The Environmental Test Laboratories provide the equipment and technical expertise needed to meet environmental standards regulated by the FAA technical standard orders using RTCA DO-160 certification standards. Our personnel have many decades of combined experience in the field of environmental testing for aviation and other industries.

**CAPABILITIES**

**DO-160 Certification Capabilities:**
- Section 4 - Temperature and Altitude
- Section 5 - Temperature Variation
- Section 6 - Humidity
- Section 7 - Operational Shocks and Crash Safety
- Section 8 - Vibration
- Section 9 - Explosion Proofness
- Section 14 - Salt Fog
- Section 15 - Magnetic Effect
- Section 16 - Power Input
- Section 17 - Voltage Spike
- Section 18 - Audio Frequency Conducted Susceptibility/Power Inputs
- Section 19 - Induced Signal Susceptibility
- Section 20 - Radio Frequency Susceptibility
- Section 21 - Emission of Radio Frequency Energy
- Section 22 - Lightning Induced Transient Susceptibility
- Section 24 - Icing
- Section 25 - Electrostatic Discharge

**Additional Capabilities:**
- RF cable insertion loss and VSWR testing
- Radome transmissivity testing
- Hi-pot testing services
- 60kV and 100kV P-Static testing systems
- In-Flight Antenna Patterns
- Aircraft Test Hangar 100x100x30ft, door 75ft X 25ft.
- Integral foam fire suppression system for fueled aircraft testing
- Aircraft Hot Fuel Testing (Weather permitting, 85° F. min.)

**EQUIPMENT**
- 20 ft. x 20 ft. semi-anechoic chamber
- 30 ft. x 50 ft. x 25 ft. fully anechoic chamber
- 25 ft. x 17 ft. reverb chamber
- 12,000 lb. vibration table
- Rate table capability of 50 lbs. total weight
- Indirect Effects of lightning test system
- 40 kW AC/DC power input test system
- Temperature/humidity/altitude chambers (capability up to 100,000 ft.)
- Large environmental Chamber - 12’Wx10’Hx48’L (-40 degrees)
- Salt Fog Chambers

**CLIENTS**
- RCO Engineering, Inc.
- Beechcraft
- Aerospace Systems and Components, Inc.
- AMETEK
- Advanced Industries, Inc.
- PWI Incorporated

**CONTACT**
Paul Jonas, Director
(316) 978-6427
pjonas@niar.wichita.edu

Located on the Wichita State University campus, in a city recognized as the Air Capital of the World, The National Institute for Aviation Research (NIAR) is a prestigious state-of-the-art aerospace research and development laboratory with global reach and expertise. NIAR integrates university, government and industry in cooperative efforts to advance technologies.

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