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RE: Comment Period on Chapter 173-443 WAC Rule Proposal Phase

Thank you for the additional opportunity to submit comments on the rulemaking for hydrofluorocarbons (HFC) under Chapter 173-443 of the Washington Administrative Code. While Boeing shares some of the same HFC uses one would find in any commercial or industrial buildings, such as refrigeration and air conditioning, there are some uses specific to aerospace products, which are considered “nonroad vehicles” under federal and Washington State air regulations. We appreciate your consideration of the material contained herein as well as information we provided to the agency in our March 16, 2020 comment letter and during and following our April 7, 2020 meeting. Our previously submitted comments still stand and are relevant to this rule proposal phase.

We Request Language Clarifying that Stationary Sources are the Rule’s Focus

The definition of “refrigeration equipment”¹ in the proposed language for WAC 173-443 implies that the intent is to regulate HFC-containing equipment at stationary sources. However, because the undefined term “stationary device” is used instead of “stationary source,” as defined in WAC 173-400-030(91),² the rule could be misinterpreted. Below, we provide two recommendations that together could prevent such misunderstanding.

Recommendation 1: Add a definition of “stationary” to the rule

The proposed rule’s current use of “stationary device,” when paired with a definition of “stationary,” would provide better clarity, consistent application, and regulatory certainty across the aerospace supply chain. The final refrigeration equipment rule in the California code³ uses “stationary device,” along with this definition of “stationary”:

“Stationary” means the system is (i) installed in a building, structure, or facility; (ii) attached to a foundation, or if not attached, will reside at the same location for more than twelve consecutive months; or (iii) located intermittently at the same facility for at least two consecutive years and operates at that facility a total of at least 90 days each year.

Boeing urges the agency to add this definition of “stationary” to the final rule.

¹ “Refrigeration equipment” means any stationary device that is designed to contain and use refrigerant gas, including but not limited to retail or commercial refrigeration equipment, household refrigeration equipment, and cold storage warehouses.

² Stationary source means any building, structure, facility, or installation which emits or may emit any air contaminant. This term does not include emissions resulting directly from an internal combustion engine for transportation purposes or from a nonroad engine or nonroad vehicle as defined in Section 216(11) of the federal Clean Air Act (42 U.S.C., 7550(11)).

³ California Code of Regulations, Title 17, Division 3, Chapter 1, Subchapter 10 Climate Change, Article 4

Recommendation 2: Add the word “chiller” to list of examples of “refrigeration equipment.”

Adding “chillers” to the list of examples makes it understood that chillers are covered by the definition of “refrigeration equipment.” Without this addition, the definition could be misconstrued to exclude chillers. The use of “not limited to” in the draft is not enough to prevent such misunderstanding.

Boeing urges the agency to add “chillers” to the examples listed in the definition of “refrigeration equipment.”

With regard to consistency with other states’ rules, we note that another U.S. Climate Alliance (USCA) member, the State of Colorado, proposed an HFC rule in 2020 that also excludes aircraft and other mobile sources.⁴ Moreover, aircraft are not part of any existing or proposed USCA member states’ HFC frameworks.⁵

Aerospace Cooling Uses and Requirements

The HFCs used in aerospace systems (e.g., in galleys, cabins, and cargo areas) are critical to meeting strict Federal Aviation Administration (FAA) certification standards and Department of Defense needs for flight safety. This is why Oregon House Bill 4024 in 2020 defined substitute to exclude parts subject to FAA certification requirements, in addition to specific exemption for aircraft fire extinguishing systems. While the industry is evaluating non-HFC solutions, none has been identified to date.

While the Washington proposed rule’s focuses on stationary sources, we would like to underscore that the development / certification process for chemical substitutions for aerospace purposes can take approximately a decade or longer, with an anticipated range close to eight years in this case.

Conclusion

We suggest one additional correction in the definition of “substitute.” The proposed rule refers to “2-BPT,” and it should be changed to “2-BTP” to correctly identify the fire extinguishing agent 2-bromo-3,3,3-trifluoropropene.

Thank you again for the opportunity to comment on Ecology’s HFC rulemaking. We understand that the intent of the rule is to regulate stationary sources, and we urge Ecology to add a definition of “stationary” based on the example provided or otherwise include language that provides clarity and certainty for the aerospace supply chain. We also request that chillers be added to the list of examples of refrigeration equipment to preclude any misunderstanding. Please reach out if you have any feedback on the comments that Boeing has provided herein or in previous submittals.

Sincerely,



Steve Shestag
Director, Environment
The Boeing Company

⁴ See Colorado Air Quality Control Commission Economic Impact Analysis for Part B.I. Hydrofluorocarbons in Aerosol Propellants, Chillers, Foam, and Stationary Refrigeration End-Uses (HFC Rule), dated Feb. 20, 2020.

⁵ See Maryland fact sheet on New Regulations under new Chapter COMAR 26.11.33, dated Dec. 2, 2019.