Trane Refrigerant Management Program

Can you, as a building owner or operator, provide the following concerning your refrigeration and HVAC systems?

1. A copy of all service invoices for any service, maintenance, repair or disposal performed on appliances at your facility**.**
2. Records indicating the number of appliances serviced, maintained, repaired or disposed at your facility.
3. Records indicating the amount of refrigerant consumed during the service, maintenance, repair or disposal of any appliances at your facility**.**
4. Records indicating the amount of refrigerant recovered or recycled during the service, maintenance, repair or disposal of any appliances at your facility
5. Records the type of equipment used to recover or recycle refrigerants contained in appliances during the service, maintenance, repair or disposal of any appliances at your facility.
6. Records indicating any other method used to prevent the release of refrigerants into the atmosphere during the service, maintenance, repair or disposal of any appliances at your facility.

Furthermore, can you provide the information for the past 3 years? If you have refrigeration appliances containing over 50 pounds of Class I (CFC's) or Class II (HCFC's) refrigerants, these are some of the questions you could be asked by EPA (or your state regulatory agency) concerning your compliance with 40 CFR Part 82, (the regulations which govern ozone-depleting substances). And they may require your responses in as little as 7 days!

For many who receive such a request (usually in the form of a letter called a 114A letter), the result is commotion and confusion as they scramble to collect the required information from their HVAC service provider, facilities group or third-party building management company. Often, information is at best, incomplete and at worst, unavailable. This article will summarize the basic requirements of the refrigerant regulations, tell you who is responsible and what records you need to keep in order to be able to sail through a similar inquiry unscathed (or at least intact!).

A building owner or operator should keep a list of all refrigeration equipment by manufacturer, model/serial number, where it is located, what type of refrigerant it contains and how much (full charge).

He/she should know "who does what" with regards to appliances owned and operated. For each of your appliances, can you answer the following questions?

Who is responsible for operation of the system(s)? Is it your own employees or a service provider? If your own employees, are they "certified" by EPA? If so, you should keep a copy of their certification card with their employee file. Who is responsible for service or maintenance on the system(s)? Are they recording all the information you may need if you are audited?

Trane developed our Refrigerant Activity Form (RAR, see below) to ensure all the data which may be required in the case of a regulatory inspection is recorded and given to the customer. We also keep a copy for our records (because the service provider can also be investigated!). Any service on your equipment should collect and record the same or similar information, regardless of whether the work is done by your own employees or a service company.

It is especially important that refrigerant *added* to the system is recorded, as that amount is used to compute the annualized "leak rate". The leak rate is computed by the following formula:

Leak rate = pounds of refrigerant added / pounds of refrigerant full charge x 365/number of days since refrigerant last added. <u>The leak rate should be computed any time refrigerant is added to a leaking system.</u>

The leak rate is used to determine whether you have exceeded the maximum leak rate (15% for comfort cooling and "other" and 35% for industrial process and commercial systems computed when you add refrigerant) and if action is required. If you exceed the maximum, you must fix the leak or retrofit or retire the equipment within 30 days (limited extensions are allowed for IP or commercial systems). If leaks are fixed, the technician should also perform and record a "leak test" to make sure the repair is effective.

(note: Trane's policy is to fix ALL leaks, instead of determining the leak rate to see whether the leak must be fixed. Usually leaks can cause other pressure and temperature problems, fixing all leaks results in the equipment functioning more efficiently.)

The regulations specifically state what records must be kept by owners and service providers, and the records they say you need to keep are limited. However, I recommend you keep records of ANY refrigerant activity because if you have no records, it is difficult if not impossible to prove what was done! All records required under the act must be kept for 3 years.

One question that is commonly overlooked is: What happens to refrigerant removed from your system(s)? The "cradle to grave" concept applies here. Even though the refrigerant may be sent somewhere for reclaim or disposal, you are still responsible for it! Most recovered refrigerant (recovered refrigerant is that removed from the system) in the U.S. is reclaimed, that is, sent to a refrigerant reclaimer where it is cleaned to virgin standards and then re-sold. If you or your service company are using a reclaim company, make sure they are certified to reclaim refrigerant and find out how they dispose of refrigerant that cannot be reclaimed (ie refrigerant contaminated with other refrigerants). They should be using a reputable company for disposal of contaminated refrigerant that cannot be reclaimed.

There is often confusion about who may be liable in the case of a violation. The EPA says any "person" owning and/or operating a facility subject to the provisions of the Act, and any employees of such a facility, are legally responsible for complying with Section 608 and with 40 C.F.R. Part 82, Subpart F. This includes the "person" servicing the appliance. For the purpose of seeking penalties for violations, EPA will often bring enforcement actions against the owners and/or operators of such facilities, rather than against individual employees.

Fines can start at over $30,000 per day per violation which is why penalties often end up in the millions of dollars. Some examples of enforcement action by EPA during the past several years is available on EPA's Stratospheric Ozone Protection web page: http://www.epa.gov/ozone/enforce/index.html.

These are just a few questions which can bring your "gaps" with regard to refrigerant management into focus. The fines specifically illustrate how lack of refrigerant management can be extremely costly, and it doesn't include the poor publicity caused by these violations.

To learn more about the Ozone Depletion regulations, see EPAs page:
http://www.epa.gov/ozone/title6/608/index.html

You can also contact your local Trane office at 303.228.2807