

the comment includes profanity, threats, information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.

**FOR FURTHER INFORMATION CONTACT:**

George W. Denning, Office of Emergency Management, Mail Code 5104A, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460; telephone number: (202) 564-2404; fax number: (202) 564-2625; email address: [Denning.George@epa.gov](mailto:Denning.George@epa.gov).

**SUPPLEMENTARY INFORMATION:**

Supporting documents which explain in detail the information that the EPA will be collecting are available in the public docket for this ICR. The docket can be viewed online at [www.regulations.gov](http://www.regulations.gov) or in person at the EPA Docket Center, EPA West, Room 3334, 1301 Constitution Ave., NW., Washington, DC. The telephone number for the Docket Center is 202-566-1744. For additional information about EPA's public docket, visit <http://www.epa.gov/dockets>.

**Abstract:** The authority for EPA's oil pollution prevention requirements is derived from section 311(j)(1)(C) of the Clean Water Act, as amended by the Oil Pollution Act of 1990. EPA's regulation is codified at 40 CFR part 112. An SPCC Plan will help an owner or operator identify the necessary procedures, equipment and resources to respond to prevent an oil spill and to respond to an oil spill in a timely manner. If implemented effectively, the SPCC Plan is expected to prevent oil spills and reduce the impact and severity of oil spills. Although the owner or operator is the primary data user, EPA may also require the owner or operator to submit data to the Agency in certain situations to ensure facilities comply with the SPCC regulation and to help allocate response resources. State and local governments may use the data, which are not generally available elsewhere and can assist local emergency preparedness planning efforts. EPA does not require an owner or operator to submit SPCC Plans, but may request the SPCC Plan during a facility inspection or an oil spill incident for review. The SPCC regulation requires the owner or operator maintain a complete copy of the Plan at the facility if the facility is normally attended at least four hours per day or at the nearest field office if the facility is not so attended. The rule also requires that the Plan be available to the Regional Administrator for on-site review during normal working hours (40 CFR 112.3(e)).

**Form Numbers:** None.

**Respondents/affected entities:** Private facilities, State/Local/Tribal governments.

**Respondent's obligation to respond:** Mandatory per 40 CFR part 112.

**Estimated number of respondents:** 670,048 (total).

**Frequency of response:** Less than once per year.

**Total estimated burden:** 8,798,928 hours (per year). Burden is defined at 5 CFR 1320.3(b).

**Total estimated cost:** \$987,220,025, includes \$186,674,814 annualized capital or operation and maintenance costs.

**Changes in the Estimates:** Differences in burden and costs from the previous ICR are attributed to adjustments for wage rates, unit costs, and the projected universe of facilities.

**John Moses,**

*Director, Collection Strategies Division.*

[FR Doc. 2013-07888 Filed 4-4-13; 8:45 am]

**BILLING CODE 6560-50-P**

## ENVIRONMENTAL PROTECTION AGENCY

[ER-FRL-9008-5]

### Environmental Impacts Statements; Notice of Availability

**Responsible Agency:** Office of Federal Activities, General Information (202) 564-7146 or <http://www.epa.gov/compliance/nepa/>.

Weekly receipt of Environmental Impact Statements Filed 03/25/2013 Through 03/29/2013

Pursuant to 40 CFR 1506.9.

### Notice

Section 309(a) of the Clean Air Act requires that EPA make public its comments on EISs issued by other Federal agencies. EPA's comment letters on EISs are available at: <http://www.epa.gov/compliance/nepa/eisdata.html>.

**EIS No. 20130080, Final EIS, BLM, CA,** Clear Creek Management Area Proposed Resource Management Plan, Review Period Ends: 05/06/2013, Contact: Sky Murphy (831) 630-5039.

**EIS No. 20130081, Draft EIS, USFWS, IN,** Fowler Ridge Wind Habitat Conservation Plan and Incidental Take Permit, Comment Period Ends: 06/04/2013, Contact: Scott Pruitt 812-334-4261.

**EIS No. 20130082, Draft Supplement, FERC, ME,** Downeast Liquefied Natural Gas (LNG) Project, Comment Period Ends: 05/20/2013, Contact: Shannon Crosley 202-502-8853.

**EIS No. 20130083, Draft EIS, NPS, NC,** Fort Raleigh National Historic Site

Draft General Management Plan, Comment Period Ends: 06/04/2013, Contact: David Libman 404-507-5701.

**EIS No. 20130084, Final EIS, USFS, CO,** Black Mesa Vegetation Management Project, Rio Grande National Forest, Review Period Ends: 05/17/2013, Contact: Diana McGinn 719-852-6241.

**EIS No. 20130085, Final EIS, USACE, OK,** Eufaula Lake Shoreline Management Plan Revision and Master Plan Supplement, Review Period Ends: 05/06/2013, Contact: Jeff Knack 918-669-7666.

Dated: April 2, 2013.

**Cliff Rader,**

*Director, NEPA Compliance Division, Office of Federal Activities.*

[FR Doc. 2013-07982 Filed 4-4-13; 8:45 am]

**BILLING CODE 6560-50-P**

## ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OAR-2009-0927; FRL-9799-4]

### Mandatory Reporting of Greenhouse Gases: Notice of Data Availability Regarding Global Warming Potential Values for Certain Fluorinated Greenhouse Gases and Fluorinated Heat Transfer Fluids

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

**ACTION:** Notice of data availability and request for comment.

**SUMMARY:** The EPA is announcing to the public the availability of estimated global warming potentials, as well as data and analysis submitted in support of them, for eight fluorinated heat transfer fluids. We are requesting comments on the estimated global warming potentials and the data and analysis supporting them. We are also requesting comment on the cited global warming potentials for 35 other fluorinated greenhouse gases and fluorinated heat transfer fluids for which we do not currently possess supporting data and analysis. The EPA is requesting comment on the global warming potentials of all 43 chemicals as we consider adding these global warming potentials to the Greenhouse Gas Reporting rule.

**DATES:** Comments must be received on or before May 6, 2013.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-HQ-OAR-2009-0927, by one of the following methods:

• *Federal eRulemaking Portal:* <http://www.regulations.gov>: Follow the online instructions for submitting comments.

• *Email:*

[GHGReportingFGHG@epa.gov](mailto:GHGReportingFGHG@epa.gov).

• *Fax:* (202) 566-1741.

• *Mail:* EPA Docket Center, Attention Docket EPA-HQ-OAR-2009-0927, Mail code: 2822T, 1200 Pennsylvania Avenue NW., Washington, DC 20460.

• *Hand Delivery:* EPA Docket Center, Public Reading Room, Room 3334, EPA West Building, Attention Docket EPA-HQ-OAR-2009-0927, 1301 Constitution Avenue NW., Washington, DC 20004. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

*Instructions:* Direct your comments to Docket ID No. EPA-HQ-OAR-2009-0927. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at <http://www.regulations.gov>, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through <http://www.regulations.gov>. The <http://www.regulations.gov> Web site is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to EPA without going through <http://www.regulations.gov> your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

*Docket:* All documents in the docket are listed in the <http://www.regulations.gov> index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material,

will be publicly available only in hard copy. Publicly available docket materials are available either electronically in <http://www.regulations.gov> or in hard copy at EPA's Docket Center, Public Reading Room, EPA West Building, Room 3334, 1301 Constitution Avenue NW., Washington, DC 20004. This Docket Facility 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:** Deborah Ottinger, Climate Change Division, Office of Atmospheric Programs (6207J), Environmental Protection Agency, 1200 Pennsylvania Avenue NW., Washington, DC 20460; telephone number: (202) 343-9149; fax number: (202) 343-2342; email address: [ottinger.deborah@epa.gov](mailto:ottinger.deborah@epa.gov).

#### **SUPPLEMENTARY INFORMATION:**

##### **I. General Information**

###### *A. What is today's notice about?*

- The EPA is making available for public comment estimated GWPs for the eight fluorinated heat transfer fluids (HTFs) listed in Table 1 of this notice as well as data and analysis submitted in support of those GWPs.

- The EPA is also making available for public comment cited GWPs for the 35 fluorinated GHGs and fluorinated HTFs listed in Table 2 of this notice. The EPA does not currently possess supporting data and analysis for these GWPs.

- Both sets of chemicals and their GWPs are being considered for addition to Table A-1 to subpart A of part 98, the compendium of GWPs used to convert tons of chemical into tons of carbon dioxide equivalent (CO<sub>2</sub>e) under the Greenhouse Gas Reporting Program.

###### *B. How does this notice relate to the forthcoming proposed rule titled "2013 Revisions to the Greenhouse Gas Reporting Rule and Proposed Confidentiality Determinations for New or Substantially Revised Data Elements"?*

In the proposed rule signed March 8, 2013, titled "2013 Revisions to the Greenhouse Gas Reporting Rule and Proposed Confidentiality Determinations for New or Substantially Revised Data Elements" (hereinafter referred to as the "2013 Technical Corrections Proposed Rule"), the EPA is proposing to amend subpart A, General Provisions, to propose GWPs for certain fluorinated greenhouse gases not currently listed in Table A-1 to subpart

A. This notice requests comment on GWPs for fluorinated GHGs and fluorinated HTFs for which documented GWPs were not available in time for inclusion in the 2013 Technical Corrections Proposed Rule. The comments submitted in response to this notice are intended to inform a potential future rulemaking to amend Table A-1 to subpart A to add the GWPs of some or all of the fluorinated GHGs and fluorinated HTFs listed in this notice.

###### *C. Where can I get the information?*

All of the information can be obtained through the Docket and at <http://www.regulations.gov> (see **ADDRESSES** section above for docket contact information).

###### *D. What is the EPA taking comment on and what supporting documentation do I need to include in my comments?*

The EPA requests comment on topics including but not limited to the following:

- For the fluorinated HTFs in Table 1 of this notice, the reliability, including the likely accuracy and precision, of the GWPs listed in Table 1 given the data and analysis submitted in support of them, and

- The completeness, quality, and transparency of the data and analysis submitted in support of the GWPs in Table 1 of this notice.

- For the fluorinated GHGs and HTFs in Table 2 of this notice, the reliability, including the likely accuracy and precision, of the GWPs listed, and

- The accuracy of the chemical names and formulas listed.

For the fluorinated HTFs in Table 1 of this notice, the EPA is specifically seeking comment on the extent to which the supporting data and analysis includes the following:

- Data and analysis related to the low-pressure gas phase infrared absorption spectrum of the fluorinated GHG.

- Data and analysis related to the estimated atmospheric lifetime of the fluorinated GHG (reaction mechanisms and rates, including e.g., photolysis and reaction with atmospheric components such as OH, O<sub>3</sub>, CO, and water), including descriptions of the measurements or modeling.

- The radiative transfer analysis that integrates the lifetime and infrared absorption spectrum data to calculate the GWP.

- Any published or unpublished studies of the GWP of the gas.

Where quantitative structure-activity relationship (QSAR) models have been used, the EPA is seeking comment on the extent to which the data and

analysis include information documenting the level of accuracy of the QSAR-derived GWP, including:

- Information on how the structure of the “target” fluorinated GHG is similar to the structures of the fluorinated GHGs used to model the radiative forcing and/or reaction rate of the “target” fluorinated GHG.

- Information on the quality (i.e., accuracy and precision) and quantity of the measurements of the radiative forcings and/or reaction rates of the fluorinated GHGs used to model these parameters for the “target” fluorinated GHG.

- Estimated uncertainties of the modeled forcings and/or reaction rates.
- Descriptions and results of any efforts to validate the QSAR model(s).

*E. What should I consider as I prepare my comments for EPA?*

- Explain your views as clearly as possible.
- Describe any assumptions that you used.
- Provide any technical information or data you used that support your views.
- Provide specific examples to illustrate your concerns.
- Offer alternatives.
- Make sure to submit your comments by the comment period deadline identified.

- To ensure proper receipt by EPA, identify the appropriate docket identification number in the subject line on the first page of your response. It would also be helpful if you provided the name, date, and **Federal Register** citation related to your comments.

#### *F. Submitting Confidential Business Information (CBI)*

Do not submit information you are claiming as CBI to EPA through <http://www.regulations.gov> or email. Clearly mark the part of the information that you claim to be CBI. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. For CBI information in a disk or CD-ROM that you mail to EPA, mark the outside of the disk or CD-ROM as CBI and then identify electronically within the disk or CD-ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment

that does not contain the information claimed as CBI must be submitted for inclusion in the public docket.

## **II. Background**

Table A–1 to subpart A of 40 CFR part 98 (“Table A–1”) is a compendium of GWP values of certain GHGs that are required to be reported under one or more subparts of the Greenhouse Gas Reporting rule (“Part 98”). These GWPs are used to convert tons of chemical into tons of CO<sub>2</sub>-equivalent for purposes of various calculations and reporting under the rule. As acknowledged in the **Federal Register** notice for the final Part 98 (74 FR 56348, October 30, 2009), it is the EPA’s intent to periodically update Table A–1 as GWPs are evaluated or re-evaluated by the scientific community. This will provide a more accurate and complete account of the atmospheric impacts of GHG emissions and supplies.

Table A–1 of Part 98 currently includes 10 fluorinated HTFs of which EPA is aware, but there are a number that it does not include. Of the 42 fluorinated HTFs listed in this notice (none of which is on Table A–1 of Part 98), electronics facilities reported emissions of 17 under the Greenhouse Gas Reporting Program (GHGRP). Electronics facilities reported use of another four in a 2009 industry survey by the International SEMATECH Manufacturing Initiative (Technology Transfer #09065014A–TR). Other HTFs (those with vapor pressures below 1 mm Hg at 25 degrees C) may be reported for the first time this year because of an expanded definition of fluorinated HTF that went into effect in 2012. Several of the fluorinated HTFs in this notice are fully fluorinated. Fully fluorinated compounds are likely to have long atmospheric lifetimes and high GWPs.<sup>1</sup>

There are two primary suppliers of fluorinated HTFs used in the United States: 3M Company (3M) and Solvay. After evaluating the reports submitted under subpart I, the EPA contacted 3M and Solvay and requested any data and information they had regarding the GWPs of the fluorinated HTFs that they supplied.

3M responded with estimated GWPs and supporting data and analysis for eight fluorinated HTFs collectively composed of nine fluorinated compounds. (One of the HTFs, FC–77, is a blend of two fluorinated

compounds.) For one of the fluorinated compounds, C<sub>8</sub>F<sub>18</sub>, the EPA is proposing a GWP in the 2013 Technical Corrections Proposed Rule. Thus, the EPA is not requesting comment on the GWP of C<sub>8</sub>F<sub>18</sub> through this action. However, the EPA is requesting comment on the GWPs and supporting data and analysis for the other eight compounds, which are listed in Table 1 of this notice. These compounds (along with the 3M HTFs already included on Table A–1 of Part 98) account for most of the emissions of 3M-supplied HTFs reported to EPA under subpart I to date (i.e., in 2012).

Solvay indicated that it generally did not possess data and analysis to support estimated GWPs for the Solvay-supplied HTFs that are not already on Table A–1 of Part 98.<sup>2</sup> Table 2 of this notice therefore includes all of the Solvay-supplied fluorinated HTFs of which EPA is aware and which are not already included on Table A–1. It also includes some 3M-supplied fluorinated HTFs (and one fluorinated GHG used as a chamber cleaning gas) for whose estimated GWPs 3M did not submit supporting data and analysis. 3M indicates that some of these HTFs are no longer produced.

For several of the fluorinated HTFs (and for the fluorinated GHG) in Table 2 of this notice, approximate GWPs have been presented or published (e.g., in presentations to the EPA or in material safety data sheets (MSDSs)) without accompanying explanation or documentation of how those GWPs have been developed. For a large subset of these fully fluorinated chemicals, GWPs of 10,000 were identified in a presentation given by 3M to EPA. For some of these chemicals, different GWPs were identified in other sources, such as MSDSs issued by 3M or Solvay. These are the GWPs that are included in Table 2. The EPA does not intend to add the cited GWPs for these compounds to Table A–1 of Part 98 without supporting data and analysis. We are therefore continuing to assemble and evaluate information regarding the GWPs for the compounds in Table 2 of this notice. We request comment on these GWPs and on the accuracy of the listed chemical names and formulas for the compounds.

## **III. GWP Values on Which EPA is Seeking Comment**

structure F<sub>3</sub>C(OCFCF<sub>2</sub>CF<sub>2</sub>)<sub>m</sub>(OCF<sub>2</sub>)<sub>n</sub>OCF<sub>3</sub>. The PFPME that is listed on Table A–1 and is the primary component of HT 70 is the simplest version, with m=n=1.) In addition, Solvay submitted an infrared absorption spectrum for another fluorinated HTF that it imports into the U.S., Galden HT–110.

<sup>1</sup> Fully fluorinated compounds are defined as compounds that contain only single bonds and in which all available valence locations are filled by fluorine atoms (e.g., saturated perfluorocarbons; fully fluorinated linear, branched and cyclic alkanes; fully fluorinated ethers; fully fluorinated

tertiary amines; fully fluorinated aminoethers; and perfluoropolyethers).

<sup>2</sup> Solvay provided a peer-reviewed paper regarding a fluorinated compound, PFPME, that is already on Table A–1 and that is sold under the trade name of Galden HT 70. (There are multiple PFPMEs, which have the general chemical

TABLE 1—F-HTFS WITH DOCUMENTED GWPS

Trade name(s)	CAS No.	Chemical name and formula	Submitted GWP	Source of submitted GWP
Fluorinert FC-77 (component); Fluorinert FC-75.	335-36-4 .....	Perfluoro-2-butyltetrahydro- furan. $C_8F_{16}O$ .....	9,600 .....	GWP and calculation method- ology provided by manufac- turer
Fluorinert FC-3283 .....	338-83-0 .....	Perfluoro-triisopropylamine (PTPA) ( $C_3F_7$ ) <sub>3</sub> N .....	8,690 .....	GWP and calculation method- ology provided by manufac- turer
Fluorinert FC-40 .....	1064698-37-8 .....	Perfluoro-tributylamine (PTBA) ( $C_4F_9$ ) <sub>3</sub> N .....	9,020 .....	GWP and calculation method- ology provided by manufac- turer
Fluorinert FC-3284, PF-5052 .....	382-28-5 .....	Perfluoromethyl morpholine (PMM). $C_5F_{11}NO$ .....	9,500 .....	GWP and calculation method- ology provided by manufac- turer
Fluorinert FC-770 .....	1093615-61-2 .....	Perfluoro-isopropyl morpholine (PIPM). $C_7F_{15}NO$ .....	11,000 .....	GWP and calculation method- ology provided by manufac- turer
Novec 7300, HFE-7300 .....	132182-92-4 .....	1,1,1,2,2,3,4,5,5,5-decafluoro-3- methoxy-4-trifluoromethyl- pentane. $CF_3CF_2CF(OCH_3)CF(CF_3)_2$ .....	310 .....	GWP and calculation method- ology provided by manufac- turer
Novec 7500, HFE-7500 .....	297730-93-9 .....	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6- dodecafluoro-2- trifluoromethyl-hexane. $CF_3CF_2CF_2CF(OC_2H_5)CF(CF_3)_2$ .....	100 .....	GWP and calculation method- ology provided by manufac- turer
<b>F-HTFS with Vapor Pressure Less than 1 mm Hg</b>				
Fluorinert FC-70 .....	338-84-1 .....	Perfluoro-triamylamine (PTAA) ( $C_5F_{11}$ ) <sub>3</sub> N .....	8,900 .....	GWP and calculation method- ology provided by manufac- turer

TABLE 2—F-GHGS AND F-HTFS FOR WHOSE GWPS DOCUMENTATION IS NOT AVAILABLE

Trade name(s)	CAS No.	Chemical name and formula	Cited GWP	Source of cited GWP
Heptafluorobutanoyl fluoride .....	773-14-8 .....	$C_4F_8O$ .....	8,700 .....	Identified in Pruette et al. (2000) <sup>a</sup>
Fluorinert FC-3255, FC-104 .....	335-36-4 .....	Predominantly $C_5-C_{18}$ .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Fluorinert FC-5311, Phen- anthrene.	306-91-2 .....	Perfluoroperhydrophenanthrene $C_{14}F_{24}$ .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Fluorinert FC-5320 .....	86508-42-1 .....	Perfluoro-compounds $C_5-C_{18}$ .....	>5,000 .....	Identified in manufacturer's lit- erature <sup>c</sup>
Fluorinert FC-8270 .....	338-83-0 .....	Perfluoro compounds (primarily compounds with 9 carbons). 1,1,1,2,3,3,3-Hexafluoro-4- (1,1,2,3,3,3-hexafluoroprop- oxy)-pentane. $C_8H_6F_{12}O$ .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Novec 7600, HFE-7600 .....	870778-34-0 .....	1,1,1,2,3,3,3-Hexafluoro-4- (1,1,2,3,3,3-hexafluoroprop- oxy)-pentane. $C_8H_6F_{12}O$ .....	700 .....	Identified in manufacturer's lit- erature <sup>d</sup>
H-Galden ZT-130 .....	188690-77-9 .....	$HCF_2OCF_2OCF_2CF_2OCF_2H$ .....	3000-5000 .....	Identified in presentation to EPA <sup>b</sup>
H-Galden ZT-150 .....	188690-77-9 .....	$HCF_2OCF_2OCF_2CF_2OCF_2H$ .....	3000-5000 .....	Identified in presentation to EPA <sup>b</sup>
H-Galden ZT-180 .....	188690-77-9 .....	$HCF_2OCF_2OCF_2CF_2OCF_2H$ .....	3000-5000 .....	Identified in presentation to EPA <sup>b</sup>
H-Galden ZV60 .....	Not Available .....	$HCF_2O-(CF_2O)_p-(CF_2CF_2O)_q-$ $CF_2H$ . (ratio of p/q is 2/3) .....	3,000-5,000 .....	Identified in presentation to EPA <sup>b</sup>
H-Galden ZV85, ZT-85 .....	Not Available .....	Not Available .....	3,000-5,000 .....	Identified in presentation to EPA <sup>b</sup>
H-Galden ZV100 .....	Not Available .....	Not Available .....	3,000-5,000 .....	Identified in presentation to EPA <sup>b</sup>
H-Galden ZV135 .....	Not Available .....	Not Available .....	3,000-5,000 .....	Identified in presentation to EPA <sup>b</sup>
Galden DET .....	Not Available .....	$CF_3(OCFCF_3CF_2)_n-(OCF_2)_m-$ $OCF_3$ .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Galden E85 .....	Not Available .....	$CF_3(OCFCF_3CF_2)_n-(OCF_2)_m-$ $OCF_3$ .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Galden HT-55 .....	69991-67-9 .....	$CF_3(OCFCF_3CF_2)_n-(OCF_2)_m-$ $OCF_3$ . n = 2.03 to 9.26 <sup>h</sup> .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
		m = 0.04 to 0.19 .....		

TABLE 2—F—GHGS AND F—HTFs FOR WHOSE GWPs DOCUMENTATION IS NOT AVAILABLE—Continued

Trade name(s)	CAS No.	Chemical name and formula	Cited GWP	Source of cited GWP
Galden HT-90 .....	69991-67-9 .....	CF <sub>3</sub> (OCFCF <sub>3</sub> CF <sub>2</sub> ) <sub>n</sub> -(OCF <sub>2</sub> ) <sub>m</sub> -OCF <sub>3</sub> , n = 2.03 to 9.26 <sup>h</sup> .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Galden HT-110 .....	69991-67-9 .....	CF <sub>3</sub> (OCFCF <sub>3</sub> CF <sub>2</sub> ) <sub>n</sub> -(OCF <sub>2</sub> ) <sub>m</sub> -OCF <sub>3</sub> , n = 2.03 to 9.26 <sup>h</sup> .....	10,000 .....	Identified in presentation to EPA <sup>b,c</sup>
Galden HT-135 .....	69991-67-9 .....	CF <sub>3</sub> (OCFCF <sub>3</sub> CF <sub>2</sub> ) <sub>n</sub> -(OCF <sub>2</sub> ) <sub>m</sub> -OCF <sub>3</sub> , n = 2.03 to 9.26 <sup>h</sup> .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Galden HT-170 .....	69991-67-9 .....	CF <sub>3</sub> (OCFCF <sub>3</sub> CF <sub>2</sub> ) <sub>n</sub> -(OCF <sub>2</sub> ) <sub>m</sub> -OCF <sub>3</sub> , n = 2.03 to 9.26 <sup>h</sup> .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Galden D02—TS .....	69991-67-9 .....	CF <sub>3</sub> (OCFCF <sub>3</sub> CF <sub>2</sub> ) <sub>n</sub> -(OCF <sub>2</sub> ) <sub>m</sub> -OCF <sub>3</sub> , m = 0.04 to 0.19 .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Galden D02—TSX .....	69991-67-9 .....	CF <sub>3</sub> (OCFCF <sub>3</sub> CF <sub>2</sub> ) <sub>n</sub> -(OCF <sub>2</sub> ) <sub>m</sub> -OCF <sub>3</sub> , m = 0.04 to 0.19 .....	None provided .....	No GWP found
Galden PFS 2 .....	69991-67-9 and 9002-84-0.	CF <sub>3</sub> (OCFCF <sub>3</sub> CF <sub>2</sub> ) <sub>n</sub> -(OCF <sub>2</sub> ) <sub>m</sub> -OCF <sub>3</sub> .	None provided .....	HTF identified in distributor's literature <sup>f</sup>

## F—HTFs with Vapor Pressure Less than 1 mm Hg

Fluorinert FC-43 .....	311-89-7 .....	N(CF <sub>2</sub> CF <sub>2</sub> CF <sub>2</sub> CF <sub>3</sub> ) <sub>3</sub> .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Fluorinert FC-5312 .....	338-84-1 .....	Perfluoro compounds (primarily with 15 carbons).	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Galden D02 .....	69991-67-9 .....	CF <sub>3</sub> (OCFCF <sub>3</sub> CF <sub>2</sub> ) <sub>n</sub> -(OCF <sub>2</sub> ) <sub>m</sub> -OCF <sub>3</sub> , n = 2.03 to 9.26 <sup>h</sup> .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Galden D03 .....	69991-67-9 .....	CF <sub>3</sub> (OCFCF <sub>3</sub> CF <sub>2</sub> ) <sub>n</sub> -(OCF <sub>2</sub> ) <sub>m</sub> -OCF <sub>3</sub> , n = 2.03 to 9.26 <sup>h</sup> .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Galden D05 .....	69991-67-9 .....	CF <sub>3</sub> (OCFCF <sub>3</sub> CF <sub>2</sub> ) <sub>n</sub> -(OCF <sub>2</sub> ) <sub>m</sub> -OCF <sub>3</sub> , n = 2.03 to 9.26 <sup>h</sup> .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Galden HS-240 .....	69991-67-9 .....	CF <sub>3</sub> (OCFCF <sub>3</sub> CF <sub>2</sub> ) <sub>n</sub> -(OCF <sub>2</sub> ) <sub>m</sub> -OCF <sub>3</sub> , n = 2.03 to 9.26 <sup>h</sup> .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Galden HS-260 .....	69991-67-9 .....	CF <sub>3</sub> (OCFCF <sub>3</sub> CF <sub>2</sub> ) <sub>n</sub> -(OCF <sub>2</sub> ) <sub>m</sub> -OCF <sub>3</sub> , n = 2.03 to 9.26 <sup>h</sup> .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Galden HT-200 .....	69991-67-9 .....	CF <sub>3</sub> (OCFCF <sub>3</sub> CF <sub>2</sub> ) <sub>n</sub> -(OCF <sub>2</sub> ) <sub>m</sub> -OCF <sub>3</sub> , n = 2.03 to 9.26 <sup>h</sup> .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Galden HT-230 .....	69991-67-9 .....	CF <sub>3</sub> (OCFCF <sub>3</sub> CF <sub>2</sub> ) <sub>n</sub> -(OCF <sub>2</sub> ) <sub>m</sub> -OCF <sub>3</sub> , n = 2.03 to 9.26 <sup>h</sup> .....	None provided .....	HTF identified in distributor's literature <sup>g</sup>
Galden LS-200 .....	69991-67-9 .....	CF <sub>3</sub> (OCFCF <sub>3</sub> CF <sub>2</sub> ) <sub>n</sub> -(OCF <sub>2</sub> ) <sub>m</sub> -OCF <sub>3</sub> , n = 2.03 to 9.26 <sup>h</sup> .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Galden LS-215 .....	69991-67-9 .....	CF <sub>3</sub> (OCFCF <sub>3</sub> CF <sub>2</sub> ) <sub>n</sub> -(OCF <sub>2</sub> ) <sub>m</sub> -OCF <sub>3</sub> , n = 2.03 to 9.26 <sup>h</sup> .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>
Galden LS-230 .....	69991-67-9 .....	CF <sub>3</sub> (OCFCF <sub>3</sub> CF <sub>2</sub> ) <sub>n</sub> -(OCF <sub>2</sub> ) <sub>m</sub> -OCF <sub>3</sub> , n = 2.03 to 9.26 <sup>h</sup> .....	10,000 .....	Identified in presentation to EPA <sup>b</sup>

<sup>a</sup>Pruette, L., S. Karecki, R. Reif, L. Tousignant, W. Reagan, S. Kesari, and L. Zazzera. "Evaluation of C4F8O as an Alternative Plasma-Enhanced Chemical Vapor Deposition Chamber Clean Chemistry." *Journal of the Electrochemical Society*, 147 (3): 1149–1153, 2000.

<sup>b</sup>3M Company. "Greenhouse Gas Reporting of Heat Transfer Fluids." Presentation by Kurt Werner of 3M Electronics Markets Materials Division. Presented to the EPA, January 2011. Available in Docket No. EPA-HQ-OAR-2011-0512.

<sup>c</sup>3M Company. "Material Safety Data Sheet: 3M™ Fluorinert™ FC-5320 Electronic Liquid." 2012. Available online at: [http://multimedia.3m.com/mws/mediawebserver?SSSSSuUn\\_zu8I00x4xtZm8m94v70k17zHvu9lxtD7SSSSSS—](http://multimedia.3m.com/mws/mediawebserver?SSSSSuUn_zu8I00x4xtZm8m94v70k17zHvu9lxtD7SSSSSS—)

<sup>d</sup>3M Company. "Material Safety Data Sheet: 3M™ Novec™ 7600 Engineered Fluid." 2011. Available online at: [http://multimedia.3m.com/mws/mediawebserver?mwslid=SSSSSuUn\\_zu8I00xMxmGmxtx4v70k17zHvu9lxtD7SSSSSS—](http://multimedia.3m.com/mws/mediawebserver?mwslid=SSSSSuUn_zu8I00xMxmGmxtx4v70k17zHvu9lxtD7SSSSSS—)

<sup>e</sup>Solvay provided an infrared (IR) spectrum for this compound, but not an estimated atmospheric lifetime or GWP.

<sup>f</sup> <http://www.sigmaaldrich.com/catalog/product/aldrich/374431?lang=en&region=US>.

<sup>g</sup> [https://www.lesker.com/newweb/fluids/msds/Galden\\_HT230.pdf](https://www.lesker.com/newweb/fluids/msds/Galden_HT230.pdf).

<sup>h</sup> In the chemical formulas for the Galden series, "n" and "m" indicate the number of times each group (in parentheses) is repeated in the compound. While "n" and "m" are integers in any single molecule, the Galden HTFs are typically made up of mixtures of different molecules. The values for "n" and "m" for any single Galden HTF represent averages for that HTF. Table 2 provides the ranges of the average values of "n" and "m" for the Solvay HTFs in each Galden series (Galden HT, LS, etc.).

#### IV. Summary of EPA Assessment of Submitted GWPs and the Data and Analysis Supporting Them

The EPA completed a review of the GWPs listed in Table 1 of this notice and the data and analysis submitted in support of them. That assessment is available in the docket, together with the submitted data and analyses. In general, we found that the data and methods used to estimate the GWPs were reasonable and that the GWPs were consistent with what would be expected for compounds of the types analyzed. However, there were some limitations to the data and analysis. First, in some cases the transparency of the data and analysis were limited because some of the reports containing the detailed background information were not available for review in time for this notice. Second, some of the data were of uncertain quality because they were based on an unpublished master's thesis. Third, because some of the analyses were performed in the early 1990s, some of the models used to estimate lifetimes or radiative efficiencies were out of date. Fourth, in one case (PTAA), radiative efficiency estimates were based on a quantitative structural activity relationship (QSAR) of uncertain predictive ability. Fifth, the atmospheric lifetime for one of the short-lived compounds (HFE-7300) was estimated based on an atmospheric lifetime for methane that is lower than the currently accepted lifetime, resulting in an underestimated lifetimes for that compound. Finally, for the six long-lived compounds, experimental limitations prevented 3M or its researchers from establishing more than minimum atmospheric lifetimes, and the GWPs based on these lifetimes are therefore also minimums.

Overall, we do not expect that these limitations resulted in large errors in the resulting GWPs; and with the exception of the errors attributable to the last two issues (related to atmospheric lifetimes), we expect that these are random rather than systematic errors. To address the last two issues, we examined the sensitivity of the GWPs of the compounds to atmospheric lifetime. In general, 100-year GWPs for very long-lived compounds are relatively insensitive to increases in assumed atmospheric lifetime, and our analysis confirmed this. However, the 100-year

GWPs for the short-lived compounds are sensitive to increases in the assumed atmospheric lifetime. For example, updating the atmospheric lifetime for HFE-7300 based on the currently accepted atmospheric lifetime of methane increases the estimated GWP of HFE-7300 by 10 percent.

Dated: April 1, 2013.

**Sarah Dunham,**

*Director, Office of Atmospheric Programs.*

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**BILLING CODE 6560-50-P**

#### ENVIRONMENTAL PROTECTION AGENCY

[FRL-9796-4]

#### Notification of Public Meeting and a Public Teleconference of the Hydraulic Fracturing Research Advisory Panel

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

**ACTION:** Notice.

**SUMMARY:** The Environmental Protection Agency (EPA) Science Advisory Board (SAB) Staff Office announces a public meeting and public teleconference of the Hydraulic Fracturing Research Advisory Panel to provide an opportunity for independent expert members of the ad hoc Panel to provide comment on EPA's *Study of the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources: Progress Report*, which was released in December 2012. The meeting will also begin a broader commitment to provide opportunities to brief the panel on the last scientific and technical developments in this emerging topic area.

**DATES:** The public meeting will be held on Tuesday, May 7, 2013, from 9:30 a.m. to 6:00 p.m. and Wednesday, May 8, 2013, from 8:00 a.m. to 6:00 p.m. (Eastern Daylight Time). The public teleconference will be held on May 16, 2013, from 1:00 p.m. to 5:00 p.m. (Eastern Daylight Time).

**ADDRESSES:** The public meeting will be held at the Westin Arlington Gateway Hotel located at 801 North Glebe Road, Arlington, VA, 22203. The public teleconference will be conducted by telephone only. The public can also view the May 7-8, 2013 meeting via a non-interactive webcast that will be

broadcast on the internet. The connection information to view the meeting via webcast will be provided on the SAB Web site at <http://www.epa.gov/sab> in advance of the meeting.

**FOR FURTHER INFORMATION CONTACT:** Any member of the public who wants further information concerning the teleconference and meeting may contact Mr. Edward Hanlon, Designated Federal Officer (DFO), EPA Science Advisory Board (1400R), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue NW., Washington, DC 20460; via telephone/voicemail at (202) 564-2134, fax at (202) 565-2098; or email at [hanlon.edward@epa.gov](mailto:hanlon.edward@epa.gov). General information concerning the SAB can be found on the EPA Web site at <http://www.epa.gov/sab>.

#### SUPPLEMENTARY INFORMATION:

**Background:** The SAB was established pursuant to the Environmental Research, Development, and Demonstration Authorization Act (ERDDAA), codified at 42 U.S.C. 4365, to provide independent scientific and technical advice to the Administrator on the technical basis for Agency positions and regulations. The SAB is a Federal Advisory Committee chartered under the Federal Advisory Committee Act (FACA), 5 U.S.C., App. 2. The SAB will comply with the provisions of FACA and all appropriate SAB Staff Office procedural policies. Pursuant to FACA and EPA policy, notice is hereby given that the SAB will hold a public meeting and public teleconference to receive public comments and to provide an opportunity for independent expert members of the SAB Panel to discuss, deliberate, and provide comment on the topics below.

In response to public concern, Congress directed EPA to study the relationship between hydraulic fracturing and drinking water. In 2011, EPA's Office of Research and Development (ORD) published its *Plan to Study the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources*. EPA has requested comment from individual ad hoc panel members on its *Study of the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources* as well as plan future potential activities of the panel. The *Progress Report* describes the status of EPA's ongoing research on the potential