TEXTRON Systems

277 Dominy Corner Road
Blackstone, Virginia 23824

December 1, 2021

U.S. Department of Transportation
Docket Operations M-30
1200 New Jersey Ave., SE
Room W12-140, West Building Ground Floor
Washington DC 20590-0001

Re: Petition of Textron Systems for Grant of Exemption Pursuant to 49 U.S. Code § 44807 - Special authority for certain unmanned aircraft systems

To Whom it may concern,

Pursuant to 49 U.S. Code § 44807, Textron Systems files this petition seeking exemption from the Federal Aviation Regulations (FAR) for the operation of the Aerosonde unmanned aircraft (UAS).

Relief from the requested FARs will allow commercial, non-public aircraft, UAS Operations at Allen C. Perkinson (KBKT) airport with a level of safety consistent with conventional aircraft operations. Informed by lessons learned from over 3,000 National Airspace System (NAS) integration aeronautical research flights (conducted at KBKT) we intend to utilize proven methods, policies, and procedures to replicate our exemplary safety record. The processes and procedures developed to conduct this operation will provide a level of safety at least equal to that provided by the rules evidenced by the proposed mitigations and documented in a Concept of Operations and associated Operational Risk Assessment. Of Note; we are **not** requesting Beyond Visual Line of Sight (BVLOS) privileges.

The public interest will be served by granting Textron Systems' Petition for Exemption. Congress has established a national policy that favors early integration of UAS into the National Air Space (NAS) in controlled, safe working environments such as the one proposed in this Petition. Granting this Petition for Exemption helps fulfill Congress' goal in passing Section 44807 of the Reform Act.
Furthermore, the proposed UAS operations in this Petition for Exemption will significantly improve safety and reduce risk to the public by providing a controlled, safe, environment for UAS training and aircraft safety of flight operations.

Pursuant to 14 C.F.R Section 11.35, Textron Systems requests confidential treatment for certain information provided with this request for exemption. All documents requiring confidential consideration will be marked "*The information contained in this document is the proprietary property of Textron Systems. Reproduction or use of the information without the written consent of Textron Systems is strictly prohibited.*". Textron Systems requests that proprietary documents not be made public. To do so would harm Textron Systems as these documents contain trade secrets and other commercial data that is not publicly available and are protected from release under the Freedom of Information Act, 5 U.S.C. Section 552(b)(4). Furthermore, these documents contain information governed by *The International Traffic in Arms Regulations* ("ITAR," 22 CFR 120-130).

A publishable summary and list of regulations from which exemption is requested is attached to this request.

Very sincerely,

12/1/2021

X Douglas Shick

Signed by: Shick, Douglas

Douglas Shick
Manager Operations
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I. Publishable Summary

In accordance with 14 C.F.R. § 11.81 (f), the following summary is provided for publication in the Federal Register as required.

Pursuant to 49 U.S.C 44807, Textron Systems asks the FAA to exempt the applicability of certain requirements codified in 14 CFR parts 61 and 91, based on Textron Systems contention that various risk mitigation measures, combined with the capabilities of the UAS, will achieve a level of safety equivalent to the level that compliance with the regulations would achieve.

Textron Systems proposed to conduct Visual Line of Sight (VLOS) commercial operations of the Textron Aerosonde UAS in Class D, E and G airspace in a volume extending upward from the surface up to and including 2,500 feet MSL within a 4.2-mile radius of Allen C Perkinson Blackstone Army Airfield (KBKT); excluding that airspace within Restricted area R-6602A when active. The operations will provide a level of safety equivalent to conventional aircraft operations based on processes and procedures developed during aeronautical research flight totaling over 900 hours and over 3,000 sorties. Textron Systems is **not** seeking Beyond Visual Line of Sight (BVLOS) authority.

Regulations From Which Exemption is Requested:

Regulatory Provision	Title	Procedures, Conditions or Limitations from Petition Which Apply	1. Justification for relief 2. Method to meet the intent of the requirement 3. Precedent-setting cases
14 C.F.R. § 61.113 (a) and (b)	Private pilot privileges and limitations; Pilot in Command.	Aerosonde Operations and Training Manual R40393-00149, Rev F.	1. The UAS will not be carrying passengers or cargo for hire. The purpose of Part 61 is to ensure that the skill and competency of any PIC is appropriate for the aircraft, airspace and type of operation including consideration for commercial pilot certificate requirements if the flight is carrying passengers or cargo for hire. 2. The petitioner proposes to use only PICs who hold, at a minimum, a Part 61 private pilot certificate and a Part 67 third-class medical certificate to operate the UAS for these limited commercial operations. The PICs will also maintain recent flight experience consistent with Part 61.56 and Part 61.57 (a)(1). The UAS will not be carrying passengers or cargo, is smaller, lighter and slower than conventional aircraft assets, and requires less experience than a commercial pilot to effectively and safely operate. 3. Exemption No. 11062; Exemption No 18596 The FAA has previously determined the unique characteristics of UAS operations for certain use cases do not warrant the additional cost and restrictions associated with requiring the PIC to have a commercial pilot certificate. The risks associated with the operation of a UAS are lower than those associated with commercial operations contemplated when part 61 was drafted.

Regulatory Provision	Title	Procedures, Conditions or Limitations from Petition Which Apply	1. Justification for relief 2. Method to meet the intent of the requirement 3. Precedent-setting cases
14 C.F.R. § 91.7	Civil aircraft airworthiness	Operator's Manual R 40393-40598-10	1. The UAS does not have an airworthiness certificate so a determination that the UAS is in airworthy condition related to an airworthiness certificate is not possible. 2. The petitioner submits that the aircraft has design characteristics to safely operate as described in the airspace specified in the petition, and that when utilizing the operational conditions and limitations provided in this exemption request, a level of safety at least equivalent to similar conventional aircraft operations under the current regulatory structure is provided. 3. Exemption No 18596 The FAA has previously determined that for the purposes of a 44807 exemption for a UAS without an airworthiness certificate, a pilot may determine the aircraft is in an airworthy condition prior to flight in accordance with suitable conditions and limitations provided by the requestor.
14 C.F.R. § 91.103 (b)(2)	Preflight Action.	Operator's Checklist R40393-40598-CL-3, R40393-40598-CL-4 Field Maintenance Manual R40393-40598	1. Operation of the UAS does not require an approved Airplane or Rotorcraft Flight Manual. Additionally, the UA is launched and recovered using fixed location ground equipment and will not operate from standard runways. 2. The petitioner will comply with other applicable parts of 91.103 with regard to the PIC, before beginning flight, becoming familiar with all available information concerning that flight including reliable information appropriate to the aircraft, aircraft performance, aircraft gross weight, and wind and temperature. 3. Exemption No 18596

Regulatory Provision	Title	Procedures, Conditions or Limitations from Petition Which Apply	1. Justification for relief 2. Method to meet the intent of the requirement 3. Precedent-setting cases
14 C.F.R. § 91.109	Flight Instruction; Simulated instrument flight and certain flight tests.	Aerosonde Operations and Training Manual R40393-00149, Rev F.	1. Flight instruction will occur at the GCS for the UAS, which is not equipped with redundant controls. 2. To achieve an equivalent level of safety, training will be conducted on a computer-based simulator prior to any flight and flight instruction will occur with an instructor "over the shoulder" at the GCS. Should an issue arise, the instructor could easily assume control of the UA. 3. Exemption No. 17790; Exemption No 18596
14 C.F.R. § 91.403 (b)	General.	Aerosonde Operations and Training Manual R40393-00149, Rev F.	1. Petitioner seeks exemption from § 91.403 (b) because relevant sections of Part 43 regarding maintenance, preventative maintenance or alterations do not apply to the UAS. 2. The petitioner submits that any maintenance, preventive maintenance, rebuilding, and alterations being performed by manufacturer qualified individuals who have been trained in proper techniques and procedures for these UAS, as described in their applicable operating and maintenance documents will achieve an equivalent level of safety to conventional aircraft maintenance as described in this regulation. 3. Exemption No 18596

Regulatory Provision	Title	Procedures, Conditions or Limitations from Petition Which Apply	1. Justification for relief 2. Method to meet the intent of the requirement 3. Precedent-setting cases
14 C.F.R. § 91.405 (a)	Maintenance required.	Field Maintenance Manual R40393-40598	1. Relief is requested because applicable or relevant sections of associated regulations do not apply to the UAS and the UAS does not have an airworthiness certificate. 2. The maintenance, inspection and preflight procedures for the UAS in accordance with the manuals and documents submitted with the petition for exemption and in conjunction with the conditions and limitations of the exemption, will achieve a level of safety equivalent to that provided by § 91.405(a). 3. Exemption No 18596; Other
14 C.F.R. § 91.407 (a)(1)	Operation after maintenance, preventive maintenance, rebuilding, or alteration.	Field Maintenance Manual R40393-40598	1. The UAS does not have an airworthiness certificate and there are no FAA certified repair personnel or certification processes for these systems. 2. The petitioner submits that the maintenance, inspection and preflight procedures for the UAS, in accordance with the manuals and documents submitted with the petition for exemption and in conjunction with the associated operating conditions and limitations will meet the intent of the regulation and provide an equivalent level of safety. 3. Exemption No 18596; Other

Regulatory Provision	Title	Procedures, Conditions or Limitations from Petition Which Apply	1. Justification for relief 2. Method to meet the intent of the requirement 3. Precedent-setting cases
14 C.F.R. § 91.409 (a) (1)(2)	Inspections	Operator's Checklist R40393-40598-CL-3, R40393-40598-CL-4 Field Maintenance Manual R40393-40598	1. The UAS does not have an airworthiness certificate and there are no FAA certified repair personnel or certification processes for these systems. 2. The petitioner submits that the maintenance, inspection and preflight procedures for the UAS, in accordance with the manuals and documents submitted with the petition for exemption and in conjunction with the associated operating conditions and limitations will meet the intent of the regulation and provide an equivalent level of safety. 3. Exemption No 18596
14 C.F.R. § 91.417 (a) and (b)	Maintenance Records	Field Maintenance Manual R40393-40598 Maintenance Release Form R40393-00922 Engine Log Book D0275B	1. The UAS does not have an airworthiness certificate and thus compliance with these regulatory provisions that apply to aircraft with airworthiness certificates is not feasible. 2. The petitioner submits that the maintenance, inspections, and records handling performed in accordance with the manufacturer's manual, any required manufacturer safety or service bulletins, and the conditions and limitations of this exemption request will provide an equivalent level of safety 3. Exemption No 18596