Chemical Protective Textiles Challenge GUIDEBOOK

VERSION 1.0

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1.1 The Operational Need

Warfighters and supporting personnel operating in chemical, biological, radiological, and nuclear (CBRN) threat environments may face exposure threats from corrosive acids, acid gases, and fuel-related hazards. Specifically, Hydrofluoric Acid (HF) and fuels (jet and rocket), present hazards that can lead to severe adverse health consequences through skin contact, vapor or aerosol inhalation, material degradation, and contamination of personal protective ensembles and equipment.

Current protective textile systems may not provide the optimal combination of chemical barrier performance, durability**,** flexibility**,** manufacturability**,** and user comfort needed for operationally relevant protection against these combined hazards. The Capability Program Executive for Chemical, Biological, Radiological and Nuclear Defense (CPE CBRND) has a need to identify commercially available or high technology readiness level (TRL) materials that can provide improved protection and can be readily used to produce protective garments and accessories used by the Warfighter. The Chemical Protective Textile Challenge seeks to identify and validate the most promising Commercial Off-The-Shelf (COTS) and high TRL materials capable of protecting against acid hazards, with emphasis on risks associated with HF and hydrocarbon fuels. The goal of this challenge is to engage material manufacturers, innovators, and relevant industry partners to submit candidate materials for review, efficacy testing and down-selection by the evaluation panel. The challenge is designed as a competition, and selected challenge participants will receive awards for submitting most promising solutions.

1.2 Challenge Objective

The objective of the Challenge is to identify and validate commercially available or near-commercial innovative textile materials that provide improved protection against hydrofluoric acid, hydrogen fluoride gas, and fuel hazards while maintaining operationally relevant durability, manufacturability, and potential for integration into Warfighter protective clothing. The challenge will engage material manufacturers and textile innovators to surface high-potential solutions, provide materials to Government for performance evaluation against defined protection and usability criteria, and support down-selection of the most promising materials.

1.3 Challenge Sponsors and Administrators

About CPE CBRND and SPARK

The Capability Program Executive for Chemical, Biological, Radiological and Nuclear Defense (CPE CBRND) is responsible for advancing and delivering integrated chemical, biological, radiological, and nuclear (CBRN) defense capabilities to the Joint Force. CPE CBRND's mission is to provide integrated layered CBRN defense capabilities across

warfighting functions and Combined Joint All-Domain Operations, ensuring that warfighters can operate effectively in contested environments. Through SPARK, its innovation incubator, CPE CBRND engages with industry, academia, and non-traditional innovators to identify and accelerate emerging technologies that address critical capability gaps. The Chemical Protective Textile Challenge is sponsored through SPARK and supported by CPE CBRND's Joint Project Manager for CBRN Special Operations Forces (JPM CBRN SOF) portfolio to identify advanced textile materials that can enhance protection against hydrofluoric acid (HF), hydrogen fluoride gas, fuel-related hazards, and other operational threats while improving the performance and durability of future protective systems.

About AFFOA

Advanced Functional Fabrics of America, Inc. (AFFOA) is a non-profit founded in 2016 and a Manufacturing USA Institute dedicated to accelerating textile technology and manufacturing breakthroughs that strengthen national security, advance domestic industry, and improve quality of life. Through its nationwide Fabric Innovation Network of more than 145 industry, academic, startup, and government partners, AFFOA helps bridge the gap between early-stage innovation and scalable manufacturing by providing technical expertise and development capabilities in technology evaluation, testing, prototyping, supply chain development, and manufacturing readiness.

As the administrator of the Chemical Protective Textile Challenge, AFFOA will leverage its technical expertise and broad domestic textiles ecosystem to convene material innovators and manufacturers, identify novel materials, and support evaluation and selection of promising textile solutions that address critical protection needs for the warfighter against Hydrofluoric (HF) acids, and other fuel hazards.

SECTION 2. DESIRED SOLUTION

2.1 Solution Scope

The Chemical Protective Textile Challenge seeks commercially available or high-TRL (>4) textile-based solutions that can provide improved protection against hydrofluoric acid, hydrogen fluoride aerosols and vapor, and fuel-related hazards. Candidate solutions may include woven or nonwoven textiles, coated fabrics, membranes, laminates, multilayer composites, barrier films, textiles with specialized surface treatments, or other innovative material systems suitable for integration into protective garments, covers, liners, or related protective equipment. Submissions should be sufficiently mature to support near-term testing and evaluation and should demonstrate a credible path toward manufacturability, scalability, and operational use. As part of the Challenge, manufacturers will be asked to provide representative material samples, such as approximately two yards of fabric or equivalent fabric samples or swatches, along with supporting technical data, performance claims, material descriptions, and relevant handling or integration considerations.

2.2 Desired Material Performance

The challenge is seeking materials that demonstrate strong barrier performance against hydrogen fluoride, hydrofluoric acid and fuel-related hazards in liquid, aerosol and vapor states while maintaining the durability, flexibility, and manufacturability required for operationally relevant protective textile systems.

Desired performance metrics, their descriptions and target desired performance are detailed in Table 1. Candidate materials should resist chemical permeation, penetration, degradation, swelling, embrittlement, or loss of mechanical integrity following exposure to target hazards. Although the focus of this challenge is protection against HF and fuels, protection against other challenge chemicals as specified in NFPA 1994 (including Chemical Warfare Agents (CWAs) and Toxic Industrial Chemicals (TICs)) is highly desired.

Solutions should also retain practical textile characteristics, including material burst strength, puncture and tear resistance, adequate means to form strong seams, flame resistance, cold temperature performance, abrasion resistance, and minimal off-gassing. Preference will be given to materials that combine chemical protection, mechanical and environmental performance and lowest weight, thickness, stiffness, thermal and evaporative resistance and highest air permeability. In addition, the evaluation panel will also give preference to materials that can be produced at scale, made in the United States and conform to the Berry Amendment and any applicable DoW procurement laws and regulations, and receive favorable feedback from end users.

Table 1 – Desired material performance metrics and targets

Desired Performance Metric	Description	Desired Performance Target
Vapor and liquid chemical resistance	The material should prevent permeation by specified NFPA 1994 challenge chemicals (including CWAs and TICs, HF and fuels), in both vapor and liquid form for a minimum of 3 hours.	No detectable permeation (<0.1 µg/cm^2/hr) after 3 hours of continuous exposure as per ASTM F739/F1383.
Material burst strength	The textile ability to resist bursting under pressure, simulating stresses from movement or contact with objects.	Minimum burst strength of 100 psi per ASTM D751.
Puncture and tear resistance	The material ability to resist physical damage from sharp objects and tearing forces, which would compromise the chemical barrier.	Puncture resistance ≥11lbf (ASTM F1342); Tear resistance ≥17 lbf (ASTM D2582 / D5587)
Material tensile strength	The strength of the material should be sufficient to ensure overall product integrity.	Materials must withstand a force of ≥30 lbf / 2in. (ASTM D751)
Seam strength	The strength of the seams must be	Seams must withstand a

	comparable to the material itself to ensure overall product integrity.	force of ≥30 lbf / 2in. (ASTM D751, seam strength).
Flame resistance (FR)	The material must not ignite, melt, drip or burn when exposed to a flame for a specified time and must self-extinguish. This is critical for operating in potentially flammable environments.	Must pass the vertical flame test as specified in ASTM D6413, with char length <4in. and afterflame < 2s.
Cold temperature performance	The material must remain flexible and not crack or fracture when exposed to and flexed in extreme cold.	No evidence of cracking or damage after being subjected to a temperature of -13F (-25C) as per ASTM D747.
Abrasion resistance	The ability of the material outer surface to withstand rubbing and friction without compromising the integrity of its chemical barrier.	No visual signs of damage or compromise after a specified number of cycles in a standard abrasion test.
Off Gassing	The material must not release any hazardous volatile compounds when tested, ensuring it is safe for the wearer to breathe inside an encapsulated suit.	Must meet the off-gassing requirements outlined in the NFPA 1994 standard.
Weight	Weight of material should be minimized to reduce weight burden on the Warfighter while still maintaining performance requirements	Lowest weight feasible according to ASTM D3776.
Thickness	Thickness of material has direct impact on product stiffness which is desired to be minimized for comfort and stowage.	Lowest thickness feasible according to ASTM D1777.
Stiffness	Material stiffness has direct impact on comfort and stowage of products.	Lowest stiffness feasible according to ASTM D1388.
Thermal and evaporative resistance	Thermal comfort is of outmost importance to allow Warfighters to wear protective equipment for prolonged missions. Thermal and evaporative resistance should be minimized to increase overall product comfort.	Lowest thermal and evaporative resistance feasible according to ASTM F1868.
Air permeability	Air permeability impacts thermal comfort of protective products and should be maximized if material is still able to maintain chemical and mechanical performance.	Highest air permeability feasible according to ASTM D737.

Important Note: The desired material performance objectives and attributes presented in this section are intended to guide participants toward the operational needs and desired

outcomes of the challenge. While solutions that meet or exceed these objectives are strongly encouraged, materials that do not fully satisfy every performance objective may still be considered if they demonstrate innovative approaches, unique capabilities, compelling performance advantages, or a credible pathway to meeting future operational requirements. Participants are encouraged to submit technologies that show strong potential to advance chemical protective textile capabilities, even if all performance objectives have not yet been fully validated.

SECTION 3. ELIGIBILITY REQUIREMENTS

The Chemical Protective Textile Challenge is open to organizations of any size that are based in the United States, including startups, manufacturers, universities, research institutions, and other entities capable of developing or supplying candidate textile materials relevant to the challenge objectives. Organizations are not required to be AFFOA members to participate in the challenge.

The Challenge is also open to organizations located outside the United States based on qualifying country provisions contained in DFARS 225.003 and the exception for chemical warfare protective clothing acquisitions contained in DFARS 225.7002-2(m)(2), which permits acquisitions of chemical warfare protective clothing and components thereof when the acquisition furthers an agreement with a qualifying country. As of February 2026, qualifying countries include Australia, Austria, Belgium, Canada, Denmark, Egypt, Estonia, Finland, France, Germany, Greece, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, Turkey, and the United Kingdom. The Challenge Sponsor and Administrator reserve the right to update eligibility requirements and qualifying country determinations if applicable regulations or program requirements change.

SECTION 4. CHALLENGE PROCESS AND TIMELINE

4.1 Challenge Process Overview

The Chemical Protective Textile Challenge is a multi-phase competition designed to identify, evaluate, and validate innovative textile materials that can improve protection against hydrofluoric acid (HF), fuel-related hazards, and other operational threats.

The challenge combines industry engagement, technical evaluation, end-user feedback, and independent material testing to identify the most promising solutions for future protective systems. Participants will progress through a structured evaluation process consisting of six steps, culminating in the selection of a challenge winner.

Step 1: Industry Day and Pitch Registration

An in-person industry day will be held on August 4, 2026, in Fayetteville, North Carolina. This event will provide an opportunity to gain additional insight into the

operational problem, the challenge objectives and evaluation process, engage directly with government stakeholders and end users, and showcase your solution to the government panel. Participants will have the opportunity to present their solution(s) during a private pitch session with AFFOA, Government subject matter experts, and end users focused on understanding material performance, operational relevance, and future potential. Participation in the industry day and the pitch is optional. Interested parties will be able to apply to the Challenge even if they do not participate in the industry day. To secure a pitch session spot at the Industry Day, registrants will be expected to submit a request form with information about their company, proposed solution and available performance information.

Find out more and register for Industry Day by July 31, 2026 here:
affoa.org/industryday
To request a Pitch Session spot, fill out this form by July 24, 2026:
affoa.org/pitchrequest

Step 2: Attend Industry Day
Participants are highly encouraged to attend the in-person Industry Day on August 4th, 2026 in Fayetteville, North Carolina. This event will provide an opportunity to gain additional insight into the operational problem, the challenge objectives and evaluation process, engage directly with government stakeholders and end users, and showcase your solution to the government panel. Participants will have the opportunity to present their solution(s) during a private pitch session with AFFOA, Government subject matter experts, and end users focused on understanding material performance, operational relevance, and future potential. Pitches will be done in person at the Industry Day.

Step 3: Official Challenge Submission
Participants must submit the required Candidate Material Information and Samples Package by the September 15, 2026 submission deadline to be considered for evaluation. Submission materials are detailed in ***SECTION 5. Challenge Submission*** Requirements below and include a company overview, technical information, performance data, manufacturing information, supporting test reports, and material samples.

Step 4: Submission Evaluation & Semifinalist Selection
Participant submissions will be reviewed by the Challenge Evaluation Panel to assess against key evaluation criteria detailed in Table 2**,** including technical performance, relevance to the challenge objectives, manufacturability and potential operational value. Based on this evaluation, up to three semifinalists will be selected to advance to the Material Testing and Validation phase and receive an award of $5,000 each. The selectees will provide AFFOA sufficient material quantity to perform material

testing and validation.

Step 5: Material Testing, Validation & Final Selection
Semifinalist materials will undergo independent testing to evaluate performance against challenge objectives and key performance parameters. Testing may include assessments of chemical resistance, fuel resistance, mechanical durability, environmental performance, and other characteristics relevant to operational use.
Testing results, participant submissions, and end-user feedback will be reviewed by the Challenge Evaluation Panel to identify the solution that best addresses the operational needs of CPE CBRND.

Phase 6: Winner Announcement and Award
One finalist will be selected as the Challenge Winner and will receive the final challenge prize ($5,000). Results will be announced publicly through official challenge communication channels.

Note: Participation in the challenge does not constitute government endorsement, a contract award or guarantee future funding, procurement, or transition opportunities.

4.2 Challenge Timeline

Phase	Date/Deadline	Description
Industry Day Pitch Registration	**July 24, 2026**	Submit request for pitch spot with requested information
Industry Day Registration	**July 31, 2026**	Register to attend the Industry Day
Industry Day	**August 4, 2026**	In-person event and private pitch sessions
Challenge Submission Deadline	**September 15, 2026 by 8PM EDT**	Deadline to submit candidate material information and samples package
Semifinalist Announcement	**October 8, 2026**	Up to three semifinalists selected and awarded $5K each
Semifinalist Material Submission Deadline	**October 15, 2026**	Deadline for semifinalist to ship material for testing
Semifinalist Testing & Evaluation	**October 15, 2026- December 15, 2026**	Independent testing and evaluation of Semifinalist materials
Winner Announcement	**January 15, 2027**	Challenge winner announced and awarded $5K

4.3 Industry Day Expectations
Industry Day will be held in Fayetteville, NC on August 4th, 2026 and is designed to provide prospective participants with a deeper understanding of the operational challenges, technical

objectives, and evaluation considerations associated with the Chemical Protective Textile Challenge. The event will bring together representatives from CPE CBRND, AFFOA, operational end users, and industry stakeholders to facilitate information exchange and foster engagement between technology developers and challenge stakeholders and sponsors.

Private Pitch Sessions:
A key component of Industry Day is the opportunity for participants to present their technologies during dedicated private pitch sessions. These sessions are intended to provide participants with direct access to AFFOA, government subject matter experts, and end users in a focused discussion environment. In order to secure a pitch spot, participants will need to submit a request by July 24, 2026 via this form: affoa.org/pitchrequest . Pitch participants should be prepared to share material samples and discuss their material's technical capabilities, performance characteristics, manufacturing readiness, operational relevance, and potential advantages over existing solutions. Additional information about the duration of the pitch and the format will be provided closer to the industry day.

Demo Tables:
In addition to private pitches, there will be tables available for Participants to display their material solutions during the networking portion of the event. Participants are encouraged to bring material samples to touch and feel, supporting technical data, product literature, and other information that may assist in communicating the capabilities and maturity of their proposed solution. This will provide participants with an opportunity to engage with end users and other government stakeholders whose feedback will also be collected and taken into account as part of the down-selection process.

Industry Day is designed to foster information exchange and provide participants with valuable stakeholder feedback; however, attendance is not required to participate in the challenge. To be considered for evaluation, participants must submit a complete Candidate Material Package and required material samples by the official challenge submission deadline.

Find out the most up-to-date information on Industry Day, Register and Request a Pitch Spot at the Industry Day Website here: affoa.org/industryday

4.4 Industry Day – Pitch Request Submission
The submission to pitch during the Industry Day is optional but highly encouraged to allow interested parties to pitch their solutions to the evaluation panel, and for government stakeholders to learn about the available solutions. Please submit the following information during the Industry Day Pitch registration:

4.4.1 Company Information

- **Point of Contact (POC):** Name, title, direct phone number, email address, and LinkedIn profile link (optional) of the designated program or technical lead.
- **Corporate Identifiers:** Legal company name, Unique Entity ID (UEI), CAGE Code, or DUNS number.
- **Corporate Website:** URL to the official company website or relevant defense/industrial division landing page.
- **Organization Type**: Classification of the entity's structural type (Traditional, Non-Traditional, Startup, For-Profit, Non-Profit, Academic Institution, Research Institute, Small Business, other)
- **Brief Company Description:** 2-4 sentence description of the organization (background and capabilities).
- **Operational Locations:** Headquarters address, primary manufacturing/facility locations, to understand current domestic or international supply chain footprints.

4.4.2 Proposed Solution Information

This section should describe the proposed solution and its readiness for scaling:

- **Proposed Solution Description:** Describe the proposed solution.
- **Development & Manufacturing Status:** Describe the technology and manufacturing readiness levels of your solution.
- **Sample Availability**: Will you be able to bring samples of your material to showcase at the Industry Day

SECTION 5. Challenge Submission Requirements

To be considered for the Chemical Protective Textiles Challenge, applicants must provide a comprehensive submission package that demonstrates both the technical validity of their material and their organization's capacity to scale production. Submissions must clearly address the desired material and performance metrics and targets as detailed in Table 1.
Please submit the information via the form located on the opportunity webpage at affoa.org/textile-challenge by September 15, 2026 at 8PM EDT.

5.1 Required Submission Materials - Challenge

The submission package consists of four distinct components.

5.1.1 Company Information

Applicants must establish their organizational eligibility and operational baseline by providing:

- **Point of Contact (POC):** Name, title, direct phone number, email address, and LinkedIn profile link (optional) of the designated program or technical lead.
- **Corporate Identifiers:** Legal company name, Unique Entity ID (UEI), CAGE Code, and/or DUNS number.
- **Corporate Website:** URL to the official company website or relevant defense/industrial division landing page.
- **Organization Type**: Classification of the entity's structural type (Traditional, Non-

Traditional, Startup, For-Profit, Non-Profit, Academic Institution, Research Institute, other)
- **Organization Size:** Small vs. Large, Employee Count
- **Brief Company Description:** 2-4 sentence description of the organization (background and capabilities).
- **Operational Locations:** Headquarters address, primary manufacturing/facility locations, to understand current domestic or international supply chain footprints.

5.1.2 Proposed Solution Information

This section should describe the proposed solution and its readiness for scaling:

- **Proposed Solution Description:** Describe the proposed solution, include the scientific and technical basis to its desired properties. You may include a detailed technical breakdown of the materials used or chemical composition, architecture of the proposed solution. Include images of the textile material.
- **Comparison to Commercial of The Shelf (COTS) Solutions**: Please describe how your solution compares to existing COTS solutions, and the innovative elements of your solution that offer benefit to solve the described challenge.
- **Development & Manufacturing Status:** Describe the technology and manufacturing readiness levels of your solution. Please elaborate on current production capacity, path for scale up, production location and any supply chain risks associated with material production and supply.
- **Existing Applications:** A summary of current commercial or military products and use cases for the material.

5.1.3 Performance Information and Data

Applicants should supply quantitative performance test results of their solution. Please provide test results for each metric listed in Table 1 and the relevant standard and conditions for the tests performed. If no testing has been performed for any of the metrics, please mark it as N/A. If available, please provide 3rd party test result reports as an attachment. Please describe any additional testing performed that are not listed in Table 1 that is relevant to the challenge.

5.1.4 Manufacturing and Supply Chain Plan

- **Manufacturing Plan**: Detailed plan outlining the path to full-scale production, including current and projected lead times, and a description of the quality management system in place.
- **Supply Chain Resilience Analysis**: Identify key suppliers for raw materials and critical components, and assess potential supply chain vulnerabilities (e.g., single-source suppliers, geopolitical risks). This is critical for ensuring the long-term availability of the material for the warfighter.
- **Cost Analysis**: Provide projected cost per unit (e.g., per square meter or linear yard) at different production volumes (e.g., pilot, low-rate, and full-rate production). This will

help the DoW assess the affordability of the solution.

5.1.5 Lifecycle and Sustainability Information

- **Shelf Life and Maintenance:** Data on the material's expected shelf life and any specific storage or maintenance requirements.
- **Disposal and Environmental Impact**: Information regarding the recommended disposal procedures for the material and any data on its environmental impact. This is increasingly important for modern military programs.

5.1.6 Physical Samples

- **Challenge Submission:** Challenge applicants will ship best representation of their materials to be evaluated by the evaluation committee. Three (3) samples (each sample not larger than a swatch of 6 x 6 inches) are requested to accommodate review in multiple physical locations. Please ship all samples to the following address:

  AFFOA
  Attn: Michael Rein
  135 South Road
  Suite #201
  Bedford, MA 01730

  Note: Shipping expenses **will not** be reimbursed by AFFOA nor the Government.

5.2 Challenge Submission Formatting Guidelines

To ensure an equitable and streamlined evaluation process, all digital materials must strictly adhere to the following formatting standards:

- **Templates:** Participants must utilize the official template provided on the challenge webpage for Submission Components highlighted above in Subsections 5.1.1-5.1.5. Altering the structural layout or removing required fields from these templates will result in administrative rejection.
- **Font and File Formats:** Documents should be single-spaced and use a minimum of 11-point font size to ensure readability. All digital submission components outlined in Subsection 5.1.1-5.1.5 must be submitted as a consolidated Word document or searchable PDF.
- **Figures, Tables, Graphs, and Images***:* Figures and tables must be numbered and referenced in the text by that number. They should be of a size that is easily readable and may be in landscape orientation.
- **Page Numbering:** Page numbers are requested, starting with the cover page.
- **Naming Conventions:** All uploaded files should be uniformly named including company name, chemical protective textile challenge, and file descriptor.

5.3 Submission Process

Candidate Material Information Package Submission:
Participants shall fill out the form/templates, upload and submit their completed Candidate Material Information Package via the official Chemical Protective Textiles Challenge Form located on the opportunity webpage, including supporting documentation and attachments, no later than the submission deadline identified in Section 4.2, September 15, 2026 by 8PM EDT.

The submission form and instructions are located on the Challenge Webpage affoa.org/textile-challenge. Applicants are responsible for ensuring that all required information and supporting materials are submitted in accordance with the requirements outlined in Sections 5.1 and 5.2.

5.4 Semifinalist Testing Material Submission
Down-selected semi-finalists must ship a minimum of nine (9) swatches of at least 6x6 inches in size or two (2) contiguous linear yards of full-width roll goods (54 in minimum width) to AFFOA at the aforementioned address in Section 5.1.4.

Note: Shipping expenses **will not** be reimbursed by AFFOA nor the Government.

SECTION 6. EVALUATION PROCESS AND SELECTION CRITERIA

6.1 Evaluation Panel
The evaluation panel will be composed of AFFOA, industry and Government subject matter experts and end users. The panel will review manufacturer submissions, supporting technical data, end-user feedback, and available test results against the challenge requirements and evaluation criteria. The panel's role will be to assess the technical merit, operational relevance, manufacturability, and transition potential of submitted materials and support the down-selection of the most promising candidates for further testing and final award consideration.

6.2 Evaluation Criteria
Submitted solutions will be evaluated based on criteria described in Table 2. Various weights will be assigned for each category.

Table 2 - Evaluation Criteria

Scoring (5 points is the highest score; 1 point is the lowest score)	
Evaluation Criteria	
Chemical Protection Performance (25%)	
There is clear demonstration of solution resistance to hydrofluoric acid, jet fuel, and rocket-fuel-related hazards; Favorable performance in permeation, penetration, breakthrough time, and degradation after exposure.	5 pts: Strongly Agree 4 pts: Agree 3 pts: Neither Agree nor Disagree 2 pts: Disagree 1 pts: Strongly Disagree

Material Durability (15%)	
There is clear demonstration of desired mechanical performance of the solution.	5 pts: Strongly Agree 4 pts: Agree 3 pts: Neither Agree nor Disagree 2 pts: Disagree 1 pts: Strongly Disagree
Operational Usability (10%)	
The is a clear demonstration of desired weight, thickness, flexibility, drape, comfort, breathability and suitability for integration into protective garments or equipment.	5 pts: Strongly Agree 4 pts: Agree 3 pts: Neither Agree nor Disagree 2 pts: Disagree 1 pts: Strongly Disagree
Manufacturability and Scalability (15%)	
Availability as COTS or high-TRL material, production maturity, domestic supply-chain outlined, ability to provide yardage, and realistic path to scale-up. Clarity and feasibility of the manufacturing plan, maturity of the quality management system, and credibility of the projected production costs.	5 pts: Strongly Agree 4 pts: Agree 3 pts: Neither Agree nor Disagree 2 pts: Disagree 1 pts: Strongly Disagree
Integration Feasibility (10%)	
Compatibility with sewing, sealing, bonding, lamination, garment construction, seams, closures, gloves, boots, or other protective-system interfaces.	5 pts: Strongly Agree 4 pts: Agree 3 pts: Neither Agree nor Disagree 2 pts: Disagree 1 pts: Strongly Disagree
Domestic Manufacturing (10%)	
Solution is produced in the United States and is compliant with the Berry Amendment regulations.	5 pts: Very Likely 4 pts: Likely 3 pts: Neutral 2 pts: Unlikely 1 pts: Very Unlikely
Supply Chain Resiliency (15%)	
Demonstrated understanding and mitigation of supply chain risks. Strength and security of the supply chain for raw materials and critical components	5 pts: Strongly Agree 4 pts: Agree 3 pts: Neither Agree nor Disagree 2 pts: Disagree 1 pts: Strongly Disagree

SECTION 7. AWARDS

7.1 Challenge Prize Awards

The Chemical Protective Textiles Challenge is designed to identify and evaluate innovative textile technologies capable of addressing critical chemical and fuel protection needs for military and operational applications. In addition to monetary awards, selected semifinalists will receive the opportunity to have their materials independently evaluated and tested against challenge-relevant performance objectives.

Challenge Semifinalists

Up to three (3) semifinalists will be selected following evaluation of submitted Candidate Material Information and Sample Packages. Each semifinalist will receive a $5,000 award and advance to the testing and validation phase of the challenge. During this phase, semifinalist materials will undergo independent testing and evaluation to assess performance against challenge objectives. Selected set of testing results and performance data generated through the challenge may be provided to the semifinalists for visibility.

Challenge Winner

Following completion of testing and final evaluation activities, one (1) Challenge Winner will be selected from the semifinalist pool. The Challenge Winner will receive an additional $5,000 award in recognition of the demonstrated performance, innovation, and operational relevance of their technology.

Award category	Number of Awards	Award Amount
Semifinalist Award	Up to 3	$5,000 each + Testing Results
Challenge Winner	1	Additional $5,000

AFFOA reserves the right to make fewer awards than anticipated, modify award amounts, or elect not to issue an award if submissions do not meet challenge objectives or minimum evaluation standards.

7.2 Important Award Conditions and Disclaimers

Award recipients will be notified directly by AFFOA following completion of the applicable evaluation phase. Award payments are subject to verification of eligibility, execution of any required documentation, and compliance with applicable federal, state, and local laws and regulations.

Participants should be aware of the following conditions governing the Chemical Protective Textiles Challenge and any associated awards:

- **Challenge awards are prizes**. Awards provided through this challenge are prize payments and are not grants, contracts, cooperative agreements, or other procurement instruments.
- **Participation does not create a contractual relationship**. Participation in the challenge and receipt of an award do not constitute a contract award, procurement action, or agreement with AFFOA, CPE CBRND, the Department of War, or the U.S. Government.
- **No guarantee of future procurement or funding**. Participation in the challenge, selection as a semifinalist, receipt of testing support, or designation as the Challenge Winner does not imply or guarantee future funding, procurement opportunities, follow-on work, transition activities, or business relationships.
- **No endorsement implied**. Selection as a semifinalist or Challenge Winner does not constitute endorsement, certification, approval, or validation of a participant, organization, product, or technology by AFFOA, CPE CBRND, the Department of War, or the U.S. Government.
- **Challenge decisions are final**. All evaluation, selection, award, and eligibility determinations made by AFFOA and the challenge evaluation panel are final and not subject to reconsideration.
- **Awards are not subject to protest**. The Chemical Protective Textiles Challenge is a

prize competition and not a procurement action. As such, challenge decisions, award determinations, and participant selections are not subject to bid protest, procurement protest, or similar challenge procedures.

- **Participant responsibility**. Participants are solely responsible for any taxes, reporting requirements, fees, permits, licenses, or other obligations associated with participation in the challenge or receipt of an award.

AFFOA reserves the right to modify challenge requirements, timelines, award structures, evaluation procedures, or other aspects of the challenge, or to cancel the challenge in whole or in part, at its sole discretion.

7.3 Recognition and Publicity

Semifinalists and the Challenge Winner may be publicly recognized by AFFOA, SPARK, CPE CBRND through the Challenge webpage, press releases, social media, presentations, reports, industry events, award announcements, and other challenge-related communications.

By participating in the challenge, participants grant AFFOA, SPARK, and CPE CBRND the right to identify their organization as a challenge participant, semifinalist, or Challenge Winner, as applicable. Participants further grant AFFOA, SPARK, and CPE CBRND the right to use their organization name, logo, technology name, and non-confidential descriptions of their submitted technology for challenge-related publicity, promotional, reporting, and recognition purposes.

Recognition opportunities may include, but are not limited to:

- Recognition as a semifinalist or Challenge Winner.
- Inclusion in Challenge summary materials, reports, and presentations to CPE CBRND.
- Inclusion on the Challenge webpage and award announcement materials.
- Participation in press releases, media announcements, and social media communications related to the Challenge.

AFFOA, SPARK, and CPE CBRND will not knowingly disclose proprietary, confidential, competition-sensitive, or otherwise restricted information submitted as part of the challenge without the participant's prior written consent, except as required by law.

Recognition as a participant, semifinalist, or Challenge Winner does not constitute endorsement, certification, or approval of a participant, organization, product, or technology by AFFOA, SPARK, CPE CBRND, the Department of Defense, or the U.S. Government.

SECTION 8. ADMINISTRATIVE TOPICS

8.1 Confidential and Proprietary Information

AFFOA understands that it may be desirable to include information considered confidential and proprietary by the Participants to convey the technical merits of the proposed solution fully and effectively. All submitted proposals will be distributed for review to a select group of AFFOA staff member evaluators and U.S. Government stakeholders. AFFOA staff member evaluators are bound to customary confidentiality provisions under their employment agreements (no less than reasonable care standard). AFFOA reserves the right to engage other persons or entities as part of the submission review and evaluation process (e.g., third-party SMEs), in which case AFFOA will require such evaluators to enter into a non-disclosure agreement with customary confidentiality provisions. AFFOA encourages Participants to include publicly available information and content when available. Any information the Proposer deems “proprietary” should be clearly and conspicuously marked as such in the submission and be limited to the minimum necessary to convey the highlights of the technical approach. Additionally, Proposers should refrain from including Export Controlled or trade secret information in their submissions. If a Proposer believes that the inclusion of Export Controlled or trade secret information is required to respond to the technical topic fully or to convey the merits of their proposal fully, they should reach out to AFFOA at challenges@affoa.org prior to the submission deadline.

8.2 Intellectual Property

Proposers shall retain their rights to the background and foreground IP. No foreground IP is expected to be generated through awards provided to selected proposers.

8.3 Public Release

Participants may publicly reference their participation in the Chemical Protective Textiles Challenge. However, participants shall not imply endorsement, certification, approval, or sponsorship of their organization, products, or technologies by AFFOA, SPARK, CPE CBRND, the Department of War, or the U.S. Government.

Participants are responsible for ensuring that any public statements, press releases, marketing materials, or other communications related to the challenge are accurate. Any use of AFFOA, SPARK, or CPE CBRND names, logos, trademarks, or branding shall comply with applicable policies and may require prior written approval.

8.4 Questions, Communication, and Contact Information

AFFOA is committed to ensuring that all participants have equal access to challenge information throughout the competition period. The official sources of information for the Chemical Protective Textiles Challenge are the Challenge webpage and Challenge email inbox.

Challenge Webpage: affoa.org/textile-challenge

The Challenge Webpage will serve as the primary source or challenge announcements,

registration information, submission instructions, FAQs, timelime updates and other participant resources.

Challenge Email: challenges@affoa.org
Participants may submit questions regarding challenge requirements, eligibility, Industry Day, submission procedures, evaluation criteria, and other administrative matters via email. Questions and responses that may be relevant to multiple participants may be shared through the Challenge Website or FAQs to ensure equal access to information. Questions, submissions, and other challenge-related correspondence should include "Chemical Protective Textiles Challenge" in the subject line to facilitate timely processing.

Participants are responsible for monitoring the Challenge Webpage and email addresses provided in submission materials for official communications, updates, and notifications related to the Challenge.

AFFOA reserves the right to issue clarifications, updates, or modifications to challenge requirements, deadlines, and procedures at any time. Such updates will be communicated through official challenge channels and will supersede any prior verbal or informal communications.