12 August 2026

CONTRACTOR SUBMISSION PACKET

Project: Automated Fluidized Bed Mixer Facility Modernization

Agency: Pine Bluff Arsenal (PBA)

Reference: CSO under 10 U.S.C 4022 and DFARS Subpart 212.70

COVER PAGE AND ADMINISTRATIVE DATA

- Company Name:
- Company Address:
- Point of Contact:
- Cage Code/UEI:
- Submission Date:
- Submission Phase:

Security and Submission Reminder: All submissions must be UNCLASSIFIED and ore-scanned for malicious code. The maximum allowable email size is 10MB. Submissions must be in Word/PDF/ Power point of a maximum of 5-page paper or 15-slide deck. Do not submit files via .zip format or third-party cloud links.

PART1: PHASE 1-SOLUTION BRIEF

(*Instructions: This section must be kept strictly to 5 pages or less if submitted as a paper, or a maximum of 15 slides if submitted as a presentation. Align your answers with the fields below.*)

1.1 Description of Solution

Provide a concise description of your quoted automated, high precision mixing, granulation, and drying fluidized bed mixer system (800 to 1200ln batch capacity) to replace the 25+ year -old legacy system.

1.2 **Implementation approach**

Outline how the proposed system will be integrated into Pine Bluff Arsenal's operational framework. Explicitly detail how it interfaces with existing facility power and environmental controls without requiring a complete building overhaul.

1.3 Capability, Availability and Maturity

Describe the current developmental, lifecycle, or commercial readiness state of your proposed system. Attach or integrate your commercial specification sheet in Section 1.8.

1.4 Scalability

Describe how your solution scales to support agile, end-to-end sustainable growth and long-term manufacturing modernization at PBA.

1.5 Benefits

State the clear advantages of your proposed solution. At a minimum, detail how your system will achieve:

- A minimum 30% throughput improvement over legacy systems
- Sub-millimeter granulation consistency.
- 95% operational availability and 95% repeatability.
- Raw material weighing accuracy within 1.5%.

1.6 Key Challenges, Risks and Mitigation Strategies

Identify the primary technical and environmental challenges of this deployment, and your mitigation strategies. You must specifically address:

1. Humidity Control: How the system will process highly hygroscopic materials (sugar and potassium chlorate) without absorbing humidity in environments averaging 72% to 95% daily summer humidity.
2. De-clumping: Your approach to potassium chlorate de-clumping and particle size reduction.
3. Particulate Containment: Minimizing particles released into the surrounding air during transferring and weighing.

4. Safety and Fire Mitigation: Automated “fail-safe” shutdown protocols for temperature/pressure spikes, a High-Speed Fire Detection and Suppression System, and automated venting for closed systems (venting completely without deflagrating in the event of a fire).

1.7 Chemical Compatibility and Hazardous Environment Compliance

The quoted equipment must be compatible with the following chemicals and rated fir Class I & II, Division 1 hazardous environments where noted. Please complete the compliance table below.

Chemical Category and Name	Spec/Standard Reference	Class I & II, Div 1 Compliant? (Y/N)	Contractor Compatibility and Engineering Comments
Dyes			
Dye, Red III	MIL-DTL-3284		
Dye, Violet IV	MIL-DTL-3691		
Dye, Solvent Yellow 33	MIL-DTL-51485		
Dye, Solvent Green 3	MIL-DTL-3277		

OXIDIZERS			
Potassium Chlorate	MIL-P-150 / MIL-DTL-150		

FUELS			
Sulfur, Grade E	MIL-S-487		
Sugar	A-A-20135 (Type 1 Style C/Class D)		

COOLANTS AND MODIFIERS			
Sodium Bicarbonate, Class 1	A-A-374		
Magnesium Carbonate	MIL-M-11361 / MIL-DTL-11361		

Terephthalic Acid (TA)	Drawing/Spec 13-19-824		

BINDERS AND PROCESS AIDS			
Polyvinyl Alcohol	MIL-P-265		
Steric Acid	MIL-S-271		
Nitrocellulose	MIL-DTL-244		
Pentaerythritol (PE)	Drawing/Spec 36-1-317		

ADDITIVES AND FLOW AGENTS			
Tricalcium Phosphate	Commercial		

1.8 **Commercial Specification Sheet**

Attach or paste your standard commercial specification sheet detailing the technical limits and physical dimensions of the proposed system below.

1.9 Pricing Model, Term Duration and ROM Pricing

Provide a high-level financial overview to establish financial feasibility under FAR Part 12 (Commercial Items).

- Term Duration (Anticipated Project Lifecycle): [Insert Months/Years]
- Rough Order of Magnitude (ROM) Pricing:
  Equipment and Hardware [Insert ROM Price]
  Integration, Engineering and Setup: [Insert ROM Price]
  Estimated Total ROM: [Insert Total ROM Price]
- Other Cost/ Price Considerations/ Proposed Business Model: e.g., procurement model, warranty programs, service level agreements)

PART 2: PHASE 3-FULL QUOTE

(Instructions: complete this section ONLY if formally invited by the Contracting Officer following Phase 2. This section serves as a baseline for negotiations of a Firm-Fixed-Price (FFP)).

2.1 **Statement of Work (SOW)**

Provide a detailed, draft Statement of Work. Use the following structured outline:

1. Background and Scope:
2. Contractor Responsibilities:
3. Government Responsibilities:
4. Site Delivery, Installation, and Commissioning:
5. Training and Handover:

2.2 **Detailed Technical Specifications and Engineering Drawings**

Provide comprehensive engineering evidence to verify structural integrity and safety system performance.

- Engineering Drawings Reference:
- Regulatory Compliance Matrix:
- Safety Venting Schematics:

2.3 **Firm-Fixed Price (FFP) Detailed Breakout**

Provide a fully transparent, granular cost breakout for the entire program.

ITEM ID	DESCRIPTION	UNIT PRICE	QTY	TOTAL PRICE (USD)
1.0	Fluidized Bed Mixer Core Equipment (with PLC and integrated sensors)	$		$
2.0	De-clumping, Weighing, & Transfer Sub-systems	$		$
3.0	High-Speed Fire Detection & Suppression System	$		$
4.0	Transportation & Logistics (Specialized freight to PBA)	$		$
5.0	**On-site Installation, Integration, & Commissioning**	$		$

6.0	**On-site Operator & Maintenance Training**	$		$
7.0	**Spare Parts Kit & Maintenance Support Terms (optional)**	$		$
	TOTAL FIRM-FIXED- PRICE (FFP)			$

2.4 Execution, Schedule, and Logistics Plan

Outline your logistics and schedule parameters for delivery to Pine Bluff Arsenal.

- Manufacturing/ Procurement Lead times:
- Transportation and Site Delivery Plan:
- Site Preparation Requirements:
- Adherence to Department of the Army/DoW Security Protocols:
- Milestone Schedule: