

Good Morning (Madame Chair), I am John A. Goines, III and I currently serve as the Chief, of the Life Sciences Equipment Laboratory, located at Wright-Patterson AFB, Dayton, Ohio.

The history of the Life Sciences Equipment Laboratory, known by the acronym **L*S*E*L**, started with the United States Air Force formally establishing the Life Support Equipment Investigation Laboratory **L*S*E*I*L** in 1983 at the former San Antonio Air Logistics Center, Kelly AFB, San Antonio, Texas. Its function was to investigate problems associated with life support equipment, and resolve issues related to Air Force mishaps. More than 30 years later its mission support continues to expand, to meet taskings from the Department of Defense, the Armed Services, and those of allied foreign nations. In 1992, to more accurately reflect its increasing responsibilities, the facility was renamed the Life Sciences Equipment Laboratory. Currently, the LSEL occupies some 13,000 square feet in Building 17 at the Air Force Life Cycle Management Center, and falls under the operational cognizance of the Human Systems Division of the Agile Combat Support Directorate at HQ Air Force Materiel Command, Wright-Patterson AFB, Ohio. It is a unique facility within the DoD, and based upon comments received from numerous international visitors, with regard to equipment studies and mission diversity performed, it is in all likelihood the only equipment laboratory of its type anywhere in the world.

In 1988, the LSEL mission evolved after the LSEL Chief was approached by the Joint Casualty Resolution Center (JCRC) to examine equipment artifacts recovered in South East Asia to determine the feasibility of accounting for personnel based solely on the equipment. The LSEL conducts investigations, studies, and instructional programs related to a very broad range of military systems, which are defined as life sciences equipment. This category incorporates most variants of flight apparel, military uniforms, and combat infantry gear (including weapons up to .50 caliber); aircraft fixed or ejection seats; most forms of parachute and aerodynamic decelerators; life rafts and personnel flotation systems; avionics communication and visual signaling devices; as well as other specialized equipment ranging from body armor to personal identification media. Basically, such equipment spans all the man-mounted or adjacently attached systems that have permitted American military personnel to successfully perform their duties in both peace and war while operating on land, sea, and in the air from 1917 to the present, and to endure such ordeals. To accomplish its functions, the LSEL maintains hundreds of reference exhibits, as diverse as World War II

infantry equipment, U.S. Navy flight ensembles from the Korean conflict, U.S. Army nursing apparel from the Vietnam period, a complete F-111 aircraft crew escape module, historical variations of military dog tags and blood chits, as well as present day night vision devices and body armor ensembles. Concurrent with present day LSEL studies accomplished upon such equipment, which frequently provides strong supporting evidence to that derived from medical or pathological findings (as to the presence or actions of personnel involved in aircraft crashes or similar destructive situations), the LSEL Chief and JCRC discovered these studies could likewise aid in the accountability of people at historic sites, especially in instances when no human remains were found.

In 1993, the LSEL was tasked by Congress and the Joint Chiefs of Staff to become a support agency of the Joint Task Force-Full Accounting [renamed the Joint POW/MIA Accounting Command (JPAC) in 2003], and subsequently other agencies including the Defense Prisoner of War/Missing Personnel Office (DPMO). This resulted in the establishment of a dedicated LSEL POW/MIA mission, which is manned by specialists whose work involves the accountability of missing Americans, from conflicts like the Indochina War Theater; the Korean Conflict, the Cold War, and the worldwide theater of World War II.

Direction/guidance from JPAC to the LSEL has been very limited through the years. This has hampered the ability of the LSEL to provide timely support not only to JPAC, but to the entire accounting community. Recently however, Deputy Assistant Secretary of Defense Winfield has taken action to establish an open line of communication between the geographically separated elements of the POW/MIA Accounting Community. Although the mission coverage is complex and challenging, the staff remains dedicated to enhancing aviation safety, sustaining and improving this Nation's military resources, and accurately resolving the status of our missing personnel for their families. Within this context, since 1994, the LSEL has supported 194 POW/MIA cases (with an annual operating budget of \$250K) and has accounted for the presence of 206 missing individuals out of 349 being sought.

The LSEL staff consists of a cadre of specialists who has extensive background in numerous types of life sciences equipment types deployed by the American military Services, and some have veteran status. Through the use of a comprehensive technical library and large collection of equipment reference exhibits maintained by the LSEL, the analysts endeavor to match submitted artifacts to the type of equipment and specific system from which it originated, identify its Service applicability, as well as the time period it was used. Further

testing can then be applied, often employing state-of-the-art equipment, along with the full resources of other laboratories and specialists at the Air Force Life Cycle Management Center, to enable artifact identification to be confirmed. Finally, in my lab, all equipment and scientific test results are translated into determinations about accountability of missing personnel. Accordingly, an identified artifact (like a piece of aircrew flight suit) can help reconstruct the pattern and type of its host structure, reveal information about which Military service utilized it, disclose other details about when it was used and with what aircraft until, along with other artifacts and damage assessments, it provides an overall image of what the evidence supports about its previous user and their probable status. Based upon such work, the LSEL and staff are totally dedicated to the resolution of the POW/MIA issue, and to supporting other agencies involved in this highest national priority endeavor, to fully account for our nation's missing personnel.

I thank you for the opportunity of providing opening remarks and I await any questions you have for me at this time.
