**Refrigerant Management Program – Overview for Appliance Owners**

The Penn State Refrigeration Program has been established to ensure the safe and compliant handling of refrigerants and refrigerant-containing appliances. No person maintaining, servicing, repairing, or disposing of an appliance or industrial process refrigeration may knowingly vent or otherwise release into the environment any refrigerant from such appliances. This overview is intended to provide a synopsis of the requirements for appliance owners that have appliances with 50 pounds or more of refrigerant in a circuit – more detailed information is given in the Refrigerant Management Program document.

*Asset Inventory:*

Provide an initial listing to EHS of all appliances containing 50 pounds or more of refrigerant in a circuit and provide annual updates of equipment added or removed. The listing is to be submitted annually to EHS and includes the following:

* Location, building, building number, room;
* Type of equipment, duty type (comfort cooling, commercial refrigeration, industrial process);
* Make, model, serial number, and date installed;
* Type of refrigerant and full charge per circuit; and
* Method of determining full charge.

*Safe Handling Practices:*

* Ensure that mechanical rooms that contain refrigerant are compliant with ANSI/ASHRAE standards and re-evaluate this when adding/replacing refrigeration-containing appliances.
* Ensure ventilation equipment and refrigerant detectors are maintained in accordance with standards and manufacturer’s recommendations.
* Arrange for an annual inspection of the mechanical room in accordance with the Program requirements to insure its integrity.

*Maintenance and Repair of Appliances:*

* Use only certified technicians to perform maintenance, service, or repair that could reasonably be expected to release refrigerant charge from appliances into the atmosphere. Activities reasonably expected to violate the integrity of the refrigerant circuit include, but are not limited to: attaching or detaching hoses and gauges from the appliance; adding or removing refrigerant; adding or removing components; and cutting the refrigerant line. The technician’s certification type must correspond to the type of service that they perform.
* Obtain service records whenever maintenance, service, or repair occurs by either PSU personnel or contracted vendors. The service record must include:
* The identity and location of the appliance;
* The date of the maintenance, service, repair, or disposal performed;
* The part of the appliance being maintained, serviced, repaired, or disposed;
* The type of maintenance, service, repair, or disposal performed for each part;
* The name of the certified technician performing the maintenance, service, repair, or disposal; and
* The amount and type of refrigerant added to, or in the case of disposal, removed from the appliance.
* Ensure that leak rates are calculated for all appliances where refrigerant has been added. Note the type of calculation used (annualized or rolling average). If refrigerant has been excluded from the leak rate due to removal/addition from seasonal variation, maintain records stating that you are using the seasonal variance flexibility and document the amount added and removed. Determine if the applicable trigger leak rate for the appliance has been exceeded.
* If a trigger leak rate is exceeded, ensure that it is either repaired within the required time frame, mothballed, or that a retrofit and retirement plan is prepared. If planned repairs cannot be completed within required timeframes, complete requests for additional time and submit to EPA as required.
* If a trigger leak rate is exceeded and the appliance is repaired, ensure that the required initial and follow-up verification tests are performed. The following information must be obtained from the service provider:
	+ Date of test
	+ Location of appliance
	+ Location(s) of all repaired leaks that were tested;
	+ Type of verification test performed;
	+ Results of the test.
* If a trigger leak rate is exceeded and the appliance is repaired, initiate the appropriate leak inspections and obtain the following records from the service provider:
	+ The date of the inspection;
	+ The method used to conduct the inspection,;
	+ A list of the location of each leak that was identified; and
	+ A certification that all visible and accessible parts of the appliance were inspected.
* Where appliances are determined to be “chronically leaking” (annual leak rate of 125%), report to EPA.
* Maintain copies of all reports as required by the program submitted to EPA.
* Ensure that refrigerant is properly removed by a certified technician from any appliance to be disposed of.