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Subject: Joint Meeting: Incineration ECAs Final Draft reviews

Dear Incineration ECA Drafting Committees:

Thanks to David Menotti for arranging for teleconference services for our next meeting /teleconference on Wednesday (2/25/04).

As promised, attached for your review and comment are the DRAFT FINAL ECA "cover documents" for the fluorotelomer and the fluoropolymer incineration ECAs. These documents incorporate the changes we discussed at our meeting on 2/20/04. We will work from these documents during our discussions on Wednesday. I have only redlined substantive new text inserts in these documents and have left the section on GLP as was because discussions continue on this point. Please note the following items regarding additional changes as described below:

1) GLP: In considering the FMG/TRP position regarding the need to exempt the formulating facilities from GLP, EPA has determined that additional discussion/clarification is needed. This will be the subject of Drafting Committee discussions on Wednesday morning (2/25/04).

2) FMG/TRP proposed text addition to Part III of the ECA regarding duplication of obligation for Phase I PFOA Transport Testing: EPA is proposing an alternative path forward. Note that the new Part III.C. text indicates that a Company's obligation to perform Phase I testing is now described in a new footnote on each signature page. In addition, each signature page now has a new footnote explaining whether or not a signatory company is obligated to perform Phase I testing under each ECA. While this is verbose, EPA believes that it accomplishes the objective and avoids any potential for unforeseen uncertainty regarding any Company's obligations in either ECA.

3) Scheduling in Table 1: EPA is agreeable to the FMG/TRP proposal to link the fluoropolymer start date to the receipt of the telomer final report. To accomplish this a new footnote # 8 was written for the fluoropolymer ECA. Note that EPA will not allow the start date for fluoropolymer Phase II testing to be extended in the event that TRP requests any extension for the submission of the telomer ECA report deadline.



FinalDraft-TelomerIncinECA2-25-04. FinalDraft-FluorolIncinECA2-25-04.

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INTERESTED PARTY REVIEW

FINAL DRAFT

**ENFORCEABLE CONSENT AGREEMENT
FOR
THE LABORATORY-SCALE INCINERATION
TESTING OF FLUOROPOLYMERS**

Docket No. OPPT - 2003 - 0071

FEBRUARY 27, 2004

INTERESTED PARTY REVIEW

FINAL DRAFT 2/27/04

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**ENFORCEABLE CONSENT AGREEMENT FOR THE LABORATORY SCALE
INCINERATION TESTING OF FLUOROPOLYMERS**

Docket No. OPPT-2003-0071

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 - A.2 Rationale for Selecting Composites to be Tested
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1 **I. INTRODUCTION**

2
3 Under the authority of section 4 of the Toxic Substances Control Act (TSCA), 15 U.S.C.
4 2603, and 40 CFR Part 790 of the Agency's implementing regulations, the United States
5 Environmental Protection Agency (EPA) and Asahi Glass Fluoropolymers USA, Inc., Daikin
6 America, Inc., Dyneon, LLC, and E.I. du Pont de Nemours and Company (hereinafter
7 collectively "the Companies") enter into this enforceable consent agreement (ECA). This ECA
8 will take effect on the date of publication of the notice in the Federal Register announcing the
9 issuance of the testing consent order (Order) that incorporates this ECA.

10
11 On April 16, 2003, EPA initiated a public process to negotiate enforceable consent
12 agreements (ECAs) concerning perfluorooctanoic acid (PFOA) and fluorinated telomers to
13 develop environmental fate and transport information, as well as relevant information to enhance
14 understanding of the sources of PFOA in the environment and the pathways by which human
15 exposure to PFOA is occurring (68 FR 18626; April 16, 2003). The goal of the ECAs resulting
16 from these public discussions is to develop data relevant to identifying the pathway or pathways
17 that result in exposures to PFOA by air, water, soil, or food; and to characterize how PFOA gets
18 into those pathways (including the products or processes that are responsible for the presence of
19 PFOA in the environment). EPA anticipates that the data to be developed under such ECAs will
20 be beyond or supplemental to that of ongoing testing efforts described under industry letters of
21 intent (LOIs) (Refs 1-4). [OPPT-2003-0012-0007,0012,0013,0016]

22
23 In preparation for the June 6, 2003, public meeting, EPA developed a preliminary
24 framework document outlining data needs that the Agency deemed appropriate to address the
25 outstanding PFOA source and exposure questions identified in the *Federal Register* notice of
26 April 16, 2003 (Ref 5)[OPPT-2003-0012-0056]. The intent of EPA's preliminary framework
27 document was to serve as a discussion guide for the June 6, 2003, public meeting and to aid in
28 distinguishing between outstanding EPA data needs and industry LOI commitments. The
29 preliminary framework document was not a predetermined list of information needs defining the
30 outcome of the ECA process.

31
32 This ECA provides for a laboratory-scale incineration testing program of fluoropolymers,
33 which is one of the data needs identified in EPA's preliminary framework document for PFOA.
34 On June 6, 2003, the PFOA Plenary Group (consisting of EPA and all interested parties)
35 acknowledged such a testing program as an opportunity for ECA development and tasked the
36 Fluoropolymer Technical Workgroup to work out the details that could be incorporated into an
37 ECA between test sponsors and EPA. On July 9, 2003, the Fluoropolymer Technical Workgroup
38 received proposals from the Companies and EPA for incineration testing of fluoropolymers.
39 Details of this testing program were developed by members of the Fluoropolymer Incineration
40 Subgroup of the Fluoropolymer Technical Workgroup during subsequent meetings. On
41 [Month/Date], 2003, the Fluoropolymer Technical Workgroup acknowledged that this testing

1 program had sufficient merit for consideration by the Plenary Group. On [Month/Date], 2003,
2 the Plenary Group discussed the merit of this testing program and recommended that EPA
3 consider entering into an ECA with test sponsors. The official record for the development of this
4 ECA, including the public version, is established under EPA docket control number [OPPT-
5 2003-0012]. The procedures for ECA negotiations are described at 40 CFR 790.22(b). The
6 official record for the testing conducted under this ECA is Docket No. OPPT-2003-0071
7
8

9 II. TEST SUBSTANCES

10 For the purposes of testing under this ECA the chemicals listed in Appendix A.1¹ will be
11 combined to form four composites. These four composites are considered the subject test
12 substances under this ECA. These composites are representative of fluoropolymer products
13 manufactured by the Companies that are currently available in the marketplace. The Companies
14 will provide the fluoropolymers specified in Appendix A.1 for incorporation into the composites
15 that will be tested under this ECA.² Criteria for the selection of each composite to be tested
16 under this ECA are described in Appendix A.2. The composition of each composite is described
17 in Appendix A.3¹. The four composites to be tested are defined for purposes of this ECA as:
18
19

- 20 (A) Dry Non-Melt PTFE Resin Composite: (containing: Ethene,
21 tetrafluoro-, homopolymer, CAS No. 9002-84-0, and Propane,
22 1,1,1,2,2,3,3-heptafluoro-3-[(trifluoroethyl)oxy]-, polymer with
23 tetrafluoroethene, CAS No. 26655-00-5)
24
- 25 (B) Dry Melt Fluoropolymer Resin Composite: (containing: 1-
26 Propene, 1,1,2,3,3,3-hexafluoro-, polymer with tetrafluoroethene),
27 CAS No. 25067-11-2; Propane, 1,1,1,2,2,3,3-heptafluoro-3-
28 [(trifluoroethyl)oxy]-, polymer with tetrafluoroethene, CAS No.
29 26655-00-5; Ethene, tetrafluoro-, polymer with
30 trifluoro(pentafluoroethoxy)ethene, CAS No. 31784-04-0; 1-
31 Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-difluoroethene
32 and tetrafluoroethene, CAS No. 25190-89-0; 1-Hexene,
33 3,3,4,4,5,5,6,6,6-nonafluoro-, polymer with ethene and

¹ There is a Public and confidential business information (CBI) version of Appendices A.1, and A.3 because some of the Companies have asserted that details describing one or more of the chemicals subject to this ECA are entitled to treatment as TSCA CBI (see Part XV of this ECA regarding confidentiality of information).

² See the Tables in Part XXIV. of this ECA for the chemicals to be supplied by each Company.

1 tetrafluoroethene, CAS No. 68258-85-5; and, 1-Propene,
2 1,1,2,3,3,3-hexafluoro-, polymer with ethene and tetrafluoroethene,
3 CAS No. 35560-16-8),
4

5 (C) Dry Non-Melt Fluoroelastomer Gum Composite: (containing: 1-
6 Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-difluoroethene,
7 CAS No. 9011-17-0; 1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer
8 with 1,1-difluoroethene and tetrafluoroethene, CAS No. 25190-89-
9 0; 1-Propene, polymer with 1,1-difluoroethene and
10 tetrafluoroethene, CAS No. 54675-89-7; 1-Propene, polymer with
11 tetrafluoroethene, CAS No. 27029-05-6; Ethene, tetrafluoro-,
12 polymer with trifluoro(trifluoromethoxy) ethene, CAS No. 26425-
13 79-6; and, Ethene, chlorotrifluoro-, polymer with 1,1-
14 difluoroethene, CAS No. 9010-75-7; and ??generic name??,
15 **Accession No. ???????**), and
16

17 (D) Aqueous Fluoropolymer Dispersions Composite: (containing:
18 Ethene, tetrafluoro-, polymer with trifluoro(pentafluoroethoxy)
19 ethene, CAS No. 31784-04-0; Ethene, tetrafluoro-, homopolymer,
20 CAS No. 9002-84-0; 1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer
21 with tetrafluoroethene), CAS No. 25067-11-2; Propane,
22 1,1,1,2,2,3,3-heptafluoro-3-[(trifluoroethenyl)oxy]-, polymer with
23 tetrafluoroethene, CAS No. 26655-00-5; Ethene, tetrafluoro-,
24 polymer with trifluoro(pentafluoroethoxy)ethene, CAS No. 31784-
25 04-0; and 1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-
26 difluoroethene and tetrafluoroethene, CAS No. 25190-89-0).
27

28 The procedure for constructing each composite is described in Appendix A.4. The
29 polymer components for each composite will be unfilled first quality product polymer,
30 substantially free of inorganic constituents. Each component of the four composites to be tested
31 under this ECA will be accompanied by a certificate of analysis showing it to meet applicable
32 product specifications.
33

34 35 **III. OBLIGATION OF SIGNATORY COMPANIES**

36
37 A. The Companies are bound by the terms of this ECA as specified below.

38
39 B. Each Company shall be responsible for supplying the test substance(s) it
40 manufacturers for incorporation into the composite(s) to be tested under this ECA, as specified
41 on each Company signature page and in Appendix A.3. The schedule for the testing program

1 includes the deadline date by which the Companies must submit their contribution(s) to the
2 facility(ies) that will be assembling the composites to be tested under this ECA. Any Company
3 failing to comply with this ECA requirement will be in violation of this ECA as described in 40
4 CFR 790.65 (see Part XII of this ECA). In the event that one or more of the Companies are in
5 violation as described above then the remaining Companies will inform EPA of the problem and
6 request an EPA determination on how to proceed with the testing program described under this
7 ECA. Each Company required to contribute to a particular composite is obligated to complete
8 the testing required by this ECA for that composite. A Company shall not be responsible for any
9 failure to perform its obligation under this ECA that is caused by circumstances beyond its
10 control, that the Company could not have prevented through the exercise of due diligence. Under
11 such circumstances the Company will consult with EPA to reach agreement on what
12 modifications, if any, are needed in the test plan or scope of testing (see Part X of this ECA
13 regarding modification to this ECA as contained in 40 CFR 790.68).

14
15 C. A Company's obligation to perform Phase I PFOA Transport Testing is
16 designated as a footnote on the signature page for that Company. See the individual signature
17 pages in Part XXIV of this ECA.

18
19 D. The Companies recognize that to implement this ECA, EPA will issue an Order
20 under section 4 of TSCA that incorporates the terms of this ECA (see Appendix F). The
21 Companies agree that all terms of this ECA will take effect on the date of publication of the
22 notice in the Federal Register announcing the issuance of the Order that incorporates this ECA,
23 and all time periods that begin on the effective date, will be treated as beginning on that
24 publication date.

25 26 27 **IV. PRINCIPAL TEST SPONSOR**

28
29 The Companies have identified the Fluoropolymer Manufacturers Group (FMG), to
30 communicate with EPA about schedules, study plans, protocols, test standards, and other aspects
31 of the testing program. EPA and the Companies agree that FMG has no legal responsibility for
32 complying with this ECA. Responsibility for complying with the ECA rests at all times with the
33 Companies.

34 35 36 **V. PURPOSE OF THE TESTING PROGRAM**

37
38 The purpose of the testing program specified by this ECA is to assess the potential for
39 waste incineration of fluoropolymers (see Part II and Appendix A.1 of this ECA) to emit PFOA,
40 based on quantitative determination of potential exhaust gas levels of PFOA that may emanate

1 from laboratory-scale combustion testing under conditions representative of typical municipal
2 waste combustor operations in the United States.

3
4 EPA believes that these incineration studies of fluoropolymers will develop data needed
5 by the Agency to determine whether municipal and/or medical waste incineration of
6 fluoropolymers is a potential source of PFOA that may contribute as a pathway to environmental
7 and human exposures. The data may also be used to inform screening level human and
8 environmental exposure assessments. In addition, the data may also be used by other Federal
9 agencies (e.g., the Agency for Toxic Substances and Disease Registry (ATSDR), the National
10 Institute for Occupational Safety and Health (NIOSH), the Occupational Safety and Health
11 Administration (OSHA), and the Consumer Product Safety Commission (CPSC), the Food and
12 Drug Administration (FDA)) in assessing chemical risks and in taking appropriate actions within
13 their programs. It is intended that the data generated under this ECA will identify whether the
14 incineration of fluoropolymers contributes to the sources and pathways of environmental and
15 human exposure to PFOA.

16 17 18 **VI. SCOPE OF THE PROGRAM**

19
20 The scope of this testing program is described in Parts VII and VIII below and will
21 consist of the testing listed in Table 1 in accordance with the test standards specified in Table 1
22 and described in Appendix B.1 and C.1 - C.2 as annotated by Appendix D.1- D.4 to this ECA
23 ("Test Standards") and submitting the reports and documents specified in Table 1 in accordance
24 with the deadlines set forth in Table 1 and described in Appendices C.1 - C.2 and E.1- E.3.

25 26 27 **VII. DESCRIPTION OF THE TESTING PROGRAM**

28
29 The program has two segments as follows: Phase I PFOA Transport Testing and Phase II
30 Fluoropolymer Incineration Testing.

31
32 A. Phase I PFOA Transport Testing: Phase I will consist of quantitative transport
33 efficiency testing for PFOA. Phase I testing for PFOA transport efficiency is specified in the
34 Phase I PFOA Transport Testing segment of Table 1 and described in Appendix C.1 as annotated
35 by Appendix D.1 and D.2. At the conclusion of Phase I testing, the Companies, will provide
36 EPA with a letter report summarizing the results. In the event that the transport efficiency of
37 PFOA or total fluorine (as determined by the formulas in Appendix C.1) is equal to or greater
38 than 70%, testing will proceed to Phase II Fluoropolymer Incineration Testing. In the event the
39 transport efficiency of PFOA and total fluorine (as determined by the formulas in Appendix C.1)
40 are both individually less than 70%, the Companies will initiate a technical consultation with
41 EPA (see Part VII. B. and Part VIII of this ECA).

1 B. Phase II Fluoropolymer Incineration Testing: This testing, specified in the Phase II
2 Fluoropolymer Incineration Testing segment of Table 1 and described in Appendix C.2 as
3 annotated by Appendices B.1, D.1, D.2, D.3, D.4, E.2 and E.3; and will include the following for
4 each fluoropolymer composite to be tested under this ECA: 1) elemental analysis, 2) combustion
5 stoichiometry, 3) thermogravimetric analysis, 4) laboratory-scale combustion testing, and, 5) if
6 required under this ECA,³ release assessment reporting.
7
8

9 VIII. PHASE I TECHNICAL CONSULTATION

10
11 A. Following completion of Phase I and prior to the initiation of Phase II, the
12 Companies will submit a letter report to EPA with the results for the transport efficiency across
13 the laboratory-scale thermal reactor system, as determined from Phase I testing.
14

15 B. If the transport efficiency for either PFOA or Total Fluorine (as determined by the
16 formulas in Appendix C.1) is greater than or equal to 70%, the Companies will proceed to Phase
17 II testing.
18

19 C. If the transport efficiency for PFOA and Total Fluorine (as determined by the
20 formulas in Appendix C.1) are both individually less than 70%, a Technical Consultation will be
21 held between the Companies and EPA. The objective of the Technical Consultation will be to
22 reach agreement on how to proceed. The technical consultation will review the outcomes of the
23 Phase I PFOA Transport Testing, discuss the feasibility of proceeding with Phase II Testing as
24 described in this ECA, and discuss whether additional modifications are needed to the test
25 standards and/or protocols described in Appendices B, C and D for Phase I PFOA Transport
26 Testing and/or Phase II Fluoropolymer Incineration Testing. Specifically, the technical
27 consultation will address: (1) whether the data from the Phase I PFOA Transport Testing
28 segment provide a sufficient basis for conducting the laboratory-scale incineration testing
29 specified in the Phase II Fluoropolymer Incineration Testing segment; (2) the nature and scope of
30 any additional Phase I work that may be required prior to the commencement of Phase II testing
31 and reporting (e.g., modifications to the Advanced Thermal Reactor System) as described in Part

³ In the event that Phase II Fluoropolymer Incineration Testing identifies measurable levels of PFOA (where measurable PFOA is defined to be at or above the limit of quantitation (LOQ) as defined in Appendix D.2) resulting from the incineration testing for any or all of the fluoropolymer composites tested under this ECA (see Part II and Appendix A.1 - A.4 to this ECA), the Companies will prepare a release assessment report (see Table 1 and Appendix E.2 to this ECA) to place in perspective the relevance of such measurable levels in the laboratory-scale incineration testing results with respect to full-scale municipal and/or medical waste incinerator operations in the United States.

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1 VII. B. of this ECA), and/or (3) the nature and scope of modifications to the protocols and test
2 standards for Phase I and/or Phase II testing, or the identification of additional testing, that may
3 be needed to complete the testing under this ECA.
4

5 Possible outcomes of the Technical Consultation include, the following:
6

- 7 1. An agreement to conduct additional Phase I testing,
8 and the schedule and standards for such testing, to
9 inform whether and under what conditions to
10 conduct Phase II testing.
11
- 12 2. An agreement to proceed into Phase II testing with
13 or without agreed-to modifications to plans, test
14 standards and schedules for Phase II testing.
15
- 16 3. An agreement to conduct such other testing, and the
17 schedule and standards for such testing, in Phase II
18 that the Companies and EPA agree may be
19 appropriate, in light of Phase I results, to assist in
20 determining the potential for release of PFOA from
21 fluoropolymers during waste incineration.
22
- 23 4. No agreement on a path forward, in which case the Company's obligations
24 to conduct testing or reporting beyond Phase I PFOA Transport Testing as
25 described in this ECA are terminated.
26

27 D. EPA shall place in the docket (OPPT-2003-0071) a summary of any Technical
28 Consultation that is held under this paragraph. Modifications to this ECA resulting from a
29 Technical Consultation will be governed by 40 CFR 790.68 (see Part XI of this ECA).
30
31

32 **IX. STANDARDS FOR CONDUCTING TESTING**

33

34 A. Testing for the laboratory-scale incineration of the fluoropolymer test substance
35 composites described in Part II of this ECA which contain the fluoropolymers listed in Appendix
36 A.1 of this ECA must be conducted in accordance with the Test Standards listed in Table 1 and
37 described in Appendices B.1 and C.1 - C.2 as annotated in Appendices D.1- D.3 to this ECA.
38 Certain provisions of these Test Standards are considered to be mandatory and are referred to as
39 "requirements." These requirements are identified by the use of the word "shall" in the text of
40 the Test Standard. For the purpose of this ECA, the words "will" and "must," if they appear in

1 the Test Standards, are considered equivalent to the word "shall" and therefore delineate a test
2 requirement to be followed or met.

3
4 Provisions that are not mandatory, and are therefore only recommended, are identified by
5 the use of "should" statements. In the event such "should" provisions are not followed, the
6 Companies will not be deemed by EPA to be in violation of this ECA and will not be subject to
7 penalties or other enforcement actions, as described in Part XII. of this ECA. However, in such
8 cases, EPA will use its professional judgement to determine the scientific adequacy of the test
9 results and any repeat testing that is determined by EPA to be necessary will be required either
10 under a separate ECA or pursuant to a rule promulgated under section 4(a) of TSCA, 15 U.S.C.
11 2603(a).

12
13 B. The Companies and EPA will consult in a good faith effort to consider the need
14 for Test Standard modifications if either EPA or the Companies desire such modifications.
15 Modifications to this ECA will be governed by 40 CFR 790.68 (see Part XI. of this ECA).

16
17 ***** FOLLOW-ON DISCUSSION POINT FOR DRAFTING COMMITTEE:**

18 [SUMMARY: Discussions are continuing on: (a) appropriate tailoring of GLP
19 requirements to meet the special needs of this test program, and (b) a
20 table providing guidance for the development of quality assurance project
21 plans.]

22
23 {original text under discussion}

24 C. All testing required by this ECA must be conducted in accordance with the EPA
25 Good Laboratory Practice Standards (GLPS) found at 40 CFR part 792.

26
27
28 **X. STUDY PLAN(S) AND QUALITY ASSURANCE PROJECT PLAN(S) (OAPP)**

29
30 The Companies will submit a study plan to EPA for each test conducted pursuant to this
31 ECA prior to the initiation of testing in accordance with 40 CFR 790.62. (For this ECA, EPA
32 will not require the plan(s) under this Part of the ECA to be submitted "no later than 45 days
33 prior to the initiation of testing," as specified at 40 CFR 790.62(a)). The content of the study
34 plan(s) submitted to EPA will comply with 40 CFR 790.62(b). This ECA and/or its appendices
35 satisfy the applicable requirements of 40 CFR 790.62(b)(2), (8), (9), and (10). A study plan may
36 cross reference the applicable provisions of the ECA and/or its appendices to satisfy these
37 requirements. Modifications to the study plan(s) under this part of the ECA will be governed by
38 the procedures of 40 CFR 790.62(c) except that the 15 day time periods in 40 CFR 790.62(c) (2)
39 and (3) will be 45 day time periods. All study plan(s) will become part of the official record
40 (Docket Control Number [OPPT-2003-0071]).
41

1 The Companies must submit Quality Assurance Project Plan(s) (QAPP) prepared in
2 accordance with EPA guidance as specified in Appendix F.⁴
3
4

5 **XI. MODIFICATIONS TO THIS ENFORCEABLE CONSENT AGREEMENT**
6

7 Modifications to this ECA, if any, will be made according to the procedures contained in
8 40 CFR 790.68.
9

10
11 **XII. FAILURE TO COMPLY WITH THE ENFORCEABLE CONSENT AGREEMENT**
12

13 The Companies acknowledge that a violation of the requirements of this ECA will
14 constitute a "prohibited act" under section 15(1) of TSCA, 15 U.S.C. 2614(1), and will trigger all
15 provisions applicable to a section 15 violation. Further information regarding the implications of
16 failure to comply with the consent agreement is provided in 40 CFR 790.65.
17

18
19 **XIII. EPA MONITORING OF ENFORCEABLE CONSENT AGREEMENT TESTING**
20

21 EPA may conduct monitoring activities of the testing conducted under this ECA such as
22 laboratory inspections and study audits, as permitted under section 11 of TSCA, 15 U.S.C. 2610.
23
24

25 **XIV. SUBMISSIONS TO EPA AND CONFIDENTIALITY OF INFORMATION**
26

27 A. All reporting required by this ECA must be submitted by the Companies to EPA
28 by the dates specified in Table 1 unless otherwise authorized by EPA pursuant to 40 CFR 790.68.
29 A paper copy of a document shall be deemed submitted when it is either postmarked or placed in
30 the hands of a commercial courier service for overnight delivery to EPA at the appropriate
31 address specified in Part XIV. B. of this ECA. Hand-delivered documents are deemed submitted
32 upon receipt at the appropriate address specified in Part XIV. B. of this ECA. Electronically
33 transmitted documents are deemed delivered upon transmission and must follow the procedures
34 for electronic submissions specified in Part XIV.B. of this ECA. Under any of the above

⁴ Guidance for developing Quality Assurance Project Plans can be found in the EPA document EPA QA/R-5: *EPA Requirements for Quality Assurance Project Plans*, prepared by: Office of Environmental Information, EPA, March 2001. This is also available from the EPA website at <http://epa.GOV/Quality/qs-docs>.

1 circumstances, it is the responsibility of the Companies to maintain appropriate documentation
2 for proof of transmittal for all reporting required by this ECA.
3

4 In accordance with 40 CFR 790.62 (d), the Companies will submit interim progress
5 reports to EPA informing the Agency of any proposed changes in standards for the development
6 of data, study plans, or test schedules, and communicating with the Agency about laboratory
7 inspections and other matters affecting the progress of testing. The schedule for interim progress
8 reports is specified in Table 1 of this ECA. The information required in interim progress reports
9 is specified in Appendix E.1.
10

11 B. All documents submitted to EPA under this ECA must be identified by the Docket
12 ID Number (OPPT-2003-0071) and the name: ECA on Laboratory-Scale Incineration Testing of
13 Fluoropolymers.
14

15 Submissions made by mail should be sent to: Document Control Office (7407M), Office
16 of Pollution Prevention and Toxics (OPPT), Environmental Protection Agency, 1200
17 Pennsylvania Avenue, NW, Washington, DC 20460-0001.
18

19 Submissions made by hand delivery or courier should be delivered to: OPPT Document
20 Control Office (DCO) in the EPA East Building, Room 6428, 1201 Constitution Avenue, NW,
21 Washington, DC and marked Attention: Docket ID Number OPPT- 2003 -0071. The DCO is
22 open from 8 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The telephone
23 number for the DCO is (202) 564-8930.
24

25 Submissions made electronically should be sent to: OPPT Document Control Office at
26 <http://www.oppt.ncic@epa.gov>, Attention: Docket OPPT-2003-0071. Electronic submissions do not
27 supersede the requirements of Part XIV. C. of this ECA. Electronic submissions for all reporting
28 required by this ECA must be submitted as attachments to the e-mail and must be in text-
29 searchable, PDF format. The e-mail transmitting any report required by this ECA and all
30 electronic attachments will be included as part of the submission. E-mail addresses are
31 automatically captured by the EPA e-mail system and become part of the submission that is
32 placed in the official public docket, and will be made available in the EPA electronic public
33 docket. Upon receipt of the electronic submission, a "receipt date" is entered into the metadata to
34 signify the date the document(s) submitted by the Company(ies) was received by EPA. EPA is
35 not responsible for failure to meet a date of submission requirement if the EPA fire wall rejects
36 an electronic submission containing a virus or other adverse electronic coding. It is the
37 obligation of the submitter to confirm that: 1) electronic submissions are received by EPA on the
38 date of transmission, 2) the electronic submission and all attachments are legible, and 3) the
39 electronic submission and all attachments meet the electronic format requirements of the EPA
40 Document Control Office. Do not submit any report containing confidential business

1 information (CBI) to EPA by e-mail. For submissions containing CBI see Part XIV.D of this
2 ECA.
3

4 C. The Companies must submit six (6) paper copies of each version (Public and CBI)
5 for all reports described in Table 1 and Part VII A. and B. of this ECA. In addition, an electronic
6 file, on a disk or CD ROM, of all documents submitted under this ECA (marked as CBI where
7 appropriate and in text-searchable, PDF format) will be provided to EPA. To avoid damage
8 caused by mail scanning technologies, the electronic file on disk or CD ROM must be hand
9 delivered or sent by courier to the address cited in Part XIV. A. See Part XIV. D. regarding
10 submissions containing CBI.
11

12 D. Any document submitted to EPA that contains data or information for which a
13 Signatory Company makes a claim of confidentiality (see Part XV of this ECA), must be
14 submitted as two separate versions. One version must be complete, with the information being
15 claimed as confidential marked in the manner described under 40 CFR 790.7. The other, public
16 version must be identical in all respects except that all of the information claimed as confidential
17 shall be redacted. EPA will place the public version in the Agency's docket. The complete
18 version will be treated in accordance with EPA confidentiality regulations in 40 CFR part 2 and
19 40 CFR 790.7.
20

21 Data or other information that are considered to be CBI must not be submitted
22 electronically to EPA by e-mail. Any part or all of data or other information claimed as CBI
23 must be so marked. If the CBI submission is on diskette or CD ROM, mark the outside of the
24 diskette or CD ROM as CBI and then identify electronically within the diskette or CD ROM the
25 specific information that is CBI. Information marked as CBI will not be disclosed except in
26 accordance with procedures set forth in 40 CFR part 2 (see Part XV of this ECA).
27

28 Any claims of confidentiality for information submitted under this ECA will be made
29 under the terms of 40 CFR 790.7. If no claim of confidentiality is made by the submitter of the
30 information at the time of submission, the information will be deemed by EPA, in accordance
31 with 40 CFR 790.7, to be public, and may be made available to the public without further notice
32 to the submitter. Information claimed as confidential will be treated in accordance with the
33 procedures in 40 CFR part 2 and to section 14 of TSCA, 15 U.S.C. 2613.
34
35

36 **XV. PUBLICATION AND DISCLOSURE OF TEST RESULTS**

37

38 All results of testing conducted pursuant to this ECA will be announced to the public by
39 EPA in accordance with the procedures specified in section 4(d) of TSCA, 15 U.S.C. 2603(d).
40 Disclosure by EPA of data generated by such testing to the public or other government agencies
41 will be governed by section 14(b) of TSCA, 15 U.S.C. 2613(b), and 40 CFR part 2. The CBI

1 version of a document will only be provided to another U.S. government organization in
2 compliance with the procedures described in the OPPTS TSCA CBI Protection Manual.
3
4

5 **XVI. OTHER RESPONSIBILITIES OF THE COMPANIES**

6
7 A. The Companies will comply with the notification requirements of section 12(b)(1)
8 of TSCA, 15 U.S.C. 2611(b)(1), and 40 CFR part 707, subpart D, if they export or intend to
9 export ethene, tetrafluoro-homopolymer (PTFE) (CAS No. 9002-84-0) or any of the composite
10 test substances described in Part II and Appendix A.3 of this ECA. Any other person who
11 exports or intends to export ethene, tetrafluoro-homopolymer (PTFE) (CAS No. 9002-84-0) or
12 any of the composite test substances described in Part II and Appendix A.3 of this ECA is subject
13 to the above cited export notification requirements
14

15 B. If any of the fluoropolymer chemicals listed in Appendix A.1 to this ECA become
16 subject to a rule promulgated under TSCA section 5(a)(2), 15 U.S.C. 2604(a)(2), governing
17 significant new uses of any of the fluoropolymer chemicals listed in Appendix A.1 to this ECA,
18 then the Companies will be subject to the data submission requirements imposed by section
19 5(b)(1)(A) of TSCA, 15 U.S.C. 2604(b)(1)(A), as if the testing under this ECA had been required
20 by a TSCA section 4 test rule.
21
22

23 **XVII. SEVERABILITY OF ENFORCEABLE CONSENT AGREEMENT PROVISIONS**

24
25 In the event that one or more provisions of this ECA are determined by a court decision to
26 be unenforceable, the remaining provisions of this ECA will not be presumed to be valid, and
27 EPA will either initiate a rulemaking proceeding to require testing or publish in the Federal
28 Register the reasons for not initiating such a proceeding.
29
30

31 **XVIII. FINAL AGENCY ACTION**

32
33 For purposes of 5 U.S.C. 704, publication of the FR notice announcing the issuance of the
34 Order incorporating this ECA constitutes final agency action..
35
36

37 **XIX. PUBLIC RECORD**

38
39 EPA has established a public record which will contain this ECA, the Order that
40 incorporates this ECA, the Federal Register notice announcing issuance of the Order
41 incorporating this ECA, and any and all relevant information, subject to the confidentiality

1 provisions of section 14(b) of TSCA and 40 CFR part 2. The official record for this ECA,
2 including the public version, which does not include any information claimed as CBI, has been
3 established under Docket Control Number OPPT-2003-0071.
4

5 An electronic version of the public docket is available through EPA's electronic public
6 docket system, EPA Dockets. EPA Dockets may be accessed at <http://www.epa.gov/edocket/> to
7 access the index listing of the contents of the official public docket, and to access those
8 documents in the public docket that are available electronically. Although not all docket
9 materials may be available electronically (for example the materials in the original dockets for
10 this action, [AR-226 and OPPTS-2003-0012], or materials under copyright), any of the publicly
11 available docket materials can be accessed through the EPA Docket Center, Rm. B102-Reading
12 Room, EPA West, 1301 Constitution Ave., NW., Washington, DC. For materials available in
13 the electronic docket, once in the system, select "search," then key in the appropriate Docket ID
14 number (OPPT-2003-0071).
15
16

17 **XX. EFFECTIVENESS**

18
19 This ECA may be signed in separate counterparts. This ECA will not be effective unless
20 signed by each of the Companies and by EPA. This ECA will take effect on the date of
21 publication of the Federal Register notice announcing the issuance of the Order that incorporates
22 this ECA.
23
24

25 **XXI. RIGHTS OF THE COMPANIES**

26
27 By signing this ECA, the Companies waive their right to challenge EPA's authority to
28 assess penalties for violations of the terms of this ECA. This waiver does not affect any other
29 rights that the Companies may have under TSCA, including the right to dispute the amount of
30 any penalty or to dispute factually whether a violation of the terms of this ECA has occurred, or
31 to seek judicial review of any rule that may be adopted by EPA that imposes requirements to test
32 any of the fluoropolymer chemicals listed in Appendix A.1 to this ECA.
33
34

35 **XXII. RESERVATION OF RIGHTS BY COMPANIES**

36
37 By signing this ECA, the Companies are not admitting that the requirements of TSCA
38 Section 4 have been satisfied for promulgating a test rule to generate the data required by this
39 ECA.
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The Companies contend that the documents generated for the incineration testing program under this ECA are protected from public disclosure under 5 U.S.C. section 552(b)(4) and 15 U.S.C. section 2613(a) and do not constitute studies subject to disclosure under 15 U.S.C. section 2613(b). Accordingly, the public information disclosure provisions of this ECA are, in the view of the Companies, a waiver of legal rights.

XXIII. IDENTITY OF THE COMPANIES AND PRINCIPAL TEST SPONSOR

The Principal Test Sponsor is:

Fluoropolymer Manufacturers Group
[? Name of technical contact person ?]
[? ADDRESS ?]
[? Phone Number ?]

The Companies subject to this ECA are:

Asahi Glass Fluoropolymers USA, Inc.
[? ADDRESS ?]

Daikin America, Inc.
[? ADDRESS ?]

Dyneon, LLC
[? ADDRESS ?]

E.I. du Pont de Nemours and Company
[? ADDRESS ?]

Special Page Header: ECA Copy # 3 Asahi Glass Fluoropolymers USA, Inc.

XXIV. SIGNATURE

TEST SPONSOR

Asahi Glass Fluoropolymers USA, Inc.¹²

ECA Subject Chemicals for Asahi Glass Fluoropolymers USA, Inc.		
CAS No.	Chemical Name	Composite(s)

Company technical contact person for handling correspondence marked as "Confidential"

Name: _____
 Title: _____
 Address: _____
 Phone Number: _____

Date: _____

 [NAME]
 [TITLE]
 Asahi Glass Fluoropolymers USA, Inc.
 [ADDRESS]

¹ Data in the table lists the chemical(s) and composite contributions for which Asahi Glass Fluoropolymers USA, Inc. is responsible. The Company developed these data in response to EPA's letter of January 6, 2004. There may be both a Public and CBI version of this page in those instances where the Company has asserted that data in this table are considered by them to be entitled to treatment as TSCA confidential business information (CBI) (see Part XIV.D. of this ECA regarding confidentiality of information).

² Asahi Glass Fluoropolymers USA, Inc. is obligated under this ECA to perform Phase I PFOA Transport Testing (see Part III. C. and VII.A. of this ECA).

Special Page Header: ECA Copy # 4

Daikin America, Inc.

XXIV. SIGNATURE

TEST SPONSOR
Daikin America, Inc.^{1 2}

ECA Subject Chemicals for Daikin America, Inc.		
CAS No.	Chemical Name	Composite(s)

Company technical contact person for handling correspondence marked as "Confidential"

Name: _____
 Title: _____
 Address: _____
 Phone Number: _____

Date: _____

 [NAME]
 [TITLE]
 Daikin America, Inc.
 [ADDRESS]

¹ Data in the table lists the chemical(s) and composite contributions for which Daikin America, Inc. is responsible. The Company developed these data in response to EPA's letter of January 6, 2004. There may be both a Public and CBI version of this page in those instances where the Company has asserted that data in this table are considered by them to be entitled to treatment as TSCA confidential business information (CBI) (see Part XIV. D. of this ECA regarding confidentiality of information).

² Daikin America, Inc. is not obligated under this ECA to perform Phase I PFOA Transport Testing (see Part III. C. and VII.A. of this ECA).

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Dyneon, LLC

XXIV. SIGNATURE

TEST SPONSOR
Dyneon, LLC¹²

ECA Subject Chemicals for Dyneon, LLC		
CAS No.	Chemical Name	Composite(s)

Company technical contact person for handling correspondence marked as "Confidential"

Name: _____
 Title: _____
 Address: _____
 Phone Number: _____

Date: _____

 [NAME]
 [TITLE]
 Dyneon, LLC
 [ADDRESS]

¹ Data in the table lists the chemical(s) and composite contributions for which Dyneon, LLC is responsible. The Company developed these data in response to EPA's letter of January 6, 2004. There may be both a Public and CBI version of this page in those instances where the Company has asserted that data in this table are considered by them to be entitled to treatment as TSCA confidential business information (CBI) (see Part XIV. D. of this ECA regarding confidentiality of information).

² Dyneon, LLC is obligated under this ECA to perform Phase I PFOA Transport Testing (see Part III. C. and VII.A. of this ECA).

Special Page Header: ECA Copy # 6 E.I. du Pont de Nemours and Company

XXIV. SIGNATURE

TEST SPONSOR

E.I. du Pont de Nemours and Company^{1 2}

ECA Subject Chemicals for E. I. du Pont de Nemours and Company		
CAS No.	Chemical Name	Composite(s)

Company technical contact person for handling correspondence marked as "Confidential"

Name: _____
 Title: _____
 Address: _____
 Phone Number: _____

Date: _____

 [NAME]
 [TITLE]
 E.I. du Pont de Nemours and Company
 [ADDRESS]

¹ Data in the table lists the chemical(s) and composite contributions for which E.I. du Pont de Nemours and Company is responsible. The Company developed these data in response to EPA's letter of January 6, 2004. There may be both a Public and CBI version of this page in those instances where the Company has asserted that data in this table are considered by them to be entitled to treatment as TSCA confidential business information (CBI) (see Part XIV. D. of this ECA regarding confidentiality of information) .

² E.I. du Pont de Nemours and Company is not obligated under this ECA to perform Phase I PFOA Transport Testing (see Part III. C. and VII.A. of this ECA).

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Special Page Header:

ECA Copy # 1 EPA PUBLIC VERSION
CONTAINS NO CONFIDENTIAL BUSINESS INFORMATION

Special Page Header:

ECA Copy # 2 EPA CBI VERSION
CONTAINS CONFIDENTIAL BUSINESS INFORMATION

XXIV. SIGNATURE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Date: _____

Stephen L. Johnson
Assistant Administrator
Office of Prevention, Pesticides, and Toxic Substances

Address:

U.S. Environmental Protection Agency
Office of Prevention, Pesticides, and Toxic Substances
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

1 Table 1 REQUIRED TESTING, TEST STANDARDS, REPORTING AND OTHER
 2 REQUIREMENTS FOR THE LABORATORY-SCALE INCINERATION TESTING OF
 3 FLUOROPOLYMERS

Phase I PFOA Transport Testing	Test Standard	Deadline for Final Report (Months) ¹
Phase I Study Plan(s)	40 CFR 790.62 (b) as annotated by Part X of the ECA	2 ³
Phase I QAPP(s)	Appendix F of the ECA	3 ³
Quantitative PFOA transport testing ²	Appendix C.1 of the ECA	8 ^{4 5}

¹ Interim progress reports must be submitted by the Companies to EPA every 6 months beginning six months from the effective date of this ECA until the end of the ECA testing program (see Part XIV and Appendix E.1 of the ECA).

² At the conclusion of Phase I PFOA transport efficiency testing, and prior to initiation of Phase II, the Companies, will provide a letter report to EPA summarizing the results of Phase I testing (see Part VII. A. of the ECA). In the event that the transport efficiency of PFOA or of total fluorine (as determined by the formulas in Appendix C.1) is greater than or equal to 70% then the Companies will proceed to Phase II Incineration Testing. In the event that the transport efficiency of PFOA and of total fluorine (as determined by the formulas in Appendix C.1) are both individually less than 70%, then the Companies will initiate a Technical Consultation with EPA. The outcomes of the Technical Consultation are described in Part VIII of this ECA.

³ Number of months after the effective date of this ECA when submission is due.

⁴ Number of months after EPA approval of the Study Plan(s) and QAPP(s) for Phase I testing when a letter report describing transport efficiency test result(s) and what contingency testing was performed is due to EPA (see Part VII. A. and Appendix C.1.3 of the ECA). If the Study Plan(s) and QAPP(s) are not approved within 2 months of submission of the Phase I QAPP(s), then this deadline is extended by 6 months to accommodate re-scheduling with the thermal reactor system laboratory.

⁵ The final report for Phase I testing will be submitted to EPA within 60 days of the completion of the Technical Consultation if the consultation does not result in an agreement to conduct further testing. If the Technical Consultation results in an agreement to conduct further testing, the final report for Phase I testing will be included in the final report for such further testing, unless agreed otherwise in the Technical Consultation (see Part VIII of the ECA regarding Phase I Technical Consultation).

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Phase II Fluoropolymer Incineration Testing	Test Standard	Deadline for Final Report (Months)¹
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Table 1 REQUIRED TESTING, TEST STANDARDS, REPORTING AND OTHER REQUIREMENTS FOR THE LABORATORY-SCALE INCINERATION TESTING OF FLUOROTELOMER BASED POLYMERS

Phase I PFOA Transport Testing	Test Standard	Deadline for Final Report (Months) ¹
Phase I Study Plan(s)	40 CFR 790.62 (b) as annotated by Part X of the ECA	2 ³
Phase I QAPP(s)	Appendix F of the ECA	3 ³
Quantitative PFOA transport testing ²	Appendix C.1 of the ECA	8 ^{4 5}

¹ Interim progress reports must be submitted by the Companies to EPA every 6 months beginning six months from the effective date of this ECA until the end of the ECA testing program (see Part XIV and Appendix E.1 of the ECA).

² At the conclusion of Phase I PFOA transport efficiency testing, and prior to initiation of Phase II, the Companies, will provide a letter report to EPA summarizing the results of Phase I testing (see Part VII. A. of the ECA). In the event that the transport efficiency of PFOA or of total fluorine (as determined by the formulas in Appendix C.1) is greater than or equal to 70%, then the Companies will proceed to Phase II Incineration Testing. In the event that the transport efficiency of PFOA and of total fluorine (as determined by the formulas in Appendix C.1) are both individually less than 70% then the Companies will initiate a Technical Consultation with EPA. The outcomes of the Technical Consultation are described in Part VIII of this ECA.

³ Number of months after the effective date of this ECA when submission is due.

⁴ Number of months after EPA approval of the Study Plan(s) and QAPP(s) for Phase I testing when a letter report describing transport efficiency test result(s) and what contingency testing was performed is due to EPA (see Part VII. A. and Appendix C.1.3 of the ECA). If the Study Plan(s) and QAPP(s) are not approved within 2 months of submission of the Phase I QAPP(s), then this deadline is extended by 6 months to accommodate re-scheduling with the thermal reactor system laboratory.

⁵ The final report for Phase I testing will be submitted to EPA within 60 days of the completion of the Technical Consultation if the consultation does not result in an agreement to conduct further testing. If the Technical Consultation results in an agreement to conduct further testing, the final report for Phase I testing will be included in the final report for such further testing, unless agreed otherwise in the Technical Consultation (see Part VIII of the ECA regarding Phase I Technical Consultation).

Phase II Fluoropolymer Incineration Testing	Test Standard	Deadline for Final Report (Months) ¹
Phase II Study Plan(s)	40 CFR 790.62 (b) as annotated by Part X of the ECA	6 ³
Phase II QAPP(s)	Appendix F of the ECA	12 ³
Receipt of components designated facility(ies)	Part XXIV and Appendix A.3 of the ECA	6 ⁷
Elemental Analysis ⁶	Appendix C.2.1 of the ECA	15 ⁸
Combustion Stoichiometry ⁶	Appendix C.2.2 of the ECA	15 ⁸
Thermogravimetric Analysis ⁶	ASTM E1868, as modified in Appendix B.1 of the ECA	15 ⁸
Laboratory-scale combustion Testing ⁶	Appendices C.2.4 and C.2.5, as annotated / supplemented by Appendices D.1, D.2, D.3, and D.4 of the ECA	15 ⁸
Release assessment report	Appendix E.2 of the ECA	15 ⁹

⁶ The results of this testing will be provided in the final report for Phase II testing (see Appendix C.2.5 of the ECA).

⁷ Number of months from the submission of a Phase I letter report signifying that Phase II testing can proceed; or, the approval of the QAPP, whichever is latter, that the Companies must meet their individual obligations to provide the designated facility(ies) with the components for each composite to be tested under this ECA (see Part III. B. of the ECA). If Phase II testing is required by Technical Consultation agreement (see footnote 2), the deadline shall be as agreed

⁸ Number of months from the date of the final report from the ECA for the Laboratory-Scale Incineration Testing of Fluorotelomer Based Polymers (see EPA Docket No. OPPT-2004-0001) when this report is due. In the event that, following the Phase II combustion testing segment of the fluorotelomer ECA, the Companies request and are granted an extension to the schedule for submitting the final report for the laboratory-scale incineration testing of fluorotelomer based polymers; the date for submission of this final report for the laboratory-scale incineration testing of fluoropolymers will not be changed.

⁹ In the event that Phase II laboratory-scale incineration testing identifies measurable levels of PFOA (where measurable PFOA is defined to be at or above the limit of quantitation (LOQ) as defined in Appendix D.2) resulting (continued...)

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⁹ (...continued)

from the incineration testing for any or all of the fluorotelomer based polymer composites tested under this ECA, the Companies will prepare a release assessment report to place in perspective the relevance of such measurable levels in the laboratory-scale incineration testing results with respect to full-scale municipal and/or medical waste incinerator operations in the United States. If required, the Release Assessment Report will be submitted in conjunction with the Final Report for Phase II testing (see footnote 6 and 8).

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APPENDIX A

TEST SUBSTANCES

- A.1 List of Chemical Components of the Composites
- A.2 Rationale for Selecting Composites to be Tested
- A.3 Composition of Composites to be Tested
- A.4 Preparation of Composites to be Tested

APPENDIX A.1

LIST OF CHEMICAL COMPONENTS OF THE COMPOSITES¹

The following table lists the thirteen commercial fluoropolymer chemicals (made using ammonium perfluorooctanoate (APFO)) that are the subject to this ECA.

The identities of the fluoropolymers (made using APFO) that are components of the composites that are subject to this ECA were provided to EPA as support documentation of the Companies' LOI commitments. Some of this documentation, including certain aspects related to the identity of the test substance as described in Part II of this ECA and the table below, may contain Confidential Business Information (CBI). In such instances EPA creates a comprehensive database for evaluation and comparison, and, when possible, provides a public version sanitized of CBI.

Subsequent analysis of the list of fluoropolymers received by EPA supported the conclusion that the individual chemicals listed below are representative of all known commercial fluoropolymer chemicals and the basic chemistries are represented by the four composite test substances that are subject to testing under this ECA (i.e., dry melt fluoropolymer resin, dry non-melt PTFE homopolymer resin/gum, dry non-melt fluoroelastomer resin/gum, aqueous fluoropolymer dispersions) (see ECA Appendix A.2 and A.3). The fluoropolymer structure is predominantly $-(CF_2)_x-$ which is a potential source of PFOA. For all fluoropolymer products used in commerce, the $-(CF_2)-$ moiety is common to all polymers and the composites to be tested under this ECA testing program (see Appendix A.2-A.4) are representative of the individual component and non-component fluorochemicals.

¹ There is a Public and CBI version of Appendix A.1 because the Companies have asserted that details describing their chemical(s) are considered by them to be entitled to treatment as TSCA confidential business information (CBI) (see Part XIV. D. of this ECA regarding confidentiality of information).

FLUOROPOLYMERS SUBJECT TO THIS ECA		
No.	CAS No.	Chemical Name
1	9002-84-0	Ethene, tetrafluoro-, homopolymer
2	25067-11-2	1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with tetrafluoroethene)
3	26655-00-5	Propane,1,1,1,2,2,3,3-heptafluoro-3-[(trifluoroethenyl)oxy]-, polymer with tetrafluoroethene
4	25190-89-0	1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-difluoroethene and tetrafluoroethene
5	68258-85-5	1-Hexene, 3,3,4,4,5,5,6,6,6-nonafluoro-, polymer with ethene and tetrafluoroethene
6	35560-16-8	1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with ethene and tetrafluoroethene
7	9011-17-0	1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-difluoroethene
8	54675-89-7	1-Propene, polymer with 1,1-difluoroethene and tetrafluoroethene
9	27029-05-6	1-Propene, polymer with tetrafluoroethene
10	26425-79-6	Ethene, tetrafluoro-, polymer with trifluoro(trifluoroethoxy)ethene
11	9010-75-7	Ethene, chlorotrifluoro-, polymer with 1,1-difluoroethene
12	31784-04-0	Ethene, tetrafluoro-, polymer with trifluoro(pentafluoroethoxy)ethene
13	CBI Accession No. ????	??generic name??

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APPENDIX A.2

RATIONALE FOR SELECTING COMPOSITES TO BE TESTED

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PUBLIC VERSION - CONTAINS NO CBI

APPENDIX A.3

COMPOSITION OF COMPOSITES TO BE TESTED¹

¹ There is a Public and CBI version of Appendix A.3 because the Companies have asserted that details describing their chemical(s) are considered by them to be entitled to treatment as TSCA confidential business information (CBI) (see Part XIV. D. of this ECA regarding confidentiality of information).

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APPENDIX A.4

PREPARATION OF COMPOSITES TO BE TESTED

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APPENDIX B

TEST STANDARDS

B.1 ASTM E 18680-02 Loss-on-Drying by Thermogravimetry

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APPENDIX C

PROTOCOLS AS TEST STANDARDS

- C.1 Transport Efficiency Testing
- C.2 Incineration Testing
 - C.2.1 Elemental Analysis
 - C.2.2 Combustion Stoichiometry
 - C.2.3 Thermogravimetric Analysis
 - C.2.4 Combustion Testing
 - C.2.5 Study Reporting

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APPENDIX D

ATTACHMENTS AND REFERENCED MATERIALS

- D.1 Exhaust Gas Sampling
- D.2 PFOA Analysis Method
- D.3 Wickbold Torch Method
- D.4 Waste Incineration and Operation Conditions

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APPENDIX D.4

Waste Incineration and Operation Conditions

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APPENDIX E

- E.1 Interim Progress Reporting
- E.2 Release Assessment Report
- E.3 Phase II Final Report

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APPENDIX E.1

OUTLINE FOR INTERIM PROGRESS REPORTING

Title : Enforceable Consent Agreement for the Laboratory-Scale Incineration Testing of Fluoropolymers - Interim Report

OPPT Docket ID No: OPPT-2003- 0071

Date of Interim Report: [date]

This Report covers the period from [date] to [date]

1) List or description of significant ECA Test Program milestones during this period:

2) Description of difficulties : (If none indicate N/A)

3) Actions taken in response to difficulties: (If none indicate N/A)

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APPENDIX F

ECA INCINERATION TESTING
QUALITY ASSURANCE PROJECT PLAN
(QAAP): REQUIRED CONTENT

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APPENDIX G

**COPY OF EPA ORDER INCORPORATING THIS
ENFORCEABLE CONSENT AGREEMENT**

APPENDIX G

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

TESTING CONSENT ORDER FOR THE LABORATORY-SCALE INCINERATION
TESTING OF FLUOROPOLYMERS

Docket No. OPPT - 2003 - 0071

Under the authority of section 4 of the Toxic Substances Control Act (TSCA), 15 U.S.C. 2603, the United States Environmental Protection Agency (EPA) issues this testing consent order (Order) to take effect on the date of publication of the notice in the Federal Register announcing the issuance of this Order. This Order incorporates the enforceable consent agreement (ECA) for the laboratory-scale incineration testing of the fluoropolymer test substance composites listed in Appendix A of the ECA.

Date

Stephen L. Johnson,
Assistant Administrator
for Prevention, Pesticides,
and Toxic Substances

INTERESTED PARTY REVIEW

FINAL DRAFT 2/27/04

PUBLIC VERSION - CONTAINS NO CBI

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