OPERATIONS MANUAL FOR BIOBASED

PRODUCT CERTIFICATION PROGRAM

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SEI

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OPERATIONS MANUAL FOR USDA BIOPREFERRED ® PROGRAM

1. Introduction

1.1 SEI administers the certification program for the U.S. Department of Agriculture's (USDA's) Voluntary Biobased Product Labeling Program. This certification and labeling initiative is one part of USDA's BioPreferred program. The BioPreferred program was created by the Farm Security and Rural Investment Act of 2002 (2002 Farm Bill) as a procurement program designed to increase the purchase and use of biobased products in the Federal government. USDA BioPreferred ® Program is now comprised of two parts: (1) the biobased product procurement preference program for Federal agencies, and (2) this voluntary certification and labeling initiative for the broad scale marketing of biobased products. This program allows biobased product manufacturers and vendors the ability to affix a biobased label to their certified products or packaging. The presence of the label means that the product/package meets or exceeds the amount of biobased content per the USDA-established minimum biobased contents, and the manufacturer or vendor has provided relevant information on the product/package. Biobased products already identified within existing product categories under the Federal procurement preference portion of the BioPreferred program must meet the minimum biobased content of the category. For a list of the categories and their related biobased contents, go to: www.biopreferred.gov

Products that do not fall within a pre-identified category must be 25 percent biobased unless the applicant applies for and receives an alternative minimum biobased content allowance.

If you wish to apply for an alternative minimum biobased content allowance, you must appeal to the USDA BioPreferred ® Program, Program Manager. Appeals should be addressed to:

Manager, USDA BioPreferred ® Program
1400 Independence Avenue, SW
Washington, D.C. 20250

Appeals may also be sent via email to biopreferred_support@amecfw.com.
Please indicate "appeal for biobased content allowance minimum" in the subject line.

The purpose of this program is to promote the sale and use of biobased products/packages in the commercial and consumer sectors.

1.2 Applicants who are interested in participating in the USDA program should fill out an application by going to the USDA BioPreferred® Program website at: www.biopreferred.gov.

1.3 Upon acceptance of your application by the USDA, you will be directed to have your product/package certified through the SEI certification program which includes testing for biobased content in accordance with ASTM D6866 Standard Test Methods for Determining

the Biobased Content of Solid, Liquid, and Gaseous Samples Using Radiocarbon Analysis. All relevant documents needed for the certification program are available on the SEI website at: www.seinet.org.

2. Technical Advisory Committee

2.1 *Membership*—The Technical Advisory Committee (TAC) for the Biobased Product Certification Program is made up of representatives from the following groups to ensure a balance of interests: manufacturer, supplier, USDA, third-party laboratory, academia, and a representative from ASTM Subcommittee D20.96 on Environmentally Degradable Plastics and Biobased Products.

2.2 *Responsibilities*—The TAC is responsible for the development of this manual which contains detailed information for the certification program including: program description and rationale; relevant standards or parts thereof; requirements for sampling, testing, and listing of third-party laboratories; and other functions as needed.

2.3 *Changes to the Operations Manual for Biobased Product Certification Program*—Anyone may provide recommended changes to this manual. Please send your recommended changes to the ASTM Certification Department at: cert@astm.org. All recommended changes shall be sent to the Technical Advisory Committee for review and acceptance. All changes must obtain final approval from the Committee on Certification Programs (CCP).

3. SEI Staff

3.1 *Department on Certification Programs*—The department shall have overall administrative and management responsibility for the certification program and perform the following functions:

3.1.1 *Staff Support*—Coordinating SEI staff support to the TAC.

3.1.2 *Forms*—SEI Participant Agreement, USDA BioPreferred ® Program, and Documentation of Sample Selection, Shipping and Disposal by Manufacturer Vendor Form

3.1.3 *Third-Party Laboratories*—Contracting with and monitoring the third-party laboratory(s) performance of test specimen preparation and testing.

3.1.4 *Participant Agreement*—Responsible for development and execution of agreements with participants (manufacturers and vendors) that covers their participation in the certification program; and other matters.

3.1.5 *Budget and Finance*—Develop and supervise the budget and financial matters for the program.

4. Governing Documents of the USDA BioPreferred ® Program

4.1 *General*—Participants are required to abide by the provisions of all the governing documents, including any legal and accounting requirements. Failure to do

so will result in program violations or termination from the certification program or both.

4.2 *SEI Certification Program Manual*—The *SEI Certification Program Manual* outlines the procedures and policies that are common to all SEI product certification programs. Participants will be notified when substantive changes are made to the manual.

4.3 *Operations Manual for USDA BioPreferred ® Program*—The *Operations Manual for USDA BioPreferred ® Program* contains additional procedures and policies that are relevant to this specific program. Where the SEI Certification Program Manual and the *Operations Manual for USDA BioPreferred ® Program* differ, the *Operations Manual for USDA BioPreferred ® Program* shall prevail. The current manual is available from the SEI website. Participants will be notified when substantive changes are made to the manual.

4.4 *USDA Catalog of Certified Products*—The USDA catalog contains the names of participants and their products/packages that are currently certified. The catalog is available on the USDA website at www.biopreferred.gov and is free for the public to access.

5. Participant Contacts

5.1 *Responsibilities of Participant Contact*—Each participant shall designate a participant contact for the certification program. This person is responsible for overseeing the participant's compliance with the certification program rules. This person will serve as the primary point of contact for issues relating to all aspects of certification testing, certification program violations or appeals, and any questions of a technical nature.

5.2 *Updating Contacts*—It is the responsibility of the participant to maintain current contacts and notify USDA and SEI immediately of any changes.

6. Biobased Product Certification Process

6.1 *Participant Agreement*—A participant agreement for participation in the USDA BioPreferred ® Program is available on the SEI website. All applicants shall complete and return the agreement committing them to comply with all requirements of the program and supply all information needed for participation in the program.

6.2 *Third-Party Laboratory*—SEI will maintain a list of third-party laboratories who are accepted by SEI to provide test specimen preparation and testing in accord with ASTM Standard D6866 Test Methods for Determining the Biobased Content of Solid, Liquid, and Gaseous Samples Using Radiocarbon Analysis. Accepted laboratories must have executed an agreement with SEI; be accredited to ISO 17025, General Requirements for the Competence of Calibration and Testing Laboratories; and comply with the SEI Practice for Documentation and Reporting of Laboratory Results for Biobased Products in accord with ASTM Test Methods D6866. The agreement will include details to cover confidentiality, conflicts of interest, impartiality, and

competency. SEI shall obtain documentation to show that it has checked the status of their accreditation and maintain such records.

6.3 *Sample Selection Process*—The participant shall provide the laboratory with a representative sample of the product or packaging to be tested.

6.3.1 *Retail Products*—For those products or packaging that are available in a retail container, the participant shall provide a container that is labeled, sealed, and secured for retail purchase to the laboratory. The container should be the smallest available retail size. If the retail container is of a size not practicable for shipment to a laboratory, the participant shall take a representative sample as detailed in Section 6.3.2.

A retail product is defined as a finished article of commerce which is not for resale but for use and consumption by the consumer.

6.3.2 *Non-Retail Products*—For those products or packaging that are not available in a retail container and are of a size not practicable for shipment to a laboratory, the participant shall take a representative sample of the product ready for distribution. The sample shall be provided in a container, labeled (including: date, lot number, and name of manufacturing facility), sealed, and secured to the laboratory. Biobased products often represent sampling problems specific to a given product, such as heterogeneity, which require employment of specific sampling methods. The participant should make use of sampling methods already accepted and validated by industries that manufacture and/or use the biobased product. Any questions regarding how to obtain a representative sample should be discussed with the laboratory before shipment of the sample.

6.3.2.1 As a general guideline for non-retail products: for solids, provide 0.5 to 10 grams (g); for liquids, provide 1 to 10 milliliters (mL); for solvents (bioethanol, biodiesel, and ethanol), provide 100 to 200 microliters (µL); and for carbon dioxide (CO_2) gases, provide 3 cc within air.

6.3.3 *Inorganic Carbonate*—If the sample contains inorganic carbonate, the participant shall discuss further with the laboratory regarding analysis.

6.3.4 *Volatile Organic Compounds*—If the sample material is a gas containing volatile organic compounds (VOCs), and it is the VOCs to be tested, the participant shall discuss further with the laboratory before shipment of the sample. Note - laboratories can only analyze gases submitted as CO_2 (either pure or in air mixtures).

6.4 *Shipment of Samples*—The participant shall be responsible for shipment costs of the sample to the laboratory and if necessary the return of the sample from the laboratory. If the sample material is not easily disposable, the participant shall contact the laboratory before shipment of the sample and may be responsible for disposal costs. The participant is responsible for all international, federal, and state regulations with regards to shipping, packaging, documentation, and associated liabilities.

6.4.1 *Notification of Damage, Open, Incorrect, or Hazardous Samples*—The laboratory shall notify SEI and the participant by e-mail within 24 hours of receipt of the sample if the sample arrives with outwardly visible damage, unsealed or seal is broken,

or if an incorrect sample has arrived at the laboratory. In addition, any sample that contains hazardous material shall be shipped per international, federal, and state regulations. The laboratory will be available to discuss with the participant regarding details for obtaining a new sample, if necessary.

6.4.2 *Notification of Refusal of Samples*—The laboratory has the right to refuse delivery of any material that is lacking appropriate documentation for hazardous or unsafe sample materials or is in excessive quantity. The laboratory will be available to discuss with the participant regarding details for obtaining a new sample, if necessary.

6.4.3 *Disposition of Samples*—Upon completion of testing, the sample will be disposed of or returned to the participant. For those samples that are easily disposable, the laboratory will handle disposal (be able to be thrown in the trash or taken to the dump). For those samples
that are not easily disposable, the participant shall have contacted the laboratory prior to shipment of the sample to arrange for properly disposing of the sample material or obtaining the left over sample material.

6.5 *Sample Selection, Shipment, and Disposal Form*—The Documentation of Sample Selection, Shipping, and Disposal by the Manufacturer/Vendor Form shall be completed and included with the shipment of the sample.

6.6 *Test Specimen Preparation*—The test specimens shall be prepared by the laboratory such that the analyzed material is representative of the submitted sample. This includes, but is not limited to, combustion of representative test specimens in quantities representative of the whole and homogenization and mixing as required to ensure representative test specimens. Test specimen preparation shall be made such that quantitative recovery of all organic carbon species is achieved to ensure accurate accounting for all fossil and renewably sourced carbon. In the event these requirements cannot be satisfied, the laboratory will immediately contact SEI and the participant with discussion for a plan of action and authorization for analysis. It
is understood that multiple analyses, at the participant's expense, may be required.

6.7 Standard Test Method—Testing shall be conducted in accordance with Method B or C of Test Methods D6866. If the sample material contains inorganic carbonate, the procedure (Option B) in Annex A shall be used.

6.8 Number of Tests Conducted—The participant shall choose one of the following options regarding the number of tests to be performed to determine the biobased content. The participant's selection of an option shall be reported to the laboratory prior to testing. The participant shall be responsible for paying all laboratory fees.

6.8.1 Option 1—A single test shall be performed to determine the biobased content. If the biobased content meets the USDA biobased requirement the product passes. If the biobased content does not meet the USDA biobased requirement the product fails. The result will be submitted to USDA.

6.8.2 Option 2—A single test shall be performed to determine the biobased content. If the biobased content meets the USDA biobased requirement the results will be

provided to USDA. If the biobased content does not meet the USDA biobased requirement, a second test shall be performed at the participant's expense. If the second test passes, a third test shall be
performed. If the third test passes, the average of the second and third tests will be recorded as the biobased content and submitted to USDA. The participant does have the option to cancel further testing if they inform the laboratory within 10 (ten) business days of notification that their first test failed.

6.9 *Testing and Reporting of Results*—Testing shall be completed by the laboratory within 15 (fifteen) business days of receipt of acceptable samples. In the event delays are expected or required, the laboratory shall immediately contact the participant and SEI with an explanation for the delay. The test report shall be provided within 10 (ten) business days after the completion of testing.

Biobased content values that exceed 100% will be reported as having a biobased content of 100%.

6.10 *Certification Decision*—SEI will review all information for completeness including the biobased content and whether it meets the USDA biobased requirement and make a decision on whether certification is granted or not. This information will be communicated to the participant and the USDA for use in the Voluntary Labeling Program.

6.11 Biobased Content Retesting—A participant who desires to have their product's or package's biobased content retested due to failure to achieve the USDA minimum biobased content, changes to the formulation or manufacturing of their product, or other reasons shall submit a new application to the USDA. The biobased content testing result from the new application shall be submitted to USDA and will replace any previous biobased content testing results. The participant shall be responsible for paying all laboratory fees.

6.12 *Records Retention*—Records will be maintained in accordance with the SEI Records Retention Program that provides for confidentiality of records. SEI will maintain all certification documentation for the period that the certification is in effect plus an additional three years.

7. Fees

7.1 *Testing Fee*—All testing fees shall be paid by the manufacturer or vendor to the laboratory.

8. Registering Comments and Complaints

8.1 *Registering Comments and Complaints*—Comments and complaints regarding the operation of the ASTM certification program are to be submitted, in writing, to the SEI Department of Certification Programs. They may include claims such as: violation of procedures, non-impartiality, discriminatory conditions, and violations of confidentiality. They will be noted in the certification program's quality system documentation, and the sender will receive a written or verbal response regarding SEI's intended action.

9. Issuance of Program Violation

9.1 *Program Violation*—When a participant breaches a term(s) of the SEI certification program's governing documents, they will receive a program violation letter via certified mail from SEI. The procedures contained in the SEI Certification Program Manual shall be followed.

10. Appeals Process

10.1 *Appealing a Program Violation*—Appeals of a program violation will follow the SEI Certification Program Manual.