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December 23, 2023

The Honorable Michael S. Regan  
Administrator  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Re: Narrow Petition for Reconsideration, to shipping for critical life sciences products (e.g., blood plasma), of the Final Rule Entitled "Phasedown of Hydrofluorocarbons: Restrictions on the Use of Certain Hydrofluorocarbons Under the American Innovation and Manufacturing Act of 2020"

Dear Administrator Regan:

Trane Technologies requests that the U.S. Environmental Protection Agency (EPA) reconsider a narrow portion of the final technology transition rule: "Phasedown of Hydrofluorocarbons: Restrictions on the Use of Certain Hydrofluorocarbons Under the American Innovation and Manufacturing Act of 2020," 88 Fed. Reg. 73098 (Oct. 24, 2023) (Technology Transition Rule) pursuant to 5 U.S.C. 553(e) and 42 U.S.C. 7607(d)(7)(B), as applicable to The American Innovation and Manufacturing Act of 2020 (AIM Act) under 42 U.S.C. 7675(k)(1)(C),

Trane Technologies (Trane) is a climate company with well-known brands such as Trane and Thermo King, which are global leaders in stationary and transport air conditioning and transport refrigeration products. Trane Technologies is well known for its global leadership in transitioning away from today's high global warming potential (GWP) refrigerants. Trane began transitioning its global high-performance chiller portfolio in 2015 and Thermo King began transitioning its EU transport refrigeration products in 2014, long before regulations began taking shape.

We greatly appreciate the Environmental Protection Agency's (EPA's) tireless and fast-paced efforts to implement the American Innovation and Manufacturing (AIM) Act program, including the Technology Transition Rule published in October of this year. Trane committed to reduce our customer's emissions by the equivalent of one gigaton (1 billion metric tonnes) of carbon dioxide between 2020 and 2030. Transitioning away from high GWP refrigerants with highly efficient products will help us meet this goal.

Trane Technologies strongly supports the EPA global warming potential (GWP) limit of 700, established in the Technology Transition Rule § 84.54 *Restrictions on the use of hydrofluorocarbons* (a)(6) for January 1, 2025<sup>1</sup>, for fresh and frozen food transport (e.g. Thermo King *Container Fresh & Frozen*<sup>2</sup>). However, the final Technology Transition rule may extend beyond the scope of fresh and frozen food and apply to deep-frozen cargo containers used to transport products requiring temperatures below -35°C including critical life sciences products (e.g., blood plasma and other pharmaceuticals)<sup>3</sup>.

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<sup>1</sup> Specifically, EPA limited intermodal containers, "with the temperature of the refrigerant entering the evaporator (for direct heat exchange systems) or the temperature of the fluid exiting (for chillers) of >-50C or higher using a regulated substance, or a blend containing a regulated substance, with a global warming potential of 700 or greater"

<sup>2</sup> [Thermo King Container Fresh & Frozen](#)

<sup>3</sup> The [Air Conditioning, Heating, and Refrigeration Institute \(AHRI\) commented on the proposed rule that EPA](#) should include marine transport refrigerant limitations only if there were an allowance for the use of R-452A for frozen cargo.

Thermo King’s *Magnum Plus*<sup>4</sup> is designed to reach and maintain -40°C box temperature to preserve the quality of critical products even in very high ambient temperature climates (e.g., +50°C ambient temperature)<sup>5</sup>, which can only be accomplished with lower boiling point refrigerants which have GWPs greater than 700.<sup>6</sup> Without access to the *Magnum Plus*, the only alternative would be a super-freezer container that uses a refrigerant with a significantly higher GWP.

With this petition, Trane Technologies is requesting reconsideration of the provisions of the rule regarding deep frozen cargo containers designed to obtain and maintain a box temperature below -35°C. Trane Technologies asks EPA to modify language in § 84.54 *Restrictions on the use of hydrofluorocarbons* (a)(6) and (c)(7) as follows.

Technology Transition Rule, § 84.54 *Restrictions on the use of hydrofluorocarbons* (a)(6) and (c)(7) as published:

*Effective January 1, 2025, refrigerated transport – intermodal containers designed with the temperature of the refrigerant entering the evaporator (for direct heat exchange systems) or the temperature of the fluid exiting (for chillers)<sup>7</sup> of -50 °C (-58 °F) or higher using a regulated substance, or a blend containing a regulated substance, with a global warming potential of 700 or greater;*

Requested modification of § 84.54 *Restrictions on the use of hydrofluorocarbons* (a)(6) and (c)(7):  
*Effective January 1, 2025, refrigerated transport – intermodal containers designed to reach and maintain -35°C box temperature ~~with the temperature of the refrigerant entering the evaporator (for direct heat exchange systems) or the temperature of the fluid exiting (for chillers) of -50 °C (-58 °F)~~ or higher using a regulated substance, or a blend containing a regulated substance, with a global warming potential of 700 or greater;*

We greatly appreciate your support in ensuring continued access to this critical service. We look forward to continuing to work with EPA as we strive to provide decarbonized, heating and cooling globally, including for the most extreme temperatures.

Sincerely,

*Helen Walter-Terrinoni*

Helen Walter-Terrinoni  
Director – Global Climate Policy  
Trane Technologies

cc: Joseph Goffman, Principal Deputy Assistant Administrator  
Paul Gunning, Director, Office of Atmospheric Protection  
Cynthia Newberg, Director, Stratospheric Protection Division  
Erin Birgfeld, Branch Supervisor Technology Transitions Branch, Stratospheric Protection Division

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<sup>4</sup> [Thermo King Magnum Plus](#)

<sup>5</sup> As an example, blood plasma must be maintained at -35°C, even in the most extreme ambient temperatures.

<sup>6</sup> Additional technical details were provided to EPA prior to this petition.

<sup>7</sup> The regulation incorrectly refers to a chiller, but container cooling uses direct expansion technology.