

US EPA ARCHIVE DOCUMENT

Inspection Directions:

An EMS Approach to Inspecting for Section 608 and 609 Compliance



Welcome back. I trust lunch was everything you asked for and more. Let me guess chicken?

My name is Jason McDonald and I'm from the Government and I'm here to help? No really I am. I am a compliance officer with EPA's Region 4 office here in Atlanta. For those who don't speak EPA-eaze- Compliance Officer loosely translated means "person who finds dirty laundry".

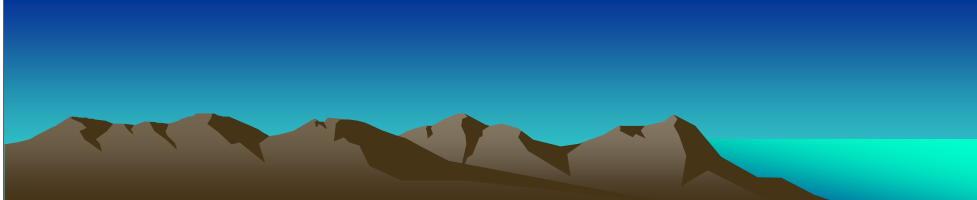
To some extent that's true but as Compliance Officers I also provide Compliance Assistance. So you can email and telephone our office if you ever have questions on how to handle an environmental matter.

I am here today to provide you an overview of the ongoing Phase-out of Hydrochloroflourocarbons (HCFCs) and what to expect when I or someone like me shows up at your front door to conduct a Stratospheric Ozone Protection inspection regulated under Section 608 and 609 of the Clean Air Act..

Do we have anyone here that conducts service, maintenance or repair of motor vehicle air conditioner appliances?

Executive Order 13148

“Greening the Government Through Leadership in Environmental Management” every Federal agency was mandated to implement Environmental Management Systems (EMSs) at appropriate facilities. April 26, 2000



In accordance with Executive Order 13148 handed down April 26, 2000 EPA has begun to conduct inspections from the Environmental Management System perspective.

Of course all of you have an active EMS ...

4 Phases of an Environmental Management Systems

- **Planning-** The organization identifies how its operations might harm the environment, and develops methods to reduce this harm.
- **Doing-** The organization implements these methods to reduce harm and operates them for a designated time period.
- **Checking-** The organization assesses whether the methods that it is operating to reduce environmental harm and ensure regulatory compliance are proving to be effective.
- **Acting-** The organization determines what changes are necessary based on the performance assessment of the methods (see Phase 3) designed to reduce environmental harm.

Since you all have an EMS you are familiar with the four phases.

Inspections are conducted with these four in mind. We look at the level of commitment meaning

-how are responsibilities labeled in the organization chart,

-are the procedures in place meeting applicable environmental requirements

-Do the policies Integrate source reduction and other pollution prevention approaches.

-and

- Are the measures establishing, tracking and reviewing specific environmental performance goals.

Executive Order 13148

- Section 202- Environmental Compliance.
- Section 206- Reductions in Ozone-Depleting Substances.

There are two sections in Executive Order 13148 that address site environmental policies.

Section 202 – Environmental Compliance

And

Section 206- Reductions in Ozone Depleting Substances

Sec. 202- Environmental Compliance.

Each agency shall comply with environmental regulations by establishing and implementing environmental compliance audit programs and policies that emphasize pollution prevention as a means to both achieve and maintain environmental compliance



Pretty self explanatory

Section 206- Reductions in Ozone-Depleting Substances

Through evaluating present and future uses of ozone-depleting substances and maximizing the purchase and the use of safe, cost effective, and environmentally preferable alternatives, each agency shall develop a plan to phase out the procurement of Class I ozone-depleting substances for all non-excepted uses by December 31, 2010.

82.65(d)

82.70(a)(2)

Excepted uses are for products like aircraft biocides. There's a list of exempted uses, however most of you won't see that exemption.

If you read through this statement there is really one segment that I want you to focus on (click).

That statement, as you can clearly see, is directly addressing the phase out rule.

Phase Out of R-22 and R-142b

- January 1, 2010 - Ban on production and import of R-22 & R-142b except for servicing needs
- January 1, 2015 - Ban on sale and use of all HCFCs (except continuing servicing needs of refrigeration equipment)
- January 1, 2020 - Ban on remaining production & import of R-22 & R-142b

Costs for R-22 and R-142b are expected to increase as availability from existing stockpiles decreases.

HCFC - Hydrochlorofluorocarbons

Phase Out of R-22 and R-142b

- Very similar to phase out of R-12 in Motor Vehicle Air Conditioning systems
- The ban on production means only stockpiles of new or recycled R-22/142b will be available
- Replacement of existing equipment is not required

Replacement substitute is R-410A which is sold and manufactured under Gentron AZ-20, SUBA 410A and Puron.

EPA maintains a list of acceptable alternative refrigerants for household and commercial air conditioning.

It is still illegal to intentionally release refrigerant substitutes when making repairs.

Existing equipment may be modified to use alternative refrigerants.

however note Sec. 206 of exec order for new units)

Protection of Stratospheric Ozone

- Prohibitions
 - Uncertified Technicians
 - Uncertified Recycle/Recovery/Reclamation Equipment
 - Intentional Venting
- Practices
 - Leak Repair
 - Proper Disposal of Refrigerant
- Record Keeping
 - Verification and Follow-up Verification tests (it's not enough to perform the test, document it)
 - Technician and Equipment Certifications

A properly implemented EMS will direct both facility staff and contractors to require technicians to present required certifications as a condition of employment.

Uncertified Equipment- Yesterday the question was raised should an equipment notification be submitted when new recycling, recovery and reclamation equipment is purchased. The answer is yes because your equipment must be certified by an approved testing organization. The equipment must also have proper labeling.

An functional EMS provides procedural guidelines that reduces non-compliance due to employee or contractor turnover.

- knowingly accepting fraudulent statements of evacuation of small appliances is a violation.

Technician Certification

- Staff
 - must be properly certified
 - site maintains copies for 3 years
- Contract Vendor
 - must be properly certified
 - site maintains copies for 3 years
- Third party vendors not under contract
 - no requirements to maintain records on-site

Environmental Compliance is like the book of Genesis. Compliance or non-compliance is trackable. And like Adam and Eve every violation is begat by some an earlier mis-step. When a root cause analysis is performed the results will point back to a flaw in the EMS.

That's why most 609/608 inspections start with a review of site workers both staff and contract.

Equipment Recovery/Recycle/Reclamation

- Equipment certification form
- Manufacturer's label affixed to the equipment
- Substantially Identical Equipment

After addressing staffing my attention turns to your equipment..

These are the three items of interest. The last one is very rare.

Substantially Identical Equipment – if you are using modified **Recovery/Recycle/Reclamation** equipment then you must have **submitted an application to the EPA complete with supporting documentation. A record of this is required.**

Even though other facilities may not have had the top document it is not necessarily an indicator of gross non-compliance. It does as I've said earlier raise an eyebrow.

Practices

- **Leak Repair**
 - Preventive Maintenance
 - Refrigerant Tracking
 - Audits
- **Disposal of refrigerant**
 - Staff
 - Contract Vendor
 - Third Party Vendor

Unlike the previous slide these items, your practices are an indicator of non-compliance. When talking with technicians or foremans in charge of your 608/609 program about these practices most inspectors will have an idea of what kind of shape your facility is in.

Refrigerant Tracking – maintain records of refrigerant added. Record of time refrigerant added to appliance could be an indication of a more serious problem. See planning for the future.

Audits- audit refrigerant records as a check against permissible leak rate limits.

Records



- Technician Certifications
- Quantity and type of refrigerant added by owner/operator to appliances > 50lbs
- Date of repair
- Type of Service
- Disposal ticket/invoice from reclamation vendor

Your practices, like Adam and Eve, Begat records. And in some cases a file cabinet full of them. But its here in these records that inspectors find over 90% of non-compliance .

Your records are your best voice. If they are silent when they should be speaking you might not be in compliance. If you know this already I will be happy to assist you with an administrative enforcement letter on the way out.

Records



- Initial report for leaks that have not been repaired within 30 days
- Initial Verification Reports
- Follow-up Verification Reports
- Documents of work performed
- Retrofit or Retirement plans
- Requests for time extensions!!!

Here is a general overview of the Records our inspectors are going to be looking for. These are the records that are noticeably absent. They should be easily accessible. If not you get another tick mark on the EMS concern list.

You can eliminate most of these concerns through a regular auditing of your program.

Documentation for Leak Repair

- Identification of the facility
- Leak rate
- Methods used to determine the leak rate and full charge
- Date of discovery leak rate was above 35% (15%)
- Location of leaks to the extent determined to date
- Repair work already completed; estimated dates of completion; date of actual completion
- Date(s), type(s) and results of the failed follow-up verification test(s)
- Parameters for determining leak rate for verification <180 days

Leak repair...every one has performed it where are the records to demonstrate it was done properly. *Go over list.

Again these are items that can be ferreted out during an internal audit. If you have a question about a record keep it then give your regional office a call for Compliance Assistance.

- Date of discovery: internal record audits and practices should provide appropriate dates. (15%) for comfort cooling systems

- Internal PM tracking and auditing can identify problematic equipment...Also equipment that may lead to radiological contamination should be noted in the record.

exposure or - If you intend, or think you could eventually attempt to verify within 180 days that the leak rate is below 35 percent, you must provide EPA the parameters on how the leak rate will be determined.

Records

- Dates of completion for repairs, extensions, etc.
- Extension notices granted by EPA
- A copy of the notification sent to EPA documenting second repair efforts were successful, and the facility is no longer required to retrofit or retire the system*

*If you are relieved of the requirement to retrofit or retire the equipment: In the case where follow-up verification of second repair efforts were able to bring the leak rate below 35%

Retrofits or Retired Systems

- The plan submitted to EPA wherein it was explained your plan to achieve an acceptable leak rate
- Description of the leak rate method
- Notifications to and responses from EPA
- Notification (copy) of the successful second repair efforts that remove the requirement to retrofit or retire the system
- Extension requests

If there is a determination to retrofit or retire a refrigerant system there are more records that are required to be kept in addition to the general leak repair records because as you look through this list those original records will be needed.

Self-Determined Full Charge

- Identification of the owner or operator of the system
- Location of the system
- Original range for the *full charge* of the system, its midpoint, and how the range was determined
- Any and all revisions of the *full charge* range and how they were determined; and
- Dates such revisions occurred

If a decision is made not to use the manufacturers documentation for the appliance's full charge then you have to document it from day 1.

Excluding Purged Refrigerants

- Maintain records to support the amount of refrigerant claimed as sent for destruction
- Flow rate
- Quantity or concentration of the refrigerant in the vent stream
- Periods of purge flow
- Facility Identification and contact person

If a decision is made to Exclude purged refrigerants that are destroyed from the annual leak rate calculations it must be documented. The inspectors will be doing a mass balance in their head.

Contact Person - including the address and telephone number;

Excluding Purged Refrigerants

- General description of the refrigeration system, focusing on aspects of the system relevant to the purging of refrigerant and subsequent destruction
- Description of the methods used to determine the quantity of refrigerant sent for destruction and type of records that are being kept by the facility
- Frequency of monitoring and data-recording
- Description of the control device and its destruction efficiency

That's all I have for now. If you have any questions I will try my best to answer them. If not today then give me a few days.