

Act (5 U.S.C. 601 *et seq.*). Because these rules approve pre-existing requirements under state law and do not impose any additional enforceable duty beyond that required by state law, they do not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4).

These rules also do not have tribal implications because they will not have a substantial direct effect on one or more Indian 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 by Executive Order 13175 (65 FR 67249, November 9, 2000). This action also does not have Federalism implications because it does 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, as specified in Executive Order 13132 (64 FR 43255, August 10, 1999). This action merely approves a state rule implementing a Federal standard, and does not alter the relationship or the distribution of power and responsibilities established in the Clean Air Act. These rules also are not subject to Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997), because they are not economically significant.

In reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. In this context, in the absence of a prior existing requirement for the State to use voluntary consensus standards (VCS), EPA has no authority to disapprove a SIP submission for failure to use VCS. It would thus be inconsistent with applicable law for EPA, when it reviews a SIP submission, to use VCS in place of a SIP submission that otherwise satisfies the provisions of the Clean Air Act. Thus, the requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) do not apply. These rules do not impose an information collection burden under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must

submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing these rules and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by September 20, 2002. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of these rules for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

#### List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: July 2, 2002.

**Wayne Nastri,**  
Regional Administrator, Region IX.

Part 52, Chapter I, Title 40 of the Code of Federal Regulations is amended as follows:

#### PART 52—[AMENDED]

1. The authority citation for part 52 continues to read as follows:

**Authority:** 42 U.S.C. 7401 *et seq.*

#### Subpart F—California

2. Section 52.220 is amended by adding paragraph (c)(294)(i)(A)(4) to read as follows:

##### § 52.220 Identification of plan.

\* \* \* \* \*

(c) \* \* \*

(294) \* \* \*

(i) \* \* \*

(A) \* \* \*

(4) Rule 4661, adopted on May 21, 1992 and amended on December 20, 2001, Rule 4662, adopted April 11, 1991 and amended on December 20, 2001,

and Rule 4663, adopted on December 20, 2001.

\* \* \* \* \*

[FR Doc. 02-18398 Filed 7-19-02; 8:45 am]

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## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 82

[FRL-7247-5]

RIN 2060-AG12

### Protection of Stratospheric Ozone; Listing of Substitutes in the Foam Sector

**AGENCY:** Environmental Protection Agency.

**ACTION:** Final rule.

**SUMMARY:** This action lists acceptable and unacceptable substitutes for ozone-depleting substances (ODSs) in the foam blowing sector under the U.S. Environmental Protection Agency's (EPA) Significant New Alternatives Policy (SNAP) program. Today's action: Withdraws the proposed decision to list HCFC-22 and HCFC-142b as unacceptable substitutes for existing users; lists HCFC-22 and HCFC-142b as unacceptable substitutes for HCFC-141b in rigid polyurethane/polyisocyanurate laminated boardstock, rigid polyurethane appliance foam, and rigid polyurethane spray foam applications; lists HCFC-22 and HCFC-142b as acceptable substitutes for HCFC-141b, with narrowed use limits (users must ascertain and document that other acceptable alternatives are not technically feasible) in commercial refrigeration and sandwich panel applications and in the rigid polyurethane slabstock and other foams end-use; and lists HCFC-124 as an unacceptable substitute in all foam end-uses. At this time, EPA is deferring final action on its proposed decision to list HCFC-141b as an unacceptable foam blowing agent.

**EFFECTIVE DATE:** August 21, 2002.

**ADDRESSES:** Information relevant to this rulemaking is available in Docket A-2000-18, U.S. Environmental Protection Agency, OAR Docket and Information Center, 401 M Street, SW., Room M-1500, Mail Code 6102, Washington, DC 20460. The docket may be inspected between 8 a.m. and 5:30 p.m. on weekdays. Telephone (202) 260-7548; fax (202) 260-4400. As provided in 40 CFR part 2, a reasonable fee may be charged for photocopying.

**FOR FURTHER INFORMATION CONTACT:** Jeff Cohen at phone: (202) 564-0135, fax

(202) 565-2155 or e-mail: [cohen.jeff@epa.gov](mailto:cohen.jeff@epa.gov), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW., Mail Code 6205J, Washington, DC 20460. Overnight or courier deliveries should be sent to the office location at 501 3rd Street, NW., Washington, DC 20001. The Stratospheric Protection Hotline can be contacted at (800) 296-1996. Additional information can also be obtained through EPA's Ozone Depletion World Wide Web site at "<http://www.epa.gov/ozone/snap/index.html>".

**SUPPLEMENTARY INFORMATION:** SNAP implements section 612 of the Clean Air Act which requires EPA to evaluate substitutes for ODSs to reduce overall risk to human health and the environment. The intended effect of the SNAP program is to expedite movement away from ozone-depleting compounds while avoiding a shift into substitutes posing other environmental problems. On March 18, 1994, EPA promulgated the initial SNAP rule establishing the program for evaluating and regulating substitutes for ozone depleting chemicals (59 FR 13044), and has since issued decisions on the acceptability and unacceptability of a number of substitutes.

In February 1999, EPA received a submission requesting review of the following foam blowing agents as substitutes for HCFC-141b: HFC-134a, HCFC-22, HCFC-142b, HCFC-124, and an HCFC-22/142b blend. In response, EPA proposed the following two determinations: (1) listing HCFC-22 and HCFC-142b as unacceptable substitutes for HCFC-141b in all foam end-uses; and (2) listing HCFC-124 as unacceptable in all foam end-uses (65 FR 42653). EPA did not address the use of HFC-134a in the proposal because HFC-134a was already listed as an acceptable substitute for HCFC-141b (64 FR 30410). In addition, EPA proposed to list HCFC-141b, -22, and -142b as unacceptable in all foam end-uses with existing users grandfathered until 2005.

During the official comment period for the proposal, EPA received approximately 45 comments on the proposal (Docket A-2000-18). After the comment period closed, EPA acquired additional information pertaining to the availability and technical viability of alternatives, and the market size and potential economic impact of the proposal on various sub-sectors of the foam industry. This information was obtained through meetings held at the request of industry representatives, letters sent from members of Congress, letters sent directly to the Agency, and through EPA's own efforts to obtain

additional information in order to fully address comments received during the comment period. On May 23, 2001, the Agency published a Notice of Data Availability (NODA) making this new information available for public review and comment (66 FR 28408). The comment period for the NODA ended on June 22, 2001.

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### I. Section 612 Program

#### A. Statutory Requirements

Section 612 of the Clean Air Act (CAA) requires EPA to develop a program for evaluating alternatives to ozone-depleting substances. EPA refers to this program as the Significant New Alternatives Policy (SNAP) program. The major provisions of section 612 are:

- **Rulemaking**—Section 612(c) requires EPA to promulgate rules making it unlawful to replace any class I (chlorofluorocarbon, halon, carbon tetrachloride, methyl chloroform, methyl bromide, and hydrobromofluorocarbon) or class II (hydrochlorofluorocarbon) substance with any substitute that the Administrator determines may present adverse effects to human health or the environment where the Administrator has identified an alternative that (1) reduces the overall risk to human health and the environment, and (2) is currently or potentially available.

- **Listing of Unacceptable/Acceptable Substitutes**—Section 612(c) also requires EPA to publish a list of the substitutes unacceptable for specific uses. EPA must publish a corresponding list of acceptable alternatives for specific uses.

- **Petition Process**—Section 612(d) grants the right to any person to petition EPA to add a substitute to or delete a substitute from the lists published in accordance with section 612(c). The

Agency has 90 days to grant or deny a petition. Where the Agency grants the petition, EPA must publish the revised lists within an additional six months.

- **90-day Notification**—Section 612(e) directs EPA to require any person who produces a chemical substitute for a class I substance to notify the Agency not less than 90 days before new or existing chemicals are introduced into interstate commerce for significant new uses as substitutes for a class I substance. The producer must also provide the Agency with the producer's health and safety studies on such substitutes.

- **Outreach**—Section 612(b)(1) states that the Administrator shall seek to maximize the use of federal research facilities and resources to assist users of class I and II substances in identifying and developing alternatives to the use of such substances in key commercial applications.

- **Clearinghouse**—Section 612(b)(4) requires the Agency to set up a public clearinghouse of alternative chemicals, product substitutes, and alternative manufacturing processes that are available for products and manufacturing processes which use class I and II substances.

#### B. Regulatory History

On March 18, 1994, EPA published a rule (59 FR 13044) which described the process for administering the SNAP program and issued EPA's first acceptability lists for substitutes in the major industrial use sectors. These sectors include: refrigeration and air conditioning; foam manufacturing; solvents cleaning; fire suppression and explosion protection; sterilants; aerosols; adhesives, coatings and inks; and tobacco expansion. These sectors comprise the principal industrial sectors that historically consumed large volumes of ozone-depleting compounds.

The Agency defines a "substitute" as any chemical, product substitute, or alternative manufacturing process, whether existing or new, that could replace a class I or class II substance. Anyone who produces a substitute must provide the Agency with health and safety studies on the substitute at least 90 days before introducing it into interstate commerce for significant new use as an alternative. This requirement applies to chemical manufacturers, but may include importers, formulators, or end-users when they are responsible for introducing a substitute into commerce.

#### C. Listing Decisions

Under section 612, the Agency has considerable discretion in the risk management decisions it can make

under the SNAP program. In the SNAP rule, the Agency identified four possible decision categories: acceptable; acceptable subject to use conditions; acceptable subject to narrowed use limits; and unacceptable. Fully acceptable substitutes, *i.e.*, those with no restrictions, can be used for all applications within the relevant sector end-use. Conversely, it is illegal to replace an ODS with a substitute listed by SNAP as unacceptable.

After reviewing a substitute, the Agency may make a determination that a substitute is acceptable only if certain conditions of use are met to minimize risk to human health and the environment. Such substitutes are described as "acceptable subject to use conditions." Use of such substitutes without meeting associated use conditions renders these substitutes unacceptable and subjects the user to enforcement for violation of section 612 of the Clean Air Act and the SNAP regulations.

Even though the Agency can restrict the use of a substitute based on the potential for adverse effects, it may be necessary to permit a narrowed range of use within a sector end-use because of the lack of alternatives for specialized applications. Users intending to adopt a substitute acceptable with narrowed use limits must ascertain that other acceptable alternatives are not technically feasible. Companies must document the results of their evaluation, and retain the results on file for the purpose of demonstrating compliance. This documentation must include descriptions of substitutes examined and rejected, processes or products in which the substitute is needed, reason for rejection of other alternatives, *e.g.*, performance, technical or safety standards, and the anticipated date

other substitutes will be available and projected time for switching to other available substitutes. The use of such substitutes in applications and end-uses which are not specified as acceptable in the narrowed use limit is unacceptable and violates section 612 of the CAA and the SNAP regulations.

EPA does not believe that notice and comment rulemaking procedures are required to list alternatives as acceptable with no restrictions. Such listings do not impose any sanction, nor do they remove any prior license to use a substitute. Consequently, EPA adds substitutes to the list of acceptable alternatives without first requesting comment on new listings (59 FR 13044). Updates to the acceptable lists are published as separate Notices of Acceptability in the **Federal Register**.

As described in the original March 18, 1994 rule for the SNAP program (59 FR 13044), EPA believes that notice-and-comment rulemaking is required to place any alternative on the list of prohibited substitutes, to list a substitute as acceptable only under certain use conditions or narrowed use limits, or to remove an alternative from either the list of prohibited or acceptable substitutes. In this final rule, EPA is issuing its decision on the acceptability of certain substitutes in the foams blowing sector. Today's rule finalizes and incorporates decisions that were proposed on July 11, 2000 at 65 FR 42653 (referred to hereinafter as "the proposal"). The section below presents a detailed discussion of the determinations that are made final in today's Final Rule.

## II. Listing Decisions on Foam Sector Substitutes

A major goal of the SNAP program is to facilitate the transition away from ozone-depleting substances. In 1994,

EPA listed hydrochlorofluorocarbons (HCFCs), such as HCFC-141b, -22, and -142b, as acceptable replacements for CFCs because the Agency believed that HCFCs provided a temporary bridge to alternatives that do not deplete stratospheric ozone ("ozone-friendly"). At that time, EPA believed that HCFCs were necessary transitional alternatives to CFC blowing agents in thermal insulating foam (59 FR 13083). Since then, HCFC-141b, -22, and -142b have become the most common foam blowing agents. HCFCs are slated for phaseout under the Clean Air Act and Montreal Protocol on Substances that Deplete the Ozone Layer,<sup>1</sup> and the Agency has identified several alternatives to HCFC blowing agents, including hydrofluorocarbons (HFCs), hydrocarbons, carbon dioxide, and other compounds as acceptable substitutes in the foam blowing sector. In some foam end-uses, these alternatives have been tested and implemented in finished products that are on the market. In others, foam manufacturers are still working to formulate, test, and implement the alternatives to HCFCs in manufacturing processes.

On July 11, 2000, EPA proposed action regarding the acceptability of certain HCFCs in the foam sector. EPA subsequently solicited additional comment in a Notice of Data Availability issued on May 23, 2001. Today, EPA is making final decisions regarding the acceptability of those substitutes. EPA's decisions are based on the technical viability of alternatives, timing and availability of alternatives, the need for products that maintain thermal efficiency, structural integrity, and safety, and the potential economic implications. Table A summarizes today's final actions by foam sector end-use.

TABLE A.—TODAY'S FINAL ACTION BY FOAM END-USE

Foam end-use	HCFC blowing agent in use	Today's final action
Rigid Polyurethane/ Polyisocyanurate Laminated Boardstock.	HCFC-141b .....	(1) HCFC-141b: No Action. (2) HCFC-22, -142b, -124: Unacceptable Substitutes for HCFC-141b.
Rigid Polyurethane Appliance Foam	HCFC-141b (some HCFC-22 and HCFC-142b).	(1) HCFC-141b: No Action. (2) HCFC-22: Remains an Acceptable Substitute for CFCs. (3) HCFC-22, -142b, -124: Unacceptable Substitutes for HCFC-141b.
Rigid Polyurethane Spray Foam .....	HCFC-141b .....	(1) HCFC-141b: No Action. (2) HCFC-22, -142b: Unacceptable Substitutes for HCFC-141b. (3) HCFC-124: Unacceptable Substitute.

<sup>1</sup> The phaseout schedule was established on December 10, 1993 (58 FR 65018) as authorized

under section 606 of the Clean Air Act. The phaseout for HCFCs currently used as foam blowing

agents range from January 1, 2003 to January 1, 2010.

TABLE A.—TODAY'S FINAL ACTION BY FOAM END-USE—Continued

Foam end-use	HCFC blowing agent in use	Today's final action
Rigid Polyurethane Commercial Refrigeration and Sandwich Panels.	HCFC-141b, -22, and HCFC-142b.	(1) HCFC-141b: No Action. (2) HCFC-22, -142b: Remain Acceptable Substitutes for CFCs. (3) HCFC-22, -142b: Acceptable Substitutes for HCFC-141b Subject to Narrowed Use Limits.* (4) HCFC-124: Unacceptable Substitute.
Rigid Polyurethane Slabstock and Other Foams.	HCFC-141b (some HCFC-22) .....	(1) HCFC-141b: No Action. (2) HCFC-22, -142b: Acceptable Substitutes for HCFC-141b Subject to Narrowed Use Limits*. (3) HCFC-124: Unacceptable Substitute.
Extruded Polystyrene .....	HCFC-142b (some HCFC-22) .....	(1) HCFC-142b, -22: Remain Acceptable Substitutes for CFCs. (2) HCFC-124: Unacceptable Substitute.
Polyolefin .....	HCFC-142b .....	(1) HCFC-142b: Remains an Acceptable Substitute for CFCs. (2) HCFC-124: Unacceptable Substitute.

\*Users must maintain records outlining technical/economic constraints that prevent switching from HCFC-141b to non-ozone-depleting alternatives.

#### A. HCFC-141b

##### Summary of Proposal

On March 18, 1994, EPA listed HCFC-141b as an acceptable substitute for CFCs in various foam end-uses. A number of foam manufacturers switched from CFC-11 and CFC-113 to HCFC-141b. Since that time, EPA has listed several non-ozone-depleting alternatives as acceptable replacements for HCFC-141b. In the July 11, 2000 proposal, EPA proposed to change its previous decision of acceptability such that use of HCFC-141b would be unacceptable for foam manufacture (65 FR 42653). However, for existing users, such use would be grandfathered until January 2005 (*i.e.*, existing users could continue to use HCFC-141b as a foam blowing agent until January 2005). The Agency believed that this time period was sufficient for these end-users to transition to non-ozone-depleting alternative foam blowing agents, taking into consideration the impending production phaseout of HCFC-141b effective January 1, 2003.

##### Summary of Final Action

EPA is deferring its decision on whether to list HCFC-141b as an unacceptable substitute for CFCs in foam blowing end uses. This decision does not in any way affect the January 1, 2003 phaseout deadline for the production and import of HCFC-141b, previously established on December 10, 1993 (58 FR 65018), to reduce U.S. HCFC consumption in accordance with section 606 of the Clean Air Act and the Montreal Protocol.

After the comment period for the July 11, 2000 proposal closed September 11, 2000, EPA acquired additional information pertaining to the availability and technical viability of alternatives and the market size and economic impact of the proposal on various industries. This information was obtained through meetings held at the request of industry representatives, letters sent through congressional representatives, letters sent directly to the Agency, and through EPA's own efforts to obtain additional information in order to fully address comments received during the comment period. The Agency published a Notice of Data Availability (NODA) on May 23, 2001 making the additional information pertaining to the foam industry available for public comment (66 FR 28408). As part of the proposed HCFC allowance allocation rulemaking, the Agency has also received comments and information pertaining to the use and availability of HCFCs and alternatives in the foam industry (66 FR 38064). The proposed HCFC allowance system is intended to control the U.S. production and consumption of class II controlled substances, the hydrochlorofluorocarbons (HCFCs) in accordance with U.S. obligations under the Montreal Protocol.

Several commenters on the proposed SNAP rule suggested that EPA should not list HCFC-141b as unacceptable for existing users because of a lack of feasible alternatives. In fact, these commenters, as well as commenters on the proposed HCFC allocation rule, requested that the Agency extend the

January 1, 2003 phaseout deadline for production of HCFC-141b for use in specific applications such as spray foam. As part of the separate regulatory program governing HCFC production and allocations under sections 605 and 606 of the Clean Air Act (66 FR 38081), the Agency will address the comments pertaining to limited, continued production of HCFC-141b for use in applications where feasible alternatives are not yet fully developed and available. A final HCFC allocation rule is expected to be published by the fall of 2002. More detailed and up-to-date information on this issue can be found on EPA's Ozone Depletion World Wide Web site at <http://www.epa.gov/ozone/title6/phaseout/hcfc141b.html>.

Because a decision on exempted HCFC-141b production will have implications for continued use of HCFC-141b in the foam industry, we are deferring a final decision on the use of HCFC-141b. By deferring, EPA is allowing continued use of stockpiled HCFC-141b (produced prior to January 1, 2003) and use of limited amounts of HCFC-141b that may be produced after January 1, 2003 to address technical constraints of some existing HCFC-141b users.

#### B. HCFC-22, HCFC-142b and Blends Thereof

##### Summary of Proposal

In the July 11, 2000 proposal, EPA proposed to list HCFC-22, HCFC-142b and blends thereof as unacceptable in all foam end-uses; existing use of HCFC-22/HCFC-142b would have been grandfathered until January 1, 2005. On

March 18, 1994, EPA listed these HCFCs as acceptable substitutes for CFC-11, -12, -113, and -114 in various foam end-uses. A number of foam manufacturers switched from those CFCs to HCFC-22 and HCFC-142b as transitional blowing agents. Since that time, EPA has listed several non-ozone-depleting substitutes as acceptable replacements for HCFCs. Under the proposal, companies not currently using HCFC-22 or HCFC-142b would be prohibited from switching to HCFC-22 or HCFC-142b while existing users of HCFC-22 and HCFC-142b could continue to use HCFC-22 and HCFC-142b as foam blowing agents, but only until January 1, 2005. The Agency believed that time period was sufficient time for existing users to transition from HCFC-22 and HCFC-142b to non-ozone depleting alternative foam blowing agents.

#### Summary of Final Action

Based on comments received on the proposal and NODA, the Agency is taking the following final actions today: (1) Withdrawing its proposed decision to list HCFC-22 and HCFC-142b as unacceptable substitutes for CFCs (*i.e.*, existing users of these chemicals can continue use); (2) listing HCFC-22 and HCFC-142b as unacceptable substitutes for HCFC-141b in rigid polyurethane/polyisocyanurate laminated boardstock, rigid polyurethane appliance, and rigid polyurethane spray foam applications; and (3) listing HCFC-22 and HCFC-142b as acceptable substitutes, with narrowed use limits, for HCFC-141b in commercial refrigeration, sandwich panels, and rigid polyurethane slabstock and other foams applications.

EPA is withdrawing the proposal to restrict existing use of HCFC-22 and HCFC-142b as substitutes for CFCs because the Agency believes there are technical and economic constraints in switching to ozone-friendly alternatives for these users within the next several years. Foam manufacturers who are existing users of HCFC-22 and HCFC-142b can continue to use these HCFCs but only under the conditions described here. Existing use is defined as current use of HCFC-22 and/or HCFC-142b to manufacture actual foam products that are sold into commercial markets and meet all relevant code approvals, where required, prior to the date of publication of this final rulemaking. Manufacturers who have conducted trials or limited production runs are not considered existing users. Foam manufacturers who use HCFC-141b in blends with HCFC-22 or HCFC-142b may continue to use the current percentage by weight of HCFC-22 and HCFC-142b based on the

overall formulation. However, in those end-uses identified in today's action where substitution of HCFC-141b with HCFC-22 or HCFC-142b is unacceptable (rigid polyurethane/polyisocyanurate laminated boardstock, rigid polyurethane appliance, and rigid polyurethane spray foam applications), foam manufacturers may not replace HCFC-141b in current formulations with HCFC-22 or HCFC-142b. In these end-uses, HCFC-141b can only be replaced by SNAP approved alternatives. For example, if a formulation contains 8% HCFC-141b (by weight) and 2% HCFC-22 (by weight), the user cannot increase the total content of HCFC-22 in the formulation when replacing HCFC-141b with other SNAP approved alternatives. In addition to combined use of HCFC-141b and HCFC-22 in blends, EPA recognizes that a manufacturer may run separate production lines, some with HCFC-141b and some with HCFC-22, or may have multiple production facilities. Although such a manufacturer is an existing user of HCFC-22/HCFC-142b for some production lines, he may not convert the HCFC-141b lines or facilities, in whole or part, to HCFC-22 or HCFC-142b, except for those end-uses in which such substitution is deemed acceptable, subject to narrowed use limits (*e.g.*, commercial refrigeration, sandwich panels, and rigid polyurethane slabstock). In those end-uses where substitution of HCFC-141b with HCFC-22 or HCFC-142b is deemed unacceptable, SNAP approved alternatives for HCFC-141b must be used in those lines or facilities.

In today's action, EPA is also addressing use of HCFC-22 and HCFC-142b as replacements for HCFC-141b. EPA is finalizing its proposed determination that HCFC-22 and HCFC-142b are unacceptable as replacements for HCFC-141b in polyurethane boardstock and spray foam, and appliance end-uses; as of the effective date of this rule, these HCFCs cannot be used as substitute foam blowing agents for HCFC-141b. EPA believes that polyurethane boardstock, spray foam, and appliance manufacturers have identified and, in many cases, implemented viable non-ozone-depleting alternatives to HCFC-141b.

For commercial refrigeration and sandwich panel applications, and the polyurethane slabstock and other foams end-use, EPA is listing HCFC-22 and HCFC-142b, with narrowed use limits, as acceptable replacements for HCFC-141b. These end-uses are comprised of a wide range of diverse applications with unique technical considerations

and fragmented HCFC use. EPA is strongly opposed to listing HCFCs as acceptable where non-ozone-depleting alternatives are available. However, EPA believes that ozone-friendly alternatives to HCFC-141b have not yet been fully developed and implemented across the spectrum of applications within these end-uses. In these situations, EPA believes switching to HCFC-22 and/or HCFC-142b as a bridge to non-ozone-depleting alternatives presents a lower risk than continued use of HCFC-141b.

In prior SNAP program regulations, substitutes have been permitted under a narrowed range of use within a sector end-use because of the lack of alternatives for specialized applications. The narrowed use limit means that users intending to adopt HCFC-22 or HCFC-142b, and blends thereof in the commercial refrigeration and sandwich panels, and the "slabstock and other foams" end-uses, must ascertain that other acceptable alternatives are not technically feasible. These narrowed use requirements are summarized in a table at the end of this document and will be incorporated into Appendix J, Subpart G of the Code of Federal Regulations (CFR) at 40 CFR part 82. Under these provisions, companies must document the results of their evaluation, and retain the results on file for the purpose of demonstrating compliance. This documentation must include descriptions of substitutes examined and rejected, processes or products in which the substitute is needed, reason for rejection of other alternatives, *e.g.*, performance, technical or safety standards, and the anticipated date other substitutes will be available and projected time for switching to other available substitutes. The use of HCFC-22, HCFC-142b, and blends thereof in applications which are not specified as acceptable in the narrowed use limit is considered unacceptable and violates section 612 of the CAA and the SNAP regulations. In addition, foam manufacturers should be aware that EPA is continuing to review the commercial refrigeration, and sandwich panels and slabstock and other foams end-uses to determine the progress of non-ozone-depleting alternatives. As non-ozone-depleting alternatives become more widely available, the Agency will reevaluate the acceptability of HCFCs in these end-uses. Therefore, foam manufacturers within these applications that are using HCFCs should begin using non-ozone-depleting alternatives as soon as they are available in anticipation of future EPA action restricting the use of HCFCs.

*C. HCFC-124*

## Summary of Proposal

In the July 11, 2000 proposal, EPA proposed to list HCFC-124 as unacceptable in all foam end-uses. Because HCFC-124 has never been listed as an acceptable foam blowing substitute for CFCs, EPA believed there were no current users of the chemical and, therefore, did not address existing users separately.

## Summary of Final Action

Today's final rule lists HCFC-124 as unacceptable in all foam end-uses. Although HCFC-124 has a lower ODP than HCFC-141b, it was never submitted as a replacement for CFCs and therefore has never been commercialized for use as a blowing agent in the U.S. EPA is not aware of any uses of HCFC-124 as a foam blowing agent anywhere in the world. Comments on the proposal indicate that HCFC-124 has been tested on a limited scale as a foam blowing agent for rigid polyurethane foam only in the appliance industry. EPA believes that introduction of an HCFC into the foams industry to replace an existing HCFC is not necessary or appropriate in light of the ability of the appliance industry to convert directly from HCFC-141b to technically viable zero-ODP foam blowing alternatives.

**III. Response to Comments***A. HCFC-141b*

Because EPA is not taking final action today on its proposed decision to list HCFC-141b as unacceptable, the Agency is not responding to comments at this time. However, EPA would like to note the following issues raised in comments: (1) Import of pre-blended HCFC-141b polyurethane systems; and (2) use of stockpiled HCFC-141b. Commenters' concerns are summarized below along with EPA's preliminary views on these issues and information on the Agency's regulatory authority to address them.

Some commenters expressed concern that there was a potential for HCFC-141b, produced in the U.S. after the production ban for domestic use but subsequently exported from the U.S., to be re-imported in pre-blended polyurethane systems and used to produce foam in the U.S. Polyurethane foam systems generally consist of two components. One contains polyols, surfactants, blowing agents and other chemicals, the other contains isocyanate. These components are mixed on site to produce foam. Information specifically addressing or

referencing these issues can be found in Air Docket A-2000-18 reference numbers IV-E-7, IV-D-80, IV-D-93, and IV-D-96. Currently there are no regulations prohibiting insulating foam products containing HCFC-141b from being sold in the U.S. after January 1, 2003.<sup>2</sup>

These comments are outside the scope of the present rulemaking. However, EPA will continue to monitor the situation closely and collect information in order to decide if any action is necessary and if so, the appropriate timing of such action. Available information does not now indicate the extent to which import of HCFC-141b systems may occur. However, if this activity becomes widespread and compromises or undermines the intent of the U.S. HCFC-141b phaseout, disadvantaging companies that have made good faith investments in developing and implementing alternative technologies, EPA could consider establishing a SNAP use restriction under section 612 of the Clean Air Act or other appropriate actions; expanding the definition of "controlled product" or "bulk substance" under the U.S. phaseout regulations at 40 CFR part 82 to specifically address polyurethane pre-polymers; and/or establishing a labeling requirement under section 611 of the Clean Air Act for foams blown with HCFC-141b and any products containing such foam. These labels would inform the public that these products contain HCFC-141b, an ozone-depleting chemical that destroys stratospheric ozone. Other possible actions that could occur if the import of pre-blended HCFC-141b systems is seen to be compromising the U.S. phaseout of HCFC-141b include: (1) Section 610 of the Clean Air Act could be amended to remove the exemption for foam insulation products which would allow EPA to restrict the sale and distribution of products containing HCFC-141b; and (2) international discussions under the Montreal Protocol might result in a re-classification of polyurethane pre-polymers to include all pre-blended polyurethane systems as controlled bulk substances subject to the import restrictions or other such changes that

<sup>2</sup> Foam products which contain or are manufactured with HCFCs are currently banned from sale or distribution into interstate commerce under section 610 of the Clean Air Act. However, section 610 exempts foam insulation from this ban. Foam insulation products are defined as product containing or consisting of the following closed cell rigid foam types: polyurethane, polystyrene boardstock, phenolic, and polyethylene foam used for pipe insulation.

could prevent import of pre-blended polyurethane systems.

Another issue identified in the NODA was the potential for users to stockpile large enough quantities to delay the transition from HCFC-141b to non-ozone-depleting chemicals. Comments in the docket show that there are conflicting views on the amount of HCFC-141b that could be stockpiled for use after January 1, 2003. Some comments stated that the amount of HCFC-141b that could be stockpiled was limited by production and storage capacity and those limitations would prevent use of HCFC-141b after 2005 regardless of EPA's proposed unacceptability listing. Opposing this position, a commenter estimated that enough HCFC-141b could be collected, stockpiled, and sold to last more than 5 years past the production phaseout date.

The Agency does not have evidence that use of stockpiled HCFC-141b will significantly impede the transition away from HCFC-141b after the production phaseout. As the phaseout nears and access to HCFC-141b becomes more limited, the Agency believes that greater numbers of HCFC-141b users who have not yet transitioned to alternatives will do so. EPA encourages foam manufacturers to follow the lead of the polyisocyanurate boardstock industry, certain appliance manufacturers, and other foam manufacturers that are undertaking commendable efforts to transition to ozone-friendly alternatives. EPA will continue to monitor the situation closely and collect information in order to decide if any action is necessary and if so, the appropriate timing. The Agency may address this issue in more detail at the time we address the question of limited, continued production of HCFC-141b as part of the HCFC allocation rulemaking.

*B. Existing Use of HCFC-22 and HCFC-142b*

In today's action, EPA is withdrawing its proposal to list HCFC-22 and HCFC-142b as unacceptable substitutes for CFCs. Comments on the July 11, 2000 proposal and May 23, 2001 NODA regarding existing use of HCFC-22 and HCFC-142b fall under the following four summarized statements which are addressed in detail below:

1. Alternatives to HCFC-22 and HCFC-142b have not been fully developed for U.S. foam markets and, therefore, they are not technically viable for existing users of these chemicals.

2. There would be a significant impact on small businesses if EPA finalized its proposed action to list HCFC-22 and HCFC-142b as unacceptable for existing users.

3. EPA should not de-list chemicals without new evidence suggesting that these chemicals are more harmful than previously known or that eliminating their use would benefit the environment.

4. EPA should not use the SNAP program to accelerate the phaseout of HCFC-22 and HCFC-142b.

#### 1. Technical Viability of Alternatives

EPA's proposal was based on published and other publicly available information indicating that technically viable alternatives to HCFC-22 and HCFC-142b are available in all foam end-uses. Although some commenters agreed with EPA and supported the proposed decision, many commenters argued that EPA had insufficient data and that technically viable alternatives are not available. Commenters who disagreed with EPA recommended that EPA withdraw portions of the proposal that would affect existing users of HCFC-22 and HCFC-142b or extend the grandfathering period, for example, to 2008 instead of 2005. Based on these comments, EPA decided to collect more information in those foam sectors where publicly available information and published literature are limited. This additional information was made available for public review in a May 23, 2001 Notice of Data Availability (NODA) (66 FR 28408). The NODA included a technical analysis of comments received from the extruded polystyrene industry and a review of challenges facing the polyurethane spray foam industry and other systems house based applications. Both of these reports can be found in Docket A-2000-18, reference number IV-D-77 and IV-D-78, respectively.<sup>3</sup>

The polystyrene industry represents the largest foam end-use of HCFC-142b, with some minor HCFC-22 use. Key concerns raised during the comment periods relate to the technical feasibility of alternatives coupled with the cost and timing of the transition to non-ozone depleting chemicals. Polystyrene

manufacturers commented that while zero-ODP alternatives have been implemented in Europe, conversion to non-HCFC alternatives in the U.S. would require more than 5 years of research and development due to differences in building codes and product requirements. The major challenges facing the polystyrene industry relate to balancing density and thickness (*i.e.*, insulation value) of the foam and compliance with safety requirements. For example, current building codes limit the use of polystyrene to either thin, high density foam or thicker, low density foam. Any changes that result in higher density or lower R-value (thicker) foam would result in products that cannot meet current building codes. Existing building codes are not expected to be revised in the near future and EPA agrees with comments indicating that it could take longer than 4 years to finalize the development of new codes to account for increased "fire loads" (*i.e.*, denser or thicker foam) that the polystyrene industry indicates would result from switching to non-HCFC alternatives.

The technical analysis of comments received from the extruded polystyrene industry, Air Docket A-2000-18, IV-D-77, shows that the polystyrene industry needs to maximize its efforts between now and 2010 in order to transition to alternatives in time for the HCFC-22/HCFC-142b production phaseout. EPA believes that research and development to modify existing blowing agent options and/or building codes in the U.S., and to also conduct trials and plant modifications, could take up to 8 years. EPA urges polystyrene manufacturers to examine research and development applied in Europe to further develop non-HCFC blowing agent options in order to achieve foam densities and insulation values that will meet building codes and be marketable in the U.S. at the earliest possible date. The Agency will continue to monitor the development of alternatives in the polystyrene sector and work with this industry to establish a time-frame for transitioning away from HCFCs.

As indicated in footnote 3 above, end-uses other than polystyrene account for a small percentage of the total existing HCFC-22 and HCFC-142b use in the foam industry. HCFC-22 and HCFC-142b are used in polyurethane appliance, commercial refrigeration, sandwich panels, and slabstock and other foam end-uses. Many comments on the July 11, 2000 proposal stated that EPA had not identified all entities potentially affected by the proposed HCFC-22/HCFC-142b restrictions or

failed to assess the impact of the proposal on these users, many of which are small businesses. In response to comments, EPA expanded its effort to identify users of HCFC-22 and HCFC-142b and analyze the current status of alternatives in these applications. EPA reviewed comments and hired a foam industry expert to collect information from spray polyurethane foam representatives and systems house representatives on the viability of alternatives in each application that could be identified. Due to the fragmentation of the industry, it was difficult to identify specific applications, blowing agents used, and the viability of alternatives for each end-user.

In developing the proposed rule, based on information available to the Agency at the time, we concluded that non-ozone-depleting chemicals which reduce the risk to human health and the environment were available as replacements, and that existing users of HCFC-22 and HCFC-142b could switch to these alternatives. Based on comments and EPA's data collection efforts, the Agency learned that HCFC-22/HCFC-142b alternatives have been identified and developed by some polyurethane foam manufacturers. However, due to unique technical considerations for many HCFC-22/HCFC-142b users in the polyurethane industry, EPA believes that technically viable alternatives cannot be implemented across the spectrum of applications at this time. Consequently, EPA believes that for many polyurethane manufacturers that have been relying on HCFC-22 and HCFC-142b, switching to alternatives by 2005 would be difficult and prohibitively costly.

Thus, because of the infeasibility in the near term of alternatives for existing users in the polystyrene industry and the availability and technical viability of alternatives in other end-uses, EPA is withdrawing the proposed restriction on HCFC-22 and HCFC-142b for existing users. However, EPA believes that there are certain polyurethane applications, particularly non-insulating applications, that may currently have technically viable alternatives that are economically feasible. EPA is conducting a complete review of the spray, commercial refrigeration, and sandwich panels and slabstock and other foams end-uses to determine the current status of specific applications and products within these end-uses and the progress being made to implement non-ozone-depleting alternatives. As non-ozone-depleting alternatives become more widely available and implemented, the Agency

<sup>3</sup> Based on EPA's information collection effort and public comments submitted in response to the NODA, EPA estimates that approximately 160 million pounds of HCFCs are used in the foam sector. HCFC-22 makes up only 5% of the total HCFC use in the foam sector on a weight basis. Approximately half of that is in the polyurethane appliance sector. The remaining HCFC-22 use is in polyurethane commercial refrigeration, sandwich panel and other polyurethane applications with some minor use of HCFC-22 in the polystyrene industry. Nearly 95% of the approximately 30 million pounds of HCFC-142b is used by the polystyrene industry. The remaining HCFC-142b use is scattered amongst polyurethane appliance, commercial refrigeration, one-component, and sandwich panel applications. Some HCFC-142b is also used to produce polyethylene foam.



plans to reevaluate the acceptability of HCFCs in these end-uses. In order to anticipate future EPA action restricting the use of HCFCs, EPA urges foam manufacturers to implement non-ozone-depleting alternatives as soon as they are available and economically feasible.

## 2. Small Business Impacts

At the time of the proposal, EPA did not believe that a significant number of small entities would be affected by the proposed action. However, EPA acknowledged that this decision would reverse a prior acceptability determination and current users could be disadvantaged if forced to quickly switch to other substitutes. For that reason, the Agency proposed to grandfather existing users of HCFC-22 and HCFC-142b until January 1, 2005. Through comments to the proposal, it came to the Agency's attention that we were not aware of some users of these HCFCs. Commenters argued that the flexibility EPA proposed to allow individual users to demonstrate need for continued use of HCFC-22 and HCFC-142b beyond 2005 was not appropriate because a case-by-case review to provide extensions to the grandfathering period would create a new SNAP process that would place an undue burden on many small businesses. In reaction to these comments, EPA expanded its effort to identify existing users of HCFC-22 and HCFC-142b that would be affected if EPA made final a decision to make HCFC-22 and HCFC-142b unacceptable for existing users. As discussed above, on May 23, 2001, EPA published a NODA that identified many of the existing HCFC-22/HCFC-142b users in the foam industry as small businesses (66 FR 28408). Because EPA is withdrawing the proposed action, there will be no effect on small businesses that are existing users of HCFC-22 and/or HCFC-142b. If the Agency takes future action to restrict the use of HCFCs based on its review of commercial refrigeration, and sandwich panels and slabstock and other foams end-uses, small business impacts will be fully considered prior to an EPA proposal.

## 3. Environmental Benefit

Commenters argued that the environmental benefit of the proposal had not been quantified and that an analysis would have shown minimal benefit. Specifically, these commenters claimed that a decision to list HCFC-22 and HCFC-142b as unacceptable would not significantly reduce damage to the ozone layer and that EPA had not shown how the proposal would reduce overall risks to human health and the

environment. One commenter stated that "any phaseout of HCFCs in the U.S. foam-blowing sector would have a de minimis impact on the recovery of the stratospheric ozone layer."

Under the SNAP program, EPA does not rank various risk factors (*e.g.*, toxicity, flammability, ozone depletion potential) for each alternative being considered. Instead, EPA considers all relevant health and environmental information in a comparative framework. Today's decision is to list HCFC-22 and HCFC-142b as unacceptable substitutes for HCFC-141b in certain applications because of the availability of non-ozone depleting alternatives. Because of the risks they pose to the stratospheric ozone layer, HCFC-22 and HCFC-142b are being phased out of production under the provisions of the Montreal Protocol and the Clean Air Act. Under SNAP, EPA's mandate is to determine that it is "unlawful" to replace an ODS with a substitute where other alternatives are available and would reduce the overall risk to human health and the environment. EPA's decision to list HCFC-22 and HCFC-142b as unacceptable in specific end-uses is based on the conclusion that other non-ODS substitutes are available and, considering all risk factors, create less overall risk to human health and the environment.

Because of technical constraints faced by existing users of HCFC-22 and HCFC-142b, EPA is withdrawing the proposal affecting existing users. However, EPA maintains that use of these chemicals continues to destroy the ozone layer (estimates gathered by EPA and provided in the NODA show that 35 million pounds of HCFC-142b and HCFC-22 are used annually) and that there will be an environmental benefit to transitioning from ODSs as soon as technically viable, energy efficient alternatives are fully developed and available. EPA encourages companies to continue efforts to develop and implement these alternatives.

## 4. Accelerated Phaseout

Many commenters viewed EPA's proposed listing decision for HCFC-22 and HCFC-142b as an attempt to accelerate the phaseout of these HCFCs. Many commenters argued that prohibiting use of HCFCs under SNAP would amount to an acceleration of the established January 1, 2010 production phase-out of HCFC-22 and HCFC-142b established under section 605 of the Clean Air Act (CAA), and that such action is not authorized under the SNAP program (section 612).

EPA recognizes that some foam manufacturers viewed the 2010 production phaseout of HCFC-22 and HCFC-142b as equivalent to an end-of-use date because after that time supplies of these chemicals will significantly diminish. However, the 2010 deadline only relates to consumption of HCFCs as defined under section 601 of the CAA (consumption = production + import - exports). SNAP determinations under section 612 of the CAA do not affect consumption, defined under section 605 of the CAA. If finalized, EPA's determination would have only restricted use of HCFC-22 and HCFC-142b in the foam sector. Nevertheless, this issue is moot because under today's action, existing users of HCFC-22 and HCFC-142b can continue using these chemicals beyond January 1, 2005.

EPA also received comments that SNAP should not be used in order to reduce consumption of ozone depleting chemicals. Use restrictions under SNAP may have the effect of reducing the production and import of ozone-depleting substances. However, the SNAP program does not directly regulate or constrain HCFC consumption. Compliance with HCFC consumption requirements for the U.S., specified in the Montreal Protocol and Clean Air Act, are addressed in separate regulatory actions by the Agency. In the proposal, EPA was following its mandate to review ODS alternatives and make determinations on their acceptability in order to ensure that substitutes for ODSs that are determined acceptable present a lower risk to human health and the environment. EPA's basis for the proposal was that the Agency believed technically and economically viable non-ozone depleting alternatives were available. Because the goal of the SNAP program is to facilitate an expeditious movement to these alternatives, EPA believed its proposed action was appropriate at the time. However, as provided above, EPA is withdrawing its proposed decision because EPA now believes that technically feasible alternatives are not widely available for polystyrene manufacturers. Additional information will be collected on the viability and timing of non-ozone-depleting alternatives for polyurethane manufacturers currently using HCFC-22 and/or HCFC-142b.

## C. New Use of HCFC-22 and HCFC-142b

A major objective of the SNAP program is to facilitate the transition from ozone-depleting chemicals by promoting the use of substitutes which present a lower risk to human health



and the environment (40 CFR 82.170(a)). Today's rule lists HCFC-22 and HCFC-142b as unacceptable replacements for HCFC-141b in rigid polyurethane and polyisocyanurate boardstock, and polyurethane appliance and spray foam applications. EPA has concluded based on the available information that technically viable, non-ozone depleting (zero-ODP) alternatives are currently or potentially available for HCFC-141b for these end-uses. The Agency believes that the use of HCFC-22 and HCFC-142b in applications where non-ozone depleting chemicals are available is unnecessary and presents greater risk to human health and the environment by contributing to the continued depletion of the ozone layer.

In the boardstock and appliance foam sectors, many companies have already switched to non-ozone-depleting alternatives or plan to do so in the near future. In the spray foam sector, alternatives other than HCFC-22 or HCFC-142b have been identified as eventual replacements for HCFC-141b. At this point, however, the spray foam industry believes that additional time is needed to test and implement any alternatives to HCFC-141b. The Agency is currently reviewing a request that limited quantities of HCFC-141b be made available for spray foam applications beyond the January 1, 2003 phaseout deadline. EPA intends to issue a proposed determination pertaining to this request later this year as part of the HCFC allocation rulemaking.

Today's rule lists HCFC-22 and HCFC-142b as acceptable replacements, under narrowed use limits, for HCFC-141b in commercial refrigeration, sandwich panels, and slabstock and other foams applications. Users intending to adopt HCFC-22 or HCFC-

142b, and blends thereof in the commercial refrigeration and sandwich panels, and the "slabstock and other foams" end-uses, must ascertain and document that other acceptable alternatives are not technically feasible. EPA believes that at this time, technically viable, non-ozone depleting (zero-ODP) alternatives to HCFC-141b are not fully developed for all applications within these end-uses. With the production phaseout of HCFC-141b approaching, several comments indicated that many companies are aggressively testing non-ozone-depleting alternatives and plan to implement them in the near future. However, these end-uses are comprised of extremely diverse products and non-ozone-depleting alternatives may not be fully developed in every unique application within these end-uses. Additionally, these end-uses comprise thousands of small businesses and EPA believes that, in this situation, it is appropriate to allow the narrowed use of HCFC-22 and/or HCFC-142b where necessary. Although EPA encourages continued efforts to implement non-ozone-depleting alternatives, the Agency feels that allowing narrowed use of HCFC-22 and/or HCFC-142b will facilitate the impending HCFC-141b transition by providing flexibility to small businesses who have not yet successfully identified suitable alternatives.

Comments on the July 11, 2000 proposal and May 23, 2001 NODA regarding new use of HCFC-22 and HCFC-142b as replacements for HCFC-141b indicate opposing views on the following four major issues which are addressed in detail below:

1. Technical viability of alternatives to HCFC-141b

2. Availability of alternatives to HCFC-141b
3. Economic/small business impacts
4. EPA's review process

1. Technical Viability of Alternatives

EPA's proposal was based on our understanding that technically feasible alternatives are available in all foam sectors. However, some comments suggested that feasible alternatives were not available for all end-uses and that EPA should have proposed acceptability determinations by end-use rather than across the entire foam sector. EPA's SNAP program has defined ten major end-uses in the foam sector. Of these ten end-uses, manufacturers in the following four use HCFC-141b:<sup>4</sup>

- Rigid Polyurethane and Polyisocyanurate Laminated Boardstock
- Rigid Polyurethane Appliance
- Rigid Polyurethane Spray, Commercial Refrigeration, and Sandwich Panels
- Rigid Polyurethane Slabstock and Other Foams

Based on data collected by the Agency (Air Docket A-2000-18, IV-D-79), rigid polyurethane/polyisocyanurate laminated boardstock makes up 60% of the total foam manufacturing use of HCFC-141b in the U.S., the rigid polyurethane appliance end-use and spray foam application each use approximately 18% of the total HCFC-141b, and the remaining 4-5% of HCFC-141b use is combined in rigid polyurethane commercial refrigeration, sandwich panels, slabstock and other foam applications. Below is a discussion, by end-use, on the technical feasibility of non-ODS alternatives to HCFC-141b (Table B lists the SNAP approved alternatives).

TABLE B.—SNAP APPROVED ALTERNATIVES TO HCFCs

SNAP approved HCFC alternative	Boardstock	Appliance	Spray	Commercial refrigeration, and sandwich panels	Slabstock and other foams
Water/CO <sub>2</sub> .....	X	X	X	X	X
HFC-134a .....	X	X	X	X	X
HFC-152a .....	X	X	X	X	X
HFC-245fa .....	X	X	X	X	X
Exxsol .....	X	X	X	X	X
Hydrocarbons (C3-C6) .....	X	X	.....	X	X
Formic Acid .....	X	X	X	X	X
Vacuum Panels .....	.....	X			
2-chloropropane .....	X				
Methyl Formate .....	X	X	.....	X	X

<sup>4</sup> HCFC-141B is not used to manufacture polystyrene foam.

## Rigid Polyurethane and Polyisocyanurate Laminated Boardstock

Although the majority of comments supported EPA's determination that technically viable alternatives to HCFC-141b are available for the polyurethane and polyisocyanurate boardstock industry, two commenters stated that those manufacturers converting from HCFC-141b to hydrocarbons would see a 10–15% loss in insulation value of their product. EPA recognizes that foam manufactured using alternative blowing agents may display slightly different properties than HCFC-141b-blown foam. However, the Agency did not receive, and is not otherwise aware of, data demonstrating that the use of hydrocarbons would reduce the insulating performance of polyurethane and polyisocyanurate boardstock. On the contrary, EPA received information showing that hydrocarbons are a viable option and that manufacturers in the polyurethane and polyisocyanurate laminated boardstock industry are actively transitioning to them, as described below.

Hydrocarbon blowing agents have been considered viable candidates to replace HCFCs for several years. A 1995 article indicates that "hydrocarbon blown foams can be developed that meet the stringent requirements of the North American construction industries" (Docket A-2000-18, IV-D-41, Supporting Document #54). Although processing techniques were not optimized at the time, according to the authors, the data "clearly indicate[s] that n-pentane and cyclopentane are viable candidates for use as \* \* \* blowing agents in polyisocyanurate foams." Subsequent studies show that, due to further research and development of hydrocarbon blown foams over the past 5 years, the technical viability of hydrocarbons has improved (A-2000-18, IV-D-41, Supporting Document #44-51).

Additionally, several comments provided information confirming that rigid polyurethane and polyisocyanurate laminated boardstock manufacturers are rapidly converting to hydrocarbon-based blowing agents. One roofing corporation presented a line of hydrocarbon blown foam in 1997, well ahead of the 2003 HCFC-141b phaseout (A-2000-18, IV-D-72). As of March 2000, two additional polyisocyanurate boardstock manufacturers had announced their intention to use hydrocarbons, and two or three others planned to do so before 2001 (Docket A-2000-18, IV-D-41, Supporting Document #43). EPA has additional information indicating that several other

boardstock manufacturers are in the process of converting some or all of their facilities from HCFC-141b to hydrocarbons (A-2000-18, IV-D-64, 73). EPA believes that evidence of an ongoing transition from HCFC-141b to hydrocarbon blowing agents, provides conclusive support for the Agency's position that low- or zero-ODP alternatives are available in the rigid polyurethane and polyisocyanurate boardstock sector.

Although hydrocarbons have taken the lead as the replacement for HCFC-141b in rigid polyurethane and polyisocyanurate laminated boardstock applications, hydrofluorocarbons (HFCs) may also be considered viable alternatives to HCFC blowing agents (Docket A-2000-18, IV-D-41, Supporting Document #48, 52, 54). An article published for a Polyurethanes World Congress meeting in 1997 indicates that HFC-245fa is a technically viable zero-ODP alternative that "produces foams with properties comparable to HCFC-141b with minimal reformulation" (Docket A-2000-18, IV-D-41, Supporting Document #52). Although the author states that the predicted costs of HFC-245fa could limit its use in certain applications, recently published articles show that more cost-effective blends of HFC-245fa and water or HFC-245fa and hydrocarbons are currently being tested and developed for the boardstock sector (Docket A-2000-18, IV-D-74, 75). Based on this information, the Agency believes HFC-245fa and HFC-245fa blends are additional, viable zero-ODP alternatives to HCFC-141b in the polyurethane and polyisocyanurate boardstock industry.

## Rigid Polyurethane Appliance Foam

The rigid polyurethane appliance foam industry predominantly uses HCFC-141b with some minor use of HCFC-22 and HCFC-142b. As discussed in the previous section, existing use of HCFC-22 and HCFC-142b is considered acceptable in today's action.<sup>5</sup> For appliance foam manufacturers using HCFC-141b today, however, the Agency believes that there

are a sufficient number of viable, non-ozone depleting alternatives to which the industry has already made substantial commitment. As discussed below, in anticipation of the phaseout of HCFC-141b and new Department of Energy efficiency standards, the U.S. appliance industry has been testing and developing zero-ODP alternatives for at least five years (Docket A-2000-18: IV-D-11, Attachments #2, 4; IV-D-41, Supporting Document #5).

Hydrocarbon blowing agents have been considered viable candidates to replace CFCs and HCFCs for several years and are widely used to produce appliance foam in Europe and Japan. One commenter provided 16 articles showing performance developments of hydrocarbon appliance systems since 1995 (Docket A-2000-18, IV-D-41, Supporting Documents #2-5, 8-9, 12-13, 15, 17, 21-23, 25-26, 29). Although U.S. appliance manufacturers have not shown broad movement towards hydrocarbons, comments indicate that hydrocarbons are technically viable alternatives to HCFC-141b (Docket A-2000-18, IV-D-31 and 41 -Supporting Document #5, 43).

HFC-134a also is a technically viable alternative that is currently being used in the U.S. to manufacture appliance foam (Docket A-2000-18, IV-D-41-Supporting Document #5, IV-E-6). An October 2000 industry report (Docket A-2000-18, IV-D-75c) documents developments in HFC-134a technology that have improved processing and foam properties. The author concludes that HFC-134a is a "cost-effective substitute to produce rigid polyurethane foam with excellent properties for the appliance industry."

EPA received some comments opposed to the Agency's determination that technically viable alternatives are available for the polyurethane appliance foam sector. Three commenters stated that appliance manufacturers converting from HCFC-141b to commercially available zero-ODP alternatives would see a 10% loss in energy efficiency (Docket A-2000-18, IV-D-3, 11, 16). These commenters also suggest that alternative blowing agents, such as HFC-134a and cyclopentane, may result in foams that are not as thermally insulating as those produced with HCFC-141b. However, one study reported that performance of cyclopentane-blown appliance foam may approach that of CFC-11 (Docket A-2000-18, IV-D-41, Supporting Document #8). If appliance manufacturers see losses in insulation values when using hydrocarbons or HFC-134a, modifications can be made to reduce energy consumption to

<sup>5</sup> Appliance manufacturers recently modified their products and operations to comply with 2001 DOE energy efficiency standards. In contrast to appliance manufacturers that have been using HCFC-141b, HCFC-22/-142b users have assumed that their blowing agents would be available until 2010. As discussed in this section, alternatives to HCFC-141b in the appliance sector have been developed and are being implemented in ways to ensure compliance with the DOE standard. The Agency believes that it would be difficult at this point for HCFC-22/-142b users to test and implement other blowing agents in their products to meet the new energy standards.

compensate for losses in insulation value (Docket A-2000-18: IV-D-11, Attachment #1; IV-D-41, Supporting Document #27, 32, 33). Additionally, EPA received numerous studies showing that use of HFC-245fa, which is scheduled to be commercially available by mid-2002, could result in energy efficiencies equal or superior to those for HCFC-141b (Docket A-2000-18: IV-D-11, Attachment #1-5, IV-D-41, Supporting Documents #1, 2, 5-7, 10, 11, 14-17, 23, 28) and several appliance manufacturers have finalized their plans to convert to HFC-245fa blowing agents (Docket A-2000-18: IV-E-6, IV-D-23).

Water heaters and vending machines also fall under the SNAP rigid polyurethane appliance sector. Both of these applications are primarily supplied by polyurethane systems houses and some manufacturers in this end-use currently use HCFC-22 and HCFC-142b, while others use HCFC-141b.<sup>6</sup> The technical viability of alternatives for these applications was discussed in the May 23, 2001 Notice of Data Availability (NODA). Available information indicates that non-ozone depleting alternatives to HCFC-141b are available and are already being implemented. Several water heater manufacturers have transitioned from HCFCs to non-ozone-depleting alternatives or are planning for conversions as the HCFC-141b production phaseout nears. No technical barriers to these alternatives were identified in the comments received from the polyurethane systems houses (non-spray foam) provided in the NODA.

#### Rigid Polyurethane Spray Foam

Based on several comments and a report commissioned by the Agency to supplement information provided in the comments to the proposed rule and NODA, there is little if any interest within the spray polyurethane foam industry in switching from HCFC-141b to HCFC-22 and/or HCFC-142b. Much of this resistance is due to differences in processing and performance, and the capital costs associated with transitioning from a liquid blowing agent (HCFC-141b) to a gaseous blowing agent (HCFC-22/HCFC-142b). Today's action lists HCFC-22 or HCFC-142b as unacceptable substitutes for HCFC-141b within the rigid polyurethane spray foam sector. As discussed previously, the Agency will issue a separate decision on the request to allow for

limited production of HCFC-141b beyond January, 2003 for spray foam applications.

#### Commercial Refrigeration and Sandwich Panels; Slabstock and "Other Foams"

Based on comments from numerous foam manufacturers within the commercial refrigeration, sandwich panels, and slabstock and "other foams" applications, EPA is approving use of HCFC-22 and HCFC-142b in these end-uses with narrowed use conditions. EPA found that these end-uses have the following characteristics: (1) Highly diverse applications with unique technical considerations depending on the application; (2) thousands of small businesses with varying levels of progress made on research and development on alternatives; and (3) use of different HCFCs within the same applications with no single preferred blowing agent of choice. These end-uses include a broad array of products and applications such as walk-in coolers, garage and entry doors, refrigerated trucks and railcars, architectural panels, picnic coolers, tank and pipe insulation, marine flotation foams, floral foams, and taxidermy foams. Given the limited amount of published information on the technical viability of alternatives in these end-uses, EPA commissioned a review of the diverse foam applications encompassed under this sector. The resulting information was made available for public review in the May 23, 2001 NODA (66 FR 28408) and can be found in EPA's Air Docket (A-2000-18, IV-D-78, and 79).

Through the NODA, EPA provided information on the type and amount of HCFC used in each foam industry end-use (Air Docket A-2000-18, IV-D-79). Based on information collected by EPA and comments to the NODA, EPA believes there is mixed use of HCFC-141b, -22, and HCFC-142b in the commercial refrigeration and sandwich panels and the slabstock and other foams applications, depending on the specific product and the individual manufacturer (Air Docket A-2000-18, IV-D-81). Unlike the polyurethane boardstock, appliance, and spray foam end-uses, a majority of foam manufacturers in these end-uses did not adopt HCFC-141b as their prime blowing agent. Instead, individual foam manufacturers within these applications adopted different HCFC blowing agents based on the original blowing agent used and existing equipment and product requirements (although there were differences in handling and processing due to differences in vapor pressure, the blowing agent and capital

costs to transition were similar). Because HCFC-141b, -22, and HCFC-142b were similar in cost, companies could meet their specific product requirements and remain cost competitive while using different blowing agents to manufacture similar products.

Within the commercial refrigeration and sandwich panel applications, non-ozone depleting alternatives have been identified and, in limited cases, implemented successfully. EPA is allowing limited use of HCFC-22 and/or HCFC-142b as alternatives to HCFC-141b for companies within these applications who have not had access to and/or have been able to fully implement ozone-friendly alternatives to meet their thermal performance, dimensional, and flammability control requirements. The narrowed use limits imposed under today's action are in recognition of comments and information collected by the Agency indicating that many companies in the pour foam industry are engaged in developing and testing alternatives to ozone depleting chemicals, but that ozone-friendly alternatives are not yet widely available to ensure that products are made that maintain sufficient thermal efficiency, product integrity and safety. While technical information is scarce for these applications, EPA believes that within the wide range of small foam uses within these applications, there are HCFC-141b users who currently have technical constraints in transitioning from HCFC-141b to non-ozone-depleting alternatives. To help ensure that HCFC-22 and HCFC-142b are used as substitutes for HCFC-141b only in specific applications where no technically viable alternatives are available, however, EPA is including these narrowed use limit provisions.

In commercial refrigeration and sandwich panel applications, EPA's consultant report and comments identified HCFC-22 and HCFC-142b as potential alternatives to HCFC-141b. One example is in refrigerated transport insulation, which may include refrigerated truck bodies and insulated rail cars, where there are cases in which it is critical to maintain thermal performance, flammability control, and an absolute outside dimension of a container while maximizing internal dimensions. Further, due to new low temperature requirements for food storage and transport recently imposed by the Food and Drug Administration, there is an increased demand for thermal performance of blowing agents for these applications. Even though manufacturers switching from a liquid

<sup>6</sup> Polyurethane systems houses sell pre-blended polyurethane systems which are defined in Section III, A.

(HCFC-141b) to a gaseous (HCFC-22/HCFC-142b) blowing agent will need to make process/equipment modifications, some companies consider HCFC-22 and HCFC-142b viable alternatives to HCFC-141b because their manufacturing processes occur in a controlled factory setting, making this transition more manageable. Therefore, where low temperature and/or space requirements cannot be met with non-ozone-depleting blowing agents, HCFC-22 and HCFC-142b can be used as replacements for HCFC-141b.

Comments to the consultant report and information from systems houses indicate that there are also pour foam applications within the slabstock and other foams end-use where manufacturers have identified difficulties in transitioning from HCFC-141b to non-ODS alternatives. EPA received comments that HCFC-22/HCFC-142b may also be used as transitional blowing agents within this end-use. Similar to the commercial refrigeration and sandwich panel end-uses, available data indicate that alternatives to HCFCs are available for some applications within the rigid polyurethane slabstock and other foam end use, particularly those where foam is used in non-insulating applications. However, due to the diverse nature of this end use (e.g., picnic coolers, drink dispensers, marine flotation, tanks and pipes, floral and taxidermy foam) and potential technical constraints of some small businesses in transitioning to ozone-friendly alternatives, EPA is approving the use of HCFC-22 and HCFC-142b as alternatives to HCFC-141b with narrowed use limits. At this time, EPA believes it is appropriate to approve these blowing agents in narrowed uses to facilitate the HCFC-141b phaseout and level the playing field for small businesses.

The Agency recognizes that some of the constraints within the commercial refrigeration and sandwich panel and slabstock and other foam end-use sectors can be resolved through equipment and formulation modifications and that non-ozone-depleting blowing agents are currently under consideration or are being used in some applications. However, the end-uses within these sectors are highly diverse and their use of HCFCs fragmented (some use HCFC-141b while others use HCFC-22 and HCFC-142b), and it is difficult to assess, in the absence of detailed information, the viability of alternatives in each narrow application. While HCFC-22/HCFC-142b may be the most viable alternatives to HCFC-141b for some applications, non-ozone-depleting alternatives may be

technically viable in other applications, such as entry or garage doors, where there are no strict insulation requirements. In fact, several door manufacturers have converted or are in the process of converting to non-ODS alternatives already listed as acceptable (Docket A-2000-18, IV-D-64, IV-E-6). In other cases, where HCFC-141b is used in niche applications, EPA believes foam manufacturers may experience difficulties and delays in transitioning from HCFC-141b to non-ozone-depleting alternatives. Given the constraints associated with cost and timing of transitioning to alternatives for small businesses, and the need to facilitate a smooth and equitable transition from HCFC-141b, EPA believes that within the commercial refrigeration and sandwich panel and the slabstock and other foam end-use sectors, it is appropriate to approve use of HCFC-22 and/or HCFC-142b as substitutes for HCFC-141b in these end-uses, provided that the users intending to adopt HCFC-22 or HCFC-142b ascertain and document that other acceptable alternatives are not technically feasible. EPA urges foam manufacturers to replace HCFC-141b with non-ODP alternatives in applications where the non-ODP alternatives are technically and economically feasible. The Agency will continue its review of the transition in these end-uses for possible regulatory action in the future.

## 2. Availability of Alternatives

Many commenters expressed concern over the timing and continued availability of the alternatives to HCFC-141b. The majority of these comments related to the limited supply of HFC-245fa to date and the uncertainty associated with relying on a single source of supply. EPA recognizes that HFC-245fa is not currently produced in commercial quantities. However, information from the manufacturer indicates that pilot quantities of HFC-245fa have been supplied to the foam industry, with semi-commercial quantities available today, and world-scale quantities becoming available later in 2002. Because the major market for this chemical is as a replacement for HCFC-141b, it is not surprising that the timing of commercialization coincides with the phaseout of 141b by January 1, 2003. Based on the progress on plant construction, EPA is confident that HFC-245fa will be commercially available to a significant part of the foam industry later this year.

It is important to note that other alternatives, including other HFCs, hydrocarbons, and CO<sub>2</sub>/water have been

commercially available for years. Although two commenters expressed concern that chemical manufacturers may not commit to produce sufficient quantities of HFC-134a, EPA has no reason to believe that HFC-134a will not be available for the foams industry. HFC-134a is extensively used throughout the U.S. in foam applications and as a refrigerant in automobile air conditioners. Hydrocarbons, CO<sub>2</sub>/water, and other SNAP approved alternatives are also widely available.

## 3. Economic/Small Business Impacts

Today's action designates HCFC-22 and HCFC-142b as acceptable substitutes subject to narrowed use limits for new users in some sectors (commercial refrigeration, sandwich panels, slabstock and other foam applications), and unacceptable for new use in other sectors where ozone-friendly alternatives are available. The Agency believes that its original cost analysis adequately accounts for the projected costs associated with the final rule. In evaluating the potential cost impacts of the July 11, 2000 proposal, EPA focused on the appliance sector where a range of alternative blowing agents, including HCFC-22 and HCFC-142b were considered technically viable replacements for HCFC-141b; responses to comments on this evaluation are provided later in this section. For other foam end-uses, EPA believed that either: (a) There would be no cost associated with the proposed decision; or, (b) that the costs would be extremely low. Explanations for each scenario follows:

(a) The Agency did not project additional costs for certain polyurethane foam end-uses because the Agency believed that those end-uses had identified non-ozone depleting chemicals as the most viable options. Because HCFC-22 and HCFC-142b were not seen as technically viable and/or cost effective, restrictions on new use of HCFC-22 and HCFC-142b in those sectors would not impose additional costs to the industry. Based on comments, EPA believes that assessment was accurate for the boardstock and spray foam end-uses. For other polyurethane applications, however, EPA found that HCFC-22 and HCFC-142b are considered technically and economically viable alternatives to HCFC-141b. In those applications, EPA is listing HCFC-22 and HCFC-142b as acceptable subject to narrowed use limits. The Agency does not believe there will be costs to the industry related to this decision that have not already been accounted for as part of the

original CFC and HCFC phaseout regulations.

Since 1993, the foam industry, including the relevant sectors: commercial refrigeration, sandwich panels, and slabstock, have been aware of the impending phaseout of HCFCs. Individual companies in these sectors commented that they have been engaged in evaluating alternatives to HCFC-141b and collecting the kind of information required by the narrowed use provisions in today's rule. Under this rulemaking, these companies will only have to retain the documentation of these evaluations. The Agency has already accounted for costs associated with recordkeeping requirements for substitutes acceptable subject to narrowed use limits under the SNAP program (2001 SNAP ICR, OMB No. 2060-0226). The Agency therefore does not project any added costs for these sectors associated with today's rule.

(b) The bulk of comments on the economic impacts to industry, including small business impacts, came from existing users of HCFC-22 and HCFC-142b who were concerned that EPA had not fully considered the impact of discontinuing use of these chemicals by 2005. Any potential impacts on such users are not an issue given today's action which withdraws EPA's proposed decision to list HCFC-22 and HCFC-142b as unacceptable for existing users of those chemicals. EPA concluded in its original economic analysis that the cost of transitioning away from HCFC-22 and HCFC-142b by January 1, 2005 would be extremely low because alternatives were readily available and comparably priced. As stated above, this issue is no longer relevant given that EPA is withdrawing the proposed restriction on continued use of HCFC-22 and HCFC-142b for those end-uses.

As noted above, for those applications where new use of HCFC-22 and HCFC-142b is not considered acceptable, rigid polyurethane appliance foam is the only sector where HCFC-22 and HCFC-142b has been considered a possible option by at least some companies. As part of the July 11, 2000 proposal, EPA estimated potential costs associated with restricting use of HCFC-22, HCFC-142b, and HCFC-124, in the appliance end-use. The Agency's assessment of costs to the appliance sector was premised on the fact that the costs of transitioning out of HCFC-141b for all users had been previously accounted for in the original CFC and HCFC phaseout regulations. Furthermore, EPA examined the potential costs associated with meeting the proposed SNAP restrictions while complying with the

DOE efficiency standards which took effect in July, 2001. Thus, for purposes of this rule, EPA compared the costs of manufacturing new refrigerators with foam blowing agents other than HCFC-141b (*i.e.*, the cost of using HCFC-22/-142b was compared with the costs of using HFC-134a, HFC-245fa or hydrocarbons).

Two commenters claim that the Unfunded Mandates Act obligated EPA to consider a reasonable number of regulatory alternatives and develop a budgetary impact statement because the proposed rule would result in costs to the private sector of more than \$100 million or more in any one year. One of these commenters suggests that "full utilization" of HFC-245fa (*i.e.*, use in all new refrigerators) would result in a material cost impact of \$86 million per year and that full utilization of HFC-134a would result in an annual cost of \$114.5 million. The commenters note that these costs do not take into account the retail pricing structure nor capital expenditures.

Although it is unclear precisely what assumptions went into the commenters' conclusions regarding cost, it appears that the cost figures provided assume the full cost of transferring from HFC-141b to a substitute. EPA disagrees with that method of determining the costs associated with this rule. The core costs of switching from HCFC-141b to another substitute are costs associated with the HCFC phase-out rule, which mandates a phaseout in production of HCFC-141b by January 1, 2003. In the economic analysis performed for the phaseout rule, EPA took into account the general cost that users of HCFCs would incur in switching to substitutes. Thus, in this rulemaking, which restricts some of the potential substitutes, EPA took into consideration the differential costs associated with employing the substitutes. For example, in examining the cost of this rule, EPA compared the costs to a user of switching from HCFC-141b to HCFC-22/142b with the costs of switching from HCFC-141b to HFC-245fa. Thus, if it were more costly to switch to HFC-245fa than to switch to HCFC-22/142b, the cost attributable to this rule which lists HCFC-22/142b as an unacceptable substitute in appliance foam would be the incremental cost of switching to HFC-245fa. In addition, EPA notes that the figures provided by the commenter for HFC-245fa and HFC-134a both assume "full utilization." Thus, those numbers should not be combined; rather, it should be assumed that the costs identified by the commenter would fall somewhere between \$86 million and \$114.5 million, assuming

the validity of those numbers. (As noted above, the commenter does not explain how those numbers were derived.) In concluding that the \$100 million threshold would be exceeded because of this rule, the commenter apparently assumes a distribution of refrigerators using both HFCs (134a and 245fa) but does not explain the scenario that they project for the industry.

The Agency also disagrees with the commenter's claim that EPA's economic analysis under-estimates the manufacturing costs for refrigerators that would be converting to zero-ODP blowing agents for their insulation foam. As noted above, the Agency did not attribute costs specific to transitioning out of HCFC-141b to this rulemaking, since those costs have already been accounted for as part of the CFC and HCFC phaseout regulations. The Agency did estimate additional manufacturing costs associated with alternative blowing agents and it is noteworthy that this commenter presents a range of added costs comparable to the range derived by EPA. The commenter estimates that zero-ODP blowing agents would cost between \$4.07 and \$8.60 per refrigerator, while EPA estimated that the cost to convert to zero-ODP blowing agents would range from approximately \$3 to \$10 for a mid-size refrigerator. It is difficult for the Agency to respond to the commenter's analysis in any detail, however, because the commenter only states in a footnote to the table entitled "Foam Blowing Agent Performance/Cost Factors" that the costs include "all costs necessary to insure that the foam system will function satisfactorily: blowing agent, polyurethane components, and capital investment," but does not disaggregate costs for separate manufacturing components as EPA did in its analysis (blowing agent price, foam density, foam cost, foam liner cost, capital to convert).

By apparently ignoring the differential costs considered by EPA, the commenter under-estimates costs associated with less energy efficient blowing agents (*e.g.*, HCFC-22/-142b) and over-estimates costs associated with more efficient blowing agents (*e.g.*, HFC-245fa). In reviewing the insulation efficiencies associated with various acceptable foam blowing agents, EPA believed it was necessary to reflect the total costs of refrigerator manufacture under the new DOE requirements associated with alternative blowing agents. EPA's analysis calculated the potential *additional* costs associated with these kinds of design modifications needed to compensate for foams blown with agents that provide less insulation value. These additional costs depend on

the insulation value of the different blowing agents. EPA derived "energy penalties" or "energy gaps" for the various foam blowing agents relative to HCFC-141b based on the R-values and k-factors for foams made with the various alternative blowing agents and other data provided in various industry forums. For example, these data indicate an 8% energy gap for a 60%/40% blend of HCFC-22/142b, whereas the commenter presents a significantly lower energy penalty (2%) for an unspecified blend of HCFC-22 and HCFC-142b. Unlike EPA's analysis, the commenter's analysis does not appear to account for differential costs between alternative blowing agents associated with potential refrigerator re-designs to meet DOE energy efficiency standards that took effect in July 2001.

The commenter incorrectly concludes that "EPA implies that lower power, more efficient evaporator and condenser fan motors, more foam, and more extensive gasket systems cost less rather than more." The Agency does not believe that these types of modifications would not entail costs, and recognizes that complying with the new DOE energy standard, and transitioning from HCFC-141b to alternative blowing agents will have costs. However, as noted above, these costs are attributable to the phaseout and DOE energy efficiency standards. Blowing agents that provide greater insulation value will reduce the burden on the manufacturer to increase energy efficiency in other components of the refrigerator. In comparing the costs associated with the different alternatives, the Agency estimated that the impacts of the proposal, because it would facilitate a transition to an energy efficient blowing agent, would actually be a cost *savings* for the industry and ultimately, consumers. Because HFC-245fa has a high insulation value, EPA calculated that the total costs (cost of foam plus re-design costs to comply with new energy efficiency standard) associated with a transition to this agent would be considerably lower compared to a transition using any other alternative. In other words, a switch from HCFC-141b to HFC-245fa (which have comparable insulation values) would cost between \$2.30 and \$3.40 per refrigerator less compared to a switch from HCFC-141b to other blowing agents with lower insulation values and boiling points, such as HCFC-142b/HCFC-22 blends, or HFC-134a. When these costs are aggregated for the U.S., the cost reductions would total between approximately \$23 million and \$34 million per year.

The Agency believes, as discussed above, that the total costs of transitioning out of HCFC-141b in manufacturing new refrigerators is not a relevant consideration for today's rulemaking. The commenter again is apparently not accounting for differences in insulation value across the different blowing agents that are potential alternatives to HCFC-141b. For example, the commenter on one hand states that indirect costs are included to compensate for the reduced insulation value provided by HFC-134a; however, indirect cost savings from using HFC-245fa, which provides significantly greater insulation value, are not included in the commenter's analysis. One commenter raised a concern that EPA does not restrict the import of products containing substitutes that EPA has determined unacceptable under SNAP and that companies that shift production of appliances to Mexico will have an unfair economic advantage. While EPA sympathizes with and shares the concerns raised by the commenter, the issues surrounding imports are complex and there are limits on EPA's ability to control the import of appliances that contain substitutes listed as unacceptable for use in the United States. However, those limits on EPA's ability to control imports do not justify a decision to list as acceptable substitutes that are more harmful to human health and the environment than other available substitutes.

The Agency concludes that comments received since the proposal do not provide any substantive reasons why the original estimates require revision. The Agency maintains its assertion that the costs associated with today's decision will not result in the expenditure by State, local, and tribal governments or the private sector of \$100 million or more in any one year.

#### 4. EPA's Review Process

EPA received comments that the Agency's review process took much longer than the period provided by the CAA and EPA's regulations and that the lengthy review created industry hardship. EPA recognizes that while a manufacturer of a substitute may market that substitute 90 days after it files a petition with EPA, that there may be reluctance of users to switch to that substitute until EPA makes a determination of whether that substitute is acceptable. EPA makes its best effort to review and act on a petition as quickly as possible. Under the SNAP procedures established in 1994, EPA may make determinations that a substitute is acceptable without going

through notice-and-comment rulemaking. Thus, often, EPA can make determinations that a substitute is acceptable relatively quickly. However, EPA believes that notice-and-comment rulemaking is required to place any alternative on the list of prohibited substitutes or to establish use limits. In providing adequate technical and scientific review of the substitute and providing sufficient public participation through the notice-and-comment rulemaking process, it is virtually impossible for the Agency to make such determinations quickly.

In this case, the Agency listed one of the chemicals in the petition, HFC-134a, as an acceptable substitute as soon as possible after the petition was received (64 FR 30410, June 8, 1999). HFC-134a is a non-ozone-depleting chemical that is safe to use and widely available. At that time, EPA reached the conclusion that additional review was necessary for the remaining chemicals (HCFCs) in the petition. Because of their ozone-depletion potential, EPA believed that the HCFCs could pose a higher risk than other SNAP approved alternatives. Therefore, EPA took additional time to assess the availability and technical viability of other SNAP approved alternatives in each foam sector end-use. Based on that review, EPA concluded that there were alternatives that posed a lower risk than HCFCs and drafted a proposal to list these chemicals as unacceptable. Following the comment period to the proposal, the Agency was faced with reviewing a significant amount of technical information provided in comments, collecting additional information regarding small businesses that might be affected by the rule, and seeking public comment on this new information through a Notice of Data Availability published in the **Federal Register**.

While EPA strives to act on these petitions in a quick, yet thoughtful, manner, if a person is concerned that EPA is failing to act in accordance with statutory or regulatory time frames the CAA provides a remedy. Under section 304 of the CAA, a person may file an action requesting a federal district court to order EPA to take action as required under the Act.

Several commenters argued that EPA did not consider the factors identified by EPA in the original SNAP program regulations as key decision criteria in evaluating the acceptability of proposed alternatives to ODSs (40 CFR 82.180 (a)(7)). Some commenters believed that EPA based the proposal on ODP alone and argued that the Agency cannot make a listing decision without taking into account the overall risk of the

alternatives. EPA would like to assure commenters that these factors were indeed considered. EPA's SNAP submission form requests extensive information on each substitute.<sup>7</sup> Before proposing action on July 11, 2000, the Agency considered ODP, global warming potential (GWP), insulation values for the resulting foam products, and toxicological risks for HCFC-22, -142b, and -124 compared to HCFC-141b and other acceptable alternatives. (EPA discusses its final decision to list HCFC-124 as unacceptable more fully in the next section.) Although in the preamble of the July 11, 2000 proposal, EPA summarized only the atmospheric effects of the various HCFCs, the information regarding the other decision criteria was considered and is publicly available in EPA's Air Docket A-91-42. After considering health and environment risk criteria, EPA determined that ODP and atmospheric lifetimes of HCFC-22, -142b, and -124 distinguish these chemicals from other HCFC-141b alternatives. As stated in the proposal, HCFC-141b has an ODP of 0.1, HCFC-142b has an ODP of 0.065, HCFC-22 has an ODP of 0.055, and HCFC-124 has an ODP of 0.02 (World Meteorological Organization, 1999). The atmospheric lifetimes for these chemicals range from 6-18 years. Although it was not the determining factor for this decision, EPA noted that HCFC-22 and HCFC-142b also have 100-year global warming potentials that are significantly higher (1900 and 2300 respectively) than the zero-ODP alternatives already listed as acceptable. The Agency believes that the ozone depletion potentials of HCFC-22, -124, and -142b make them unacceptable substitutes for HCFC-141b in appliance, boardstock and spray foam applications because other alternatives are available that overall pose less risk to human health and the environment.

One commenter suggested that EPA should list HCFC-22, -142b, and -124 as acceptable substitutes for HCFC-141b in all foam end-uses because each of the submitted chemicals has a lower ODP than does HCFC-141b. The same commenter suggested EPA's proposed decision not to list as acceptable substitutes with any ODP was inconsistent with prior EPA decisions because 2-chloropropane, with an ODP of 0.003, was recently listed as

acceptable under SNAP in the polyurethane boardstock sector. Similarly, another commenter referenced approval of a blend with CF<sub>3</sub>I (ODP estimated to be 0.008, atmospheric lifetime approximately 1 day) to replace CFC-12 in some refrigeration applications. EPA acknowledges that the Agency has listed substitutes for ODSs that themselves have ODPs; indeed, EPA approved the use of HCFCs as transitional foam blowing agents, despite their ozone depletion potential, because technically feasible alternatives to CFCs were limited at that time. EPA is taking the same approach in today's final action. In commercial refrigeration, sandwich panels, and slabstock and other foams applications, the Agency is approving narrowed use of HCFC-22 and HCFC-142b as replacements for HCFC-141b because other approved alternatives may not be viable in certain applications at this time. However, in polyurethane boardstock, appliance and spray foam applications, EPA believes that low- or non-ozone-depleting alternatives have been identified; therefore, EPA is listing HCFCs as unacceptable as replacements for HCFC-141b in these end-uses. EPA does not believe that today's decision to list HCFC-22 and HCFC-142b as unacceptable replacements for HCFC-141b in those end uses is inconsistent with EPA's approval of 2-chloropropane as a replacement for HCFC-141b because the ODP of 2-chloropropane is estimated to be 0.003 which is extremely low (significantly lower than the ODPs of HCFC-22 and HCFC-142b).

Even though HCFC-22, and 142b have lower ODPs than HCFC-141b, EPA does not believe that new use of these ODSs as substitutes for HCFC-141b, even for a short period of time, is warranted across the spectrum of foam applications given the availability of zero-ODP foam blowing agents in certain applications. Where alternatives are available, the transition from HCFCs to zero-ODP alternatives can be made, and will be made more quickly without an additional and incremental transition from HCFC-141b to other HCFCs. This decision is consistent with a previous EPA determination, based on the availability of alternatives with zero-ODP, that HCFC-141b is *not* acceptable as a substitute cleaning solvent for CFC-113 or methyl chloroform (59 FR 13044). A determination that it is acceptable for users of HCFC-141b to switch to HCFC-22, HCFC-142b or blends thereof would result in continued damage to the ozone layer and would delay the transition to zero-

ODP foam blowing agents which are available.

One commenter suggested that EPA's review should have resulted in approval of HCFCs because, based on data provided by the commenter, some of the currently acceptable alternatives increase GWP, CO<sub>2</sub> loading, and energy use compared to HCFC-141b (Docket A-2000-18, IV-D-3) and that HCFC-22, -142b, and -124 provide lower overall risk than HCFC-141b. Under SNAP, EPA's primary consideration is the comparison of substitutes, not the comparison of the substitute with the substance it is replacing (Clean Air Act Section 612 (c)). The information that EPA had at the time of proposal, as well as the information provided by the commenter, shows that the zero-ODP alternatives already listed as acceptable, compared to HCFC-22 and HCFC-142b, can in fact reduce ODP, GWP, atmospheric lifetime, and improve energy efficiency, thereby reducing emissions of CO<sub>2</sub>. The information also shows that the zero-ODP alternatives, compared to HCFC-124 reduce ODP in all cases, and reduce GWP, atmospheric lifetime, and CO<sub>2</sub> loading in some cases. However, the differences in GWP, atmospheric lifetime, and CO<sub>2</sub> loading were not significant enough to warrant determining HCFC-124 acceptable. Although information provided by this commenter and a few others report increases in energy use for some currently acceptable substitutes, EPA believes, as discussed above in section III, C, 1 under *Rigid Polyurethane Appliance Foam*, that use of zero-ODP alternatives will result in insulation values very close to those for HCFC-141b and that other non-foam related modifications could improve energy efficiency where necessary.

Regarding the other health and environmental factors typically included in SNAP review (40 CFC 82.180(a)(7)), EPA found no substantive distinction between the HCFCs under consideration and the alternatives already listed as acceptable foam blowing agents. However, some commenters disagreed with EPA's finding and expressed concern that EPA disregarded evidence that HCFC-22 and HCFC-142b pose lower risks than current alternatives in certain aspects. Two commenters specifically pointed out that hydrocarbons are flammable volatile organic compounds and pose a greater risk than the HCFCs under review. One of these commenters also stated that HCFC-22 and HCFC-142b are relatively less toxic than HFC-245fa.

EPA recognizes that the risks associated with factors such as toxicity and flammability vary amongst the

<sup>7</sup> To minimize the reporting burden EPA does not require submitters to re-submit data that have been previously reviewed by the Agency. HCFC-22 and HCFC-142b and HCFC-124 were previously submitted and fully reviewed as CFC substitutes in the foam and refrigeration sectors. This information is part of the record for the original March 1994 SNAP rulemaking.



SNAP-approved alternatives and the HCFCs under consideration. For example, EPA recognized the flammability risks and VOC issues associated with hydrocarbons when they were originally approved as replacements for CFCs in the foam sector (59 FR 13083). In SNAP listing decisions published in December 1999 and April 2000, the Agency approved hydrocarbons for use as replacements for HCFC-141b, but indicated that hydrocarbon blowing agents are flammable and should be handled with proper precautions (64 FR 68039 and 65 FR 19327). EPA gave examples of high risk scenarios and stated that approval of hydrocarbons in certain applications would be granted only to manufacturers providing safety training to their customers (64 FR 68039 and 65 FR 19327).

Regarding the comment about toxicity of HFC-245fa, EPA does not believe there are increased human health risks associated with use of HFC-245fa versus HCFCs in the foam industry. When EPA listed HFC-245fa as an acceptable substitute, EPA's Office of Pollution Prevention and Toxics reviewed the toxicity profile of HFC-245fa and referred it to the American Industrial Hygiene Association's (AIHA) workplace environmental exposure limit (WEEL) committee for a final exposure limit. Since then, the WEEL committee adopted an occupational exposure limit of 300 ppm (8-hour Time Weighted Average). EPA anticipates that HFC-245fa will be used in a manner consistent with recommendations specified in the manufacturers' Material Safety Data Sheets (MSDSs) (64 FR 68039) and that any exposures will fall well below acceptable exposure limits set by the AIHA or other voluntary consensus standards organizations.

As part of prior SNAP determinations, the Agency has specifically reviewed the flammability and toxicological risks associated with the various alternative foam blowing agents, and consistent with its conclusion and recommendations at the time these substitutes were listed as acceptable, the Agency believes that those potential risks associated with the zero-ODP alternatives will be mitigated by the industry with appropriate health and safety procedures.

#### D. HCFC-124

Based on comments, EPA believes that interest in using HCFC-124 is limited to the rigid polyurethane appliance end-use within the foam sector. Comments on the July 11, 2000 proposal and May 23, 2001 NODA regarding new use of HCFC-124 in

appliances indicate opposing views on whether HCFC-124 should be listed as an acceptable substitute for HCFC-141b.

Several comments summarized and responded to above suggested that EPA should list HCFC-124, as well as HCFC-22 and HCFC-142b, as acceptable substitutes in all foam end-uses because each of these chemicals has a lower ODP than HCFC-141b. In addition, two commenters argued that HCFC-124 provided an energy-efficient alternative to HCFC-141b while use of zero-ODP alternatives would result in energy losses. As discussed above in section III, C, 1 under *Rigid Polyurethane Appliance Foam*, EPA believes use of currently acceptable alternatives could result in energy efficient products. One commenter agreed with the Agency's proposed decision on HCFC-124 and estimated that foam blown with HFC-245fa has a 7–10% energy consumption advantage compared to HCFC-124 and, after accounting for the aging rate of the foam, that a refrigerator made with HFC-245fa blown foam would have about 15% less total global warming impact compared to a similar product made with HCFC-124. This commenter expressed confidence that the appliance industry has zero-ODP alternatives to HCFC-141b that will not adversely affect energy efficiency, including HFC-245fa. The commenter expressed concern that approval of HCFC-124 would reverse progress made by the appliance industry to eliminate compounds with an ODP, would fail to account for the availability of other, more viable non-ODP alternatives, and this would be inconsistent with the intent of the Clean Air Act and EPA's mandate to protect the environment. This commenter also expressed concern that approval would "penalize environmentally responsible companies".

The Agency agrees with the latter commenter and their analysis which more fully takes account of energy consumption and the total environmental impact of alternative blowing agents. As discussed, EPA does not believe that new use of HCFCs as substitutes for HCFC-141b, even for a short period of time, is warranted in all foam end-uses given the availability of zero-ODP foam blowing agents in most specific applications. In the case of rigid polyurethane appliance foam, the transition from HCFCs to zero-ODP alternatives can be made without an additional and incremental transition from HCFC-141b to HCFC-124. The Agency has identified several zero ODP foam blowing agent alternatives for the appliance foam end-uses. The Agency believes that the ozone depletion

potential of HCFC-124 makes it an unacceptable substitute for HCFC-141b because other alternatives are available for the appliance foam industry that overall pose a less significant risk to human health and the environment. The information that EPA had at the time of proposal as well as the information provided by commenters since shows that the zero-ODP alternatives already listed as acceptable, compared to HCFC-124, have lower ODPs in all cases, and in some cases, lower GWPs and atmospheric lifetimes. A determination that it would be acceptable for users of HCFC-141b to switch to HCFC-124 would result in continued damage to the ozone layer and would delay the transition to zero-ODP foam blowing agents which are available.

#### IV. Summary

A major objective of the SNAP program is to facilitate the transition from ozone-depleting chemicals by promoting the use of substitutes which present a lower risk to human health and the environment (40 CFR 82.170(a)). In this light, a key policy interest of the SNAP program is promoting the quickest shift from ODSs to alternatives posing lower overall risk and that are currently or potentially available (59 FR 13044). Today's decision to list HCFC-22, HCFC-142b, and HCFC-124 as unacceptable substitutes for HCFC-141b in the end-uses discussed above is based on the Agency's finding that the use of HCFC-22 and HCFC-142b, in applications where non-ozone depleting chemicals are available, would contribute to the continued depletion of the ozone layer, and would delay the transition to alternatives that pose lower overall risk to the health and the environment.

For commercial refrigeration and sandwich panel applications, and the polyurethane slabstock and other foams end-use, EPA is listing HCFC-22 and HCFC-142b, with narrowed use limits, as acceptable replacements for HCFC-141b. EPA is strongly opposed to listing HCFCs as acceptable where non-ozone-depleting alternatives are available. However, EPA believes that ozone-friendly alternatives to HCFC-141b have not yet been fully developed and implemented across the spectrum of applications within these end-uses. In these situations, EPA believes switching to HCFC-22 and/or HCFC-142b as a bridge to non-ozone-depleting alternatives presents a lower risk than continued use of HCFC-141b.

## V. Administrative Requirements

### A. Executive Order 12866

Under Executive Order 12866, (58 FR 51735; October 4, 1993) the Agency must determine whether the regulatory action is "significant" and therefore subject to OMB review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may: (1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlement, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, OMB notified EPA that it considers this a "significant regulatory action" within the meaning of the Executive Order and EPA submitted this action to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

### B. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Pub. L. 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector.

Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures by State, local, and tribal governments, in the aggregate, or by the private sector, of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other

than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Section 204 of the UMRA requires the Agency to develop a process to allow elected state, local, and tribal government officials to provide input in the development of any proposal containing a significant Federal intergovernmental mandate.

Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

EPA has determined that this rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. This rule imposes no enforceable duty on any State, local or tribal government. The core costs of transitioning from HCFC-141b to substitutes are costs associated with the January 1, 2003 phaseout deadline for the production and import of HCFC-141b, previously established on December 10, 1993 (58 FR 65018). In the economic analysis for that rule, EPA accounted for costs to HCFC manufacturers and users to shift from, for example, HCFC-141b to substitutes. For the private sector, this rule identifies which HCFC-141b alternatives are acceptable and adds minor recordkeeping requirements for those who wish to transition from HCFC-141b to HCFC-22 or HCFC-142b in sectors where that transition is acceptable. Thus, it is not subject to the requirements of sections 202 and 205 of the UMRA. EPA has also determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments; therefore, EPA is not required to develop a plan with regard to small governments under section 203. Finally, because this rule does not contain a significant intergovernmental mandate, the Agency is not required to develop a process to obtain input from elected state, local, and tribal officials under section 204.

*C. Regulatory Flexibility Act (RFA) as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq.*

The RFA generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions. As discussed above, EPA received comments on potential small business impacts of the proposal. In response to those comments, the Agency collected additional technical information and analyzed the potential for economic impacts to small businesses. EPA found that there are some foam manufacturers who currently have technical constraints in transitioning from HCFCs to non-ozone-depleting alternatives. Based on that information, EPA is withdrawing its proposed decision to list *existing use* of HCFC-22 and HCFC-142b as unacceptable and approving narrowed use of HCFC-22 and HCFC-142b as replacements for HCFC-141b in certain applications. As provided above, EPA believes that the recordkeeping requirement associated with the narrowed use determination will not result in any substantial cost. In the end-uses for which EPA is listing HCFC-22 and HCFC-142b acceptable, small businesses will not be affected. Therefore, I certify that this action will not have a significant economic impact on a substantial number of small entities.

### D. Paperwork Reduction Act

EPA has determined that this final rule contains no information requirements subject to the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*, that are not already approved by the Office of Management and Budget (OMB). OMB has reviewed and approved two Information Collection Requests (ICRs) by EPA which are described in the March 18, 1994 rulemaking (59 FR 13044, at 13121, 13146-13147) and in the October 16, 1996 rulemaking (61 FR 54030, at 54038-54039). These ICRs included five types of respondent reporting and record-keeping activities pursuant to SNAP regulations: submission of a SNAP petition, filing a SNAP/TSCA Addendum, notification for test marketing activity, record-keeping for substitutes acceptable subject to

narrowed use limits, and record-keeping for small volume uses. The OMB Control Numbers are 2060–0226 and 2060–0350.

*E. Submission to Congress and the Comptroller General*

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. This rule is not a “major rule” as defined by 5 U.S.C. 804(2).

*F. Executive Order 13045: “Protection of Children from Environmental Health Risks and Safety Risks”*

Executive Order 13045: “Protection of Children from Environmental Health Risks and Safety Risks” (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be “economically significant” as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This final rule is not subject to the Executive Order because it is not economically significant as defined in Executive Order 12866, and because the Agency does not have reason to believe the environmental health or safety risks addressed by this action present a disproportionate risk to children, as the exposure limits and acceptability listings in this final rule primarily apply to the workplace.

*G. Executive Order 13132: Federalism*

Executive Order 13132, entitled “Federalism” (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure “meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.” “Policies that have federalism implications” is defined in

the Executive Order to include regulations that 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.” Under Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. EPA also may not issue a regulation that has federalism implications and that preempts State law unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

This final rule 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, as specified in Executive Order 13132. Thus, the requirements of section 6 of the Executive Order do not apply to this rule.

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

Executive Order 13175, entitled “Consultation and Coordination with Indian Tribal Governments” (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure “meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.” “Policies that have tribal implications” is defined in the Executive Order to include regulations that have “substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and the Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes.”

This final rule does not have tribal implications. It will not have substantial direct effects on tribal governments, 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. This rule applies to facilities that manufacture foam and not government

entities. Thus, Executive Order 13175 does not apply to this rule.

*I. National Technology Transfer and Advancement Act*

The National Technology Transfer and Advancement Act of 1995 (NTTAA), section 12(d), Public Law 104–113, requires federal agencies and departments to use technical standards that are developed or adopted by voluntary consensus standards bodies, using such technical standards as a means to carry out policy objectives or activities determined by the agencies and departments. If use of such technical standards is inconsistent with applicable law or otherwise impractical, a federal agency or department may elect to use technical standards that are not developed or adopted by voluntary consensus standards bodies if the head of the agency or department transmits to the Office of Management and Budget an explanation of the reasons for using such standards. This rule does not mandate the use of any technical standards; accordingly, the NTTAA does not apply to this rule.

*J. Executive Order 13211 (Energy Effects)*

This rule is not a “significant energy action” as defined in Executive Order 13211, “Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use” (66 Fed. Reg. 28355 (May 22, 2001)) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. The rule lists acceptable and unacceptable substitutes for ozone-depleting chemicals in foam manufacturing. Where other approved alternatives are available and technically viable, EPA is listing HCFC–22, HCFC–142b, and HCFC–124 as unacceptable replacements for HCFC–141b. Although some comments to the proposal stated that use of other EPA approved alternatives would result in diminished insulation value and reduce the energy efficiency of products such as appliances, as discussed in the response to comments above, EPA believes that use of alternatives can result in products that are equal or superior in energy efficiency. EPA’s position is supported by several appliance manufacturers who plan to meet DOE energy efficiency requirements using non-ozone-depleting foam blowing agents. Where alternatives to HCFC–141b have not been fully developed, EPA is listing HCFC–22 and HCFC–142b as acceptable in certain applications with narrowed use limits. Based on our evaluation of comments and technical data, we have concluded

that this rule is not likely to have any adverse energy effects.

## VI. Additional Information

For copies of the comprehensive SNAP lists or additional information on SNAP, contact the Stratospheric Protection Hotline at (800) 296-1996.

For more information on the Agency's process for administering the SNAP program or criteria for evaluation of substitutes, refer to the SNAP final rulemaking published in the **Federal Register** on March 18, 1994 (59 FR 13044). Notices and rulemakings under the SNAP program, as well as EPA publications on protection of stratospheric ozone, are available from

EPA's Ozone Depletion World Wide Web site at "<http://www.epa.gov/ozone/>" and from the Stratospheric Protection Hotline number as listed above.

### List of Subjects in 40 CFR Part 82

Environmental protection, Administrative practice and procedure, Air pollution control, Reporting and recordkeeping requirements.

Dated: July 12, 2002.

**Christine Todd Whitman,**  
*Administrator.*

For the reasons set out in the preamble, 40 CFR part 82 is amended as follows:

## PART 82—PROTECTION OF STRATOSPHERIC OZONE

1. The authority citation for Part 82 continues to read as follows:

**Authority:** 42 U.S.C. Sec. 7414, 7601, 7671-7671q.

### Subpart G—Significant New Alternatives Policy Program

2. Subpart G is amended by adding Appendix K to read as follows:

**Appendix K to Subpart G—Substitutes Subject to Use Restrictions and Unacceptable Substitutes Listed in the July 22, 2002, Final Rule, Effective August 21, 2002.**

### FOAM BLOWING—UNACCEPTABLE SUBSTITUTES

End-use	Substitute	Decision	Comments
Replacements for HCFC-141b in the following rigid polyurethane/polyisocyanurate applications: —Boardstock —Appliance —Spray	HCFC-22, HCFC-142b and blends thereof.	Unacceptable .....	Alternatives exist with lower or zero-ODP.
All foam end-uses .....	HCFC-124 .....	Unacceptable .....	Alternatives exist with lower or zero-ODP.

### FOAM BLOWING—ACCEPTABLE SUBSTITUTES

End-use	Substitute	Decision	Comments
Replacements for HCFC-141b in the following rigid polyurethane applications: —Commercial Refrigeration —Sandwich Panels —Slabstock and Other Foams	HCFC-22, HCFC-142b and blends thereof.	Acceptable Subject to Narrowed to Narrowed Use Limits.	Users must evaluate other acceptable non-ozone-depleting substitutes to determine that HCFC-22/HCFC-142b use is necessary to meet performance or safety requirements. Users must determine that there are technical constraints that preclude the use of other available substitutes. Documentation of this evaluation must be available for review upon request.

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BILLING CODE 6560-50-P

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 147

[FRL-7247-7]

### Underground Injection Control Program Revision; Aquifer Exemption Determination for Portions of the Lance Formation Aquifer in Wyoming

**AGENCY:** Environmental Protection Agency.

**ACTION:** Final rule.

**SUMMARY:** The State of Wyoming Department of Environmental Quality (WDEQ) has requested Environmental Protection Agency (EPA) approval of a revision to the State Underground

Injection Control (UIC) Program, specifically that EPA approve an aquifer exemption from classification as an underground source of drinking water (USDW) for portions of the Lance Formation within the Powder River Basin in Johnson County, Wyoming.

Until August 2000, COGEMA Minerals was mining uranium from the Wasatch Formation under a UIC Class III in-situ leaching permit, issued by WDEQ. A previous Lance Formation aquifer exemption, approved by EPA in the **Federal Register** on March 26, 1999, allowed COGEMA to inject mining and mineral processing waste fluids from the Wasatch into the Lance Formation through two Class I Non-Hazardous deep injection wells permitted in 1997. COGEMA, after closing its mining operations, is extending its large-scale ground water restoration throughout the

entire mined portion of the Wasatch Formation.

During the active mining process, the disposal capacity of the two existing Class I wells were adequate for the smaller scale restoration waste stream as COGEMA mined, then closed each Class III well field sequentially. However, now that COGEMA is restoring the entire mine site, large-scale restoration will produce a larger volume of waste fluid. WDEQ issued the final permit to COGEMA for the operation of two additional wells on November 3, 2000. However, COGEMA cannot inject any fluids into these wells until EPA approves this aquifer exemption.

Today's approval of this new aquifer exemption will allow COGEMA to use the newly permitted Class I injection wells to inject ground water restoration waste fluids from the Wasatch Formation into the Lance Formation. As a result of this increased disposal