Recent Updates to the 40 CFR Part 82 Refrigerant Regulations and What to Do Now

Air & Waste Management Association

Jerry Bauer, PE
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40 CFR Part 82 Regulations – Recent Revisions

Why it is important?

► Big Picture (General Audience) - Politics at the EPA Administrator Level and Above

► Details (Companies/Consultants that have Large Refrigeration Units) - How to Meet the Recent Revisions to 40 CFR Part 82
Acronyms

**CFC** = Chloro Fluoro Carbons (CFC) (example = R-12)

**HCFC** = Hydro Chloro Fluoro Carbons (HCFC) (examples R-112 and R-122)

**HFC** = Hydro Fluorocarbons (example = R-134a)

**GHG** = Greenhouse Gas
HFCs – Substitute Refrigerants/HFCs (R-134a)

HFCs-
Negligible impact on Ozone Hole (not listed as bad actor in Montreal Protocol, Clean Air Act, or Part 82)

…but
strong GHG with Global Warming Potentials ranging from 100 to 18,000 (compared to 1.0 for Carbon Dioxide); R-134a has a GWP of 1,300

- 1974 scientists discovered that the ozone layer was getting thinner. Attributed to human activities – primarily CFCs, used in aerosol cans, fire retardants and refrigeration
- 1987 Montreal Protocol – Issued to Solve Problem
- 1991 Clean Air Act Amendments – Adopt Montreal Protocol
1. Phase-Out / Limit Production of CFCs and HCFCs

2. Performance requirements associated with servicing refrigeration units.
Part 82 (Cliff Note Version) 1994

- Refrigerant Devices with Charges Greater than 50 lbs have substantive requirements
- Substantive Requirements applicable to CFCs and HCFCs; HFCs are generally exempt
- Requirements: calculate leak rates and document repair verification tests. (Many companies have deficient records)
- Companies/technicians prohibited from “venting” CFCs and HCFCs
Part 82 (Cliff Note Version) 1994 – Part 2

- Affected companies/often not heavily regulated/not Title V air sources (Hospitals, universities, food processing)
- Compliance gaps/deficiencies a common problem
- Enforcement (at EPA level only) with limited staff
- Enforcement rare but harsh (some going beyond written regulations)
Part 82 (Cliff Note Version) 1994 – Part 3

- Title V air permits require annual certification statement
- Compliance with 40 CFR Part 82 a requirement in Title V permits

- Companies have been meeting 40 CFR Part 82
- Switched from CFCs to HCFCs
- Switched from HCFCs to HFCs (called substitute refrigerants)
Part 82 (Pre-2016) The “Safest” Compliance Alternative

- Replace CFCs and HCFCs with HFC/Substitute Refrigerant
- Minimal compliance requirements: Use Certified technicians and intentional venting prohibited
World Economic Forum: “30 years ago the world pledged to fix the ozone layer. And it worked”

“Using a combination of measurements from satellites, ground-based instruments and weather balloons, a team of scientists found that since 2000 the hole has shrunk by 4 million square kilometres – an area bigger than India.”

*World Economic Forum*
November 2016 Revisions to Part 82


…Why did EPA Propose rolling the regulations back less than 2 years later?

Answer: Greenhouse Gas Emissions
November 2016 Revisions to Part 82

The Biggest Change: Extended Regulation to substitute refrigerants, such as HFCs.

Effective January 1, 2019

Remember: Many facilities have been switching to HFCs thinking they reached the finish line.
November 2016 Revisions to Part 82 – Part 2

Other Revisions:

► Reduced allowable leak rates
  • process refrigeration 35% to 30%;
  • commercial refrigeration 35% to 20%;
  • comfort heating 15% to 10%

► Leak rate determination required each time refrigerant added to equipment with charges greater than 50 lbs.
November 2016 Revisions to Part 82 – Part 3

Other Revisions:
► Evacuation requirements for disposal of equipment
► Requirements for proactive leak inspection
► Report if “chronic” leaks (125% in calendar year)
November 2016 Revisions to Part 82

Some industries “Called Foul”: The revision to extend requirements to Substitute refrigerants (which do not significantly impact the ozone layer)

Industry “Ok with the other revisions”
November 2016 Revisions to Part 82

EPA - October 2018 Proposed Amendment

- Roll Back Requirements for Substitute Refrigerants
- Extension of January 1, 2019 compliance date (Substitute refrigerants)
Current news/developments

- The October 2018 proposed rule to roll back requirement affecting Substitute Refrigerants appears stalled out
- Companies need to meet Part 82 as revised Nov 2019 (It is the law)
Summary

- Current EPA Administration would like to undo the Part 82 Nov. 2016 Revisions and roll back the regulation (such that HFCs/R-134a are not subject to substantive regulation)

- November 2016 Part 82 Revision to cover Substitute Refrigerants (R-134) is a big compliance burden/risk

- As of Sept. 2019, EPA proposal to “undo” the requirement to cover Substitute Refrigerants has not been finalized (no news)
Predictions (the presenters not AWMA)

- By Feb. 2021, U.S. will have a new EPA Administrator/EPA Administration
- The EPA Proposed revision to Part 82 that would “undo” the October 2016 will stall out – at least until 2020
- If the Current President/EPA Administrator retains another term, regulation likely revised/reversed
- The “GHG” connection to Part 82 could cause increased public scrutiny and enforcement
Recommendations

Companies with Refrigeration Units (even HFCs) that have charges greater than 50 lbs:

1. Verify in-house staff/outside refrigeration contractor is meeting Part 82 requirements (especially documenting the initial repair and follow-up repair verification tests) as written Nov. 2016

2. Obtain/maintain records required under Part 82
CREATE AMAZING.