

**Southwest Research Institute
Request for Special Temporary Authority
ELS File No. 1740-EX-ST-2026**

SUPPORTING STATEMENT

Pursuant to Section 5.3 (a), (c), and (j), Section 5.53, and Section 5.61 of the Federal Communications Commission (“FCC”) rules, 47 C.F.R. §§ 5.3 (a), (c), and (j), 5.51, 5.53, and 5.61 (2024), Southwest Research Institute (“SwRI”) respectfully requests an experimental special temporary authority (“STA”) so that it may expand upon the research and development it currently conducts under complementary licenses issued to SwRI under call signs WD2XKZ, WD2XLA, WD2XLB, WD2XLC, WD2XKZ, WI2XEE, WK2XHX, and WK2XHU, among others. Those licenses have supported SwRI’s efforts to test and evaluate prototype and experimental RF equipment covering frequencies ranging from 10 kHz to 18 GHz.

Specifically, by the instant request, SwRI seeks authorization to evaluate the functionality and performance of prototype devices operating on various frequencies from 3 kHz to 300 MHz to meet the requirements of a U.S Federal government contract under which SwRI will be supporting as a subcontractor. Government contract information and point of contact information will be provided under separate cover.

SwRI proposes to conduct tests for a limited 2-month period, as explained in further detail below, but to accommodate possible delays, it seeks an STA to commence on October 30, 2026, and running until April 30, 2027. Accordingly, SwRI respectfully requests that the STA be granted as soon as possible, but not later than **November 9, 2026.**

In support of SwRI’s request, the following is shown:

1) Company Background:

Established in 1947 and headquartered in San Antonio, Texas, Southwest Research Institute is a nonprofit entity that provides independent, multidisciplinary, applied engineering and research devoted to technology development and transfer for the industry and the government (*i.e.*, the United States and other friendly nations) on a worldwide basis. Approximately 50% of the SwRI’s business is for the U.S Government. See <https://www.swri.org/about-swri> Its address and FCC Registration Number (“FRN”) are provided below:

Southwest Research Institute
6220 Culebra Road
San Antonio, TX 78238-5166

FRN: 0004074217

2) Need for STA and Public Interest Statement:

As noted above, SwRI seeks authority to conduct ground-based tests of prototype transmitters to evaluate their performance and functionality as part of its research on behalf of the United States government. It proposes to commence the testing under the requested STA on November 9, 2026, and, absent unforeseen circumstances, to complete such testing within 6 months. Thus, SwRI does not anticipate the need for a regular experimental license.

SwRI submits that grant of the requested STA is in the public interest, as it would allow the company to support its research and development of equipment to meet the needs and requirements of the U.S. Federal Government

3) Location of Test Site:

To conduct its research and development, SwRI must conduct evaluations outside an anechoic chamber in an outdoor environment. Accordingly, it proposes to conduct tests at its main campus at 6220 Culebra Road, San Antonio (Bexar County), Texas, at a fixed site within 2 km of the coordinates 29-26-22.6 N; 98-37-20.05 W (NAD83).

4) Frequencies Desired:

As noted above, SwRI has conducted scientific research and development under experimental licenses issued by the FCC under call signs WD2XKZ, WD2XLA, WD2XLB, WD2XLC, WD2XKZ, WI2XEE, WK2XHX, and WK2XHU, among others covering frequencies ranging from 10 kHz to 18 GHz. By the instant request, SwRI seeks authority to conduct tests that are not covered by its existing licenses.

SwRI acknowledges that it must conduct its testing on a secondary, non-interference basis and that the selection of specific frequencies in the requested band may be necessary to avoid the potential for interference. SwRI also recognizes that its proposed experimentation may require coordination not only with Interdepartment Radio Advisory Committee ("IRAC") of the National Telecommunications and Information Administration ("NTIA"), but also with existing non-Federal government licensees authorized on the requested frequencies.

Accordingly, if a particular frequency or channel it has requested is not available due to Federal government or non-Federal government use, SwRI would be agreeable to restrictions that may be imposed on the use of specific frequencies near those requested, provided it is able to transmit with a bandwidth of at most 30 kHz below 300 kHz, a bandwidth of at most 300 kHz between 1.5 and 3 MHz, a bandwidth of at most 3 MHz between 15 and 30 MHz, and a bandwidth of at most 30 MHz between 150 and 300 MHz.

5) Power Levels and Duty Cycle:

SwRI will operate with the minimum necessary power to conduct its research and evaluations, and in no event will that level exceed a peak of 5 Watts effective radiated power (“ERP”), as shown in the accompanying application.

Moreover, the testing to be conducted under the requested authority will not be continuous. Transmissions will be intermittent and will occur only from 8am to 5pm CT Monday through Friday, and with a duty cycle that will vary from 1-25% for Q0N and 100% for N0N and P0N waveforms.

6) Type of Emission, Modulation Technique, and Bandwidth Required:

The occupied bandwidth of the transmissions will typically be 30 kHz or less on channels operating below 300 kHz, 300 kHz or less on channels between 1.5 and 3 MHz, 3 MHz or less on channels between 15 and 30 MHz, and 30 MHz on channels between 150 and 300 MHz. The designators for the modulation techniques associated with the proposed operations are N0N, Q0N, and F0N. As shown in the attached application, depending on the channel, the emission designators will vary from 300HN0N to 30MF0N. If other emission modes and modulation techniques are utilized, in no event will the emissions extend beyond the bandwidth or channels specified on the STA as granted.

SwRI does not propose to supply station identification as set forth in Section 5.115 of the Commission's Rules, 47 C.F.R. § 5.115 (2024).

7) Compliance with Antenna Structure and Collocation Requirements and Human Exposure Limits:

SwRI will comply with all Federal Aviation Administration (“FAA”) and FCC rules and regulations regarding the installation and operation of antennas and their support structures. The antennas to be deployed under the authority requested will not extend more than six meters above ground or more than six meters above a building. As noted in the accompanying FCC Form, however, the antennas will be mounted on an existing antenna support structure that is 21 meters in height, but they will not extend more than 6 meters above that structure.

All power levels will comply with the limits set forth in the FCC’s rules, including those relating to human exposure to radiation. In addition, all personnel who operate the equipment are knowledgeable as to the effects of RF energy and will have the ability to control their exposure.

8) Equipment To Be Used:

SwRI proposes to deploy not more than 2 prototype/experimental fixed devices during the operations proposed in this request.

9) Restrictions on Operation:

SwRI recognizes that: (a) permission to operate will have been granted under experimental authority issued by the Federal Communications Commission, is strictly temporary, and may be cancelled at any time and that (b) operation is subject to the condition that it does not cause harmful interference.

Moreover, SwRI does not propose to market, sell, or lease unapproved equipment to end users or conduct a market study in conjunction with these tests. After the completion of the tests, SwRI will recall and recover all devices that do not comply with FCC regulations. If any different treatment becomes necessary during the course of its experimentation, SwRI will seek separate and additional authority from the agency.

10) Interference Protection/Stop Buzzer Contact Information:

SwRI understands that other stations may be licensed in the band it has requested and that, if any interference occurs, it may be required to discontinue its operations immediately. SwRI does not expect such interference to occur, however, as it proposes to limit the power and transmitting times of the proposed tests to the minimum necessary to conduct its evaluations as described above.

Notwithstanding these precautions, in the unlikely event that interference does occur, SwRI will immediately cease transmissions using the designated stop buzzer protocol, as identified below, and it will not resume operations until the issue is resolved in coordination with affected parties.

SwRI advises the FCC that Dr. C. Jimmy Li is the technical contact for this request. Dr. Li will be personally responsible for the operations to be conducted. The primary and secondary “stop buzzer” contacts, in the event that operations must be terminated because of any interference concerns are listed below.

11) Contact and Other Information:

SwRI "Stop Buzzer" Contact:

C. Jimmy Li, Ph.D.
Principal Engineer
Southwest Research Institute
6220 Culebra Road
San Antonio, TX 78238-5166
Telephone: (210) 522-4285
Email: jimmy.li@swri.org

SwRI Legal Contacts:

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