



United States Department of Agriculture  
Research, Education, and Economics  
Agricultural Research Service  
South Atlantic Area

## AIRWORTHINESS STATEMENT

This vehicle system is based on the commercially available Almost Ready-to-Fly (ARF) radio control model airplane kit, the Great Planes ElectriFly *Spectra*. Two of these kits were used and assembled in the fashion of the F-82 Twin Mustang. The wingspan of this system was extended by joining two wings (total wingspan of 126") for improved stability during data acquisition. Additional directional stability was achieved by adding more surface area to the vertical tail via dorsal fins. Flight characteristics of this vehicle are typical of a radio-control training model, which offers good stability and control in all axes. Each fuselage of this vehicle contains its own independent PCM control system.

Based on section 2 of the Department of Defense MIL-HDBK-516B this aircraft qualifies as a Remotely Operated Aircraft (ROA)/Unmanned Aerial Vehicle (UAV). Our certification process adheres to the sections of MIL-HDBK-516B that are applicable to ROAs/UAVs.

This particular system was successfully test flown on December 18, 2008 at the Wallops Flight Facility UAV Runway. However, the system was not subjected to NASA's airworthiness compliance protocols due to the intent to transfer ownership to the USDA. This vehicle performed as intended during its maiden, 17-minute flight. It exhibited adequate power and climb rate with good stability and control in all axes as well as nominal payload performance. All procedures for verifying system stability pre- and post-flight have been documented and provided in the proceeding attachments. We believe that these checks meet the requirements of airworthiness and agree to take responsibility for the system, the safety of its operators, and operate under the restrictions contained in the COA application.

A handwritten signature in black ink that reads "Timothy C. Strickland".

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