

PFAS in Food Packaging Alternatives Assessment
Attachment B
Tasks and Deliverables Expected

Contractor will provide services and staff, and will carry out activities to perform the tasks listed below. The proposed deliverable dates may be renegotiated during the contract term by mutual agreement of Ecology and the Contractor.

Objective 1 – Project Management

Task 1.1 Administer and Manage the Project Work

- Contractor must manage the project including conducting, coordinating, and scheduling project activities and assuring quality control. Contractor must carry out this project in accordance with any completion dates outlined in this agreement.
- Contractor must ensure this project is completed according to the details of this agreement.
- Contractor may elect to use its own personnel or it may contract for professional services necessary to perform and complete project-related work with Ecology approval.

Task 1.2 Establish and Support Communications and Coordination

- Ecology Coordination – Contractor will organize and schedule meetings with Ecology via web or telephone conference at least once each month during the contract term.

Objective 2 – Interested Party Engagement

Task 2.1 Recruit Interested Parties

- **Identify Interested Parties** – Contractor will identify and invite participation from representatives of affected businesses, NGOs, and the public. Parties invited should be in a position to offer data or experience relevant to the decision criteria identified in the Work Statement. The contractor will provide a list of invited parties to Ecology within one month of contract award. Ecology will use the PFAS CAP listserv and other means to promote communication with interested parties.

Task 2.2 Engage Interested Parties

Contractor will engage interested parties individually and in groups to gather data and experiences to inform the alternatives assessment (AA) and RCW 70.95G requirements.

Task 2.2.1 Summarize Interested Party Input

Contractor will summarize and document input and learnings from interested party engagement on:

- Performance and Practical Substitution
 - Technical specifications (for example, TAPPI test method results) and qualitative tests (for example, qualitative visual staining, and statements of customer acceptance) that are standard practice in assessing performance.
 - Where proposed alternatives involve changes in packaging design or approach, contractor will address factors that determine whether the proposed changes are practicable.
- Alternative Availability and Cost
 - Data on product retail cost ranges or cost differentials to permit comparisons between PFAS-containing and PFAS-free products. Contractor must avoid discussions that would conflict with antitrust laws (<https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws>).

- Data on how proposed alternatives meet the “readily available in sufficient quantity and at comparable cost” and “can be...economically substituted” elements of the law.

Task 2.2.2 Organize and Present at Webinar Events

- Webinar 1 - Product Scope – The proposed set of packaging applications, potential alternatives, and formulation chemicals for evaluation will be presented to interested parties in a webinar. Contractor will prepare presentation materials and hold this webinar no later than March 31, 2019.
- Webinar 2 - Assessment Data – Data on hazard, exposure, performance, cost, and availability will be presented to interested parties in a webinar prior to the final Ecology assessment of alternatives. Contractor will prepare presentation materials and hold this webinar no later than June 30, 2019.
- Contractor will provide drafts of webinar presentations to Ecology no later than one week prior to each scheduled webinar and revise as requested.

Objective 3 –Provide Input and Support on Decision Rules

RCW 70.95G directs that Ecology make the determination of whether safer alternatives are available. Ecology will draft rules and decision criteria to meet requirements of RCW 70.95G based in part on preliminary data gathering by the contractor. Objective 7 addresses contractor obligations to develop data for the four required IC2 AA modules. The contractor will collaborate with Ecology to identify and develop additional data needed to support Ecology’s decision-making processes.

Task 3.1 Provide Input on Hazard and Exposure Decision Rules

- Hazard and exposure will be assessed jointly with GreenScreen® benchmark scores. Additional exposure considerations will be based on the guidelines for Level 1 assessment in the IC2 Guide.
- The contractor will recommend additional assessment as needed to address formulated mixtures.
- The contractor will recommend an approach to assess “improved” hazard and exposure for cases where GreenScreen benchmark scores do not differentiate among alternatives. For alternatives with the same GreenScreen score, the contractor will develop a narrative evaluation to identify improved hazard based on individual hazard endpoints.

Task 3.2 Provide Input on Cost Decision Rule

- Contractor will provide input on how the available cost data can be used to satisfy the requirements of RCW 70.95G regarding cost.

Task 3.3 Provide Input on Performance Decision Rule

- Contractor will provide input on how decision rules should address customer type and market structure. If multiple food packaging applications are considered, the contractor should develop the data needed to fully address each specific application.

Task 3.4 Provide Input on Additional Decision Rules or Criteria

- Contractor will provide input on how the “available in sufficient quantity” and “practicably substituted” requirements identified in the RCW 70.95G can be addressed.

Objective 4 – Specify Chemicals of Concern (PFAS Base-case)

Task 4.1 Identify a PFAS Base-case

- Contractor will propose a chemical or group of chemicals to represent a PFAS base case formulation. The formulation must be compliant with FDA regulations. Food types and conditions of use for the PFAS base-case and alternatives under evaluation should be clearly identified.
- One PFAS base-case will be selected as representative of hazard and exposure for all applications. Ecology must approve the base-case formulation selection.
- Formulation chemical disclosure should meet the best practices identified in the GreenScreen for Safer Chemicals Hazard Assessment Guidance, version 1.3.

Objective 5 – Identification of Alternatives

Task 5.1 Survey PFAS-based Food Packaging Market

- Contractor will assess data from a review of literature and trade journals, interviews with industry experts, and interviews with interested parties to develop a list of specific PFAS-based food packaging applications that should be considered for safer substitution. Identify relevant supporting data that could be used for prioritization, for example, market size.

Task 5.2 Identify Application Areas and Alternatives for Assessment

- In consultation with Ecology, Contractor will identify specific food packaging applications for assessment.
- In consultation with Ecology, contractor will develop a prioritized list of alternatives for evaluation in the selected applications.
- Consultant will verify and provide supporting documentation that proposed alternatives comply with relevant FDA regulations (conditions of use and food type).
- Consultant should develop data to confirm that the alternatives can be practicably substituted.

Objective 6 – Coordinate/Conduct Chemical Hazard Assessments (CHAs)

Task 6.1 Obtain Ingredient Disclosure and Negotiate CBI Considerations

- Coordinate with manufacturers, suppliers or others to obtain disclosure of formulation chemicals and any required nondisclosure agreements
- Formulation chemical disclosure should meet the best practices identified in the GreenScreen for Safer Chemicals Hazard Assessment Guidance, version 1.3.

Task 6.2 Perform Initial Hazard Screens

- Conduct or coordinate initial hazard screens using GreenScreen List Translator or other hazard screening method approved by Ecology. GreenScreen LT-1 substances may not require further assessment if approved by Ecology.

Task 6.3 Obtain/Perform Level 2 Hazard Assessments

- Obtain, conduct, or sub-contract GreenScreen or equivalent assessments of PFAS base-case.
- Obtain, conduct, or sub-contract GreenScreen or equivalent assessments of alternative products.
- Contractor obligation for GreenScreen or equivalent assessments will be limited to \$25,000.
 - These costs will include any upcharge needed to prepare redacted assessments to protect CBI as negotiated with the entity providing formulation data.

- Ecology will review all hazard assessments. Contractor will respond to Ecology feedback and arrange to have assessments revised as mutually agreed by the Contractor and Ecology.

Objective 7 – Develop Additional Data Needed to Assess Alternatives

Data should be developed for each applicable IC2 module and criterion in the law as identified in the Work Statement such that Ecology can make the necessary alternatives assessment decisions. The information should be developed separately for each specific food packaging application, as needed.

Task 7.1 Develop Data Needed to Assess Hazard

- Contractor will provide data and assessments that meet the guidelines for Level 2 Hazard Assessment in the IC2 Guide for a PFAS base-case and the alternatives proposed for final assessment.

Task 7.2 Develop Data Needed to Assess Performance

- Synthesize information from interested party engagement and conduct additional research as needed (e.g., industry product information, literature review) to develop available data on performance for a PFAS product and the proposed alternatives for each application selected.

Task 7.3 Develop Data Needed to Assess Comparative Exposure

- Contractor will provide physicochemical property data, chemical treatment loading rates, and other available information needed to perform a Level 1 Basic Comparative Exposure Evaluation as described in the IC2 Guide.

Task 7.4 Develop Data Needed to Assess Cost and Availability

- Synthesize information from interested party engagement and conduct additional research as needed (e.g., industry product information, literature review) to develop data on cost and availability for a PFAS base-case and the proposed alternatives for each application selected.

Task 7.5 Develop Data Needed to Assess Additional Criteria

- Synthesize information from interested party engagement and conduct additional research as needed (e.g., industry product information, literature review) to develop data on the “available in sufficient quantity” and “practicably substituted” requirements identified in the law.
- Alternatively, the contractor may provide supporting data from interested party engagement that reasonably supports that alternatives meet these additional criteria.

Objective 8: Report Findings

Task 8.1 Document Findings for PFAS Base-case and Alternatives

- Document the process used, sources of information, data, and other information developed for Objectives 3, 4, 5, 6 and 7.
- The contractor will submit a draft to Ecology thirty-days prior to the final report due date. The contractor will respond to Ecology comments and revise the report as mutually agreed.
- The final report will be due August 30, 2019.