

**ENGINEERING TECHNICAL STATEMENT PREPARED BY WILLIAM T. GODFREY, JR. OF THE FIRM KESSLER AND GEHMAN ASSOCIATES, INC., TELECOMMUNICATIONS CONSULTING ENGINEERS IN CONNECTION WITH A MINOR MODIFICATION OF A LICENSED FACILITY APPLICATION FOR KSLU NCE-FM (FILE NO. BLED19850610KA).**

The firm Kessler and Gehman Associates was retained by Southeastern Louisiana University (SLU) to prepare engineering studies and the engineering portion of a minor modification of a licensed facility for FM application requesting authorization to change transmitter sites, increase ERP, increase antenna height and change from a nondirectional to a directional antenna.

**DISCUSSION**

SLU is the licensee of the KSLU Non-Commercial Education FM (NCE-FM) facility which is licensed to operate with an ERP of 3.0 kW (C-pol) using a nondirectional antenna mounted at 41.0 m AGL on a tower located at Latitude 30°-30'-53.6" N / Longitude 090°-27'-59.3" W which does not have an Antenna Structure Registration Number (ASRN). SLU proposes to operate the KSLU NCE-FM facility with an ERP of 4.2 kW (C-pol) using a directional antenna mounted at 102.4 m AGL on a tower located at Latitude 30°-32'-29.7" N / Longitude 090°-29'-3.7" W (ASRN 1057047). The reference distance of the proposed facility using the procedure specified in paragraph (b)(1)(i) of §73.211 is less than 28 km; therefore, the proposed station shall remain Class A.

**ANTENNA DATA**

The antenna azimuth pattern for the proposed KSLU facility is a calculated envelope pattern. The attached antenna envelope azimuth pattern exhibit plots the proposed azimuth pattern every ten degrees and demonstrates that the 2 dB per 10 degree requirement and the 15 dB front to back ratio requirement are satisfied pursuant to §73.316 of the FCC rules.

**PRINCIPAL COMMUNITY**

Exhibit 1 demonstrates compliance with §73.515 of the FCC rules such that the that the proposed principal community of Hammond, LA will be completely encompassed by the proposed KSLU facility's F(50,50) 60.0 dBuV/m contour in all azimuthal directions. Therefore, the proposed transmitter location, based on the proposed effective radiated power (ERP) and

antenna height above average terrain (HAAT), will provide a minimum field strength of 1 mV/m (60 dBu) over at least 50 percent of the proposed Hammond, LA community of license and it will also reach more than 50 percent of the population within the community as required.

### **AREA AND POPULATION ANALYSIS**

The population counts within the proposed KSLU facility's 60 dBu (1 mV/m) service contour were determined using U.S. Census 2020 data. The area and population gain within the proposed KSLU facility's 60 dBu (1 mV/m contour) is predicted to be 1,213.3 sq. km and 36,142 persons respectively (See Exhibit 2). The attached Technical Parameters exhibit was calculated using V-Soft's Probe 5 professional signal propagation software which utilizes the centroid method of counting persons within each of the relevant census blocks using 2020 Census data and calculates contours based on the standard predicted contours established in §73.313(c) of the FCC Rules.

### **INTERFERENCE STUDIES**

The attached FM Interference Study (See Exhibit 3) was calculated using V-Soft's FMCommander Version 7.1.90 professional FM allocation software, USGS 03 second terrain elevation database, and the most recent FCC FM and TV (for TV6) databases. The attached NCE FM Interference Study verifies that the proposed KSLU Channel 215 facility's F(50,10) interfering contours will not overlap any applicable station's F(50,50) 60.0 dBuV/m protected service contours and that the proposed KSLU Channel 215 facility's F(50,50) 60.0 dBuV/m protected service contour will not be overlapped by any applicable station's F(50,10) interfering contours. **It is requested that the FCC use 3 arc sec terrain data when processing the application** (See Exhibits 4 and 5).

### **TV CHANNEL 6 STUDY**

§73.525(a)(1) of the FCC Rules states that an affected TV Channel 6 station is a TV broadcast station operating on Channel 6 that is located within 180 km of an NCE-FM station operating on Channel 215. Spacing studies demonstrate that the proposed KSLU facility's tower site is not located within 180 km of any TV Channel 6 facility; therefore, there are no affected TV Channel 6 stations and the proposed KSLU facility fully complies with §73.525 of the FCC rules pertaining to TV Channel 6 stations.

**INTERMEDIATE FREQUENCY INTERFERENCE (53RD & 54TH CHANNELS)**

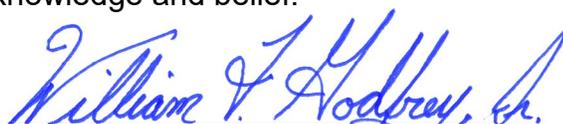
The proposed KSLU facility's site will meet all separation requirements pertaining to intermediate frequency ("IF") interference. The closest IF station with respect to distance from the proposed KSLU facility's transmitter site ( $215 + 53 = 268$  &  $215 + 54 = 269$ ) is the licensed WYNK-FM Channel 268 Class C facility located approximately 79.8 km from the proposed KSLU facility's transmitter site where a separation of 28.5 km is required; therefore, the distance is easily met with a margin of 51.3 km.

**FM BLANKETING INTERFERENCE**

Blanketing is defined as interference to the reception of other broadcast stations which is caused by the presence of an FM broadcast signal of 115 dBu (562 mV/m) or greater signal strength in the area adjacent to the antenna of the transmitting station. The 115 dBu contour is referred to as the blanketing contour and the area within this contour is referred to as the blanketing area. The proposed KSLU Channel 215 facility's blanketing contour extends 0.81 km from its transmitter site and it is understood that KSLU must assume full financial responsibility for remedying new complaints of blanketing interference for a period of one year to all broadcast stations within the proposed KSLU facility's blanketing contour.

**CERTIFICATION**

This engineering technical statement was prepared by William T. Godfrey, Jr., with the professional firm Kessler and Gehman Associates, Inc., Telecommunications Consulting Engineers having offices in Gainesville, Florida, and has been working with the firm in the field of television and radio broadcast consulting since 1998 and his qualifications are a matter of record with the Federal Communications Commission. Mr. Godfrey is a Graduate from the University of North Florida and a Distinguished Military Graduate from the University of Florida. As a Professional in the field of Telecommunications he states under penalty of perjury that the information contained in this report is true and correct to the best of his knowledge and belief.

  
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Consulting Engineers

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