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RDMR-AEV

AWR RQ-11B20071219R1

19 OCT 2009 R1  
19 DEC 2007

MEMORANDUM FOR Project Manager, Unmanned Aircraft Systems (SFAE-AV-UAS),  
Redstone Arsenal, AL 35898-5000

SUBJECT: Airworthiness Release, Qualification Level 3, for Operation of the RQ-11B  
Unmanned Aircraft System at the State of New Mexico "Boot Heel" UAS Airspace Complex  
(RQ-11B20071219R1) (TN 51797A).

1. Scope: This memorandum constitutes an Airworthiness Release (AWR) Qualification Level 3 authorizing operation of the Unmanned Aircraft System RQ-11B for operations at the State of New Mexico "Boot Heel" UAS Airspace Complex. This AWR is intended to support the issuance of a Certificate of Authorization (COA) from the Federal Aviation Administration (FAA).
2. Validity: This AWR is terminates 19 OCT 2011, upon changes in configuration of the subject equipment, or upon issuance of a later Airworthiness Release, whichever occurs first. This AWR is valid only for operations within the COA airspace at the State of New Mexico "Boot Heel" UAS Airspace Complex.
3. List of Appendices:

Appendix A - Restrictions and Operating Information  
Appendix B - Configuration and Installation Detail  
Appendix C - Inspections, Maintenance, and Logbook Instructions  
Appendix D - References List

4. The point of contact (POC) is (b) (6) commercial (b) (6) or e-mail:  
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**Appendix A – Restrictions and Operating Information:**

**WARNING**

The air vehicle is susceptible to radiated emissions. Loss of link, loss of GPS, loss of video, and possible loss of vehicle control are likely in proximity to emitters. Operators shall avoid known high intensity Electromagnetic Interference (EMI) areas.

**WARNING**

Accidental operation of the RQ-11 Raven UAS outside of active restricted airspace and/or the FAA approved airspace shall be immediately reported to Air Traffic Control (ATC) / Range Control. The operator shall make immediate actions to correct the flight path and/or follow ATC/Range Control direction.

**WARNING**

The RQ-11 Raven UAS do not have a sense and avoid system. Mid-air collision is a risk. All flight operations shall be conducted to ensure that manned and unmanned aircraft shall maintain proper separation. Airspace deconfliction shall be accomplished using local ATC procedures and procedures identified in the FAA COA.

**WARNING**

The RQ-11 Raven UAS has not completed full airworthiness qualification. All flight operations shall be conducted in a manner to minimize exposure to manned aircraft and populated ground areas.

**WARNING**

The RQ-11 Raven UAS has not undergone SOF Explosive Atmosphere testing. A serious fire or explosion may result if the aircraft is powered while flammable vapors are present during ground or flight operations. Do not operate the system in the presence of flammable vapors.

**WARNING**

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The operator must coordinate frequencies with any other Raven operators in the area In Accordance With (IAW) the operator's manual and Local Spectrum Manager procedures. Failure to coordinate frequencies with other users could result in loss of vehicle control and possible loss of the air vehicle.

### CAUTION

Noise characterization testing has not been completed on this system. Prolonged exposure to engine noise at close proximity may contribute to hearing loss. It is recommended that ear plugs be worn while launching the air vehicle.

1. The aircraft operating instructions, procedures, and limitations shall be in accordance with references D-1 through D-3 and this AWR. In the event of conflict between these documents, the information in this AWR shall prevail.
2. Flights shall avoid other Raven transmitters by at least 200 meters. Ground control stations shall be located at least 400 meters apart.
3. Emergency procedures: IAW the operator's manual.
4. The Rally waypoint shall be inside the COA approved airspace over an approved Autoland point.
5. Flight of the RQ-11 Raven UAS is restricted to Visual Meteorological Conditions (VMC).
6. Flight over populated areas shall be avoided.
7. Any procedural deficiencies or flight anomalies detected during operations shall be corrected, annotated, and reported to the POC listed in paragraph 4 of this AWR.
8. Commander's Corner:
  - a. The RQ-11B Raven Unmanned Aircraft System (UAS) has not completed the airworthiness qualification process. An AWR has been granted through a Level 3 Airworthiness evaluation. A Level 3 AWR establishes a minimum level of safety for UAS operations. Strict adherence to the Operator's Manual, local Standard Operating Procedures for UAS, and this AWR is required to reduce the risk of loss of the aircraft, property damage and personal injury.
  - b. Coordination of channel selection with other systems operating in the area is critical to reducing accident rates.



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**Appendix B – Configuration and Installation Detail:**

1. Configuration details, other specific equipment, and drawings: The RQ-11 Unmanned Aircraft System is defined in reference D-1.
2. Special installation instructions: NONE.
3. Installation verification and quality checks: NONE.

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**Appendix C – Inspections, Maintenance, and Logbook Instructions:**

1. Conduct inspections and maintenance as specified in reference D-1.

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**Appendix D – References:**

1. Technical Manual 1-1550-695-13&P, Operator and Field Maintenance Manual Including Repair Parts and Special Tools List for Small Unmanned Aircraft System (SUAS) RQ-11 B.
2. Technical Manual 1-1550-695-CL, Operator's and Crewmember's Checklist, RQ-11B SUAS
3. "New Mexico National Guard Unmanned Aerial Systems (UAS) Standard Operating Procedures (SOP) and Policies for Department of Defense Counterdrug Support Operations within the State of New Mexico's National Guard "Boot Heel" UAS Airspace Range Complex", dated 1 November 2007.