

(2) On Jenny Lake:

(i) Operating a power-driven vessel using a motor exceeding 7½ horsepower is prohibited, except:

(ii) An NPS authorized boating concessioner may operate power-driven vessels under conditions specified by the Superintendent.

\* \* \* \* \*

(h) *Where may I ride a bicycle in Grand Teton National Park?* (1) You may ride a bicycle on park roads, in parking areas, and upon designated routes established within the park in accordance with § 4.30(a) of this chapter. The following routes are designated for bicycle use:

(i) The paved multi-use pathway alongside Dornan Road between Dornan's and the Teton Park Road.

(ii) The paved multi-use pathway alongside the Teton Park Road between Dornan Road (Dornan's Junction) and the South Jenny Lake developed area.

(2) The Superintendent may open or close designated routes, or portions thereof, or impose conditions or restrictions for bicycle use after taking into consideration the location of or impacts on wildlife, the amount of snow cover or other environmental conditions, public safety, and other factors, under the criteria and procedures of §§ 1.5 and 1.7 of this chapter.

Dated: September 22, 2011.

**Eileen Sobeck,**

*Acting Assistant Secretary for Fish and Wildlife and Parks.*

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## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 82

[EPA-HQ-OAR-2003-0118; FRL-9474-4]

RIN 2060-AG12

### Protection of Stratospheric Ozone: acceptability Determination 26 for Significant New Alternatives Policy Program

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Determination of acceptability.

**SUMMARY:** This Determination of Acceptability expands the list of acceptable substitutes for ozone-depleting substances under the U.S. Environmental Protection Agency's (EPA) Significant New Alternatives Policy (SNAP) program. The determinations concern new substitutes

for use in the refrigeration and air conditioning, solvent cleaning and fire suppression sectors.

**DATES:** This determination is effective on October 4, 2011.

**ADDRESSES:** EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2003-0118 (continuation of Air Docket A-91-42). All electronic documents in the docket are listed in the index at <http://www.regulations.gov>. Although listed in the index, some information is not publicly available, *i.e.*, Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Publicly available docket materials are available either electronically at <http://www.regulations.gov> or in hard copy at the EPA Air Docket (No. A-91-42), EPA/DC, EPA West, Room 3334, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air Docket is (202) 566-1742.

**FOR FURTHER INFORMATION CONTACT:** Margaret Sheppard by telephone at (202) 343-9163, by facsimile at (202) 343-2338, by e-mail at [sheppard.margaret@epa.gov](mailto:sheppard.margaret@epa.gov), or by mail at U.S. Environmental Protection Agency, Mail Code 6205J, 1200 Pennsylvania Avenue, NW., Washington, DC 20460. Overnight or courier deliveries should be sent to the office location at 1310 L Street, NW., 10th floor, Washington, DC 20005.

For more information on the Agency's process for administering the SNAP program or criteria for evaluation of substitutes, refer to the original SNAP rulemaking published in the **Federal Register** on March 18, 1994 (59 FR 13044). Notices and rulemakings under the SNAP program, as well as other EPA publications on protection of stratospheric ozone, are available at EPA's Ozone Depletion World Wide Web site at <http://www.epa.gov/ozone/> including the SNAP portion at <http://www.epa.gov/ozone/snap/>.

#### SUPPLEMENTARY INFORMATION:

##### I. Listing of New Acceptable Substitutes

- A. Refrigeration and Air Conditioning
- B. Solvent Cleaning
- C. Fire Suppression
- II. Section 612 Program
  - A. Statutory Requirements and Authority for the SNAP Program
  - B. EPA's Regulations Implementing Section 612
  - C. How the Regulations for the SNAP Program Work

D. Additional Information About the SNAP Program

Appendix A—Summary of Decisions for New Acceptable Substitutes

#### I. Listing of New Acceptable Substitutes

This section presents EPA's most recent acceptable listing decisions for substitutes in the refrigeration and air conditioning, solvent cleaning, and fire suppression sectors. For copies of the full list of ozone-depleting substance (ODS) substitutes in all industrial sectors, visit EPA's Ozone Layer Protection Web site at <http://www.epa.gov/ozone/snap/lists/index.html>.

The sections below discuss each substitute listing in detail. Appendix A contains a table summarizing today's listing decisions for new substitutes. The statements in the "Further Information" column in the table provide additional information, but are not legally binding under section 612 of the Clean Air Act (CAA). In addition, the "further information" may not be a comprehensive list of other legal obligations you may need to meet when using the substitute. Although you are not required to follow recommendations in the "further information" column of the table to use a substitute consistent with section 612 of the CAA, EPA strongly encourages you to apply the information when using these substitutes. In many instances, the information simply refers to standard operating practices in existing industry and/or building-code standards. However, some of these statements may refer to obligations that are enforceable or binding under federal or state programs other than the SNAP program. Many of these statements, if adopted, would not require significant changes to existing operating practices.

You can find submissions to EPA for the use of the substitutes listed in this document and other materials supporting the decisions in this action in docket EPA-HQ-OAR-2003-0118 at <http://www.regulations.gov>.

#### A. Refrigeration and Air Conditioning

##### 1. Hot Shot 2

*EPA's decision: EPA finds Hot Shot 2 is acceptable as a substitute for CFC-12, CFC-11, CFC-113, CFC-114, R-13B1, R-500, R-502, HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b, for use in retrofit equipment in:*

- Centrifugal chillers
- Reciprocating and screw chillers
- Industrial process refrigeration
- Ice skating rinks
- Cold storage warehouses

- Refrigerated transport
- Retail food refrigeration
- Vending machines
- Commercial ice machines
- Residential dehumidifiers
- Household and light commercial air conditioning and heat pumps

Hot Shot 2 is a blend by weight of 79.3 percent HFC-134a, which is also known as 1,1,1,2-tetrafluoroethane (CAS Reg. No. 811-97-2), 19.5 percent HFC-125, which is also known as 1,1,1,2,2-pentafluoroethane (CAS Reg. No. 354-33-6), and 1.7 percent R-600, which is also known as n-butane (CAS Reg. No. 106-97-8). You may find the submission under Docket item EPA-HQ-OAR-2003-0118-0271 at <http://www.regulations.gov>.

**Environmental information:** Hot Shot 2 has no ozone depletion potential (ODP). Its components (HFC-134a, HFC-125, and R-600) have 100-year integrated (100-yr) global warming potentials (GWPs) of 1,430,<sup>1</sup> 3,500, and 4 respectively. If these values are weighted by mass percentage, then Hot Shot 2 has a GWP of about 1,820. Of the three components of Hot Shot 2, R-600 is defined as a volatile organic compound (VOC) under CAA regulations (see 40 CFR 51.100(s)) addressing the development of State Implementation Plans (SIPs) to attain and maintain the national ambient air quality standards. The emissions of this refrigerant will be limited given it is subject to the venting prohibition under section 608(c)(2) of the CAA and EPA's implementing regulations codified at 40 CFR 82.154(a)(1).<sup>2</sup> Considering the small expected emissions of this refrigerant and particularly of the VOC component, use of Hot Shot 2 is not expected to pose any significant adverse impacts on local air quality.

**Flammability information:** While the component R-600, isobutane, is a hydrocarbon that is flammable, Hot Shot 2 as formulated and in the worst-case fractionation formulation is not flammable.

**Toxicity and exposure data:** Potential health effects of this substitute include drowsiness or dizziness. The substitute may also irritate the skin or eyes or cause frostbite. At sufficiently high

concentrations, the substitute may cause irregular heartbeat. The substitute could cause asphyxiation if air is displaced by vapors in a confined space. These potential health effects are common to many refrigerants.

EPA anticipates that Hot Shot 2 will be used consistent with the recommendations specified in the Material Safety Data Sheets (MSDSs) for the blend and for the individual components. For the blend, the manufacturer recommends an acceptable exposure limit (AEL) of 1000 ppm on an 8-hour time-weighted average. For both HFC-134a and HFC-125, the American Industrial Hygiene Association (AIHA) recommends workplace environmental exposure limits (WEELs) of 1000 ppm on an 8-hour time-weighted average. Similarly, for R-600 the American Conference of Governmental Industrial Hygienists (ACGIH) has established a threshold limit value (TLV) of 1,000 ppm on an 8-hour time-weighted average. The National Institute for Occupational Safety and Health (NIOSH) has a recommended exposure limit (REL) of 800 ppm for R-600 on a 10-hour time-weighted average. EPA anticipates that users will be able to meet workplace exposure limits (WEELs, TLVs, RELs and manufacturer AELs) and address potential health risks by following requirements and recommendations in the MSDS and other safety precautions common to the refrigeration and air conditioning industry.

**Comparison to other refrigerants:** Hot Shot 2 is not ozone-depleting in contrast to CFC-12, CFC-11, CFC-113, CFC-114 (with ODPs ranging from 0.58 to 1.0<sup>3</sup>), R-13B1 (with an ODP of 15.9), HCFC-22 (with an ODP of 0.04), R-500 (with an ODP of 0.074) and R-502 (with an ODP of 0.334), the ozone-depleting substances which it replaces, and comparable to a number of other acceptable non-ozone-depleting substitutes for these end uses such as HFC-134a, R-410A, and R-404A. Hot Shot 2's GWP of about 1,820 is lower than or comparable to those of the substances it is replacing, including CFC-12, CFC-11, CFC-113, CFC-114, R-13B1, R-500, R-502, and HCFC-22, with GWPs ranging from 1,810 to 10,900. Furthermore, the GWP of Hot Shot 2 is lower than or comparable to that of other non-ozone-depleting

substitutes in the same refrigeration and air conditioning end uses for which we are finding it acceptable, such as HFC-134a with a GWP of 1,430, R-410A with a GWP of 2,100 and R-404A with a GWP of 3,930. Flammability and toxicity risks are low, as discussed above. Thus, EPA finds Hot Shot 2 acceptable in the end uses listed above because the overall environmental and human health risk posed by Hot Shot 2 is lower than or comparable to the risks posed by other substitutes found acceptable in the same end uses.

## 2. R-407F

**EPA's decision:** EPA finds R-407F is acceptable as a substitute for HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b, for use in new and retrofit equipment in:

- Industrial process refrigeration
- Ice skating rinks
- Industrial process air conditioning
- Cold storage warehouses
- Refrigerated transport
- Retail food refrigeration
- Commercial ice machines
- Household refrigerators and freezers
- Motor vehicle air conditioning (buses and passenger trains only)
- Household and light commercial air conditioning and heat pumps

R-407F, marketed under the trade name Genetron® LT or Genetron® Performax™ LT, is a weighted blend of 30 percent HFC-32, which is also known as difluoromethane (CAS Reg. No. 75-10-5), 30 percent HFC-125, which is also known as 1,1,1,2,2-pentafluoroethane (CAS Reg. No. 354-33-6), and 40 percent HFC-134a, which is also known as 1,1,1,2-tetrafluoroethane (CAS Reg. No. 811-97-2). You may find the submission under Docket item EPA-HQ-OAR-2003-0118-0264 at <http://www.regulations.gov>.

**Environmental information:** R-407F has no ODP. HFC-32, HFC-125, and HFC-134a have GWPs of 675, 3500, and 1430, respectively. If these values are weighted by mass percentage, then R-407F has a GWP of about 1,820. The contribution of this refrigerant blend to greenhouse gas emissions will be limited given it is subject to the venting prohibition under section 608(c)(2) of the CAA and EPA's implementing regulations codified at 40 CFR 82.154(a)(1), which limit emissions of refrigerant substitutes.

R-407F does not contain any VOCs as defined under CAA regulations (see 40 CFR 51.100(s)) addressing the development of SIPs to attain and maintain the national ambient air quality standards.

<sup>1</sup> Unless otherwise stated, all GWPs in this document are from: IPCC, 2007: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. This document is accessible at [http://www.ipcc.ch/publications\\_and\\_data/ar4/wg1/en/contents.html](http://www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html).

<sup>2</sup> For more information, including definitions, see 40 CFR part 82 subpart F.

<sup>3</sup> Unless otherwise stated, all ODPs in this document are from: WMO (World Meteorological Organization), *Scientific Assessment of Ozone Depletion: 2010*, Global Ozone Research and Monitoring Project-Report No. 52, 516 pp., Geneva, Switzerland, 2011. This document is accessible at [http://ozone.unep.org/Assessment\\_Panels/SAP/Scientific\\_Assessment\\_2010/index.shtml](http://ozone.unep.org/Assessment_Panels/SAP/Scientific_Assessment_2010/index.shtml).

**Flammability information:** While the component HFC-32 is moderately flammable, R-407F as formulated and in the worst-case fractionation formulation is not flammable.

**Toxicity and exposure data:** Potential health effects of this substitute include drowsiness or dizziness. The substitute may also irritate the skin or eyes or cause frostbite. At sufficiently high concentrations, the substitute may cause irregular heartbeat. The substitute could cause asphyxiation if air is displaced by vapors in a confined space. These potential health effects are common to many refrigerants.

The AIHA has established WEELs of 1000 ppm on an 8-hour time-weighted average for each of the components of R-407F. The manufacturer also recommends an AEL of 1000 ppm on an 8-hour time-weighted average for each of the R-407F components. EPA anticipates that users will be able to meet AIHA's WEELs and the manufacturer's recommended AELs and address potential health risks by following requirements and recommendations in the MSDS and other safety precautions common to the refrigeration and air conditioning industry.

**Comparison to other refrigerants:** R-407F is not ozone-depleting in contrast to HCFC-22 (with an ODP of 0.04) and HCFC-142b (with an ODP of 0.06), the ozone-depleting substances which it replaces, and comparable to a number of other acceptable non-ozone-depleting substitutes in these end uses (e.g., R-410A and R-404A). R-407F's GWP of about 1,820 is comparable to that of HCFC-22 with a GWP of 1,810 and lower than or comparable to that of other non-ozone-depleting substitutes for HCFC-22 in the same refrigeration and air conditioning end uses, such as R-410A with a GWP of 2,100 and R-404A with a GWP of 3,930. Flammability and toxicity risks are low, as discussed above. Thus, EPA finds R-407F acceptable in the end uses listed above because the overall environmental and human health risk posed by R-407F is lower than or comparable to the risks posed by other substitutes found acceptable in the same end uses.

### 3. R-507A

**EPA's decision:** EPA finds R-507A is acceptable as a substitute for R-13B1 for use in retrofit equipment in very low temperature refrigeration.

R-507A, also known as R-507, is a blend of 50% by weight HFC-125 (1,1,1,2,2-pentafluoroethane) and 50% by weight HFC-143a (1,1,1-trifluoroethane). EPA previously listed

R-507A as an acceptable alternative for various CFCs (e.g., CFC-12) and CFC-containing blends (e.g., R-500 and R-502) in several refrigeration and air conditioning end uses and as an alternative for HCFC-22 and blends in the very low temperature refrigeration end use. (March 18, 1994, 59 FR 13044; August 26, 1994, 59 FR 44240; January 13, 1995, 60 FR 3318; September 5, 1996, 61 FR 47012; December 20, 2002, 67 FR 77927). Today's decision finds R-507A acceptable as a substitute for R-13B1 (also known as halon 1301) in the very low temperature refrigeration end use.<sup>4</sup>

**Environmental information:** The ODP of R-507A is zero. The GWPs of HFC-125 and HFC-143a are about 3,400 and 4,300, respectively. If these values are weighted by mass percentage, then R-507A has a GWP of 3,850. The contribution of this refrigerant blend to greenhouse gas emissions will be limited given it is subject to the venting prohibition under section 608(c)(2) of the CAA and EPA's implementing regulations codified at 40 CFR 82.154(a)(1), which limit emissions of refrigerant substitutes.

R-507A does not contain any VOCs as defined under CAA regulations (see 40 CFR 51.100(s)) addressing the development of SIPs to attain and maintain the national ambient air quality standards.

**Flammability Information:** While the component HFC-143a is moderately flammable, R-507A as formulated and in the worst-case fractionation formulation is not flammable.

**Toxicity and Exposure Data:** Potential health effects of this substitute include headache, nausea, dizziness, drowsiness, or loss of consciousness. The substitute may also irritate the skin or eyes or cause frostbite. At sufficiently high concentrations, the substitute may cause irregular heartbeat or rapid heartbeat. The substitute could cause asphyxiation if air is displaced by vapors in a confined space. These potential health effects are common to many refrigerants.

EPA anticipates that R-507A will be used consistent with the recommendations specified in the MSDSs for the blend and the individual components. All components of the blend have WEELs of 1,000 ppm, as established by AIHA. EPA anticipates that users will be able to meet AIHA's WEELs and address potential health risks by following requirements and

recommendations in the MSDS and other safety precautions common to the refrigeration and air conditioning industry.

**Comparison to Other Refrigerants:** R-507A is not ozone-depleting, in contrast to R-13B1 (with an ODP of 15.9), the ozone-depleting substance which it replaces, and in contrast to NARM-502 and R-403B, substitutes for this end use that contain HCFC-22 with an ODP of 0.04. R-507A's GWP of about 3,850 is well below that of R-13B1 with a GWP of 7,140 and lower than or comparable to that of other non-ozone-depleting substitutes for R-13B1 in the very low temperature refrigeration end use, such as R-508A with a GWP of 13,200, NARM-502 with a GWP of 2,380, and R-403B with a GWP of 1,500. Flammability and toxicity risks are low, as discussed above. Thus, EPA finds R-507A acceptable in the very low temperature refrigeration end use for retrofit equipment because the overall environmental and human health risk posed by R-507A is lower than or comparable to the risks posed by other substitutes found acceptable in the same end use.

### B. Solvent Cleaning

#### 1. Perfluorobutyl Iodide (PFBI)

**EPA's decision:** EPA finds perfluorobutyl iodide (PFBI) is acceptable as a substitute for CFC-113, methyl chloroform, and HCFC-225ca, HCFC-225cb, and blends thereof for use in:

- Metal cleaning.
- Electronics cleaning.
- Precision cleaning.

PFBI is also known as 1,1,1,2,2,3,3,4,4-nonafluoro-4-iodobutane (CAS Reg. No. 423-39-2). This substitute was submitted to EPA under the trade name Capstone® 4-I as a fluorinated iodide mixture containing greater than 99 percent PFBI. You may find the submission under Docket item EPA-HQ-OAR-2003-0118-0269 at <http://www.regulations.gov>.

**Environmental information:** PFBI has an ODP of less than 0.005. PFBI has a GWP of less than 5 relative to CO<sub>2</sub> and an atmospheric lifetime of a few days<sup>5</sup>. PFBI is currently defined as a VOC under Clean Air Act regulations (see 40 CFR 51.100(s)) addressing the development of SIPs to attain and maintain the national ambient air quality standards. Many States currently, in particular those with areas that are violating the ozone NAAQS,

<sup>4</sup> EPA received a test marketing notification for this use, accessible under Docket item EPA-HQ-OAR-2003-0118-0266 at <http://www.regulations.gov>.

<sup>5</sup> ODP, GWP and atmospheric lifetime for PFBI are from information provided in the submission under Docket item EPA-HQ-OAR-2003-0118-0269 at <http://www.regulations.gov>.

have regulations governing the VOC content of solvents.

Some evidence shows that the substitute can cause aquatic toxicity, with an LC<sub>50</sub><sup>6</sup> of 2 mg/l in a 96-hour test on fathead minnows under laboratory conditions. Due to PFBI's low solubility in water, high vapor pressure and high volatility, it is not likely to accumulate in surface water at concentrations high enough to be toxic to fish<sup>7</sup>. To address the potential for toxicity to fish, the EPA recommends that users follow recommendations in the manufacturer's MSDS, including:

- Collect the spent solvent for reclamation or incineration;
- Incinerate materials that contain or are contaminated with the solvent;
- Send solvent-contaminated wastewater to a wastewater treatment facility to prevent the solvent from entering waterways; and
- Do not dispose of the solvent by releasing it into waterways.

EPA anticipates that PFBI will be disposed of consistent with regulations pertaining to the definition of hazardous waste under the Resource Conservation and Recovery Act (RCRA) as well as with the recommendations above.

**Flammability information:** PFBI is not flammable.

**Toxicity and exposure data:** Potential health effects of this substitute include cough, shortness of breath, central nervous system depression, dizziness, confusion, incoordination, drowsiness, or unconsciousness. The substitute may also irritate the skin or eyes. At sufficiently high concentrations, the substitute may cause irregular heartbeat or fluid in the lungs. These potential health effects are common to many solvents.

EPA anticipates that PFBI will be used consistent with the recommendations specified in the manufacturer's MSDS. EPA and the manufacturer both recommend an acceptable exposure limit of 375 ppm over an 8-hour time-weighted average for PFBI. Users should be aware of additional exposure limits that may be associated with byproducts in PFBI solutions, such as iodine. EPA anticipates that users will be able to meet the workplace exposure limits (manufacturer AEL and EPA recommendation) and address potential health risks by following requirements and recommendations in the MSDSs and other safety precautions common in the solvent cleaning industry.

**Comparison to other solvents:** PFBI's ODP of less than 0.005 is below that of CFC-113 (with an ODP of 0.85) and lower than or comparable to that of other substitutes for CFC-113 in metals, electronics, and precision cleaning such as HCFC-225ca with an ODP of 0.02, HCFC-225cb with an ODP of 0.03, and HFE-7100 with an ODP of zero. PFBI's GWP of less than 5 is well below that of CFC-113 with a GWP of 6,130 and is lower than that of other substitutes for CFC-113 in the listed end uses, such as HCFC-225ca with a GWP of 1,220, HCFC-225cb with a GWP of 595, and HFE-7100 with a GWP of 297. PFBI has a lower LC<sub>50</sub> for fish than some other acceptable solvents in these end uses (e.g., 7280 to 8120 mg/l for acetone<sup>8</sup>, 40.7 to 66.8 mg/l for trichloroethylene,<sup>9</sup> and greater than 7.9 mg/l for HFE-7100<sup>10</sup>) and an LC<sub>50</sub> higher than for some other acceptable substitutes (e.g., 0.7 mg/l for d-limonene<sup>11</sup>). EPA expects that following the disposal recommendations in the manufacturer's MSDS can sufficiently address this risk. Flammability and toxicity risks are low, as discussed above. Thus, EPA finds PFBI acceptable in the end uses listed above because the overall risk to human health and the environment posed by PFBI is lower than or comparable to the risks posed by other substitutes found acceptable in the same end uses.

### C. Fire Suppression

#### 1. Firebane® All-Weather 1115 and Firebane® 1115

**EPA's decision:** EPA finds Firebane® All-Weather 1115 and Firebane® 1115 acceptable as substitutes for halon 1211 for use as streaming agents.

Because the formulations of Firebane® All-Weather 1115 and Firebane® 1115 are very similar and share the same human health and environmental risks, we are listing them together and,

<sup>8</sup> Fisher Scientific, 2001. Material Safety Data Sheet for acetone. Updated March 19, 2001. Available at <http://www.mhatt.aps.anl.gov/dohn/msds/acetone.html>.

<sup>9</sup> NPS, 1997. Irwin, R.J., M. VanMouwerik, L. Stevens, M.S. Seese, and W. Basham. 1997. Environmental Contaminants Encyclopedia. National Park Service, Water Resources Division, Fort Collins, Colorado.

<sup>10</sup> Material Safety Data Sheet for 3M™ Novec™ 7100 Engineered Fluid. March 17, 2011. Downloaded from <http://multimedia.3m.com/mws/media/webserver?mwsId=SSSSSS> on August 10, 2011. HFE-7100's LC50 for fish (fathead minnow) is reported as being greater than its saturation concentration in water.

<sup>11</sup> Toxicity of eight terpenes to fathead minnows (*Pimephales promelas*), daphnids (*Daphnia magna*), and algae (*Selenastrum capricornutum*). ASCL Corporation and U.S. Environmental Protection Agency, Environmental Research Laboratory-Duluth. 1990.

hereinafter, collectively referring to them as "both Firebane® 1115 formulations." The manufacturer of both Firebane® 1115 formulations has claimed their composition as CBI. You may find the submissions under Docket items EPA-HQ-OAR-2003-0118-0255 and EPA-HQ-OAR-2003-0118-0256 at <http://www.regulations.gov>.

**Environmental information:** Both Firebane® 1115 formulations have zero ODP and zero GWP. Therefore, both Firebane® 1115 formulations are not expected to pose any significant adverse impacts on the ozone layer or climate.

In the case of both Firebane® 1115 formulations, it is expected that all of the constituents would rapidly aerosolize during expulsion from the container and then settle as a liquid on surfaces. After settling, cleanup would involve washing or rinsing of surfaces. The substitutes are readily biodegradable and have an exceptionally low biological oxygen demand<sup>12</sup> (BOD) level for wastewater and low chemical oxygen demand. Discharge of either Firebane® 1115 formulation is, therefore, not expected to contribute to surface water contamination or generation of solid waste.

Of the constituents of both Firebane 1115® formulations, only one has not been exempted as a VOC under the CAA (40 CFR 51.100(s)). Potential emissions of VOCs from the use of substitutes for halons in the fire extinguishing and explosion prevention sector are likely to be insignificant relative to VOCs from all other sources (i.e., other industries, mobile sources, and biogenic sources). Even at full market penetration, and given typical annual emission rates for halon substitute fire suppressants, estimated annual VOC emissions from both formulations of Firebane® 1115 are not expected to pose any significant adverse impacts on local air quality.

**Flammability information:** Both Firebane® 1115 formulations are non-flammable.

**Toxicity and exposure data:** The majority of the constituents of the Firebane® 1115 formulations are classified by the U.S. Food and Drug Administration (FDA) as "Generally Recognized as Safe (GRAS)" compounds, and the remaining constituents are FDA-approved for use as direct and/or indirect food additives. These compounds are commonly used in food, pharmaceutical, or cosmetic applications. Individual constituents may cause gastrointestinal discomfort (if

<sup>6</sup> LC<sub>50</sub> is defined as the concentration at which 50% of the test animals die.

<sup>7</sup> For more information see the risk screen for PFBI provided in the Docket at <http://www.regulations.gov>.

<sup>12</sup> BOD is the amount of oxygen consumed by microorganisms as they decompose organic materials in water.

excessively ingested), or minor irritation to the eyes, skin, and/or respiratory tract.

Given the low toxicity of its constituents, both formulations of Firebane® 1115 are not expected to pose a significant risk to personnel during manufacture, installation and maintenance. To minimize worker exposure to any chemicals during manufacture, installation, and maintenance through an accidental release or spill, EPA recommends the following:

- Proper personal protective equipment (PPE) be used during handling of the substitute (e.g., goggles, gloves);
- Adequate ventilation should be in place;
- All spills should be cleaned up immediately in accordance with good industrial hygiene practices;
- Training for safe handling procedures should be provided to all employees that would be likely to handle containers of or extinguishing units filled with Firebane® 1115 or Firebane® All-Weather 1115; and
- In case of an inadvertent discharge, workers should immediately follow the instructions listed in the manufacturer's MSDS.

The above recommendations are all contained in the manufacturers's MSDS. EPA also recommends that use of these systems should be in accordance with the latest edition of NFPA 10 Standard for Portable Extinguishers.

Firebane® 1115 and Firebane® All-Weather 1115 are not expected to cause significant harm to human health when used as streaming agents in portable fire extinguishers. As described above, the constituents of both Firebane® 1115 formulations are composed of compounds with low toxicity. Their use as streaming agents is not expected to pose any significant adverse health effects when the recommended safety precautions are followed.

**Comparison to other fire suppressants:** Both Firebane® 1115 formulations have zero ODP and GWP in contrast to halon 1211 (with an ODP of 7.1 and a GWP of 1,890), the ODS which they replace. Compared to other substitutes for halon 1211, such as HCFC Blend B (with ODP of roughly 0.01 and GWP of roughly 80), HFC-227ea (with ODP of 0 and GWP of 3,220), and HFC-236fa (with an ODP of 0 and GWP of 9,810), both Firebane® 1115 formulations have less impact on the atmosphere. Toxicity risks are low, as discussed above. Thus, we find that Firebane® 1115 and Firebane® All-Weather 1115 are acceptable because

the overall environmental and human health risk posed by Firebane® 1115 and Firebane® All-Weather 1115 is lower than or comparable to the risks posed by other substitutes found acceptable in the same end use.

## 2. Firebane® 1170 and Firebane® 1179

**EPA's decision:** EPA finds Firebane® 1170 and Firebane® 1179 acceptable as substitutes for halon 1211 for use as streaming agents.

Because the formulations of Firebane® 1170 and Firebane® 1179 are very similar and share the same human health and environmental risks, they are being listed together and, hereinafter, collectively referred to in this section as "both Firebane® formulations." The manufacturer of both Firebane® formulations has claimed their composition as CBI. You may find the submissions under Docket items EPA-HQ-OAR-2003-0118-0260 and EPA-HQ-OAR-2003-0118-0270 at <http://www.regulations.gov>.

**Environmental information:** Both Firebane® formulations have zero ODP and zero GWP. Therefore, both Firebane® formulations are not expected to pose any significant adverse impacts on the ozone layer or climate.

At manufacture, EPA believes that regulatory requirements on industrial wastewater discharges are sufficient to prevent the unlikely release of the substitute to surface water during the manufacturing operations of both Firebane® formulations. Because of the BOD level of these formulations, discharges of either Firebane® formulation that result in release to waterways could result in relatively high BOD in the waterways. However, neither Firebane® formulation is expected to pose significant harm to the environment, provided that proper disposal procedures are followed. As with the majority of halon substitutes, their physicochemical properties make it unlikely that the substitutes would be released to surface water.

During discharge, the constituents of both Firebane® formulations would rapidly aerosolize during expulsion from the container and then settle as a liquid on surfaces. After settling, cleanup would involve washing or rinsing of surfaces. It is recommended that discharges of either Firebane® formulation not be released to waterways. Further, during cleanup, it is recommended that discharges of either Firebane® formulation be collected (e.g., mopped) and sealed in containers and then disposed of in accordance with local, state, and federal requirements and as specified in the manufacturer's MSDS. The MSDS also

specifies that training for safe handling procedures be provided to all employees that would be likely to dispose of either Firebane® formulation at cleanup. In addition, the use of an extinguisher is expected to be infrequent (i.e., in case of a fire emergency), and therefore discharges at end-use would be infrequent. Therefore, EPA expects that following the safe handling and disposal recommendations in the manufacturer's MSDS would protect against significant harm to surface water during manufacture, end-use or at cleanup.

Of the constituents of both Firebane® formulations, only one has not been exempted as a VOC under the CAA (40 CFR 51.000). Potential emissions of VOCs from the use of substitutes for halons in the fire extinguishing and explosion prevention sector are likely to be insignificant relative to VOCs from all other sources (i.e., other industries, mobile sources, and biogenic sources). Even at full market penetration, and given typically annual emission rates for halon substitute fire suppressants, estimated annual VOC emissions from both Firebane® formulations are not expected to pose any significant adverse impact on local air quality.

**Flammability information:** Both Firebane® formulations are non-flammable.

**Toxicity and exposure data:** The majority of the constituents of both Firebane® formulations are composed of FDA-classified GRAS compounds, and the remaining constituents are FDA-approved for use as direct or indirect food additives. These compounds are commonly used in food, pharmaceutical, or cosmetic applications. Individual constituents may cause gastrointestinal discomfort (if excessively ingested), or minor irritation to the eyes, skin, and/or respiratory tract. Given the low toxicity of their constituents, both Firebane® formulations are not expected to pose a significant risk to personnel during manufacture, installation and maintenance. To minimize worker exposure to any chemicals during manufacture, installation, and maintenance through an accidental release or spill, EPA recommends the following:

- Proper Level C or higher PPE be used during handling of the substitute (e.g., goggles, gloves);
- Adequate ventilation should be in place;
- All spills should be cleaned up immediately in accordance with good industrial hygiene practices;
- Training for safe handling procedures should be provided to all employees that would be likely to

handle containers of or extinguishing units filled with Firebane® 1170 or Firebane® 1179; and

- In case of an inadvertent discharge, workers should immediately follow the instructions listed in the MSDS for Firebane® 1170 or for Firebane® 1179. The above recommendations are all included in the manufacturer's MSDSs. EPA also recommends that use of these systems should be in accordance with the latest edition of NFPA 10 Standard for Portable Extinguishers.

Firebane® 1170 and Firebane® 1179 are not expected to cause harm to human health when used as streaming agents in portable fire extinguishers. EPA expects no significant adverse health effects when the recommended safety precautions and normal industry practices are applied and use of the substitutes is in accordance with the manufacturer's MSDSs.

**Comparison to other fire suppressants:** Both Firebane® 1170 and Firebane® 1179 have zero ODP and GWP in contrast to halon 1211 (with an ODP of 7.1 and a GWP of 1,890), the ODS they replace. Compared to other substitutes for halon 1211, such as HCFC Blend B (with an ODP of roughly 0.01 and GWP of roughly 80), HFC-227ea (with an ODP of 0 and GWP of 3,220), and HFC-236fa (with an ODP of 0 and GWP of 9,810), both Firebane® formulations have less impact on the atmosphere. Toxicity risks are low, as discussed above. Thus, we find that Firebane® 1170 and Firebane® 1179 are acceptable because the overall environmental and human health risk posed by Firebane® 1170 and Firebane® 1179 is lower than or comparable to the risks posed by other substitutes found acceptable in the same end use.

### 3. Firebane® 1179 Total Flooding

**EPA's decision:** EPA finds Firebane® 1179 acceptable as a substitute for halon 1301 for total flooding uses in both occupied and unoccupied areas.

The manufacturer of Firebane® 1179 has claimed its composition as CBI. You may find the submission under Docket item EPA-HQ-OAR-2003-0118-0270 at <http://www.regulations.gov>.

**Environmental information:** Firebane® 1179 has zero ODP and zero GWP. Firebane® 1179 is expected to aerosolize rapidly during expulsion from the fire suppression system and then settle as a liquid on surfaces. After settling, cleanup would involve washing or rinsing of surfaces. See the listing for Firebane® 1179 above in section C.2 for further information.

**Flammability information:** Firebane® 1179 is non-flammable.

**Toxicity and exposure data:** The majority of the constituents in the Firebane® 1179 formulation are FDA-classified GRAS compounds, and the remaining constituents are FDA-approved for use as direct or indirect food additives. These compounds are commonly used in food, pharmaceutical, or cosmetic applications. Individual constituents may cause gastrointestinal discomfort (if excessively ingested), or minor irritation to the eyes, skin, and/or respiratory tract. Given the low toxicity of its constituents, EPA expects no significant adverse health effects when the recommended safety precautions and normal industry practices are applied and use of the substitute is in accordance with the manufacturer's MSDS. See the listing for Firebane® 1179 above in section C.2 for further information.

**Comparison to other fire suppressants:** Firebane® 1179 has zero ODP and GWP in contrast to halon 1301 (with an ODP of 16 and a GWP of 7,140), the ozone-depleting substance which it replaces, and comparable to other acceptable non-ozone-depleting substitutes (e.g., Inert Gas 541, HFC-227ea and HFC-125). Firebane® 1179's GWP is comparable to or less than that for other non-ozone depleting substitutes for halon 1301, such as Inert Gas 541, HFC-227ea or HFC-125, with GWPs of less than 1, 3,220, and 3,500, respectively. Toxicity risks are low, as discussed above. Thus, we find that Firebane® 1179 is acceptable because the overall environmental and human health risk posed by Firebane® 1179 is lower than or comparable to the risks posed by other substitutes found acceptable in the same end use.

### 4. N2 Towers Inert Gas Generator Fire Suppression System (N2 Towers® System)

**EPA's decision:** EPA finds the N2 Towers Inert Gas Generator Fire Suppression System (N2 Towers® System) is acceptable as a substitute for halon 1301 for total flooding uses in both occupied and unoccupied areas.

The N2 Towers® System is a fire suppression system that pyrotechnically generates nitrogen (N<sub>2</sub>, CAS Reg. No. 7727-37-9). It is designed for use with Class A and B fires (ordinary combustible materials fires and flammable liquids fires, respectively). The N2 Towers® System is an inert gas system designed for total flooding applications for fires in normally occupied or unoccupied spaces. Each N2 generator unit contains a large number of small propellant grain discs that generate nitrogen gas when activated.

Depending on the fire suppression requirement, several generators may be stacked inside an N<sub>2</sub> tower in a room, or a single generator may be bracketed inside a vehicle. You may find the submission under Docket item EPA-HQ-OAR-2003-0118-0253 at <http://www.regulations.gov>.

**Environmental information:** The constituents of the N2 Towers® System are solids before use and therefore have zero ODP and zero GWP. Further, the ODP of each of the post-activation constituents of the N2 Towers® System is zero, and the GWPs of post-activation constituents are 1 or less.

The N2 Towers® System does not contain any VOCs as defined under CAA regulations (see 40 CFR 51.100(s)) addressing the development of SIPs to attain and maintain the national ambient air quality standards. Accordingly, use of the N2 Towers® System is not expected to pose any significant adverse impacts on local air quality.

**Flammability information:** The N2 Towers® System generates products that are non-flammable.

**Toxicity and exposure data:** The potential health risks of the N2 Towers® System come from its production of nitrogen gas, an inert gas that at sufficiently high levels can cause asphyxiation. The N2 Towers® System is designed to ensure that the oxygen concentration in any protected space will not fall below 12 percent over the 5-minute discharge period, consistent with the health criteria in NFPA Standard 2001 for Clean Agent Fire Extinguishing Systems. EPA recommends that use of this system should be in accordance with the safe exposure guidelines for inert gas systems in the latest edition of NFPA 2001, specifically the requirements for residual oxygen levels, and that use should be in accordance with the relevant operational requirements in NFPA Standard 2010 for Aerosol Extinguishing Systems. EPA also recommends that Section VIII of the OSHA Technical Manual be consulted as well as all information from the manufacturer for information on selecting the appropriate types of PPE to be worn by personnel involved in the manufacture, installation, and maintenance of the N2 Towers® System.

**Comparison to other fire suppressants:** The N2 Towers® System is not ozone-depleting in contrast to halon 1301 (with an ODP of 16 and a GWP of 7,140), the ODS which it replaces, and comparable to other acceptable non-ozone-depleting substitutes (e.g., Inert Gas 541, HFC-227ea and HFC-125). The GWPs of the

post-activation constituents of the N2 Towers® System range from zero to three which are comparable to or less than the GWPs for other non-ozone depleting substitutes for halon 1301, such as Inert Gas 541, HFC-227ea or HFC-125, with GWPs of less than 1, 3,220, and 3,500, respectively. Toxicity risks are low, as discussed above. Thus, we find that the N2 Towers® System is acceptable because the overall environmental and human health risk posed by the N2 Towers® System is lower than or comparable to the risks posed by other substitutes found acceptable in the same end use.

## II. Section 612 Program

### A. Statutory Requirements and Authority for the SNAP Program

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:

#### 1. Rulemaking

Section 612(c) requires EPA to promulgate rules making it unlawful to replace any class I substance (*i.e.*, chlorofluorocarbon, halon, carbon tetrachloride, methyl chloroform, methyl bromide, and hydrobromofluorocarbon) or class II substance (*i.e.*, hydrochlorofluorocarbon) 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.

#### 2. Listing of Unacceptable/Acceptable Substitutes

Section 612(c) requires EPA to publish a list of the substitutes unacceptable for specific uses and to publish a corresponding list of acceptable alternatives for specific uses. The list of acceptable substitutes may be found at <http://www.epa.gov/ozone/snap/lists/index.html> and the lists of substitutes that are “unacceptable,” “acceptable subject to use conditions,” and “acceptable subject to narrowed use limits” are in subpart G of 40 CFR part 82.

#### 3. Petition Process

Section 612(d) grants the right to any person to petition EPA to add a substance to, or delete a substance 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.

#### 4. 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 unpublished health and safety studies on such substitutes.

#### 5. 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.

#### 6. 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. EPA's Regulations Implementing Section 612

On March 18, 1994, EPA published the original rulemaking (59 FR 13044) which established the process for administering the SNAP program and issued EPA's first lists identifying acceptable and unacceptable substitutes in the major industrial use sectors (subpart G of 40 CFR part 82). These sectors—refrigeration and air conditioning; foam blowing; cleaning solvents; fire suppression and explosion protection; sterilants; aerosols; adhesives, coatings and inks; and tobacco expansion—are the principal industrial sectors that historically consumed the largest volumes of ODS.

Section 612 of the CAA requires EPA to ensure that substitutes found acceptable do not present a significantly greater risk to human health and the environment than other substitutes that are currently or potentially available.

### C. How the Regulations for the SNAP Program Work

Under the SNAP regulations, anyone who plans to market or produce a substitute to replace a class I substance or class II substance in one of the eight

major industrial use sectors must provide notice to the Agency, including health and safety information on the substitute, at least 90 days before introducing it into interstate commerce for significant new use as an alternative. This requirement applies to the persons planning to introduce the substitute into interstate commerce,<sup>13</sup> which typically are chemical manufacturers but may include importers, formulators, equipment manufacturers, and end-users<sup>14</sup>. The regulations identify certain narrow exemptions from the notification requirement, such as research and development and test marketing (40 CFR 82.176(b)(4) and (5), respectively).

The Agency has identified four possible decision categories for substitutes that are submitted for evaluation: Acceptable; acceptable subject to use conditions; acceptable subject to narrowed use limits; and unacceptable (40 CFR 82.180(b)). Use conditions and narrowed use limits are both considered “use restrictions” and are explained in the paragraphs below. Substitutes that are deemed acceptable with no use restrictions (no use conditions or narrowed use limits) can be used for all applications within the relevant end uses within the sector.

After reviewing a substitute, the Agency may determine that a substitute is acceptable only if certain conditions in the way that the substitute is used are met to minimize risks to human health and the environment. EPA describes such substitutes as “acceptable subject to use conditions.” Entities that use these substitutes without meeting the associated use conditions are in violation of EPA's SNAP regulations.

For some substitutes, the Agency may permit a narrowed range of use within an end-use or sector. For example, the Agency may limit the use of a substitute to certain end-uses or specific applications within an industry sector. EPA describes these substitutes as “acceptable subject to narrowed use limits.” The Agency requires the user of a narrowed-use substitute to

<sup>13</sup> As defined at 40 CFR 82.104, “interstate commerce” means the distribution or transportation of any product between one state, territory, possession or the District of Columbia, and another state, territory, possession or the District of Columbia, or the sale, use or manufacture of any product in more than one state, territory, possession or District of Columbia. The entry points for which a product is introduced into interstate commerce are the release of a product from the facility in which the product was manufactured, the entry into a warehouse from which the domestic manufacturer releases the product for sale or distribution, and at the site of United States Customs clearance.

<sup>14</sup> As defined at 40 CFR 82.172, “end-use” means processes or classes of specific applications within major industrial sectors where a substitute is used to replace an ODS.



demonstrate that no other acceptable substitutes are available for the specific application by conducting comprehensive studies. A person using a substitute that is acceptable subject to narrowed use limits in applications and end-uses that are not consistent with the narrowed use limit is using the substitute in an unacceptable manner and is in violation of section 612 of the CAA and EPA's SNAP regulations.

The Agency publishes its SNAP program decisions in the **Federal Register** (FR). EPA publishes decisions concerning substitutes that are deemed acceptable subject to use restrictions (use conditions and/or narrowed use limits), or substitutes deemed unacceptable, as proposed rulemakings to provide the public with an opportunity to comment, before publishing final decisions.

In contrast, EPA publishes decisions concerning substitutes that are deemed acceptable with no restrictions in "notices of acceptability" or "determinations of acceptability," rather than as proposed and final rules. As described in the March 18, 1994, rule initially implementing the SNAP program, EPA does not believe that rulemaking procedures are necessary to list alternatives that are acceptable

without restrictions because such listings neither impose any sanction nor prevent anyone from using a substitute.

Many SNAP listings include "Comments" or "Further Information" to provide additional information on substitutes. Since this additional information is not part of the regulatory decision, these statements are not binding for use of the substitute under the SNAP program. However, regulatory requirements so listed are binding under other regulatory programs (e.g., worker protection regulations promulgated by the Occupational Safety and Health Administration (OSHA)). The "Further Information" classification does not necessarily include all other legal obligations pertaining to the use of the substitute. While the items listed are not legally binding under the SNAP program, EPA encourages users of substitutes to apply all statements in the "Further Information" column in their use of these substitutes. In many instances, the information simply refers to sound operating practices that have already been identified in existing industry and/or building codes or standards. Thus many of the statements, if adopted, would not require the affected user to make significant changes in existing operating practices.

#### *D. Additional Information About the SNAP Program*

For copies of the comprehensive SNAP lists of substitutes or additional information on SNAP, refer to EPA's Ozone Depletion Web site at: <http://www.epa.gov/ozone/snap/index.html>. For more information on the Agency's process for administering the SNAP program or criteria for evaluation of substitutes, refer to the March 18, 1994, SNAP final rulemaking (59 FR 13044), codified at 40 CFR part 82, subpart G. A complete chronology of SNAP decisions and the appropriate citations is found at: <http://www.epa.gov/ozone/snap/chron.html>.

#### **List of Subjects in 40 CFR Part 82**

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

Dated: September 27, 2011.

**Elizabeth Craig,**

*Acting Director, Office of Atmospheric Programs.*

#### **Appendix A: Summary of Acceptable Decisions**

#### **REFRIGERATION AND AIR CONDITIONING**

End-Use	Substitute	Decision	Further information <sup>1</sup>
Centrifugal chillers ( <i>retrofit only</i> ) ....	Hot Shot 2 as a substitute for CFC-11, CFC-12, CFC-114, R-500, HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The manufacturer has an acceptable exposure limit of 1,000 ppm over an 8-hour time-weighted average for Hot Shot 2.
Reciprocating and screw chillers ( <i>retrofit only</i> ).	Hot Shot 2 as a substitute for CFC-12, R-500, R-502, HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The manufacturer has an acceptable exposure limit of 1,000 ppm over an 8-hour time-weighted average for Hot Shot 2.
Industrial process refrigeration ( <i>retrofit only</i> ).	Hot Shot 2 as a substitute for CFC-11, CFC-12, CFC-113, CFC-114, R-13B1, R-500, R-502, HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The manufacturer has an acceptable exposure limit of 1,000 ppm over an 8-hour time-weighted average for Hot Shot 2.
Industrial process refrigeration ( <i>retrofit and new</i> ).	R-407F as a substitute for HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The American Industrial Hygiene Association (AIHA) has established workplace environmental exposure limits (WEELs) of 1,000 ppm over an 8-hour time-weighted average for each of R-407F's individual components.
Ice skating rinks ( <i>retrofit only</i> ) .....	Hot Shot 2 as a substitute for CFC-12, R-500, R-502, HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The manufacturer has an acceptable exposure limit of 1,000 ppm over an 8-hour time-weighted average for Hot Shot 2.
Ice skating rinks ( <i>retrofit and new</i> )	R-407F as a substitute for HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The AIHA has established WEELs of 1,000 ppm over an 8-hour time-weighted average for each of R-407F's individual components.



## REFRIGERATION AND AIR CONDITIONING—Continued

End-Use	Substitute	Decision	Further information <sup>1</sup>
Industrial process air conditioning ( <i>retrofit and new</i> ).	R-407F as a substitute for HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The AIHA has established WEELs of 1,000 ppm over an 8-hour time-weighted average for each of R-407F's individual components.
Cold storage warehouses ( <i>retrofit only</i> ).	Hot Shot 2 as a substitute for CFC-12, R-500, R-502, HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The manufacturer has an acceptable exposure limit of 1,000 ppm over an 8-hour time-weighted average for Hot Shot 2.
Cold storage warehouses ( <i>retrofit and new</i> ).	R-407F as a substitute for HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The AIHA has established WEELs of 1,000 ppm over an 8-hour time-weighted average for each of R-407F's individual components.
Refrigerated transport ( <i>retrofit only</i> )	Hot Shot 2 as a substitute for CFC-12, R-500, R-502, HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The manufacturer has an acceptable exposure limit of 1,000 ppm over an 8-hour time-weighted average for Hot Shot 2.
Refrigerated transport ( <i>retrofit and new</i> ).	R-407F as a substitute for HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The AIHA has established WEELs of 1,000 ppm over an 8-hour time-weighted average for each of R-407F's individual components.
Retail food refrigeration ( <i>retrofit only</i> ).	Hot Shot 2 as a substitute for CFC-12, R-500, R-502, HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The manufacturer has an acceptable exposure limit of 1,000 ppm over an 8-hour time-weighted average for Hot Shot 2.
Retail food refrigeration ( <i>retrofit and new</i> ).	R-407F as a substitute for HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The AIHA has established WEELs of 1,000 ppm over an 8-hour time-weighted average for each of R-407F's individual components.
Vending machines ( <i>retrofit only</i> ) .....	Hot Shot 2 as a substitute for CFC-12, R-500, R-502, HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The manufacturer has an acceptable exposure limit of 1,000 ppm over an 8-hour time-weighted average for Hot Shot 2.
Commercial ice machines ( <i>retrofit only</i> ).	Hot Shot 2 as a substitute for CFC-12, R-500, R-502, HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The manufacturer has an acceptable exposure limit of 1,000 ppm over an 8-hour time-weighted average for Hot Shot 2.
Commercial ice machines ( <i>retrofit and new</i> ).	R-407F as a substitute for HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The AIHA has established WEELs of 1,000 ppm over an 8-hour time-weighted average for each of R-407F's individual components.
Residential dehumidifiers ( <i>retrofit only</i> ).	Hot Shot 2 as a substitute for CFC-12, R-500, HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The manufacturer has an acceptable exposure limit of 1,000 ppm over an 8-hour time-weighted average for Hot Shot 2.
Household refrigerators and freezers ( <i>retrofit and new</i> ).	R-407F as a substitute for HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The AIHA has established WEELs of 1,000 ppm over an 8-hour time-weighted average for each of R-407F's individual components.
Motor vehicle air conditioning ( <i>retrofit and new-bus and passenger trains only</i> ).	R-407F as a substitute for HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The AIHA has established WEELs of 1,000 ppm over an 8-hour time-weighted average for each of R-407F's individual components.
Household and light commercial air conditioning and heat pumps ( <i>retrofit only</i> ).	Hot Shot 2 as a substitute for CFC-12, R-502, HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The manufacturer has an acceptable exposure limit of 1,000 ppm over an 8-hour time-weighted average for Hot Shot 2.
Household and light commercial air conditioning and heat pumps ( <i>retrofit and new</i> ).	R-407F as a substitute for CFC-12, R-502, HCFC-22 and HCFC blends, including those containing HCFC-22 and/or HCFC-142b.	Acceptable .....	The AIHA has established WEELs of 1,000 ppm over an 8-hour time-weighted average for each of R-407F's individual components.

## REFRIGERATION AND AIR CONDITIONING—Continued

End-Use	Substitute	Decision	Further information <sup>1</sup>
Very low temperature refrigeration (retrofit).	R-507A as a substitute for R-13B1.	Acceptable .....	The AIHA has established WEELs of 1,000 ppm over an 8-hour time-weighted average for each of R-507A's individual components.

<sup>1</sup> Users should observe recommendations in the manufacturer's MSDS and guidance for all listed refrigerants.

## SOLVENT CLEANING

End-Uses	Substitute	Decision	Further information
Metals cleaning .....	Perfluorobutyl iodide (PFBI) as a substitute for CFC-113, methyl chloroform, and HCFC-225ca, HCFC-225cb, and blends thereof.	Acceptable .....	PFBI has an ODP of less than 0.005 and a 100-year global warming potential of less than 5. Its Chemical Abstracts Service Registry number (CAS Reg. No.) is 423-39-2.
Electronics cleaning .....	.....	.....	EPA recommends an acceptable exposure limit of 375 ppm over an 8-hour time-weighted average for PFBI.
Precision cleaning .....	.....	.....	Observe recommendations in the manufacturer's MSDS and guidance for using this substitute, particularly with respect to disposal considerations. EPA recommends that spent solvent is collected for reclamation or incineration, materials that contain or contaminated with solvents are incinerated, and that solvent-contaminated wastewater is sent to a wastewater treatment facility to prevent the solvent from entering waterways. PFBI is currently defined as a volatile organic compound (VOC) under CAA regulations (see 40 CFR 51.100(s)) addressing the development of State Implementation Plans (SIPs) to attain and maintain the national ambient air quality standards.

## FIRE SUPPRESSION

End-Use	Substitute	Decision	Further information <sup>1 2</sup>
Total flooding systems (occupied and unoccupied areas).	Firebane® 1179 as a substitute for halon 1301.	Acceptable .....	EPA recommends that use of this system should be in accordance with the manufacturer's MSDS.
	N2 Towers® System as a substitute for halon 1301.	Acceptable .....	EPA recommends that use of this system should be in accordance with the safe exposure guidelines for inert gas systems in the latest edition of NFPA 2001 Standard on Clean Agent Fire Extinguishing Systems, specifically the requirements for residual oxygen levels, and use should be in accordance with the NFPA Standard 2010 for Aerosol Extinguishing Systems.
Streaming agents .....	Firebane® All-Weather 1115 and Firebane® 1115 as substitutes for halon 1211.	Acceptable .....	EPA recommends that use of these systems be in accordance with the latest edition of NFPA 10 Standard for Portable Extinguishers.
	Firebane® 1170 and Firebane® 1179 as substitutes for halon 1211.	Acceptable .....	EPA recommends that use of these systems be in accordance with the latest edition of NFPA 10 Standard for Portable Extinguishers.

<sup>1</sup> EPA recommends that users consult Section VIII of the OSHA Technical Manual for information on selecting the appropriate types of personal protective equipment for all listed fire suppression agents. EPA has no intention of duplicating or displacing OSHA coverage related to the use of personal protective equipment (e.g., respiratory protection), fire protection, hazard communication, worker training or any other occupational safety and health standard with respect to halon substitutes.

<sup>2</sup> Use of all listed fire suppression agents should conform to relevant OSHA requirements, including 29 CFR part 1910, subpart L, sections 1910.160 and 1910.162.

**DEPARTMENT OF HOMELAND SECURITY****Federal Emergency Management Agency****44 CFR Part 67****[Docket ID FEMA-2011-0002]****Final Flood Elevation Determinations***Correction*

In rule document 2011-15507, beginning on page 36373, in the issue of Wednesday June 22, 2011, make the following corrections:

**§ 67.11 [Corrected]**

1. On page 36379, in the first column of the table for Clinton County, Iowa, “Unincorporated Areas of Clinton County” should not have appeared.

2. On the same page, in the first column of the table for Muscatine County, Iowa, “Unincorporated Areas of Muscatine County, Iowa” should not have appeared.

[FR Doc. C1-2011-15507 Filed 10-3-11; 8:45 am]

**BILLING CODE 1505-01-D**

**FEDERAL COMMUNICATIONS COMMISSION****47 CFR Parts 32, 52, 61, 64, and 69****Communications Common Carriers, Reporting and Recordkeeping Requirements, Telephone, Telecommunications, Uniform System of Accounts**

**AGENCY:** Federal Communications Commission.

**ACTION:** Final rule; announcement of effective date.

**SUMMARY:** This document announces the approval of the Office of Management and Budget (OMB) for information collection requirements in the sections outlined in the **DATES** section.

**DATES:** Effective October 4, 2011, the following regulations have been approved by OMB:

32.2000—64 FR 50007, September 15, 1999.

52.33—63 FR 35161, June 29, 1998.

52.33(a)(3)—67 FR 40620, June 13, 2002.

61.38(b)(4)—69 FR 25336, May 6, 2004.

61.41(c), (d) and (e)—69 FR 25336, May 6, 2004.

64.5001—71 FR 43673, August 2, 2006.

69.123—69 FR 25336, May 6, 2004.

**FOR FURTHER INFORMATION CONTACT:**

Lynne Hewitt Engledow, Pricing Policy

Division, Wireline Competition Bureau, at [lynne.engledow@fcc.gov](mailto:lynne.engledow@fcc.gov).

**SUPPLEMENTARY INFORMATION:** On June 23 2000, OMB approved the information collection requirements contained in § 32.2000 of title 47 of the United States Code as a revision to OMB Control Number 3060-0370.

On September 12, 2000, OMB approved the information collection requirements contained in § 52.33 of title 47 of the United States Code as a revision to OMB Control Number 3060-0370.

On October 22, 2002 OMB approved the information collection requirements contained in § 52.33(a)(3) of title 47 of the United States Code as a revision to OMB Control Number 3060-0742.

On May 25, 2005, OMB approved the information collection requirements contained in §§ 61.38(b)(4), 61.41(c), (d) and (e) and 69.123 of title 47 of the United States Code as a revision to OMB Control Number 3060-0298.

On February 5, 2007, OMB approved the information collection requirements contained in § 64.5001 of title 47 of the United States Code as a new collection, OMB Control Number 3060-1096. These information collection requirements required OMB approval to become effective. The Commission publishes this document as an announcement of those approvals. If you have any comments on the burden estimates listed below, or how the Commission can improve the collections and reduce any burdens caused thereby, please contact Thomas Butler, Federal Communications Commission, Room 5-C458, 445 12th Street, SW., Washington, DC 20554. Please include the OMB Control Numbers, 3060-0370, 3060-0742, 3060-0298, and 3060-1096 in your correspondence. The Commission will also accept your comments via the Internet if you send them to [PRA@fcc.gov](mailto:PRA@fcc.gov).

To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call the Consumer & Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 419-0432 (TTY).

**Synopsis:** As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3507), the FCC is notifying the public that it received OMB approval for the information collection requirements described above. The OMB Control Numbers are 3060-0370, 3060-0742, 3060-0298 and 3060-1096. The total annual reporting burden for respondents for these collections of information, including the time for gathering and maintaining the collection of

information, has been most recently approved to be:

*For 3060-0370:* 859 responses, for a total of 859 hours, and no annual costs.

*For 3060-0742:* 10,001,890 responses, for a total of 672,516 hours and \$13,423,321 in annual costs.

*For 3060-0298:* 1,160 responses, for a total annual burden of 58,000 hours, and \$945,400 in annual costs.

*For 3060-1096:* 1,896 responses, for a total of 15,800 hours, and no annual costs.

An agency may not conduct or sponsor a collection of information unless it displays a current valid OMB Control Number. No person shall be subject to any penalty for failing to comply with a collection of information subject to the Paperwork Reduction Act, which does not display a current, valid OMB Control Number. The foregoing notice is required by the Paperwork Reduction Act of 1995, Public Law 104-13, October 1, 1995, and 44 U.S.C. 3507.

**List of Subjects in 47 CFR Parts 32, 52, 61, 64, and 69**

Communications common carriers, reporting and Recordkeeping requirements, Telephone, Telecommunications, Uniform system of accounts.

Federal Communications Commission.

**Marlene H. Dortch,**

*Secretary.*

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**BILLING CODE 6712-01-P**

**DEPARTMENT OF DEFENSE****Defense Acquisition Regulations System****48 CFR Parts 212, 247, and 252****RIN 0750-AG25****Defense Federal Acquisition Regulation Supplement; Defense Cargo Riding Gang Member (DFARS Case 2007-D002)**

**AGENCY:** Defense Acquisition Regulations System, Department of Defense (DoD).

**ACTION:** Final rule.

**SUMMARY:** DoD is adopting as final, with changes, an interim rule amending the Defense Federal Acquisition Regulation Supplement (DFARS) to implement section 3504 of the National Defense