

19 pgs

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Subject: Joint Meeting: Incineration ECA development for Telomers &
Fluoropolymers

The next meeting to develop Incineration ECAs for Telomers and Fluoropolymers is scheduled for February 20th 9:30 a.m. - 2:00 p.m. This will be a joint meeting at EPA headquarters room East 4349. A limited number of phone lines will be available for those who wish to participate across the miles.

Once again I have compiled an abbreviated handout for the group to work from (see attached file = 2-20-04_IncinJointMtg.pdf). We will continue to refer back to the documents circulated at the January public meetings (i.e., Fluoropolymer Draft #7, Fluorotelomer Draft #2, and compiled Appendices B-E all dated 1/27-29/04).

TENTATIVE AGENDA

- 1) Introductions
- 2) Update on information call-in for signature pages and Appendix A.1
- 3) Finalizing ECA text on CBI disclosure with other government organizations
- 4) Revisions to ECA text in Part VIII. D.
- 5) Follow-up on clarification of Phase II trigger text
- 6) ECA text on GLP / QAAP
- 7) Table 1 revisions to footnotes and schedules
- 8) Finalizing Appendices and attachments
- 9) Other discussions (to be determined by the group)
- 10) Distribution to IPs and Next Steps

TELECONFERENCE CALL INFO:

EPA has reserved a limited number of phone lines for this call. Note: You cannot call in earlier NOR stay on later than the scheduled end time as EPA Teleconferences are connected and disconnected automatically by the system.

Date: 2/20/04

Times Eastern: 9:30 a.m. - 2:00 p.m.

Conference Name: Incineration ECAs (Telomer & Fluoropolymer)

Telephone #: (202)275-0170

Access Code: 7869#

If you are not calling from an EPA Headquarters phone then you must **dial 1 plus the area code (202) and the 7-digit telephone number.** At the prompt all participants must **enter the four-digit conference access code followed by the “#” sign.** If the code is not entered properly, the caller will be given two more changes. If it is still unsuccessful he or she will be

placed in out “**Waiting Room**” until an operator can provide assistance.
If you have difficulty accessing the conference call contact (202) 272-0168.

Please note that all EPA teleconferences are monitored for audio quality by EPA's telecommunications service contractors, therefore discussions of any sensitive or restricted information is prohibited.



2-20-04IncinJointMtg.pd

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February 20, 2004 Incineration ECA Development Conference Call

NOTE: Dear Incineration ECA Drafting Committees:

This is a working document containing excerpts of those sections of the Draft ECA document ("cover document") for which the Drafting Committee is continuing discussions to finalize text. Included are:

- 1) CBI Use By Other Government Organizations -
Excerpt of Part XV (from the 1/21/04 draft).....Pg 1
- 2) Suggested clarification text for the Phase II trigger.....Pg 2
- 3) Additional changes to Part VIII. D. text.....Pg 3
- 4a) GLP / QAAP Discussions - Excerpt of Part IX and X
(from the 1/21/04 draft)Pgs 4-5
- 4b) FMG/TRP 1/20/04 draft QAAP outline.....Pgs 6-8
- 4c) EPA 2/4/04 comments on FMG/TRP draft QAAP outline.....Pg 9
- 5) Revised Table I FluoroTelomer (based on 2/4/04 discussions).....Pgs 11-13
- 6) Revised Table I Fluoropolymer (based on 2/4/04 discussions).....Pgs 14-16

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

2
3 ***** FOLLOW-ON DISCUSSION POINT**

4 [Summary - FMG proposed 11/24/03 additional text to clarify conditions under which EPA
5 can share a CBI Document with another government agency. EPA struck this addition on
6 12/22/03 citing laws governing such distribution adequately addressed FMG concerns.
7 During further discussion, it became clear that additional clarification could be provided to
8 meet FMG's needs. On 1/6/04 EPA excerpt text from the OPPTS CBI manual to FMG and
9 alternative language is suggested in red. On 1/13/04 discussions concluded that the EPA
10 CBI manual adequately covered in-house sharing but questions remained about external
11 sharing. EPA provided additional CBI manual excerpts to further clarify. At the 1/21/04
12 meeting and 2/4/04 meetings FMG asked for additional clarification. EPA provided the
13 FMG with a letter clarifying FMG questions. At the 2/11/04 meeting FMG indicated that
14 they would consider the redline text in view of EPA's letter.]
15

16 All results of testing conducted pursuant to this ECA will be announced to the public by
17 EPA in accordance with the procedures specified in section 4(d) of TSCA, 15 U.S.C. 2603(d).
18 Disclosure by EPA of data generated by such testing to the public or other government agencies
19 will be governed by section 14(b) of TSCA, 15 U.S.C. 2613(b), and 40 CFR part 2. The CBI
20 version of a document will only be provided to another U.S. government organization in
21 compliance with the procedures described in the OPPTS TSCA CBI Procedure Manual.
22

23
24 {FMG 11/24/03 proposed additional text / struck by EPA 12/22/03}

25 The CBI version of a document will not be provided to another government agency unless that
26 agency has certified that it affords equivalent protection.
27
28

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1 NOTE to Drafting Committee: During the 2/4/04 conference call David Menotti corrected
2 what is now the text of Table 1, footnote # 8 regarding the trigger language that leads to
3 Phase II. After making these corrections to the footnote, EPA staff went back into the text
4 of Part VII and Part VIII of the ECA document to check for consistency. As a result EPA
5 recommends the following changes to improve clarity.

6
7 Suggested text changes to the following three (3) sections in the ECA are in red/strikeout.
8
9

10 **VII. DESCRIPTION OF THE TESTING PROGRAM**

11 A. Phase I PFOA Transport Testing: Phase I will consist of quantitative transport efficiency
12 testing for PFOA. Phase I testing for PFOA transport efficiency is specified in the Phase I PFOA
13 Transport Testing segment of Table 1 and described in Appendix C.1 as annotated by Appendix
14 D.1 and D.2. At the conclusion of Phase I testing, the Companies, will provide EPA with a letter
15 report summarizing the results. In the event that the transport efficiency of PFOA or total
16 fluorine (as determined by the formulas in Appendix C.1) is equal to or greater than 70%, testing
17 will proceed to Phase II Fluorotelomer Based Polymers Incineration Testing. In the event the
18 transport efficiency of PFOA ~~or and~~ total fluorine (as determined by the formulas in Appendix
19 C.1) ~~is~~ **are both individually** less than 70%, the Companies will initiate a technical consultation
20 with EPA (see Part VII. B. and Part VIII of this ECA)
21

22 **VIII. PHASE I TECHNICAL CONSULTATION**

23 B. If the ~~analysis of the~~ recovery ~~fluids~~ for either PFOA or total fluorine (as determined
24 by the formulas in Appendix C.1) is greater than or equal to 70%, the Companies will proceed to
25 Phase II testing.
26

27 C. If the ~~analysis of the~~ recovery ~~fluids~~ for ~~both~~ PFOA and total fluorine (as determined
28 by the formulas in Appendix C.1) ~~is~~ **are both individually** less than 70%, a Technical
29 Consultation will be held between the Companies and EPA.
30
31

32 **Table 1** (footnote #2 as discussed 2/4/04)

33 At the conclusion of Phase I PFOA transport efficiency testing, and prior to initiation of Phase
34 II, the Companies, will provide a letter/report to EPA summarizing the results of Phase I testing
35 (see Part VII. A. of the ECA). In the event that the transport efficiency of PFOA or of total
36 fluorine (as determined by the formulas in Appendix C.1) is greater than or equal to 70% then the
37 Companies will proceed to Phase II Incineration Testing. In the event that the transport
38 efficiency of PFOA ~~and or~~ of total fluorine (as determined by the formulas in Appendix C.1)
39 ~~is~~ **are both individually** less than 70% then the Companies will initiate a Technical Consultation
40 with EPA. ~~to determine under what conditions Phase II testing can proceed.~~ The outcomes of the
41 Technical Consultation are described in Part VIII of this ECA.

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1 ***** FOLLOW-ON DISCUSSION POINT *****

2 [During the 2/11/04 discussions, EPA indicated the need to revisit ECA text in Part VIII. D.
3 and asks for the following changes]

4
5
6 **VIII. PHASE I TECHNICAL CONSULTATION**

7
8 D. EPA shall place in the docket (OPPT-2004-0001) a summary of any Technical
9 Consultation that is held under this paragraph. In the event modifications to the testing program
10 are agreed to, EPA and the Companies will revise this ECA, as well as Table 1 and the
11 Appendices, as appropriate. Modifications to this ECA resulting from the Technical
12 Consultation will be governed by 40 CFR 790.68 (see Part XI of this ECA).

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1 **IX. STANDARDS FOR CONDUCTING TESTING**

2
3 A. Testing for the laboratory-scale incineration of the fluoropolymer test substance
4 composites described in Part II of this ECA which contain the fluoropolymers listed in Appendix
5 A.1 of this ECA must be conducted in accordance with the Test Standards listed in Table 1 and
6 described in Appendices B.1 and C.1 - C.2 as annotated in Appendices D.1- D.3 to this ECA.
7 Certain provisions of these Test Standards are considered to be mandatory and are referred to as
8 "requirements." These requirements are identified by the use of the word "shall" in the text of
9 the Test Standard. For the purpose of this ECA, the words "will" and "must," if they appear in
10 the Test Standards, are considered equivalent to the word "shall" and therefore delineate a test
11 requirement to be followed or met.
12

13 Provisions that are not mandatory, and are therefore only recommended, are identified by
14 the use of "should" statements. In the event such "should" provisions are not followed, the
15 Companies will not be deemed by EPA to be in violation of this ECA and will not be subject to
16 penalties or other enforcement actions, as described in Part XII. of this ECA. However, in such
17 cases, EPA will use its professional judgement to determine the scientific adequacy of the test
18 results and any repeat testing that is determined by EPA to be necessary will be required either
19 under a separate ECA or pursuant to a rule promulgated under section 4(a) of TSCA, 15 U.S.C.
20 2603(a).
21

22 B. The Companies and EPA will consult in a good faith effort to consider the need
23 for Test Standard modifications if either EPA or the Companies desire such modifications.
24 Modifications to this ECA will be governed by 40 CFR 790.68 (see Part XI. of this ECA).
25

26 ***** FOLLOW-ON DISCUSSION POINT:**

27 [SUMMARY: FMG maintains that the University of Dayton laboratory can not comply
28 with GLPS requirements for testing under this ECA. In addition, FMG expresses concern
29 about duplication between QAPjP and study plan requirements. EPA maintains that: 1)
30 study plan(s) are required, 2) all studies must be conducted in accordance with GLPS and
31 3) separate QAPjP(s) must be submitted. EPA noted that cut and paste from ECA
32 protocols etc. can be used to complete QAPjP and study plan submission requirements. On
33 12/6 and 12/10/03 FMG agreed to prepare a table listing GLPS requirements, whether
34 laboratory compliance was impossible / possible at additional cost / possible at no
35 additional cost, and whether the item is covered by the QAPjP / in conflict with QAPjP
36 requirements / or not addressed by QAPjP requirements (Note: The table was not available
37 for 1/13/04 Draft Committee discussions). On 1/21/04 EPA reiterated that adequate quality
38 assurance for testing aimed at sorting out the environmental sources of PFOA and routes
39 to human exposures is sufficient to compel the need for full compliance with these
40 requirements.]
41

42 {original text}

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

3
4 {12/22/03 Revised EPA placeholder text with supplemental text in red}

5 C. All testing required by this ECA must be conducted in accordance with the
6 EPA Good Laboratory Practice Standards (GLPS) found at 40 CFR part 792, except ~~as~~
7 provided in Appendix F as follows.....(list to be developed from FMG table).

8
9 {11/24/03 FMG proposed revisions}

10 C. All testing required by this ECA must be conducted in accordance with ~~the EPA~~
11 ~~Good Laboratory Practice Standards (GLPS) found at 40 CFR part 792.~~ a Quality Assurance
12 Project Plan prepared in accordance with Appendix YYY.

13
14
15 **X. STUDY PLAN(S) AND QUALITY ASSURANCE PROJECT PLAN(S) (QAPP)**

16
17 The Companies will submit a study plan to EPA for each test conducted pursuant to this
18 ECA prior to the initiation of testing in accordance with 40 CFR 790.62. (For this ECA, EPA
19 will not require the plan(s) under this Part of the ECA to be submitted "no later than 45 days
20 prior to the initiation of testing," as specified at 40 CFR 790.62(a)). The content of the study
21 plan(s) submitted to EPA will comply with 40 CFR 790.62(b). This ECA and/or its appendices
22 satisfy the applicable requirements of 40 CFR 790.62(b)(2), (8), (9), and (10). A study plan may
23 cross reference the applicable provisions of the ECA and/or its appendices to satisfy these
24 requirements. Also ~~pursuant to Part IX (C) of~~ for this ECA, the Companies must submit Quality
25 Assurance Project Plan(s) (QAPP) prepared in accordance with EPA guidance.¹ Modifications
26 to the study plan(s) under this part of the ECA will be governed by the procedures of 40 CFR
27 790.62(c) except that the 15 day time periods in 40 CFR 790.62(c) (2) and (3) will be 45 day
28 time periods. All study plan(s) will become part of the official record (Docket Control Number
29 [OPPT-2003-0071]).

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¹ 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>.

DRAFT FOR DISCUSSION

DO NOT CITE OR QUOTE
1-20-04

**APPENDIX G
INCINERATION TESTING ECA QUALITY ASSURANCE PROJECT PLAN: OUTLINE & PLANNED CONTENT**

Section	Planned Sections	Primary Guidance for Preparing Each QAPP Section (ref: EPA QAMS-005/80)	Supplemental Guidance Reference for Preparing Each QAPP Section (ref: EPA QA/R-5 QAPP Guidance elements)	Required Content of Incineration Testing ECA
not numbered	Title Page	1.0 Title Page with Provision for Approval Signatures	A1 Title and Approval Sheet A2 Distribution List	to be included in QAPP
not numbered	Table of Contents	2.0 Table of Contents	A2 Table of Contents	to be included in QAPP
1.0	Introduction	not applicable	not applicable	to be satisfied by cross-reference to introductory text in ECA and Appendices, as applicable
2.0	Project Description	3.0 Project Description	A5 Problem Definition/Background A6 Project/Task Description B1 Sampling Process Design (Experimental Design)	to be satisfied by cross-reference to ECA (Parts I, IV) and Appendix C.1 or C.2, as applicable
3.0	Project Organization and Responsibility	4.0 Project Organization and Responsibility	A4 Project/Task Organization	to be included in QAPP
4.0	Quality Assurance Objectives	5.0 Quality Assurance Objectives for Measurement Data	A7 Quality Objectives and Criteria	to be included in QAPP

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5.0	Sampling Procedures	6.0 Sampling Procedures	B2 Sampling Methods	to be satisfied by cross-reference to Appendix C.1 or C.2 (as applicable) and to Appendix D.1
6.0	Sample Handling and Custody	7.0 Sample Custody	B3 Sample Handling and Custody	to be included in QAPP
7.0	Analytical Methods	9.0 Analytical Methods	B4 Analytical Methods	to be satisfied by cross-reference to Appendices C.2, D.2, and D.3, as applicable
8.0	Calibration Procedures and Frequency	8.0 Calibration Procedures and Frequency	B7 Instrument/Equipment Calibration and Frequency	to be included in QAPP in summary form for chemical analysis equipment
9.0	Internal Quality Control Checks	11.0 Internal Quality Control Checks and Frequency	B5 Quality Control	to be included in QAPP consistent with ECA Appendices, as applicable
10.0	Data Reduction, Validation, and Reporting	10.0 Data Reduction, Validation, and Reporting	D1 Data Review, Verification, and Validation	to be included in QAPP consistent with Appendices C.1, C.2, and D.2, as applicable
11.0	Preventive Maintenance	13.0 Preventive Maintenance	B6 Instrument/Equipment Testing, Inspection, and Maintenance	to be included in QAPP in summary form for chemical analysis equipment
12.0	Accuracy, Precision, Completeness	14.0 Procedures to Assess Data Precision,	not applicable	to be included in QAPP

		Accuracy, and Completeness		
13.0	Performance and System Audits	12.0 Performance and System Audits	not applicable	to be included in QAPP as applicable; not applicable to laboratory(ies) performing analysis pursuant to 40 CFR 792
14.0	Corrective Actions	15.0 Corrective Actions	C1 Assessments and Response Actions	to be included in QAPP as applicable; not applicable to laboratory(ies) performing analysis pursuant to 40 CFR 792
15.0	Quality Assurance Reports to Management	16.0 Quality Assurance Reports to Management	C2 Reports to Management	to be included in QAPP as applicable; not applicable to laboratory(ies) performing analysis pursuant to 40 CFR 792

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For use during the February 4, 2004 Incineration Development Conference Call

EPA Comments on the FMG / TRP draft of "Appendix G: Incineration Testing ECA Quality Assurance Project Plan: Outline & Planned Content." EPA notes the following:

- 1) QAMS-005 / 80 is not current for QAPP submissions to OPPT. Therefore, the second and third columns from the left of the FMG / TRP draft Appendix G should be deleted.

A QAAP must follow the most current Agency guidance. EPA indicates that, for testing under an ECA for OPPT, an acceptable QAPP must follow QA / R5. Guidance for developing Quality Assurance Project Plans can be found in the EPA document EPA QA/R5: *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>.

- 2) The FMG/TRP QAAP draft outline does not include headings for each of the four elements listed in QA/R5 Chapter 3.

The FMG / TRP QAAP draft outline must include the four groups of elements described in Chapter 3 of the EPA QA / R5 document (A. Project Management, B. Data Generation and Acquisition, C. Assessment and Oversight, and D. Data Validation and Usability).

- 3) The FMG/TRP draft outline does not track each sub-element as described in QA/R5 Chapter 3.

For clarity, the FMG / TRP Appendix G draft outline must follow the numerical order of the individual sub-elements for each group of elements as shown in the table of contents of QA / R5 Chapter 3 under 3.2 GROUP A: Project Management, 3.3 GROUP B: Data Generation and Acquisition, 3.4 Group C: Assessment and Oversight, and 3.5 Group D: Data Validation and Usability. The left hand column of the FMG/TRP draft Appendix G outline should track these sub-elements

- 4) The FMG / TRP QAPP must be a stand alone document. Cutting and pasting text from the ECA document and/or ECA appendices is acceptable.

- 5) The FMG/TRP needs to provide further clarification regarding the specific meaning of and with relevance to each applicable sub-element in QA/R5 for the following text included in the draft outline:

"to be included in the QAAP as applicable; not applicable to laboratory(ies) performing analysis pursuant to 40 CFR 792"

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NOTE To Drafting Committee: The following pages incorporate revisions discussed on 2/11/04.

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In addition, we need to develop the schedule for Phase II fluoropolymer incineration testing which will be sequenced to begin following the fluorotelomer incineration testing.

7

8

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1 Table 1 REQUIRED TESTING, TEST STANDARDS, REPORTING AND OTHER
 2 REQUIREMENTS FOR THE LABORATORY-SCALE INCINERATION TESTING OF
 3 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	Appendix G 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 ~~or~~ of total fluorine (as determined by the formulas in Appendix C.1) is 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 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, 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 Fluorotelomer Incineration Testing	Test Standard	Deadline for Final Report (Months)¹
3	Phase II Study Plan(s)	40 CFR 790.62 (b) as annotated by Part X of the ECA	2 ³
6	Phase II QAPP	Appendix G of the ECA	6 ³
8	Receipt of components by designated facility(ies)	Part XXIV and Appendix A.3 of the ECA	3 ⁷
11	Elemental Analysis ⁶	Appendix C.2.1 of the ECA	24 ⁸
13	Combustion Stoichiometry ⁶	Appendix C.2.2 of the ECA	24 ⁸
15	Thermogravimetric Analysis ⁶	ASTM E1868, as modified in Appendix B.1 of the ECA	24 ⁸
18	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	24 ⁸
23	Release assessment report	Appendix E.2 of the ECA	24 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, number of months following the completion of a Technical Consultation agreement to proceed with Phase II testing that the Companies must meet their individual obligations to provide the formulating laboratory(ies) with the components for each composite to be tested under this ECA (see Part III. B. of the ECA).

⁸ Number of months from the submission of a Phase I letter report signifying that Phase II testing can proceed. If the study plan(s) and QAPP are not approved within 2 months of submission the Phase II QAPP, then this deadline is extended by 6 months to accommodate re-scheduling with the thermal reactor system laboratory. If Phase II testing is required by Technical Consultation agreement (see footnote 2), the deadline for submission shall be as agreed in the technical consultation.

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 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

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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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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	Appendix G of the ECA	3 ³
Quantitative PFOA transport testing ²	Appendix C.1 of the ECA	8 ^{4 5}

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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 ~~or~~ of total fluorine (as determined by the formulas in Appendix C.1) is 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 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, 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
3	Phase II Study Plan(s)	40 CFR 790.62 (b) as annotated by	<u>? TBD ?</u> ³
4		Part X of the ECA	
5			
6	Phase II QAPP	<u>Appendix ?? G ?? of the ECA</u>	<u>? TBD ?</u> ³
7			
8	Receipt of components	Part XXIV and Appendix A.3 of the	<u>? TBD ?</u> ⁷
9	designated facility(ies)	ECA	
10			
11	Elemental Analysis ⁶	Appendix C.2.1 of the ECA	<u>? TBD ?</u> ⁸
12			
13	Combustion Stoichiometry ⁶	Appendix C.2.2 of the ECA	<u>? TBD ?</u> ⁸
14			
15	Thermogravimetric Analysis ⁶	ASTM E1868, as modified in	<u>? TBD ?</u> ⁸
16		Appendix B.1 of the ECA	
17			
18	Laboratory-scale combustion	Appendices C.2.4 and C.2.5, as	<u>? TBD ?</u> ⁸
19	Testing ⁶	annotated / supplemented by	
20		Appendices D.1, D.2, D.3, and D.4 of	
21		the ECA	
22			
23	Release assessment report	Appendix E.2 of the ECA	<u>? TBD ?</u> 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, number of months following the completion of a Technical Consultation agreement to proceed with Phase II testing that the Companies must meet their individual obligations to provide the formulating laboratory(ies) with the components for each composite to be tested under this ECA (see Part III. B. of the ECA).

⁸ Number of months from the submission of a Phase I letter report signifying that Phase II testing can proceed. If the study plan(s) and QAPP are not approved within 2 months of submission the Phase II QAPP, then this deadline is extended by 6 months to accommodate re-scheduling with the thermal reactor system laboratory. If Phase II testing is required by Technical Consultation agreement (see footnote 2), the deadline for submission shall be as agreed in the technical consultation.

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 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

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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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