
2010/15 PFOA Stewardship Program

Guidance on Reporting Emissions and Product Content

October 2006

Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency

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1. Introduction

1.1 Background

On January 25, 2006, Administrator Stephen Johnson invited eight major fluoropolymer and telomer manufacturers to participate in a global stewardship program on perfluorooctanoic acid (PFOA) and related chemicals. Participating companies were asked to commit to reducing PFOA and related chemicals from facility emissions and in product content by 95% no later than 2010, and to work toward eliminating PFOA from emissions and in product content no later than 2015. All eight companies, Arkema, Asahi, Ciba, Clariant, Daikin, DuPont, 3M/Dyneon, and Solvay Solexis, submitted letters of commitment to the PFOA Stewardship Program by the March 1, 2006 deadline.

1.2 Scope of the PFOA Stewardship Program

Each of the eight companies expressed support for a global stewardship program addressing reductions in PFOA, PFOA precursor chemicals, and related higher homologues from both emissions and product content. Participation in the stewardship program is in addition to a company's existing commitments to the Agency. Companies also expressed their general commitment to continue their ongoing research on the sources, pathways of exposure, and potential risks of these chemicals.

1.3 Baseline Data Report

As a means of measuring continuing improvement in achieving reductions, the Stewardship Program specified that individual companies use year 2000 data as the baseline of their company's emissions and product content. The companies have agreed to submit baseline information by October 31, 2006. If no data are available for year 2000, companies have agreed to use as a baseline the nearest year for which data are available.

1.4 Annual Reports

Companies in the Program have agreed to submit annual reports on their progress toward meeting the goals by the end of October of every year. As noted in Administrator Johnson's invitation letter, companies would report their progress publicly in terms of company-wide percentage achievements both for U.S. operations and for the company's global business. The Administrator's letter further noted that companies would also provide to EPA detailed information on their progress in support of their public reports, and would allow EPA to share information submitted under the Program with the Agency's contractors, including information contained within detailed progress reports that may be claimed as confidential. The first annual progress reports should be submitted by October 31, 2007. However, some companies have expressed their desire to report the reductions already achieved to date, and EPA encourages such submissions to be made in conjunction with the baseline data report submissions.

Some participating companies indicated that the PFOA Stewardship Program could be an umbrella encompassing all of the various pollution prevention, research, and product

development activities they are already planning or carrying out in connection with these chemicals. Companies are encouraged to provide such information in their annual reports.

1.5 Data Quality

For all data and information gathered under the PFOA Stewardship Program, the companies committed to employing scientific practices, protocols and procedures designed to ensure data quality, objectivity, utility and integrity. Each annual submission should include a brief discussion of data quality measures employed in composing the final report.

2. Guidance on Reporting Emissions

EPA developed the model-facility reporting form to facilitate a consistent reporting format among companies for the detailed information being submitted in support of each company's summary initial baseline and annual public reports. The form is based on the reporting form from the Use and Exposure Information Project (UEIP) that was developed through a collaborative effort between industry representatives and EPA's Office of Pollution Prevention and Toxics (OPPT). The form was designed specifically to minimize the need for submitters to assert Toxic Substances Control Act (TSCA) Confidential Business Information (CBI) claims, and has been used successfully for more than a decade by some of the companies currently involved in the PFOA Stewardship Program.

The UEIP was a voluntary program, developed initially as a joint effort by the Chemical Manufacturers Association¹ (CMA), the Synthetic Organic Chemical Manufacturers Association (SOCMA), and OPPT, to provide a method for chemical manufacturers to send use and exposure information to OPPT for the chemicals entering the Risk Management screening assessment process. The above groups, as well as the American Petroleum Institute (API) and Chemical Specialty Manufacturers Association (CSMA) developed the original UEIP form in a collaborative effort. The original UEIP form was slightly modified to make it more closely suit the purposes and objectives of the PFOA Stewardship Program. For example, the sections containing exposure-related information were eliminated.

The facility reporting form on emissions is Appendix C of this guidance document. The form is chemical- and site-specific, and requests information on chemical releases at sites where a company manufactures, processes, or uses the chemical. Companies should complete a separate form for each facility. If a company is reporting for more than one chemical, it should complete a separate form for each chemical (PFOA, PFOA precursor chemical, or related higher homologue). Further guidance can be found in the reporting form in Appendix C.

EPA will use information on facility reports on emissions to measure progress toward meeting the goals of the PFOA Stewardship Program. To ensure transparency in reporting, as

¹ Now the American Chemistry Council (ACC)

well as in Agency and company decision making, the Stewardship Program is designed to collect information in a format that is readily accessible to the public. Although the submission of CBI under the Stewardship Program is discouraged, EPA recognizes that there may be various circumstances in which a company may need to claim some of its information as TSCA CBI. Appendix B contains information relevant to CBI submissions. A sanitized version of any CBI information should also be submitted, which should disclose as much information as possible. If no claim of confidentiality is made at the time of submission, the detailed information may be made available to the public without further notice by EPA.

3. Guidance on Reporting Product Content

EPA recognizes that there are still many difficulties associated with obtaining accurate and reproducible results in chemical analyses of perfluorinated alkylated compounds. To ensure that the results reported under the Stewardship Program are both comparable and reliable, companies have committed to work with EPA, other PFOA Stewardship Program participants, and other experts in order to establish scientifically credible analytical standards and laboratory methods for measuring the chemicals in the program by 2010, the first goal attainment year.

EPA also recognizes that some of the companies have made significant progress in developing analytical techniques on their own. Companies are encouraged to publicly share these advances with others.

The facility reporting form on product content is Appendix D of this guidance document. This form was developed to provide a consistent reporting format across companies for the detailed information being submitted in support of each company's initial baseline and annual summary public report. The form is product- and site-specific. Companies should complete a separate form for each facility. If a company is reporting for more than one product, it should complete a separate form for each product. Further guidance can be found in the reporting form in Appendix D.

EPA will use information on facility reports on product content to measure progress toward meeting the goals of the PFOA Stewardship Program. To ensure transparency in reporting, as well as in Agency and company decision making, the Stewardship Program is designed to collect information in a format that is readily accessible to the public. Although the submission of CBI under the Stewardship Program is discouraged, EPA recognizes that there may be various circumstances in which a company may need to claim some of its information as TSCA CBI. A sanitized version of any CBI information should also be submitted, which should disclose as much information as possible. If no claim of confidentiality is made at the time of submission, the detailed information may be made available to the public without further notice by EPA.

4. Public Summary Reports

The public summary reporting form for the baseline year information can be found in Appendix E. The public summary annual reporting form for reporting reductions in emissions and product content can be found in Appendix F. These reporting forms were developed to provide a simple, convenient, consistent, and readily understandable format in which to summarize emission and product content reductions across company operations in the U.S. and worldwide. As contemplated by Administrator Johnson's invitation letter, the public summary reports provide a means for companies to express their progress in terms of company-wide percentage achievements both for U.S. operations and for the company's global business.

Once submitted by the companies, these forms will be posted on the PFOA Stewardship Program website for easy public reference. They must not contain any CBI. In those sections of the form that may cover information that your company claims as CBI, please fill in the form with as much non-CBI information as possible using ranges or generic descriptions.

5. Submissions to EPA

5.1 Public Record

All submissions under this Stewardship Program will be made publicly available in Docket EPA-HQ-OPPT-2006-0621 unless confidentiality is claimed at the time the information is submitted. EPA has made an electronic version of the public docket available at <http://www.regulations.gov>.

To access the electronic dockets through <http://www.regulations.gov>, from the main page locate the "Advanced Search" tab and select "Docket." On the search screen that appears, enter the appropriate docket ID number in the "Docket ID" field and click "Search." The public can also access the EPA-HQ-OPPT-2006-0621 Docket through the EPA Docket Center Reading Room, which is located in the EPA Headquarters Library, Infoterra Room, EPA West, Rm. 3334, 1301 Constitution Avenue, N. W., Washington, D.C.

5.2 Confidential Business Information (CBI)

Although the submission of CBI under the Stewardship Program is discouraged, EPA recognizes that there may be various circumstances in which a company may need to claim some of its information as TSCA CBI. Information claimed CBI will be treated in accordance with the procedures in 40 CFR part 2 and section 14 of TSCA, 15 U. S. C. 2613. Appendix B provides guidance on the submission of CBI to the Agency.

5.3 Submissions to EPA

All documents submitted to EPA under this Program should be identified by the Docket ID Number EPA-HQ-OPPT-2006-0621.

To ensure timely processing, EPA requests that the companies submit one (1) paper copy (marked as CBI where appropriate) and one (1) electronic copy (on a disk or CD ROM; marked as CBI where appropriate and in text-searchable, PDF format) of all documents submitted under this Program to the OPPT Document Control Office in accordance with the procedures specified below. For any CBI submissions, a second copy of the submission (paper and electronic), from which all the marked information and legends are removed, should accompany the submission leaving only the non-confidential portions of the submission.

Submissions made by hand delivery or courier (EPA's preferred option of receiving document submissions for this Program)

Deliver to: OPPT Document Control Office (DCO) in the EPA East Building, Room 6428, 1201 Constitution Avenue, NW, Washington, DC, and mark Attention: Docket ID Number EPA-HQ-OPPT-2006-0621. The DCO is open from 8:00 a.m. to 4:00 p.m., Monday through Friday, excluding legal holidays. The telephone number for the DCO is (202) 564-8930.

Submissions made by mail

Send to: Document Control Office (7407M), Office of Pollution Prevention and Toxics (OPPT), Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460-0001. Mark Attention: Docket ID Number EPA-HQ-OPPT-2006-0621. No electronic media should be submitted to the EPA by mail because it would be destroyed by current mail screening irradiation procedures.

Submissions made electronically

Send to: OPPT Document Control Office at oppt.ncic@epa.gov, Attention: Docket OPPT-2006-0621. Electronic submissions for all reporting under this Program should be submitted as attachments to the e-mail and should be in text-searchable, PDF format. The e-mail transmitting any report required by this Program and all electronic attachments should be included as part of the submission. E-mail addresses are automatically captured by the EPA e-mail system and become part of the submission that is placed in the official public docket, and will be made available in the EPA electronic public docket. Upon receipt of the electronic submission, a "receipt date" is entered into the metadata to signify the date the document(s) submitted by the company(ies) was received by EPA. EPA is not responsible for any submissions that fail to transmit when the EPA firewall rejects an electronic submission containing a virus or other adverse electronic coding. Submitter should confirm that: 1) electronic submissions are received by EPA on the date of transmission, 2) the electronic submission and all attachments are legible, and 3) the electronic submission and all attachments meet the electronic format requirements of the EPA Document Control Office. Do not submit any report containing confidential business information (CBI) to EPA by e-mail.

For all non-CBI submissions, one (1) additional paper and one (1) electronic (searchable PDF) copy of each document should be transmitted directly by a commercial courier or hand delivery to Mary Dominiak in the EPA East Building, Room 4410M, 1201 Constitution Avenue, NW, Washington, DC and marked Attention: 2010/15 PFOA Stewardship Program.

CBI information that is provided to EPA should be sanitized to protect CBI but provide as much information to the public as possible. Any part of data or other documentation claimed as CBI should be so marked. Confidential portions of any particular page should be clearly marked by highlighting, bracketing, or some other marking that clearly identifies the precise information that is claimed as CBI. In addition to the marked copy, a second copy of the submission should accompany the submission from which all the marked information and legends are removed, leaving only the non-confidential portions of the submission. Data or other information that are claimed as CBI should not be submitted electronically to EPA by e-mail. If the CBI submission is on diskette or CD ROM, mark the outside of the diskette or CD ROM as CBI and then identify electronically within the diskette or CD ROM the specific information that is CBI.

Appendix A
Glossary of Terms

Glossary of Terms

The following definitions should be considered general and applicable to the 2010/15 PFOA Stewardship Program only.

Byproduct

A chemical substance produced without a separate commercial intent during the manufacture or processing of another chemical substance or mixture.

CBI

Confidential Business Information.

ECA

Enforceable Consent Agreement.

Externally recycled

Recovered at another site and then transferred into the subject site for reuse.

Higher homologue chemicals

PFOA and PFOS are both eight-carbon chain length chemicals. Chemicals similar in structure to PFOA or PFOS but with nine or more carbons in the chain are higher homologues of PFOA or PFOS.

Homologue

One of a series of compounds, each of which has a structure differing regularly by some increment (number of carbons, presence of a CH₂ group) from adjacent members of the group.

Impurity

A chemical substance that is unintentionally present with another chemical substance.

Internally recycled

Recovered and reused at the same site.

NPDES

National Pollution Discharge Elimination System.

PFAC

Perfluoroalkyl carboxylate is a generic term used to describe a fully fluorinated carboxylic acid of any carbon chain length, including PFOA.

PFAS

Perfluoroalkyl sulfonate is a generic term used to describe a fully fluorinated sulfonate of any carbon chain length, including PFOS.

PFNA

Perfluorononanoic acid is a fully fluorinated, nine-carbon chain carboxylic acid (C9) (CAS 375-95-1).

PFOA

Perfluorooctanoic acid is a fully fluorinated, eight-carbon chain carboxylic acid (C8) (CAS 335-67-1).

POTW

Publicly Owned Treatment Works.

Precursor

A chemical that can break down to form another chemical. For example, some residual monomer chemicals from the telomer manufacturing process, such as telomer alcohols and telomer iodides, are PFOA precursors because they may remain in the final product and can break down into PFOA.

Product

For the purpose of this Program, the term “product” refers to basic fluorochemical substances or mixtures that are manufactured by the eight fluoropolymer and telomer companies. For example, the chemical substance polytetrafluoroethylene may be sold as a commercial chemical product in the form of a solid or as a diluted aqueous dispersion. Other fluoropolymers, fluorotelomer-based polymers, and telomer monomers that are in commerce (for example, sold to formulators as constituents for incorporation into other formulated products such as inks, paints, cleaners, and surface treatment applications for carpets, textiles, leather, and paper) would be included in the definition of "product" because they are commercial chemical substances. The final formulations themselves, and the articles to which they may be applied (such as carpet, textiles, and paper), are not included in the definition of “product” for the purpose of reporting under the PFOA Stewardship Program.

RCRA

The Resource Conservation and Recovery Act.

Telomer Based Product

Chemical substances that have the fluoroalkyl portion of the molecule derived from telomers manufactured from low molecular weight polymerization of tetrafluoroethylene.

UEIP

Use and Exposure Information Project.

Appendix B

**Guidance on Reporting Confidential Business
Information (CBI)**

2010/15 PFOA Stewardship Program Guidance on Reporting Confidential Business Information (CBI)

Under TSCA, a company may claim that information provided to EPA is confidential business information (CBI) entitled to confidential treatment. Please note that EPA may request a company to substantiate any CBI claim. You are advised that if no CBI claim accompanies your submission, EPA may make the information available to the public. If you make a CBI claim in the submission, the information covered by such claims will only be disclosed to the extent and by means of the procedures set forth in 40 CFR 2.201 *et seq.* and at 41 FR 36902, Sept. 1, 1976, as amended by 50 FR 51662, Dec. 8, 1985.

If you submit information claimed as CBI, please follow the procedures set forth in 40 CFR 2.201 *et seq.* and at 41 FR 36902, Sept. 1, 1976, as amended by 50 FR 51662, Dec. 8, 1985. In summary, these regulations provide that a company that submits information to EPA may designate all or part of the information as CBI. The submitter should clearly mark an attached cover sheet and each page that contains CBI with the term “Confidential,” “Trade Secret,” “Proprietary,” or other appropriate term indicating the confidential nature of the information contained on that page. Confidential portions of any particular page should be clearly marked by highlighting, bracketing, or some other marking that clearly identifies the precise information that is claimed as CBI. In addition to the marked copy, a second copy of the submission, from which all the marked information and legends are removed, should accompany the submission leaving only the non-confidential portions of the submission. This second copy will be placed in public files and will not be handled as CBI. The submitter may, if known, indicate the period of time for which the company will consider the information as CBI.

Because non-confidential data may be available to the public, it is very important to determine which information is confidential before completing the form. Submitters of the form should be sensitive to information their customers may hold confidential, and should refer to any confidential disclosure agreement with them. If you are in doubt concerning customer CBI, please consult the customer or the appropriate department in your company.

Any questions about how to assert or make CBI claims should be directed to Scott Sherlock, Office of Pollution Prevention and Toxics, at sherlock.scott@epa.gov or 202-564-8257.

Appendix C

Draft Facility Report on Emissions

2010/15 PFOA Stewardship Program Draft Facility Report on Emissions

I. CHEMICAL IDENTIFICATION

Identify the chemical for which you are submitting information:

Chemical name: _____

CAS number: _____

II. COMPANY IDENTIFICATION

Identify the company and location of the facility submitting information:

Company name: _____

Site location: _____

Identify a company technical contact who can respond to inquiries about the information submitted:

Technical contact: _____

Phone: _____

Address: _____

III. ON-SITE ACTIVITIES

Calendar year for which you are reporting: Jan 1, 20__ to Dec 31, 20 __

Provide the amount of chemical identified above for the reporting year at specific site:

Imported (virgin) _____kgs/yr

Imported (externally recycled) _____kgs/yr

Manufactured _____kgs/yr

Estimate the amount of subject chemical distributed off-site:

_____ % of manufacture/import

Provide the amount used (including any that was manufactured, imported [virgin or externally recycled], or internally recycled) of the subject chemical for the reporting year at specific site:

_____kgs/yr

Narrative Description and Process Flow Schematic:

Provide overall material balance of the chemical being reported, showing releases and products (kgs/year). Use the following page to provide a narrative description and process flow schematic of on-site activities, and include information that gives an understanding of the nature and extent of potential exposures to the subject chemical. Attach additional pages if desired. The narrative and process flow schematic should cover major unit operations and chemical conversions for manufacturing and on-site uses, if applicable. The narrative should provide insight into why and how releases are caused by the process. The schematic should show the points of release of the subject chemical in the workplace and to the environment. In the event the subject chemical is used in many different processes, provide information on each major process instead of each individual process.

Narrative Description and Process Flow Schematic:

IV. SITE RELEASE AND TRANSFER INFORMATION
(For manufacturing and on-site processing/use if applicable)

In this section, estimate the total media-specific releases after on-site treatment of the chemical from your facility. You may estimate the releases by using monitoring data or any other method you believe appropriate. Estimates should be reported in kgs per year for the reporting period. Enter the values as whole numbers to no more than two significant figures. For example, if your annual releases are estimated to be 12,360 kgs, an estimate of 12,000 kgs should be reported.

Estimate the number of days per year the release occurs. Enter a whole number with a maximum of 2 significant figures.

Insert "NA" for release activities not associated with the chemical or "0" for releases of less than 0.5 kgs per year.

For all releases, the source of data and/or basis for determination should be described in detail. Suggested information about the possible sources/basis includes:

1. If the source/basis is an analytical measurement, then
 - Describe the method (including analytical standards used, sampling, sample treatment, analysis).
 - Describe the uncertainties and assumptions made.
 - Give the Level of Detection (LOD)/Level of Quantification (LOQ).

2. If the source/basis is a mass balance, then
 - Show the mass balance calculation.
 - Show that the mass balance closes.
 - If the mass balance does not close, then report the fraction of total feedstock that is not accounted for and the assumptions you made to correct the balance. Describe the uncertainties.

3. If the source/basis is other than measurement or mass balance, then
 - Describe the method used. For example, if engineering calculations are used, give a general description and state your assumptions. Describe the uncertainties.

Part IV (cont.)

A. ON-SITE AIR RELEASES

Estimate the total fugitive or non-point releases to air and the number of days per year the releases occur. These releases include equipment leaks from valves, pump seals, flanges, compressors, sampling connections, and open-ended lines; evaporative losses from surface impoundments and spills; releases from building ventilation systems; and, any other fugitive or non-point air emission.

In addition, estimate the total releases that occur through stacks, vents, pipes, or other confined air streams as stack or point source releases. Include storage tank emissions and releases from pollution control equipment.

If desired, you can provide estimates of the accuracies of your release estimates.

	Estimated Total Annual Releases (kgs)	Estimated % Accuracy (Optional)	# Days/year Release Occurs
Fugitive (non-point)	_____	_____	_____
Stack (point)	_____	_____	_____

Basis for each release estimate:
(See discussion on source/basis in beginning of Section IV.)

Comments:
(This section is available to clarify your responses. Attach additional pages if desired.)

Part IV (cont.)

B. WATER RELEASES FROM SITE

Estimate the total releases of the chemical leaving the fence line of your facility from all discharge points to all streams or water bodies. Include all discharges from process outfalls such as pipes, open trenches, releases from on-site wastewater treatment, and contribution from storm water runoff, if applicable. Do not include discharges to a POTW or other off-site wastewater treatment facilities. If desired, you can provide an estimate of the accuracy of your release estimate.

Estimated Total Annual Releases (kgs)	Estimated % Accuracy (Optional)	# Days/year Release Occurs
---	---------------------------------------	-------------------------------

Water releases: _____ _____ _____

Enter the names of the streams or water bodies to which the facility directly discharges the chemical. Also, enter the NPDES permit number for the facility. If more than one number is assigned to the facility, list each number for the appropriate discharge quantity and receiving water identified.

Receiving Water Name(s): _____

NPDES number(s): _____

Basis for each release estimate:
(See discussion on source/basis in beginning of Section IV.)

Comments:
(This section is available to clarify your responses. Attach additional pages if desired.)

Part IV (cont.)

C. ON-SITE LAND RELEASES

Estimate the total releases of the chemical for each category of land disposal, if applicable. Estimate only on-site releases. Do not estimate leaks from landfills separately. This should be accounted for in your estimate of total landfill release.

Releases to land treatment/land amendment include all waste containing the chemical that is applied or incorporated into soil on-site. Do not include waste that is landfilled.

Surface impoundments are natural topographic depressions, man-made excavations, or diked areas formed primarily of earthen materials designed to hold an accumulation of the chemical.

Underground injection is the technology of placing fluids underground, in porous formations of rocks, through wells or other similar conveyance systems.

Other releases include any amount of the chemical that is released to land other than those listed. An example is the accidental release of the chemical from an underground pipeline or storage tank.

	Estimated Total Annual Releases (kgs)	Estimated % Accuracy (Optional)
Landfill	_____	_____
Land Treatment/Land Amendment	_____	_____
Surface Impoundments	_____	_____
Underground Injection	_____	_____
Other (specify):	_____	_____

Basis for each release estimate:
(See discussion on source/basis in beginning of Section IV.)

Comments:
(This section is available to clarify your responses. Attach additional pages if desired.)

Part IV (cont.)

D. OFF-SITE TRANSFERS

Estimates of off-site transfers should be similar in accuracy and precision to previous release estimates.

DI. Transfer to Publicly Owned Treatment Works (POTW)

Number of days/year the release occurs: _____

Estimate the total quantity of the subject chemical, not the waste stream, transferred to the POTW. Complete section below for each POTW to which your facility discharges wastewater containing the chemical. Enter the POTW's NPDES permit number, if known.

Annual Transfer (kgs): _____

Estimated % Accuracy of Transfer Estimate (optional) _____

POTW Name: _____

Street Address: _____

City: _____

County: _____

State: _____

Zip Code: _____

NPDES number: _____

Basis for each release estimate:
(See discussion on source/basis in beginning of Section IV.)

Comments:
(This section is available to clarify your responses. Attach additional pages if desired.)

Part IV (cont.)

D2. Transfers to other off-site locations

In this section, estimate the quantity of the subject chemical, not the waste stream, transferred and the accuracy of the estimate for each category listed. If your facility sends the subject chemical in waste to an off-site location where some of the chemical will be recycled and the remainder will be treated, estimate each amount separately (i.e., waste treatment and recycling activities).

	Estimated Annual Transfers (kgs)	Estimated % accuracy (Optional)
Incineration	_____	_____
Wastewater Treatment (Excluding POTW)	_____	_____
Underground Injection	_____	_____
Hazardous Waste (RCRA Subtitle C) Landfill	_____	_____
Other Landfill	_____	_____
Recycle or Recovery (Does not include internally recycled)	_____	_____
Internally Recycled	_____	_____
Unknown or Other	_____	_____

Basis for each release estimate:
(See discussion on source/basis in beginning of Section IV.)

Comments:

(This section is available to clarify your responses. Attach additional pages if desired.)

Appendix D

Draft Facility Report on Product Content

IV. PRODUCT CONTENT

A. CONCENTRATIONS OF RELEVANT PERFLUOROALKYL CHEMICALS

Please provide the concentrations (ppb) of various perfluoroalkyl chemicals in your product. For chemicals for which you do not have actual data, please provide range estimates.

The following is a nonexhaustive list of chemicals that should be included:

PFOA and its salts

- Octanoic acid, pentadecafluoro- (CAS 335-67-1)
- Octanoic acid, pentadecafluoro- ammonium salt (CAS 3825-26-1)

PFOA precursors

- Octane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7, 8,8-heptadecafluoro-8-iodo- (CAS 507-63-1)
- 1-Decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro- (CAS 678-39-7)
- 1-Decene, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro- (CAS 21652-58-4)
- 2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester (CAS 27905-45-9)
- 2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester (CAS 1996-88-9)
- 2-Decenoic acid, 3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-hexadecafluoro- (CAS 70887-84-2)
- Decanoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro- (CAS 27854-31-5)

Higher homologues

- Dodecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12-pentacosafuoro-12-iodo- (CAS 307-60-8)
- Decane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10-heneicosafuoro-10-iodo- (CAS 423-62-1)
- Nonanoic acid, heptadecafluoro- (CAS 375-95-1)
- Decanoic acid, nonadecafluoro- (CAS 335-76-2)
- 1-Decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro- (CAS 678-39-7)
- Decane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-10-iodo- (CAS 2043-53-0)
- Dodecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10-heneicosafuoro-12-iodo- (CAS 2043-54-1)
- 2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester (CAS 4980-53-4)
- 2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafuorododecyl ester (CAS 17741-60-5)

Part IV (cont.)

B. ANALYTICAL METHODS

Analyses should be conducted using the most accurate instrumentation and procedures available as of the time of testing. Please provide detailed information on the methods used (including analytical standards used, sampling, sample treatment, analysis), assumptions made, uncertainties and detection limits (LOD, LOQ) for the data provided.

Appendix E

Draft Company Report: Summary of Baseline Emissions and Product Content

2010/15 PFOA Global Stewardship Program

Draft Company Report: Summary of Baseline Emissions and Product Content

SECTION 1: REPORT DATE	October 2006
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SECTION 2: COMPANY IDENTIFICATION	
2a	Company Name
	Street Address

SECTION 3: SUMMARY OF EMISSIONS					
		Reporting Period (use calendar year - e.g. Jan 1, 2000 to Dec 31, 2000)			
3a	Operations	Chemical category	Releases to all environmental media from fluoropolymer and telomer manufacture		
			kgs	$\frac{\text{kgs of category}}{\text{kgs of fluoropolymers}^1}$	$\frac{\text{kgs of category}}{\text{kgs of telomers}}$
	U.S. facilities	PFOA and PFOA salts			
		Higher homologues			
Precursors					
3b	Non-U.S. facilities	PFOA and PFOA salts			
		Higher homologues			
		Precursors			
3c	Please provide information on the methods, assumptions, uncertainties and detection limits for the data provided above.				

SECTION 4: SUMMARY OF PRODUCT CONTENT					
Reporting Period (use calendar year - e.g. Jan 1, 2000 to Dec 31, 2000)					
4a	Product type	Fluoropolymer dispersions	Other fluoropolymers ¹	Telomer based products	
	Production volume (kgs/year) ²				
4b	Operations	Chemical category	Concentration ³		
			Fluoropolymer dispersions ⁴ (ppm wet-weight)	Other fluoropolymers ^{1,5} (ppb dry-weight)	Telomer based products ⁶ (ppb dry-weight)
	U.S. facilities	PFOA, PFOA salts and higher homologues			
		Precursors			
4c	Non-U.S. facilities	PFOA, PFOA salts and higher homologues			
		Precursors			
4d	Please provide information on the methods, assumptions, uncertainties and detection limits for the data provided above.				

¹ Fluoropolymers manufactured with PFOA.

² Use the following ranges: (1) Zero (2) > 0 – 10 kgs; (3) > 10 kgs – 100 kgs; (4) > 100 kgs – 1,000 kgs; (5) > 1,000 kgs – 10,000 kgs; (6) > 10,000 kgs – 100,000 kgs; (7) > 100,000 kgs – 1,000,000 kgs; (8) Over 1,000,000 kgs.

³ Concentration should reflect the concentration of chemical in the product as sold by the reporting company. If the reporting company has information concerning the concentration of chemical in the product as used by others – for example, as incorporated by dilution into a formulation – that additional information would also be helpful.

⁴ This value should be expressed as a weighted average concentration and range.

⁵ This value should be expressed as a maximum concentration.

⁶ This value should be expressed as a simple (not weighted) average and range.

Appendix F

Draft Company Annual Report: Summary of Reductions in Emissions and Product Content

2010/15 PFOA Global Stewardship Program

Draft Company Report: Summary of Reductions in Emissions and Product Content

SECTION 1: REPORT DATE	October 20__
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SECTION 2: COMPANY IDENTIFICATION	
2a	Company Name <hr/> Street Address

SECTION 3: SUMMARY OF EMISSIONS						
Reporting Period (use calendar year - e.g. Jan 1, 2005 to Dec 31, 2005)						
3a	Operations	Chemical category	Releases to all environmental media from fluoropolymer and telomer manufacture			% Reduction of total kgs released from baseline year
			kgs	$\frac{\text{kgs of category}}{\text{kgs of fluoropolymers}^1}$	$\frac{\text{kgs of category}}{\text{kgs of telomers}}$	
3a	U.S. facilities	PFOA and PFOA salts				
		Higher homologues				
		Precursors				
3b	Non-U.S. facilities	PFOA and PFOA salts				
		Higher homologues				
		Precursors				
3c	Please provide information on the methods, assumptions, uncertainties and detection limits for the data provided above.					

SECTION 4: SUMMARY OF PRODUCT CONTENT								
Reporting Period (use calendar year - e.g. Jan 1, 2005 to Dec 31, 2005)								
4a	Product type		Fluoropolymer dispersions		Other fluoropolymers ¹		Telomer based products	
	Production volume (kgs/year) ²							
4b	Operations	Chemical category	Concentration ³			% Reduction from baseline year		
			Fluoropolymer dispersions ⁴ (ppm wet-weight)	Other fluoropolymers ^{1,5} (ppb dry weight)	Telomer based products ⁶ (ppb dry weight)	Fluoropolymer dispersions	Other fluoropolymers ¹	Telomer based products
	U.S. facilities	PFOA, PFOA salts and higher homologues						
		Precursors						
4c	Non-U.S. facilities	PFOA, PFOA salts and higher homologues						
		Precursors						
4d	Please provide information on the methods, assumptions, uncertainties and detection limits for the data provided above.							

¹ Fluoropolymers manufactured with PFOA.

² Use the following ranges: (1) Zero (2) > 0 – 10 kgs; (3) > 10 kgs – 100 kgs; (4) > 100 kgs – 1,000 kgs; (5) > 1,000 kgs – 10,000 kgs; (6) > 10,000 kgs – 100,000 kgs; (7) > 100,000 kgs – 1,000,000 kgs; (8) Over 1,000,000 kgs.

³ Concentration should reflect the concentration of chemical in the product as sold by the reporting company. If the reporting company has information concerning the concentration of chemical in the product as used by others – for example, as incorporated by dilution into a formulation – that additional information would also be helpful.

⁴ This value should be expressed as a weighted average concentration and range.

⁵ This value should be expressed as a maximum concentration.

⁶ This value should be expressed as a simple (not weighted) average and range.