E.O. 12866 Meeting Request - Comments from the Environmental Investigation Agency (EIA) on Phasedown of Hydrofluorocarbons: Management of Certain Hydrofluorocarbons and Substitutes Under Subsection (h) of the American Innovation and Manufacturing Act of 2020
Agency/Subagency: Environmental Protection Agency (EPA) / Office of Air and Radiation (OAR)

The 90 Billion Ton Opportunity: Lifecycle Refrigerant Management report published by EIA, with partners NRDC and IGSD, cited in the proposed rule – found that improving LRM of refrigerants presents an opportunity to prevent emissions of up to 90 billion carbon dioxide equivalent tonnes globally by the end of this century.

As EPA also recognizes minimizing releases and increasing reclamation is the critical third leg of the stool for executing the HFC phasedown, we have several recommendations to achieve that goal and want to emphasize three critical key points in today's meeting.

I. Leak Management and Automatic Leak Detection System Requirements

Reduce Charge Sizes for Repair Provisions

- To maximize the climate and economic benefits we encourage reducing the refrigerant charge size for appliances subject to the proposed leak repair provisions from the proposed 15-pound or more threshold to 5 pounds. *RIA* shows a five-pound threshold would prevent a total of 86 $MMTCO_2e$ emissions by 2050 with annual refrigerant savings of over 1 million dollars ($1,080,000).

ALDS

- The requirements for leak repair and ALDS to minimize releases from equipment are important to this rule since major appliance categories leak as much as 1-5 times their proper full refrigerant charge throughout their lifetimes.
- This also significantly reduces costs for businesses; EPA estimates that the proposed leak repair and ALDS provisions would lead to savings of $13 million in 2025 and prevent 3.8 $MMTCO_2e$ of HFC emissions in 2030.
- We fully support mandatory ALDS for Commercial and IPR equipment with charge sizes of ≥1,500 pounds and recommend it also requires inspection of any part of the system not enclosed (i.e. outdoors). CARB requires this once every 3 months for similarly sized systems (2,000 lbs and up). This allows the operator to identify leaks and repair them promptly, cutting emissions and costs.
- Regarding the alarm threshold, EPA has proposed that leak detection sensors must accurately detect a 10 ppm concentration of refrigerant vapor; we recommend lowering the alarm threshold from 100 ppm to this 10pmm sensor detection level to achieve full emissions reductions.
    - EIA leak detection at ~60 stores to date has shown that less than 5% of leaks were at a concentration greater than 100 ppm, however, one-third ranged from 10-100 ppm.
- We also support exempting refrigeration systems that transition to an ultra-low GWP (<10) refrigerant before January 1, 2027.

Remove Exemption for Light Commercial

- The repair provisions should include products typically considered "light commercial" when installed in a commercial application (such as convenience stores, restaurants, or office buildings). The exemption for variable refrigerant flow (VRF) systems should be removed as increasing VRF systems in commercial uses with large amounts of piped refrigerant provides more opportunity for leaks.

Lower Leak Rate Thresholds for Repair

- Additionally, the leak rate for commercial refrigeration equipment should be set at 15%, instead of the proposed 20%. Companies are already hitting these targets; EPA's GreenChill program requires a maximum 15% leak rate for stores and 5% as the platinum standard, which the program reports over half of certified stores have achieved.
    - Washington State has set a 16% leak rate for retail food refrigeration systems. We also recommend alignment with Washington State's requirements for leak rates for IPR and comfort cooling set at 24% and 8%, respectively.

II. Cylinder Tracking, Reporting, and Enforcement

We fully support the Cylinder Tracking, Reporting, and Enforcement requirements that regulate "practice[s], process[es], or activit[ies] regarding the servicing, repair, disposal, or installation of equipment that involves regulated substances" and thus are within the authority provided by subsection (h)(1).

- Reclamation from disposable cylinders is estimated to increase the supply by up to 4.2 million (4,276,800) lbs annually, assuming all recovered heels are reclaimed. It also provides an easy means for an entity to identify reclaimed HFCs. Many reclaimers are already employing similar tracking methods, as mentioned in their comments, including A-gas and Worthington Industries.

Heel Recovery

- We support requiring tracking cylinders until they reach an EPA-certified reclaimer or recycler.
- We are concerned with the "final processor" being responsible for ensuring that all regulated substances, including the remaining heel, have been recovered before disposal of a cylinder. This could result in the status quo where metal recyclers and waste disposal operations often vent remaining gases.
- Small businesses are expected to experience cost savings associated with the requirement to recover heels before cylinder disposal, while larger businesses, such as Hudson, are offering to incentivize reclaim with refrigerant buyback programs.

III. Technician Training

We encourage the agency to further support recovery and leak minimization through a separate rulemaking establishing training or certification requirements for technicians under subsection (h).

- The existing 608 certification does not cover flammable refrigerants. ASHRAE A2L or A3 flammability rating will necessitate greater care on the part of regulators and industry to ensure safety.
- Such a program should reward or incentivize existing 608 certified technicians to become certified under the AIM Act, and require this new certification for all first-time technician certifications. Technicians should be required to recertify at least once in the near future to safely use flammable refrigerants.
    - Federal, State, or private enterprises may also provide no- or low-cost training materials or incentivize certification by providing free or discounted rates for needed equipment.

- Training requirements are needed for all classes of flammable refrigerants used for heat transfer purposes, as well as R-744 and ammonia systems for those working with commercial or industrial systems.

Sincerely,

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