ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 84

[EPA–HQ–OAR–2024–0196; FRL–10782–01–OAR]

RIN 2060–AV98

Phasedown of Hydrofluorocarbons: Review and Renewal of Eligibility for Application-Specific Allowances

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of proposed rulemaking.

SUMMARY: The U.S. Environmental Protection Agency is undertaking this rulemaking to assess the eligibility of six applications to receive priority access to allowances allocated pursuant to the American Innovation and Manufacturing Act of 2020. This rulemaking proposes the framework for how EPA will assess whether to renew the eligibility of applications to receive application-specific allowances; decisions to renew or not renew each of the six applications that currently receive application-specific allowances; revisions to the Technology Transitions regulations as relevant to the specific applications under review; a procedural process for submitting a petition to designate a new application as eligible for priority access to allowances; narrow revisions to the methodology used to allocate allowances to application-specific allowance holders for calendar years 2026 and beyond; and limited revisions to existing regulations. EPA is also proposing to authorize an entity to produce regulated substances for export. Lastly, EPA is proposing certain confidentiality determinations for newly reported information if this rulemaking is finalized as proposed.

DATES: Comments must be received on or before October 31, 2024. Any party requesting a public hearing must notify the contact listed below under **FOR FURTHER INFORMATION CONTACT** by 5 p.m. Eastern Daylight Time on September 23, 2024. If a virtual public hearing is held, it will take place on or before October 1, 2024 and further information will be provided at *https://www.epa.gov/climate-hfcs-reduction.*

ADDRESSES: The U.S. Environmental Protection Agency (EPA) has established a docket for this action under Docket ID No. EPA–HQ–OAR–2024–0196. All documents in the docket are listed on the *https://www.regulations.gov* website. Although listed in the index, some information is not publicly available, *e.g.,* Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard-copy form. Publicly available docket materials are available electronically through *http://www.regulations.gov* or in hard copy at the EPA Docket Center, Room 3334, WJC West Building, 1301 Constitution Avenue NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the EPA Docket Center is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: Michelle Graff, U.S. Environmental Protection Agency, Stratospheric Protection Division, telephone number: 202–564–5387; or email address: *graff.michelle@epa.gov.* You may also visit EPA's website at *https://www.epa.gov/climate-hfcs-reduction* for further information.

SUPPLEMENTARY INFORMATION: Throughout this document, whenever ''we,'' ''us,'' ''the Agency,'' or ''our'' is used, we mean EPA. Acronyms and abbreviations that are used in this rulemaking that may be helpful include:

2-BTP—2-bromo-3,3,3-trifluoropropene
AAGR—Average Annual Growth Rate
AES—Automated Export System
AIM Act—American Innovation and Manufacturing Act of 2020
AHRI—Air-Conditioning, Heating, and Refrigeration Institute
APU—Auxiliary Power Unit
ASHRAE—American Society for Heating, Refrigerating, and Air-Conditioning Engineers
ASA—Application-Specific Allowance
CAA—Clean Air Act
CBI—Confidential Business Information
CBP—U.S. Customs and Border Protection
CF_3I—Trifluoroiodomethane
CFR—Code of Federal Regulations
CGMP—Current Good Manufacturing Practice
CHIPS Act—Creating Helpful Incentives to Produce Semiconductors Act of 2022
ClF_3—Chlorine Trifluoride
CO_2—Carbon Dioxide
COVID—Coronavirus Disease
CVD—Chemical Vapor Deposition
DFARS—Defense Federal Acquisition Regulation Supplement
DOD—U.S. Department of Defense
DOJ—U.S. Department of Justice
EEI—Electronic Export Information
EV—Exchange Value
EVe—Exchange Value Equivalent
EPA—U.S. Environmental Protection Agency
FAA—Federal Aviation Administration
FAR—Federal Acquisition Regulation
FDA—U.S. Food and Drug Administration
FIFRA—Federal Insecticide, Fungicide, and Rodenticide Act
FSTOC—Fire Suppression Technical Options Committee
FTOC—Flexible and Rigid Foams Technical Options Committee
FR—Federal Register
GHG—Greenhouse Gas
GWP—Global Warming Potential
HCFO—Hydrochlorofluoroolefin
HFC—Hydrofluorocarbon
HFIB—Hexafluoroisobutylene
HFO—Hydrofluoroolefin
ICAO—International Civil Aviation Organization
ICR—Information Collection Request
IPCC—Intergovernmental Panel on Climate Change
ITN—Internal Transaction Number
Kg—Kilogram
MCMEU—Mission-Critical Military End Uses
MCTOC—Medical and Chemicals Technical Options Committee
MDI—Metered Dose Inhaler
MT—Metric Ton
MTEVe—Metric Tons of Exchange Value Equivalent
NAICS—North American Industry Classification System
NF_3—Nitrogen Trifluoride
ODP—Ozone Depletion Potential
ODS—Ozone-Depleting Substances
OMB—U.S. Office of Management and Budget
PFC—Perfluorocarbon
PII—Personally Identifiable Information
PRA—Paperwork Reduction Act
PU—Polyurethane
RACA—Requests for Additional Consumption Allowance
RFA—Regulatory Flexibility Act
RIA—Regulatory Impact Analysis
RSV—Respiratory Syncytial Virus
SCPPU—Structural Composite Preformed Polyurethane
SF_6—Sulfur Hexafluoride
SiN—Silicon Nitride
SiO_2—Silicon Dioxide
SNAP—Significant New Alternatives Policy
SISNOSE—Significant Economic Impact on a Substantial Number of Small Entities
TCE—Trichloroethylene
TEAP—Technology and Economic Assessment Panel
TSCA—Toxic Substances Control Act
TSD—Technical Support Document
UMRA—Unfunded Mandates Reform Act

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I. Executive Summary

A. Purpose of the Proposed Regulatory Action

The U.S. Environmental Protection Agency (EPA) is undertaking this action to implement certain provisions of the American Innovation and Manufacturing Act of 2020, codified at 42 U.S.C. 7675 (AIM Act or the Act). The Act directs EPA to implement the phasedown of hydrofluorocarbons (HFCs) by issuing a limited quantity of transferrable production and consumption allowances, which entities must expend to produce or import HFCs. In addition, subsection (e)(4)(B) of the Act authorizes EPA to allocate allowances exclusively for the use in specific applications for which there is: (1) no safe or technically achievable substitute and (2) an insufficient supply of the HFCs used in the application that can be secured from chemical manufacturers. The Act listed six applications that would receive priority access to allowances for a five-year period beginning on December 27, 2020: propellants in metered dose inhalers (MDIs), defense sprays, structural composite preformed polyurethane (SCPPU) foam for marine use and trailer use (hereafter referred to as SCPPU foam for marine and trailer uses), the etching of semiconductor material or wafers and the cleaning of chemical vapor deposition (CVD) chambers within the semiconductor manufacturing sector, mission-critical military end uses (MCMEU), and onboard aerospace fire suppression. EPA intends to finalize this proposed rule ahead of the allocation of calendar year 2026 allowances. Without finalization of this proposed rule, all applications would be ineligible for allowances for calendar year 2026.[1] EPA has created a category of allowances to provide this priority access, which EPA refers to as application-specific allowances (ASAs). ASAs are allocated ahead of general pool allowances based on a methodology intended to determine eligible entities' needs for regulated substances (see Section VII of this preamble and the Allocation Framework Rule (86 FR 55116, October 5, 2021) for more information). After the total ASA quantity is determined, the remaining allowances are distributed to general pool allowance recipients using a different methodology.

[1] EPA first codified the allocation methodology for general pool and ASA holders in ''*Phasedown of Hydrofluorocarbons: Establishing the Allowance Allocation and Trading Program Under the American Innovation and Manufacturing Act*'' (hereafter referred to as the ''Allocation Framework Rule'') (86 FR 55116, October 5, 2021). The methodology for general pool allowance holders was subsequently updated in ''*Phasedown of Hydrofluorocarbons: Allowance Allocation Methodology for 2024 and Later Years*'' (hereafter referred to as the ''2024 Allocation Rule'' (88 FR 46836, July 20, 2023); the ASA methodology was not updated in the 2024 Allocation Rule.

Subsection (e)(4)(B)(v) of the AIM Act directs EPA to review applications receiving priority access to allowances not less frequently than once every five years, and, if the application meets the criteria above, authorize the eligibility of the application to receive priority access to allowances for a period of not more than five years. EPA is proposing how the Agency will interpret these two criteria to review applications receiving ASAs. EPA is also proposing decisions to renew or not renew each of the six applications that currently receive ASAs.

Separately, subsection (i) of the Act authorizes EPA, by rulemaking, to restrict the use of HFCs in sectors or subsectors where the regulated substances are used. Under the authority of this provision, EPA finalized the rule ''*Phasedown of Hydrofluorocarbons: Restrictions on the Use of Certain Hydrofluorocarbons Under the American Innovation and Manufacturing Act of 2020*'' (hereafter referred to as the ''2023 Technology Transitions Rule''; 88 FR 73098, October 24, 2023), which established restrictions for three sectors and 39 subsectors. The rule exempted applications with a current qualification for ASAs. As such, if an application is no longer eligible to receive ASAs, it would become subject to the restrictions established in the 2023 Technology Transitions Rule. EPA is therefore proposing how the Technology Transitions regulations would apply to applications if EPA were to determine that those applications are not eligible for renewal for the full five-year period.

The Act also includes a provision for the public to petition EPA to designate an application as eligible for priority access to allowances. EPA is proposing a procedural process for submitting a petition under this provision and to define minimum required elements of such a petition. In addition, this rulemaking proposes narrow revisions to the methodology used to allocate allowances to ASA holders for calendar years 2026 and beyond as well as other limited revisions to the existing 40 CFR part 84 regulations. EPA is also proposing to authorize an entity to produce regulated substances for export for application-specific uses pursuant to subsection (e)(5). Lastly, EPA is proposing certain confidentiality determinations for newly reported information if this rulemaking is finalized as proposed.

B. Summary of Proposed Actions

Application-specific allowance holder review: EPA is describing how it proposes to interpret the criteria under subsection (e)(4)(B) of the AIM Act and evaluate the six categories of ASA holders listed in subsection (e)(4)(B)(v) of the Act. EPA is proposing to renew the following applications for the full five-year period from 2026–2030: propellants in MDIs, the etching of semiconductor material or wafers and the cleaning of CVD chambers within the semiconductor manufacturing sector, MCMEU, and onboard aerospace fire suppression. EPA is co-proposing two options for defense sprays: do not renew or renew for a two-year period through 2027. EPA is co-proposing three options for SCPPU foams for marine and trailer uses: do not renew, renew for a two-year period through 2027, or renew for the full five-year period from 2026–2030 with allowance amounts determined based on the exchange value (EV) of a substitute HFC. In cases where EPA is proposing to change the status of ASA holders, this proposal also details how the Technology Transitions regulations would apply to those applications.

Application-specific allowance holder petitions: EPA is proposing the process and information requirements for submitting petitions under subsection (e)(4)(B) of the AIM Act which seek the designation of an application as an essential use.

Application-specific allowance methodology: EPA is proposing targeted revisions to the existing ASA methodology: to require companies to provide a total request for allowances for the calendar year, to expand permissible scenarios that could qualify as unique circumstances, to use a different allocation methodology for certain very small users of HFCs and entities with irregular purchasing history, how to account for inventory in allocation decisions, to establish a set-aside of allowances for situations that meet the criteria for unique circumstances related to medical conditions treated by MDIs, and to allow ASA holders to return a portion of their allowances voluntarily if they do not intend to use them. EPA is also proposing new requirements for conferrals of MCMEU allowances and an opportunity to return unneeded ASAs.

Other regulatory revisions: EPA is proposing other specific regulatory changes to: clarify the ability of the Federal government to pursue, if appropriate, auctioning illegally imported HFCs that are seized by enforcement officials, require exporting companies to report ''Internal Transaction Numbers'' (ITNs) quarterly, and simplify the reporting on ''date of purchase'' for a Request for Additional Consumption Allowances (RACA).

Authorization of production for export: EPA is proposing to authorize an entity to produce for export for application-specific uses abroad.

Handling of confidentiality for newly reported information: EPA is proposing certain confidentiality determinations for newly reported information if this rulemaking is finalized as proposed.

II. General Information

A. Does this action apply to me?

You may be potentially affected by this proposal if you use HFCs in one of the six applications eligible for an allocation under section (e)(4)(B)(iv) of the AIM Act. You may also potentially be affected if you produce, import, export, purify, destroy, reclaim, package, or otherwise distribute HFCs for end users in one of these six applications or are a current HFC allowance holder. Potentially affected categories, North American Industry Classification System (NAICS) codes, and examples of potentially affected entities are included in Table 1.

TABLE 1—NAICS CLASSIFICATION OF POTENTIALLY AFFECTED ENTITIES

NAICS code	NAICS industry description
325120	Industrial Gas Manufacturing.
325199	All Other Basic Organic Chemical Manufacturing.
325211	Plastics Material and Resin Manufacturing.
325412	Pharmaceutical Preparation Manufacturing.
325414	Biological Product (except Diagnostic) Manufacturing.
325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing.
326220	Rubber and Plastics Hoses and Belting Manufacturing.
326150	Urethane and Other Foam Product.
326299	All Other Rubber Product Manufacturing.

TABLE 1—NAICS CLASSIFICATION OF POTENTIALLY AFFECTED ENTITIES—Continued

NAICS code	NAICS industry description
333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing.
333511	Industrial Mold Manufacturing.
334413	Semiconductor and Related Device Manufacturing.
334419	Other Electronic Component Manufacturing.
334510	Electromedical and Electrotherapeutic Apparatus Manufacturing.
336212	Truck Trailer Manufacturing.
336214	Travel Trailer and Camper Manufacturing.
336411	Aircraft Manufacturing.
336611	Ship Building and Repairing.
336612	Boat Building.
336992	Military Armored Vehicle, Tank, and Tank Component Manufacturing.
SIC 373102	Military Ships, Building, and Repairing.
339112	Surgical and Medical Instrument Manufacturing.
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers.
423730	Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers.
423740	Refrigeration Equipment and Supplies Merchant Wholesalers.
423830	Industrial Machinery and Equipment Merchant Wholesalers.
423840	Industrial Supplies Merchant Wholesalers.
423860	Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers.
424690	Other Chemical and Allied Products Merchant Wholesalers.
488510	Freight Transportation Arrangement.
541380	Testing Laboratories.
541714	Research and Technology in Biotechnology (except Nanobiotechnology).
562111	Solid Waste Collection.
562211	Hazardous Waste Treatment and Disposal.
562920	Materials Recovery Facilities.
922160	Fire Protection.

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

B. What is EPA'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 (codified at 42 U.S.C. 7675). In subsection (k)(1)(A), the AIM Act provides EPA with the authority to promulgate necessary regulations to carry out 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 EPA promulgates under the AIM Act as though the AIM Act were part of title VI of the CAA. Accordingly, this rulemaking 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 EPA to address HFCs in three main ways: phasing down HFC production and consumption through an allowance allocation program, facilitating the transition to next-generation technologies by restricting use of these HFCs in the sector or subsectors in which they are used, and promulgating certain regulations for purposes of maximizing reclaiming and minimizing releases of HFCs from equipment and ensuring the safety of technicians and consumers. This proposal relates to the first area and addresses restrictions in the second area for impacted subsectors.

The Act required EPA, for the five-year period beginning on December 27, 2020, to allocate the full quantity of allowances necessary, based on projected, current, and historical trends, for the production or consumption of regulated substances for the exclusive use in six applications: propellants in MDIs, defense sprays, SCPPU foam for marine and trailer uses, the etching of semiconductor material or wafers and the cleaning of CVD chambers within the semiconductor manufacturing sector, MCMEU, and onboard aerospace fire suppression (42 U.S.C. 7675(e)(4)(B)(iv)(I)). EPA has defined these allowances as ASAs. EPA intends to finalize this rulemaking ahead of the allocation of calendar year 2026 allowances. Without finalization of this rulemaking, all applications would be ineligible for application-specific allowances for calendar year 2026.

Subsection (e)(4)(B)(v) of the AIM Act requires EPA to review applications receiving allocations pursuant to subsection (e)(4)(B)(iv) at least every five years. If pursuant to this review EPA determines that the requirements of two statutory criteria are met, EPA shall authorize production or consumption, as applicable, of the exclusive use of regulated substances in the application for renewable periods of not more than five years. Specifically, EPA must determine whether: (1) no safe or technically achievable substitute will be available during the applicable period for the application; and (2) the supply of the regulated substance that manufacturers or users of the regulated substance for that application are capable of securing from chemical manufacturers is insufficient to accommodate the application.

Separately, an entity may file a petition for an application to receive ASAs. The AIM Act outlines timeframes and deadlines for EPA to act on such a petition and how the Agency should assess such a petition (42 U.S.C. 7675(e)(4)(B)(ii)). Specifically, not later than 180 days after receiving a petition, EPA must propose and seek public comment on whether to provide ASAs for the application. Not later than 270

days after EPA receives a petition, the Agency must take final action on the petition. Any application determined to be eligible for ASAs would also be subject to the review requirements in subsection (e)(4)(B)(v).

Subsection (i) of the AIM Act, ''Technology Transitions,'' provides that ''the Administrator may by rule restrict, fully, partially, or on a graduated schedule, the use of a regulated substance in the sector or subsector in which the regulated substance is used'' (42 U.S.C. 7675(i)(1)). However, rules promulgated under subsection (i) ''shall not apply to . . . an essential use under clause (i) or (iv) of subsection (e)(4)(B), including any use for which the production or consumption of the regulated substance is extended under clause (v)(II) of that subsection'' (42 U.S.C. 7675(i)(7)(B)(i)). Therefore, per subsection (i)(7)(B)(i), the restrictions promulgated under the Technology Transitions Program are not currently applicable to any application receiving an ASA (40 CFR 84.56(a)(2)). To the extent that this proposal would result in an application no longer receiving an ASA, this action also proposes the Technology Transitions Program restrictions that would apply to that application, if any, based on EPA's consideration of the factors listed in subsection (i)(4) of the AIM Act, should EPA finalize a determination that an application can no longer receive an ASA.

Prior to proposing a rule, subsection (i)(2)(A) of the Act directs EPA to consider negotiating with stakeholders in the sector or subsector subject to the potential rule in accordance with negotiated rulemaking procedures established under subchapter III of chapter 5 of title 5, United States Code (commonly known as the ''Negotiated Rulemaking Act of 1990''). If EPA makes a determination to use the negotiated rulemaking procedures, subsection (i)(2)(B) requires that EPA, to the extent practicable, give priority to completing that rulemaking over completing rulemakings under subsection (i) that are not using that procedure. If EPA does not use the negotiated rulemaking process, subsection (i)(2)(C) requires the Agency to publish an explanation of the decision not to use that procedure before commencement of the rulemaking process. The Negotiated Rulemaking Act of 1990 (5 U.S.C. 563) provides seven criteria that the head of an agency should consider when determining whether a negotiated rulemaking is in the public interest, namely, whether: (1) there is a need for a rule; (2) there are a limited number of identifiable interests that will be significantly affected by the rule; (3) there is a reasonable likelihood that a committee can be convened with a balanced representation of persons who can adequately represent the identified interests and are willing to negotiate in good faith to reach a consensus on the proposed rule; (4) there is a reasonable likelihood that a committee will reach a consensus on the proposed rule within a fixed period of time; (5) the negotiated rulemaking procedure will not unreasonably delay the notice of proposed rulemaking and the issuance of the final rule; (6) the agency has adequate resources and is willing to commit such resources, including technical assistance, to the committee; and (7) the agency, to the maximum extent possible consistent with the legal obligations of the agency, will use the consensus of the committee with respect to the proposed rule as the basis for the action proposed by the agency for notice and comment.

If a head of agency determines that the use of the negotiated rulemaking procedure is in the public interest, an agency may convene a federally chartered advisory committee, and may rely on an appointed convener under 5 U.S.C. 563(b) to assist with ascertaining the names of persons who are willing and qualified to represent interests that will be significantly affected by the proposed rule. If the agency decides to establish a negotiated rulemaking committee, the agency must publish in the **Federal Register** and in relevant publications a notice announcing the agency's intention to establish a negotiated rulemaking committee, a description of the subject and scope of the rule, a list of the interests which are likely to be significantly affected by the rule, a list of the persons proposed to represent such interests and the proposed agency representatives, a proposed agenda and schedule for completing the committee's work, a description of the administrative and technical support to be provided to the committee by the agency, a solicitation for comments on the proposal to establish the committee and on the proposed membership of the committee, and an explanation of how a person may apply or nominate another person for membership on the committee. The agency must provide at least 30 calendar days for the submission of comments and applications related to the membership of the committee. In establishing and administering such a committee, the agency shall comply with the Federal Advisory Committee Act, unless an exception applies. If the committee reaches consensus on a proposed rule, the committee shall transmit a report containing the proposed rule to the Federal agency. If the committee does not reach a consensus on a proposed rule, the committee may transmit a report specifying any areas upon which consensus was reached. The proposed rule is still subject to public comment, and for purposes of a rulemaking developed under the AIM Act, the requirements of CAA section 307(d).

Before proposing the 2023 Technology Transitions Rule, consistent with AIM Act subsection (i)(2)(A) and (C), EPA considered whether to negotiate with stakeholders using the negotiated rulemaking procedure provided for in the Negotiated Rulemaking Act of 1990, decided not to use such procedures, and published its explanation of that decision in the **Federal Register** (86 FR 74080, December 29, 2021).

EPA noted in the final 2023 Technology Transitions Rule that, where appropriate, EPA will consider recent Agency actions and decisions related to restrictions on the use of HFCs in sectors and subsectors for its consideration on using negotiated rulemaking procedures. EPA did not, for example, separately consider using negotiated rulemaking for four petitions that were received after a rulemaking process had already been commenced regarding the same sectors and subsectors, nor did EPA consider anew whether or not to use negotiated rulemaking in an interim final rule (88 FR 88825, December 26, 2023) that amended one provision of the 2023 Technology Transitions Rule for one subsector.

Similarly, the proposed changes to the Technology Transitions regulations contemplated in this action would be targeted at a subset of applications within a subsector subject to those restrictions. EPA is not addressing a new subsector in this proposal, nor even proposing a different level of stringency from already promulgated restrictions; rather, this action proposes only to establish deadlines by which applications would need to comply with Technology Transitions regulations in the event that those applications no longer receive ASAs. EPA does not believe that the public interest would be served by using the negotiated rulemaking procedure for this limited adjustment to the Technology Transitions regulations, especially because timeliness is a concern.

III. Background

HFCs are anthropogenic [2] fluorinated chemicals that have no known natural sources. HFCs are used in a variety of applications such as refrigeration and air conditioning, foam blowing agents, solvents, aerosols, and fire suppression. HFCs are potent greenhouse gases (GHGs) with 100-year global warming potentials (GWPs) (a measure of the relative climatic impact of a GHG) that can be hundreds to thousands of times that of carbon dioxide (CO_2).

HFC use and emissions have been growing worldwide due to the global phaseout of ozone-depleting substances (ODS) under the *Montreal Protocol on Substances that Deplete the Ozone Layer* (Montreal Protocol), and the increasing use of refrigeration and air-conditioning equipment globally. HFC emissions had previously been projected to increase substantially over the next several decades. In 2016, in Kigali, Rwanda, countries agreed to adopt an amendment to the Montreal Protocol, known as the Kigali Amendment, which provides for a global phasedown of the production and consumption of HFCs. The United States ratified the Kigali Amendment on October 31, 2022. Global adherence to the Kigali Amendment would substantially reduce future emissions, leading to a peaking of HFC emissions before 2040.

There are hundreds of possible HFC compounds. The 18 HFCs listed as regulated substances by the AIM Act are some of the most commonly used HFCs (neat and in blends) and have high impacts as measured by the quantity of each substance emitted multiplied by their respective GWPs. These 18 HFCs are all saturated, meaning they have only single bonds between their atoms, and therefore have longer atmospheric lifetimes than fluorinated compounds that are unsaturated. More detailed information on HFCs, their uses, and their impacts is available in the Allocation Framework Rule (86 FR 55116, October 5, 2021).

IV. How is EPA assessing whether to extend eligibility for application-specific allowances?

As noted in Section II.B of this preamble, the AIM Act directs EPA to undertake a review of applications receiving allowances pursuant to subsection (e)(4)(B)(iv) at least every five years. The statute says that access to ASAs shall be authorized for a renewed period if two statutory criteria are met. Specifically: (1) ''no safe or technically achievable substitute will be available during the applicable period for that application; and'' (2) ''the supply of the regulated substance that manufacturers or users of the regulated substance for that application are capable of securing from chemical manufacturers . . . including any quantities of a regulated substance available from production or import, is insufficient to accommodate the application'' (42 U.S.C. 7675(e)(4)(B)(1)). In this section, we outline how EPA interprets these criteria, what information the Agency will consider in assessing these criteria, and a proposed framework for evaluating if an application is eligible for renewal for up to five years. EPA notes that under the statute, these criteria also apply to new applications that may be listed, but, aside from Section VI addressing the petition process, this proposed rulemaking is primarily focused on the renewal of existing applications. However, EPA's interpretations of the criteria discussed in this section would apply to future actions to add new applications. The AIM Act includes additional evaluation considerations for new applications in subsection (e)(4)(B)(i), but the Agency is not addressing their interpretation in this rulemaking.

A. How is EPA interpreting the ''no safe or technically achievable substitute will be available'' criterion?

In order for an application to continue to be eligible to receive ASAs, EPA must determine ''no safe or technically achievable substitute will be available'' for the application during the time period under review (42 U.S.C. 7675(e)(4)(B)(i)(I)). EPA is proposing that the best interpretation of this criterion is that if there is an available substitute that is both safe and technically achievable, an application would not meet this criterion for renewal. EPA acknowledges that the statutory language could be ambiguous as to whether a substitute must be both safe and technically achievable. However, reading the statutory language differently than proposed would seem to create a perverse outcome. In such a scenario, an application would become ineligible for ASAs if EPA identified a substitute that was technically achievable, but not safe. EPA reads the context of subsection (e)(4) as indicating that Congress intended that listed applications continue to receive priority access to allowances as long as the application needed to use regulated substances. In a situation where an identified substitute is not safe, EPA believes that it would be Congress's intent to continue to provide priority access to allowances such that the application was not prematurely forced to transition to an unsafe substitute. Similarly, it does not seem reasonable to take away access to ASAs when an identified substitute is safe, but not technically achievable. If the application cannot technically implement the transition to a substitute, it seems unrealistic to think that there could be a transition away from regulated substances. Accordingly, EPA proposes to interpret the statutory text and surrounding framework such that if EPA determines there is no safe substitute that is technically achievable for an application, or a technically achievable substitute is not safe, the application would meet the first criterion for renewal.

In looking at potential substitutes for an application under subsection (e)(4)(B)(i)(I), EPA is proposing to consider regulated substances (*i.e.,* other HFCs), alternative substances (*e.g.,* hydrofluoroolefins (HFOs), hydrocarbons), and blends of HFCs and/or HFC alternatives that can perform the same general function as the current HFC in use. EPA is proposing that such an interpretation of the term ''substitute'' is most consistent with the statutory language of subsection (e)(4)(B) as a whole. Specifically, in its direction to EPA to review applications receiving ASAs every five years, Congress directed EPA to ''review the availability of substitutes, including any quantities of the regulated substance available.'' This sentence structure, indicating that examination of quantities of regulated substances available would be included as part of analyzing what substitutes are available, suggests that regulated substances are part of the universe of substitutes that Congress intended EPA to include in its review. In addition to EPA's determination that such an approach is more consistent with the statutory language than an approach of only looking at non-regulated substances as substitutes, EPA has also identified other benefits of this interpretation. For example, it would seem to be a perverse outcome if EPA renewed an application's eligibility for ASAs at historic quantities where there was an available substitute that did not require any or required fewer allowances to procure. Non-HFCs may be able to fill the same role as the HFC, often functioning as a chemical-for-chemical

[2] While the overwhelming majority of HFC production is intentional, EPA is aware that HFC–23 can be a byproduct associated with the production of other chemicals, including but not limited to hydrochlorofluorocarbon (HCFC)–22 and other fluorinated gases.

replacement or requiring limited design changes.

EPA is proposing, as part of its assessment of what chemicals may be determined to be safe as a substitute for applications under review, to only include substances, including blends of substances, with a lower GWP than the regulated substance currently in use. As explained in the Allocation Framework Rule (86 FR 55116, October 5, 2021), the HFC phasedown's significant benefits are derived from the reduction of production and consumption of certain chemicals on a GWP-weighted basis.[3] Considering higher-GWP substances or blends of substances would run against this overall objective and could reduce the benefits of the HFC phasedown, especially if this rulemaking led to the uptake of higher-GWP non-HFC technologies (*e.g.,* semiconductor manufacturers transitioning back to using higher-GWP perfluorocarbons (PFCs)). In addition, this proposed interpretation aligns with the approach under the 2023 Technology Transitions Rule (88 FR 73098, October 24, 2023), which established GWP limits for subsectors and considered substitutes as only those with lower GWPs. Further discussion regarding the sources EPA is relying on to determine if a substitute is safe (*e.g.,* listed by EPA's Significant New Alternatives Policy (SNAP) Program) can be found below.

In addition to looking at chemicals that could serve as substitutes, EPA is also including in its analysis any potentially available not-in-kind technologies (*e.g.,* finger-pump bottles that would not use any chemical propellant in lieu of aerosol cans) for purposes of subsection (e)(4)(B)(i)(I). Such an approach is consistent with the common understanding of the plain language definition of ''substitute.'' For example, Merriam Webster defines substitute as a thing that ''takes the place of function of another'' and the Oxford dictionary similarly notes a substitute is a ''thing acting or serving in place of another.'' In general, not-in-kind technologies can serve the need of some applications, so it is appropriate to include them within the scope of assessing safe and technically achievable substitutes. It would be unnecessarily limiting to exclude from the scope of the analysis a technology that performs the same general function for the application as the current HFC in use does. EPA also acknowledges that market pressure from the HFC phasedown may encourage a transition into not-in-kind technologies (and non-HFCs) by limiting the supply of HFCs on a GWP-weighted basis, while the Technology Transitions Program prohibits the use of certain HFCs in certain sectors and subsectors. There is also precedent for considering not-in-kind technologies under CAA Title VI, such as the SNAP Program and Nonessential Product Bans, and the AIM Act Technology Transitions Program, all of which also evaluate not-in-kind substitutes as possible alternatives to ODS and HFCs, respectively.

EPA is aware that a transition to certain substitutes will require changes to how the HFCs are used in the application (*e.g.,* accommodating a flammable HFC in the manufacturing process). Shifts to not-in-kind technologies will inherently require a change in manufacturing and/or the product, so it would be a consistent approach to also not outright exclude substitute chemicals that would similarly require a change in manufacturing process or the product.

EPA does not want to unnecessarily limit the scope of the substitute analysis at this point in time, and therefore is considering a wide range of possible safe and technically achievable substitutes. The phasedown of HFCs is still nascent, and, at this point, we cannot know the full breadth of technologies that will be developed as replacements for the current HFCs in use.

The Agency is proposing to assess this criterion, specifically that a substitute is safe, technically achievable, and available, on an application-wide basis. For applications that use multiple HFCs, a substitute would need to be able to replace all HFCs used (or multiple substitutes that replace all individual HFCs would need to be available). For applications that have sub-applications (*e.g.,* defense sprays include those intended for humans and those intended for animals), there would need to be a viable substitute for known sub-applications. EPA's interpretation is that it would be unreasonable to consider an application as having met this criterion and thereby ineligible for renewal unless all known sub-applications can successfully transition away from their currently used HFC(s).

EPA's evaluation of each application is not intended to be a company-specific review; the commercialization[4] of a substitute by one sub-application suggests the substitute is safe or technically achievable for the entire application barring evidence, such as testing data, to the contrary. However, there are additional barriers to commercialization, which are considered when assessing if the identified substitute is available for an entire application. In addition, EPA's interpretation of the statutory language is that applications are intended to be viewed as a whole and not necessarily renewed by sub-application. Specifically, the listing of the applications in subsection (e)(4)(B)(iv)(I) does not break down the application into sub-applications (*e.g.,* ''defense sprays'' is not listed as multiple separate applications, *e.g.,* ''personal defense sprays,'' ''law enforcement defense sprays,'' and ''bear defense sprays''). Similarly, for applications that use multiple HFCs and have specific uses for the individual HFCs, it would not be reasonable to assess this criterion as being met if an application does not have an available safe and technically achievable substitute for each HFC. It is EPA's opinion that Congress did not intend for an application to lose its eligibility for ASAs if it could only transition some, but not all, of the HFCs currently used in the application.

EPA reviewed a range of sources in developing its assessment of the availability of safe, technically achievable substitutes for each application at issue here. Sources include, but are not limited to: manufacturer announcements; information provided by stakeholders under part 84 reporting requirements and other communications; relevant Federal and State regulations; evaluations carried out under the 2023 Technology Transitions Rule (88 FR 73098, October 24, 2023) and the SNAP Program; standards from industry, standard-setting bodies (*e.g.,* American Society for Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)), and the U.S. Government (*e.g.,* the U.S. Food and Drug Administration's (FDA) standards for MDIs); and peer-reviewed technical reports. The Technical Support Document (TSD) ''Draft Review of Applications in the American Innovation and Manufacturing (AIM) Act Section (e)(4)(B)(4)'' contains a comprehensive array of sources we looked at for each application, and EPA is taking comment on other relevant sources that should be considered.

[3] While the AIM Act calls for reduction of HFC production and consumption on an EV-weighted basis, EV and GWP are numerically equal. Lower GWP is an important consideration for whether a substitute is safe, so EPA is using GWP instead of EV in the discussion in this section of the rule.

[4] EPA is using the term ''commercialization'' to mean that the substitute is commercially available and actively being used in an application's equipment or sold on the market (domestically or internationally) for use in the application. ''Commercialization'' is not intended to be equated with ''available,'' as explained in more detail in the main text.

As noted, EPA is considering the listings under the SNAP Program as part of its assessment. The SNAP Program has an established history evaluating substitutes for ODS, many of which are also possible substitutes for HFCs. Where relevant, in its assessment of the availability of safe substitutes, EPA considered information from the SNAP Program, including the listings themselves and the information underlying SNAP Program decisions. The SNAP Program does not evaluate substitutes for semiconductor etching and cleaning of CVD chambers. Some military applications are covered under the SNAP Program. In other cases, such as MDIs and SCPPU foams, while these applications are within the scope of the SNAP Program, there may be other sources of information (*e.g.,* the FDA, company information) that may be more appropriate.

In its evaluation of substitutes and related decisions (*e.g.,* to list as acceptable or unacceptable), the SNAP Program carries out a comparative risk evaluation and considers whether a substitute to an ozone-depleting substance presents human health and environmental risks that are lower than or comparable to such risks from other substitutes that are currently or potentially available for the same uses. The human health risks analyzed include safety, and in particular, flammability, toxicity, and exposure (of workers, consumers, and the general population) to chemicals with direct toxicity; environmental risks include ozone depletion potential (ODP) and GWP. Information and data relied upon in the SNAP Program are directly relevant to EPA's assessment of substitutes in this rulemaking, and therefore EPA has pulled from and relied upon SNAP Program assessments as appropriate.

EPA evaluates substitutes under the SNAP Program on an ongoing basis and over time has listed numerous substances as ''acceptable,'' ''acceptable, subject to use conditions,'' or ''acceptable, subject to narrowed use limits.'' ''Acceptable subject to use conditions'' indicates that a substitute is acceptable only if used in a certain way. Use conditions can include, but are not limited to, warning labels, compliance with relevant safety standards, and restrictions on where a substitute is used (*e.g.,* HFC–134a is acceptable for FDA-approved MDIs for medical purposes but is not acceptable for a majority of aerosol uses, and some fire suppression substitutes may only be used in typically unoccupied spaces). EPA can also list substitutes as ''acceptable subject to narrowed use limits'' under SNAP, indicating that a substitute may be used only within certain specialized applications within an end use and may not be used for other applications within that end use (*e.g.,* SNAP has previously listed some substitutes as acceptable for only narrowed use limits for military or space- and aeronautics-related applications). In listing of a chemical as acceptable or acceptable subject to use conditions directly relevant to the application, the SNAP Program makes an assessment that the benefits outweigh the risks relative to other alternatives; these listings are relevant data to support EPA's determination under AIM Act subsection (e)(4)(B) on whether a substitute is ''safe'' under the interpretation proposed in this rulemaking.

EPA lists substitutes as ''unacceptable'' under SNAP if the Agency determines that they may increase overall risk to human health and the environment, compared to other alternatives that are available or potentially available for the same use. EPA has listed substitutes as unacceptable considering the human health criteria described above, as well as the environmental factors considered under SNAP. For example, SNAP has listed certain substitutes as unacceptable due to unusually high ODP, GWP, toxicity and exposure, and flammability (where it is not clear how to mitigate risks sufficiently). Substitutes listed as unacceptable in an end use are prohibited for that use and therefore would not be an available safe or technically achievable substitute for an application under our proposed interpretation of this criterion.

The Agency is also reviewing the evaluations carried out for the 2023 Technology Transitions Rule (88 FR 73098, October 24, 2023) and relying on information and assessments done in that rulemaking, as appropriate. In establishing restrictions, the Technology Transitions Program factored in the availability of substitutes, considering both safety and technological achievability, among other factors. The Technology Transitions Program relied on information from a wide range of sources when assessing availability, including but not limited to, SNAP, the Montreal Protocol's Technology and Economic Assessment Panel (TEAP), standards bodies, and information provided by industry, States, and environmental non-governmental organizations. Though the Technology Transitions Program looked subsector-wide, not at specific end uses, and did not specifically analyze the applications currently receiving ASAs under subsection (e)(4)(B)(iv), some of these applications (*e.g.,* defense sprays and SCPPU foams for marine and trailer uses) have similarities with the subsectors currently subject to restrictions. As a result, in carrying out the assessments undertaken in this rulemaking, EPA is considering relevant information from the Technology Transition Program's evaluations.

In the assessment undertaken in this rulemaking, EPA is also taking into account other Federal standards and regulations, both within EPA and from other U.S. Government agencies. For many applications under review in this rulemaking, there are applicable regulations and standards that outline requirements related to the chemicals or technologies used within an application. In these situations, such standards and regulations may in some instances limit use of possible substitutes. In some instances, it may not be possible for a substitute to ever be used. In other instances, applicable regulations may require entities to go through a regulatory approval process that would affect when an application can transition to a substitute. Some examples of regulations and standards we are considering as part of our proposed evaluations include EPA's regulations covering pesticides such as bear spays and dog sprays (sub-applications of defense sprays) under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA; 7 U.S.C. 136–136y), the FDA's requirements for MDIs, and the U.S. Federal Aviation Administration's (FAA) requirements for onboard aerospace fire suppression. Additional standards and regulations for each application are discussed further in the relevant chapter of the TSD. EPA invites comment on any other standards or regulations that entities think EPA should consider in determining an application's ability to transition to a substitute.

EPA also considered the work undertaken by the Montreal Protocol's TEAP in the proposed application assessment given the TEAP's analytical work on substitutes and alternative technologies to substances controlled under the Montreal Protocol, including HFCs. TEAP assesses technical and economic information that serves as the basis for parties' assessment of control measures of substances under the purview of the Montreal Protocol. Such information is related to substitutes that may replace the substances controlled under the Montreal Protocol and alternative technologies that may be used without adverse impact on the ozone layer and climate, production and consumption of controlled substances,

emissions of controlled substances, potential alternatives for exempted uses and others, as mandated by the parties. This assessment includes applications listed in AIM subsection (e)(4)(B)(iv). In addition, TEAP develops assessments in response to decisions taken by the parties to the Montreal Protocol, including but not limited to Decision XXVIII/2, which call for an assessment of alternatives to HFCs every five years. EPA particularly looked at the 2022 Assessment Reports by the Medical and Chemical Technical Options Committee, concerning semiconductors, aerosols, and MDIs; the Flexible and Rigid Foams Technical Options Committee (FTOC); and the Fire Suppression Technical Options Committee (FSTOC). TEAP reports have included information on technical achievability and safety. TEAP reports are developed by experts around the world and provide insight into the HFC substitutes currently in use and under development in the United States and globally. As such, EPA is considering relevant information from these reports when carrying out the assessment of available safe or technically achievable substitutes undertaken in this rulemaking.

As described throughout this section, EPA is considering information from a wide range of sources in its assessment of the availability of safe or technically achievable substitutes for the applications receiving ASAs under subsection (e)(4)(B)(iv)(I), and no one source will be determinative for this criterion. Further information about sources consulted for each application can be found in Section V of this preamble and the TSD. EPA invites comment on its interpretation of ''no safe or technically achievable substitute will be available'' and the sources it is considering in its assessment of this criterion.

B. How is EPA interpreting the insufficient supply of regulated substances criterion?

Under the second criterion for renewal of an application's eligibility to receive ASAs, EPA must determine that ''the supply of the regulated substance that manufacturers or users of the regulated substance for that application are capable of securing from chemical manufacturers . . . , including any quantities of a regulated substance available from production or import, is insufficient to accommodate the application'' (42 U.S.C. 7675(e)(4)(B)(i)(II)). As described here and in the sections of the proposed rule discussing each of the six applications, a determination that there is insufficient supply could be based on a number of different factors, including the available domestic supply of the HFC(s) at issue, demand for said HFC(s), and supply chain constraints particular to a given application (*e.g.,* federally required purity specifications). Priority access to allowances through ASAs has the potential to address insufficient supply of HFCs by allowing entities that use HFCs in an eligible application to more easily procure HFCs from a domestic supplier by conferring allowances to authorize production or import or to import the HFCs themselves.

In this proposed rulemaking, EPA is interpreting this criterion as requiring an assessment related to the supply of the HFC(s) currently used in an application's equipment or to manufacture the application's products for use. Under this proposed interpretation, EPA would not evaluate HFC(s) currently used exclusively for research and development in assessing whether there is insufficient supply. EPA recognizes that the research and development process may find various alternatives to be unsuitable for an application. Therefore, it would be premature to consider supply of potentially unsuitable HFC alternatives until such time as they have been commercialized or are close to commercialization. Further, it could also have the perverse effect of limiting research into alternatives if an application's initial research could prematurely contribute to removal from eligibility for ASAs.

EPA is proposing to consider regulated substances supplied by chemical manufacturers in its assessment of supply. EPA interprets the reference to regulated substances ''from chemical manufacturers'' in 42 U.S.C. 7675(e)(4)(B)(i)(II) as direction from Congress to assess supply from chemical manufacturers only, and that this direction could cover both virgin and recovered and reprocessed HFCs. EPA is proposing to include HFCs produced domestically and those that are produced abroad and imported in its assessment of supply under this criterion. Congress directed EPA to consider regulated substances ''from chemical manufacturers . . . , including any quantities of a regulated substance available from production or import'' in its assessment under 42 U.S.C. 7675(e)(4)(B)(i)(II). Because of Congress's reference to production and import of regulated substances, and the lack of any language suggesting that chemical manufacturers should be read as limited to only U.S. producers, EPA intends to consider imported material from foreign HFC producers in addition to regulated substances from domestic producers. As a result, EPA is proposing not to consider HFC supply held by and available to entities that do not produce or import HFCs in its assessment of this criterion. This would exclude quantities of HFCs held by entities that do not produce or import HFCs with allowances, potentially including reclaimers, distributors, HFC blenders,[5] and HFC repackagers. EPA considers this proposed interpretation to be most consistent with the statutory language in 42 U.S.C. 7675(e)(4)(B)(i)(II).

The Agency is proposing to consider multiple sources of data in its evaluation of whether supply of a regulated substance is insufficient to accommodate an application. Specifically, in developing the analysis for each application, EPA has drawn information regarding the total expected HFC consumption in the United States, global production of individual HFCs used in the applications, manufacturer announcements regarding production of specific HFCs, past and projected market trends for an application that can inform projected demand for the HFC(s) it uses, and allowance usage by application to date, including conferrals, imports, and open market purchases by ASA holders, as well as expenditures of conferred allowances by suppliers to ASA holders. EPA is intending to consider data from all of these sources collectively in order to gain a more complete picture of projected supply for the relevant individual HFC(s), rather than relying on one data point. EPA is taking comment on these and any other sources the agency should consider when assessing insufficient supply.

EPA is proposing to assess insufficient supply on an application-wide basis. If an application uses multiple HFCs, and the supply of at least one of those HFCs is insufficient to accommodate the application, EPA would consider the criterion met for the application. EPA interprets 42 U.S.C. 7675(e)(4)(B)(i)(II) to require the Agency to review the supply of the regulated substance for each regulated substance an application uses. If there is an insufficient supply for one HFC, EPA would determine that this criterion is met, and the application would continue to be eligible for ASAs, assuming the first criterion regarding substitutes is also met. EPA is proposing

[5] For a discussion on the difference between producing HFCs consistent with the AIM Act and blending HFCs to make various refrigerant blends, see ''Response to Comments'', pg. 193, Docket ID No. EPA–HQ–OAR–2021–0044, associated with the Allocation Framework Rule (86 FR 55116) and the discussion in the 2024 Allocation Rule (88 FR 46863).

that such an approach is the best interpretation of the AIM Act direction in 42 U.S.C. 7675(e)(4)(B)(i)(II) that if both criteria are met, ''the Administrator shall authorize the production or consumption, as applicable, of any regulated substance used in the application.'' A converse approach would result in EPA not renewing the ASA eligibility of an application that has no available substitutes and there is an insufficient supply available of a regulated substance used by that application. EPA is interpreting the AIM Act to provide ASAs to an application where at least one regulated substance that manufacturers are capable of securing is insufficient to accommodate the application, even if the supply of a different regulated substance is not insufficient.

In addition to looking generally at the supply of HFCs, EPA is also considering relevant restrictions, if any, on the type of HFC or supplier of HFCs that would further limit supply to a particular application. For example, FDA regulations govern use of pharmaceutical-grade HFCs by MDI manufacturers. Facilities manufacturing the regulated substances must comply with FDA regulations, and there are a limited number of purifiers. EPA is considering any applicable relevant Federal regulations and standards (examples listed above in Section IV.A.), including required regulatory approvals and purity levels, that could limit the supply of the HFC(s) used within an application.

C. What is EPA's proposed framework for renewing applications?

In outlining the requirement that EPA review the applications eligible for ASAs at least every five years, the AIM Act states that if EPA determines ''that the requirements described in subclauses (I) *and* (II) of clause (i) are met'' then the EPA will renew the application's eligibility to continue to receive ASAs (42 U.S.C. 7675(e)(4)(B)(v)(II)) (emphasis added). Accordingly, EPA interprets the statutory language to mean that both criterion (I) of clause (i) (that a substitute is not available) and criterion (II) (that supply is insufficient) must be met for an application to be renewed as eligible for ASAs. If either or both criteria are not met as of January 1, 2026, EPA proposes to not renew an application's eligibility to receive ASAs. Put another way, if EPA determines, for example, that supply is not insufficient to accommodate an application as of January 1, 2026, EPA would propose to not renew that application's eligibility for ASAs, regardless of whether a substitute is available.

If both statutory criteria are met as of January 1, 2026, EPA intends to assess whether an application's fulfillment of a criterion may change over the following five-year period. The outcome of this assessment would be determinative of how long EPA will deem an application eligible to receive ASAs. For example, if EPA determines that there is no substitute available as of January 1, 2026, but a substitute will be available by January 1, 2028, EPA would renew the application's eligibility to receive ASAs for only two years (*i.e.,* calendar years 2026 and 2027). Similarly, if supply is deemed insufficient to accommodate the application as of January 1, 2026, but the market will change such that supply will not be insufficient to accommodate the application as of January 1, 2028, EPA would renew the application's eligibility to receive ASAs for only two years (*i.e.,* calendar years 2026 and 2027).

If EPA determines that an application has a safe or technically achievable substitute available that is a regulated substance, EPA proposes to evaluate the supply of the substitute HFC and assess if supply of the substitute HFC is insufficient to accommodate the application. If the Agency did not do this, the application would not be eligible for renewal because it had met the substitute criterion, regardless of the supply of this substitute HFC; EPA sees this as counter to Congress's intent when it established priority access to allowances for these applications. Further, it is EPA's assessment that it would be counterproductive to an application's efforts to transition away from the currently used HFC(s) if EPA did not consider the supply of the HFC substitute when assessing eligibility for renewal for ASAs (*i.e.,* if an application had insufficient supply of the substitute HFC, an entity may be forced to return to using its original HFC). Under the framework proposed in this rulemaking, if EPA determines there is an HFC substitute, but there is insufficient supply of that HFC substitute, EPA would continue to list the application as eligible for ASAs. This approach would allow an entity transitioning to a lower-GWP HFC to remain eligible to receive allowances until supply of that lower-GWP HFC is no longer insufficient (or a non-HFC substitute is identified).

EPA is also proposing that if an application is eligible to be renewed for ASAs for less than five years, the application will not be reviewed for eligibility for ASAs ahead of the next five-year renewal period. The direction in the statute under AIM subsection (e)(4)(B)(v) is to review each ''application receiving an allocation of allowances under clause (i) or (iv) . . . not less frequently than once every 5 years,'' and, if the criteria are met, EPA shall renew the application ''for renewable periods of not more than 5 years.'' EPA interprets this language, coupled with the lack of language in the statute directing EPA to do another review of an application that is no longer eligible for allowances at the end of its renewal period, as direction that EPA is not required to re-review this application for eligibility for ASAs ahead of the next five-year period. Congress's direction to undertake a renewal is specific to applications receiving ASAs under 42 U.S.C. 7675(e)(4)(B)(i) and (iv). If an application is renewed for only two of five years at this stage, when the next renewal period arises, it would not be receiving ASAs under 42 U.S.C. 7675(e)(4)(B)(i) or (iv). Therefore, EPA is proposing that the best interpretation of the AIM Act language is that once EPA determines that an application is no longer eligible for ASAs, EPA would not re-review that application at any future time. If an application is determined to no longer be eligible for ASAs and an entity is interested in being considered for eligibility for ASAs again, the entity would need to petition the Agency to be evaluated for eligibility, and the Agency would then undertake the relevant petition review process; see Section VI of this preamble for further discussion of the petition process requirements.

V. Review of the Six Applications Listed in the AIM Act

EPA reviewed the six applications listed in AIM Act subsection (e)(4)(B)(iv)(I)—propellant in MDIs; defense sprays; SCPPU foam for marine use and trailer use; the etching of semiconductor material or wafers and the cleaning of CVD chambers within the semiconductor manufacturing sector; MCMEU; and onboard aerospace fire suppression—as required under 42 U.S.C. (e)(4)(B)(v)(I). Pursuant to that review, in this rulemaking EPA is proposing and seeking comment on whether the criteria for renewal described in Section IV of this preamble are met for any part, or the entirety, of the 2026–2030 time period. This section begins with an overview of total projected U.S. HFC consumption and then proceeds into EPA's assessment of the criteria for each application and proposed decision regarding whether to renew each application's eligibility to receive ASAs. EPA provides additional

information in the TSD available in the docket for this rulemaking.

A. Overview of Total U.S. HFC Consumption

This section contains a summary of total projected U.S. HFC consumption. We assess specific HFC supply considerations on an application-by-application basis below. EPA provides additional information regarding this analysis in the TSD.

The global and domestic HFC markets have been rapidly changing since agreement to the Kigali Amendment to the Montreal Protocol in 2016.[6] The domestic HFC market has been further changing since the passage of the AIM Act in 2020 and the subsequent promulgation of domestic regulations. In 2021, EPA promulgated regulations to implement the required phasedown of HFC production and consumption in the United States. Additional regulations coming into effect, as early as January 1, 2025, will also further alter this overall market and impact demand for certain HFCs. EPA anticipates the market will be dynamic as it responds to these additional regulations and continues adapting to the global phasedown of HFCs.

In the addendum to the HFC Phasedown Regulatory Impact Analysis (RIA) updated for the 2023 Technology Transitions Rule (88 FR 73098, October 24, 2023), EPA modeled total HFC consumption to be significantly lower than the limit established by the statutory phasedown cap for all years of the phasedown, assuming compliance with the restrictions. The 2023 Technology Transitions Rule established subsector-level GWP limits and restrictions on the use of certain regulated substances. These requirements take effect as early as January 1, 2025, and as late as January 1, 2028. While some subsectors already use either HFCs that are below the GWP limit or non-HFC substitutes, other subsectors will need to transition away from their currently used HFC to comply with these regulations. In addition, the proposed rulemaking ''*Phasedown of Hydrofluorocarbons: Management of Certain Hydrofluorocarbons and Substitutes Under Subsection (h) of the American Innovation and Manufacturing Act of 2020*'' (88 FR 72216, October 19, 2023) (hereafter ''Emissions Reduction and Reclamation Rule'') has proposed requirements that reclaimed and recycled HFCs be used for certain equipment in the refrigeration, air-conditioning, and heat pump sector and fire suppression sector (onboard aerospace fire suppression, as an application eligible for ASAs, is currently exempt) as early as early as January 1, 2028. If finalized as proposed, these requirements are also expected to limit use of virgin HFCs for specific activities (*e.g.,* servicing for certain refrigeration and air conditioning subsectors).[7] In general, there is uncertainty associated with these estimates, as they are based on expected industry transitions in response to AIM Act rulemakings and predicted market dynamics. If HFC consumption is lower than the amount allowed under the AIM Act in a given year, the result may be that there are more allowances than are needed to meet market demand in that year.[8] If demand for HFCs is lower than the cap, it is possible that general pool consumption and production allowances, which are currently used to produce or import HFCs for entities that do not hold allowances and entities that use HFCs in an application-specific use, would be available to allow for the production or import of HFCs for use by entities that historically have relied upon ASAs. While current ASA holders can access material produced using general pool allowances or purchase HFCs on the open market, if demand by non-ASA entities is lower than the cap, it is possible that the ''leftover'' allowances could be used to supply ASA holders and therefore decrease the need for ASAs. It is also possible that all allowances are used, and the HFCs that are not sold in that year are stockpiled in anticipation of future needs.

The Agency cannot fully predict shifts in chemical production, domestically and internationally, that may occur. As the HFC phasedown progresses, EPA anticipates suppliers may focus their business on supplying lower-GWP HFCs, since production and consumption of these lower-GWP HFCs requires the expenditure of fewer allowances for the same volume of substance.[9] At the same time, sectors that are not yet ready to transition and are not covered by the 2023 Technology Transitions Rule (88 FR 73098, October 24, 2023) may continue to use higher-GWP HFCs and could grow in size.

EPA also does not yet have data on how the market is reacting to the 2024 stepdown in HFC allowances (from 90 percent of the HFC consumption baseline to 60 percent of baseline); at the time of this proposal the market is only a few months into adjusting to the 2024 HFC stepdown, and EPA has received only one set of quarterly reports. Among other things, data on market reactions could inform how the market will react to the next large stepdown in 2029 (from 60 percent of baseline to 30 percent of baseline). For example, the decrease in available consumption allowances could encourage users of HFCs to transition faster than projected. However, given the significant amount of HFCs in inventory at the end of 2022, the transition away from HFCs could also be slower than projected. Though it seems likely that demand could be below the cap for the 2025–2028 period based on existing regulations, it is uncertain if 2029 (the fourth year of the five-year renewal period) will see similar space between consumption and allowed consumption under the cap. EPA also notes the 2024 stepdown in permissible production and consumption is unique given its scale and that it is occurring early in the overall AIM Act implementation. There will be significantly more information regarding the state of the HFC market after the January 1, 2024, stepdown at the time EPA is finalizing this proposal, and EPA intends to analyze available data to inform its decisions regarding whether supply of individual HFCs is insufficient to accommodate the individual applications.

In addition, there are also other constraints on supply of specific HFCs used in the six applications that EPA is taking into consideration (*e.g.,* purity specifications required by Federal standards and regulations and limited number of producers), as explained in more detail in Sections V.B through V.G. of this preamble. Supply chain dynamics for each of the six

[6] The United States ratified the Kigali Amendment in October 2022.

[7] See Emissions Reduction and Reclamation Rule (88 FR 72216, 72292, October 19, 2023).

[8] The actions taken pursuant to subsection (h) and (i) of the AIM Act did not propose to and did not accelerate the HFC phasedown. The RIAs associated with those actions did not analyze an acceleration of the HFC phasedown. Rather, HFCs will continue to be available consistent with the phasedown codified at 40 CFR part 84, subpart A, and this action does not propose to change that phasedown schedule. Even if the requirements finalized pursuant to subsections (h) and (i) in effect reduce the production or consumption of HFCs used in particular sectors or subsectors faster than the scheduled reductions under the AIM Act, that does not make those rules an acceleration under subsection (f).

[9] In the Allocation Framework Rule, EPA established a system whereby allowances are measured on an EV equivalent basis. 86 FR at 55142. To determine the total number of allowances needed, producers and importers multiply the quantity of the HFC they seek to produce or import by its EV. For example, an importer would need to expend 143 consumption allowances to import 100 kilograms (kg) of HFC–134a. Given the variation in EVs, one would need to expend 5.3 allowances to import 100 kg of HFC–152a.

applications could affect whether general pool allowances would be able to be used to provide HFCs for each application.

B. Propellants in Metered Dose Inhalers

EPA has been allocating ASAs for regulated substances used for propellants in MDIs in accordance with subsection (e)(4)(B)(iv)(I)(ff) of the AIM Act. In the Allocation Framework Rule, EPA defined a ''metered dose inhaler'' as ''a handheld pressurized inhalation system that delivers small, precisely measured therapeutic doses of medication directly to the airways of a patient. MDIs treat health conditions such as asthma and chronic obstructive pulmonary disease and are approved for such use by the U.S. Food and Drug Administration (FDA)'' (40 CFR 84.3). Patients using MDIs to treat pulmonary conditions work closely with their healthcare provider to identify the right treatment for their condition. Pharmaceutical grade HFC–227ea and HFC–134a, purified from technical grade HFC–227ea and HFC–134a, respectively, are both used in MDIs as a propellant.

EPA is proposing to determine that no safe or technically achievable substitute will be available for propellants in MDIs and that supply of the regulated substance that manufacturers and users are capable of securing from chemical manufacturers is insufficient to accommodate this application through calendar year 2030. Therefore, EPA proposes to renew the eligibility of entities using regulated substances for propellants in MDIs to receive ASAs for the five-year period of calendar years 2026 through 2030.

1. Availability of Safe and Technically Achievable Substitutes

EPA has not identified substitutes that it would propose to deem safe and technically achievable that are available for propellants in the metered-dose inhalers application at this time. In assessing the availability of substitutes for MDIs, EPA reviewed information from sources such as the FDA, the EPA SNAP Program, the TEAP's Medical and Chemicals Technical Options Committee (MCTOC), industry, scientific journal articles, and more, which is described in greater detail in the TSD included in the docket for this proposed action. After reviewing relevant information and analyses, EPA is aware of two potential replacements for HFC–134a and HFC–227ea as propellants in MDIs, specifically HFO–1234ze(E) and HFC–152a.

MDIs, including those containing an alternative propellant other than HFC–134a or HFC–227ea, are subject to the approval requirements under section 505 of the Federal Food, Drug and Cosmetic Act. The process to develop an MDI with a new propellant is complex and will take time. A sponsor (*i.e.,* MDI manufacturer) will need to reformulate the MDI product to use the new alternative propellant and conduct a development program to obtain data, including clinical data, with the new MDI product. If the development program is successful, a sponsor will then need to submit an application to the FDA for approval; the review timeline for a new drug application is 10 to 12 months. The overall process to develop an MDI product containing a new alternative propellant is expected to take years.

EPA regularly consulted with the FDA throughout development of this proposed rule, and the reformulation of the majority of MDIs with an alternative propellant may extend beyond the end of the renewal period of 2030. EPA is aware that a few MDI manufacturers have begun the development process, some of whom are expecting to soon begin Phase 3 trials and FDA has stated that it is possible that they may receive new drug applications for a small number of MDI products with alternative propellants by 2030. However, these new drug applications will need to undergo FDA review. For new drug applications that receive FDA approval, the commercialization plans for new MDIs are unknown but is anticipated to take additional time. Unlike for some of the other uses receiving ASAs where commercialization of substitutes across the entire application after those products are first available on the market may take a few years, for MDIs, EPA anticipates that it will take many years before alternatives are available across the application. That is, it will take time for reformulation, approval, and commercialization to occur for each of the individual MDI products used to treat pulmonary disease. For example, manufacturers of generic MDIs may face delay in transitioning to alternative propellants, as generic drug products must be shown to be a duplicate of, and bioequivalent to, a previously approved drug product and rely on FDA's finding that the previously approved product is safe and effective. Applicants request approval for generic drug products, including MDIs, in Abbreviated New Drug Applications (ANDAs). FDA provides its recommendations for establishing bioequivalence in its product-specific guidances, which for orally inhaled products like MDIs, have generally included some combination of in vitro and in vivo studies, along with recommendations related to the formulation and device. FDA committed to review 90% of standard original ANDAs within 10 months from the date of submission, but often multiple review cycles are necessitated by application quality. This review time can be extended if a site/facility is not ready for inspection. The timing of ANDA approval also depends on, among other things, the patent and exclusivity protections for the previously approved product.

According to the MCTOC 2022 Assessment Report, the transition from HFC–134a and HFC–227ea to HFC–152a and HFO–1234ze(E) in MDIs is expected to begin in non-Article 5 countries [10] in 2025 and continue through at least 2032, and no other feasible, lower-GWP MDI propellants have been identified in the United States and abroad.[11] HFO–1234ze(E) and HFC–152a, along with other aerosol propellants, are listed as acceptable by EPA's SNAP Program and are commercially available and currently used in commercial and/or technical aerosol products. Furthermore, they also have most of the requisite physical properties to function as a propellant in MDIs with significantly lower GWPs than the current HFCs in use; however, neither propellant has significant use in pharmaceuticals today and will require extensive clinical research and FDA approval before they could replace the current HFCs.

In light of the above analysis, it is EPA's assessment that there is no information before the Agency at the time of this proposal to suggest that there would be a safe and technically achievable substitute available prior to the next five-year review.

2. Supply

As previously mentioned, pharmaceutical-grade HFC–134a and HFC–227ea (also known as HFA–134a and HFA–227ea) are currently used as propellants in MDIs.

As part of the manufacturing process for MDIs, technical grade HFC–134a and HFC–227ea are purified into pharmaceutical-grade HFC–134a and HFC–227ea. Documents the FDA requires as part of the drug approval process must specify the facility manufacturing the HFC propellant. The supply of pharmaceutical-grade HFC–

[10] Non-Article 5 countries are defined as developed countries under the Montreal Protocol. For a list of Article 5 and non-Article 5 countries see *https://ozone.unep.org/classification-parties.*

[11] See *https://ozone.unep.org/system/files/documents/MCTOC-Assessment-Report-2022.pdf.*

134a comes from technical grade HFC–134a that is produced at a limited number of production facilities in other countries, including a single plant in the United States, and then purified at a single facility in the United Kingdom and reimported to the United States for consumption in MDIs. In its analysis of other applications, EPA has noted that HFC–134a is the most widely available HFC. However, this fact does not equate to a sizeable supply for the MDI application because MDI manufacturers are not easily able to switch suppliers of pharmaceutical-grade HFCs. Unlike other applications, where EPA has discussed the diverse number of chemical suppliers for HFC–134a globally, in this instance the options are constrained.

As components of drug products, the use of HFCs in MDIs are subject to certain FDA requirements. FDA's Current Good Manufacturing Practice (CGMP) requirements under the statute (21 U.S.C. 351(a)) apply to drugs, including their components (21 U.S.C. 321(g)(1)), and include requirements related to methods, facilities, controls, manufacturing, processing, packing, and holding to assure that drugs meet requirements for safety, identity, strength, and quality and purity. FDA has also promulgated CGMP regulations for finished pharmaceuticals in 21 CFR 210 and 211. These CGMP regulations also contain requirements for manufacturers in their handling, control, storage, and testing of components used in manufacture of drug products. HFC purification occurs in dedicated facilities that are subject to FDA CGMP requirements for drugs and devices, as well as other international quality standards, as MDI manufacturers may serve markets in addition to that of the United States. If an MDI manufacturer wanted to change their supplier of pharmaceutical grade HFC, this would trigger FDA review. MDI manufacturers who change suppliers of pharmaceutical grade HFCs would need to provide data to ensure the safety and quality of the new propellant and submit the data to the FDA for review and approval. This data may include pharmacology/toxicology data, product quality data of the new propellant source, and a comparison of the current and proposed new propellant sources, and quality data that demonstrates the drug made with the new propellant meets all applicable quality requirements. Depending upon the comparability of the HFA sources, additional data may be requested by the FDA (21 CFR 314.70).

There are three suppliers of pharmaceutical-grade HFC–227ea for use in the United States. One of the suppliers is a producer that purifies the technical grade HFC–227ea at one of their facilities in the United States. The second produces and purifies the pharmaceutical-grade HFC–227ea at their facility in Germany, which is then imported by that producer for distribution to domestic MDI manufacturers. The third supplies pharmaceutical-grade HFC–227ea to the United States from their facility in the United Kingdom. At least two of these facilities also supply pharmaceutical-grade HFC–227ea globally for MDI manufacture. Producers of pharmaceutical-grade HFC–227ea must also comply with FDA requirements as described above, which limits their ability to switch to other suppliers of HFC–227ea.

3. What is EPA proposing regarding eligibility for application-specific allowances?

EPA is proposing to renew the eligibility of entities using regulated substances for propellants in MDIs to receive ASAs for the five-year period of calendar years 2026 through 2030. EPA is proposing to determine ''that the requirements described in subclauses (I) and (II) of clause (i) are met'' in accordance with the requirements of 42 U.S.C. 7675(e)(4)(B)(v)(II). Specifically, for the reasons outlined earlier in this section, EPA is proposing to determine that no safe or technically achievable substitute will be available for propellants in MDIs and that supply of the regulated substance that manufacturers and users are capable of securing from chemical manufacturers is insufficient to accommodate propellants in MDIs through calendar year 2030. EPA is proposing to determine that the supply of both HFC–134a and HFC–227ea is insufficient to accommodate the propellants in MDIs application.

C. Defense Sprays

Per subsection (e)(4)(B)(iv)(I)(bb) of the AIM Act, EPA has been allocating ASAs for defense sprays since 2021. EPA defined a ''defense spray'' as ''an aerosol-based spray used for self-defense, including pepper spray and animal sprays, and containing the irritant capsaicin and related capsaicinoids (derived from oleoresin capsicum), an emulsifier, and an aerosol propellant,'' (40 CFR 84.3). Within this application, there are four primary uses: bear sprays, dog sprays, personal defense sprays, and law enforcement sprays. The defense sprays chapter in the TSD contains more details on these product categories. HFC–134a is the primary propellant currently used for the majority of defense sprays and is the only HFC for which EPA has allocated allowances since 2022. After analyzing information relevant to the statutory criteria, as outlined in this section and the TSD, EPA is proposing two options—to not renew the eligibility for entities in this application to receive ASAs or to renew for two years. EPA is also taking comment on the possibility of renewing for a full five-year period.

1. Availability of Safe and Technically Achievable Substitutes

There has already been commercialization of alternatives to HFC–134a as a propellant in some defense spray uses, and transition is underway for other parts of the application. Thus, while many defense sprays currently use HFC–134a as a propellant, EPA is aware of entities that have already successfully commercialized alternative propellants, including non-HFCs, in some of their products. The availability of safe and technically achievable substitutes for this application will continue to expand, and EPA will take any additional information into account in the final rulemaking.

All dog defense sprays commercialized in the United States and registered with EPA under FIFRA use a non-HFC propellant and have never used an HFC propellant; from company communications, EPA is aware that at least three dog sprays utilize compressed nitrogen gas. In addition, EPA is aware from company communications that two bear sprays using propellants other than HFC–134a are available domestically, one using a non-HFC, HFO–1234ze(E), and one utilizing a lower-GWP HFC, HFC–152a. Both products have been available for multiple years. In addition, there is one bear spray that is manufactured domestically, but sold into the Canadian market, that also utilizes HFO–1234ze(E). EPA is also aware of at least one defense spray used on humans available in other countries, but manufactured in the United States, that uses HFO–1234ze(E).

The commercialization of defense sprays with alternative propellants suggests that there are safe and technically achievable substitutes to HFC–134a available within this application, but it is not clear that they are immediately available for the entire application. In other words, there are multiple different uses within this application, and many of the uses have similar technical requirements (*e.g.,* large spray volume and distance) and safety considerations (*e.g.,*

flammability). Thus, EPA's assessment is that while there are certain differences amongst the uses, generally a propellant commercialized for one use should be safe and technically achievable for another use as explained in more detail below. It is EPA's understanding that defense sprays have industry-set technical requirements that differentiate them from other aerosols, but that outside of FIFRA requirements for bear sprays,[12] defense sprays do not need to be certified or comply with Federal regulatory standards to be sold in the United States. EPA is aware of some voluntary standards for law enforcement sprays, explained in more detail in the defense sprays chapter of the TSD, that specify performance requirements and test methods for the evaluation of these sprays. EPA's understanding is that defense sprays do not need to be certified under this standard to be sold into the law enforcement market.

While some entities have successfully commercialized alternative propellants, there are steps other entities will need to undertake in order to use these alternatives, such as their own research and development process, approval under FIFRA for bear sprays, and potentially changes to manufacturing facilities. For example, EPA is aware of at least two defense spray manufacturers that had made significant investments to potentially transition to a non-HFC as a propellant that did not pursue the transition due to performance concerns.[13] The multiple defense spray products commercialized using alternative propellants suggests that past challenges can be overcome, though EPA acknowledges that commercialization of alternative propellants across this entire application may take a few years.

Outside of what has already been commercialized by some defense spray companies, EPA is not aware of any other substances under consideration as safe and technically achievable substitutes for this application. Multiple propellants, including HFC–152a, HFO–1234ze(E), and hydrocarbons, have been listed as acceptable under SNAP and identified as technically and economically feasible alternatives for propellants in aerosols by the TEAP's MCTOC. However, there are additional technical demands in the defense spray application that provide unique challenges as compared to other types of aerosol applications. For example, given their use for personal protection and crowd control, defense sprays need to have a larger spray cloud and longer spray distance, and stakeholders have noted that law enforcement's use of defense sprays alongside stun guns (*e.g.,* Tasers) poses specific concerns around flammability. Therefore, alternatives identified as acceptable for aerosols, such as hydrocarbons, may not be available for all defense spray uses. SNAP lists substitutes for aerosols at the end use level, not the application level (*e.g.,* the Agency has listed substitutes for aerosol propellants, which would allow for those substitutes in defense sprays), and TEAP's MCTOC has not specifically discussed or evaluated defense sprays as an individual use. More information about the specialized nature of defense sprays can be found in the defense sprays chapter of the TSD.

To inform determinations in this rulemaking, EPA invites comment on whether the alternatives commercialized for some defense spray uses are not available for the entire application, including any supporting data and information; EPA is particularly interested in data regarding flammability of alternative propellants at the concentrations found in defense sprays and testing results demonstrating safety risks in the situations where defense sprays are typically utilized.

2. Supply

The majority of defense sprays currently use HFC–134a as their propellant. HFC–134a is the most widely produced HFC globally and is produced in substantial quantities in multiple countries, including the United States. In 2022, domestic production of HFC–134a was 61,377 metric tons (MT), making up 46 percent of U.S. HFC production on a mass basis; this production amount is also nearly double the domestic production amount of the HFC produced in the second highest quantity. EPA is aware that one domestic producer of HFC–134a is transitioning its facility to produce a different chemical.[14] In addition, there are multiple entities that import HFC–134a. In 2022, 7,363.1 MT of HFC–134a were imported into the United States. Overall, HFC–134a made up approximately 32 percent of total U.S. HFC consumption[15] in 2022 on a mass basis. This application has very limited demand for HFC–134a in comparison to U.S. consumption of HFC–134a; allocated ASAs for this application in 2024 are equivalent to 0.1 percent of calculated domestic consumption of HFC–134a in 2022, on a metric tons of exchange value equivalent (MTEVe) basis. In addition, at the end of 2022, suppliers held 51,902.9 MT of HFC–134a in domestic inventory, which is equivalent to about 101 percent of calculated consumption of HFC–134a in 2022, and 1,036.8 MT of HFC–134a was reclaimed; the entities both holding this material in inventory and reclaiming these HFCs are broader than EPA's interpretation of chemical manufacturers (see Section IV.B for more information), so not all of this HFC–134a may be considered available supply.

However, as described in more detail in Section V.A of this preamble, the overall market for HFCs and for HFC–134a in particular is likely to continue changing in light of the AIM Act and other restrictions. There is uncertainty regarding how the market is reacting to the stepdown of the level of permissible production and consumption of HFCs that took effect on January 1, 2024, and EPA anticipates further market changes as a result of the stepdown taking effect on January 1, 2029. However, global production capacity is expected to remain substantial over the coming years, given production will continue in countries on later HFC phasedown schedules, and EPA expects continued domestic and global demand for HFC–134a. EPA will analyze any available information on market adjustment to the January 1, 2024, stepdown and regulations effective January 1, 2025, in finalizing this rulemaking.

In considering supply of the regulated substance currently used by this application, EPA also notes that the Agency is unaware of any reason why this application cannot use recovered and reprocessed HFCs. For example, EPA is not aware of any specific purity

[12] Defense sprays used to deter bears, dogs, and other animals are considered pesticides under FIFRA, so must comply with related requirements, including approval for the inert ingredients (*e.g.,* the propellant) used in the product. In addition to HFC–134a, both HFC–152a and HFO–1234ze(E) are approved for use as inert ingredients for non-food pesticidal use (*e.g.,* animal sprays). Transitioning a product to another approved propellant is a relatively simple process that only requires submission of product performance data (*i.e.,* no tests related to safety, impacts on human health, etc.), and approval can occur in five to seven months. This action would be a Pesticide Registration Improvement Act B680 or B681. See *https://www.epa.gov/pria-fees/pria-fee-category-table-biopesticides-and-pollution-prevention-division-bppd-amendments* for more information.

[13] Written testimony submitted for the record from Safariland and Security Equipment Corporation for the U.S. Senate Committee on Environment and Public Works hearing on the AIM Act. *https://www.epw.senate.gov/public/index.cfm/2020/3/s-2754-american-innovation-and-manufacturing-act-of-2019-written-testimony-and-questions-for-the-record.*

[14] See *https://www.arkema.com/usa/en/media/news/global/corporate/2022/20221006-two-major-steps-develop-supply-forane-1233zd/.*

[15] Consumption = (Total Production + Production for Feedstock + Imports [Virgin and Used]) − (Exports [Virgin and Used] + Destruction).

requirements for HFCs used in this application. As a result, the supply of recovered and reprocessed HFCs that can be secured from chemical manufacturers is relevant when assessing whether the supply of HFC–134a is insufficient to accommodate this application. The likeliest source of these reprocessed HFCs for defense sprays would be reclaimed refrigerants, which must meet specific purity requirements.[16] Since there are no Federal purity requirements or industry purity standards for HFCs used in aerosols, the purity of reclaimed HFCs is likely the same or higher than the virgin HFCs used in this application. The supply of reclaimed HFC–134a in the United States is substantial and increases the supply of HFC–134a available to this application. However, as is true in many other parts of EPA's supply analysis, there is uncertainty regarding the overall supply and demand for reclaimed HFCs.

There is additional uncertainty around the supply and demand for HFC–134a as a result of the 2023 Technology Transitions Rule (88 FR 73098, October 24, 2023). GWP restrictions under the 2023 Technology Transitions Rule begin taking effect January 1, 2025, with the latest restriction taking effect on January 1, 2028. Overall demand for HFC–134a could fall since all subsectors subject to Technology Transitions restrictions will not be permitted to use neat HFC–134a, as its GWP of 1,430 is greater than the highest GWP limit (*i.e.,* 700). However, many subsectors subject to Technology Transition restrictions already use chemicals that fall below the GWP restriction levels, and where this is the case EPA does not anticipate any change in demand of HFC–134a. Additionally, some sectors may use blends with HFC–134a as a component where the GWP is below the applicable limit. Moreover, HFC–134a will likely continue to be used in other applications not subject to these restrictions (*e.g.,* heavy-duty trucks), as well as for servicing existing equipment (*e.g.,* light-duty motor vehicle air conditioning). HFC suppliers may also shift their production and import practices, such that supply of HFC–134a changes. EPA intends to review available information on market shifts that occur when the first set of Technology Transition restrictions take effect on January 1, 2025, and where possible will incorporate any relevant information into the analysis underpinning finalization of this rulemaking. Based on this additional information, at finalization of this proposed rule, EPA may be in a position to determine that the supply of HFC–134a is not insufficient to accommodate this application once all of the Technology Transition restrictions take effect as of January 1, 2028, if not earlier (*i.e.,* as early as January 1, 2026).

EPA also intends to finalize a rulemaking under subsection (h) of the AIM Act, the Emissions Reduction and Reclamation Rule (88 FR 72216, October 19, 2023), in the summer of 2024. EPA proposed a number of requirements including those concerning use of reclaimed HFCs for certain activities. In addition, EPA intends to finalize a rulemaking, ''*Trichloroethylene (TCE); Regulation Under the Toxic Substances Control Act (TSCA)*'' (88 FR 74712, October 31, 2023), later this year; this rulemaking has proposed to ban the use of TCE due to unreasonable risk of injury to human health. If finalized as proposed, this would prohibit TCE from being used as a feedstock to manufacture HFC–134a within eight and a half years from when that rule is finalized. While this could end the production of HFC–134a in the United States,[17] it is unclear how this change would affect overall supply of HFC–134a, as there is currently still global supply of HFC–134a that could be imported into the United States. EPA anticipates being able to consider the projected effects of these other rules prior to finalizing this rulemaking.

Entities do not need to seek or receive ASAs in order to use HFC–134a in defense sprays. Further, entities do not have to expend an allowance to purchase HFC–134a from another entity that has imported or produced the regulated substance. EPA notes that of the six defense spray entities that have received ASAs at some point for calendar years 2022, 2023, and 2024, three did not receive ASAs in at least one of those years. EPA is also aware of at least two entities selling bear sprays that use HFC–134a that have never applied for, and therefore never received, ASAs. This suggests that at least those two entities were able to acquire HFC–134a on the open market without having ASAs. These facts could suggest that ASAs may not be imperative for entities in this application to access HFC–134a.

In sum, HFC–134a is currently more widely available than other HFCs, and defense sprays' need for HFC–134a is small compared to the overall demand for HFC–134a across a range of sectors. At the same time, there is inherent uncertainty in the HFC market due to future stepdowns and new regulations coming into effect. Further information regarding EPA's assessment of the supply of HFC–134a related to the needs of the defense sprays application can be found in the defense sprays chapter of the TSD.

EPA is also considering the supply of HFC–152a, as it is used in at least one defense spray product, as noted above. HFC–152a is produced in substantial quantities, though the current domestic production of HFC–152a is about half that of HFC–134a, on a mass basis.[18] In 2022, domestic production of HFC–152a was 29,654.9 MT, about 22 percent of U.S. HFC production by mass. There is currently only one U.S. HFC–152a production facility, and that producer has announced plans to increase production by approximately 20 percent by mid-2024.[19] At the time of this proposal, the facility expansion is not yet complete, so EPA cannot say with certainty when it will be available. However, there is also substantial global production of HFC–152a, which also supplies the U.S. market. Multiple entities imported HFC–152a in 2022, importing a total of 5,810.1 MT. Overall, HFC–152a made up approximately 20 percent of total U.S. HFC consumption in 2022 on a mass basis. In addition, at the end of 2022, suppliers held 5,076.3 MT of HFC–152a in domestic inventory, which is equivalent to about 16 percent of calculated consumption of HFC–152a in 2022. The company that has commercialized the bear spray using HFC–152a has never received allowances for HFC–152a, which suggests that at least this entity is able

[16] In alignment with the definition in 42 U.S.C. 7675(b)(9), EPA defined reclaim as ''the reprocessing of regulated substances to all of the specifications in appendix A to 40 CFR part 82, subpart F (based on Air-Conditioning, Heating, and Refrigeration Institute (AHRI) Standard 700–2016) that are applicable to that regulated substance and to verify that the regulated substance meets these specifications using the analytical methodology prescribed in section 5 of appendix A to 40 CFR part 82, subpart F'' (40 CFR 84.3). Thus, HFC–134a refrigerant that is reclaimed and used by a different user than the one recovering the refrigerant must meet the purity requirements of AHRI 700, *Standard for Specifications for Refrigerants.* That standard, among other things, requires that reclaimed HFC–134a must be visibly clean (that is, no visible solids or particulate), no more than 1.5 percent by volume of air in the vapor phase, no more than 10 parts per million of water by weight, and no more than 0.5 percent by weight of other volatile impurities.

[17] Though there are other pathways to produce HFC–134a, the pathway using TCE is the primary production pathway in the United States, and it is EPA's understanding that it is complex to change production pathways.

[18] See *https://www.epa.gov/climate-hfcs-reduction/hfc-data-hub/expanded-hfc-data.*

[19] See *https://www.chemours.com/en/news-media-center/all-news/press-releases/2023/chemours-announces-capacity-increase-of-hfc-152a-providing-reliable-domestic-supply-of-low-global-wa.*

to acquire HFC–152a on the open market without having ASAs.

In addition, HFC–152a has one of the lowest EVs relative to other regulated HFCs, so fewer allowances are needed to import or produce HFC–152a in comparison to the same volume of higher-EV HFCs. For example, an importer would need to expend 143 consumption allowances to import 100 kg of HFC–134a compared to 12.4 allowances to import 100 kg of HFC–152a—a greater than 90% reduction. This means that, from a strictly allowance-focused view, HFC–152a will be easier to acquire than most other HFCs as the phasedown progresses and the number of HFC allowances is reduced. Allowances allocated to an end user may therefore not be necessary to secure production or import of HFC–152a.

Future projections suggest that there could be increased demand for HFC–152a, although there is inherent uncertainty with how industry will respond to the phasedown of HFCs at this early stage. HFC–152a has a GWP that is below all the GWP limits for sectors and subsectors subject to the 2023 Technology Transitions Rule (88 FR 73098, October 24, 2023). The 2023 Technology Transitions Rule identified HFC–152a as an available or potentially available substitute for all 13 foam subsectors, aerosol propellants, motor vehicle air conditioning, and household refrigerators and freezers.[20] However, there are also multiple other acceptable alternatives, including non-HFCs, and, for subsectors where a transition to another substitute has already occurred (*e.g.,* motor vehicle air conditioning, household refrigerators and freezers), it is highly unlikely that a new transition to HFC–152a would be considered. For subsectors where HFC–152a neat or in blends is likely under consideration, it is not yet known if there will be any significant shift toward use of HFC–152a, particularly as many relevant subsectors have begun to move out of HFCs entirely. For example, the MCTOC 2022 Assessment report notes that a significant proportion of aerosols already use non-HFCs as propellants. Similarly, the FTOC 2022 Assessment Report highlights that fluorocarbon use in foams has been falling for decades, and foams are largely expected to continue transitioning to non-HFCs, including hydrocarbons, HFOs, and hydrochlorofluoroolefins (HCFOs). Demand for HFC–152a may therefore change in future years as subsectors transition to alternatives from their currently used HFC.

In sum, while there is a reasonably large supply of HFC–152a that is expected to increase over the coming years relative to other HFCs, there is uncertainty around future demand for the reasons described above.

3. What is EPA proposing regarding eligibility for application-specific allowances?

Given the rapidly changing landscape for HFC supply and EPA's assessment of substitute availability application-wide, EPA is proposing two options based on our current analysis and in anticipation of additional available information before this proposed rule is finalized. Specifically, EPA is proposing to finalize one of the following outcomes: (1) No renewal, such that the application will not receive ASAs or (2) Renew eligibility for ASAs for two years, such that ASAs are available for calendar years 2026 and 2027.[21] EPA is also seeking comment on renewing eligibility for the full five-year period.

As explained earlier in this proposal, an application must meet both criteria to be eligible to receive ASAs. For the reasons described earlier in this section, EPA is proposing to determine that there is not a safe and technically achievable substitute that is immediately available for the entire application, but a safe or technically achievable substitute will be available for the entirety of the defense spray application by January 1, 2028. In other words, EPA proposes to determine that the criterion in subsection (e)(4)(B)(i)(I) is not met for defense sprays starting January 1, 2028. Under this proposed determination, even if EPA received information to determine that supply of the currently used regulated substance was insufficient, defense sprays would not be eligible for renewal as of January 1, 2028, unless they have insufficient supply of a substitute HFC, as discussed in more detail below.

EPA is also proposing to determine that either (1) the supply of HFC–134a is not insufficient to accommodate this application; or (2) the supply of HFC–134a will not be insufficient to accommodate this application as of January 1, 2028. In other words, EPA proposes to determine that the criterion in subsection (e)(4)(B)(i)(I) is either: (1) not met at all for this application for HFC–134a, and therefore the application would not be eligible to receive ASAs starting January 1, 2026; or (2) not met as of January 1, 2028, and therefore the application would not be eligible to receive ASAs starting January 1, 2028. Under the first option, this means that even if the application does not have a safe or technically achievable substitute available, ASAs would not be available for defense spray manufacturers as of January 1, 2026. For the second option, defense sprays would not be an eligible application for ASAs as of January 1, 2028, regardless of the availability of substitutes.

EPA does not have sufficient information to make a definitive determination on whether supply of HFC–152a is insufficient to accommodate this application at the time of this proposal. We are monitoring this issue and will be seeking information on the alternatives that subsectors subject to Technology Transitions restrictions transition into and how much additional domestic production capacity of HFC–152a comes online in the coming year.

EPA is also taking comment on whether defense sprays should be eligible to receive ASAs for the full five-year period from 2026–2030. A full five-year renewal could be without restriction or could be based on and tailored only to the application's need to purchase HFC–152a. As explained earlier, HFC–152a is used commercially in one bear spray product, so this latter scenario could be relevant if HFC–152a is an available safe and technologically achievable substitute for the entire defense spray application by 2028. Under this scenario, EPA would follow an approach similar to the option proposed for SCPPU foams for marine and trailer uses in Section V.D.3.

EPA intends to review comments and other relevant information received on this proposal to further understand how the market surrounding this application evolves and the availability of substitutes application-wide before EPA finalizes this proposed rule. Specifically, we intend to review additional information on how the HFC market adjusts to the 2024 stepdown, defense sprays' research into alternative propellants and related trials (including relevant data on flammability), what alternatives consumer aerosols transition to (as they are subject to the

[20] See 2023 Technology Transitions Rule (88 FR 73098, October 24, 2023) TSD ''American Innovation and Manufacturing Act of 2020—Subsection (i)(4) Factors for Determination: List of Substitutes.'' This list is not exhaustive, so it is possible HFC–152a is an available alternative for other subsectors. In addition, EPA did not identify information for products or equipment containing certain substitutes, which may indicate a lack of current commercial demands for the substitutes in those products or equipment. However, this did not automatically remove those substitutes from the list of available substitutes, as commercial demands is only one subfactor that needed to be considered under subsection (i)(4)(B).

[21] The proposed amendatory text included in this **Federal Register** notice shows only one of the co-proposed options. This is for illustrative purposes and should not be read as EPA favoring one co-proposal over another.

Technology Transitions restrictions starting in 2025), and research into alternative propellants intended to be used in technical aerosols (which are subject to the Technology Transitions restrictions starting in 2028). EPA invites submission of comment and additional data related to these data gaps. EPA will consider this new information, in addition to public comments, in making a final determination for this application.

4. Proposed Restriction Under EPA's Technology Transitions Program

The 2023 Technology Transitions Rule (88 FR 73098, October 24, 2023) restricts the manufacture and import of all aerosol products that use HFCs or HFC blends that have a GWP greater than 150. This restriction begins January 1, 2025, for all aerosols except for those specifically listed in the final rule as technical aerosols, which have manufacture and import restrictions starting January 1, 2028. The listed technical aerosols are applications for which EPA received sufficient information through the comment period or through EPA's own analysis indicating that additional time is needed to transition to substitutes due to various technical requirements, such as non-flammability and/or a specific vapor pressure. The list of technical aerosols does not include defense sprays.

The 2023 Technology Transitions Rule exempts applications that receive ASAs (40 CFR 84.56(a)(2)). However, as finalized in the October 24, 2023, rule, if an application no longer qualifies for ASAs, the Technology Transitions restrictions then apply.

While most aerosols are required under the Technology Transitions Program to meet a 150 GWP limit starting on January 1, 2025, the EPA provided additional time to comply with this limit for some technical aerosol uses. Most of the U.S. aerosol industry subject to the January 1, 2025, compliance date has already transitioned to using propellants that meet the 150 GWP limit,[22] and therefore has available substitutes for use based on EPA's consideration of the factors listed in subsection (i)(4)(B) (*e.g.,* technological achievability, commercial demands, safety, consumer costs, etc.). By contrast, the uses that received an extension for compliance with the 150 GWP limit until January 1, 2028, 40 CFR 84.54(a)(16)(i)(A)–(O), currently use HFC–134a (most often as a propellant) and have limitations that require additional time ''to reformulate, test, and transition'' to ensure availability of substitutes under subsection (i)(4)(B) for these technical uses.

EPA is proposing that defense sprays would be considered under the Technology Transitions Program consistent with technical aerosols, with the corresponding compliance deadlines on the manufacture and import of defense sprays using HFCs and blends containing HFCs with a GWP of 150 or greater beginning January 1, 2028, with a three-year sell-through of those products. Thus, defense sprays manufactured or imported prior to January 1, 2028, could continue to be sold until January 1, 2031. As discussed in Section V.C.1 of this preamble, while some defense spray uses may have substitutes available in the near term that are technically achievable and safe, EPA's proposed assessment under subsection (e)(4)(B) is that such substitutes are not immediately available across all defense spray uses. In particular, the flammability or specific vapor pressure of potential substitute propellants present availability concerns for some uses in the near term. Consideration of technological achievability and safety, as well as other subsection (i)(4)(B) factors, indicates that a compliance date of January 1, 2025, for transition of all defense spray uses is not appropriate, but the approval of substitute propellants as safe under SNAP and TEAP analyses (see Section V.C.1), as well as EPA's assessment that many propellant uses in this subsector have been able to successfully transition to substitutes, provides support for EPA's proposed finding that all defense sprays will have available substitutes by January 1, 2028. We invite comment on whether availability of substitutes for use in defense sprays, particularly considering those factors enumerated under subsection (i)(4)(B), indicates that defense sprays could in fact meet the existing 150 GWP limit restriction if the application ceased being eligible for ASAs on January 1, 2026. We note that given the January 1, 2028, compliance date for the transition of the remaining aerosol sector, comments urging the Agency to provide additional time for compliance beyond that date will need to provide very specific and detailed information in support of that request, speaking to the statute's factors under subsection (i)(4) and in particular the subsection (i)(4)(B) factors.

Under the 2023 Technology Transitions Rule, the labeling requirements are effective at the same time as the manufacture and import restrictions, which, if EPA finalizes this action as proposed, would be January 1, 2028. Recordkeeping and reporting provisions are effective for all sectors and subsectors under the 2023 Technology Transitions Rule starting January 1, 2025. EPA proposes that the recordkeeping requirements would apply to defense spray manufacturers and importers beginning January 1 of the year that use no longer qualifies for ASAs, and the first report would be due March 31 of the following year. For example, if defense sprays are no longer eligible for ASAs in 2026, manufacturers and importers would need to keep records as required by the 2023 Technology Transitions Rule starting January 1, 2026, and submit their first Technology Transitions report to EPA by March 31, 2027, even if EPA finalizes its proposal that the 150 GWP limit for the manufacture and import of defense sprays using HFCs would not apply until January 1, 2028.

EPA requests comment on the proposal to consider defense sprays consistent with technical aerosols for purposes of the Technology Transitions Program and the restrictions that result from such a classification, such as the GWP limit that would take effect on January 1, 2028, use restrictions, a three-year sell-through window for inventory ending January 1, 2031, and labeling and reporting requirements.

EPA has previously determined that available substitutes for use as aerosol propellants include HFC–152a (GWP 124) and HFO–1234ze(E) (GWP <1) (88 FR 73098, October 24, 2023). EPA is also interested in any supporting data and information related to the availability of substitutes and whether a different timeline is more appropriate for transitioning in this application or for a subset of products in this application.

D. Structural Composite Preformed Polyurethane Foam for Marine Use and Trailer Use

The third application to which EPA has been allocating ASAs to since 2022 is SCPPU foam for marine and trailer uses, in accordance with subsection (e)(4)(B)(iv)(I)(cc) of the AIM Act. In the Allocation Framework Rule (86 FR 55116, October 5, 2021), EPA defined this application as ''a foam blown from polyurethane that is reinforced with fibers and with polymer resin during the blowing process, and is preformed into the required shape (*e.g.,* specific boat or trailer design) to increase structural strength while reducing the weight of such structures'' (40 CFR 84.3). SCPPU foam is different from other types of

[22] See Household and Commercial Products Association (HCPA) and National Aerosols Association (NAA) Technology Transitions Petition to EPA dated July 6, 2021. Available in the public docket at EPA–HQ–OAR–2021–0289–0037.

polyurethane (PU) foams due to its specialized structural properties, and it is preformed into required shapes (*e.g.,* specific boat or trailer design). HFC–134a is the current HFC used in the blowing process for SCPPU foam. After analyzing information relevant to the statutory criteria, as outlined in this section and the TSD, EPA is proposing a range of options—to not renew the eligibility for entities in this application to receive ASAs, to renew for two years, or to renew access to ASAs for five years with allowances determined based on the use of a lower-GWP HFC substitute for HFC–134a. EPA is also taking comment on the possibility of renewing for a full five-year period consistent with the current allowance allocation approach.

1. Availability of Safe and Technically Achievable Substitutes

EPA anticipates that SCPPU foam for marine and trailer uses' commercialization of formulations using alternatives to HFC–134a as blowing agents is well underway and will evolve significantly between issuance of this proposed rulemaking and its finalization. The Agency will consider information collected from regulated entities and other relevant sources through the public comment period and the current reporting requirements to inform a final determination.

EPA is aware, from manufacturer communications and reporting, of two substitutes currently under development for this application—an HFC–152a/cyclopentane blend and an HFO. EPA notes that SNAP has listed both HFC–152a and cyclopentane as acceptable for all PU foams, including rigid PU uses in both marine flotation and commercial refrigeration (the two respective end uses for this application). Based on information from the manufacturers of SCPPU foam for marine and trailer uses, EPA understands that the research and development phase for both potential substitutes is nearing completion and that companies are nearing a phase where they will be able to commercialize use of substitutes. If commercialization occurs as companies anticipate and as shared with EPA, the entire application would be able to use a substitute different from HFC–134a before January 1, 2026. According to the information shared with EPA, one substitute seems close to being commercialized for SCPPU foam for marine use, and the other substitute seems close to being commercialized for SCPPU foam for trailer use. The company that is close to commercializing use of the HFC–152a/cyclopentane blend performed multiple early trial runs with HFOs, all of which failed to meet their needs, so the company decided to pursue the HFC–152a blend. On this basis, we are proposing to determine that the HFO is not an available substitute application-wide for the five-year period from 2026–2030, given additional research and development trials are needed, as well as the subsequent ramp up to commercialization. EPA understands that often different companies use different blowing agents to produce the same foam. At this time, it is unclear why an HFC–152a/cyclopentane blend cannot be used across the entirety of the application and similarly whether at some future date another blowing agent (*e.g.,* an HFO) might be used application-wide. To inform determinations in this rulemaking, EPA invites comment on any potential reasons why an HFC–152a/cyclopentane blend might not be safe and technically achievable for the entire application, including any supporting data and information, such as trial data. While there are two different end uses in this application, the foam used in both sub-applications is the same (*i.e.,* it is an SCPPU foam).

Other than an HFO and an HFC–152a/cyclopentane blend, EPA is not aware of other safe and available alternatives at this time. There are currently a range of alternatives identified as acceptable by SNAP and as technically proven by the TEAP's FTOC for other PU foams, including rigid PU uses in both marine flotation and commercial refrigeration. Alternatives include a lower-GWP HFC (*i.e.,* HFC–152a), hydrocarbons, and HFOs. However, alternatives identified as acceptable for PU foams are not necessarily available for SCPPU foam, given the unique technical requirements for this foam (*e.g.,* specialized structural properties). SNAP generally lists substitutes at the sector and end use level, not the application level (*e.g.,* the Agency has listed substitutes for rigid PU foam, which would allow for those substitutes in SCPPU foam, but it has not evaluated the use of these substitutes for SCPPU foam in particular), and TEAP's FTOC did not specifically discuss or evaluate SCPPU foam as an individual use in its 2022 assessment report. More information about the specialized nature of SCPPU foam can be found in the SCPPU foam chapter of the TSD.

Aside from the limitations noted above, EPA is not aware of significant Federal regulatory restrictions on the type of substitutes that could be considered for this application. EPA is also not aware of any required standards that SCPPU foam needs to meet to be manufactured and sold in the United States. The SCPPU foam chapter of the TSD contains further information on sources consulted, and EPA invites comment on any additional information the Agency should consider in analyzing substitutes for this application.

After reviewing the available information, including reports on progress made by manufacturers of SCPPU foam for marine and trailer use, EPA has not identified a safe and technically achievable substitute that is available at the time of this proposal, but anticipates that substitutes will likely be available soon. We are monitoring this issue and are seeking information from the entities that use HFCs in this application on whether progress continues as anticipated to inform our final determination.

2. Supply

Entities manufacturing SCPPU for marine and trailer uses currently use an HFC–134a formulation. As described in more detail in Section V.C.2 of this preamble, HFC–134a is the most widely produced of all HFCs. There is substantial domestic and global production of HFC–134a. This application's demand for HFC–134a is very small compared to domestic consumption; allocated ASAs for this application in 2024 are equivalent to 0.1 percent of calculated domestic consumption of HFC–134a in 2022, on an MTEVe basis. However, as noted earlier, the global and domestic HFC markets are continuing to adapt to regulations promulgated pursuant to the AIM Act, including the implementation of the phasedown of production and consumption of HFCs, and other authorities. EPA anticipates this market will continue to change, and EPA will analyze additional information as it becomes available ahead of finalizing this rulemaking. Such additional information will include whether there were immediate market shifts as a result of both the stepdown of the level of permissible production and consumption of HFCs that took effect on January 1, 2024, and regulations effective January 1, 2025.

In addition to changes in the HFC market due to the overall phasedown of production and consumption, other AIM Act regulatory programs are expected to take effect both between proposal and finalization of this rulemaking and during the applicable period under review in this rulemaking, as described in more detail in Section V.C.2. These requirements may reduce demand for HFC–134a domestically for

certain other uses, though EPA expects continuing demand for HFC–134a in applications not subject to restrictions will continue. There may also be new or expanded use of blends with HFC–134a as a component designed to meet new restrictions. In addition, other EPA regulations may impact domestic supply of HFC–134a, but global supply should remain substantial in comparison to this application's demand for HFC–134a.

EPA is currently not aware of any applicable restrictions on where this application could purchase HFCs, including any purity requirements or regulatory restrictions on supply. As such, it is EPA's assessment that this application may be able to use recovered and reprocessed HFCs supplied by chemical manufacturers. This is relevant in assessing what supply of regulated substance may be available to an application, since in such a case EPA does not need to limit its analysis to only virgin chemicals. The likeliest source of reprocessed HFCs for this application would be reclaimed refrigerants, which are held to AHRI 700 standards (see footnote 17 in Section V.C.2). Since there are no Federal purity requirements for HFCs used in foams or any industry requirements, the purity of reclaimed HFCs is likely the same or higher than the virgin HFCs used in this application. While EPA is not aware of specific purity requirements for this application, EPA notes that efficacy of blowing agents can be influenced by their composition and purity. As described in more detail in Section V.C.2, the supply of reclaimed HFC–134a in the United States is significant, though there is uncertainty regarding the future demand for this material.

As part of this proposed analysis, EPA is also considering the supply of HFC–152a. As further explained in Section IV.C, as part of the framework for its analysis EPA is proposing to evaluate the supply of a substitute HFC if that HFC is a safe or technically achievable substitute for an application. As outlined in the prior section (Section V.D.1), EPA's analysis suggests that HFC–152a blended with cyclopentane appears to be a safe and technically achievable substitute for this application. EPA is therefore evaluating the supply of HFC–152a to determine whether it would be insufficient to accommodate this application. As described in more detail in Section V.C.2, other AIM Act regulations may increase demand for HFC–152a domestically for certain uses, though EPA notes that many sectors where HFC–152a is a technically achievable substitute have already transitioned to other alternatives. Domestic production capacity is also expected to increase, but EPA cannot say with certainty when it will be available. Global supply should also remain substantial in comparison to this application's demand for HFC–152a.

3. What is EPA proposing regarding eligibility for application-specific allowances?

In light of the rapid evolution of information regarding both the availability of substitutes for this sector (including all companies in this application's stated plans to transition away from HFC–134a before 2026) and HFC supply, EPA is proposing a range of options based on the current Agency analysis and in anticipation of increased available information before this proposed rule is finalized. Specifically, EPA is proposing to finalize any of the following outcomes: (1) no renewal, such that the application will not receive ASAs, (2) renew eligibility for ASAs for two years, such that ASAs are available for calendar years 2026 and 2027, or (3) renew eligibility to continue receiving ASAs for the full five-year period with allowance amounts determined based on the EV of HFC–152a.[23]

Before finalization of this rule, we anticipate new information to become available on the supply of HFCs and availability of substitutes for the application, as outlined in detail in this section. EPA will consider this new information, in addition to public comments, in making a final determination for this application.

As explained earlier in this section, the development of safe or technically achievable substitutes for this application is a rapidly evolving space, such that multiple possible outcomes can reasonably be expected to occur through 2030. All entities that have received ASAs for SCPPU foam for marine and trailer uses to date have told EPA that they plan to transition to substitutes before January 1, 2026. One potential outcome at rule finalization is that EPA depends on these statements to determine that a ''safe or technically achievable substitute is available for the applicable period'' for this application. Statements from all of the companies that use regulated substances to manufacture SCPPU foam that they will transition to substitutes before the next ASA period could serve as a reasonable basis to determine that safe and technically achievable substitutes are available. There are also specific milestones that these entities have reached, such as one company receiving a final air permit for an expansion of the manufacturing facility that will use the HFC–152a/cyclopentane blend, indicating the company is able to move forward with full-scale testing and commercialization. If the entities' plans shared with EPA remain the same at the time when EPA is finalizing this proposed rule, particularly if they have already commercialized use of the substitutes, it is likely that EPA would determine that a safe or technically achievable substitute is available for this application. If EPA makes this determination, SCPPU foam for marine and trailer uses will not be eligible for ASAs as of January 1, 2026, even if EPA receives information to determine that supply of the currently used regulated substance is insufficient, unless the application has insufficient supply of a substitute HFC, as discussed in more detail below in this section. However, EPA recognizes there is uncertainty as to whether plans to commercialize will remain the same, be delayed, or be subject to unanticipated hurdles that could require additional evaluation of this alternative. EPA also has less information regarding the deployment of the HFO alternative outside of statements from the entity working toward its development and commercialization. Before finalization of this proposed rule, EPA intends to review and consider, as appropriate, all available information, specifically regarding expected timelines and testing data. EPA invites comment regarding the availability of safe or technically achievable substitutes for this application. The Agency will continue to collect information from regulated entities and other relevant sources through the public comment period and the current reporting requirements to inform a final determination of whether the criterion in subsection (e)(4)(B)(i)(I) is met.

EPA is also proposing to determine either: (1) the supply of HFC–134a is not insufficient to accommodate this application; or (2) the supply of HFC–134a is not insufficient to accommodate this application as of January 1, 2028. In other words, EPA proposes to determine that the criterion in subsection (e)(4)(B)(i)(I) is either: (1) not met at all for this application for HFC–134a, and therefore the application would not be eligible to receive ASAs with allowances calculated based on HFC–134a use starting January 1, 2026; or (2) not met as of January 1, 2028, and therefore the application would not be

[23] The proposed amendatory text included in this **Federal Register** document shows only one of the co-proposed options. This is for illustrative purposes and should not be read as EPA favoring one co-proposal over another.

eligible to receive ASAs with allowances calculated based on HFC–134a use starting January 1, 2028. Under the first option, this means that even if the application did not have a safe or technically achievable substitute available, ASAs would not be available for manufacturers of SCPPU foam for marine and trailer uses as of January 1, 2026. For the second option, SCPPU foam for marine and trailer uses would not be an eligible application for ASAs as of January 1, 2028, regardless of the availability of substitutes. However, if the available substitute is an HFC with insufficient supply, EPA may determine SCPPU foam for marine and trailer uses are eligible for renewal for that substitute HFC.

Given the current uncertainty over which EPA anticipates having more clarity ahead of finalization of this proposed rule, at this time EPA contends that it could determine that the criterion in subsection (e)(4)(B)(i)(I) is met now, met as of January 1, 2028, or is not met at all through the entire renewal period with respect to HFC–152a. Under the first possible determination (supply of HFC–152a is not insufficient now), even if the application did not have a safe or technically achievable non-HFC substitute available as of January 1, 2026, the application would not be eligible for renewal as of that date. Under the second possible determination (supply of HFC–152a is not insufficient as of January 1, 2028), the application would not be eligible for ASAs as of January 1, 2028, even if the application did not have a safe or technically achievable non-HFC substitute. Under the third possible determination (supply of HFC–152a is insufficient), the application would be eligible for ASAs if there was no safe or technically achievable non-HFC substitute for the entire application. EPA will monitor reported data over the next year on the noted areas of uncertainty and invites comment on this issue.

In light of the range of outcomes EPA has proposed regarding its determinations on whether the criteria in subsection (e)(4)(B)(i)(I) and (II) are met, EPA is proposing three potential outcomes on whether and how SCPPU foam for marine and trailer uses may be eligible for future ASAs: (1) not eligible to receive ASAs; (2) eligible to receive calendar year 2026 and 2027 ASAs; and (3) eligible to receive ASAs for the five-year period of calendar years 2026–2030 with allowance amounts determined based on the EV of HFC–152a. EPA is also taking comment on SCPPU foam for marine and trailer uses eligibility to receive ASAs consistent with the current approach through calendar year 2030 ASAs. EPA also could finalize different outcomes based on how the transition to substitutes progresses between this proposal and rule finalization.

Under outcome (3), EPA is proposing to allocate allowances based on an expectation that the application can use HFC–152a. To achieve this, EPA is proposing to base the calculation of allowance allocations on the estimated total mass of HFCs needed by the application and allocate at the level necessary to purchase HFC–152a on an EV-weighted basis. For example, if a company used 1,000 kg of HFC–134a and 500 kg of HFC–152a in Year 3 (as defined by the regulatory formula; see Section VII for further discussion of regulatory formula and proposed revisions), and HFC–152a substituted for HFC–134a one-for-one on a gram basis for this application, EPA would multiply 1,500 kg by the applicable average annual growth rate (AAGR) and then by the EV of HFC–152a to calculate the company's allowance allocation for the following year. EPA would not limit which HFCs could be purchased for use in the application once the allowances are issued. EPA is taking comment on whether the Agency should apply any relevant mass conversions in this calculation (*i.e.,* if an application needed more or less HFC–152a on a gram-by-gram basis when substituting for HFC–134a) where the total mass of HFCs used would be multiplied by a mass ratio, as appropriate, then multiplied by the AAGR.

As outlined in detail elsewhere in this section, before EPA finalizes this proposed rule, the Agency intends to review available information and comments received on this proposal to get further clarity on progress toward commercialization of substitutes, how the overall HFC market has adjusted to the 2024 stepdown, what alternatives are adopted by subsectors subject to 2025 Technology Transitions Program restrictions, and how much additional domestic HFC–152a production capacity comes online.

4. Proposed Restriction Under EPA's Technology Transitions Program

The 2023 Technology Transitions Rule (88 FR 73098, October 24, 2023) restricts the manufacture and import of foam products that use as a blowing agent HFCs or HFC blends that have a GWP of 150 or greater (hereafter, ''foam products''). This restriction begins January 1, 2025. Examples of items subject to this restriction include products that are foams, such as extruded polystyrene boardstock; products for blowing foam, such as two-part foam systems for blowing PU foam; and products that are manufactured using foam, such as boats or refrigerated trailers.

The 2023 Technology Transitions Rule exempts applications which receive ASAs (40 CFR 84.56(a)(2)). However, as finalized in the October 24, 2023, rule, if an application no longer qualifies for ASAs, the Technology Transitions restrictions would apply.

As discussed in the preamble to the 2023 Technology Transitions Rule, the transition to non-HFC and lower-GWP substitutes is already well underway or completed for much of the foams sector (*see* 88 FR 73184). EPA therefore established a uniform GWP limit of 150 for the entire foams sector starting January 1, 2025. The sole exception to this restriction for the foams sector was SCPPU foam for marine and trailer uses, per their receipt of ASAs. As discussed above in Section V.D.1, EPA proposes that while there are no safe and technically achievable alternatives available at this time under subsection (e)(4)(B) specifically for use in SCPPU foams for marine and trailer uses, we anticipate, based on currently available information, that the development of substitutes for these uses is progressing rapidly, such that by the time EPA finalizes this action, substitutes meeting the (e)(4)(B)(i)(I) criterion may be available. While the list of considerations under subsection (i)(4)(B) that EPA is to factor in, to the extent practicable, when considering availability of substitutes for issuing restrictions under subsection (i) includes factors beyond those characteristics listed in subsection (e)(4)(B)(i)(I), in this instance EPA's view is that technological achievability of lower-GWP substitutes in marine and trailer uses is the primary barrier to transitioning away from the use of HFC–134a in these two uses. Many of the factors listed in subsection (i)(4)(B) are not relevant to EPA's assessment of availability of substitutes for these two uses, such as building codes, appliance efficiency standards, and contractor training costs. As noted in Section V.D.1 of this preamble, EPA's SNAP Program has already listed as acceptable the potential substitutes under consideration and the entities actively developing the substitutes and working to bring those substitutes to market are almost certainly considering costs to consumers and affordability for small business consumers as part of their efforts.

We propose that the applicability of the restriction on HFC foam blowing

agents in the 2023 Technology Transitions Rule to SCPPU foam for marine and trailer uses will depend entirely on which of the three co-proposals EPA ultimately finalizes. That is, under co-proposal (1), where EPA would not renew ASAs for SCPPU for marine and trailer uses as of the effective date of a final rule based on this proposal, requirements of the Technology Transitions Program, which include labeling, reporting, recordkeeping, and restrictions on HFCs, would apply beginning January 1, 2026. Under co-proposal (2), where EPA would renew ASAs for SCPPU for marine and trailer uses for 2026 and 2027, requirements of the Technology Transitions Program would apply beginning January 1, 2028. For both co-proposals (1) and (2), EPA proposes that the recordkeeping requirements would apply to manufacturers of SCPPU foams for marine and trailer uses beginning January 1 of the year those uses no longer qualify for ASAs, and the first report would be due March 31 of the following year, as discussed above in Section V.C.4. For example, under co-proposal (1), manufacturers would need to keep records as required by the 2023 Technology Transitions Rule starting January 1, 2026, and submit their first Technology Transitions report to EPA by March 31, 2027; under co-proposal (2), manufacturers would need to keep such records starting January 1, 2028, and would submit their first Technology Transitions report by March 31, 2029. Under co-proposal (3), where EPA would renew ASAs for SCPPU for marine and trailer uses based upon the use of HFC–152a instead of HFC–134a, SCPPU for marine and trailer uses would continue to be exempt from the 2023 Technology Transitions Rule. The requirements under each co-proposal for SCPPU for marine and trailer uses are summarized in Table 2 below. EPA is interested in data and information related to the availability of substitutes and the proposed timeline for transitioning in this application.

TABLE 2—APPLICABILITY OF TECHNOLOGY TRANSITIONS REQUIREMENTS UNDER CO-PROPOSALS FOR SCPPU FOR MARINE AND TRAILER USES

Co-proposal	Technology transitions GWP limit and compliance date	Date technology transitions labeling requirements begin	Date technology transitions reporting requirements begin
(1) No renewal of ASAs	GWP limit of 150 beginning January 1, 2026.	January 1, 2026	First report due March 31, 2027, including data from January 1, 2026, through December 31, 2026.
(2) Renew eligibility for ASAs for 2026 and 2027.	GWP limit of 150 beginning January 1, 2028.	First report due March 31, 2029, including data from January 1, 2028, through December 31, 2028.	
(3) Renew eligibility for 2026–2030 with allowance amounts determined based on the EV of HFC–152a.	Because application continues to be eligible for ASAs, it is exempt from Technology Transitions requirements.		

E. Etching of Semiconductor Material or Wafers and the Cleaning of Chemical Vapor Deposition Chambers Within the Semiconductor Manufacturing Sector

EPA has been allocating ASAs for regulated substances used for the etching of semiconductor material or wafers and the cleaning of CVD chambers within the semiconductor manufacturing sector in accordance with subsection (e)(4)(B)(iv)(I)(dd) of the AIM Act. In the Allocation Framework Rule, EPA defined ''etching'' in the context of semiconductor manufacturing as ''a process type that uses plasma-generated fluorine atoms and other reactive fluorine-containing fragments that chemically react with exposed thin films (*e.g.,* dielectric, metals) or substrate (*e.g.,* silicon) to selectively remove portions of material. This includes semiconductor production processes using fluorinated GHG reagents to clean wafers.'' (40 CFR 84.3). EPA defined ''chemical vapor deposition chamber cleaning'' (hereafter referred to as ''chamber cleaning'') in the context of semiconductor manufacturing as ''a process type in which chambers used for depositing thin films are cleaned periodically using plasma-generated fluorine atoms and other reactive fluorine-containing fragments'' (40 CFR 84.3). At the time of this proposal, EPA is aware of three HFCs that are used for this application in manufacturing. HFC–23 is commonly used for selective dry etching of silicon dioxide (SiO_2) and silicon nitride (SiN), while HFC–32 and HFC–41 are used in high-aspect-ratio hole etching. HFC–23, HFC–32, and HFC–41 may also be minimally used in chamber cleaning processes.

EPA is proposing to determine that no safe or technically achievable substitute will be available for the semiconductor application and that supply of the regulated substance that manufacturers and users are capable of securing from chemical manufacturers is insufficient to accommodate the semiconductor application through calendar year 2030. Therefore, EPA proposes to renew the eligibility of entities using regulated substances for the defined semiconductor application to receive ASAs for the five-year period of calendar years 2026 through 2030.

1. Availability of Safe and Technically Achievable Substitutes

EPA has not identified any substitutes that it would propose to deem safe and technically achievable that are available for the entirety of the defined semiconductor application.

In developing this assessment, EPA reviewed information from industry trade groups, the TEAP's MCTOC, the Intergovernmental Panel on Climate Change (IPCC), scientific journal articles, and more. The sources examined by EPA are outlined in greater detail in the TSD included in the docket for this proposed action.

The MCTOC 2022 Assessment report reviewed HFC gases commonly used in semiconductor manufacturing, along with their alternatives, using the following criteria: commercially available, technically proven, environmentally sound, economically viable and cost effective, safe to use in industrial applications considering flammability and toxicity issues, and easy to use and maintain.[24] Based on this report and other sources, EPA is

[24] See *https://ozone.unep.org/system/files/documents/MCTOC-Assessment-Report-2022.pdf.*

aware that semiconductor manufacturers currently utilize other fluorinated gases, such as sulfur hexafluoride (SF_6), nitrogen trifluoride (NF_3), some saturated PFCs (*i.e.,* CF_4, C_2F_6, c-C_4F_8), and some unsaturated PFCs (*i.e.,* C_4F_6, C_5F_8) for the processes of etching and chamber cleaning. The MCTOC 2022 Assessment report lists these chemicals as both commercially available and technically proven and can be used as substitutes for etching and chamber cleaning. In developing its proposed determination regarding substitutes, however, EPA did not consider many of these chemicals in its proposed consideration of the availability of safe and technically achievable substitutes because of their higher GWPs, lower utilization rates (*i.e.,* higher emission rates), or higher toxicity than HFCs. Sulfur hexafluoride (SF_6), which is used in the etching of silicon, silicon dioxide (SiO_2), and silicon nitride (SiN), as well as chamber cleaning, has a 100-year GWP of 22,800. Nitrogen trifluoride (NF_3), which is used in the etching of silicon and silicon nitride (SiN), as well as for chamber cleaning, has a 100-year GWP of 17,200. Saturated PFCs, used in the etching of silicon, silicon dioxide (SiO_2), and other materials, have a 100-year GWP ranging between 7,390 to 12,200. Saturated PFCs are also difficult to abate and have relatively low utilization rates.

Unsaturated PFCs are used in high-aspect-hole-ratio etching. They have GWPs of less than two; however, these compounds have not been widely adopted at least in part since these chemicals can only be used in certain processes and are not necessarily viable for all types of etching, etching all materials, or chamber cleaning. For example, unsaturated PFCs are not known to be used in chamber cleaning, so the Agency does not consider unsaturated PFCs as available for the entire application.

The MCTOC 2022 Assessment report also lists other compounds that are currently being studied for use but are not yet technically proven, are not considered safe or easy to use, and may have additional toxicity concerns. These chemicals include carbonyl sulfide, HFO–1336mzz(E), PFC–1216, chlorine trifluoride (ClF_3), hexafluoroisobutylene (HFIB), and trifluoroiodomethane (CF_3I). Carbonyl sulfide, used in certain etching applications, is also highly flammable and toxic. HFO–133mzz(E) is being considered as a replacement for certain etching chemicals. PFC–1216 is being studied for use in etching silicon dioxide (SiO_2). Chlorine trifluoride (ClF_3) may be used for chamber cleaning for Low Pressure CVD chambers but is extremely flammable and is not considered safe or easy to use. Although not known to currently be used, hexafluoroisobutylene (HFIB) could be used in certain etching applications for silicon containing material. Trifluoroiodomethane (CF_3I) is used for etching of silicon dioxide (SiO_2) and silicon nitride (SiN), but the MCTOC 2022 Assessment report does not list it as safe or easy to use.

EPA is aware of certain HFCs that may be in the early stages of research for high-aspect-ratio hole etching, such as HFC–134a and HFC–125. ASA holders have stated that research on lower-GWP alternatives is ongoing and there are currently no known alternatives to HFCs, PFCs, and nitrogen trifluoride (NF_3), and any alternatives would not be commercially available until at least 2030.

In light of the above analysis, EPA has not identified a safe and technically achievable substitute that is available at the time of this proposal. When a substitute or substitutes are identified for the entirety of the application, it would still take significant time to replace the current HFC(s) with the substitute(s). One industry trade group has stated that semiconductor technologies require at least 10 years from fundamental research to high volume manufacturing to innovate and implement new technologies and their associated raw materials. Given that no promising substitutes have been identified, there is no information before the Agency at the time of this proposal to suggest that there would be a safe and technically achievable substitute available prior to the next five-year review.

2. Supply

HFC–23, HFC–32, and HFC–41 are all currently used in the etching of semiconductor material or wafers and the cleaning of CVD chambers within the semiconductor manufacturing sector. As described earlier in Section IV.B of the preamble, EPA is proposing to determine that an application meets this criterion if EPA determines that any of the HFCs currently used in an application's equipment or to manufacture the application's products for use have insufficient supply.

As described above in Section E of this preamble, HFC–23 is used in the etching of silicon dioxide (SiO_2) and silicon nitride (SiN) and is also used minimally in chamber cleaning. In 2022, domestic producers produced approximately 1,049.3 MT of HFC–23. 876.2 MT were subsequently destroyed, and one producer sold 5.2 MT of this HFC–23 for consumptive uses, which could be used for semiconductors as well as other uses. In addition, there were about a half dozen entities that imported HFC–23 with total amount of imports equaling 125.6 MT. Overall, HFC–23 made up only 0.07 percent of total U.S. HFC consumption in 2022 on a mass basis. Moreover, as HFC–23 has the highest EV, it may be possible that this supply is further constricted in the future as the phasedown progresses and the number of available allowances is reduced. As stated elsewhere in this proposed rule, EPA recognizes that there is inherent uncertainty regarding HFC production, and in particular for HFCs with a more limited number of production facilities and/or higher GWPs than other regulated HFCs, this uncertainty may be greater. Therefore, EPA understands there will be changes to the market conditions resulting from the domestic and global phasedown of HFC production and consumption.

In addition, the use of HFC–23 in the semiconductor manufacturing application is large compared to the annual consumption of HFC–23. In 2022, semiconductor ASA holder purchases [25] of HFC–23 accounted for about 81 percent of calculated consumption of HFC–23. Furthermore, at the end of 2022, suppliers held 304.0 MT of HFC–23 in domestic inventory, which is equivalent to about 293 percent of calculated consumption of HFC–23 in 2022; not all of this HFC–23 may be considered available supply, as the entities both holding this material in inventory and reclaiming these HFCs are broader than EPA's interpretation of chemical manufacturers (see Section IV.B for more information).

EPA also analyzed the supply of HFC–32. In 2022, the one domestic producer of HFC–32 produced 17,744.3 MT of HFC–32. There were also over a dozen entities that imported HFC–32, with total import quantities equaling 9,885.3 MT. Overall, HFC–32 made up approximately 17 percent of total U.S. HFC consumption in 2022 on a mass basis. The use of HFC–32 in the semiconductor manufacturing application is small compared to the annual consumption of HFC–32. In 2022, semiconductor ASA holder purchases of HFC–32 accounted for less than 0.035 percent of calculated consumption of HFC–32. At the end of 2022, suppliers held 21,435 MT of HFC–32 in domestic inventory, which is equivalent to about 80 percent of calculated consumption of HFC–32 in 2022; similar to considerations for

[25] For this calculation, EPA is using purchases in 2022 instead of allowances allocated so that percent of consumption can be calculated for each HFC.

supply of HFC–23 and for other applications, not all of this inventory may be considered available.

Another factor EPA is considering is the impact that other regulatory actions may have for the available supply of HFC–32. As described in more detail above in Section V.A, the overall market for HFCs is likely to continue changing in light of AIM Act and potentially other restrictions. There is particular uncertainty regarding demand for HFC–32. The 2023 Technology Transitions Rule (88 FR 73098, October 24, 2023) set a GWP threshold of 700 for certain sectors and subsectors where previously higher-GWP HFCs or HFC blends have been used. HFC–32 has a GWP of 675 and may be a suitable alternative in those sectors and subsectors. In other cases, the 2023 Technology Transitions Rule set a GWP threshold of 150 and thus HFC–32 could not be used unless as a component of blends. The first set of restrictions under the 2023 Technology Transitions Rule have compliance dates of January 1, 2025, with the latest compliance dates taking effect on January 1, 2028. Additionally, the proposed Emissions Reduction and Reclamation Rule (88 FR 72216, October 19, 2023) proposes requirements for the use of recycled or reclaimed HFCs for certain uses, as discussed elsewhere in this preamble. When finalized, that rule may affect the use of reclaimed HFC–32.

EPA also analyzed the supply of HFC–41. There is one domestic supplier of HFC–41 that produced 22.2 MT of HFC–41 in 2022. In addition, there were multiple entities that imported HFC–41, with total import quantities equaling 38.3 MT. Overall, HFC–41 made up only 0.03 percent of total U.S. HFC consumption in 2022 on a mass basis. The use of HFC–41 in the semiconductor manufacturing application is moderately large compared to the annual consumption of HFC–41. In 2022, semiconductor ASA holder purchases of HFC–41 accounted for 21.5 percent of calculated consumption of HFC–41. At the end of 2022, suppliers held 26.7 MT of HFC–41 in domestic inventory, which is equivalent to about 60 percent of calculated consumption of HFC–41 in 2022; as noted for the supply of HFC–23 and HFC–32 and for other applications, not all of this inventory may be considered available.

One factor that plays into the sufficiency of supply of these HFCs is the purity specifications used by individual companies in the semiconductor manufacturing sector. While there is no Federal standard or regulation governing the purity of HFCs used in semiconductor manufacturing, EPA is aware that individual companies in this sector set their own requirements. HFCs purchased for use in semiconductor manufacturing is produced at around 95–97 percent purity and then typically is purified to 99.999–99.9999 percent purity before it is used by semiconductor manufacturers. Supplying refined HFCs to end users can take up to one year, as purifiers require long lead times.

These purity requirements are also relevant when considering if reclaimed HFCs can be used in this application. EPA notes that virgin HFCs produced for semiconductor use are typically only at 95–97 percent purity, so EPA is not aware of why reclaimed HFCs cannot also be purified to industry specifications; EPA invites comments on this. Of the three HFCs utilized by the semiconductor industry, only HFC–23 and HFC–32 were reclaimed in 2022 and thereby could be a source of supply for this application, though the amount of reclaimed material is small. In addition, it is possible to capture the unreacted process gases used in semiconductor manufacturing, but the reclamation of fluorinated gases from the semiconductor manufacturing process is not currently economically viable.

There are other factors that may further impact the supply of HFCs for this application. The Creating Helpful Incentives to Produce Semiconductors Act of 2022 (CHIPS Act) has allocated over 50 billion dollars to semiconductor research, development, manufacturing, and workforce development in the United States, which has led to additional investment by semiconductor manufacturers. The U.S. market share of memory chip production is projected to grow from less than 2 percent to up to 10 percent over the next decade.[26] [27]

3. What is EPA proposing regarding eligibility for application-specific allowances?

EPA is proposing to renew the eligibility of entities using regulated substances for the etching of semiconductor material or wafers and the cleaning of CVD chambers within the semiconductor manufacturing sector to receive ASAs for the five-year period of calendar years 2026 through 2030. EPA is proposing to determine ''that the requirements described in subclauses (I) and (II) of clause (i) are met'' in accordance with the requirements of 42 U.S.C. 7675(e)(4)(B)(v)(II). Specifically, for the reasons outlined earlier in this section, EPA is proposing to determine that no safe or technically achievable substitute will be available for the etching of semiconductor material or wafers and the cleaning of CVD chambers within the semiconductor manufacturing sector for the entire five-year period. EPA is also proposing to determine that supply of the regulated substance that manufacturers and users are capable of securing from chemical manufacturers is insufficient to accommodate this application through calendar year 2030. As explained earlier, EPA is proposing to determine the supply criterion is met if supply of one HFC used by the application is insufficient to accommodate the application. EPA proposes to determine that the supply of HFC–23 and HFC–41 are insufficient to accommodate the application for the reasons outlined in the prior section.

F. Mission-Critical Military End Uses

EPA has been allocating ASAs for regulated substances used for MCMEU in accordance with subsection (e)(4)(B)(iv)(I)(ee) of the AIM Act. In the Allocation Framework Rule, EPA defined ''mission-critical military end uses'' as ''those uses of regulated substances by an agency of the Federal Government responsible for national defense which have a direct impact on mission capability, as determined by the U.S. Department of Defense (DOD), including, but not limited to uses necessary for development, testing, production, training, operation, and maintenance of Armed Forces vessels, aircraft, space systems, ground vehicles, amphibious vehicles, deployable/expeditionary support equipment, munitions, and command and control systems'' (40 CFR 84.3). In the Allocation Framework Rule, EPA finalized an approach that treats the allocation of MCMEU allowances differently than the other applications given the ''complex nature of the way DOD sources and uses HFCs for mission-critical applications,'' (*e.g.,* significantly larger networks of sites and users, including contractors, of HFCs than others covered by ASAs) (86 FR 55116, 55153, October 5, 2021). EPA set up a system whereby DOD must provide the amount of HFCs needed for mission-critical military use and that the two agencies would ''work together to ensure the amount necessary is available for mission-critical military applications'' (86 FR 55116, 55153, October 5, 2021).

[26] See *https://www.whitehouse.gov/briefing-room/statements-releases/2022/01/21/fact-sheet-biden-harris-administration-bringing-semiconductor-manufacturing-back-to-america-2/.*

[27] See *https://www.mckinsey.com/industries/industrials-and-electronics/our-insights/semiconductor-fabs-construction-challenges-in-the-united-states.*

As the definition states, DOD has discretion to identify which uses of HFCs have a direct impact on mission capability. DOD is required to report to EPA ''the broad sectors of use covered by current mission-critical military end uses in the next calendar year,'' per 40 CFR 84.31(h)(3)(iv). Given the complex nature of the way DOD sources and uses HFCs for mission-critical applications, EPA has always maintained that DOD should have discretion to request the amount of allowances necessary to meet its mission-critical end uses and the Agency is not altering that approach through this rulemaking.

Recognizing the sensitive nature of the application, as well as the expert judgement that DOD has in identifying which uses of HFCs have a direct impact on mission capability, EPA consulted with DOD throughout development of this proposed rule, including in advance of interagency review, and received input to support EPA's evaluation of the statutory criteria described in Section IV of this preamble.

After analyzing information relevant to the statutory criteria, as outlined in this section, and based on input from DOD, EPA is proposing to determine that no safe or technically achievable substitute will be available for the MCMEU application and that the supply of the regulated substances that the application is capable of securing from chemical manufacturers is insufficient to accommodate the MCMEU application through calendar year 2030. Therefore, EPA proposes to renew the eligibility of the MCMEU application to receive ASAs for the five-year period of calendar years 2026 through 2030.

1. Availability of Safe and Technically Achievable Substitutes

As discussed earlier in the preamble, in situations where there are not safe and technically achievable substitutes available for the entirety of the application, EPA would consider the statutory criterion regarding substitutes as being met. In public technical reports DOD (included in the rulemaking docket), DOD identified mission-critical end uses that do not have safe and technically achievable substitutes available. For example, DOD uses a mixture of HFC–227ea and sodium bicarbonate dry chemical in automatic fire extinguishing systems that protect the crew compartments of ground vehicles. DOD has tested potential replacements but has not identified a viable alternative to date. There are distinct technical specifications for some mission-critical end uses that are distinct from civil standards for the same category of use (*e.g.,* refrigerants and fire suppression agents). For example, automatic fire suppression systems in ground vehicles must meet unique military requirements for inhalation toxicity that allow personnel to stay within the protected space for at least five minutes after fire suppression.

Furthermore, because Congress defined this application as what is ''mission-critical,'' EPA has always acknowledged that this application is more fluid in terms of what particular HFC uses fall within the application. DOD may change which end uses it determines to be mission-critical over time. This further feeds into EPA's proposed assessment that the Agency cannot determine at this time that there will be safe and technically achievable substitutes available for the entirety of the application.

2. Supply

In 2021, DOD sent a letter to EPA with information regarding mission-critical end uses at the time, including a list of six HFCs used in the application (HFC–125, –134a, –143a, –227ea, –236fa, and –32). EPA has determined through communications with DOD that at least some of these HFCs continue to be utilized in mission-critical end uses. As described in section IV.B of the preamble, EPA is proposing to determine that an application meets this criterion if EPA determines that any of the HFCs currently used to manufacture products or systems for use in the application have insufficient supply.

In the analysis of other applications in this proposal, EPA has evaluated the supply of five out of six HFCs that DOD identified as using in 2021 (*i.e.,* all but HFC–143a). EPA is proposing to determine that supply of some of these HFCs is insufficient to accommodate the application. For example, in the evaluation of supply for the onboard aerospace fire suppression application, EPA is proposing to determine that the supply of HFC–227ea and HFC–236fa is insufficient to accommodate the application. This is in addition to the unique restrictions that apply to the Defense Logistics Agency and DOD purchasing requirements that impact the available supply of HFCs to DOD for MCMEUs. For example, there are Buy America requirements in Federal Acquisition Regulation (FAR) 25.1 and Defense Federal Acquisition Regulation Supplement (DFARS) 225.1 which may restrict how DOD can procure goods, which may include HFCs. Furthermore, as noted in the substitutes discussion for the MCMEU application, EPA has always acknowledged that this application is more fluid in terms of what HFC uses fall within the application. DOD may change which end uses it determines to be mission-critical over time. The fact that DOD may determine that different HFCs and different annual quantities of those HFCs are necessary for mission-critical end uses further feeds into EPA's proposed assessment that the supply of HFCs will be insufficient to accommodate the application.

3. What is EPA proposing regarding eligibility for application-specific allowances?

EPA proposes to renew eligibility for DOD to receive MCMEU ASAs for the five-year period of calendar years 2026 through 2030. EPA is proposing to determine ''that the requirements described in subclauses (I) and (II) of clause (i) are met'' in accordance with the requirements of 42 U.S.C. 7675(e)(4)(B)(v)(II). Specifically, for the reasons outlined earlier in this section, EPA is proposing to determine that no safe or technically achievable substitute will be available for the entirety of the application and that the supply of the regulated substance that manufacturers and users are capable of securing from chemical manufacturers is insufficient to accommodate the application through calendar year 2030.

G. Onboard Aerospace Fire Suppression

EPA has been allocating ASAs for regulated substances used for onboard aerospace fire suppression in accordance with subsection (e)(4)(B)(iv)(I)(ff) of the AIM Act. In the Allocation Framework Rule, EPA defined ''onboard aerospace fire suppression'' as the ''use of a regulated substance in fire suppression equipment used on board commercial and general aviation aircraft, including commercial-derivative aircraft for military use; rotorcraft; and space vehicles. Onboard commercial aviation fire suppression systems are installed throughout mainline and regional passenger and freighter aircraft, including engine nacelles, auxiliary power units (APUs), lavatory trash receptacles, baggage/crew compartments, and handheld extinguishers'' (40 CFR 84.3). At the time of this proposal, EPA is aware of only one area, lavatory trash receptacles, in which HFCs (specifically HFC–227ea and HFC–236fa) are used in commercial aviation. For military uses, HFC–125 has been used in engine nacelles and APUs, and HFC–236fa has been used in a streaming application (*i.e.,* a portable

extinguisher).[28] In addition to HFC uses in commercial and military aviation, EPA is aware that HFCs have limited usage in general aviation, which consists of private and/or business aircraft. The Agency seeks additional information on how HFCs are used for general aviation and how widespread the use is.

After analyzing information relevant to the statutory criteria, as outlined in this section and the TSD, EPA is proposing to determine that no safe or technically achievable substitute will be available for the entirety of onboard aerospace fire suppression and that supply of the regulated substance that manufacturers and users are capable of securing from chemical manufacturers is insufficient to accommodate the onboard aerospace fire suppression application through calendar year 2030. Therefore, EPA proposes to renew the eligibility of entities using regulated substances for onboard aerospace fire suppression to receive ASAs for the five-year period of calendar years 2026 through 2030.

1. Availability of Safe and Technically Achievable Substitutes

Identification of available safe and technically achievable substitutes in this application requires considering a range of factors, including fire suppression effectiveness, toxicity, and space and weight considerations. EPA has not identified available substitutes that it would propose to deem safe and technically achievable for the entirety of the onboard aerospace fire suppression application. As discussed earlier in the preamble, in situations where there are not safe and technically achievable substitutes available for the entirety of the application, EPA would not consider this statutory criterion met.

HFCs are used in onboard aerospace fire suppression in fixed systems for total flooding applications and in portable equipment for streaming uses (*e.g.,* handheld fire extinguishers). Fire suppression agents must satisfy environmental and safety criteria, including but not limited to acceptable ODPs and GWPs, be effective extinguishants, and, for spaces where people would be present, have sufficiently low toxicity such that under normal use the discharge of agent in occupied spaces would not harm people. Other important features that are sometimes relevant for onboard aerospace fire suppression include being electrically non-conductive, and ''clean'' in certain applications such as for high-value electronics, controls, or other critical systems in the protected spaces where it is important to leave no non-volatile residue that could damage the equipment.

As noted at the start of this section, HFCs are used in limited areas within the application. Because there are potentially overlapping ASAs available for a military use of HFCs, EPA has focused its analysis of substitute availability primarily on commercial aviation. EPA is aware of only one application where HFCs are used in commercial aviation: lavatory trash receptacle fire extinguishing systems. Lavatory trash receptacle systems are total flooding systems; total flooding systems are designed to automatically discharge a fire extinguishing agent throughout a confined space. EPA has not identified any safe and technically achievable substitutes for lavatory trash receptacle systems. In coming to this proposed determination, EPA reviewed information from multiple sources including FAA, the EPA SNAP Program, FSTOC, and the International Civil Aviation Organization (ICAO) which is outlined in greater detail in the TSD included in the docket for this proposed action. The FSTOC 2022 Assessment Report noted that it is not aware of any research to develop an HFC substitute in lavatory trash receptacle fire extinguishing systems. Furthermore, FSTOC noted that identifying substitutes for lavatory trash receptacles is a low priority for industry given that it makes up less than one percent of the installed fire suppression base on board aircraft.

In developing its proposed determination, given the global effort to find viable halon alternatives, EPA did not consider halons in its proposed consideration of the availability of safe and technically achievable substitutes. However, both Halon 1301 and Halon 1211 are technically achievable and continue to be used in onboard aerospace fire suppression. Although the onboard aerospace fire suppression industry has relied on halons for fire suppression for decades, the United States phased out the production and import of virgin halons in 1994 due to their high ODP. Recycled halons have been the only supply of halons in the United States for nearly 30 years and still comprise the majority of installed fire suppression capacity on most aircraft. Industry has made extensive efforts to identify alternatives to halons particularly with recent estimates from the TEAP's FSTOC that the dwindling supply of recycled halons could lead to shortages in the next decade.

In assessing whether there was a safe and technically achievable substitute available, EPA also considered what alternatives are listed for use under SNAP for fire suppression that would be relevant for these applications. EPA notes that 2-bromo-3,3,3-trifluoropropene (2–BTP) is listed as an acceptable substitute subject to use conditions for use as a streaming agent in handheld extinguishers and for certain total flooding applications (*e.g.,* engine nacelles and APUs). FAA has approved the use of 2–BTP in handheld extinguishers, and commercial aircraft manufacturers have begun replacing Halon 1211 with 2–BTP extinguishers on newly designed aircraft. As noted above, the SNAP Program listed 2–BTP as acceptable as a total flooding agent in engine nacelles and APUs; however, 2–BTP has not been listed as acceptable in lavatory trash receptacles and the factors for consideration are different from other acceptable SNAP-listed uses. For examples, use in lavatory trash receptacles would be in a space occupied by people, whereas use in engine nacelles and APUs are in unoccupied spaces. Furthermore, FAA has not approved 2–BTP for any total flooding systems to date.

As noted in the introduction to this section, in addition to the use of HFCs for lavatory trash receptacles in commercial aviation, HFC–125 has been used in engine nacelles and APUs on commercial-derivative aircraft for military use. Industry has explored several other fire suppression agents in engine nacelles and APUs, but none have proven to be a viable solution. For example, the industry previously explored FK–5–1–12 for use as a fire suppression agent in engine nacelles, but it failed an FAA-required live fire test. As a result, for the purposes of its evaluation under the AIM Act subsection (e), EPA has not identified safe and technically achievable substitutes that are available for use in engine nacelles or APUs.

In addition to the areas in which HFCs are used in total flooding systems, HFC–236fa is used as a streaming agent in commercial-derivative aircraft for military use. As previously noted in this section, 2–BTP has been listed as acceptable by SNAP, is FAA-approved, and commercial aircraft manufacturers have begun transitioning to 2–BTP extinguishers on newly produced aircraft. While EPA analysis suggests that 2–BTP is available as a safe and technically achievable substitute, as explained elsewhere in this proposal, EPA would only determine the statutory

[28] See *https://www.epw.senate.gov/public/_cache/files/d/1/d152a591-878f-4a4d-b9c1-dc7121c06eca/9D366FF1E61F7EFFD6A71C37C92924A5.04.03.2020-boeing.pdf.*

criterion in subsection (e)(4)(B)(i)(I) is not met if the Agency determines substitutes are available for the entirety of the application.

If a substitute were identified for the entirety of the application, it would still take significant time for transition to the substitute to occur for this application. FAA has testing requirements and minimum performance standards that a new fire suppression agent must meet before it can be used commercially. While there is no prescribed amount of time it takes to meet these requirements, a stakeholder indicated to EPA in a November 2023 public stakeholder meeting that the certification process can take three to five years. Another stakeholder described the FAA process as arduous and noted that it could take many years to receive certification for a new fire suppression agent. There is no information before the Agency at the time of this proposal to suggest that there would be a safe and technically achievable substitute available prior to the next five-year review.

2. Supply

As previously discussed, HFC–227ea, HFC–236fa, and HFC–125 are all currently used in onboard aerospace fire suppression. As described in Section IV.B of the preamble, EPA is proposing to determine that the requirements of 42 U.S.C. 7675(e)(4)(B)(i)(II) are met for this application if EPA determines that any of the HFCs currently used in a commercial product or to manufacture products for use in the application have insufficient supply.

HFC–227ea is the only regulated substance for which onboard aerospace fire suppression allowances have been expended to date. As previously stated, HFC–227ea is used in commercial aviation whereas HFC–236fa and HFC–125 are used in commercial-derivative aircraft for military use. As intended in the Allocation Framework Rule, there is overlap between the onboard aerospace fire suppression application and the MCMEU application. EPA is not reopening this approach through this rulemaking, so as long as DOD continues to classify the operation of Armed Forces aircraft as mission-critical, then DOD may use MCMEU allowances for fire suppression equipment installed on commercial-derivative aircraft. Therefore, in addition to HFC–227ea being the only regulated substance for which onboard aerospace fire suppression allowances have been expended, the uses of HFC–227ea are the only uses for which the onboard aerospace fire suppression application is the sole pathway to receive allowances. In 2022, the sole domestic producer of HFC–227ea produced 1,324.7 MT of HFC–227ea, comprising one percent of U.S. HFC production on a mass basis. In addition, there were nine entities that imported HFC–227ea with the total amount of imports equaling 454.2 MT. Overall, HFC–227ea made up only 0.2 percent of all U.S. HFC consumption in 2022 on a mass basis. At the end of 2022, suppliers held 1,008.3 MT of HFC–227ea in domestic inventory, which is equivalent to about 323 percent of calculated consumption of HFC–227ea in 2022; as noted in the supply discussions for the other applications above (Sections B–E), not all of this HFC–227ea may be considered available supply, as the entities holding this material are broader than EPA's interpretation of chemical manufacturers. As stated elsewhere in this proposed rule, EPA recognizes that there is inherent uncertainty regarding HFC production, and in particular for HFCs with a more limited number of production facilities and/or higher GWPs than other regulated HFCs, this uncertainty may be greater; HFC–227ea has one of the highest GWPs of the regulated HFCs. Additionally, EPA understands there will be changes to market conditions resulting from the domestic and global phasedown of HFC production and consumption that could affect future supply of HFC–227ea. Given the relative size of the market for HFC–227ea and the limited number of producers in the United States and abroad, the supply chain for HFC–227ea is potentially more fragile than other supply chains (*e.g.,* HFC–134a). This makes it more likely that the supply of HFC–227ea available from chemical manufacturers will be insufficient during 2026–2030 for this application.

The use of HFC–227ea in onboard aerospace fire suppression is small compared to the annual consumption of HFC–227ea. Allocated ASAs for this application in 2024 are equivalent to 0.8 percent of calculated consumption of HFC–227ea in 2022. While this small usage could make it easier for suppliers to divert a fraction of their available supply to this application, the supply chain for HFC–227ea remains fragile for reasons mentioned earlier in this section, including low production and a limited number of suppliers.

Another factor EPA is considering is the impact that other regulatory actions may have for the available supply of HFC–227ea. Specifically, the proposed Emissions Reduction and Reclamation Rule proposes requirements for the use of recycled HFCs for the initial charge (*i.e.,* installation) and/or servicing in fire suppression systems generally, but not onboard aerospace fire suppression systems as long as the application continues to be eligible for ASAs. If this requirement is finalized as proposed, this could decrease the demand for virgin HFC–227ea.

EPA also analyzed the supply of the other HFCs currently used in this application to determine whether supply of those HFCs was also insufficient to accommodate the application. HFC–236fa is used in portable extinguishers in commercial-derivative aircraft. There is currently one producer in the United States of HFC–236fa, however, there was no domestic production reported in 2022. Globally, HFC–236fa is produced in even smaller quantities than HFC–227ea. In 2022, there were seven entities that imported HFC–236fa with the total amount of imports equaling 301.4 MT. Overall, HFC–236fa made up less than 0.2 percent of all U.S. HFC consumption in 2022 on a mass basis. At the end of 2022, suppliers held 127.5 MT of HFC–236fa in domestic inventory, which is equivalent to about 47 percent of calculated consumption of HFC–236fa in 2022; as noted for HFC–227ea and other HFCs discussed in this preamble, not all of this inventory may be considered available supply (see Section IV.B for more information). While onboard aerospace fire suppression allowance holders have not used allowances for HFC–236fa to date, allocated ASAs for this application in 2024 are equivalent to 0.3 percent of calculated consumption of HFC–236fa in 2022. However, similar to the analysis for HFC–227ea, given the relative size of the market for HFC–236fa and the limited number of producers in the United States and abroad, the supply chain for HFC–236fa is potentially more fragile than other supply chains (*e.g.,* HFC–134a). This makes it more likely that the supply of HFC–236fa available from chemical manufacturers will be insufficient during 2026–2030 for this application. Also, if finalized as proposed, the Emissions Reduction and Reclamation Rule (88 FR 72216, October 19, 2023) could result in similar changes for HFC–236fa as previously discussed with HFC–227ea.

HFC–125 is used in engine nacelles and APUs in military use. HFC–125 is one of the most widely produced HFCs in the world with multiple producers in the United States and globally. In 2022, U.S. production of HFC–125 totaled 19,175.7 MT, comprising 14 percent of U.S. HFC production on a mass basis. In addition, there were 19 entities that imported HFC–125 with the total amount of imports equaling 23,849 MT.

Overall, HFC–125 made up approximately 25 percent of total U.S. HFC consumption in 2022 on a mass basis. At the end of 2022, suppliers held 56,208.2 MT of HFC–125 in domestic inventory, which is equivalent to about 141 percent of calculated consumption of HFC–125 in 2022; for reasons explained elsewhere in this preamble, not all of this inventory may be considered available supply. Allocated ASAs for this application in 2024 are equivalent to 0.0059 percent of calculated consumption of HFC–125 in 2022. The 2023 Technology Transitions Rule (88 FR 73098, October 24, 2023) is restricting the use of HFCs and HFC blends above certain GWP limits in a number of sectors and subsectors as early as 2025. In all likelihood, demand for certain blends containing HFC–125 will decrease. However, given HFC–125 could be used in lower-GWP blends, including blends with GWPs that are less than the relevant GWP limits, there is uncertainty regarding how HFC–125 demand will be impacted. A reduction in demand for HFC–125 in the refrigeration and air conditioning sectors could result in an increase in available supply for use in fire suppression equipment.

3. What is EPA proposing regarding eligibility for application-specific allowances?

EPA is proposing to renew the eligibility of entities using regulated substances for onboard aerospace fire suppression to receive ASAs for the five-year period of calendar years 2026 through 2030. EPA is proposing to determine ''that the requirements described in subclauses (I) and (II) of clause (i) are met'' in accordance with the requirements of 42 U.S.C. 7675(e)(4)(B)(v)(II). Specifically, for the reasons outlined earlier in this section, EPA is proposing to determine that no safe or technically achievable substitute will be available for onboard aerospace fire suppression and that the supply of the regulated substance that manufacturers and users are capable of securing from chemical manufacturers is insufficient to accommodate onboard aerospace fire suppression through calendar year 2030. As explained earlier, EPA is proposing to determine the supply criterion is met if supply of one HFC used by the application is insufficient to accommodate the application. EPA proposes to determine that the supply of HFC–227ea and the supply of HFC–236fa are insufficient to accommodate the application for the reasons outlined in the prior section.

VI. What are the proposed requirements associated with a petition to be listed as an application that will receive application-specific allowances?

The Agency is proposing a procedural framework for a petition filed pursuant to 42 U.S.C. 7675(e)(4)(B)(ii) requesting the designation of an application as eligible for ASAs. Subsection (e)(4)(B)(ii) outlines requirements that apply if the Administrator receives a petition requesting consideration of eligibility for ASAs. In the event a complete petition is received, the Agency would make a determination on whether to designate the application as eligible for ASAs after considering the criteria listed in 42 U.S.C. 7675(e)(4)(B)(i). The AIM Act specifies a timeline by which the Agency must consider these petitions. Within 180 days, the Agency must make the complete petition available to the public and propose and seek comment on whether to designate the application as eligible for ASAs and if so, the requisite number of allowances. Within 270 days of receiving the petition, the Agency must take final action on the petition.

In order to have sufficient information to evaluate a petition based on the criteria in subsection (e)(4)(B)(i), EPA is proposing to require that certain information must be included in order for a petition to be considered complete. The Agency envisions that petitions could be submitted by a single entity, such as a company or trade association, or a group of entities. The information listed as required is not meant to be a comprehensive list of what a petition may include, but rather a minimum threshold after which the Agency would consider a petition complete. EPA would only consider the statutory timeline triggered upon the filing of a complete petition. If the Agency were to receive a petition that did not include all required elements listed in this section, EPA proposes that it would consider that petition incomplete. In the event that an entity filed an incomplete petition, EPA would notify that entity that their petition was incomplete, but not process the petition any further. After a petition is submitted, if the petitioner supplements the petition, EPA would consider the petition to be re-submitted, and the statutory timelines for action would restart. New information may fundamentally alter the merits of a petition and therefore EPA would have to restart its review in order to account for new information holistically. Comments on EPA's proposed determination would not restart the statutory timelines unless the petitioner formally requested to supplement or revise their petition.

EPA proposes that a complete petition must include, at a minimum:

- A description of the application, including an explanation of what the application is, what purpose or function it achieves, and what populations or commercial products benefit from the application;
- A list of regulated substances and description of their use in the application and an explanation as to why HFCs are required in the application;
- Evidence that no safe or technically achievable substitute, including not-in-kind technologies, is or is expected to be available, and that the petitioner has conducted research to evaluate substitutes for the HFC(s). Examples of evidence that may be accepted include, but are not limited to, third-party analyses and technical reports by recognized experts in the field, test results evaluating potential substitutes on safety and technical achievability, decisions by EPA to list alternatives under the SNAP Program, or Federal regulatory standards that inhibit the ability of the application to transition to a substitute;
- Evidence that supply of the regulated substance(s) used in the application is insufficient to accommodate the application. Examples of evidence that may be accepted include, but are not limited to, signed and notarized communication from responsible corporate officers at multiple representative suppliers and potential suppliers for the sector or related sectors that the application falls in stating that the currently used HFCs cannot be sourced; signed and notarized communication from responsible corporate officers at 10 or more allowance holders, including at least three of the 10 largest consumption allowances holders, stating that the currently used HFCs cannot be sourced;
- A signed certification from a responsible corporate officer at the requesting entity that the application cannot use recovered and reprocessed HFCs in conjunction with or in place of virgin HFCs, either due to demonstrated lack of technical achievability or insufficient supply, and an explanation and evidence documenting why recovered and reprocessed HFCs cannot be used for the application;
- Total quantity (in kg) of all regulated substances acquired for the application specified in the petition in each of the previous three years, including a copy of the sales records, invoices, or other records documenting that quantity; if multiple entities are

submitting a joint petition, they must each provide EPA with unaggregated entity-specific information, which may be transmitted jointly or individually;

- The name of the entity or entities supplying regulated substances for and contact information for those suppliers over the past three years; if multiple entities are submitting the petition, they must each provide this information individually to EPA;
- Total quantities (in kg) of regulated substances held in inventory as of the date the petition is submitted; if multiple entities are submitting the petition, they must each provide this information individually to EPA;
- An estimate of the total quantity of HFCs the petitioner expects to purchase in the first year it would be eligible for ASAs;
- Data on the proportion of the overall cost of the product or system that reflects the cost of regulated substances; if multiple entities are submitting the petition, they must each provide this information individually to EPA;
- Historic and projected sales of the product or system; if multiple entities are submitting the petition, they must each provide this information individually to EPA;
- Evidence of research into design changes to decrease the amount of HFCs used in the product or system;
- An explanation regarding whether the use of the regulated substance is necessary for the health, safety, or is critical for the functioning of society (encompassing cultural, intellectual, and economic aspects);
- An explanation regarding steps taken to minimize the use of the regulated substance and any associated emission of the HFC(s); and
- Information on regulatory restrictions related to possible alternatives and substitutes.

Requiring minimum information be included in order for the Agency to deem a petition complete and process that petition would help provide clarity for the Agency and ensure timeliness and transparency for the petitioner. If EPA does not take this approach, it could prevent EPA from having sufficient data to determine whether the application warrants receiving ASAs and would unnecessarily delay a response from the Agency. This would mean that a petitioner would have to wait longer to re-submit a petition if a necessary element were omitted from the original submission. EPA seeks comment on the proposed petition process, including all of these proposed elements and the associated burden with providing such information to the Agency.

In addition to proposing to establish required elements of a complete petition, EPA is providing a non-exhaustive list of other elements that are optional, but the Agency may find compelling or helpful in making a determination on a petition:

- Market research on the application, which could include: an estimate of the number of domestic entities within the application; an estimate of the amount of bulk HFCs used domestically within the application; an estimate of the projected annual growth rate for the duration of the period for which the application is seeking eligibility to receive ASAs, with supporting evidence by third-party sources;
- Economic research on the elasticity of demand for products or systems within the application, with supporting evidence by third-party sources;
- Research on whether products or systems in the application outside of the United States have had success in transitioning to substitutes or otherwise reducing use of HFCs;
- Other information that may be relevant as the Agency evaluates the petition, based on the factors listed in subsection (e)(4)(B)(i).

EPA notes that for an entity to be eligible to receive ASAs in a given calendar year, a complete petition should be submitted no later than January 31 two calendar years prior to provide the Agency sufficient time to review a petition and be able to issue allowances in advance of the statutory deadline of October 1 each year. For example, if an entity would like to receive allowances in calendar year 2027, the entity should submit a complete petition no later than January 31, 2025. EPA is setting this clear expectation so entities can factor this into their planning when deciding to petition EPA to be added to the list of eligible applications. This proposed timeline would allow the Agency the requisite time to review and take final action on the petition, consistent with the statutory timeline in subsection (e)(4)(B)(ii), and also issue a final rule to effectuate that decision in 40 CFR 84.13.

EPA proposes to allocate allowances to entities in a new application through the same manner as other entities receiving ASAs, per 40 CFR 84.13 and 40 CFR 84.31(h). EPA contends that allocating allowances based on the established regulatory approach would be the fairest and most transparent method of determining allowance allocations for entities in a new application. While EPA is proposing that a petition be required to include some of the information that would be necessary to determine an allowance allocation, it is possible that not all entities within an application would be involved in the submission of the petition. In other words, having entities within a new application request ASAs by July 31 like all other applications (per 40 CFR 84.13(b)) would ensure that all entities in a new application have equal opportunity to request allowances. This may mean that in cases where there is a final rule pending to add an application to the list of entities eligible for ASAs at 40 CFR 84.13, any entity wishing to be eligible for ASAs in the next calendar year would need to provide the information required at 40 CFR 84.13(h)(2) by July 31.

EPA proposes that if a petition is granted and a new application is listed as eligible to receive ASAs, that eligibility would apply until the end of the five-year review cycle during which its petition was granted. Per subsection (e)(4)(B)(v), EPA must review each ASA use receiving an allocation of allowances not less frequently than once every five years. EPA proposes that, at the end of each five-year review cycle, it will review any applications listed in 40 CFR 84.13(a) at the time of review, regardless of how they were initially included on the list. For example, the five-year review period covered in this proposed rule includes calendar years 2026 through 2030. If a petition were granted to receive ASAs starting for calendar year 2028, that application would be eligible for calendar year 2028, 2029, and 2030 allowances, and then EPA would review the eligibility for that application to continue receiving ASAs starting with calendar year 2031 allowances.

Consistent with the reporting requirements under 40 CFR 84.31(a), EPA is proposing that all reports, petitions, and any related supporting documents must be submitted electronically in a format specified by EPA;[29] and quantities of regulated substances must be stated in terms of kilograms unless otherwise specified. EPA is proposing that these records and copies of reports required by this section must be retained for three years.

VII. Proposed Revisions to Existing Regulations

EPA finalized an approach under the Allocation Framework Rule for issuing ASAs for the initial years after enactment of the AIM Act. EPA set up a framework to determine ASA

[29] Currently, most HFC reports under the AIM Act are submitted through the HAWK module in the electronic Greenhouse Gas Reporting Tool (eGGRT).

allocations for calendar years 2022 through 2025 for five of the six applications identified in the AIM Act: propellants in MDIs; defense sprays; SCPPU foam for marine use and trailer use; etching of semiconductor material or wafers and the cleaning of CVD chambers within the semiconductor manufacturing sector; and onboard aerospace fire suppression. As explained in more detail in the Allocation Framework Rule, EPA allocates ASAs differently for MCMEU, given the complex nature of the way DOD sources and uses HFCs in the mission-critical context (86 FR 55116, 55153, October 5, 2021).

The 2024 HFC Allocation Rule did not reopen the methodology for issuing ASAs but noted that the Agency had begun development of this proposed rule to review and consider whether to renew eligibility for each of the six applications for ASAs and would herein consider revisions to existing regulatory requirements (88 FR 46836, 46840, July 20, 2023). As EPA foreshadowed in the 2024 HFC Allocation Rule, the Agency is proposing targeted regulatory changes after considering whether any changes should be made to the existing regulatory requirements governing ASAs based on implementation over the past several years. EPA is also proposing one specific regulatory change to clarify how EPA's regulations would apply to any illegally imported HFCs that are seized and auctioned by enforcement officials, proposing to require exporting companies to report ITNs quarterly, and proposing to simplify the ''date of purchase'' requirement for a RACA.

Under the current regulations established in the Allocation Framework Rule, EPA issues ASAs based on multiplying the company's HFC use in the prior year by the higher of:

- The AAGR of use for the company over the past three years; or
- The AAGR of use by all entities requesting that type of ASA (*e.g.,* for MDIs) over the past three years.

For the calculation of AAGR, EPA calculates the growth rate between the first and second year plus the growth rate between the second and third year, divided by two. The formula is as follows:

$$\frac{\left(\left(\frac{\text{Application or Entity HFC Purchases in Year 2}}{\text{Application or Entity HFC Purchases in Year 1}}-1\right)+\left(\frac{\text{Application or Entity HFC Purchases in Year 3}}{\text{Application or Entity HFC Purchases in Year 2}}-1\right)\right)}{2}$$

EPA relies on activity from July 1 to June 30 for each of the three preceding years prior to the annual allocation because of the biannual reporting deadlines and to include the most recent year of data prior to the October 1 allocation deadline in the allowance allocation determinations. EPA established the information an entity requesting ASAs must provide in 40 CFR 84.31(h)(2). EPA is proposing to codify the existing practice such that entities reporting on or applying for ASAs provide supporting documentation to verify reported data on total quantities of HFCs acquired through conferring allowances, expending allowances for direct import, purchases without expending allowances, and quantity held in inventory.

EPA also established that the Agency would consider unique circumstances that are not reflected by the rates of growth calculated in the methodology outlined above that are also factually documented when determining allowance allocations. EPA finalized the following circumstances as potentially meriting an increased allocation to an individual company beyond historical growth rates: (1) additional capacity will come on line in the next year, such as a new manufacturing plant or expanded manufacturing line, (2) a domestic manufacturer or some of its manufacturing facilities has been acquired, and (3) a global pandemic or other public health emergency increases demand for use of HFCs in an application, such as an increase in patients diagnosed with medical conditions treated by MDIs. These scenarios could provide reasons to increase allowance allocations to affected companies in the affected years. Furthermore, if a company wanted to make a claim that it qualifies for individualized treatment due to one of these unique circumstances, the company must sufficiently document in a verifiable way why it qualifies. Specific documentation includes, but is not limited to, recent invoices for new tools; permit documentation for new facilities, facility expansion, or installation of equipment related to retooling; agency or company press releases for the launch of new products; or Securities and Exchange Commission filings documenting facility acquisitions or expansions. Ultimately, accommodating unique circumstances that are fully documented and proven help the Agency fulfill Congress's mandate that EPA ''allocate the full quantity of allowances necessary'' (86 FR 55116, 55151, October 5, 2021). As a result of the multiple allocations between 2021 and 2023 and the lessons learned through this process, EPA is now proposing limited changes to these existing regulations.

Specifically, EPA is proposing: to require companies provide the total expected amount of HFCs they intend to purchase in the calendar year, to expand permissible scenarios that could qualify as unique circumstances, a different allocation methodology for certain very small users of HFCs and entities with irregular purchasing history, how to account for inventory in allocation decisions, new requirements for conferrals of MCMEU allowances, to establish a pool of set-aside allowances for situations that meet the criteria for unique circumstances related to medical conditions treated by MDIs, and to allow ASA holders to return a portion of their allowances voluntarily if they do not intend to use them. EPA is proposing other specific regulatory changes to: clarify how EPA's regulations would apply to any illegally imported HFCs that are seized and auctioned by enforcement officials, require exporting companies to report ITNs quarterly, and simplify the ''date of purchase'' requirement for a RACA.

A. Expected Total HFC Purchases

Under EPA's current program, entities may voluntarily state the total amount of HFCs they expect to purchase for the next year. EPA has encouraged entities to provide this data on a voluntary basis to provide an additional data element for the Agency to consider in making allocation decisions.

EPA proposes to amend the regulations to require all entities to provide their total expected HFC purchases for the next calendar year as a component of overall applications due July 31 for ASAs for the following calendar year. Under this proposed requirement, entities would be required to provide an estimate of the total quantity of HFCs they expect to purchase next year based on their expected eligibility for allowances. EPA will allocate at that level if it is lower

than what that entity is eligible for based on the regulatory formula.

EPA is proposing this approach to better understand each entity's HFC needs in the next year. The regulatory allocation methodology established in the Allocation Framework Rule, and outlined at the start of this section, is designed to determine an allocation based on ''projected, current, and historical trends.'' However, this formula may not fully take into account other considerations that could impact an entity's HFC needs in the next year. This proposed approach may also avoid overallocation at the expense of general pool allowance holders.

B. Unique Circumstances

Under EPA's current regulations, entities may request that EPA consider unique circumstances that are not reflected by the rates of growth calculated. Entities ''must provide additional information if requesting that EPA consider unique circumstances'' under 40 CFR 84.13(b)(1). EPA is proposing to codify into the regulations the Agency's existing practice of requiring entities to provide supporting documentation to verify any claimed need. EPA previously codified three situations that would be considered as unique circumstances (40 CFR 84.13(b)(1)). After multiple allocations and many conversations with stakeholders, EPA is proposing to add to the list of unique circumstances under which EPA may allocate additional allowances beyond what is calculated from the regulatory allocation formula. EPA is also proposing to broaden the third unique circumstance related to MDIs.

First, EPA is proposing to create a unique circumstance for economic disruption outside the immediate control of the entity applying for ASAs, such as an economy-wide recession or other documented short- to medium-term market events that negatively impact a company's operations, such as a strike that affects product demand or supply chain disruption. EPA proposes to consider this situation as a unique circumstance as such an event could lead to an increased need to purchase HFCs beyond what is reflected in the regulatory formula, but likely would not be captured under an existing scenario that EPA would consider as an acceptable unique circumstance. If finalized, entities would still have to submit documentation that verifies that this situation has taken place, the current status of the market event (*e.g.,* whether it has concluded and demand for the HFCs has returned), and that this situation has materially impacted an entity's HFC needs. The entity would also have to provide supporting documentation to justify the projected amount of HFCs needed, including explaining how projections compare to pre-market event use.

EPA is also proposing to add building a stockpile of a specific HFC as a scenario which EPA would consider a unique circumstance in the event a major producer for an application announces they will be ceasing production of the HFC used by the application-specific entity in the near future. An entity could request additional allowances for the purpose of building inventory ahead of the cease in production. For an entity to be eligible for additional allowances under this unique circumstance, EPA proposes that the entity must provide EPA with a letter from their supplier signed by a responsible corporate officer [30] stating that the supplier is ceasing all production of the HFC at issue within three years. Further, EPA proposes that an eligible entity must certify that they have regulatory requirements beyond the 40 CFR part 84 requirements that limit its ability to switch suppliers or there are no other suppliers that could meet their needs (*e.g.,* because there no other chemical manufacturers that can supply the needed HFC). EPA proposes to also require evidence that the entity has a restricted HFC supply chain, such as required purity requirements. If additional allowances were granted because of this requested unique circumstance, EPA proposes to require reporting specific to the building of inventory by the entity that would be allocated ASAs in advance of their supplier's production facility ceasing production. Such inventory buildup must be held by the entity that is allocated allowances, and EPA would subtract those quantities from the entity's purchase history such that it is not included in the regulatory formula to determine the entity's allocation the following year.

EPA is also proposing to expand the scope of the unique circumstance for a global pandemic or other public health emergency that increases patients diagnosed with medical conditions treated by MDIs to include ''healthcare system needs.'' EPA notes that the reference in the regulations to an ''other public health emergency'' is not limited to situations where the Department of Health and Human Services (HHS) has officially declared a public health emergency. The proposed expansion of the unique circumstance is a direct outgrowth of experience over the past three years of implementing the phasedown and is designed to ensure a sufficient volume of HFCs is available to manufacture MDIs to treat asthma, chronic obstructive pulmonary disease, and other respiratory diseases when unexpected market events occur.

EPA proposes to define a healthcare system need as circumstances where an increase in demand for MDIs used to treat asthma, chronic obstructive pulmonary disease, and other respiratory diseases may occur because of a change in market conditions that otherwise would not be included in calculated rates of growth. If finalized, EPA intends to consult closely with the FDA and potentially HHS more broadly before allocating allowances for ''healthcare system needs.''

Examples of the types of events that could fall into a healthcare system need include, but are not limited to:

- A manufacturer that makes MDIs outside of the United States stops selling approved MDI products in the United States;
- Major recall or suspension of production of alternative (non-MDI) emergency asthma treatments prompting increase in MDI demand;
- Change in preferred products from pharmacy benefit managers or State Medicare programs to patients;
- FDA compliance or enforcement actions that impact MDI market dynamics by reducing availability of generic drug products that;
- Significant increase in respiratory infections in general population (*e.g.,* respiratory syncytial virus (RSV), coronavirus disease (COVID)); and
- Decrease in availability of active pharmaceutical ingredient or device component for one or more MDI manufacturers causing a supply shortage.

C. Methodology for Entities With Irregular Purchasing History and Very Small Users

EPA has observed that there are certain entities with purchase patterns for which the regulatory formula either is not able to calculate an allocation or applying the terms of the regulatory formula would produce absurd results. For these entities, EPA is proposing an alternative approach for calculating the quantity of allowances each entity is eligible to receive. Specifically, EPA is proposing to create an alternative

[30] EPA is also proposing to define this term, which is used elsewhere under the HFC Allocation Program. For purposes of 40 CFR part 84, subpart A, EPA is proposing that *responsible corporate officer* and *responsible official* mean a person who is authorized by the regulated entity to make representations on behalf of, or obligate the company as ultimately responsible for, any activity regulated under 40 CFR part 84, subpart A.

method of allocating to entities that are either of the following: (1) Entity has small purchases of HFCs (<100 kg) at least one of the last three years where their purchase history would result in 200 percent or higher AAGR of use for the company over the past three years, or (2) entity's growth rate cannot be calculated because it had zero purchases in one of the last three years for reasons other than newly using HFCs. For entities that fall into either category, the Agency is proposing to allocate the highest, as measured in exchange value equivalent (EVe), verified purchase amount in the last three years.

With respect to the first category, EPA is proposing these cutoff numbers to allow for some narrow flexibility in an entity's purchasing patterns and to recognize the variability for entities that purchase relatively small quantities of HFCs. EPA is proposing to move away from applying the existing regulatory formula for entities where a relatively small fluctuation in purchasing measured on a mass basis would result in an extraordinarily large and nonsensical growth rate. EPA reviewed data from the past three October 1 allocation cycles and found that the top three highest entity-specific AAGRs from each of the allocation cycles ranged from about 125 percent or higher, with the lowest ''small use'' of HFCs in a particular year of less than 5 kg. Thus, the Agency is proposing 200 percent as the AAGR cutoff and less than 100 kg as the ''small use'' cutoff.

For the second category, it is mathematically impossible to calculate a growth rate based on zero purchases in a year under EPA's existing regulatory formula. Entities that had zero purchases in one of the three years under consideration would also have to be determined to be an active purchaser prior to a year with zero purchases. It is not EPA's intent to capture entities that are new in an application under this alternative pathway.

EPA is separately proposing a different allocation approach for all very small purchasers of HFCs. EPA is proposing to define entities in this category as anyone whose HFC purchases add up to less than 100 kg in each of the previous three years. The Agency recognizes there are certain entities that purchase the same small quantities of regulated substances every year who may not follow a growth-oriented use similar to that of entities that use HFCs in wide-scale, commercial operations. Examples of these uses could include those meant for small batch use in one of the eligible applications for research and development and/or entities that may not yet be manufacturing commercially if, for example in the case of MDIs, the entity is still in the product development phase, is only manufacturing small numbers of MDIs (*e.g.,* for clinical trials), and is waiting for final FDA approval. For these entities, EPA proposes to allocate the highest, determined on an EVe basis, of an entity's past three years' worth of purchases, since their use stays relatively consistent over time. EPA is taking comment on whether the Agency should look back further at up to five years' worth of purchase history. EPA based this number on the past three October 1 allocation cycles, and reviewed purchasing patterns for the smallest purchasers who are not new to the HFC market and would not be considered entities with irregular purchase histories. EPA is taking comment on the cutoff threshold on what size purchases would allow for an entity to be considered a ''small user.'' EPA is also soliciting comment on whether, combined with this approach or as an alternative to this approach, EPA should round allowance allocations for very small purchasers to account for purchase of a specific cylinder volume. In order to take this approach, EPA requests comment on the typical cylinder volume sizes used in these small purchases. EPA would also require eligible applicants to provide information on the cylinders being purchased in their biannual reporting.

D. Average Annual Growth Rate Calculations

EPA currently calculates AAGR on an MTEVe basis. This process involves converting the mass (*e.g.,* kilogram) of each HFC into MTEVe and summing those MTEVe quantities across each year, before applying the AAGR formula described earlier in this section. The Agency is providing courtesy notice of a change going forward to calculate AAGR on a mass basis. This new process would be based on summing all HFCs together for each year to get a total quantity based on mass and using this mass quantity in the AAGR formula. AAGR calculations are not codified in the regulations, so this is not a regulatory revision, but EPA is providing this notice given broader methodology changes proposed in this rulemaking.

EPA is modifying this calculation because we are concerned that as entities transition to lower-GWP HFCs, an AAGR calculated on an MTEVe basis will not appropriately reflect their projected demand for HFCs in the upcoming calendar year. For example, under an MTEVe-based AAGR calculation, an entity transitioning to a lower-GWP HFC, which has an associated lower EV, could have a negative AAGR while simultaneously experiencing a growth in actual HFC usage. In this situation, the entity would be allocated an amount of allowances lower than its current year's HFC use. While entities will require fewer allowances to purchase these lower-GWP HFCs, until a company has a full three years of purchase data with this lower-GWP HFC, the calculated allowances may be substantially less than projected demand, either increasing by too small an amount or in some cases declining despite an actual increase in demand. It would be a perverse outcome for entities to receive an insufficient HFC allocation because they are transitioning to a lower-GWP alternative.

In addition, growth calculated on a mass basis is more reflective of demand than MTEVe and is not impacted by any potential swings resulting from purchasing differing levels of HFCs with different EV values each year. For example, a company purchasing 20 kg of HFC–41 in one year and 40 kg of HFC–23, which has an EV approximately 160 times that of HFC–41, the following year would have the same growth rate as a company purchasing 20 kg of HFC–41 in one year and 40 kg of HFC–41 the next year (*i.e.,* the growth rate for that year is 100 percent for both companies versus 32,000 percent for the first company and 100 percent for the second company).

E. Inventory

EPA's current regulations require entities receiving ASAs to provide, as part of their biannual reporting requirements, information on the quantities of HFCs left in their inventory at the end of the previous six-month reporting period (40 CFR 84.31(h)(1)(iv)). Upon finalization of this rulemaking and heading into the allocation of calendar year 2026 allowances, EPA will have several years of data on inventory, including how inventory levels have changed over time. In the Allocation Framework Rule, EPA noted its intent to account for changes in inventory in the allocation of ASAs (86 FR 55116, 55152, October 5, 2021).

EPA is proposing to include verified changes in inventory into the calculation of the quantity of HFCs an entity used over the 12-month period for all allocations except MCMEU. Changes in inventory are documented information as to how an entity used HFCs in a particular year. For example, if an entity purchased 100 kg of HFCs,

and their inventory grew by 50 kg, this would suggest that the entity used 50 kg in the manufacturing process under the applicable application. In this instance, consideration of purchases minus inventory buildup is a more accurate reflection of HFC use by the entity than HFC purchases would be alone. EPA proposes to factor in both drawdown and growth in inventory; a drawdown of inventory would be added to HFC purchases and a buildup of inventory would be subtracted from HFC purchases.

EPA is proposing that this approach would not apply to calculation of MCMEU allowance allocations because DOD has a history of building up inventory and may need to do so for mission-critical or national security purposes. The Agency acknowledges that building inventories can be an important strategy for other entities to navigate changing market conditions, especially in advance of the 2029 reduction step. Therefore, as part of this proposal, EPA is also including that entities may provide a rationale as to why a buildup in inventory should not be subtracted from the quantities of HFCs they annually acquire. An example of what the Agency would consider to be acceptable rationale would be if a producer announced that they would be ceasing production of an HFC that is used in a particular application, and the entity wanted to build up inventory of that HFC to continue manufacturing of their product while they figured out their transition timeline. Another example could include a situation where an entity had to purchase a minimum volume (*e.g.,* a full ISO tank) and that last purchase resulted in an increase in inventory.

In the alternative, EPA is proposing to not incorporate small amounts of growth in inventory in allocation decisions. EPA would propose to define a small amount of growth as below 20 percent or, alternatively, growth in inventory for only a single year. EPA invites comment on this alternative pathway and also what the Agency should consider to be a small amount of inventory growth.

F. Department of Defense Conferrals

In the Allocation Framework Rule, EPA finalized that anyone conferring an ASA, except for the conferral of allowances for MCMEU, would be required to submit information about each conferral prior to conferring allowances (40 CFR 84.31(h)(4)). While DOD was not required to submit conferral information to EPA, DOD was required to maintain records documenting the conferral(s) of ASAs to other entities up to and including the producer or importer of the chemical (40 CFR 84.31(h)(7)(iv)).

In order to ensure that certain imports are not delayed or denied, EPA is proposing to modify the 40 CFR part 84, subpart A regulations to require that DOD report information consistent with the required reporting of conferral data from all other ASA holders. This would include the identity of each conferrer and conferee and the quantity in MTEVe of ASAs being conferred. This proposed regulatory change would not be a significant burden for DOD because DOD is already required to track this data internally (40 CFR 84.31(h)(7)).

If finalized, this regulatory revision would bring the process for conferring MCMEU allowances in line with other entities receiving ASAs. The Allocation Framework Rule noted that one of the goals of this requirement was ''to ensure EPA has the requisite information to track application-specific allowances'' (86 FR 55116, 55189, October 5, 2021). When an HFC supplier reports to EPA that they have expended ASAs other than MCMEU allowances, conferral reports have allowed EPA to confirm whether that supplier was in possession of ASAs. With MCMEU allowances, given that DOD is not required to share information about the conferral of MCMEU allowances with EPA, the Agency has encountered difficulty verifying whether suppliers are in possession of MCMEU allowances. EPA is particularly concerned that without conferral information for MCMEU allowances, the Agency would recommend that U.S. Customs and Border Protection (CBP) deny entry of an import of HFCs bound for MCMEU. This could cause unnecessary delays for DOD and extra costs for importers. Different reporting requirements for MCMEU allowances has resulted in unexpected confusion and delays in the approval of some producer and/or importer quarterly reports, increasing administrative burden for DOD, entities who are producing and importing on behalf of DOD, and EPA. If finalized, this regulatory change would help address these issues.

In addition to bringing the process for conferring MCMEU allowances in line with other entities receiving ASAs, EPA is proposing one additional requirement for the conferral of MCMEU allowances, per a request from DOD. To enable clearer tracking of MCMEU allowances from initial conferral to expenditure, EPA is proposing to require that a certificate number, generated by DOD, be reported to EPA for each conferral and expenditure of MCMEU allowances. For example, if an intermediary receives a conferral of MCMEU allowances from DOD and then confers the allowances further to a supplier, both DOD and the intermediary must report the same certificate number as part of the conferral. Finally, when the supplier expends the conferred MCMEU allowances for production or import of HFCs, the supplier must report the certificate number in the same report in which the expenditure of MCMEU allowances is reported. This additional layer of tracking conferrals could further relieve any unexpected confusion.

G. Limited Set-Aside for Unique Circumstances Related to MDIs

Some stakeholders have expressed concern that an annual allocation decision is not always sufficient to meet the needs of the entities eligible for ASAs. Entities have noted that unanticipated events may arise after July 31, when requests for ASAs are due, that legitimately necessitate an increased need to purchase more HFCs than expected. EPA received a comment to the Allocation Framework Rule (86 FR 55116, October 5, 2021) requesting that EPA create a separate additional pool of allowances to accommodate growth, new mid-year entrants, and ''under-allocation.'' At the time of that rulemaking, EPA determined that establishing such a pool of allowances was unnecessary because the Agency had set up an allocation formula to allocate the full quantity of allowances necessary, and setting allowances aside just in case they were needed would reduce the allowances available to general pool allowance holders thereby reducing how many HFCs can be imported or produced if the set-aside allowances went unexpended. EPA also noted that a company can access HFCs from the open market; if a company used more HFCs in a given year, that increased use would be reflected in the next year's allocation. However, EPA also noted that the Agency would learn from implementation of the program and consider adjusting the methodology (86 FR 55116, 55151, October 5, 2021).

Based on the Agency's observations in implementing the ASA allocations over the past three years, EPA is proposing to create a set-aside of allowances specifically for situations that meet the criteria for the unique circumstance established in 40 CFR 84.13(b)(1)(iii), including the proposed changes described in Section VII.B of this preamble. In other words, this would be a set aside to accommodate unforeseen need for regulated substances related to a global pandemic, other public health emergency, or other healthcare system needs related to increased patients

diagnosed with medical conditions treated by MDIs. EPA still sees significant downsides to creating a set-aside of allowances for unforeseen demands in the eligible applications as outlined in the Allocation Framework Rule, but does see benefit in creating a set-aside for the singular narrow possibility of a public health emergency or other unforeseen event that would specifically affect availability of MDIs. As a result, EPA is proposing to set aside allowances that would be available for the use of HFCs as a propellant in MDIs if the requester meets the criteria for the unique circumstance as defined in in 40 CFR 84.13(b)(1)(iii). Application-specific entities could apply to EPA for these allowances based on a demonstrated need to purchase more HFCs in the present calendar year in light of events that were unforeseen at the time of the entity's application for ASAs for the calendar year at issue. For example, during the beginnings of the COVID–19 pandemic in 2020, MDI manufacturers purchased nearly 40% more HFC–134a than they did in 2019, which is substantially more than they would have been allocated based on Year 3 purchases and the application's AAGR; this extra demand also could not have been predicted in July 2019, when manufacturers would have applied for calendar year 2020 allowances. EPA would consult with the FDA in determining whether the presented situation meets the criteria as defined, but scenarios could include a global pandemic. Other examples of situations that could qualify are described in Section VII.B. EPA is also taking comment on whether there are other analogous situations where an unexpected increased need for HFCs resulting from the other established and proposed unique circumstances could arise in which the facts would justify the potential use of another set-aside for ASA holders. If a commenter identifies such a situation, EPA requests that the commenter also provide information on how EPA would appropriately cabin requests to demand that was truly unexpected and unforeseeable and also information on what entities should have to provide as evidence when applying for set-aside ASAs. At a minimum, it seems appropriate to require a requesting entity to present EPA with information on how facts have changed that were unknowable at the time the entity applied for that year's ASAs and also evidence that the entity has been unable to acquire needed HFCs from the open market or through allowance transfer. EPA seeks comment on the appropriate records that would need to be provided to EPA to document the entity's unsuccessful efforts to acquire HFCs without additional allowances from EPA. EPA would likely require at least some of the records described in Section VI of this preamble.

EPA is presenting a series of options for comment on how such a set-aside pool would be created. Under Option 1, which is EPA's preferred option, EPA would form this pool by setting aside 10 percent of the allocation of certain entities—those that produced or imported HFCs during 2011–2019 to serve the applications eligible for ASAs, except MCMEU. An entity that produced or imported HFCs in the time range of 2011–2019 for a separate entity now receiving ASAs is getting a current HFC allowance allocation based on those past purchases. At the same time, ASAs are being issued to entities for conferral to a producer or importer. This can be viewed as a double allocation. For example, if Entity A imported for an MDI manufacturer in 2011–2019, those historic imports are included in calculating Entity A's allowance allocation. In other words, Entity A is getting a higher allowance allocation because of their imports for an MDI manufacturer. At the same time, the MDI manufacturer is being allocated ASAs, which can be conferred to Entity A to import HFCs for the MDI manufacturer. Therefore, Entity A has two sets of allowances available to them as a result of being an importer for MDI manufacturers. Because of this aspect of the design of EPA's allocation system, if EPA were to create a set-aside of allowances for application-specific entities, EPA proposes to hold back 10 percent of the allocation of entities that produced and imported for application-specific uses during 2011–2019. This appears more equitable than holding back a set amount of allowances from all general pool allowance holders, since only those that historically imported and produced for application-specific uses may have two sets of allowances now available to them. Of course, because a company that historically produced or imported for application-specific uses has two sets of allowances available to them, it seems that they should have sufficient production and/or consumption allowances available to purchase additional HFCs for an application-specific entity if an unexpected need arises. EPA is soliciting comment on whether, because of this fact, a set-aside is not truly needed, or if a set-aside is necessary because historic importers and producers are requiring conferral of ASAs to meet the needs of application-specific entities.

Under this proposed Option 1 approach, EPA would withhold 10 percent of the identified entities' allowances until April 30. If no application-specific entity applied for the allowances by April 30, then the withheld allowances would be issued to the entities from which they were withheld. If a request is pending, EPA would withhold allowances until that request was evaluated and allowances were issued. Such issuance would be done in a proportionate fashion if some, but not all, of the set-aside allowances were allocated to application-specific entities. EPA seeks comment on whether April 30 is late enough in the year to provide the appropriate safety value for unforeseen public health emergencies and other healthcare system needs.

Alternatively, Option 2 would be that EPA would create a set-aside pool for application-specific entities in the event of a public health emergency or other healthcare system need from any revoked allowances, including from administrative consequences already finalized. In the Allocation Framework Rule, EPA created administrative consequences whereby EPA can adjust allowance allocations if EPA determines that a person failed to comply with certain requirements relating to the HFC allowance allocation and trading program. Under the administrative consequence tool, a revoked allowance is one that EPA takes back from an allowance holder and redistributes to all other allowance holders (86 FR 55116, 55169, October 5, 2021). Under this second option, instead of redistributing revoked allowances to all other allowance holders, EPA would put the revoked allowances into a set-aside pool in case additional ASAs were needed as a result of a public health emergency. One potential flaw with this proposed approach is that to date, entities could expend ASAs to either produce or import HFCs. EPA created ASAs to function this way because end users in the identified applications may not know in advance how they will procure HFCs, and this method provides flexibility to ensure that end users receive the ''full quantity of allowances necessary,'' (86 FR 55148). To ensure that these ASAs are provided within the overall annual production and consumption caps, EPA subtracts the amount of ASAs allocated from both the production and consumption general allowance pools (40 CFR 84.9(a)(3); 84.11(a)(3)). However, to date, EPA has only revoked consumption

allowances.[31] EPA would likely need to hold back some amount of production allowances under this option, up to 1,000,000 MTEVe, to ensure sufficient allowances were available.

A third, less preferred option, would be to hold back a set amount of allowances. This set-aside would be created from all general pool allowance holders. EPA proposes that the Agency could hold back allowances in the range of 500,000 to 1,000,000 MTEVe production and consumption allowances. If no application-specific entity applied for the allowances by April 30, then the withheld allowances would be issued to the entities from which they were withheld. If a request is pending, EPA would withhold allowances until that request was evaluated and allowances were issued. As explained previously, this approach seems less equitable than Option 1. This approach also does not allay the concerns identified by EPA in the Allocation Framework Rule for establishing a set-aside for ASAs. However, EPA is interested in stakeholder input regarding this option.

Finally, as an alternative to creating a set-aside at all, EPA is taking comment on the possibility of allowing conferral of ASAs from other applications in the event an unforeseen event that meets the unique circumstance outlined in 40 CFR 84.13(b)(1)(iii). Under EPA's current regulations, conferred ASAs may only be used to produce or import HFCs for the application-specific use associated with the allowance(s) (40 CFR 84.13(h)). Under this alternative, EPA would amend the regulations such that if an unforeseen event meeting 40 CFR 84.13(b)(1)(iii), ASAs could be conferred and expended to produce or import HFCs for application-specific use different from the application associated with the allowance. For example, if EPA agreed that there was a public health emergency that created an unexpected need to purchase more HFCs for MDI manufacturing, under this approach ASAs allocated for aerospace fire suppression could be conferred to import or produce HFCs for use in MDI manufacturing.

EPA seeks comment on these proposals, in particular on the scope of the need, the number of allowances that are expected to need to be set aside, the date by which requests must be received to be considered, and all other aspects of the proposal.

[31] See *https://www.epa.gov/climate-hfcs-reduction/administrative-consequences-under-hfc-allocation-rule.*

H. Return of Unneeded Allowances

EPA is aware that some application-specific entities are allocated more allowances than are necessary to accommodate their needs for a given calendar year. This may be because for that specific year, the regulatory formula overestimated that individual entity's need. It is also possible that the entity's expectations for the year did not match reality because of unexpected intervening events, such as a drop in demand for the entity's products or supply chain difficulties. In light of these considerations, EPA is proposing to allow ASA holders to return their allowances voluntarily if they do not intend to use them. ASA holders could return allowances up to and including June 30 of the year for which the allowances can be expended (*e.g.,* calendar year 2025 allowances would have to be returned by June 30, 2025). This would be completely optional and intended to be used at the discretion of the ASA holder. EPA proposes to use any returned allowances to either: (1) fulfill unexpected higher demand of another ASA holder (see proposal in Section VII.G of this preamble); or (2) return the allowances to the general pool of allowance holders proportionate to respective market shares. EPA sees benefit of redeploying allowances that would go unused into the overall HFC market for smoother transition and to ease the overall HFC phasedown.

EPA is soliciting comment on this proposal, including whether it is needed if EPA finalizes other proposals outlined in this notice. EPA is particularly interested in whether this proposed approach is needed if EPA finalizes the requirement for entities to include in their application for allowances their anticipated need for the following calendar year. EPA is also interested in stakeholder input on whether codifying an ability for entities to return unneeded allowances would have unintended negative effects, including limiting the availability of allowances for transfer to another application-specific entity that has an unanticipated need for more allowances during the calendar year.

I. Enabling Auctions of Illegally Imported HFCs

In addition to the proposed changes to EPA's application-specific regulations outlined in this section, EPA is also proposing a targeted change to the regulations related to the enforcement and compliance provisions EPA finalized in the Allocation Framework Rule. As explained in the Allocation Framework Rule, EPA established a comprehensive system of mechanisms that together and by themselves discourage and prevent illegal production, import, and subsequent sales of illegally produced or imported HFCs. Since the requirement came into effect that entities must expend allowances to produce or import HFCs, EPA has been working with partner agencies across the Federal government to implement a comprehensive enforcement and compliance program.

One issue that EPA has been grappling with is what to do with HFCs that an entity imports or attempts to import without expending the requisite number of allowances. Among other things, the Federal government has been considering reexport, destruction, and auctions as potential available pathways for such HFCs. EPA is in the process of working with partner Federal agencies, particularly CBP, to consider the feasibility of an auction of HFCs that have been stopped or seized by CBP as was done in the past with illegally imported ODS. As part of this process, EPA has identified a provision in the existing 40 CFR part 84 regulations that could be read to inhibit some auctions of HFCs, although there is nothing in 40 CFR part 84 that prohibits auctions. In order to ensure auctions are an option, if the Federal government otherwise chooses to pursue them, EPA in this rulemaking is proposing to amend the prohibition relating to the sale and prohibition of illegally imported HFCs in 40 CFR 84.5 to clarify that a person may sell or distribute, or offer for sale or distribution, a regulated substance purchased at an auction authorized by CBP if the buyer expended consumption allowances or ASAs in a quantity equal to the EV-weighted equivalent of the illegally imported regulated substances. This proposed change would provide explicit clarity to an entity that purchases HFCs at such an auction that the HFCs they purchase can be sold as if they were initially imported with allowances.[32]

EPA is also proposing targeted changes to the reporting requirements to provide clarity in the regulations for how such purchases would be reported. EPA proposes that entities purchasing HFCs at auction would need to report the import of those HFCs (that was done by another entity prior to the auction purchase) under 40 CFR 84.31(c)(1) and maintain records consistent with 40 CFR 84.31(c)(2). EPA proposes that entities would use the date that entry

[32] The sales provision in 40 CFR 84.5 does not apply to other government personnel or contractors that need to move the HFCs for eventual disposition consistent with the regulatory requirements, such as through an auction with verification by EPA prior to sale.

was filed for the HFCs purchased at auction for purposes of 40 CFR 84.31(c)(1) reporting and maintain records of that purchase under 40 CFR 84.31(c)(2). This would provide a date that can be easily verified and would align with when the entity formally expressed intent to CBP to enter the HFCs into U.S. commerce.

Additionally, EPA is proposing that entities who purchase HFCs at auction would not be subject to the advance notification requirement in 40 CFR 84.31(c)(7) for HFCs purchased via an auction authorized by CBP, as the window for the notification would have already passed and EPA would be verifying whether a prospective purchaser has sufficient allowances as part of any auction. However, EPA proposes that entities would still have to provide notification to EPA via a CBP-authorized electronic data interchange system, such as the Automated Broker Interface, prior to the HFCs entering U.S. commerce and provide the same data elements as in 40 CFR 84.31(c)(7). If a certificate of analysis (see 40 CFR 84.31(c)(7)(xvi)) is not available at the time of filing entry, EPA is proposing that the entity would need to do any required sampling and testing prior to sale in U.S. commerce.

J. Quarterly Exporter Reporting of Internal Transaction Numbers

ITNs uniquely identify shipments being exported from the U.S. to another country. EPA currently requires companies to report ITNs when they request additional consumption allowances after exporting bulk HFCs. EPA is proposing to require companies to additionally report ITNs quarterly for all HFC exports. It is EPA's understanding that reporters can obtain ITNs from either CBP or their broker with relative ease, once they have a process to do so in place. Many reporters already gather ITNs on a regular basis for the purpose of submitting RACA reports.

Under CBP regulations, there are some instances in which exporters may acquire ITNs but are not required to do so. These instances may include exports to Canada and lower-value exports, for example. EPA proposes that exporters would not be required to report ITNs for shipments that are exempt from needing ITNs under CBP regulations. EPA is not proposing any changes to the existing regulations related to RACAs, so reporters would still need to obtain ITNs for any exports listed in RACA submissions (*e.g.,* exports to Canada).

EPA is proposing to require exporters to report ITNs quarterly to better enable EPA to perform quality assurance and integrity checks between exports reported to the Agency under the reporting requirements in 40 CFR 84.31 with Customs records. This, in turn, will enable EPA to better ensure the accuracy of the overall volume of HFCs that are exported, which is a critical component of the overall calculation of the HFC phasedown, in addition to being communicated for transparency to stakeholders and being a key part of the Agency's international reporting obligations under the Montreal Protocol.

K. Date of Purchase for Requests for Additional Consumption Allowances (RACAs)

EPA is proposing to change the existing requirement in 40 CFR 84.17(a)(5) to report the date HFCs were purchased as part of a RACA. Instead, EPA would require an entity to only report whether the HFCs exported were purchased before January 1, 2022, or after that date. EPA has received feedback from entities requesting RACAs that it is difficult to report the date HFCs were purchased because the information can be difficult to obtain. For example, a company may purchase several batches of HFCs over the course of several months and combine these batches into a homogenous mixture in an on-site holding tank. These batches of HFCs could come from multiple suppliers. The contents of the holding tank are then siphoned off into smaller containers and exported to a foreign country, at which point the company seeks a RACA for those exported HFCs. In this scenario, it is difficult to determine what the ''date of purchase'' was for any given container of HFCs that was exported.

When EPA initially codified the requirement to provide the date purchased as part of a RACA, the primary purpose of this data element was to track how much material is being exported out of pre-2022 inventory, before the phasedown program was in effect. This, in turn, helps the Agency understand certain market trends (*e.g.,* how many containers are being sold out of older inventory as opposed to more recently purchased inventory). However, EPA can track this trend with a simpler data element. Accordingly, EPA proposes to change the existing requirement to provide the date HFCs were purchased to whether the HFCs were purchased before or after January 1, 2022.

VIII. Authorization To Produce for Export

In previous rulemakings, *i.e.,* the Allocation Framework Rule and the 2024 Allocation Rule, some commenters expressed concern that under EPA's methodology for issuing production and consumption allowances, certain producers were not allocated sufficient allowances to meet the demands of their international customers working in applications for which ASAs were allocated to the domestic manufacturers. Commenters said that foreign semiconductor manufacturing remains important even while domestic semiconductor manufacturing increases under the CHIPS Act.

This issue was generally beyond the scope of prior rulemakings, but EPA recognizes that under the methodology for issuing general pool production and consumption HFC allowances [33] in tandem with how ASAs have historically been issued, domestic HFC producers that manufacture low EV HFCs with proportionally smaller market shares may face challenges due to a combination of the phasedown itself, EPA's allocation methodology, and that EPA does not allocate ASAs for entities' operations outside the United States.

Subsection (e)(5) of the AIM Act provides that the Administrator may authorize an entity to produce a regulated substance in excess of the number of production allowances otherwise allocated to that entity, subject to several conditions including:

- The authorization is valid for a renewable period of not more than five years;
- Authorization must be established via notice and opportunity for public comment; and
- The production is solely for export to, and use in, a foreign country that is not subject to the prohibition in subsection (j)(1); [34] and
- The production so authorized would not violate the production or consumption limits.

EPA has received a request from Iofina Chemical (Iofina) to authorize additional production of HFCs under subsection (e)(5) that can be exported to supply semiconductor manufacturers outside of the United States. Iofina has informed EPA that it has experienced challenges acquiring HFC allowances via a transfer from another allowance holder so it can produce low-EV, HFC–41, to sell to semiconductors manufacturers abroad. Iofina has flagged

[33] EPA is not reopening nor proposing to revisit the methodology for issuing general pool production and consumption HFC allowances in this rulemaking.

[34] Given that the prohibition of (j)(1) does not take effect until 2033, and EPA is proposing to make allowances available to Iofina through 2030, EPA does not consider this restriction related to subsection (j)(1) as relevant to this rulemaking.

this challenge for EPA for several years. The company has also noted that even if it were able to secure a transfer for a single year, Iofina could not plan over multiple years.

EPA has considered Iofina's specific situation, the limited number of allowances that would be needed to accommodate its request, and its stated intent to export HFCs for use in an application that Congress specified in subsection (e)(4)(B) of the AIM Act, and is proposing to authorize Iofina to undertake additional production for export as contemplated by AIM Act subsection (e)(5). To operationalize this subsection of the AIM Act, EPA is proposing to establish a production for export category of allowances and associated recordkeeping and reporting requirements. EPA is proposing that this new category of allowances would be nontransferable. Consistent with language in subsection (e)(5) of the AIM Act that EPA may ''authorize *an entity*'' (emphasis added), the Agency is proposing that these production for export allowances would be available only to Iofina to supply regulated HFCs to application-specific end users located abroad, specifically and only for the etching of semiconductor material or wafers and cleaning of CVD chambers within the semiconductor manufacturing sector. EPA is proposing to issue 3,000.0 MTEVe of allowances annually to Iofina for the stated purpose for each of the calendar years 2026 through 2030.

EPA proposes to determine that authorization of production for export to Iofina in this instance is appropriate and consistent with subsection (e)(5) of the AIM Act. EPA proposes that this is particularly true where the ASA requirements of subsection (e)(4)(B)(iv) provide priority access to HFCs for defined applications. This proposal is intended to address a need that has been voiced consistently and exclusively by Iofina, for which Iofina has provided supporting information to substantiate the request.

EPA is proposing to allocate 3,000.0 MTEVe non-transferrable production for export allowances exclusively to Iofina on an annual basis for each of the calendar years 2026 through 2030. A detailed discussion of the rationale for the Agency's proposal follows.

A. To what entities is EPA proposing to allocate production for export allowances?

As described above, EPA is proposing to only allocate production for export allowances to Iofina. The Agency has determined that the company has demonstrated their need for production for export allowances. Iofina has made good faith efforts to acquire allowances via an inter-company transfer and has had difficulty finding another allowance holder willing to transfer production and consumption allowances to them in order to produce regulated HFCs for export. Iofina has documented foreign customer demand in an application-specific end use for the HFC they produce. Iofina has committed to conduct extensive due diligence to verify and ensure that the HFCs they sell abroad are only sold to an entity that will use the HFC for the etching of semiconductor material or wafers and cleaning of CVD chambers within the semiconductor manufacturing sector and are not going to be diverted for some other use (*e.g.,* destroyed for carbon credits, sold to another entity that will use the HFCs for another end use).

EPA has also considered how this authorization supports the HFC phasedown overall. Iofina produces only one HFC, HFC–41, one of the lowest EV HFCs controlled by the AIM Act with an EV of 92, at its facility in Covington, Kentucky. Iofina produced HFCs during the 2011–2019 timeline and in subsequent years, and accordingly have been allocated allowances for calendar years 2022, 2023, and 2024. Because Iofina has always produced a low EV HFC, their allocation is smaller than companies that have historically produced higher EV HFCs, which now have flexibility to transition into a lower EV HFC at higher volumes. HFC–41 comprises a small portion of overall U.S. HFC calculated production [35] (0.02 percent in 2022 on a mass basis and approximately 0.001 percent on an EVe basis), and Iofina is the only U.S. producer of HFC–41 for consumptive use. Further, HFC–41 has a lower EV than all other regulated substances used in the etching of semiconductor material or wafers and the cleaning of CVD chambers within the semiconductor manufacturing sector. Coupled with the extremely small volume of allowances that this production would require, EPA sees authorizing this additional flexibility as appropriate to support continued U.S. production of HFC–41.

EPA recognizes that upon reviewing this proposed rulemaking, there may be other HFC producers who would be interested in receiving production for export allowances for application-specific uses abroad. At this time, EPA has only assessed the appropriateness of proposing an allocation for Iofina in light of the specific circumstances presented by that entity. The Agency is not proposing, nor creating a mechanism to finalize, production for export allowances for any other entity through this rulemaking. If other producers were to express a similar interest, EPA would consider whether to act in a separate rulemaking under subsection (e)(5), but we emphasize that this action is dependent on facts specific to Iofina, including the relatively small size of Iofina's production and the modest impacts on the overall market for HFCs that will result.

B. How many production for export allowances is EPA proposing to issue to Iofina on an annual basis, and for how many years is EPA proposing to issue these allowances?

EPA is proposing to issue Iofina non-transferrable production for export allowances in the amount of 3,000.0 MTEVe on an annual basis. The Agency arrived at this proposed amount based on an evaluation of a combination of factors including: Iofina's request; supporting information from the company explaining and demonstrating the need for production for export allowances; Iofina's relative market share of production allowances and recent yearly allocations from EPA; recent conferral activity where Iofina is the recipient; and, the general effect to other producers of issuing Iofina production for export allowances in the proposed amount.

The production cap for calendar year 2024 through 2028 (the current phasedown step) is 229,521,263 MTEVe and the production cap for calendar year 2029 through 2033 (the next phasedown step) is 114,760,632 MTEVe. The proposed number of production for export allowances the Agency would issue Iofina would be approximately 0.001 percent of the overall production cap for 2026 through 2028 and 0.003 percent for 2029 and 2030.[36] Accordingly, the Agency does not envision any shortage of production allowances for these years as a result of the proposal to issue Iofina 3,000.0 MTEVe of production for export allowances. In essence, the proposed 3,000.0 MTEVe of production for export allowances issued to Iofina would not materially affect any other domestic producer even in light of the next phasedown step.

Consistent with the provisions in subsection (e)(5)(A)(i), EPA is proposing that if finalized, Iofina would be issued

[35] See EPA HFC Data Hub at *https://www.epa.gov/climate-hfcs-reduction/hfc-data-hub.*

[36] Percent = (Number of Production of Allowances Issued)/(Production Cap)*100.

production for export allowances on an annual basis for a five-year period between 2026 through 2030.

C. Would Iofina need to expend consumption allowances for materials produced with production for export allowances and subsequently exported?

Subsection (e)(5) of the AIM Act allows EPA to ''authorize a person to produce'' for export if such production would not violate the yearly cap described in subsection (e)(2)(B). To operationalize this statutory requirement, EPA proposes to require that any material produced with production for export allowances must be exported in the same year it was produced. The AIM Act defines ''consumption'' as the amount of HFCs produced and imported minus the quantity of HFCs exported. Therefore, production of an HFC in a given year would be ''netted out'' when calculating consumption if that HFC is exported in that same year. Because HFCs produced with production for export allowances would be exported in the same year and therefore would be ''netted out'' when evaluating the United States' calculated yearly consumption, EPA is proposing that when Iofina produces for export using this specific category of allowances, it is not required to expend consumption allowances in an equivalent amount. Relatedly, EPA is also proposing that Iofina's materials produced with production for export allowances are not eligible for additional consumption allowances through the RACA provisions in 40 CFR 84.17.

D. How will this process affect the issuance of other types of allowances?

Under 40 CFR part 84, subpart A, EPA first issues ASAs. Because the Agency is proposing an annual finite number of production for export allowances for Iofina, EPA proposes to issue these non-transferrable allowances immediately after ASAs are issued. As a result, EPA is proposing small modifications to 40 CFR 84.9 to reflect that the number of available general pool production allowances is the difference between the yearly production cap and the sum of ASAs issued and the number of production for export allowances. It should be noted that because production for export allowances is a separate category from general pool production allowances, Iofina would be eligible for both of these types of allowances beginning in 2026 through 2030 if the production for export allowance provisions are finalized. EPA is not proposing any changes to how general pool consumption allowances are issued on an annual basis and is neither revising nor reopening the methodology codified in 40 CFR 84.11.

E. What are the proposed recordkeeping and reporting requirements for production for export allowances?

In order to maintain overall stringency while allowing for the flexibilities in the AIM Act described in this general information section of the preamble, EPA is proposing that Iofina comply with recordkeeping and reporting requirements in addition to what is already required of the entity as a domestic producer under 40 CFR 84.31(a) and (b) and as an exporter under 40 CFR 84.31(d).

1. Annual Certifications

EPA is proposing that Iofina secure signed certifications by a responsible corporate officer from their overseas application-specific customers attesting that any regulated HFCs produced using production for export allowances will only be used in application-specific uses (*i.e.,* only for the etching of semiconductor material or wafers and the cleaning of CVD chambers within the semiconductor manufacturing sector). EPA is proposing that Iofina must provide such written and signed certification for each of their overseas customers, accompanied by a description of how the foreign use aligns with the definitions in 40 CFR 84.13(a) and 40 CFR 84.3. If the regulated HFCs produced by Iofina using product for export allowances are to be held at an intermediary prior to receipt by the semiconductor manufacturer, the intermediary must also submit the same certification. As part of the yearly written certification, EPA is proposing that the name and address of the foreign entity, and the contact person's name, email address, and phone number are included. Further, EPA is proposing that Iofina must provide copies of these signed certifications with its end of year fourth quarter report due February 14 (*i.e.,* certifications for calendar year 1 are due on February 14 of year 2).

2. Quarterly Export and Inventory Reporting

In addition to submitting the quarterly exporter reports currently required under 40 CFR 84.31(a) and (b), the Agency is proposing that Iofina must, as part of these quarterly exporter reports, document the amounts exported that were produced using production for export allowances. Iofina would also be required to document the country to which HFCs were exported. As part of this documentation and to help ensure that EPA can quickly locate exports of regulated HFCs produced by Iofina, the Agency is proposing that an ITN be provided for each shipment regardless of monetary value, destination country, or other characteristics that could otherwise exempt or preclude an exporting entity from obtaining an ITN. Additionally, EPA is proposing that Iofina report quarterly no later than 45 days after the applicable quarterly control period on inventory of regulated HFCs produced with production for export allowances so EPA can effectively track their use. Inventory of regulated HFCs produced with production for export allowances must be zero as of December 31 for that calendar year; otherwise, EPA may pursue actions including but not limited to allowance adjustments, *i.e.,* administrative consequences, or enforcement action. All reports described in this section would be subject to EPA's auditing provisions under 40 CFR 84.33 if finalized as proposed.

3. Recordkeeping

EPA is proposing that Iofina maintains for a period of five years the certifications from all of its customers and any intermediaries attesting that the regulated HFCs they are receiving are only to be used for the etching of semiconductor material or wafers and cleaning of CVD chambers within the semiconductor manufacturing sector. The Agency is also proposing that Iofina maintain for a period of five years records demonstrating that Iofina has conducted extensive due diligence to verify and ensure that the HFCs they sell abroad are only sold to an entity that will use the HFC for an application-specific use and are not going to be diverted for some other use (*e.g.,* destroyed for carbon credits, sold to another entity that will use the HFCs for another end use).

IX. How will EPA handle confidentiality for newly reported information?

Consistent with EPA's commitment to transparency in program implementation, as well as to proactively encourage compliance, support enforcement of program requirements, and enable third-party engagement to complement EPA's enforcement efforts, EPA is proposing several ways it intends to release data that would be collected if this proposed rule is finalized as proposed.

EPA has reviewed the data elements that are proposed to be reported under this rulemaking. Based on that review, EPA is proposing certain confidentiality

determinations in advance through this notice and comment rulemaking for individual reported data elements that EPA would be collecting through this rulemaking. This proposal identifies certain information that must be submitted to EPA that may be subject to disclosure to the public without further notice because the Agency proposes to find that the information does not meet the standard for confidential treatment under Exemption 4 of the Freedom of Information Act (FOIA). EPA is also proposing to identify certain other categories of information that would be entitled to confidential treatment. For data elements for which EPA is not making a confidentiality determination in this action, EPA will apply the 40 CFR part 2 process for establishing case-by-case confidentiality determinations. The confidentiality determinations in this proposed action are intended to increase the efficiency with which the Agency responds to FOIA requests and to provide consistency in the treatment of the same or similar information. Establishing these determinations through this rulemaking will provide predictability for both information requesters and entities submitting information to EPA. The confidentiality determinations are also proposed to increase transparency around this program's implementation.

A. Background on Determinations of Whether Information Is Entitled to Treatment as Confidential Information

Exemption 4 of the FOIA exempts from disclosure ''trade secrets and commercial or financial information obtained from a person [that is] privileged or confidential'' (5 U.S.C. 552(b)(4)). In order for information to meet the requirements of Exemption 4, EPA must find that the information is either: (1) a trade secret, or (2) commercial or financial information that is: (a) obtained from a person, and (b) privileged or confidential.

Generally, when we have information that we intend to disclose publicly that is covered by a claim of confidentiality under FOIA Exemption 4, EPA has a process to make case-by-case or class determinations under 40 CFR part 2 to evaluate whether such information qualifies for confidential treatment under the exemption. 40 CFR 2.205.[37] In this action, EPA is proposing to make categorical confidentiality determinations in advance through this notice and comment rulemaking for some information that must be submitted to EPA under the proposed requirements. If EPA finalizes these determinations, that information could be disclosed to the public without further notice.

The U.S. Supreme Court decision in *Food Marketing Institute* v. *Argus Leader Media,* 139 S. Ct. 2356 (2019) (*Argus Leader*) addresses the meaning of ''confidential'' within the context of FOIA Exemption 4. The Court held that ''[a]t least where commercial or financial information is both customarily and actually treated as private by its owner and provided to the government under an assurance of privacy, the information is 'confidential' within the meaning of Exemption 4.'' *Argus Leader,* 139 S. Ct. at 2366. The Court identified two conditions ''that might be required for information communicated to another to be considered confidential.'' *Id.* at 2363. Under the first condition, ''information communicated to another remains confidential whenever it is customarily kept private, or at least closely held, by the person imparting it.'' *Id.* (internal citations omitted). The second condition provides that ''information might be considered confidential only if the party receiving it provides some assurance that it will remain secret.'' *Id.* (internal citations omitted). The Court found that the first condition necessary for information to be considered confidential within the meaning of Exemption 4, but did not address whether the second condition must also be met.

Following the issuance of the Court's opinion in *Argus Leader,* the U.S. Department of Justice (DOJ) issued guidance concerning the confidentiality prong of Exemption 4, articulating ''the newly defined contours of Exemption 4'' post-*Argus Leader.*[38] Where the Government provides an express or implied indication to the submitter prior to or at the time the information is submitted to the Government that the Government would publicly disclose the information, then the submitter generally cannot reasonably expect confidentiality of the information upon submission, and the information is not entitled to confidential treatment under Exemption 4.[39] In this proposed rule, EPA intends to clearly assert that certain information would not be kept confidential and may be disclosed publicly, if it is determined to not be entitled to confidential treatment in the final version of this rulemaking. This assertion aligns with the Supreme Court's decision, and the subsequent DOJ guidance that the government's assurances that a submission will be treated as *not* confidential should dictate the expectations of submitters. If EPA were to finalize these determinations, submitters would be on notice before they submit any information that EPA has determined that the identified information outlined in the memorandum provided in the docket for this action titled *Proposed Confidentiality Determinations for Data Elements in the Proposed Rule,* will not be entitled to confidential treatment upon submission and may be released by the Agency without further notice. As a result, submitters will not have a reasonable expectation that the information will be treated as confidential; rather, they should have the expectation that the information will be disclosed.

As described further below, EPA is proposing to make categorical confidentiality determinations as some of the proposed data elements that would be submitted to EPA contain information that is not entitled to confidential treatment. For data elements not explicitly listed in the document in the docket, EPA will apply the 40 CFR part 2 process for establishing case-by-case confidentiality determinations.

There may be additional reasons not to release information determined to not be entitled to confidential treatment, for example if it is personally identifiable information (PII). The Agency will separately determine whether any data should be withheld from release for reasons other than business confidentiality before data is released. EPA requests comment on the proposed confidentiality determinations.

[37] This approach of making categorical determinations for a class of information is a well-established Agency practice. Prior examples of rules where EPA has made such categorical determinations include *Confidentiality Determinations for Data Required Under the Mandatory Greenhouse Gas Reporting Rule and Amendments to Special Rules Governing Certain Information Obtained Under the Clean Air Act* (76 FR 30817) (May 26, 2011); *Control of Air Pollution From New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards* (88 FR 4296) (January 24, 2023); and *Renewable Fuel Standard (RFS) Program: RFS Annual Rules* (87 FR 39600) (July 1, 2002).

[38] ''Exemption 4 After the Supreme Court's Ruling in *Food Marketing Institute* v. *Argus Leader Media* and Accompanying Step-by-Step Guide,'' Office of Information Policy, U.S. DOJ, (October 4, 2019), available at *https://www.justice.gov/oip/exemption-4-after-supreme-courts-ruling-food-marketing-institute-v-argus-leader-media.*

[39] *See id.;* see also ''Step-by-Step Guide for Determining if Commercial or Financial Information Obtained from a Person is Confidential under Exemption 4 of the FOIA,'' Office of Information Policy, U.S. DOJ, (updated October 7, 2019), available at *https://www.justice.gov/oip/step-step-guide-determining-if-commercial-or-financial-information-obtained-person-confidential.*

B. Data Elements Associated With a Petition To Be Listed as an Application That Will Receive Application-Specific Allowances

In light of the statutory requirement in subsection (e)(4)(B)(ii) to make a complete petition available to the public, and consistent with EPA's commitment to transparency in program implementation, EPA has reviewed the data elements EPA has proposed would be required for a petition to be listed as an application that will receive ASAs. Specifically, EPA proposes to not provide confidential treatment to, and may release without further process, all required elements of the petition, except for a subset of the elements for which EPA has proposed that multiple entities could submit information individually to EPA;[40] and all information submitted to EPA that does not correspond to a required element. The memorandum to the docket lists each individual element of a complete petition, as proposed by EPA, with an accompanying proposed determination on whether that element would be entitled or not to confidential treatment. EPA is proposing that through this rulemaking, entities are put on notice of data release in line with the *Argus Leader* decision. EPA is providing an express indication to all potential petitioners prior to the time information is submitted to EPA that EPA will publicly disclose the information without further process. Therefore, potential future submitters cannot reasonably expect confidentiality of the information upon submission, and the information is not entitled to confidential treatment under Exemption 4. EPA invites comment on this proposed determination.

C. Data Elements Related to Proposed Revisions to Existing Regulations

To maximize program transparency, EPA is proposing to release several data elements associated with the proposed limited changes to existing regulations, including specific data elements associated with the following proposed regulatory revisions: (1) a pool of set-aside allowances for situations that meet the criteria for unique circumstances related to the propellants in MDIs application; (2) allowing ASA holders to return their allowances voluntarily if they do not intend to use them; and (3) the ''date of purchase'' requirement for a RACA. The memorandum to the docket lists each individual element EPA has proposed related to these regulatory revisions with an accompanying proposed determination on whether that element would be entitled or not to confidential treatment. EPA is proposing that through this rulemaking notice, entities are put on notice of data release in line with the *Argus Leader* decision. EPA is providing an express indication to all entities prior to the time information is submitted to EPA that EPA will publicly disclose the information without further process. Therefore, potential future submitters cannot reasonably expect confidentiality of the information upon submission, and the information is not entitled to confidential treatment under Exemption 4. EPA invites comment on this proposed determination.

EPA is proposing to regulatorily determine that certain other information would be entitled to confidential treatment. EPA is proposing that supporting documentation verifying a need to purchase regulated substances in the present calendar year for purposes of the proposed set aside because it is likely to include the type of information that submitters customarily keep private or closely held. EPA is also proposing that data elements associated with the following proposed regulatory revisions would be entitled to confidential treatment: (1) requiring companies provide the total expected amount of HFCs they intend to purchase in the calendar year; (2) new requirements for the conferral of MCMEU allowances; and (3) requiring exporters to report ITNs quarterly. These data elements constitute the type of information that submitters customarily keep private or closely held. Furthermore, in the case of ITNs reported by exporters, it is EPA's understanding that the ITN, as part of the Electronic Export Information (EEI) contained in the Automated Export System (AES), is considered confidential by the Department of Commerce. Additional information on the proposed determinations for specific data elements associated with the proposed regulatory revisions is provided in the memorandum in the docket for this action. EPA invites comments on these proposed confidentiality determinations, including information on whether the listed elements are the type of information customarily kept private or closely held.

D. Data Elements Reported to EPA Related to Production for Export

EPA is proposing to establish a production for export category of allowances as described in Section VIII. If EPA were to finalize the proposal for production for export allowances, EPA is proposing to release several data elements that a production for export allowance holder would be required to submit, including: (1) quantity of allowances expended for each regulated substance; (2) quantity of each regulated substance produced for export; (3) quantity of each regulated substance, produced using production for export allowances, that was exported; (4) quantity of each regulated substance held in inventory at the end of the quarter; and (5) the country to which regulated substances, produced using production for export allowances, were exported. The memorandum to the docket lists each individual element EPA has proposed related to the production for export allowances with an accompanying proposed determination on whether that element would be entitled or not to confidential treatment. EPA is proposing that through this rulemaking, entities are put on notice of data release in line with the *Argus Leader* decision. EPA is providing an express indication to all entities prior to the time information is submitted to EPA that EPA will publicly disclose the information without further process. Therefore, potential future submitters cannot reasonably expect confidentiality of the information upon submission, and the information is not entitled to confidential treatment under Exemption 4. EPA invites comment on this proposed determination.

EPA is proposing that the ITNs submitted for all exports of regulated substances produced using production for export allowances would be entitled to confidential treatment for the same rationale described earlier in this section for the proposed requirement that exporters report ITNs on a quarterly basis. EPA requests comment on this proposed determination, including comments on why this information may not be entitled to confidential treatment.

EPA is proposing that the signed certifications would be entitled to confidential treatment because it is EPA's understanding that these certifications could have the potential to reveal confidential business relationships (*i.e.,* the relationship between the allowance holder, overseas customer, and any intermediaries). EPA requests comment on this proposed determination, including comments on why this information may not be

[40] For example, EPA is proposing that (1) data on the proportion of the overall cost of the product or system that reflects the cost of regulated substance(s) and (2) historic and projected sales for the product or system would not be treated as confidential business information, as these are important elements for the public to consider when EPA is taking action on a petition for application-specific allowances.

entitled to confidential treatment. Specifically, EPA requests comment on whether the existence of a business relationship between an HFC producer and customer is information that is customarily closely held.

X. What are the costs and benefits of this action?

The changes proposed in this proposed rule would not result in any significant changes to the phasedown program as a whole, and thus do not fundamentally change the assumptions made in the Allocation Framework Rule RIA and subsequent RIA addenda. The Allocation Framework Rule RIA estimated benefits and costs for the HFC phasedown between 2022 and 2050, including assuming for analytical purposes that the allocation system would continue unchanged for years past the initial period (*i.e.,* for 2024 and beyond). This action would not change the total number of allowances issued each year or the associated environmental impacts. Further, the 2023 Technology Transitions Rule RIA Addendum quantified the costs and benefits associated with the transitions necessary for compliance based on the sector- and subsector-specific restrictions finalized in that rule. Given that the 2023 Technology Transitions Rule promulgated restrictions for sectors that encompass both defense sprays and SCPPU foams (aerosols and foam blowing sectors, respectively), the compliance costs associated with the proposals described in Section V of this proposed rule to restrict the use of certain HFCs in defense sprays and SCPPU foams have already been accounted for in the 2023 Technology Transitions Rule RIA Addendum. Therefore, EPA is not developing an update to the RIA for this proposed rule; however, given that some elements proposed in this rulemaking could result in incremental impacts for a subset of entities, the Agency did analyze potentially salient costs and benefits considerations associated with this proposed rulemaking. A summary of this analysis is included below, and additional details are presented in *Discussion of Costs and Benefits for Phasedown of Hydrofluorocarbons: Review and Renewal of Eligibility for Application-specific Allowances,* which is available in the docket for this action (EPA–HQ–OAR–2024–0196).

This analysis is intended to provide the public with information on the relevant costs and benefits of this action and to comply with Executive Orders. The analysis does not form a basis or rationale for any of the actions EPA is proposing in this rulemaking.

For entities in applications for which EPA is co-proposing an option to not renew eligibility for ASAs, the biggest drivers for any costs would be no longer being exempted from the restrictions promulgated under the Technology Transitions Program. However, entities within those applications that currently receive ASAs would also avoid recordkeeping and reporting costs associated with being an ASA holder because they would no longer receive ASAs and thereby no longer need to comply with related recordkeeping and reporting provisions, resulting in burden relief.

General pool allowance holders may receive benefits in the form of additional allowances if EPA finalized one or more applications no longer being eligible for ASAs. However, EPA anticipates that the number of additional allowances would be insignificant, totaling well under one percent of consumption allowances in a given year. For example, the number of allowances allocated in calendar year 2024 to the two applications for which EPA is co-proposing an option to not renew is equivalent to 0.1 percent of calendar year 2024 consumption allowances. In addition, as these marginal benefits constitute a transfer from one group to another and do not change the total number of allowances issued, there is no net societal impact.

EPA estimates that there may be costs related to the proposed requirements for ASA petitions and revisions to existing regulations. For example, in a scenario in which EPA does not renew the defense sprays and SCPPU foam for marine and trailer uses applications, the estimated costs of this proposed rule would be $19,052 in one-time costs and $54,310 in annual costs. More discussion of this scenario is included in the costs and benefits memo available in the docket that is referenced above. Other than these costs, EPA has not identified additional costs or benefits beyond those estimated in the Allocation Framework Rule RIA and subsequent RIA addenda.

XI. Statutory and Executive Order Review

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 14094: Modernizing Regulatory Review

This action is a ''significant regulatory action'' as defined in Executive Order 12866, as amended by Executive Order 14094. Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for Executive Order 12866 review. Documentation of any changes made in response to the Executive Order 12866 review is available in the docket. EPA prepared an economic analysis of the potential impacts associated with this action. This analysis, ''*Discussion of Costs and Benefits for Phasedown of Hydrofluorocarbons: Review and Renewal of Eligibility for Application-specific Allowances,*'' is available in the docket for this action (EPA–HQ–OAR–2024–0196) and is briefly summarized in Section X of this preamble, titled, ''What are the costs and benefits of this action?''. The high end costs of this proposed rule are estimated in the table below:

TABLE 3—SUMMARY OF COSTS IN SCENARIO IN WHICH DEFENSE SPRAYS AND SCPPU FOAM FOR MARINE AND TRAILER USES APPLICATIONS ARE NOT RENEWED

Activity	One-time costs	Annual costs
Application-specific allowance recordkeeping and reporting burden relief for entities no longer eligible for ASAs	.....	$(189,728)
Technology Transitions recordkeeping and reporting burden for entities no longer eligible for ASAs	19,052	221,462
Petitions requesting eligibility for ASAs	.....	12,758
Other regulatory revisions	.....	9,818
Total	19,052	54,310

B. Paperwork Reduction Act (PRA)

The information collection activities in this proposed rule have been submitted for approval to OMB under the PRA. The Information Collection Request (ICR) document that the EPA prepared has been assigned EPA ICR number 2685.05. You can find a copy of the ICR in the docket for this proposed rule, and it is briefly summarized here.

Subsection (d)(1)(A) of the AIM Act specifies that on a periodic basis, but not less than annually, each person that, within the applicable reporting period, produces, imports, exports, destroys, transforms, uses as a process agent, or reclaims a regulated substance shall submit to EPA a report that describes, as applicable, the quantity of the regulated substance that the person: produced, imported, and exported; reclaimed; destroyed by a technology approved by the Administrator; used and entirely consumed (except for trace quantities) in the manufacture of another chemical; or, used as a process agent. EPA collects such data regularly to support implementation of the AIM Act's HFC phasedown provisions. EPA requires quarterly reporting to ensure that annual production and consumption limits are not exceeded. It is also needed for EPA to be able to review allowance transfer requests, of which remaining allowances is a major component of EPA's review. In addition, EPA collects information to calculate allowances, to track the movement of HFCs through commerce, and to require auditing. Collecting these data elements allows EPA to confirm that the entity has not exceeded its allowed level of production and consumption and that the aggregated annual quantity of production and consumption in the United States does not exceed the cap established in the AIM Act. As described above in this preamble, EPA is proposing a procedural process for submitting a petition to designate a new application as eligible for priority access to allowances; reporting and recordkeeping requirements relevant for narrow revisions to the methodology used to allocate allowances to ASA holders for calendar years 2026 and beyond; and other limited reporting and recordkeeping revisions, such as for the proposal to authorize an entity to produce regulated substances for export.

All information sent by the submitter electronically is transmitted securely to protect information that is CBI or claimed as CBI consistent with the confidentiality determinations made in the Allocation Framework Rule and the proposed confidentiality determinations described in Section IX of this preamble, if finalized as proposed. The reporting tool guides the user through the process of submitting such data. Documents containing information claimed as CBI must be submitted in an electronic format, in accordance with the recordkeeping requirements.

Respondents/affected entities: Respondents and affected entities will be individuals or entities that produce, import, export, reclaim, recycle for use as a fire suppressant, distribute, destroy, transform, use HFCs as a process agent, or produce for export, certain HFCs that are defined as a regulated substance under the AIM Act. Respondents and affected entities will also be any entity issued or conferred ASAs.

Respondent's obligation to respond: Mandatory (AIM Act).

Estimated number of respondents: 342.

Frequency of response: Quarterly, biannual, annual, and as needed depending on the nature of the report.

Total estimated burden: 36,248 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $5,486,236 (per year), includes $1,038,450 annualized capital or operation & maintenance costs.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9.

Submit your comments on the Agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to the EPA using the docket identified at the beginning of this proposed rule. The EPA will respond to any ICR-related comments in the final rule. You may also send your ICR-related comments to OMB's Office of Information and Regulatory Affairs using the interface at *www.reginfo.gov/public/do/PRAMain.* Find this particular information collection by selecting ''Currently under Review—Open for Public Comments'' or by using the search function. OMB must receive comments no later than October 16, 2024.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities (SISNOSE) under the RFA. The small entities subject to the requirements of this action are entities that hold HFC allowance allocations (including production, consumption, and application-specific allowances), entities that applied for but did not receive set-aside allowances in 2022, entities that previously imported HFCs between 2017 and 2019 but did not receive 2022 allowance allocations, and entities that recover and reprocess HFCs. Given there are co-proposals for two applications, EPA conducted this preliminary screening analysis based on the pathway that could lead to the highest cost burden on small entities; therefore, this analysis assumes for analytical purposes that the defense sprays and SCPPU foam for marine and trailer uses applications will not be renewed. The Agency has determined that four of the 276 affected small businesses—or 1.4 percent of all affected small businesses—could incur costs in excess of one percent of annual sales, and three of those four small businesses—or 1.1 percent of all affected small businesses—could incur costs in excess of 3 percent of annual sales. The four entities that could incur costs in excess of one percent of annual sales are all entities that currently receive ASAs in the defense sprays and SCPPU foam for marine and trailer uses applications. These costs are primarily driven by these entities no longer being exempted from Technology Transition Program restrictions. Further details of this analysis are presented in *Economic Impact Screening Analysis for Phasedown of Hydrofluorocarbons: Review and Renewal of Eligibility for Application-specific Allowances,* which is available in the docket for this action (EPA–HQ–OAR–2024–0196).

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain any unfunded mandate of $100 million (adjusted annually for inflation) or more (in 1995 dollars) 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 and the costs involved in this action are estimated not to exceed $183 million in 2023$ ($100 million in 1995$ adjusted for inflation using the GDP implicit price deflator) or more in any one year.

E. 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.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have Tribal implications as specified in Executive Order 13175. EPA is not aware of Tribal businesses engaged in activities that would be directly affected by this action. Based on the Agency's assessments, EPA also does not believe that potential effects, even if direct, would be substantial. Accordingly, this action will not have substantial direct effects on Tribes, on the relationship between the Federal government and Indian Tribes, or on the distribution of power and responsibilities between the Federal government and Indian Tribes, as specified in Executive Order 13175. Thus, Executive Order 13175 does not apply to this action.

EPA periodically updates Tribal officials on air regulations through the monthly meetings of the National Tribal Air Association and has shared information on this rulemaking through this and other fora.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that 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.

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

This action is not a ''significant energy action'' because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. This action applies to certain regulated substances and certain applications containing regulated substances, none of which are used to supply or distribute energy.

I. National Technology Transfer and Advancement Act

This rulemaking does not involve technical standards.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations and Executive Order 14096: Revitalizing Our Nation's Commitment to Environmental Justice for All

The EPA believes that this type of action does not concern human health or environmental conditions and therefore cannot be evaluated with respect to potentially disproportionate and adverse effects on communities with environmental justice concerns. This proposed rule does not change the HFC phasedown schedule.

Although this action does not concern human health or environmental conditions, the EPA identified and addressed environmental justice concerns associated with the HFC phasedown within the Allocation Framework Rule (86 FR 55116, October 5, 2021) and the 2024 Allocation Rule (88 FR 46836, July 20, 2023). In these rulemakings, EPA identified and addressed environmental justice concerns by assessing available information to analyze baseline human health or environmental conditions, conducting updated analyses based on more recently available data, and providing meaningful participation opportunities for communities with environmental justice concerns. EPA carefully evaluated available information on HFC production facilities and the characteristics of nearby communities. Based on EPA's analysis, EPA found evidence of environmental justice concerns near HFC production facilities from cumulative exposure to existing environmental hazards in these communities.

List of Subjects in 40 CFR Part 84

Environmental protection, Administrative practice and procedure, Air pollution control, Chemicals, Climate Change, Emissions, Imports, Reporting and recordkeeping requirements.

Michael S. Regan,
Administrator.

For the reasons set out 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.

■ 2. Amend § 84.3 by adding the definitions ''Healthcare system need'', ''Responsible corporate officer'', and ''Responsible official'' in alphabetical order to read as follows:

§ 84.3 Definitions.

* * * * *

Healthcare system need means circumstances where an increase in demand for MDIs used to treat asthma, chronic obstructive pulmonary disease, and other respiratory diseases may occur because of a change in market conditions that otherwise would not be included in calculated rates of growth.

* * * * *

Responsible corporate officer means a person who is authorized by the regulated entity to make representations on behalf of, or obligate the company as ultimately responsible for, any activity regulated under 40 CFR part 84, subpart A.

Responsible official means a person who is authorized by the regulated entity to make representations on behalf of, or obligate the company as ultimately responsible for, any activity regulated under 40 CFR part 84, subpart A.

* * * * *

■ 3. Amend § 84.5 by:
■ a. In paragraph (a)(1), adding '', unexpended production for export allowances,'' after the phrase ''unexpended production allowances and consumption allowances''.
■ b. Revising paragraph (c)(2).
■ c. In paragraph (d), adding ''production for export,'' after ''All production, consumption,'' and adding ''production for export,'' after the phrase ''confer a production, consumption,''.
■ d. Revising paragraph (f).
■ e. Adding paragraph (k).

The revisions and additions read as follows:

§ 84.5 Prohibitions relating to regulated substances.

* * * * *

(c) * * *

(2) No person may use a regulated substance produced or imported by expending application-specific allowances for any purpose other than those for which the application-specific allowance was allocated, and as set forth in this paragraph (c). Application-specific allowances are apportioned to a person under §§ 84.13 and 84.15 for the production or import of regulated substances solely for the individual application listed on the allowance.

* * * * *

(f) *Sale and distribution.* No person may sell or distribute, or offer for sale or distribution, any regulated substance

that was produced or imported in violation of paragraphs (a) through (d) of this section, except:

(1) for such actions needed to re-export the regulated substance; or

(2) if the regulated substance was purchased at a government auction authorized by the United States Customs and Border Protection and consumption allowances were expended in the requisite quantity to cover the regulated substances at issue.

Every kilogram of a regulated substance sold or distributed, or offered for sale or distribution, in contravention of this paragraph constitutes a separate violation of this subpart. Sale or distribution, or offer for sale or distribution, of less than one kilogram of regulated substance in contravention of this paragraph constitutes a separate violation of this subpart.

* * * * *

(k) *Production for export allowances.* No person may use a regulated substance produced by expending production for export allowances for any purpose other than those for which the production for export allowance was allocated, aligning with the applications as listed in § 84.13(a).

■ 4. Amend § 84.9 by:

■ a. In paragraph (b)(3) adding ''and 3,000.0 MTEVe allowances to be allocated pursuant to § 84.18,'' after ''§ 84.13''.

■ b. Redesignating paragraph (c) as paragraph (d).

■ c. Adding new paragraph (c).

The addition reads as follows:

§ 84.9 Allocation of calendar-year production allowances.

* * * * *

(c) Starting with the allocation of 2026 calendar year allowances, the relevant Agency official will withhold ten percent of production allowances otherwise calculated under paragraph (b) of this section from any entity that produced regulated substances in any calendar year 2011 through 2019 for a separate entity that is being issued application-specific allowances in accordance with § 84.13, except for mission-critical military end uses. If there are remaining production allowances after distribution from the set-aside under § 84.15, the relevant agency official will distribute such allowances to the entity from which they were withheld.

* * * * *

■ 5. Amend § 84.11 by:

■ a. Redesignating the second paragraph (c) as paragraph (e).

■ b. Redesignating paragraph (c) as paragraph (d).

■ c. Adding new paragraph (c).

The addition reads as follows:

§ 84.11 Allocation of calendar-year consumption allowances.

* * * * *

(c) Starting with the allocation of 2026 calendar year allowances, the relevant Agency official will withhold ten percent of consumption allowances otherwise calculated under paragraph (b) of this section from any entity that imported regulated substances in any calendar year 2011 through 2019 for a separate entity that is being issued application-specific allowances in accordance with § 84.13, except for mission-critical military end uses. If there are remaining consumption allowances after distribution from the set-aside under § 84.15, the relevant agency official will distribute such allowances to the entity from which they were withheld.

* * * * *

■ 6. Amend § 84.13 by:

■ a. In paragraph (a), removing ''2022, 2023, 2024, and 2025'' and adding in their place ''as designated''.

■ b. In paragraph (a)(1), adding ''for calendar years 2022–2030'' after the phrase ''metered dose inhalers''.

■ c. In paragraph (a)(2), adding ''for calendar years 2022–2025'' after the phrase ''defense sprays''.

■ d. In paragraph (a)(3), adding ''for calendar years 2022–2030'' after the phrase ''trailer use''.

■ e. In paragraph (a)(4), adding ''for calendar years 2022–2030'' after the phrase ''semiconductor manufacturing sector''.

■ f. In paragraph (a)(5), adding ''for calendar years 2022–2030'' after the phrase ''end uses''.

■ g. In paragraph (a)(6), adding ''for calendar years 2022–2030'' after the phrase ''fire suppression''.

■ h. In paragraph (b)(1), adding '', including supporting documentation that verifies this need'' after the phrase ''this section''.

■ i. In paragraph (b)(1)(ii) remove ''or'' after the phrase ''facility or facilities;''.

■ j. In paragraph (b)(1)(iii), removing ''A global pandemic or other public health emergency that increases'' and adding in their place ''A global pandemic, other public health emergency, or other healthcare system needs related to increased'' and removing ''inhalers.'' and adding in its place ''inhalers;''.

■ k. Adding paragraphs (b)(1)(iv) and (v).

■ l. Adding paragraph (b)(2).

■ m. Redesignating paragraph (c)(1) as paragraph (c)(7).

■ n. Adding new paragraph (c)(1).

■ o. Adding paragraphs (c)(4) through (6).

■ p. Revising newly redesignated paragraph (c)(7) introductory text.

■ q. Removing paragraph (e).

■ r. Redesignating paragraphs (f) through (h) as paragraphs (e) through (g), respectively.

■ s. Adding new paragraph (h).

The revisions and additions read as follows:

§ 84.13 Allocation of application-specific allowances.

* * * * *

(b) * * *

(1) * * *

(iv) Economic disruption outside the immediate control of the applicant; or

(v) Buildup of a stockpile of a specific regulated substance in the event of a production cessation. Requests for this unique circumstances must include: a letter from the applicant's supplier signed by a responsible corporate officer stating that the supplier is ceasing all production of the regulated substance at issue within three years; certification that the applicant has regulatory requirements beyond this part that limit ability to switch suppliers or there are no other suppliers that could meet their needs; and evidence that the applicant has a restricted HFC supply chain.

(2) Entities must provide an estimate of the total quantity of regulated substances they expect to purchase in the following calendar year based on their expected eligibility for allowances.

(c) * * *

(1) Accounting for verified changes in inventory in calculating growth rates and purchase amounts, except:

(i) for applications for mission-critical military end uses; and

(ii) if the applying entity provides a rationale deemed acceptable by the relevant agency official as to why inventory buildup should not be accounted for;

* * * * *

(4) Subtracting out quantities reported under § 84.31(h)(1)(x) in calculating growth rates and purchase amounts;

(5) Allocating allowances equivalent to the highest verified purchase amount measured in exchange value equivalent from the prior three years for entities that meet any of the following criteria:

(i) entity purchased less than 100 kilograms of regulated substances in at least one of the last three years, and the average growth rate of use for the company over the past three years calculated under paragraph (7)(i) is equal to or greater than 200 percent;

(ii) entity had zero purchases in one of the last three years for reasons other than newly using regulated substances; or

(iii) entity purchased equal to or less than 100 kilograms of regulated

substances in each of the past three years;

(6) For the application of structural composite preformed polyurethane foam for marine use and trailer use, utilizing the exchange value for HFC–152a in calculating the allowance allocation, regardless of what regulated substance was used by an entity;

(7) For all other entities, multiplying the use of regulated substances by the company in the specific application in the prior year by the higher of:

* * * * *

(h) Any entity receiving an allocation of allowances pursuant to this section may voluntarily choose to return any quantity of allowances to EPA up to, and including, June 30 of the calendar year in which the allowances can be expended. If any allowances are so returned, those allowances will be distributed to the persons who meet the criteria listed in §§ 84.9 and 84.11 proportionate to entities' market share as calculated in §§ 84.9(b)(2) and 84.11(b)(5).

■ 7. Add § 84.14 to read as follows:

§ 84.14 Petition for designation of an application as eligible for application-specific allowances.

(a) Petitions filed pursuant to 42 U.S.C. 7675(e)(4)(B)(ii) must include:

(1) A description of the application, including an explanation of what the application is, what purpose or function it achieves, and what populations or commercial products benefit from the application;

(2) A list of regulated substance(s) and description of their use in the application and an explanation as to why regulated substances are required in the application;

(3) Evidence that no safe or technically achievable substitute is or is expected to be available, and that the petitioner has conducted research to evaluate substitutes for the regulated substance(s);

(4) Evidence that supply of the regulated substance(s) used in the application is insufficient to accommodate the application;

(5) A signed and notarized certification from a responsible corporate officer at the requesting entity that the application cannot use recovered and reprocessed regulated substance in conjunction with or in place of virgin regulated substance, either due to demonstrated lack of technical achievability or insufficient supply, and an explanation and evidence documenting why recovered and reprocessed regulated substance cannot be used for the application;

(6) Total quantity (in kilograms) of all regulated substances acquired by each entity submitting the petition for the application specified in the petition in each of the previous three years, including records documenting that quantity;

(7) The name of the entity or entities supplying regulated substances and contact information for those suppliers over the past three years;

(8) Total quantity (in kilograms) of each regulated substance held in inventory by each entity submitting the petition as of the date the petition is submitted;

(9) An estimate of the total quantity of regulated substances the petitioner expects to purchase in the first year it would be eligible for ASAs;

(10) Data on the proportion of the overall cost of the product or system that reflects the cost of regulated substances for each entity;

(11) Historic and projected sales for the product or system for each entity;

(12) Evidence of research into design changes to decrease the amount of regulated substance used in the product or system;

(13) An explanation regarding whether the use of the regulated substance(s) is necessary for the health, safety, or is critical for the functioning of society (encompassing cultural and intellectual aspects);

(14) An explanation regarding steps taken to minimize the use of the regulated substance and any associated emission of the HFC(s); and

(15) Information on regulatory restrictions related to possible alternatives and substitutes.

(b) If the petition does not include the required information listed in paragraph (a), the petition will be deemed incomplete, and EPA will notify the entity submitting the petition.

(c) In the event that an application becomes eligible to receive application-specific allowances:

(1) EPA will allocate allowances to entities in a new application in accordance with § 84.13; and

(2) A new application would be eligible to receive application-specific allowances for no longer than the latest calendar year included in § 84.13(a).

■ 8. Amend § 84.15 by adding paragraph (h) to read as follows:

§ 84.15 Set-aside of application-specific allowances, production allowances, and consumption allowances.

* * * * *

(h) Consumption and production allowances from § 84.9(c) and § 84.11(c) are available in the form of application-specific allowances to entities that request them no later than April 30 of the calendar year in which the allowances may be expended that:

(1) qualify for application-specific allowances under § 84.13;

(2) provide supporting documentation that verify a need to purchase regulated substances in the present calendar year beyond what is reflected by the rates of growth calculated in § 84.13(c)(1);

(3) are facing a situation that qualifies as a unique circumstance as defined in § 84.13(b)(iii); and

(4) demonstrate to the satisfaction of the relevant agency official that the situation described in paragraph (3) was unknowable at the time the entity made its request for application-specific allowances pursuant to § 84.13(b).

■ 9. Amend § 84.17 by:

■ a. In the introductory text, adding the language '', except for the export of regulated substances produced with a production for export allowance'' to the end of the first sentence.

■ b. Revising paragraph (a)(5).

The revision reads as follows:

§ 84.17 Availability of additional consumption allowances.

* * * * *

(a) * * *

(5) The source of the regulated substances and whether the date purchased was before or after January 1, 2022;

* * * * *

■ 10. Add § 84.18 to read as follows:

§ 84.18 Authorization of production for export allowances.

(a) EPA will allocate 3,000.0 MTEVe of production for export allowances to Iofina Chemical by October 1 of the calendar year prior to the year in which the allowances may be used for calendar years 2026, 2027, 2028, 2029, and 2030.

(b) Production for export allowances cannot be transferred.

(c) Any regulated substances produced with production for export allowances must be exported in the same calendar year it was produced.

■ 11. Amend § 84.31 by:

■ a. In the introductory text of paragraph (a), removing the phrase ''in the six applications listed in subsection (e)(4)(B)(iv) of the AIM Act''.

■ b. Redesignating paragraphs (d)(1)(vii) and (d)(1)(viii) as paragraphs (d)(1)(viii) and (d)(1)(ix), respectively.

■ c. Adding new paragraph (d)(1)(vii).

■ d. In paragraph (h)(1)(i), adding '', including a copy of the sales records, invoices, or other records documenting that quantity'' after the word ''months''.

■ e. In paragraph (h)(1)(ii), adding '', including a copy of the sales records, invoices, or other records documenting that quantity'' after the word ''months''.

■ f. In paragraph (h)(1)(iii), adding ‘‘, including a copy of the sales records, invoices, or other records documenting that quantity’’ after the parenthetical ‘‘(*i.e.,* from the open market)’’.
■ g. In paragraph (h)(1)(iv), adding ‘‘, including a copy of inventory records documenting that quantity;’’ after the word ‘‘use’’.
■ h. In paragraph (h)(1)(viii), removing the last ‘‘and’’ after the phrase ‘‘additional need’’.
■ i. In paragraph (h)(1)(ix), removing ‘‘allowances.’’ and adding in its place ‘‘allowances; and’’.
■ j. Adding paragraph (h)(1)(x).
■ k. In paragraph (h)(2)(iv), adding ‘‘, including a copy of inventory records documenting that quantity;’’ after the phrase ‘‘current year’’.
■ l. In the introductory text of paragraph (h)(4), removing ‘‘, except for the conferral of allowances for mission-critical military end uses,’’.
■ m. In paragraph (h)(7)(i), removing ‘‘annual’’ and adding in its place ‘‘biannual’’.
■ n. Redesignating paragraphs (h)(7)(iii) through (h)(7)(vi) as paragraphs (h)(7)(iv) through (h)(7)(vii), respectively.
■ o. Adding new paragraph (h)(7)(iii).
■ p. Redesignating paragraph (l) as paragraph (n).
■ q. Adding new paragraphs (l) and (m).

The revision and additions read as follows:

§ 84.31 Recordkeeping and reporting.

* * * * *

(d) * * *

(1) * * *

(vii) Internal Transaction Numbers for all shipments, except shipments where an exemption from the requirements for the filing of Electronic Export Information (EEI) is provided in 15 CFR part 30 Subpart D;

* * * * *

(h) * * *

(1) * * *

(x) If allowances are allocated for a unique circumstance under § 84.13(b)(1)(v), the quantity (in kilograms) of each regulated substance purchased with the intent to build inventory during the prior six-month period, including a copy of records documenting that quantity.

* * * * *

(7) * * *

(iii) A copy of confirmation notices when conferring allowances for application-specific use;

* * * * *

(l) *Holders of production for export allowances.* Any person allocated production for export allowances must comply with the following recordkeeping and reporting requirements:

(1) Quarterly Reporting. Within 45 days after the end of each quarter, each holder of production for export allowances must submit to the relevant Agency official a report containing the following information:

(i) The quantity (in exchange value equivalent) of production for export allowances expended for each regulated substance and the quantity (in kilograms) of each regulated substance produced for export;

(ii) The quantity (in kilograms) of each regulated substance produced using production for export allowances that was exported;

(iii) The quantity (in kilograms) of each regulated substance produced with production for export allowances held in inventory at the end of the quarter;

(iv) Internal Transaction Numbers for all exports of regulated substances produced with production for export allowances;

(v) The country or countries to which regulated substances produced using production for export allowances were exported.

(2) Annual Reporting. Within 45 days after the end of the fourth quarter, each holder of production for export allowances must submit to the relevant Agency official a report containing the following information:

(i) Signed certifications by a responsible corporate officer from all foreign customers and supply intermediaries attesting that any regulated substances produced using production for export allowances will only be used in an application as listed in § 84.13(a). Each certification must include the name and address of the foreign entity, and a contact person's name, email address, and phone number;

(ii) A description of how the use identified in the signed certifications provided pursuant to paragraph (i) aligns with the applications as listed in § 84.13(a).

(3) Recordkeeping. Entities who receive production for export allowances must maintain the following records for three years:

(i) A copy of all certifications reported pursuant to paragraph (2)(i); and

(ii) Records demonstrating due diligence undertaken to verify and ensure that all regulated substances produced with production for export allowances and exported are being used in an application as listed in § 84.13(a).

(m) *Purchasers of HFCs at a government auction.* Any entity purchasing regulated substances at a government auction authorized by the United States Customs and Border Protection must report such purchase as if they were an import consistent with the applicable provisions under this section, except for the following adjustments.

(1) *Quarterly reporting.* The date that filing for that entry was accepted by a United States Customs and Border Protection-authorized electronic data interchange system, such as the Automated Broker Interface, must be reported as the date on which the regulated substances were imported for purposes of paragraph (c)(1)(v). Unless otherwise unavailable, all requirements of paragraph (c)(1) must be reported. If a data element is unavailable, the auction purchaser must contact EPA and state that fact in writing by the time they make their filed report.

(2) *Recordkeeping.* In addition to the records specified in paragraph (c)(2), the auction purchaser must maintain records of the auction purchase, including the accepted bid, confirmation of payment, certification by the entity that they expended allowances, container composition testing to verify the regulated substances contained within the cylinder, and all other final documentation of the auction purchase. Unless otherwise unavailable, all requirements of paragraph (c)(2) must be met. If a data element is unavailable, the auction purchaser must contact EPA and state that fact in writing by the time they make their filed report.

(3) *Advance notification.* The auction purchaser must report the information specified in paragraph (c)(7) prior to the HFCs entering U.S. commerce. The requirement in paragraph (c)(7)(xvi) does not apply if a certificate of analysis is not available at the time of submitting the information in paragraph (c)(7). The entity must complete all required sampling and testing required in this subpart prior to sale in U.S. commerce and maintain such records consistent with 84.31.

* * * * *

■ 12. Amend § 84.54 by revising paragraph (a)(16)(i)(O) and adding paragraph (a)(16)(i)(P) to read as follows:

§ 84.54 Restrictions on the use of hydrofluorocarbons.

(a) * * *

(16) * * *

(i) * * *

(O) Products for removing bandage adhesives from skin; and

(P) Defense sprays as defined at § 84.3.

* * * * *

■ 13. Amend § 84.60 by adding paragraphs (a)(7) and (b)(3) to read as follows:

§ 84.60 Recordkeeping and reporting.

(a) * * *

(7) Effective [DATE], this paragraph shall apply to defense sprays as defined at § 84.3 and structural composite preformed polyurethane foam as defined at § 84.3.

(b) * * *

(3) Effective [DATE], this paragraph shall apply to defense sprays as defined at § 84.3 and structural composite preformed polyurethane foam as defined at § 84.3.

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