**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 82**

**[FRL–5958–4]**

**RIN 2060–AG12**

## Protection of Stratospheric Ozone; Listing of Substitutes for Ozone-Depleting Substances

**AGENCY:** Environmental Protection Agency.

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** This action proposes restrictions or prohibitions on substitutes for ozone depleting substances (ODSs) under the Environmental Protection Agency's (EPA) Significant New Alternatives Policy (SNAP) program. SNAP implements section 612 of the amended Clean Air Act of 1990, which requires EPA to evaluate substitutes for the ODSs to reduce overall risk to human health and the environment. Through these evaluations, SNAP generates lists of acceptable and unacceptable substitutes for each of the major industrial use sectors. 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 a final rulemaking setting forth its plan for administering the SNAP program, and issued decisions on the acceptability and unacceptability of a number of substitutes. In this Notice of Proposed Rulemaking (NPRM), EPA is issuing its preliminary decisions on the acceptability of certain substitutes not previously reviewed by the Agency. Specifically, this action proposes to list as unacceptable the use of two gases as refrigerants in ''self-chilling cans'' because of unacceptably high greenhouse gas emissions which would result from the direct release of the cans' refrigerants to the atmosphere.

**DATES:** Written comments or data provided in response to this document must be submitted by March 5, 1998.

**ADDRESSES:** Written comments and data should be sent to Docket A–91–42, U.S. Environmental Protection Agency, OAR Docket and Information Center, 401 M Street, S.W., Room M–1500, Mail Code 6102, Washington, D.C. 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. To expedite review, a second copy of the comments should be sent to Carol Weisner, Stratospheric Protection Division, U.S. Environmental Protection Agency, 401 M Street, S.W., Mail Code 6205J, Washington, D.C. 20460, or at the address listed in the next paragraph for overnight or courier deliveries. Information designated as Confidential Business Information (CBI) under 40 CFR, part 2, subpart B must be sent directly to the contact person for this document. However, the Agency is requesting that all respondents submit a non-confidential version of their comments to the docket as well.

**FOR FURTHER INFORMATION CONTACT:** Carol Weisner at (202) 564–9193 or fax (202) 565–2096, Substitutes Analysis and Review Branch, Stratospheric Protection Division, Mail Code 6205J, Washington, D.C. 20460. Overnight or courier deliveries should be sent to our 501–3rd Street, NW, Washington, DC, 20001 location.

**SUPPLEMENTARY INFORMATION:**

## I. Overview of This Action

This action is divided into six sections, including this overview:

II. Section 612 Program
A. Statutory Requirements
B. Regulatory History
III. Proposed Listing of Substitutes
IV. Administrative Requirements
V. Additional Information

## II. Section 612 Program

### *A. Statutory Requirements*

Section 612 of the Clean Air Act authorizes EPA to develop a program for evaluating alternatives to ozone-depleting substances. EPA is referring 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) requires 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 the Final Rulemaking (FRM) (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 blowing; solvent cleaning; fire suppression and explosion protection; sterilants; aerosols; adhesives, coatings and inks; and tobacco expansion. These sectors comprise the principal industrial sectors that historically consume 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.

## III. Proposed Listing of Substitutes

To develop the lists of unacceptable and acceptable substitutes, EPA conducts screens of health and environmental risks posed by various substitutes for ozone-depleting compounds in each use sector. The outcome of these risks screens can be found in the public docket, as described above in the **ADDRESSES** portion of this document.

Under section 612, the Agency has considerable discretion in the risk management decisions it can make in SNAP. The Agency has identified five possible decision categories: acceptable; acceptable subject to use conditions; acceptable subject to narrowed use limits; unacceptable; and pending. 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. A pending listing represents substitutes for which the Agency has not received complete data or has not completed its review of the data.

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 risks to human health and the environment. Use of such substitutes in ways that are inconsistent with such use conditions renders these substitutes unacceptable.

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 shall 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. Use of such substitutes in application and end-uses which are not specified as acceptable in the narrowed use limit renders these substitutes unacceptable.

In this Notice of Proposed Rulemaking (NPRM), EPA is issuing its preliminary decision on the acceptability of certain substitutes not previously reviewed by the Agency. As described in the final 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.

EPA does not believe that rulemaking procedures are required to list alternatives as acceptable with no limitations. 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. Updates to the acceptable and pending lists are published as separate Notices of Acceptability in the **Federal Register**.

Part A. below presents a detailed discussion of the proposed substitute listing determinations by major use sector. Tables summarizing listing decisions in this Notice of Proposed Rulemaking are in Appendix F. The comments contained in Appendix F to Subpart G of 40 CFR Part 82, provide additional information on a substitute. Since comments are not part of the regulatory decision, they are not mandatory for use of a substitute. Nor should the comments be considered comprehensive with respect to other legal obligations pertaining to the use of the substitute. However, EPA encourages users of acceptable substitutes to apply all comments in their application of these substitutes. In many instances, the comments simply allude to sound operating practices that have already been identified in existing industry and/or building-code standards. Thus, many of the comments, if adopted, would not require significant changes in existing operating practices for the affected industry.

### *A. Refrigeration and Air Conditioning*

#### 1. Unacceptable Substitutes

a. CFC–12, R–502, and HCFC–22 Household Refrigeration, Transport Refrigeration, Vending Machines, Cold Storage Warehouses, and Retail Food Refrigeration, Retrofit and New.

(i) Self-chilling Cans Using HFC–134a or HFC–152a.

This technology represents a product substitute intended to replace several types of refrigeration equipment. A self-chilling can includes a heat transfer unit that performs the same function as one half of the traditional vapor-compression refrigeration cycle. The unit contains a charge of pressurized refrigerant that is released to the atmosphere when the user activates the cooling unit. As the refrigerant's pressure drops to atmospheric pressure, it absorbs heat from the can's contents and evaporates, cooling the can. Because this process provides the same cooling effect as household refrigeration, transport refrigeration, vending machines, cold storage warehouses, or retail food refrigeration, it is a substitute for CFC–12, R–502, or HCFC–22 in these systems. The Agency requests comment on the approach of defining self-chilling cans as a product substitute for a variety of types of refrigeration equipment.

HFCs have played a major role in the phaseout of CFC refrigerants, and EPA expects this responsible use to continue. HFC–134a is an acceptable substitute for ozone-depleting refrigerants in a wide variety of refrigeration systems. In addition, both HFC–134a and HFC–152a are components in refrigerant blends that are themselves acceptable substitutes. These refrigeration systems are closed, meaning that refrigerant recirculates, and there are EPA regulations requiring their recovery and reuse. The only source of refrigerant emissions is leaks, and EPA regulations require the repair of large leaks from these systems. In contrast, however, self-chilling cans work by releasing refrigerant.

In assessing the risks of proposed substitutes under the SNAP program, EPA considers all environmental impacts a substitute may produce. HFC–134a and HFC–152a have no ozone depletion potential, are low in toxicity, and are not volatile organic compounds. HFC–152a is flammable, but the primary area of concern for both HFC–134a and HFC–152a is their potential to contribute to global warming; both compounds are powerful greenhouse gases.

EPA has assessed the possible contribution of self-chilling can technology to U.S. emissions of global warming gases when HFC–134a and HFC–152a are used. EPA included several possible market penetration values in this assessment, ranging from 1% to 25%. A one percent penetration would amount to sales of roughly one billion cans annually. The resultant emissions estimates are directly proportional to the market penetration; to estimate the effects of market penetrations other than those evaluated here, scale appropriately. For purposes of illustration, the discussion below uses market penetration scenarios of 5%

and 25%. Because the product has not yet been introduced, it is not possible to know actual market penetration, and the Agency is not aware of any projections of market penetration in the trade press. EPA invites comment on both the expected cost of producing and sales price of self-chilling cans and on their possible market penetration.

Because the total US market for beer and soft drinks is approximately 100 billion cans per year, even a small market penetration could substantially increase US emissions of greenhouse gases. Based on industry estimates appearing in trade journals for the beverage canning industry and a basic understanding of the physical properties of refrigerants, EPA assumed that a 12 ounce beverage can requires 2 ounces of refrigerant and a 16 ounce beverage can requires 2.7 ounces of refrigerant. EPA used values from the Intergovernmental Panel on Climate Change for the global warming potential (GWP) of HFC–134a (1300) and HFC–152a (140), based on a 100-year integrated time horizon. This analysis is conservative for two reasons: (1) EPA assumed that the refrigerant absorbs heat only from the beverage and not from the surrounding air, thereby reducing the refrigerant charge required, and (2) several articles in canning industry trade journals have indicated that the likely usage would be 3–4 oz. of refrigerant per 12 ounce can instead of the 2 ounces assumed here. Under this scenario, 5% market penetration of cans using HFC–134a results in emissions of 96 million metric tons of carbon equivalent (MMTCE).

To provide perspective, this value is 25% higher than 76.5 MMTCE, the reductions in greenhouse gas emissions currently estimated in the year 2000 under President Clinton's Climate Change Action Plan published in October, 1993 (CCAP). At 25% market penetration of cans using HFC–134a, the emissions are 479 MMTCE, nearly one third of the total emissions from all US power generation. Using HFC–152a, a 5% market penetration results in emissions of 10 MMTCE and a 25% market penetration yields emissions of 52 MMTCE, or more than 2/3 the total expected reductions under the CCAP.

Under the SNAP program, EPA compares the risks of a given substitute to what it is replacing, as well as to the risks of other substitutes available for the same use. Therefore, EPA also analyzed the effect of replacing systems with new equipment using new refrigerants in the end-uses listed above with self-chilling cans. Like chilling cans, refrigeration systems have a direct effect on greenhouse gas emissions related to emissions, but leakage from refrigeration systems is minimal. They also have an indirect effect because the production of electricity to power the systems results in the release of carbon dioxide. Self-chilling cans have only a direct effect, namely the release of refrigerant to the atmosphere. However, cans using HFC–134a exceed the combined direct and indirect effects of equivalent refrigeration systems by a factor of more than 40. Cans using HFC–152a exceed refrigeration systems by a factor of 4. Again, these are conservative estimates, because EPA assumes that these systems are dedicated solely to cooling beverages, while in reality much of this capacity is devoted to cooling other products.

Today's proposal has no implications for high value medical emissive uses, such as the use of HFC–134a as a propellant in metered dose inhalers. Information from trade journals and the company developing self-chilling cans indicates that the predominant use of this technology will be to cool beverages. EPA has always distinguished between critical uses of substitutes and more general use, and therefore invites comment on other potential uses of self-chilling cans. In addition, EPA has long recognized the difference between uses designed to be emissive and those designed to be closed systems. For example, this determination has no bearing on continued, responsible use of HFC–134a and HFC–152a in non-emissive uses such as retail food refrigeration.

Under the SNAP program, EPA has encouraged the introduction of innovative technology designed to reduce emissions of ozone depleting substances. In pursuit of such developments, we have promoted the use of substitutes for ozone-depleting substances (ODS) with lower overall risk. Guided by this policy, we have stressed the importance of examining all the environmental effects a substitute may produce, including global warming. EPA has restricted the use of several greenhouse gases through narrowed use limits and unacceptability determinations. For example, PFCs may only be used in new heat transfer systems after a study has demonstrated that no other substitute will work. Similarly, EPA proposed several refrigerant blends as unacceptable on May 21, 1997 (62 FR 27873) because they contain HFC–23, a gas with an extremely high GWP. Today's proposal is consistent with EPA's ongoing efforts to assure that as the transition away from ODS continues, we do not contribute to significant new use of high-GWP greenhouse gases.

Therefore, EPA proposes self-chilling cans using HFC–134a or HFC–152a to be unacceptable substitutes for CFC–12, R–502, or HCFC–22 in the end-uses listed above.

## IV. 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 have been documented in the public record.

### *B. Unfunded Mandates Act*

Section 202 of the Unfunded Mandates Reform Act of 1995 requires EPA to prepare a budgetary impact statement before promulgating a rule that includes a Federal mandate that may result in expenditure by state, local, and tribal governments, in aggregate, or by the private sector, of $100 million or more in any one year. Section 203 requires the Agency to establish a plan for obtaining input from and informing any small governments that may be significantly or uniquely affected by the rule. Section 205 requires that regulatory alternatives be considered before promulgating a rule for which a budgetary impact statement is prepared. The Agency must select the least costly, most cost-effective, or least burdensome alternative that achieves the rule's objectives, unless there is an explanation why this alternative is not

selected or this alternative is inconsistent with law.

Because this proposed rule is estimated to result in the expenditure by State, local, and tribal governments or the private sector of less than $100 million in any one year, the Agency has not prepared a budgetary impact statement or specifically addressed the selection of the least costly, most cost-effective, or least burdensome alternative. Because small governments will not be significantly or uniquely affected by this rule, the Agency is not required to develop a plan with regard to small governments. However, this proposed rule has the net effect of reducing burden from part 82, Stratospheric Protection regulations, on regulated entities.

*C. Regulatory Flexibility Act*

The Regulatory Flexibility Act (RFA) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements 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 not-for-profit enterprises, and small governmental jurisdictions. This proposed rule would not have a significant impact on a substantial number of small entities because costs of the SNAP requirements as a whole are expected to be minor. In fact, this proposed rule offers regulatory relief to small businesses by providing acceptable alternatives to phased-out ozone-depleting substances. Additionally, the SNAP rule exempts small sectors and end-uses from reporting requirements and formal agency review. To the extent that information gathering is more expensive and time-consuming for small companies, the actions proposed herein may well provide benefits for small businesses anxious to examine potential substitutes to any ozone-depleting class I and class II substances they may be using, by requiring manufacturers to make information on such substitutes available. 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 proposed 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 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). The OMB Control Numbers are 2060–0226 and 2060–0350.

## V. Additional Information

For copies of the comprehensive SNAP lists or additional information on SNAP, contact the Stratospheric Protection Hotline at 1–800–296–1996, Monday–Friday, between the hours of 10:00 a.m. and 4:00 p.m. (EST).

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). Federal Register notices can be ordered from the Government Printing Office Order Desk (202) 783–3238; the citation is the date of publication. Notices and rulemakings under the SNAP program are available from the Ozone Depletion World Wide Web site at ''http://www.epa.gov/ozone/title6/snap'' .

### List of Subjects in 40 CFR Part 82

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

Dated: January 28, 1998.

**Carol M. Browner,**

*Administrator.*

For the reasons set out in the preamble, 40 CFR part 82 is proposed to be 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. 7414, 7601, 7671—7671q.

## Subpart G—Significant New Alternatives Policy Program

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

### Appendix F to Subpart G—Substitutes Subject to Use Restrictions and Unacceptable Substitutes

REFRIGERANTS—UNACCEPTABLE SUBSTITUTES

| End-use | Substitute | Decision | Comments |
|---|---|---|---|
| CFC–12, R–502, and HCFC-22 Household Refrigeration, Transport Refrigeration, Vending Machines, Cold Storage Warehouses, and Retail Food Refrigeration, Retrofit and New. | Self-Chilling Cans Using HFC–134a or HFC–152a. | Unacceptable | Unacceptably high greenhouse gas emissions from direct release of refrigerant to the atmosphere. |

[FR Doc. 98–2617 Filed 2–2–98; 8:45 am]

BILLING CODE 6560–50–P