

**DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION**

Response to Comments

On the Proposed Amendments to Regulations .01 and .06 under COMAR 26.11.33 – Prohibitions on Use of Certain Hydrofluorocarbons in Aerosol Propellants, Chillers, Foam, and Stationary Refrigeration End-Uses Public Hearing Held in Baltimore, MD August 17, 2020

Purpose of Hearing: The purpose of the public hearing was to allow for public comment on the Maryland Department of the Environment's (the Department or MDE) proposal regarding new Regulations .01 and .06 under COMAR 26.11.33 – Prohibitions on Use of Certain Hydrofluorocarbons (HFC) in Aerosol Propellants, Chillers, Foam, and Stationary Refrigeration End-Uses.

Date and Location: The public hearing was held virtually on August 17, 2020, at 10 a.m. GoToMeeting – Event Access Code: 833-404-781 - the Maryland Department of the Environment.

Attendance: 60 attendees: Lisa Nissley of MDE served as hearing officer. Other MDE staff were Randy Mosier, Joshua Shodeinde, Carolyn Jones, Christopher Wheeling, Megan Ulrich and Scott Thompson. The attendees are listed in Attachment A, as they logged in to the GoToMeeting Hearing.

Statement: The Department's statement was read by Mr. Joshua Shodeinde, Regulatory and Compliance Engineer of the Regulations Development Division of the Air and Radiation Administration, Department of the Environment. A transcript of the meeting has been prepared by For the Record, Inc., White Plains MD.

Comments and Responses: Comments, unless otherwise noted, were received electronically from:

Stephen Wieroniey, American Chemistry Council - Center for the Polyurethanes Industry (CPI)
Nicholas Georges, Household and Commercial Products Association (HCPA)
Charlie McCrudden, Daikin
Justin Koscher, Polyisocyanurate Insulation Manufacturers Association (PIMA)
Ellen Valentino, Maryland-Delaware-DC Beverage Association
Kevin Messner, Association of Home Appliance Manufacturers (AHAM) (verbal)
Lisa Massaro, DuPont; Allen Karpman, Arkema; Peter M. Geosits, Koura; Ming Xie, Kingspan Insulation (joint comments submitted electronically)
Christopher Bresee, Air-Conditioning, Heating and Refrigeration Institute (AHRI) (verbal)
Walter A. Reiter, III, EPS Industry Alliance (EPSIA)
Sanjeev Rastogi, Honeywell
Christina Theodoridi, Natural Resources Defense Council (NRDC)

A summary of the comments received and the Department's responses to the comments are below.

REGULATORY PROPOSAL

Comment: Several commenters support Maryland’s regulation to reduce HFC emissions from certain end-uses. One commenter stated that American industry has invested well over \$1 billion domestically and employed more than 700,000 US workers to research, develop and implement alternative solutions to high-global warming potential (GWP) HFCs. Several commenters also expressed appreciation that Maryland’s proposed regulations are consistent with actions from other US Climate Alliance (USCA) states.

Response: The Department appreciates the support for this regulatory proposal to reduce certain HFCs and HFC blends that have a high-global warming potential and pose a higher overall risk to human health and the environment. Reducing emissions of HFCs will combat the adverse impacts of climate change in Maryland. The Department worked extensively with the US Climate Alliance (USCA), multiple state environmental regulatory divisions, industry associations, industry manufacturers and installers, environmental advocates, and the general public in drafting the proposed regulations.

DEFINITIONS

Comment: One commenter offered technical changes to 10 definitions and suggested the addition of a new definition for “polyurethane.” Another commenter suggested modifying the definition of “aerosol propellant” to align with the definition already existing in State regulations. Another commenter suggested a definition for “manufacturer” so that the definition does not unintentionally create confusion among owners and operators.

Response: MDE acknowledges the comments received. However, the Department does not believe the revisions are warranted at this time. The proposed definitions of the different foam end-uses have been reviewed by USCA states, industry, and other stakeholders, and they are consistent with U.S. EPA SNAP and other states’ rules and current proposals. The recommended edits submitted by the commenter may be considered as part of a future amendment to the proposed regulatory language after an additional technical review from other industry stakeholders, should alternate terms and/or definitions become more broadly accepted.

Further, the definitions in the proposed COMAR Chapter 33 only apply within that Chapter, just as the definitions in COMAR Chapter 32 only apply to the Consumer Products Chapter. As a rule, the definitions of COMAR Chapter 1 apply through all regulations in Subtitle 11 Air Quality unless those definitions are superseded by a similar term contained within another, and unique to that, Chapter.

DISCLOSURE REQUIREMENTS

Comment: One commenter believes the disclosure statement requirement is unnecessary and unwarranted as applied to polyisocyanurate (polyiso) insulation products. The commenter further argues that requiring manufacturers to provide disclosures as part of regulating such end-uses like polyiso insulation falls outside of the Department’s regulatory authority and is not legitimately connected to the Department’s interest in reducing the use of HFCs.

Response: Although the Department recognizes that some industries may have shifted from manufacturing products and equipment with HFCs, one of the intentions of the disclosure statement is to inform the buyer as to whether the product/equipment purchased is in compliance with State regulations. By requiring all manufacturers to submit disclosure statements, the Department can keep track of any industry that goes back to using HFCs or HFC blends when they previously moved away from using these substances.

The authority to adopt the proposed regulations is cited at the beginning of the proposed new COMAR Chapter proposal, in the Notice of Proposed Action (NPA) published on July 31, 2020, and the Technical Support Document (TSD). The Department has the authority to regulate emissions of air pollution and consults with the Attorney General's office during an internal regulatory proposal review process. Additionally, the State's Joint Committee on Administrative, Executive, and Legislative Review (AELR) conducts a thorough review of proposed regulations, including determinations of authority to adopt regulations.¹ Upon conclusion of its review for this proposal, AELR stated, "The other statutes cited by the department provide more general authority for the regulations. Section 1-404² gives the Secretary of the Environment broad authority to adopt regulations to carry out the provisions of law that are within the jurisdiction of the Secretary, while § 2-103³ gives the department jurisdiction over emissions into the air and ambient air quality in this State. Lastly, § 2-1202⁴ defines terms related to the State's Greenhouse Gas Emissions Reduction Act." The AELR's review concluded that the Department correctly cited authority for this proposal.

Comment: One commenter expressed concern over disclosure requirements for equipment that is not pre-charged. The commenter believes that MDE should also permit the use of existing labels, specifically the UL or equivalent safety label, as an acceptable form of disclosure for refrigeration or air conditioning equipment that is not pre-charged.

Response: UL or equivalent safety label will not be sufficient. The proposed disclosure requirements serve to inform the end-user that they may not use substances which are listed as prohibited in Maryland in their equipment if the substances are listed as prohibited for that equipment type. Additionally, the disclosure requirements provide assurance to manufacturers that compliant substances are being used in their products and equipment in situations where end-users determine which refrigerant is ultimately placed in systems. Moreover, Maryland worked extensively with each industry sector to adopt disclosure language specific to the type of product and equipment.

Comment: One commenter requested clarifying language to provide that electronic-only and product literature disclosures are sufficient and permitted under this rule to minimize the regulatory burden to the HVAC supply chain.

Response: The Department believes that the proposed disclosure requirements currently offer a flexible, low-cost and convenient way for manufacturers to comply, which includes the use of disclosure via product literature such as an owner's manual given directly to the end-user.

¹ <http://mgaleg.maryland.gov/mgawebsite/Search/AELR>.

² Annotated Code of Maryland, Environmental Article

³ Annotated Code of Maryland, Environmental Article

⁴ Annotated Code of Maryland, Environmental Article

Although the Department acknowledges the advantages of having a centralized online database for disclosures, this system would need to be comprehensively detailed and developed before being integrated into regulatory language. Therefore, while an electronic-only disclosure is not currently feasible, it can be further studied as part of a future amendment.

RECORDKEEPING REQUIREMENTS

COMMENT: Several commenters opposed the recordkeeping requirements, and recommend their deletion altogether. Commenters believe the requirements are overly burdensome, provide no enforcement value, and are duplicative of other state requirements. One commenter suggested an exemption from recordkeeping requirements for manufacturers that do not sell foams containing restricted substances in Maryland, and suggested MDE utilize on-product disclosures for enforcement. Another commenter believes Maryland's proposed recordkeeping requirements go above and beyond other state programs. Further, the commenter suggests that Maryland align the recordkeeping requirements as proposed by other jurisdictions.

Response: The Department disagrees with these comments for the following reasons. The proposed regulations apply only to manufacturers of products and equipment in the end-uses listed and require that they maintain information and data they already have. Furthermore, the proposed recordkeeping requirements align closely with at least one other state program. Therefore, these requirements do not present a significant regulatory burden.

Also, recordkeeping will ensure that products and equipment in the market are compliant with the proposed requirements based on the manufacturing date and refrigerant/HFC used. On-product disclosures inform the buyer as to whether the product/equipment purchased is in compliance with State regulation. The recordkeeping requirements will provide an additional enforcement mechanism to ensure that products and equipment comply with the proposed prohibition deadlines.

Comment: One commenter recommended that safety data sheets should be accepted for recordkeeping requirements, similar to the way it is accepted in disclosure. Specifically, the commenter recommends modifying Regulation .06A(4) to read:

A copy of the disclosure statement, label, sticker or safety data sheet issued or available to the buyer or recipient.

Response: The Department does not believe the requested changes are necessary. Regulation .06A states that certain manufacturers "must maintain for three years a copy of...records, **where applicable.**" Based on this language, manufacturers would be required to provide records consistent with information that can be produced by the manufacturer. Safety data sheets may be utilized to demonstrate the aerosol propellant contained within a product.

REPORTING REQUIREMENTS

Comment: Several commenters oppose the reporting requirements and recommend removal of this requirement. Commenters state that the reporting requirements do not provide any benefit to the state

and are overly burdensome for manufacturers. One commenter believes the proposed requirement creates a sustained hardship that does not improve the enforcement of the regulation.

Response: The Department disagrees with these comments for the following reasons. The reporting requirements will enable State enforcement staff to track and monitor manufacturers' progress in phasing out the use of substances that will be prohibited from use in the State. Furthermore, the reporting requirements provide an additional enforcement mechanism to ensure timely transition by industry. The Department anticipates that only a small subset of manufacturers in certain end-use categories would be required to submit annual reports; and once compliance deadlines go into effect, these manufacturers will no longer need to submit reports. While Maryland is unique in its proposed requirements for annual reporting until compliance deadlines, at least one other state program⁵ requires submission of reports from those manufacturers with products and equipment that contain substances listed in the proposed regulation. Maryland's proposed reporting form has been modeled from this state program to reduce the burden to those manufacturers subject to this provision.

PROHIBITION DATES

Comment: Several commenters requested that MDE extend the prohibition dates for three end-uses for several reasons. First, certification activities by code officials are delayed due to COVID-19 impacts on traveling. Second, EPA published a proposed SNAP listing Rule (SNAP 23), which approves three new types of blends for use in XPS Boardstock and Billet foam that are prohibited under the Department's proposal. Third, the commenters recommend that Maryland maintain consistency with other USCA states. Commenters claim three other states (ME, VT, HI) have proposed or agreed to move the compliance date for these foams to January 2022. At least 10 other US Climate Alliance states, including PA and VA, will only finalize their proposals in mid-2021 and will have to adopt them by 2022 or at a later date by default. Lastly, the proposed ban date is in the middle of construction season and will disrupt it.

Response: The Department's final proposal included a six-month extension of the prohibition date for four foam end-uses from January 1, 2021, which is the date originally proposed in stakeholder meetings, to July 1, 2021. The currently proposed dates will give industry additional time to reformulate foam products by allowing approximately nine months between regulation adoption and compliance deadlines. This transitional time is consistent with the Department's approach with previous promulgated regulations, such as the Architectural and Industrial Coating regulations, which also granted industry at least 6 months to comply.

The Department believes that the proposed timeline is appropriate as it offers enough lead-time from the intended schedule of the vacated EPA SNAP rules (effective dates prior to January 2019) for the three foam end-uses). EPA's analysis to justify an earlier prohibition date included technical and economic considerations for the availability of lower GWP alternatives for these end-uses.

Additionally, Maryland is maintaining consistency with United States Climate Alliance (USCA) states such as CA, WA, DE and CO, who already have effective laws with compliance dates of January 1, 2020 or January 1, 2021 for the three foam end-uses in question. Aside from VT, the other states listed (HI, ME, PA, VA) will not be finalizing rules until at least sometime next year, much later than the date MD

⁵ Washington Department of Ecology HFC regulations

regulations would be final. MD is acting in concert with states currently finalizing rules, such as DE, CO, and potentially NY.

In regards to construction activity, the proposed regulations contain a sell-through provision, allowing products manufactured prior to the prohibition date to be sold and purchased after the effective date of prohibition. MDE does not believe our proposed regulations will disrupt industry's construction activity as construction companies should still have continued access to products being used.

MDE is tracking EPA's SNAP listing Rule (SNAP 23). As this rule is only proposed at this time, MDE will continue to monitor it. If a final rule is passed, MDE will evaluate taking any future corresponding action at that time.

Lastly, MDE included the following language in the Technical Support Document (TSD) for this regulation: The Department recognizes that COVID-19 has created unforeseen circumstances across our State and that it may have affected a person's ability to comply with these regulations. Any person not able to comply with the prohibition deadlines in this regulation due to COVID-19 may submit a plan for compliance in accordance with Section 2-611 of the Environment Article. It will be necessary to clearly state and document the reason the pandemic is the cause for such delay. The submitted plan will be made available for public comment for 30 days on the Department's website, and the Department will, as required by statute, issue its response to the plan within 90 days.

Comment: Several commenters support the prohibition dates established in the regulatory proposal. One commenter believes that those companies who have invested in the transition, and are prepared to meet a January 1, 2021 transition date, should not be penalized, and those who delay should not be rewarded. Two commenters stated that a delay in the prohibition date for these products will lock-in additional emissions for years to come, and also stated that manufacturers who request an extension have announced capacity to comply with regulations in several states and Canada.

Response: The Department appreciates the information to support the compliance deadlines. The Department believes the compliance deadlines provide sufficient transition timelines while implementing phase-outs of HFCs and HFC blends that contribute to GHG emissions.

ECONOMIC IMPACT

Comment: One commenter believes the economic impact analysis is flawed. According to the commenter, the general applicability and definition of "manufacturer" encompasses many business sectors from retailers, vending machine owners and operators, and several local beverage manufacturers and distributors. This inaccuracy means that the economic impact is significantly understated. Another commenter believed small business owners could be most impacted.

Response: The Department disagrees with this comment for the following reasons. The impact to all businesses, including small businesses, was compiled in the Department's Notice of Proposed Action (NPA) and Technical Support document (TSD). Businesses that may be potentially affected by the proposed regulations in Maryland are manufacturers, retailers, owners, operators and users of end-uses of consumer aerosol products, domestic and commercial refrigerated appliances, polyurethane foams, polystyrene foams, polyolefin foams, polyisocyanurate foams, and vending machines. The Department

followed the EPA's screening analyses of SNAP rules 20 and 21 to determine businesses impacted by the proposed HFC regulations.⁶

The regulation will primarily impact the manufacturers of material and equipment. Maryland consumers and businesses (retailers, owners, operators, distributors, etc.) may be affected by the product transition in the market. However, the EPA estimates that the transition to new equipment and products with lower global warming potential substitutes will have negligible cost to end-users as market forces absorb initial cost increases and annual savings incurred to meet the end-use prohibitions. The proposed regulations do not prescribe that any business transition to a particular refrigerant or alternative, so additional costs are not estimated. The impact of the proposed regulation can be presumed to have no significant economic impact on a substantial number of small entities as the EPA's nationwide report⁷ concluded.

Additionally, there is a reporting requirement in the regulation that applies only to manufacturers with products and equipment that contain HFCs that will be prohibited. The Department anticipates that only a small subset of manufacturers in certain end-use categories would be required to submit annual reports; once compliance deadlines go into effect, these manufacturers will no longer need to submit reports. The reporting requirements will enable State enforcement staff to track and monitor manufacturers' progress in phasing out the use of substances that will be prohibited from use in the State. The primary responsibility for reporting these products to the Department is on the manufacturer; however, if the product manufacturer has no presence in the U.S, the importer or distributor of the product or equipment is required to report. The importer or distributor will not need to report if the product manufacturer already reports to the Department. The Department estimates that only a small number of entities will be impacted by the reporting requirement and the economic impact of the reporting requirements to be minimal.

EXISTING PRODUCTS AND EQUIPMENT

Comment: One commenter requested clarity as to whether retailers may maintain current equipment through its life cycle. The commenter believes it is the intent of the regulations to allow retailers the ability to repair and continue to operate current cooling systems. The commenter also states that the proposed regulations should apply only to new installations, and that the current systems be allowed to run through the equipment life cycle.

Response: The proposed prohibition compliance dates for specified end-uses apply only to "new" or "retrofit" equipment as defined in the proposed regulation; products and equipment acquired or manufactured prior to the proposed prohibition dates are exempted. The proposed regulation's intent is to allow for existing equipment, or any equipment manufactured prior to the effective date of these regulations, to continue to be serviced, maintained, and/or charged with the original refrigerant/HFC substance that the equipment was designed to use. Thus, even if that particular refrigerant/HFC substance is prohibited as of the effective date of this regulation, existing equipment, or any equipment, manufactured prior to the effective date will not have to replace its refrigerant/HFC substance with a substitute substance.

⁶ <https://www.epa.gov/snap/snap-regulations>

⁷ "Economic Impact Screening Analysis for Regulatory Changes to the Listing Status of High-GWP Alternatives - Revised" prepared by ICF International dated July 2015 (EPAHQ-OAR-2014-0198-024020)

Comment: Several commenters support the sell-through provision included in the proposed regulation.

Response: The Department agrees that sell-through provisions are an important part of the transition to lower global warming potential substances without imposing significant hardship on businesses.

COVID-19 ADJUSTMENTS

Comment: One commenter suggests the Department engage both with manufacturers and end-users to determine the impact of COVID-19 on operations and manufacturing as well as end-user financial impact.

Response: MDE included the following language in the Technical Support Document (TSD) for this regulation: The Department recognizes that COVID-19 has created unforeseen circumstances across our State and that it may have affected a person's ability to comply with these regulations. Any person not able to comply with the prohibition deadlines in this regulation due to COVID-19 may submit a plan for compliance in accordance with Section 2-611 of the Environment Article. It will be necessary to clearly state and document the reason the pandemic is the cause for such delay. The submitted plan will be made available for public comment for 30 days on the Department's website, and the Department will, as required by statute, issue its response to the plan within 90 days.

IMPORTED PRODUCTS AND EQUIPMENT

Comment: One commenter believes the proposed regulations have a built-in conflict that prohibits a vending business from importing vending machines from other states into the State. Maryland is home to multistate vending machine operations and the regulations would not allow them to keep machines for warehousing and repair.

Response: The regulations will prohibit the sale, lease, rent, install, use or manufacture of products and equipment that contain high-global warming potential HFC and HFC blends in Maryland. The intent of the regulation is not to restrict the warehousing and/or transportation of products and equipment that will be used in other states.

The proposed prohibitions for specified end-uses apply only to "new" or "retrofit" equipment as defined in the proposed regulation; vending machines acquired or manufactured prior to the proposed prohibition dates are exempted. The proposed regulation's intent is to allow for existing vending machines, or any equipment manufactured prior to the effective date of these regulations, to continue to be serviced, maintained, and/or charged with the original refrigerant/HFC substance that the equipment was designed to use through the life cycle of the product or equipment. Thus, even if that particular refrigerant/HFC substance is prohibited as a result of this regulation, equipment manufactured prior to the effective date of prohibition will not have to replace its refrigerant/HFC substance with a substitute substance. However, any vending machine that has been manufactured **after** the effective date of prohibition and contains a prohibited substance, may not be serviced in the State.

Certain mechanical repairs of any vending machine, e.g. replacement of glass covering or coin slot, may be allowed as long as the mechanical repair (1) does not use a prohibited substance for vending machines manufactured after the effective date of prohibition; (2) does not lead to the conversion from

one refrigerant to another refrigerant; and (3) does not involve a repair that may leak the refrigerant, such as repairing gaskets and seals.

ADDITIONAL COMMENTS

Comment: A few commenters stated that safety standards and model building codes must enable the use of group A2L refrigerants. The commenters encourage MDE to work with the Division of Codes and Standards and the Department of Labor, Licensing, and Regulation to adopt rules permitting the use of substitutes not prohibited by this regulation. According to the commenters, ensuring the regulations timeline and restrictions match with modifications to codes and standards would be a great step in ensuring a safe and timely refrigerant transition without disruption to HVACR equipment.

Response: The Department is aware of proposals to update safety standards and building codes to allow for low-GWP refrigerants to be utilized in certain buildings and is monitoring discussions centered on the topic closely. Built into the regulation is sufficient time to allow updates to safety standards and building codes to complement the compliance deadlines in the proposed regulations.

Nonetheless, the Department will continue to collaborate with industry to ensure regulations are adopted in an efficient and safe manner. The Department will also continue to review the evolving development of all aspects of these regulations through the USCA and other states and may consider amendments in the future, if necessary.

Comment: One commenter recommended the addition of training and servicing requirements for technicians for future regulations considerations. The commenter stated that industry intends to develop a standardized training program for technicians, contractors, wholesalers, and trainers.

Response: The Department acknowledges this suggestion and will continue to work with industry and stakeholders to consider appropriate regulatory amendments as advanced practices and technologies become available.

Comment: A few commenters recommend that Maryland consider adding provisions around refrigerant management to address Maryland's strategy to reduce HFC emissions. According to the commenters, any ban that does not exempt reclaimed product will leave stranded all existing equipment that relies on a banned refrigerant.

Response: Reclaiming and reusing of refrigerants is outside the scope of the proposed regulatory initiative and may be reviewed as a part of any future regulatory action.

Comment: Several commenters stated that it is the MDE and SNAP programs' responsibility to provide a list of acceptable blowing agent substitutes for each end use.

Response: The Department acknowledges these comments; however, providing a list of acceptable blowing agent substitutes is outside the scope of this proposed new regulation. EPA's SNAP program maintains a list of acceptable substitutes and updates the lists based on a technical and environmental analysis of substitutes. The EPA identifies and evaluates substitutes⁸ in end-uses that have historically

⁸ <https://www.epa.gov/snap/snap-substitutes-sector>

used ozone-depleting substances (ODS), looks at overall risk to human health and the environment of both existing and new substitutes, publishes lists of acceptable and unacceptable substitutes by end-use, promotes the use of acceptable substitutes, and provides the public with information about the potential environmental and human health impacts of substitutes. To arrive at determinations on the acceptability of substitutes, EPA performs a cross-media analysis of risks to human health and the environment from the use of various substitutes in different industrial and consumer uses that have historically used ODS.

Attachment A – Hearing Attendees

Meeting Date	Meeting Duration	Number of Attendees
August 17, 2020 9:46 AM EDT	59 minutes	60

Details

Name

Meeting Attendee 1	Dianne Brickman
Meeting Attendee 2	Duane King
Meeting Attendee 3	Eamon Flynn
Meeting Attendee 4	Elizabeth Ortlieb
Meeting Attendee 5	Ellen Valentino
Meeting Attendee 6	Emily Lamb
Meeting Attendee 7	Emily Porcari
A Thur De Koos	Helen Walter-Terrinoni
Allan Chara	Jean Cornell
Caitlin McDonough	Jessica Olson
Carolyn Jones	Jon Reimann
Charlie McCrudden	Joshua Shodeinde
Chris Forth	Justin Koscher
Christian Wisniewski	Kailasam, Ajit
Christian Wisniewski	Kara Hawkins
Christina Banoub	Karen Willoughby
Christina Theodoridi	Kevin Messner
Christopher Bresee	Kevin Muldoon (KCC)
	Leslie Churilla, NAVFAC
Christopher Nitz	Washington
Christopher Wheeling	Lisa Massaro
Cindy Hudson	Mark Boncardo
	Maryland Department of
Dan Arnold	the Environment
Daniel Atkins	Michael Pennington
David Bolanos	Michael Pennington
Deane Groff	Nanette Lockwood
Nicholas Georges	
Randy Mosier - MDE	

Meeting Attendee 8

Robert Wolfer

Ronald Shughart

Ryan Kiscaden

Schuyler Pulleyn

Scott Thompson

Shelly Leibowitz

Stephen Wieroniey

Sue Ann Richardson

Ted Atwood

Walter Reiter

Megan Ulrich