6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 84

[EPA-HQ-OAR-2026-2905; FRL-13327-01-OAR]

RIN 2060-AX04

Phasedown of Hydrofluorocarbons: Excluding Road and Intermodal Container Transport Refrigeration Units from the Hydrofluorocarbon Leak Repair Requirements

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is proposing an exemption for road and intermodal container transport refrigeration units (TRUs) from the leak repair requirements established under the American Innovation and Manufacturing (AIM) Act. In the final rule "Phasedown of Hydrofluorocarbons: Management of Certain Hydrofluorocarbons and Substitutes Under the American Innovation and Manufacturing Act of 2020," the EPA established, among other provisions, leak repair requirements for refrigerant-containing appliances with a charge size of 15 pounds or more that contain a hydrofluorocarbon (HFC) or certain substitutes for HFCs. The EPA intended to exempt refrigerant-containing road and intermodal container TRUs from the leak repair requirements and is issuing this proposal to clarify the applicability of these requirements. The EPA is not proposing other amendments or taking comment on any other aspects of the 2024 "Phasedown of Hydrofluorocarbons: Management of Certain Hydrofluorocarbons and Substitutes Under the American Innovation and Manufacturing Act of 2020."

DATES: Comments on this notice of proposed rulemaking must be received on or before

[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. *Public hearing*: Any party requesting a public hearing must notify the contact listed under the **FOR FURTHER INFORMATION CONTACT** section, which is Annie Kee at email address: *kee.annie@epa.gov* by 5 p.m. Eastern Daylight Time on or before **[INSERT DATE 5 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. If a public hearing is held, it will take place on or before **[INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Please refer to the **SUPPLEMENTARY INFORMATION** section for additional information on the public hearing.

ADDRESSES: You may send comments, identified by Docket ID No. EPA-HQ-OAR-2026-2905, by any of the following methods:

- Federal eRulemaking Portal: *https://www.regulations.gov/* (our preferred method). Follow the online instructions for submitting comments.
- E-mail: *a-and-r-Docket@epa.gov*. Include Docket ID No. EPA-HQ-OAR-2026-2905 in the subject line of the message.
- Mail: U.S. Environmental Protection Agency, EPA Docket Center, Air and Radiation Docket, Mail Code 28221T, 1200 Pennsylvania Avenue NW, Washington, DC 20460.
- Hand Delivery or Courier: EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue, NW, Washington, DC 20004. The Docket Center's hours of operations are 8:30 a.m. to 4:30 p.m., Monday-Friday (except Federal Holidays).

Instructions: All submissions received must include the Docket ID No. for this rulemaking. Comments received may be posted without change to *https://www.regulations.gov*, including personal information provided. For detailed instructions on sending comments and additional

information on the rulemaking process, see the "Public Participation" heading of the **SUPPLEMENTARY INFORMATION** section of this document. For information on EPA Docket Center services, please visit us online at *https://www.epa.gov/dockets*.

Docket: The EPA has established a docket for this rulemaking under Docket ID No. EPA-HQ-OAR-2026-2905. All documents in the docket are listed at *https://www.regulations.gov*. Although listed, some information is not publicly available, *e.g.*, Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. The EPA does not place certain other material, such as copyrighted material, on the Internet; this material is publicly available only as portable document format (PDF) versions accessible only on EPA computers in the docket office reading room. The public cannot download certain databases and physical items from the docket but may request these items by contacting the docket office at (202) 566-1744. The docket office has 10 business days to respond to such requests. With the exception of such material, publicly available docket materials are available electronically at *https://www.regulations.gov* or on EPA computers in the docket office reading room at the EPA Docket Center, WJC West Building, Room Number 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m. ET, Monday through Friday. The telephone number for the Public Reading Room is (202) 566-1744.

If a virtual public hearing is requested on or before **[INSERT DATE 5 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, the EPA will post an update at *https://www.epa.gov/climate-hfcs-reduction*. The EPA does not intend to publish a document in the *Federal Register* announcing the public hearing or any other updates to any aspects of the hearing. If a virtual public hearing is held, it will be on or before **[INSERT DATE 15 DAYS**

AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. Information on the virtual hearing, including the time and how to participate, will be posted on the EPA's Hydrofluorocarbon Phasedown website at *https://www.epa.gov/climate-hfcs-reduction*. Refer to the section titled, "Public Participation" for additional information.

FOR FURTHER INFORMATION CONTACT: For information about this proposed rule, contact Annie Kee, Chemicals, Coatings, and Products Division, Office of Clean Air Programs (Mail Code 6205A), Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460; telephone number: (202) 564-2056; email address: kee.annie@epa.gov. Notices and rulemakings under the AIM Act are available on the EPA's website at *https://www.epa.gov/climate-hfcs-reduction/notices-and-rulemakings*.

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. Throughout this preamble, the use of "we," "us," or "our" is intended to refer to the EPA. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

AIM Act	American Innovation and Manufacturing Act
CAA	Clean Air Act
CBI	Confidential Business Information
EPA	Environmental Protection Agency
ER&R	Emissions Reduction and Reclamation
FR	*Federal Register*
GWP	Global warming potential
HFC	Hydrofluorocarbon
NAICS	North American Industry Classification System
OMB	Office of Management and Budget
PBI	Proprietary Business Information
RIA	Regulatory impact analysis
TRU	Transport refrigeration unit
U.S.C.	United States Code

Table of Contents

I. Executive Summary

A. Purpose of the Proposed Action

The EPA is proposing to exempt road and intermodal container TRUs from the leak repair requirements promulgated under subsection (h) of the AIM Act and codified at 40 CFR 84.106. In the 2024 rule, "Phasedown of Hydrofluorocarbons: Management of Certain Hydrofluorocarbons and Substitutes Under the American Innovation and Manufacturing Act of 2020," (hereafter referred to as the 2024 Emissions Reduction and Reclamation (ER&R) rule),

among other provisions, the EPA established leak repair requirements.[1] Under these requirements, as of January 1, 2026, owners or operators must comply with leak repair requirements for refrigerant-containing appliances with a full charge size of 15 pounds or more that contain an HFC or certain HFC substitutes, with certain limited exceptions as specified in the regulations.[2] The EPA did not intend to subject refrigerant-containing road and intermodal container TRUs to the leak repair requirements. In this action, the EPA is clarifying the applicability of these requirements and is proposing to exempt refrigerant-containing road and intermodal container TRUs from the ER&R leak repair requirements.

B. Summary of the Major Provisions of the Proposed Action

This action proposes to exempt road and intermodal container TRUs from the leak repair requirements in 40 CFR 84.106, which became effective as of January 1, 2026, for refrigerant-containing appliances with a charge size of 15 pounds or more that contain an HFC or certain HFC substitutes. Under this proposal, all road and intermodal container TRUs would be exempt from the leak repair requirements, regardless of their charge size. The proposed exemption, if finalized, would appear as an amendment to subpart C of 40 Code of Federal Regulations (CFR) part 84, by adding paragraph (iii) to 84.106(a)(3), "Leak repair," to include "Road and intermodal container transport refrigeration units" as exempt from the leak repair requirements. The EPA is not proposing other amendments or seeking comment on any other aspects of the 2024 ER&R rule. The specific proposed regulatory amendment to the leak repair provisions appears at the end of this document as proposed regulatory text.

II. Public Participation

[1] 89 FR 82682 (October 10, 2024).
[2] Pursuant to 40 CFR 84.106(a)(2), the leak repair requirements only apply where the refrigerant in the appliance contains an HFC and/or a substitute for an HFC with a global warming potential (GWP) greater than 53, based on the GWPs listed in table 1 of 40 CFR 84.64(b).

A. Written Comments

Submit your comments, identified by Docket ID No. EPA-HQ-OAR-2026-2905, at *https://www.regulations.gov* (our preferred method), or the other methods identified in the **ADDRESSES** section. Once submitted, comments cannot be edited or removed from the docket. The EPA may publish any comment received in the public docket. Do not submit to the EPA's docket at *https://www.regulations.gov* any information you consider to be CBI, Proprietary Business Information (PBI), or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the web, cloud, or other file sharing system). Please visit *https://www.epa.gov/dockets/commenting-epa-docket*s for additional submission methods; the full EPA public comment policy; information about CBI, PBI, or multimedia submissions; and general guidance on making effective comments.

The EPA recognizes that given the nature of this proposed rulemaking, potentially affected entities may wish to submit CBI. CBI should not be submitted through *https://www.regulations.gov*. For submission of confidential comments or data, please work with the person listed in the **FOR FURTHER INFORMATION CONTACT** section if submitting a comment containing CBI.

B. Participation in Virtual Public Hearing

The EPA may hold a virtual public hearing if the Agency receives a request to hold one. Any party requesting a public hearing must notify the contact listed in the **FOR FURTHER INFORMATION CONTACT** section, which is Annie Kee at email address:

kee.annie@epa.gov by 5 p.m. Eastern Daylight Time on or before **[INSERT DATE 5 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. If a virtual public hearing is held, it will take place on or before **[INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** and further information will be provided on the EPA's Hydrofluorocarbon Phasedown website at *https://www.epa.gov/climate-hfcs-reduction*.

The EPA will make every effort to follow the schedule as closely as possible on the day of the hearing; however, please plan for the hearings to run either ahead of schedule or behind schedule. The EPA anticipates each commenter will have three to five minutes to provide oral testimony. The EPA encourages commenters to provide a copy of their oral testimony electronically by emailing it to *kee.annie@epa.gov*. The EPA also recommends submitting the text of your oral comments as written comments to the rulemaking docket EPA-HQ-OAR-2026-2905. Written statements and supporting information submitted during the comment period will be considered with the same weight as oral comments and supporting information presented at the public hearing. The EPA may ask clarifying questions during the oral presentations but will not respond to the presentations at that time.

Please note that any updates related to a potential hearing will be posted online at *https://www.epa.gov/climate-hfcs-reduction*. Please monitor our website or contact Annie Kee, 202-564-2056, *kee.annie@epa.gov* to determine if a hearing will be held or for any other updates related to any aspects of such hearing. The EPA does not intend to publish a document in the *Federal Register* announcing the hearing or any related updates.

III. General Information

A. Does this action apply to me?

This action proposes to amend existing regulations. You may be affected by this

proposed action if you own, operate, service, or repair road and intermodal container TRUs containing HFCs or their substitutes. The following list identifies regulated entities that may be affected by this rulemaking and their respective North American Industry Classification System (NAICS) code, are:

- Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers (423450).
- Drugs and Druggists' Sundries Merchant Wholesalers (424210).
- General Line Grocery Merchant Wholesalers (424410).
- Packaged Frozen Food Merchant Wholesalers (424420).
- Wine and Distilled Alcoholic Beverage Merchant Wholesalers (424820).
- Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers (424930).
- Supermarkets and Other Grocery (except Convenience) Stores (445110).
- Convenience Retailers (445131).
- Warehouse Clubs and Supercenters (452311).
- Specialized Freight (except Used Goods) Trucking, Local (484220).
- Specialized Freight (except Used Goods) Trucking, Long-Distance (484230).
- Freight Transportation Arrangement (488510).

This list is not intended to be exhaustive but rather to provide a guide for readers regarding entities likely affected by this action. Other types of entities than those listed could also be affected by this action. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

B. What action is the Agency proposing to take?

The EPA is proposing an exemption for road and intermodal container TRUs from the leak repair requirements in 40 CFR 84.106. The Agency established the leak repair requirements under subsection (h) of the AIM Act in the 2024 ER&R rule. Among other provisions in the 2024 ER&R rule, as of January 1, 2026, owners or operators must comply with leak repair requirements for refrigerant-containing appliances with a full charge size of 15 pounds or more that contain an HFC or certain HFC substitutes, with certain limited exceptions as specified in the regulations. These requirements include leak rate calculation, appliance repair, and leak

inspections, among other provisions. In addition, there are applicable recordkeeping and reporting requirements for owners or operators.

In the 2024 ER&R rule, the EPA did not intend for the leak repair requirements to apply to owners or operators of road and intermodal container TRUs, given the Agency understood these appliances are typically designed for a charge size of 15 pounds or less of refrigerant. To avoid any potential confusion regarding the applicability of these requirements, the EPA is proposing to explicitly exempt road and intermodal container TRUs from the leak repair requirements in 40 CFR 84.106. In the Regulatory Impact Analysis (RIA) Addendum supporting the 2024 ER&R rule[3] (hereafter referred to as the 2024 RIA addendum), the EPA clearly demonstrated its understanding that road and intermodal container TRUs have a charge size of 15 pounds or less and therefore were not intended to be subject to the leak repair requirements.[4] Consistent with that understanding, the EPA did not assess the relevant costs and benefits of the final leak repair requirements in the 2024 ER&R rule on road and intermodal container TRUs. This proposed rule is narrow in scope and is expected to primarily affect owners or operators of road and intermodal container TRUs. The EPA is not proposing other amendments or requesting comment on any other aspects of the 2024 ER&R rule.

C. What is the Agency's authority for taking this action?

On December 27, 2020, the AIM Act was enacted as section 103 in Division S, Innovation for the Environment, of the Consolidated Appropriations Act, 2021 (42 U.S.C. 7675). In subsection (k)(1)(A), the AIM Act provides the EPA with the authority to promulgate

[3] "Regulatory Impact Analysis Addendum: Analysis of the Economic Impact and Benefits of the Final Rule: Management of Certain Hydrofluorocarbons and Substitutes Under Subsection (h) of the American Innovation and Manufacturing Act of 2020," is available in the docket for this rule (EPA-HQ-OAR-2026-2905).

[4] In the 2024 RIA addendum, the EPA noted on table 3-10: "Road Transport and Intermodal Containers average charge sizes are less than 10 pounds but shown as rounded values. Therefore, these appliance types (even under the "High" distributed charge size group) … are not affected by the leak repair … provisions."

necessary regulations to carry out the EPA's functions under the Act, including its obligations to ensure that the Act's requirements are satisfied (42 U.S.C. 7675(k)(1)(A)). Subsection (k)(1)(C) of the Act also provides that Clean Air Act (CAA) sections 113, 114, 304, and 307 apply to the AIM Act and any regulations the EPA promulgates under the AIM Act as though the AIM Act were part of Title VI of the CAA (42 U.S.C. 7675(k)(1)(C)). Accordingly, the promulgation of these regulations under the AIM Act is subject to CAA section 307(d) (see 42 U.S.C. 7607(d)(1)(I)) (CAA section 307(d) applies to "promulgation or revision of regulations under subchapter VI of this chapter (relating to stratosphere and ozone protection)").

The AIM Act authorizes the EPA to regulate HFCs in three main areas: phasing down the production and consumption of listed HFCs; management of these HFCs and their substitutes; and facilitating the transition to next-generation technologies by restricting use of these HFCs in the sector or subsectors in which they are used. This rulemaking concerns a requirement under the second area—establishing certain regulations for HFCs and their substitutes for the purposes of maximizing reclaiming and minimizing releases of HFCs from equipment and ensuring the safety of technicians and consumers. Subsection (h) of the AIM Act is titled "Management of Regulated Substances." For purposes of maximizing reclaiming and minimizing releases of HFCs from equipment and ensuring the safety of technicians and consumers, subsection (h)(1) directs the EPA to promulgate regulations to control, where appropriate, any practice, process, or activity regarding the servicing, repair, disposal, or installation of equipment that involves a regulated substance, a substitute for a regulated substance, the reclaiming of a regulated substance used as a refrigerant, or the reclaiming of a substitute for a regulated substance used as a refrigerant.[5] The phrase "where appropriate" in subsection (h)(1) provides the EPA discretion

[5] 42 U.S.C. 7675(h)(1).

to reasonably determine how the regulations under subsection (h)(1) will apply because "where appropriate" clearly leaves the EPA flexibility to determine how to regulate in the context of subsection (h). For additional discussion of the EPA's authorities under subsection (h) of the AIM Act, please refer to the 2024 ER&R rule.[6]

D. What are road and intermodal container transport refrigeration units?

The refrigerated transport subsector primarily moves perishable goods (*e.g.*, food, flowers) and pharmaceuticals at temperatures between −22 °F (−30 °C) and 61 °F (16 °C) by various modes of transportation, including aircraft, roads and railways, vessels, and intermodal containers. A TRU is a type of integrated refrigeration appliance installed on a vehicle or intermodal container to regulate the temperature of the cargo. This proposed action focuses solely on certain TRUs, specifically road and intermodal container TRUs. Rail TRUs are a separate type of appliance from road and intermodal container TRUs and are not covered by this proposed action.

Road TRUs are refrigerant-containing appliances most often used on vans, trucks, and semi-trailers and cool cargo at a particular temperature or at different temperatures simultaneously (*e.g.*, to transport both fresh and frozen foods). These TRUs are installed on vehicles that operate on roads. Road TRUs often have an integrated power source; however, some smaller units are connected to and powered by the vehicle's main engine. Intermodal container TRUs, which are refrigerated shipping containers, allow uninterrupted storage while being transported on rail, trucks, and vessels. An intermodal container TRU is a refrigerant-containing appliance installed on the exterior of the container or integrated within the container. While some intermodal container TRUs do have an integrated power source, the Agency

[6] 89 FR 82682 (October 11, 2024).

understands that some intermodal container TRUs may not have an integrated power source. This description of road and intermodal container TRUs is consistent with the EPA's characterization of the subsector in the 2023 final Technology Transitions rule ("Phasedown of Hydrofluorocarbons: Restrictions on the Use of Certain Hydrofluorocarbons Under the American Innovation and Manufacturing Act of 2020"[7]). The typical charge size for road and intermodal container TRUs can range from 5 to 15 pounds. Recent information from industry indicates that in some instances, the charge size is greater than 15 pounds but is generally 18 pounds or less.[8] Thus, to avoid any potential confusion regarding the applicability of the leak repair requirements, the EPA is proposing to explicitly exempt road and intermodal container TRUs from the leak repair requirements in 40 CFR 84.106. Under this proposed action, all road and intermodal container TRUs would be exempt from the leak repair requirements, regardless of the charge size.

IV. What is the EPA Proposing in This Action?

A. What is the EPA proposing to explicitly exempt from the leak repair requirements?

The EPA is proposing an exemption for road and intermodal container TRUs from the leak repair requirements in 40 CFR 84.106. The 2024 ER&R rule implemented regulatory requirements to minimize the release of HFCs and their substitutes from equipment (*e.g.*, air conditioning and refrigeration appliances) and to maximize the amount of HFCs reclaimed. Among other provisions, the EPA established regulatory requirements for leak repair for certain refrigerant-containing appliances containing HFCs and certain HFC substitutes.[9] Specifically, in 40 CFR 84.106, as of January 1, 2026, owners or operators must comply with leak repair

[7] 88 FR 73098 (October 24, 2023).
[8] "Carrier Corporation Briefing on HFC Management Rule Applicability to Road and Intermodal Transport Refrigeration Units," is available in the docket for this rule (EPA-HQ-OAR-2026-2905).
[9] 89 FR 82682 (October 11, 2024).

requirements for refrigerant-containing appliances with a full charge size of 15 pounds or more of refrigerant, with certain limited exceptions as specified in the regulations. The leak repair requirements include leak rate calculation, appliance repair, leak inspections, among other provisions. In addition, there are applicable recordkeeping and reporting requirements for owners or operators subject to the leak repair provisions.

In the 2024 ER&R rule, the EPA codified certain limited exemptions from the leak repair requirements. For example, the EPA exempted refrigerant-containing appliances used for the residential and light commercial air conditioning and heat pump subsector from the leak repair provisions in 40 CFR 84.106.[10] The residential and light commercial air conditioning and heat pump subsector is categorized by refrigerant-containing appliances that are used to cool individual rooms, single-family homes, and small commercial buildings. As stated in the preamble to the 2024 ER&R rule, while the majority of refrigerant-containing appliances in this subsector are below the 15-pound charge size threshold for the leak repair requirements, a portion of the refrigerant-containing appliances in this subsector may have charge sizes above 15 pounds.[11] In finalizing the leak repair requirements in 2024 ER&R rule, the EPA determined that it was appropriate to explicitly exempt refrigerant-containing appliances in that subsector from the leak repair requirements. To codify the exemption, under the "Applicability" section of the leak repair requirements, in 40 CFR 84.106(a)(3)(ii), the EPA listed, "Refrigerant-containing appliances used for the residential and light commercial air conditioning and heat pump subsector" as not being covered.

The EPA is using a similar approach for the proposed exemption for road and intermodal

[10] Pursuant to 40 CFR 84.106(a)(3)(i), appliances (as defined in 40 CFR 82.152) containing solely an ozone-depleting depleting substance as listed in 40 CFR part 82, subpart A as a refrigerant are also exempt from the leak repair requirements.
[11] 89 FR 82719 (October 11, 2024).

container TRUs. In particular, under this proposal, the EPA would explicitly exempt road and intermodal container TRUs from the leak repair requirements. Accordingly, under the "Applicability" section of the leak repair requirements, the EPA would list "Road and intermodal container transport refrigeration units" as being exempt, as a means of exempting refrigerant-containing appliances used for road and intermodal container transport refrigeration units from the leak repair requirements. The regulatory text, if finalized, would appear in 40 CFR 84.106(a)(3)(iii).

The EPA is proposing this amendment because in finalizing the leak repair requirements in the 2024 ER&R rule, the EPA did not intend for road and intermodal container TRUs to be subject to the provisions as the Agency understood the average charge size for these appliances was well under 15 pounds. The EPA clearly demonstrated that understanding in the 2024 RIA addendum and the preamble discussions to the proposed and final ER&R rules. In the 2024 RIA addendum, while the EPA did evaluate the costs and benefits of rail TRUs complying with the leak repair requirements, the Agency did not do the same for road and intermodal container TRUs. Where the EPA discussed affected appliances in both the preambles to the proposed and final 2024 ER&R rules, the Agency explicitly indicated certain TRUs (*e.g.*, rail) could and would be covered by the leak repair requirements given their expected charge size and without discussing road or intermodal container TRUs as subject.

Stakeholder inquiries earlier this year indicated that there are road and intermodal container TRUs designed for charge sizes over 15 pounds. When notified about these particular TRUs, the Agency initially responded by providing information on the EPA's website that noted as with any appliance, including road and intermodal container TRUs, there may be situations where the appliance is charged, initially or during a servicing event, to a level that is less than or

greater than the intended charge size. In addition, the EPA noted for the purposes of 40 CFR 84.106, consistent with the EPA's 2024 RIA addendum, the Agency generally presumes road and intermodal container TRUs have a charge size of 15 pounds or less and intends to implement this provision consistent with this presumption.[12] However, given the EPA's better understanding based on recent information[13] that road and intermodal container TRUs are routinely designed for and/or charged with more than 15 pounds, the Agency is now considering whether amending the regulations to provide an explicit exemption, along the lines of the exemption for residential and light commercial air conditioning, would be appropriate. In addition, the EPA received a petition for reconsideration from Carrier dated April 21, 2026, which the EPA is reviewing, to revise 40 CFR 84.106 to exempt road and intermodal TRUs.[14] In this action, while the Agency is not proposing to exempt TRUs installed on railcars, we are requesting comment on whether this type of appliance should also be exempt from the leak repair requirements.

Under this proposal, all road and intermodal container TRUs, regardless of their charge size, would be exempt from the leak repair requirements in 40 CFR 84.106. The EPA is not proposing amendments or taking comment on any other aspects of the 2024 ER&R rule.

B. What are the cost and environmental impacts of this proposed action?

The EPA is including this section on costs and environmental impacts to provide general information about the proposed action. Estimates are considered preliminary, and the Agency is

[12] EPA's Frequent Questions on the Phasedown of Hydrofluorocarbons. Available at *https://www.epa.gov/climate-hfcs-reduction/frequent-questions-phasedown-hydrofluorocarbons#Leak-repair-and-ALD*.
[13] "Carrier Corporation Briefing on HFC Management Rule Applicability to Road and Intermodal Transport Refrigeration Units," is available in the docket for this rule (EPA-HQ-OAR-2026-2905).
[14] "Petition to Revise the Phasedown of Hydrofluorocarbons: Management of Certain Hydrofluorocarbons and Substitutes Under the American Innovation and Manufacturing Act of 2020 Rule, 89 Fed. Reg. 82,682 (Oct. 11, 2024), codified at 40 C.F.R. Part 84, Subpart C," is available in the docket for this proposed rule (EPA-HQ-OAR-2026-2905).

seeking more detailed information on specific costs likely to be avoided through this proposed action. If finalized, the proposed exemption for road and intermodal container TRUs is expected to significantly reduce potential regulatory burden for certain TRU owners and operators, for discrete types of refrigerant-containing appliances (*i.e.*, road and intermodal container TRUs with more than 15 pounds of refrigerant). The 2024 RIA addendum developed for the 2024 ER&R rule already assumed that road and intermodal container TRUs are not subject to leak repair requirements. However, if the Agency implemented leak repair requirements to apply to road and intermodal container TRUs, then potentially burdensome costs could have resulted.

Within Carrier's petition for rulemaking, Carrier estimates that the potential savings from this action would be $333 million per year, based on monitoring and recordkeeping costs, leak detection and repair (LDAR) inspections, and equipment downtime.[15] The EPA has not fully evaluated the estimated costs provided by Carrier. The EPA's preliminary quantified cost savings from this proposed action is approximately $90 million per year, based on several key assumptions. The EPA assumes there are 360,000 road and intermodal container TRUs with a refrigerant charge size of 15 pounds or more and all of these TRUs would experience an annual compliance cost of $250. The annual costs are based on the estimated annual leak inspection costs included in the 2024 RIA addendum and are based on a loaded labor rate of $58/hour and 4 hours of time, converted to 2024 dollars. This estimate is preliminary, but provides a rough estimate of potential savings for stakeholders to comment on. The EPA recognizes that this estimate does not explicitly include all potential costs (*e.g.*, recordkeeping and reporting costs), but expects this omission is offset by the assumption that all TRUs will exceed the 10% leak rate

[15] *See* page 3 of "Petition to Revise the Phasedown of Hydrofluorocarbons: Management of Certain Hydrofluorocarbons and Substitutes Under the American Innovation and Manufacturing Act of 2020 Rule, 89 Fed. Reg. 82,682 (Oct. 11, 2024), codified at 40 C.F.R. Part 84, Subpart C," available in the docket for this rule (EPA-HQ-OAR-2026-2905).

threshold and trigger the leak inspection requirements. More discussion of these assumptions is provided below.

The EPA estimates total present value cost savings of approximately $1 billion (using a 3 percent discount rate) or $900 million (using a 7 percent discount rate). These estimates are based the EPA's preliminary cost savings estimate of approximately $90 million per year extended over a 15-year analysis period of 2026 to 2040, expressed in 2024 dollars, discounted to 2026.[16] Over a 25-year period through 2050, the EPA estimates total present value cost savings of approximately $1.5 billion (using a 3 percent discount rate) or $1 billion (using a 7 percent discount rate). Estimates of total present value are based on an assumption that both technology and policy impacts are static and do not change over time.

The EPA's Vintaging Model[17] estimates a current stock of approximately 1.2 million appliances in the road transport and intermodal container subsectors, which contain road and intermodal container TRUs, among other appliances. In the context of the 2024 RIA addendum, the EPA incorrectly assumed that road and intermodal container TRUs have an average charge size of 10 pounds and that all these units have a charge size of 15 pounds or less. This implied a total installed charge of approximately 5,000 metric tons. Recently, stakeholders have provided information indicating that approximately 70% of road and intermodal container TRUs contain more than 15 pounds of refrigerant, or 360,000 units that are in operation in the range of 15 to 18 pounds of charge size.[18] Assuming an average of 17 pounds, this quantity of units would

[16] The 2024 RIA addendum expressed costs using 2022 constant dollars. For the preliminary estimate, costs have been converted to 2024 constant dollars using a GDP chain-type price index retrieved from *https://fred.stlouisfed.org/series/A191RG3A086NBEA*.

[17] U.S. EPA. 2018. EPA's Vintaging Model of ODS Substitutes. EPA Report EPA-400-F-18-001. Available at: *https://www.epa.gov/sites/default/files/2018-09/documents/epas-vintaging-model-of-ods-substitutes-peer-review-factsheet.pdf*.

[18] *See* page 1 of "Petition to Revise the Phasedown of Hydrofluorocarbons: Management of Certain Hydrofluorocarbons and Substitutes Under the American Innovation and Manufacturing Act of 2020 Rule, 89 Fed.

represent a total installed charge of approximately 3,000 metric tons that exceed 15 pounds of charge per unit. In comparison, the total installed charge of all appliances over 15 pounds covered by the leak repair requirements in the 2024 RIA addendum was approximately 312,000 metric tons. While road and intermodal container TRUs are relatively small in terms of total charge size, they are relatively numerous in terms of the number of units.

Under the 2024 ER&R rule leak repair requirements, owners or operators of subject refrigerant-containing appliances are required to calculate leak rates whenever refrigerant is added to appliances, with certain limited exceptions. Owners or operators are required to identify and repair leaks when the leak rate exceeds the applicable leak rate threshold for the appliance, among other provisions. If road and intermodal container TRUs were subject to the leak repair requirements, costs per leak event above the 10% threshold could have ranged from several hundred dollars up to one thousand dollars or more per unit. As detailed in appendix E of the 2024 RIA addendum, the EPA assumed that a leak inspection would require on average 4 hours per appliance per inspection for commercial refrigeration appliances and used a loaded labor rate of $58 per hour. Thus, a single inspection per year would cost approximately $230, expressed in 2022 dollars, or approximately $250 when converted to 2024 dollars. This estimate does not include costs for repair, leak calculations, or recordkeeping and reporting. One stakeholder provided their own cost estimates which totaled $333 million, or approximately $1,000 per unit per year.[19] That estimate assumed higher labor rates, refrigerant monitoring twice per year, leak inspection and repair, and appliance downtime during repairs. The EPA estimates cost savings of this rule of $90 million per year, reflecting 360,000 appliances with per-unit annual costs of

Reg. 82,682 (Oct. 11, 2024), codified at 40 C.F.R. Part 84, Subpart C," available in the docket for this rule (EPA-HQ-OAR-2026-2905).

[19] *Ibid*.

$250. Incorporating higher labor costs or additional cost categories would increase the estimate of cost savings. Costs could also be lower for appliances that do not exceed the 10% leak rate threshold.

Estimating costs of leak inspection and repair requirements are complicated by the fact that the appliances will have a distribution of charge sizes and leak rates, and owners or operators would perform cost-effective maintenance and repair on their appliance regardless of regulatory requirements. The 2024 RIA addendum accounted for these issues using distributions along both the charge size and leak dimensions. With regard to costs, the 2024 RIA addendum calculated effective cost of performing repairs six or 10 weeks sooner than otherwise, as opposed to assuming that repairs would not otherwise have been performed. In addition, the 2024 RIA addendum did not assume that requirements brought leak rates to zero, but that leak rates would be reduced. The EPA expects that if the same analysis methodologies are applied to road and intermodal container TRUs that preliminary estimates could be refined. The EPA has not assessed market impacts of this proposal outside of the preliminary engineering cost estimates described above.

V. On Which Topics is the EPA Specifically Requesting Comment?

The EPA is requesting comment on the proposed exemption for road and intermodal container TRUs from the leak repair requirements in 40 CFR 84.106. Specifically, under this proposed action, all road and intermodal container TRUs would be exempt from the leak repair requirements, regardless of the charge size. The EPA also requests comment on the cost savings and environmental impacts from this action. In addition, we are requesting information on typical equipment leak rates and the range of typical equipment charge sizes for road and intermodal container TRUs. The EPA is also requesting comment on the typical number of repairs that may occur over the course of equipment lifetime that require refrigerant to be added

and the costs associated with repairing and recharging TRUs.

Additionally, the EPA is requesting comment on whether rail TRUs (*e.g.*, TRUs used exclusively on rail cars) should also be explicitly exempted from the leak repair requirements. The EPA requests information on the average charge size of rail TRUs and number of rail TRU appliances in the United States.

VI. Statutory and Executive Orders Reviews

Additional information about these statutes and Executive Orders can be found at *https://www.epa.gov/laws-regulations/laws-and-executive-orders*.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and was therefore not submitted to the Office of Management and Budget (OMB) for review.

B. Executive Order 14192: Unleashing Prosperity Through Deregulation

This action is expected to be an Executive Order 14192 deregulatory action. This proposed rule is expected to provide burden reduction by clarifying that the leak repair provisions under the 2024 ER&R rule do not apply to road and intermodal container TRUs that contain an HFC or certain HFCs substitutes. This action does not impose additional regulations.

C. Paperwork Reduction Act (PRA)

This action does not impose an information collection burden under the PRA because it does not contain any information collection activities.

D. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the EPA concludes that the impact of concern for this rule is any significant adverse economic impact on small entities

and that the agency is certifying that this rule will not have a significant economic impact on a substantial number of small entities because the rule relieves regulatory burden on the small entities subject to the rule. The change proposed in this rulemaking is deregulatory in nature and clarifies that the EPA's original intent was to exempt road and intermodal container TRUs from the 2024 ER&R rule leak repair provisions. This proposed action does not change any other regulatory requirements under that rulemaking. We have therefore concluded that this action will relieve regulatory burden for all directly regulated small entities.

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate as described in UMRA, 2 U.S.C. 1531-1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local or Tribal governments or the private sector.

F. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

G. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action does not have Tribal implications as specified in Executive Order 13175. The proposed action does not result in any changes to the requirements in 40 CFR part 84 other than clarifying that road and intermodal container TRUs are exempt from the leak repair provisions in 40 CFR 84.106. Thus, Executive Order 13175 does not apply to this action.

H. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

The EPA interprets Executive Order 13045 as applying only to those regulatory actions

that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of "covered regulatory action" in section 2-202 of the Executive Order. Therefore, this action is not subject to Executive Order 13045 because it does not concern an environmental health risk or safety risk. Since this action does not concern human health, EPA's Policy on Children's Health also does not apply.

I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution or Use

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

J. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards.

List of Subjects in 40 CFR Part 84

Environmental protection, Administrative practice and procedure, Air pollution control, Chemicals, Climate change, Emissions, Reclaiming, Recycling, Reporting and recordkeeping requirements.

Lee Zeldin,
Administrator.

For the reasons set forth in the preamble, the EPA proposes to amend 40 CFR part 84 as follows:

PART 84—PHASEDOWN OF HYDROFLUOROCARBONS

1. The authority citation for part 84 continues to read as follows:

Authority: Pub. L. 116-260, Division S, Sec. 103.

Subpart C—Management of Regulated Substances

2. Amend § 84.106 by adding paragraph (a)(3)(iii) to read as follows:

§ 84.106 Leak repair.

(a) * * *

(3) * * *

(iii) Road and intermodal container transport refrigeration units.

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