacuum is achieved the container may be marked as "scrap" with the certified technician's initials and sent to salvage for recycling.

QUESTIONS OR NEED HELP? CONTACT ENVIRONMENTAL SERVICES