

1 under this Biodegradation SEP are fluorotelomer-based polymers, while the ninth is a fluorotelomer-
2 based phosphate ester. The Fluorotelomer Products are products that were sold by DuPont prior to
3 the date DuPont signs the Consent Agreement, and that DuPont will provide as the chemical
4 substances to be tested pursuant to this Biodegradation SEP. An understanding of the degradation
5 potential of the Fluorotelomer Products will be developed by considering the results of semi-
6 continuous activated sludge (SCAS) studies. Accordingly, this Biodegradation SEP is designed to
7 provide information on the inherent biodegradation potential of the Fluorotelomer Products and
8 their Corresponding Polymers using SCAS.

9 The modified SCAS test is an inherent biodegradability study in which the test substance is
10 exposed to activated sludge microorganisms in an aerated, aqueous medium with periodic settling of
11 the solids and renewal of the aqueous phase with fresh media and test substance. The laboratory
12 will run the test for twelve (12) weeks and will measure analytes that are indicative of degradation
13 by determining the amount and rate of formation of observed degradation product(s) in the
14 aqueous, sludge, and gas phases. Performing SCAS on the Fluorotelomer Products and then
15 comparing the results to the same study performed on their Corresponding Polymers will enable a
16 close look at the potential aerobic biodegradation of each of the Fluorotelomer Products. The test
17 also gives an indication of the potential for removal of the test substances via sorption to the
18 activated sludge inoculum.

19 **D. Use and Functionality of Fluorotelomer Products.** Fluorotelomer products are used
20 widely in a range of commercial applications, including some that are directly released into the
21 environment, such as fire fighting foams, as well as soil, stain, and grease resistant coatings on
22 carpets, textiles, paper, and leather. Fluorotelomer products are aqueous dispersions. They

1 originate from fluorotelomer iodides $[F(CF_2CF_2)_n-I]$; where $n= 3,4,5$ commonly] which are
2 commercially made by reacting pentafluoroethyl iodide with tetrafluoroethylene to create even-
3 number-carbon polyfluoroalkyl iodides. Although the telomerization process can be used to
4 produce odd-number-carbon raw materials, those are not intentionally made or sold by DuPont.

5 Fluorotelomer iodides are functionalized to create a series of fluorotelomer raw materials
6 [including other fluorotelomer iodides $[F-(CF_2-CF_2)_n-CH_2-CH_2-I]$, $n = 3,4,5$ commonly] and
7 fluorotelomer alcohols $[F-(CF_2-CF_2)_n-CH_2-CH_2-OH]$, $n = 2,3,4,5$ etc.] that are then appended to an
8 organic or inorganic moiety that contains the fluorotelomer as a functional group. As an example,
9 fluorotelomer acrylate monomers $[F-(CF_2-CF_2)_n-CH_2-CH_2-O-C(O)-CH=CH_2]$, $n = 3,4,5$
10 commonly] are copolymerized with one or more of a group of hydrocarbon monomers to create an
11 acrylic polymer with fluorotelomer functionality. The most common fluorotelomer raw material
12 used in DuPont's fluorotelomer products is the family of fluorotelomer alcohols. These alcohols
13 are generally further transformed into polymeric and non-polymeric fluorotelomer-based products.
14 This Biodegradation SEP involves the testing of polymeric and non-polymeric fluorotelomer
15 products based on these common fluorotelomer intermediates; any reference in this Biodegradation
16 SEP to DuPont's commercial Fluorotelomer Products and their Corresponding Polymers is a
17 reference to both the polymeric and non-polymeric products.

18 DuPont generally manufactures product concentrates as aqueous dispersions of
19 fluorotelomer products that are sold to industrial customers who dilute, formulate, and blend the
20 fluorotelomer products. These customers then either apply these new formulations to finished
21 articles or sell them to other customers who apply them to finished articles. In this way, the
22 DuPont commercial Fluorotelomer Products being tested as part of this Biodegradation SEP are

1 thus analogous to paint concentrates and the finished articles to a cured paint surface. Evaluations
2 of these biodegradation studies carried out on DuPont’s Fluorotelomer Products for the purpose of
3 attempting to assess the biodegradation potential of cured fluorotelomer-based polymer products
4 would need to be carefully done given the differences between the cured and uncured
5 fluorotelomer-based products. Substances made with fluorotelomer functionality should not be
6 referred to as either “perfluorinated” or “fluoropolymers” as these terms describe other materials.

7 E. As part of this Biodegradation SEP, DuPont will:

8 1. Provide sufficient quantities, as described in Sections II.D-E, below, of
9 DuPont’s nine Fluorotelomer Products, listed in Attachment A.

10 2. Prepare the following chemical substances (referred to collectively as
11 “Corresponding Polymers”).

12 a. A purified polymer that is prepared in accordance with this Appendix
13 Attachment H – Purification Procedure Agreement (PPA) for each of the Fluorotelomer Products
14 listed in Attachment A (“Purified Fluorotelomer Product”). DuPont and EPA have agreed on the
15 procedure(s) that DuPont will use to purify the Fluorotelomer Products to produce the Purified
16 Fluorotelomer Products, taking into consideration the need to optimize various factors, including
17 the appropriate duration of extraction and redispersion processes, the desired purity of the Purified
18 Fluorotelomer Products, the schedule for delivery of the Purified Fluorotelomer Products to the
19 laboratories for characterization, testing and studies, and the overall schedule for completing this
20 Biodegradation SEP. The PPA represents the agreement reached between EPA and DuPont
21 concerning the procedure to be used to produce the Purified Fluorotelomer Products. Reporting on
22 the production of the Purified Fluorotelomer Products shall be in accordance with the reporting

1 provisions of the PPA.

2 b. A synthesized fluorotelomer product containing a purified polymer,
3 comparable to the Fluorotelomer Product for which it corresponds, that is prepared in the
4 laboratory using production plant raw materials (“Synthesized Fluorotelomer Product”).

5 c. A synthesized fluorotelomer product containing a purified polymer,
6 comparable to the Purified Fluorotelomer Product for which it corresponds, that is prepared in the
7 laboratory using high purity raw materials (“Lab-scale Synthesized Fluorotelomer Product”).

8 **3. *Timing of Test Substance Transfer.***

9 a. Within thirty (30) days of entering into a contract with (1) the laboratory
10 performing biodegradation and (2) the laboratory performing characterization, DuPont shall
11 transfer the sufficient quantities, as described in Sections II.D, below, of the nine Fluorotelomer
12 Products to such laboratories.

13 b. Within thirty (30) days of entering into a contract with (1) the
14 laboratory performing biodegradation and (2) the laboratory performing characterization,
15 DuPont shall transfer the sufficient quantities, as described in Sections II.D of the
16 Corresponding Polymers, identified on Attachment A for pilot testing, to such laboratories.

17 c. DuPont shall transfer sufficient quantities, as described in Sections
18 II.D, of the Corresponding Polymers that EPA selects for biodegradation studies to such
19 laboratories to timely commence characterization and the biodegradation studies as required in
20 each laboratory’s EPA-approved work plan.

21 d. The timing for transfer of test substances to EPA is set forth in Section
22 II.E., below.

1 4. ***Third Party Laboratory Contract: Characterization.*** Contract with a Third
2 Party Laboratory (“laboratory”) to characterize the Fluorotelomer Products, their Corresponding
3 Polymers identified in Attachment A for pilot testing, and any of their Corresponding Polymers
4 selected by EPA for biodegradation studies according to Attachment B parameters to help inform
5 the results of the biodegradation studies. The characterization of these Fluorotelomer Products and
6 Corresponding Polymers, discussed in greater detail in Attachment B, will determine, using the
7 most accurate instrumentation and procedures available as of the time of testing, and the best
8 achievable precision, the amount of residual monomers and oligomers, other residuals, and the
9 molecular weight distribution of polymeric material in the Fluorotelomer Products and
10 Corresponding Polymers.

11 5. ***Third Party Laboratory Contract: Biodegradation.*** Contract with a Third
12 Party Laboratory (“laboratory”) to:

13 a. Pilot test the Fluorotelomer Products and Corresponding Polymers, as
14 identified in Attachment A, following study guidelines for modified semi-continuous activated
15 sludge (SCAS). SCAS pilot testing shall begin by the laboratory no later than January 31, 2010.

16 b. Perform SCAS studies on the Fluorotelomer Products and any
17 Corresponding Polymers selected by EPA to be used in the biodegradation studies.

18 c. The laboratory will conduct the SCAS studies on the Fluorotelomer
19 Products and any of their Corresponding Polymers in order to investigate the degradation potential
20 of these Fluorotelomer Products to produce perfluorooctanoic acid (PFOA) or other analytes
21 identified in Attachment C, and to determine the potential, if any, for their Corresponding
22 Polymers to degrade to form PFOA or other analytes identified in Attachment C.

1 6. ***Panel Administrator Contract.*** Contract with an independent third party
2 (“Panel Administrator”) to implement and administer the Peer Consultation process under this
3 Biodegradation SEP. As discussed in greater detail in Section V, a Peer Consultation Panel will be
4 involved in this Biodegradation SEP at specified milestones.

5 F. ***Applicability of Results.*** Because this Biodegradation SEP is designed to examine (1)
6 the inherent biodegradation potential of the Fluorotelomer Products and their Corresponding
7 Polymers and (2) the biodegradation potential and fate of the Fluorotelomer Products and their
8 Corresponding Polymers under aerobic sewage treatment plant simulation conditions, it does not
9 address the biodegradation potential of the Fluorotelomer Products or their Corresponding
10 Polymers in soil, sediments, landfills, or aquatic or marine systems, nor does it address degradation
11 under anaerobic conditions. Additionally, using the results of this Biodegradation SEP to attempt
12 to assess the biodegradation potential of cured polymers would need to be carefully done given the
13 differences between cured and uncured fluorotelomer-based products.

14 Inherent biodegradability tests are designed to assess whether a substance has any potential
15 for biodegradation. According to OECD Guidance on the Use of the Globally Harmonized System
16 for the Classification of Chemicals which are Hazardous for the Aquatic Environment (April
17 2001), a positive result in an inherent biodegradation test indicates that the test substance will not
18 persist indefinitely in the environment; however, rapid and complete biodegradation cannot be
19 assumed. A negative result in an inherent biodegradation test does not definitively demonstrate that
20 a chemical will not biodegrade under any conditions, but rather that the chemical will not
21 biodegrade under the conditions of the test. Aerobic sewage treatment simulation tests are designed
22 to yield information on the behavior of chemicals in aerobic sewage treatment plants. These tests

1 permit the measurement of the rates of loss of the test chemical, formation and identification of
2 degradation products, partitioning of these chemicals to sludge solids, and volatilization under
3 conditions controlled to mimic those found in full-scale aerobic wastewater treatment systems. The
4 results from these studies are indicative of how the test substance will behave in full-scale
5 systems.

6 **II. GENERAL OBLIGATIONS AND REQUIREMENTS**

7 A. **Total Cost.** DuPont must spend no less than five million dollars (\$5,000,000) in
8 eligible SEP costs in performing activities under this Biodegradation SEP, but is not required to
9 spend more than five million dollars (\$5,000,000) in eligible SEP costs.

10 B. **SEP Completion.** DuPont shall comply with the deadlines set forth in this Appendix
11 and will use its best efforts to satisfactorily complete this Biodegradation SEP, within the
12 meaning of Section IV.4 of the CAFO, no later than December 27, 2011 (“SEP Completion
13 Date”). No later than sixty (60) days prior to the SEP Completion Date, if DuPont believes that it
14 will be unable to satisfactorily complete the SEP within such time period, DuPont shall petition
15 EPA to extend the SEP Completion Date based upon DuPont’s assertion of good cause to extend
16 such date. The Office of Civil Enforcement, in consultation with the Office of Pollution Prevention
17 and Toxics, will review DuPont's petition and meet with DuPont to discuss its petition. The Office
18 of Civil Enforcement, in consultation with the Office of Pollution Prevention and Toxics, shall
19 determine whether DuPont has demonstrated that there is good cause to extend the SEP
20 Completion Date and, if determining that DuPont has demonstrated good cause, determine how
21 long to extend the SEP Completion Date.

22 C. **Good Laboratory Practices and Study Monitor.** For purposes of this Biodegradation

1 SEP, with regard to characterization and biodegradation testing and studies, DuPont and its
2 contractors shall be subject to, and must comply with, 40 C.F.R. Part 792. Each laboratory
3 conducting research under this Biodegradation SEP shall designate a Study Director in
4 accordance with 40 C.F.R. § 792.33. DuPont shall designate a Study Monitor that will serve as the
5 point of contact for EPA and the laboratories.

6 **D. *Supply of Test Substances to Laboratories.*** DuPont shall provide the laboratory that it
7 contracts with to perform characterization and the laboratory that it contracts with to perform the
8 biodegradation studies, sufficient quantities of the Fluorotelomer Products, identified in
9 Attachment A, and any Corresponding Polymers, to perform all of the tests and studies discussed
10 in this Biodegradation SEP for which such laboratory has been contracted to perform. Sufficient
11 quantities of the Corresponding Polymers, identified in Attachment A for pilot testing, must
12 include the quantities necessary to perform characterization, the pilot tests, and biodegradation
13 studies, even if such Corresponding Polymers are not selected by EPA to be used in the
14 biodegradation studies. Each Fluorotelomer Product and Purified Fluorotelomer Product that
15 DuPont provides to the laboratory performing characterization must be from the same production
16 batch as provided to the laboratory performing the biodegradation studies. Each Synthesized
17 Fluorotelomer Product and Lab-scale Synthesized Fluorotelomer Product that DuPont provides to
18 the laboratory performing characterization must be from the same laboratory batch as provided to
19 the laboratory performing biodegradation testing.

1 E. ***Supply of Test Substances to EPA.*** EPA shall receive sufficient quantities of the
2 Fluorotelomer Products identified in Attachment A, and Corresponding Polymers, to
3 replicate the characterization and biodegradation studies (i.e., SCAS tests (including pilots))
4 performed under this Biodegradation SEP. DuPont shall fulfill this obligation as follows:

- 5 • Sufficient quantities for EPA of the Fluorotelomer Products identified in
6 Attachment A, the nine Synthesized Fluorotelomer Products, and the nine
7 Lab-scale Synthesized Fluorotelomer Products shall be shipped by DuPont to
8 a laboratory identified by EPA (per SEP A Section II.H.) on or before
9 November 18, 2008 and
- 10 • Sufficient quantities for EPA of the Purified Fluorotelomer Products resulting
11 from the PPA shall be shipped by DuPont no later than fourteen (14) days
12 after sparging ceases for each such Product or by June 1, 2009, whichever
13 occurs first. Further details on the quantities to be shipped, the specific
14 timing for shipment, and shipment location are set forth in Section II.B.4. of
15 the PPA.

16 All test substances shall be provided to EPA following the chain of custody procedures in
17 Attachment D, except that quart jars acceptable under DOT regulations may be substituted
18 for the 30 mL containers. DuPont shall develop appropriate holding procedures for the test
19 substances to assure the chemical integrity of such substances. These appropriate holding
20 procedures shall be provided to EPA three (3) days in advance of the date that DuPont ships
21 the test substance to the EPA-identified laboratory.

22 F. ***Chain of Custody.*** Any instance in which, pursuant to this Biodegradation

1 SEP, DuPont or a laboratory transfers either Fluorotelomer Products, Corresponding
2 Polymers, or other chemicals to a laboratory or to EPA, DuPont and/or such
3 laboratory(ies) are required to follow the chain of custody procedures in Attachment D of
4 this Appendix.

5 G. ***EPA Review and Approval (or Acceptance) Process.*** EPA will review and either
6 approve or, pursuant to Section II.G.3, below, accept all work plans, protocols, contracts,
7 request for proposals/bids, confidentiality agreements, lists, material modifications, and any
8 other submission other than a final report, progress report, preliminary report, or quarterly
9 report, relating to performance of this Biodegradation SEP.

10 1. In providing comments to DuPont regarding such documents or
11 submissions, EPA will include justification(s) and/or rationale(s) for the comments. EPA
12 will provide such comments to DuPont within a reasonable amount of time, commensurate
13 with the type and nature of the document or submission being reviewed.

14 2. All of EPA's comments, including requested changes, to a document or
15 submission enumerated above must be incorporated by DuPont, and/or its contractors, and
16 resubmitted to EPA for approval. With regard to contracts, request for proposals/bids, and
17 confidentiality agreements, if DuPont believes that EPA's comments do not relate to the
18 performance of the Biodegradation SEP, DuPont shall notify EPA within seven (7) business
19 days of DuPont's receipt of such comments. In this notification to EPA, DuPont shall
20 explain why it believes that EPA's comments do not relate to the performance of this
21 Biodegradation SEP and that such comments are not required to be incorporated into the
22 document. EPA shall consider DuPont's explanation before making a final decision

1 regarding whether such comments relate to the performance of this Biodegradation SEP;
2 provided, however, that EPA will not unreasonably require DuPont to modify or remove
3 from any such contract or agreement any provision that requires the contractor to indemnify
4 DuPont for stipulated penalties that DuPont pays under Section VII.4 of the CAFO as a
5 result of the contractor's failure to perform work in accordance with a schedule to which the
6 contractor has agreed.

7 3. In limited circumstances, EPA may, in its discretion, after reviewing a
8 proposed contract, proposed confidentiality agreement, or proposed protocol opt to accept
9 such a document without formally approving it. If EPA exercises this option, EPA will
10 notify DuPont that the proposed contract or proposed confidentiality agreement has been
11 accepted.

12 H. ***Submission Procedures and Transfer of Test Substances to EPA.*** All
13 submissions by DuPont, a laboratory, or the Panel Administrator to EPA shall be submitted
14 via first class mail, return receipt requested, or by commercial delivery service with
15 documented delivery, to the person identified in Section V of the CAFO. All submissions
16 shall be provided in electronic format on a compact disc (CD). All submissions shall be
17 accompanied by a cover letter in hardcopy, that describes the contents of the CD, and
18 complies with any other requirements of the CAFO. EPA will specify, in advance of the
19 transfer of test substances addressed in Section II.E, above, where to transfer such divided
20 samples.

21 I. ***Final Reports containing Confidential Business Information.*** All final reports
22 provided to EPA containing Confidential Business Information ("CBI") must also be provided

1 to EPA in a sanitized version within thirty (30) days of submission of the CBI version. Such
2 final reports include final laboratory reports under 40 C.F.R. Part 792, final reports of the
3 Peer Consultation Panel, and SEP Completion Reports submitted pursuant to Section IV of
4 the CAFO. Any claim of CBI must be substantiated pursuant to 40 C.F.R. Part 2, upon
5 submission of the sanitized version. Note that this Section II.I governs over CAFO Section
6 V.9. with respect to the timing for submittal of sanitized final laboratory reports, final Peer
7 Consultation Panel reports, and the SEP Completion Report.

8 J. ***Manner in which Testing and Studies shall be Performed.*** The characterization
9 and biodegradation studies must be performed in the following manner and in compliance
10 with the following Attachments, unless DuPont or its contractor requests, and EPA approves, a
11 change, or if EPA, after consultation with DuPont, determines that a change is appropriate:

12 1. DuPont shall use one laboratory to characterize the Fluorotelomer Products,
13 the Corresponding Polymers identified in Attachment A for pilot testing, and any
14 Corresponding Polymers that EPA selects for biodegradation studies, in accordance with
15 Attachment B.

16 2. DuPont shall use one laboratory to perform SCAS studies (alternatively
17 referred to herein as the “biodegradation studies”), in accordance with Attachment C.

18 a. This laboratory shall perform the SCAS studies on the
19 Fluorotelomer Products and any Corresponding Polymers that EPA selects for
20 biodegradation studies, following both the sequence, and grouping (to maximize laboratory
21 efficiency, capacity allowing) provided in Attachment A.

22 b. If, based on their submissions in response to the Request for

1 Proposals (“RFP”) and any further information that DuPont or EPA receives, none of the
2 laboratories identified in Attachment G appears to be reasonably capable of, or if no
3 laboratory is willing to contractually commit to, completing all of the biodegradation studies
4 (including pilots) by no later than September 1, 2011 (or such longer time as EPA approves),
5 the parties agree to implement the following approach, in the following order of preference:

6 i. DuPont shall use one laboratory identified in Attachment G to
7 perform the biodegradation studies but not the analytical component of the studies, and
8 DuPont shall use the laboratory that DuPont contracts with to perform characterization of
9 the Fluorotelomer Products and any Corresponding Polymers under this Biodegradation
10 SEP, as a subcontractor for the analytical component of the biodegradation studies; or

11 ii. DuPont shall propose two laboratories identified in Attachment
12 G to perform the biodegradation studies and shall propose how to divide the biodegradation
13 work between the two laboratories, subject to EPA approval.

14 3. Pilot Testing

15 a. The laboratory performing the biodegradation studies shall conduct
16 one 14-day pilot test for SCAS on each of the Fluorotelomer Products that have been
17 selected for pilot testing as identified in Attachment A, and shall conduct one 14-day pilot
18 test for SCAS on each of the Corresponding Polymers that have been selected for pilot
19 testing as identified in Attachment A, to develop test data that can inform protocol decisions
20 and to establish that these biodegradation studies can produce results that can be analyzed
21 and quantified with regard to the biodegradation potential of the Fluorotelomer Products
22 and any Corresponding Polymers.

1 b. EPA reserves the right, after reviewing the results of the first pilot of
2 the Fluorotelomer Products or first pilots of its Corresponding Polymers, to specify the use of
3 the Corresponding Polymers for the pilot tests in the remaining groups.

4 c. The Peer Consultation Panel, described in Section V, below, shall
5 review the results of such pilots, including the pilots' protocol and design, in conjunction
6 with the characterization data. The Panel Administrator shall develop and forward to EPA
7 and DuPont a final Panel report providing: (1) each participating Panel member's comments
8 and recommendations on appropriate final protocols for the laboratory to use for the
9 biodegradation studies and (2) comments and recommendations regarding which of the
10 Corresponding Polymers should be used in the biodegradation studies. EPA will review the
11 Panel report and any comments that DuPont has submitted to EPA pursuant to Section II.K,
12 below. EPA will then transmit its comments and judgments to DuPont and require DuPont to
13 direct the laboratory to develop a final protocol, within a specified timeframe, to be
14 submitted to EPA for approval. The final protocol that the laboratory develops shall consider
15 the Panel report and EPA's comments and judgments. The laboratory shall not commence
16 the biodegradation studies until it has received EPA's approval of the final protocol and
17 EPA's determination regarding which of the Corresponding Polymers shall be used in the
18 biodegradation studies.

19 K. At any time during the performance of this Biodegradation SEP, DuPont may
20 provide comments to EPA regarding the following technical documents: protocols, test
21 methods, analytical methods (and any modifications of such technical documents), and the
22 Panel report addressing the charge set forth in Section V.A.2.b. To be eligible for

1 consideration by EPA, DuPont must submit such comments to EPA within seven (7)
2 business days of DuPont's receipt of the technical document. EPA reserves the right to
3 directly seek input from the appropriate laboratory regarding DuPont's comments. The
4 extension of deadlines in Section II.L, below, does not apply to this Section II.K. A request
5 for an extension of this deadline shall be subject to EPA's discretion, and granted for good
6 cause shown.

7 L. Extensions of deadlines other than the SEP Completion Date

8 1. ***First Extensions.*** For an extension of a deadline specified in this
9 Appendix or in a work plan or other submission implementing this Biodegradation SEP,
10 other than the SEP Completion Date, DuPont shall be entitled to a first extension as a matter
11 of right, provided that DuPont submits a written notice to EPA that it is exercising this
12 provision, no later than one business day prior to the deadline.

13 a. For deadlines of thirty (30) days or less, DuPont shall
14 automatically receive an extension equal to the number of days initially provided in this
15 Appendix.

16 b. For deadlines greater than thirty (30) days, DuPont shall
17 automatically receive a 30-day extension unless DuPont requests, and EPA approves, an
18 extension greater than thirty (30) days, for good cause shown.

19 c. For deadlines that are not stated in terms of number of days after
20 a preceding event but are stated as specific dates, DuPont shall automatically receive a 30-
21 day extension unless DuPont requests, and EPA approves, an extension greater than thirty
22 (30) days, for good cause shown.

1 2. ***Second Extension (for Third Party Work only).*** For an extension of a
2 deadline other than the SEP Completion Date involving work that DuPont has contracted
3 with a third party to perform, if, after exercising its right to an automatic extension provided
4 in Section II.L. 1, above, DuPont requests a second extension of the same deadline, such
5 extension shall be granted provided that DuPont’s Study Monitor sent a written notice to the
6 third party no later than five (5) business days before the deadline, and DuPont requests an
7 extension no later than one (1) business day prior to the deadline. In exercising this
8 provision, DuPont shall furnish EPA with the written notice that it sent to the third party.

9 a. For deadlines of thirty (30) days or less, DuPont shall
10 receive an extension equal to the number of days initially provided in this Appendix.

11 b. For deadlines greater than thirty (30) days, DuPont shall receive a
12 30-day extension unless DuPont requests, and EPA approves, an extension greater than
13 thirty (30) days, for good cause shown.

14 3. ***Additional Extensions.*** DuPont’s request for an extension other than the
15 SEP Completion Date for which there is either: (a) a second request for an extension of a
16 deadline that does not involve work that DuPont has contracted with a third party to
17 perform, or (b) a third request for an extension of a deadline that does involve work that
18 DuPont has contracted with a third party to perform, or (c) subsequent requests for extensions
19 of deadlines addressed in Sections II.L.3.a-b, such requests are subject to EPA’s discretion,
20 and granted for good cause shown. In granting a request for an extension under Section
21 II.L.3, EPA may grant an extension of time different from the amount of time requested by
22 DuPont.

1 4. ***Delays resulting from EPA Review.*** If DuPont is delayed in performing a
2 required action prescribed in an EPA-approved work plan and the delay is caused only
3 because of EPA’s review and approval of a submission that DuPont provided to EPA
4 sufficiently in advance of the deadline so as to allow EPA a reasonable amount of time to
5 review and approve the submission, commensurate with the type and nature of the
6 submission, DuPont will be entitled to an extension to perform the required action. The
7 extension shall be equal to the number of days of EPA’s review and approval of the
8 submission and shall be calculated from the date that EPA received such submission through
9 the date that EPA transmitted its approval of the submission to DuPont. If, during its review
10 and prior to its approval, EPA requests that DuPont make changes to the submission, in
11 calculating the extension, the parties shall not include the amount of time for DuPont to
12 make such changes and resubmit the document to EPA for approval. Such time excluded
13 from the extension shall start from the date that EPA transmits the requested changes to
14 DuPont through the date that EPA receives the amended submission, incorporating the
15 requested changes. But, such time excluded from the extension shall not include time during
16 which EPA is still reviewing a portion of the submission for which EPA has also requested
17 changes. If an extension is granted under this provision, DuPont may still request an
18 extension of the extended deadline under Sections II.L.1-3, above.

19 5. To the extent that this Section II.L governs requests for extensions of
20 deadlines under this Biodegradation SEP, it shall supersede any provisions in the CAFO
21 concerning the extension of deadlines.

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III. SELECTION OF THIRD PARTY LABORATORIES

A. ***Development of Confidentiality Agreement.*** Within forty-five (45) days from the date DuPont signs the Consent Agreement, DuPont shall submit to EPA the confidentiality agreement that DuPont intends to use with any laboratory. Within seven (7) business days of receipt of EPA’s approval (or acceptance) of the confidentiality agreement, DuPont must provide the laboratories listed in Attachment G with a confidentiality agreement and request that such confidentiality agreement be signed and returned by a date certain consistent with the deadlines established in this Appendix.

B. ***Development of Request for Proposals.*** By February 1, 2006, DuPont shall submit to EPA one or more draft Requests for Proposals (RFPs) to be sent to all of the laboratories identified in Attachment G to solicit proposals for (1) characterizing the Fluorotelomer Products and any Corresponding Polymers, and (2) conducting the SCAS studies on the Fluorotelomer Products and any Corresponding Polymers (including pilot testing).

The proposed RFPs must at least include the following elements:

1. The laboratory’s obligation, if selected, to follow 40 C.F.R. Part 792, and prepare (or subcontract for preparation of) and comply with, a QAPP, provided in Attachment E of this Appendix.
2. All existing information that would be reasonably relevant to assisting the laboratory to develop a firm cost estimate, with pricing, for the work that the laboratory is solicited to perform, which must include such information as the identity, structure, and

1 compositional analysis of the Fluorotelomer Products. The laboratory's proposal may be
2 based upon not-to-exceed estimates for the proposed work or any other method that
3 provides, to the extent feasible, a firm cost estimate for the work.

4 a. Laboratories receiving the RFP for characterization of the
5 Fluorotelomer Products and Corresponding Polymers must provide cost estimates for
6 characterizing all of the Fluorotelomer Products and their Corresponding Polymers.

7 b. Laboratories receiving the RFP for the biodegradation work must
8 include cost estimates for conducting 14-day pilot tests for SCAS on the Fluorotelomer
9 Products and the Corresponding Polymers, as identified in Attachment A, and for performing
10 SCAS studies on all Fluorotelomer Products and their Corresponding Polymers.

11 3. The laboratory's cost proposal should include the identification of any
12 analytical methods that the laboratory anticipates needing to develop in order to perform any
13 of the required analytical work associated with the characterization or biodegradation studies
14 required under this Biodegradation SEP.

15 4. For the laboratories receiving the RFP for the biodegradation work,
16 DuPont shall provide the guidelines for SCAS, included in Attachment C of this Appendix.

17 5. A requirement that the recipient identify in its proposal a general schedule
18 and budget for completion of the proposed work identified in the RFP in accordance with the
19 deadlines and criteria set forth in this Appendix.

20 6. A copy of Section II.L, above, and the terms and conditions
21 identified in Section III.F.2, below.

22 7. Notice that failure to submit a proposal meeting all of the criteria in the

1 RFP to DuPont within thirty (30) days of the laboratory's receipt of the RFP may render the
2 laboratory ineligible for selection.

3 C. Within seven (7) days of receipt of the approved RFP, DuPont shall provide the
4 EPA-approved RFPs to all laboratories listed in Attachment G that have submitted to
5 DuPont a signed confidentiality agreement. If DuPont has not received a signed
6 confidentiality agreement from a laboratory by the date that DuPont is required to provide
7 the RFP, DuPont shall notify EPA why it cannot send the RFP to such laboratory. EPA
8 reserves the right to contact such laboratory to inquire why it has not returned the
9 confidentiality agreement and, if such laboratory agrees within seven (7) business days of
10 contact by EPA to sign and submit the confidentiality agreement to DuPont, DuPont shall
11 then provide the RFP to the laboratory.

12 D. **Laboratory Eligibility.** Within forty-five (45) days of EPA's approval of the
13 RFPs, or such longer time as EPA has approved in accordance with Section III.D.2, below,
14 DuPont must receive a firm proposal back from a laboratory receiving an RFP in order for that
15 laboratory to be eligible to perform work under this Biodegradation SEP.

16 1. DuPont shall require the recipients to submit one duplicate copy of its
17 proposal to EPA concurrent with its submission to DuPont.

18 2. If a laboratory that received the RFP does not submit a proposal to
19 DuPont within thirty (30) days of receipt of the RFP, EPA reserves the right to contact such
20 laboratory to inquire why it has not submitted a proposal to DuPont. If the laboratory
21 indicates that it wants to submit a proposal, the laboratory must do so by a date to be specified
22 by EPA, which shall not be longer than fourteen (14) days after contact by EPA, unless the

1 parties agree to a longer time period.

2 E. ***Selection of Laboratories.*** No later than fourteen (14) days after receipt of the
3 last bid that DuPont received within the applicable period for submission under III.D,
4 DuPont must propose to EPA the laboratory that DuPont would like to use to perform the
5 characterization of the Fluorotelomer Products and Corresponding Polymers, and the
6 laboratory that DuPont would like to use to perform the biodegradation studies of the
7 Fluorotelomer Products and Corresponding Polymers.

8 1. DuPont must provide EPA with a detailed rationale describing
9 why DuPont has selected such laboratories to perform the work and why it has not selected
10 the other laboratories that submitted a proposal to perform such work.

11 2. DuPont shall contract with only one laboratory to perform the
12 modified SCAS studies on the Fluorotelomer Products and Corresponding Polymers. DuPont
13 shall contract with only one laboratory to characterize the Fluorotelomer Products and
14 Corresponding Polymers.

15 3. If, after proposal submission, EPA rejects either the laboratory for
16 characterization and/or the laboratory for biodegradation testing, EPA will provide DuPont
17 with a written rationale for the rejection and require DuPont to propose a different laboratory
18 from which DuPont has received a proposal. The parties will continue this process until EPA
19 agrees to DuPont's laboratory selection.

20 4. If no laboratories submit proposals to DuPont, or if none of the
21 proposals submitted is acceptable to EPA, the Directors of the Office of Civil Enforcement
22 and the Office of Pollution Prevention and Toxics shall meet with DuPont to discuss

1 appropriate changes that can be made to this Biodegradation SEP to foster laboratory
2 participation in the performance of this Biodegradation SEP. EPA and DuPont shall first
3 implement the alternative approach set forth in Section II.J.2.b before EPA considers whether
4 to expand the list of potential laboratories identified in Attachment G to include foreign
5 laboratories. If the parties cannot agree to any such appropriate changes, or if after agreeing to
6 such appropriate changes, no laboratories submit a proposal, this Biodegradation SEP shall be
7 deemed to have ceased prior to its completion, in which case, DuPont shall not be subject to
8 Section VII.3 of the CAFO but DuPont shall be subject to Section VII.1 of the CAFO, and
9 the parties may exercise Section VI of the CAFO even though this Biodegradation SEP is not
10 deemed satisfactorily completed.

11 F. **Laboratory Contract Requirements.** Within thirty (30) days of EPA's approval
12 of the laboratories under Section III.E, DuPont must provide EPA with a final draft of the
13 proposed contract that DuPont and the two laboratories have negotiated.

14 1. No contract shall be executed by DuPont and a laboratory until EPA has
15 reviewed and either approved or accepted the contract in accordance with Section II.G.2.

16 2. The proposed contract must include the following terms and conditions in
17 addition to the elements discussed in Section III.B, above:

18 a. The laboratory consents to inspection, for purposes of this
19 Biodegradation SEP, at any reasonable time, as provided in 40 C.F.R. § 792.15.

20 b. All laboratory personnel must directly answer any questions from
21 EPA pertaining to work the laboratory is performing under this Biodegradation SEP. Any
22 request from EPA for written information from a laboratory pertaining to work it is

1 performing under this Biodegradation SEP will be transmitted through DuPont's designated
2 Study Monitor. DuPont's Study Monitor shall notify the laboratory of EPA's request for such
3 information within three (3) business days of EPA's request, and the laboratory shall
4 provide such information to EPA and DuPont within three (3) business days of DuPont's
5 Study Monitor's notice to the laboratory.

6 i. If, based upon oral or written information so obtained, EPA
7 believes that a minor modification(s) to an approved or accepted test protocol or other
8 analytical method must be made, EPA will inform DuPont of the modification and require
9 DuPont to instruct the laboratory to implement the change immediately and continue
10 running the test. DuPont may submit comments for EPA's consideration regarding such
11 modification, in accordance with Section II.K, above.

12 ii. If, based upon oral or written information so obtained, EPA
13 believes that a modification to an approved or accepted test protocol or other analytical
14 method must be made that requires the laboratory to stop the test and start again, EPA will
15 inform DuPont of the modification and require DuPont to instruct the laboratory to provide
16 EPA and DuPont with all data generated up to that date and immediately terminate the test
17 and re-run the test implementing the modification. DuPont may submit comments for
18 EPA's consideration regarding such modification, in accordance with Section II.K, above.

19 c. EPA shall have the exclusive authority to approve all work plans,
20 protocols, and test methods that the study sponsor would otherwise approve under 40 C.F.R.
21 Part 792 as well as any analytical methods not expressly enumerated in 40 C.F.R. Part 792,
22 and the QAPPs. DuPont may submit comments for EPA's consideration regarding such

1 technical documents, in accordance with Section II.K, above.

2 d. **Material Modifications.** Any proposed material modification that
3 a laboratory or DuPont would like to make that involves work conducted under this
4 Biodegradation SEP must be approved by EPA prior to implementation. For purposes of this
5 Biodegradation SEP, a material modification is an adjustment to the work conducted under
6 this Biodegradation SEP made in the normal course of implementing such work that would
7 result in a substantive alteration of the biodegradation studies or other activities conducted
8 under this Biodegradation SEP.

9 e. EPA and DuPont shall receive written notification from the
10 laboratory no later than five (5) business days before the laboratory makes any modification
11 that involves work previously approved by EPA under this Biodegradation SEP, except as
12 provided in Section III.F.2.f, below. If, based upon this notification, EPA believes that such
13 modification is material, EPA will orally notify DuPont and the laboratory immediately, and
14 require DuPont to instruct the laboratory to submit such proposed modification to EPA for
15 approval within the timeframe that EPA establishes in the oral notice. DuPont may submit
16 comments for EPA's consideration regarding such modification, in accordance with Section
17 II.K, above.

18 f. **Emergency Modifications.** In the event of an emergency, the
19 laboratory may make a modification that involves work previously approved by EPA under
20 this Biodegradation SEP, to address an unforeseen circumstance or occurrence that will have
21 an adverse affect on the test if not immediately implemented. The laboratory shall provide
22 notice to EPA and DuPont within twenty-four (24) hours of such modification. If, based

1 upon this modification, EPA believes that the laboratory must stop the test and start again or
2 that the laboratory should implement an additional change, EPA will require DuPont to
3 instruct the laboratory to provide EPA and DuPont with all data generated up to that date and
4 either immediately terminate the test and re-run the test or immediately implement the
5 additional change. DuPont may submit comments for EPA's consideration regarding such
6 modification or additional change, in accordance with Section II.K, above.

7 g. **Progress Reports.** Within thirty (30) days of commencing the
8 technical work, and by the first day of each month thereafter until the laboratory submits its
9 last final report under Section IV.C, below, the laboratory shall provide EPA and DuPont
10 with a progress report that describes the technical work performed, a copy of the raw data
11 generated up to that date, and costs incurred.

12 h. **Information Exchange.** When the laboratory provides any
13 information in written form to EPA or DuPont concerning the laboratory's work under this
14 Biodegradation SEP, the laboratory shall provide such information to the other party as soon
15 as practicable. The laboratory is not responsible for disseminating information that it
16 receives in written form from DuPont; DuPont shall concurrently provide the information to
17 EPA. When the laboratory provides information in oral form to EPA or DuPont concerning
18 the laboratory's work under this Biodegradation SEP, the laboratory shall communicate such
19 information to the other party as soon as practicable. The laboratory is not responsible for
20 communicating information it receives in oral form from DuPont or EPA; each party shall
21 communicate such information to the other party. However, when the laboratory receives
22 an oral communication from DuPont or EPA, it shall notify both parties and provide a brief

1 written description of such oral communication. To the extent practicable, the parties shall
2 jointly communicate orally with the laboratory in light of the laboratory's obligation to
3 prepare a written notification to the parties when it receives an oral communication, not
4 jointly, from either party.

5 i. The laboratory shall allow Peer Consultation Panel members to
6 visit the laboratory, as necessary, when the Peer Consultation Panel has a meeting(s) and/or
7 deliberations relevant to the work that the laboratory is performing under this Biodegradation
8 SEP.

9 G. **Contract Execution.** Within five (5) business days of receipt of EPA's approval
10 (or acceptance) of the proposed contract in accordance with Section II.G.2, DuPont must
11 sign and forward the contract to the laboratory for execution.

12 a. DuPont and the laboratory shall seek to execute the contract within thirty
13 (30) days of receipt of EPA's approval (or acceptance) of the proposed contract. If DuPont
14 and the laboratory have not executed the contract within thirty (30) days, DuPont must,
15 inform EPA of the delay, explain the reason for the delay, provide a reasonable estimate as to
16 when the contract will be executed, and exercise its right to an automatic extension in
17 Section II.L, above. After exercising its right to an automatic extension in Section II.L, but
18 before a second request for an extension under Section II.L, if DuPont believes that,
19 notwithstanding its best efforts, the laboratory will not enter into the contract with DuPont,
20 DuPont shall provide notice to EPA of the impasse. EPA reserves the right to contact such
21 laboratory, upon receipt of such notice from DuPont, to inquire why the laboratory has not
22 entered into the contract with DuPont. If DuPont and the laboratory have not entered into a

1 contract within fourteen (14) days EPA's inquiry, unless DuPont and EPA agree to a longer
2 time period, then the parties shall follow the approach set forth in Section III.H, below.

3 b. Within five (5) business days from the date that DuPont and the
4 laboratory execute the contract, DuPont must notify EPA that it has entered into the
5 contract with the laboratory.

6 H. If no laboratory enters into a contract with DuPont, the Directors of the Office of
7 Civil Enforcement and the Office of Pollution Prevention and Toxics shall meet with DuPont
8 to discuss appropriate changes that can be made to this Biodegradation SEP to foster
9 laboratory participation in the performance of this Biodegradation SEP. If the parties cannot
10 agree to any such appropriate changes, or if after agreeing to such appropriate changes, no
11 laboratories enter into a contract with DuPont, this Biodegradation SEP shall be deemed to
12 have ceased prior to its completion, in which case, DuPont shall not be subject to Section
13 VII.3 of the CAFO but DuPont shall be subject to Section VII.1 of the CAFO, and the parties
14 may exercise Section VI of the CAFO even though this Biodegradation SEP is not deemed
15 satisfactorily completed.

16 I. *Commencement of Work.* Within thirty (30) days from the date that DuPont and
17 each laboratory execute the contract, the laboratory must commence the work it has agreed to
18 perform under the contract, as described in Section IV, below.

19 **IV. TESTS TO BE PERFORMED ON DUPONT'S FLUOROTELOMER**
20 **PRODUCTS AND CORRESPONDING POLYMERS**

21 A. Characterization of the Fluorotelomer Products and Corresponding Polymers

22 1. As provided in Section III.I, the laboratory shall commence the work

1 identified in this Section IV.A, within thirty (30) days from the date that DuPont and the
2 laboratory execute the contract to perform work under this Biodegradation SEP. The
3 laboratory shall commence such work by submitting a work plan to EPA that describes the
4 work the laboratory has been contracted to perform, addressing all requirements for such
5 work under this Biodegradation SEP (including Attachment B), and a general schedule and
6 budget for completion of the work. Within forty-five (45) days from the date that DuPont
7 and the laboratory execute the contract to perform work under this Biodegradation SEP, the
8 laboratory shall submit to EPA all relevant technical documents that require EPA's approval.

9 2. Within fourteen (14) business days of EPA's approval of the work plan
10 and all relevant technical documents, the laboratory shall begin the implementation of the
11 EPA- approved work plan.

12 3. Within fourteen (14) business days of characterizing each
13 Fluorotelomer Product and any Corresponding Polymers, the laboratory shall provide EPA
14 and the Panel Administrator, a Certificate of Analysis, as provided in Attachment F, as
15 well as the protocols and a copy of the raw data. The laboratory shall provide the QAPP to
16 the Panel Administrator with the first Certificate of Analysis but need not provide the
17 QAPP for the remaining eight Fluorotelomer Products and Corresponding Polymers.

18 B. Biodegradation Studies: SCAS

19 1. As provided in Section III.I, the laboratory shall commence the work
20 identified in this Section IV.B, within thirty (30) days from the date that DuPont and the
21 laboratory execute the contract to perform such work. The laboratory shall commence such
22 work by submitting a work plan to EPA that describes the work the laboratory has been

1 contracted to perform, addressing all requirements for such work under this Biodegradation
2 SEP (including Attachment C), and a general schedule and budget for completion of the
3 work. Within ninety (90) days from the date that DuPont and the laboratory execute the
4 contract to perform work under this Biodegradation SEP, the laboratory shall submit to EPA
5 all relevant technical documents that require EPA's approval.

6 2. Within fourteen (14) business days of EPA's approval of the work plan
7 and all relevant technical documents, the laboratory shall begin the implementation of the
8 EPA-approved work plan.

9 a. The laboratory shall run the SCAS test for twelve (12)
10 weeks. The inoculum source shall be activated sludge mixed liquor from a municipal
11 wastewater treatment plant operating in compliance with its National Pollutant Elimination
12 Discharge System ("NPDES") permit. Settled domestic sewage from a municipal wastewater
13 treatment plant operating in compliance with its NPDES permit shall be used as feed. Daily
14 samples of the aqueous phase, sludge solids, and off gas shall be collected, analyzed, and
15 quantified for the analytes listed in Attachment C of this Biodegradation SEP. If at any time
16 EPA determines, or if DuPont or the laboratory recommends and EPA determines, that daily
17 sampling is not necessary, EPA will notify DuPont to instruct the laboratory of a change in
18 the sampling schedule and establish a new timeframe for sampling. Analyses shall be
19 conducted using the most accurate instrumentation and procedures available as of the time of
20 testing. All analytical methods shall be approved by EPA prior to the start of the studies.

21 3. The laboratory shall conduct one 14-day pilot test for SCAS on each of
22 the Fluorotelomer Products that have been selected for pilot testing as identified in

1 Attachment A, and shall conduct one 14-day pilot test for SCAS on each of the
2 Corresponding Polymers that have been selected for pilot testing as identified in Attachment
3 A, to develop test data that can inform protocol decisions and to establish that these
4 biodegradation studies can produce results that can be analyzed and quantified with regard to
5 the biodegradation potential of the Fluorotelomer Products and Corresponding Polymers.

6 4. **Pilot Preliminary Reports.** No later than fourteen (14) days after the
7 laboratory completes each pilot test, the laboratory shall provide EPA, DuPont, and the Panel
8 Administrator with a preliminary report regarding the pilot test results. In providing the
9 preliminary report, the laboratory shall summarize the pilot test results and provide the QAPP,
10 the protocols, and a copy of the raw data.

11 5. Within fourteen (14) business days after EPA has approved the final
12 design and protocols for the SCAS studies, the laboratory shall begin the biodegradation
13 studies following the sequence and groupings (capacity allowing) provided in Attachment
14 A.

15 a. EPA reserves the right to omit any analyte identified in
16 Attachment C for purposes of the biodegradation studies.

17 b. Upon consideration of the Panel's report addressing the charge in
18 Section V.A.2.c, additional characterization data for any purified or synthesized Corresponding
19 Polymers that had not been characterized prior to the Panel's report, and the amount of
20 remaining eligible SEP dollars, EPA shall determine which of the Corresponding Polymers,
21 if any, shall be used in the biodegradation studies.

22 6. **Study Preliminary Reports.** Within seven (7) business days of the

1 laboratory completing the biodegradation studies on the first Fluorotelomer Product and any
2 of its Corresponding Polymers (or first group of Fluorotelomer Products and any of their
3 Corresponding Polymers), the laboratory shall submit a preliminary report summarizing the
4 study results to EPA, DuPont, and the Panel Administrator for distribution to the Peer
5 Consultation Panel.

6 a. In providing the preliminary report, the laboratory shall also
7 provide the protocols and a copy of the raw data. The laboratory shall only provide the
8 QAPP to the Panel Administrator with the first Fluorotelomer Product and any of its
9 Corresponding Polymers (or first group of Fluorotelomer Products and any of their
10 Corresponding Polymers).

11 b. As the laboratory completes biodegradation studies on each
12 Fluorotelomer Product and Corresponding Polymers (or group of Fluorotelomer Products
13 and Corresponding Polymers), the laboratory shall submit preliminary reports and
14 associated information described in Section IV.B.6.a, above, to EPA, DuPont, and to the
15 Panel Administrator for distribution to the Peer Consultation Panel.

16 C. Reporting Test and Study Results

17 1. Each laboratory shall follow 40 C.F.R. Part 792, subpart J in preparing
18 the final report for the tests that it performs.

19 2. Each laboratory must submit a final report to EPA, DuPont, and the
20 Panel Administrator within thirty (30) days of completing all of the work identified in its
21 contract with DuPont.

1
2 **V. PEER CONSULTATION FOR TESTS PERFORMED ON DUPONT'S**
3 **FLUOROTELOMER PRODUCTS AND CORRESPONDING POLYMERS**

4 *A. Peer Consultation Panel and Charges.* As part of this Biodegradation SEP, DuPont
5 shall contract with an independent third party to serve as a Panel Administrator to implement
6 and administer the Peer Consultation process under this Biodegradation SEP.

7 1. The Panel Administrator shall select a Peer Consultation Panel ("Panel")
8 that will address the charges set forth in Section V.A.2, below.

9 a. The Panel Administrator shall solicit potential Panel member
10 nominations from the public, will allow self-nomination, and may nominate potential Panel
11 members. The parties may submit Panel member nominations to the Panel Administrator.

12 b. After receiving Panel member nominations, the Panel
13 Administrator shall develop a pool of potential Panel members that will be subject to
14 comment by EPA, DuPont, and the public.

15 c. After considering all comments received regarding the Panel
16 member pool, the Panel Administrator shall select a potential Panel and submit the potential
17 Panel to EPA and DuPont for comment. The Panel Administrator has the exclusive authority
18 to select the Panel. If both parties, independently, recommend to the Panel Administrator that
19 a particular potential Panel member would not be appropriate to serve on the Panel, the Panel
20 Administrator shall remove such individual from the potential Panel and from the pool,
21 select a new potential Panel from the pool of potential Panel members, and then submit a
22 new potential Panel to EPA and DuPont for comment. The Panel Administrator shall follow

1 this approach until it has selected a final Panel.

2 d. The Panel Administrator shall treat all comments received
3 under Sections V.A.1.b and V.A.1.c as confidential.

4 2. The Panel is charged to:

5 a. Review the approved or accepted protocols that the
6 laboratory used to characterize the Fluorotelomer Products and Corresponding Polymers
7 for chemical characteristics, compositional analysis, oligomeric content, molecular weight
8 distribution, and residual content as discussed in Attachment B of this Biodegradation SEP
9 and determine:

10 i. whether the approved or accepted protocols
11 were sufficiently robust to provide reliable characterization data, and

12 ii. whether the laboratory correctly followed the
13 protocols.

14 b. Review the design and approved or accepted protocol that
15 was used to run each pilot and results for each pilot to provide comments and
16 recommendations for developing a final design and protocol for SCAS studies that will be
17 approved by EPA prior to implementation by the laboratory.

18 c. Compare the pilot results and characterization data of each
19 Fluorotelomer Product to the pilot results and characterization data of its Corresponding
20 Polymer to advise EPA regarding the similarities and differences of the Corresponding
21 Polymers as compared to the Fluorotelomer Products, and which, if any, of the Corresponding
22 Polymers should be used in the biodegradation studies.

1 i. If, based upon such comparison, the Panel can
2 identify one Corresponding Polymer for each Fluorotelomer Product that should be used in
3 the biodegradation studies, the Panel shall so state, and provide a detailed explanation as to
4 why it is appropriate to use only this one Corresponding Polymer in the biodegradation
5 studies.

6 ii. If, based upon such comparison, the Panel cannot
7 identify one Corresponding Polymer for each Fluorotelomer Product but can identify two
8 Corresponding Polymers for a particular Fluorotelomer Product, the Panel shall so state, and
9 provide a detailed explanation as to why it is appropriate to use the two Corresponding
10 Polymers in the biodegradation studies.

11 iii. If, based upon such comparison, the Panel cannot
12 identify two Corresponding Polymers for each Fluorotelomer Product and recommends that
13 all three Corresponding Polymers for a particular Fluorotelomer Product be used in the
14 biodegradation studies, the Panel shall so state, and provide a detailed explanation as to why
15 it is appropriate to use all three Corresponding Polymers in the biodegradation studies.

16 iv. If, based upon such comparison, the Panel cannot
17 identify any Corresponding Polymers for a Fluorotelomer Product and recommends that no
18 Corresponding Polymer be used in the biodegradation studies, the Panel shall so state, and
19 provide a detailed explanation as to why it is not appropriate to use any Corresponding
20 Polymers in the biodegradation studies.

21 v. The Panel shall also advise EPA as to whether
22 the laboratory should run a 14-day pilot test for SCAS on each of the Corresponding

1 Polymers that it recommends should be used in the biodegradation studies but which were
2 not pilot tested by the laboratory performing the biodegradation work.

3 d. Advise EPA regarding which analytes that were
4 measured for in the pilot tests should also be measured for in the biodegradation studies.

5 e. Evaluate the results of the SCAS studies performed on the
6 Fluorotelomer Products and any Corresponding Polymers, and advise EPA as to what the
7 results mean, both for the individual substances and for the group of test substances as a
8 whole.

9 f. Provide comment on whether 14C labeling or other
10 methods would enhance the characterization of the test substances, measurement of the
11 potential for biodegradation, and/or the evaluation of the biodegradation study results. If so,
12 the Panel should describe how, and in what ways, the use of 14C-radiolabeled Lab-scale
13 Synthesized Fluorotelomer Product would increase the usefulness of the results of the
14 characterization and biodegradation studies.

15 3. EPA, after consultation with DuPont, may submit additional, timely
16 charges to the Panel that relate to, and are consistent with, the purposes of this
17 Biodegradation SEP.

18 4. The Panel Administrator may request a clarification from EPA
19 regarding the charges set forth in Section V.A.2, above. Such request must be made in
20 writing. The Panel Administrator will provide DuPont a copy of its written request and
21 EPA will provide DuPont with a copy of its written response to the request, in accordance
22 with Section V.E.8, below.

1 B. *Requirements of Panel Input.* The Panel will provide input to EPA on an
2 advisory basis; such input will be provided by way of a summary document that reflects the
3 individual opinions of the Panel members. The Panel Administrator may designate fewer
4 than all members of the Panel to participate in providing advice on specific charges.
5 Accordingly, at different times during the Peer Consultation process, the Panel may be
6 composed of different experts appropriate to the issue(s), but shall only be composed of the
7 experts that have been selected by the Panel Administrator to serve as members of this Peer
8 Consultation Panel. While consensus is not required, an accurate summary of all opinions
9 expressed by the individual members must be submitted to EPA. The Panel will not operate
10 under a consensus-based process but rather should identify areas of agreement and
11 disagreement, and provide supporting scientific rationale. While EPA will consider the
12 advice and recommendations it receives from the Panel, EPA is not bound by such advice or
13 recommendations.

14 C. Qualifications and Requirements for Panel Members

15 1. The Panel must be composed of scientific experts who, collectively,
16 have extensive and broad experience relevant to such areas as conducting and/or
17 assessing biodegradation testing and environmental fate of polymers, and laboratory
18 analysis and characterization of polymers and fluorochemicals. Specific knowledge of
19 fluorotelomer chemistry is desirable.

20 2. Panel members must have sufficient technical expertise to make
21 meaningful contributions to science-based evaluations.

22 3. Examples of the types of expertise that will be needed include, but are

1 not limited to, conducting biodegradation testing, environmental fate, polymer chemistry,
2 analytical chemistry under 40 C.F.R. Part 792, and/or fluorotelomer/ fluoropolymer
3 chemistry.

4 D. General Requirements for the Peer Consultation Process

5 1. One Panel will be selected by the Panel Administrator and shall be
6 composed of at least four (4) but no more than eight (8) members collectively meeting the
7 qualifications stated in Section V.C.

8 2. In selecting the Panel, the Panel Administrator shall use conflict of
9 interest guidelines approved by EPA. DuPont shall have an opportunity to review and
10 provide comments to EPA regarding the conflict of interest guidelines.

11 3. The Panel Administrator shall submit information to Administrative
12 Record (AR) 226 to ensure that the public has an opportunity to nominate panel members,
13 access to the Panel's sanitized final reports, and access to all sanitized laboratory final
14 reports. The Panel Administrator shall not disclose any information that would be Toxic
15 Substances Control Act Confidential Business Information if submitted to EPA.

16 4. Panel meetings and deliberations will not be open to the public but
17 will be open to DuPont and EPA employees and/or contractors with Toxic Substances
18 Control Act Confidential Business Information clearance. Such Panel meetings and/or
19 deliberations may also be open to other individuals or entities that EPA would like to
20 attend, subject to confidentiality agreements, and prior approval from DuPont.

21 5. If practicable, Panel meetings and deliberations will be held at or near the
22 facilities of the laboratory conducting work relevant to the charge or charges under

1 consideration at such meetings and/or deliberations so that Panel members can visit the
2 laboratory, as needed.

3 6. EPA and DuPont may submit written comments to the Panel
4 Administrator regarding technical documents developed by the laboratories under
5 consideration by the Peer Consultation Panel. The Panel Administrator shall not provide
6 such written comments to Panel members in advance of any Panel meetings or
7 deliberations but only provide such comments to the Panel members at the time of the
8 Panel meetings or deliberations so as not to bias the Panel members' premeeting
9 consideration of any particular issue under consideration.

10 E. Selection and Responsibilities of the Panel Administrator

11 1. By February 1, 2006, the parties will agree to the Panel Administrator.

12 2. By March 15, 2006, DuPont must provide EPA with a final draft of the
13 proposed contract that DuPont and the Panel Administrator have negotiated. The contract
14 shall not be executed by DuPont and the Panel Administrator until EPA has reviewed and
15 either approved or accepted the contract. The contract shall provide for appropriate
16 confidentiality provisions.

17 3. Within seven (7) business days from receipt of EPA's approval (or
18 acceptance) of the proposed contract, DuPont must sign and forward the contract to the
19 Panel Administrator for execution.

20 a. DuPont and the Panel Administrator shall seek to execute
21 the contract within twenty-one (21) days of DuPont's receipt of EPA's approval (or
22 acceptance) of the proposed contract. If DuPont and the Panel Administrator have not

1 executed the contract within twenty-one (21) days of DuPont's receipt of EPA's approval
2 (or acceptance) of the proposed contract in accordance with Section II.G.2, DuPont must
3 inform EPA of the delay, explain the reason for the delay, provide a reasonable estimate as
4 to when the contract will be executed, and exercise its right to an automatic extension
5 provided in Section II.L, above. However, if DuPont believes that, notwithstanding its best
6 efforts, the candidate Panel Administrator will not execute the contract with DuPont, DuPont
7 shall provide notice to EPA of the impasse. EPA reserves the right to contact such candidate
8 Panel Administrator, upon receipt of such notice from DuPont, to inquire why it has not
9 entered into the contract with DuPont. If DuPont and the candidate Panel Administrator
10 have not entered into a contract within fourteen (14) days after EPA's inquiry, unless EPA
11 and DuPont agree to a longer time period, then the parties shall follow the approach set
12 forth in Section V.E.4, below.

13 b. Within five (5) business days from the date that DuPont
14 and the Panel Administrator execute the contract, DuPont must notify EPA that it has
15 entered into the contract with the Panel Administrator.

16 4. If no Panel Administrator enters into a contract with DuPont, the
17 Directors of the Office of Civil Enforcement and the Office of Pollution Prevention and
18 Toxics shall meet with DuPont to discuss appropriate changes that can be made to this
19 Biodegradation SEP to foster Panel Administrator participation in the performance of this
20 Biodegradation SEP. If the parties cannot agree to any such appropriate changes, or if after
21 agreeing to such appropriate changes, no potential Panel Administrators enters into a
22 contract with DuPont, this Biodegradation SEP shall be deemed to have ceased prior to its

1 completion, in which case, DuPont shall not be subject to Section VII.3 of the CAFO but
2 DuPont shall be subject to Section VII. 1 of the CAFO, and the parties may exercise Section
3 VI of the CAFO even though this Biodegradation SEP is not deemed satisfactorily
4 completed.

5 5. ***Peer Consultation Process Work Plan.*** Within sixty (60) days of
6 contract execution, the Panel Administrator must submit to EPA a proposed work plan
7 (including all applicable attachments) that addresses the following:

8 a. The process, schedule, and budget for implementing and
9 administering the Peer Consultation process under this Biodegradation SEP from the date the
10 Panel Administrator executes the contract with DuPont through the date that the Panel
11 Administrator submits to EPA and AR226 the Panel's final report from the last Panel
12 meeting.

13 b. A description of the process for nominating and selecting
14 the Panel members, in accordance with Section V.A. 1, above, and the rationale to be used in
15 determining how many experts to empanel to address the charges.

16 c. The schedule for the Panel to timely address the
17 charges in Section V.A.2 to ensure the most efficient use of the Panel.

18 i. The Panel Administrator shall communicate with
19 the laboratory performing the biodegradation testing to determine if it would be appropriate
20 to have the Peer Consultation Panel review the results of the first pilot test for SCAS and,
21 once the laboratory has begun the full biodegradation studies, the results of the SCAS studies
22 for the first grouping of chemical substances identified in Attachment A, i.e., the three

1 Fluorotelomer Products identified as the A group, and any Corresponding Polymers selected
2 for testing, or any subsequent groupings identified in Attachment A, as appropriate. The
3 Panel Administrator may seek a recommendation from the laboratory with regard to this
4 issue and/or the Panel Administrator may make its own determination after reviewing the
5 data as to whether it is appropriate to convene the Peer Consultation Panel to review such
6 results or to delay the review until all pilot tests and all biodegradation studies are completed.

7 ii. Regardless of how Peer Consultation is handled
8 with regard to reviewing the first pilot test results and biodegradation study results, all pilot
9 tests and biodegradation studies shall be reviewed by the Peer Consultation Panel.

10 d. The proposed conflict of interest guidelines that will be
11 used to screen potential Panel members. The Panel Administrator shall send the conflict of
12 interest guidelines to DuPont concurrent with its submission to EPA. DuPont shall have
13 fourteen (14) business days to provide comments to EPA regarding such conflict of interest
14 guidelines.

15 e. The proposed contract for the Panel members, including
16 the proposed honorarium to be paid to each Panel member.

17 f. The proposed confidentially agreements for the Panel
18 members.

19 g. The process that the Panel Administrator will use to draft,
20 on behalf of the Panel, the Panel's reports. The Panel Administrator must address the
21 following:

22 i. The process and schedule for the Panel
23 Administrator to compile comments from the Panel; and

1 process, the Panel Administrator shall provide such information to the other party in the
2 same form as soon as practicable. The Panel Administrator is not responsible for sharing
3 information it receives in oral or written form from EPA or DuPont; the party providing such
4 information to the Panel Administrator shall concurrently provide the information in the
5 same form to the other party. However, when the Panel Administrator receives a substantive
6 oral or written communication from DuPont or EPA that impacts the Panel Administrator's
7 implementation and/or administration of the Peer Consultation process, it shall notify both
8 parties of the communication and provide a brief written description of the content of the
9 communication.

10 9. Recommendations, Advice, and Conclusions of the Panel

11 a. *Final Panel Reports submitted to the Parties.* Within
12 forty-five (45) days of each Panel meeting, the Panel Administrator shall submit a final
13 written report, on behalf of the Panel, to EPA and DuPont, that addresses the charge or
14 charges under consideration at such meeting.

15 b. *Final Panel Reports submitted to AR 226.* Within thirty
16 (30) days after the Panel Administrator has submitted a final written report to EPA and
17 DuPont, such final written report and a sanitized version of such final written report shall be
18 submitted to AR 226.

19 **VI. MISCELLANEOUS**

20 A. Eligible SEP Costs

21 1. The cost for providing sufficient quantities, as described in Sections
22 II.D-E, above, of the Fluorotelomer Products for characterization, biodegradation pilot

1 tests, and biodegradation studies shall not be an eligible SEP Cost.

2 2. The cost of preparing sufficient quantities, as described in Sections II.D-
3 E, for characterization of Corresponding Polymers identified for pilot testing in Attachment
4 A, and up to two additional Corresponding Polymers that the Panel recommends pursuant
5 to charge V.A.2.c, shall not be an eligible SEP Cost.

6 3. The cost of preparing sufficient quantities, as described in Sections II.D-
7 E, for biodegradation pilot tests of the Corresponding Polymers, as identified on Attachment
8 A, shall not be an eligible SEP cost.

9 4. The cost of preparing sufficient quantities, as described in Sections II.D-
10 E, for biodegradation studies of up to two of the Corresponding Polymers that the Panel
11 identifies pursuant to charge V.A.2.c, shall not be an eligible SEP cost.

12 B. The title, section headings, and sub-headings used in this Appendix A are
13 intended by the parties to assist in reading the document and have no legal meaning or
14 effect.

15 C. Unless otherwise indicated, the word “days” as used in this Appendix refers
16 to calendar days.

17 D. Unless otherwise provided in this Appendix or its Attachments, terms shall have
18 the same meaning as provided in 15 U.S.C §§ 2601 et seq. and 40 C.F.R. Parts 2 and 792.
19 Terms not defined in 15 U.S.C §§ 2601 et seq. and 40 C.F.R. Parts 2 and 792, but that are
20 defined in this Appendix or its Attachments, shall be given the meaning as defined in this
21 Appendix or its Attachments.

22 E. Except as otherwise provided, all communications between the parties,

1 including DuPont's third party contractors, shall be in writing.