



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**US ARMY RESEARCH, DEVELOPMENT, AND ENGINEERING COMMAND**  
**AVIATION AND MISSILE RESEARCH, DEVELOPMENT, AND ENGINEERING CENTER**  
**5400 FOWLER ROAD**  
**REDSTONE ARSENAL, AL 35898-5000**

31 October 2017

Mr. Dy Le  
Director, Institute for Materials, Manufacturing, and Sustainment  
Office of the Vice President for Research  
Room 303 Experimental Sciences Building, Texas Tech University  
Box 43132 Lubbock, Texas, 79409-3132

**SUBJECT:** Letter of support for Texas Tech University's proposed Sustainment System Integration Laboratory.

Dear Mr. Dy Le,

Texas Tech University's proposed plan to develop a System Integration Laboratory (SIL) that can be used to develop, integrate, and demonstrate advanced sustainment technologies directly supports the U.S. Army's Zero-Maintenance Science and Technology (S&T) vision and facilitates transitioning autonomous sustainment capability to the Warfighter.

The U.S. Army's Aviation Development Directorate (ADD) is responsible for leading aviation S&T to develop dominant aviation capabilities for the Warfighter. Sustainment is an area of S&T emphasis that is focused on enabling highly reliable, low maintenance platforms that can survive unsustained in the multi-domain battle space for extended periods. Mission effectiveness and life cycle affordability of future vertical lift aircraft are largely driven by three main sustainment elements: ultra-reliable, operationally durable, holistic system level design; aircraft and fleet health state awareness; and redundant, damage tolerant, reconfigurable platform systems.

Texas Tech University's proposed Sustainment SIL will likely produce an excellent capability, in regards to both personnel and facility, to develop innovative technology solutions spanning each of the three main sustainment elements. The SIL, as envisioned, will provide a unique opportunity to integrate and demonstrate advanced sustainment capabilities in a relevant environment, increasing solution maturity and reducing the risk associated with transitioning future technology to a U.S. Army Aviation Program of Record.

The U.S. Army's ADD could greatly benefit from the construction of an advanced Sustainment SIL, as proposed, and anticipates that the capability it would provide could play a key role in realizing the Army's Zero-Maintenance vision.

**WILLIAM D. LEWIS, Ph. D.**  
Director for Aviation Development