



Kessler and Gehman Associates
Consultants • Broadcast • Wireless

APPLICATION FOR SPECIAL TEMPORARY AUTHORITY FOR AN FM BROADCAST STATION

CALL SIGN: KUHF-FM
FACILITY ID: 69150
LOCATION: HOUSTON, TX

Prepared For:

University of Houston System
311 E. Cullen Building
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Houston, TX 77204-2028

Prepared By:

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March 1, 2021

1.0 REQUEST FOR SPECIAL TEMPORARY AUTHORITY

Kessler and Gehman Associates, Inc. has been retained by University of Houston System, licensee of KUHF-FM to prepare an engineering Special Temporary Authority (STA) to operate using the construction permitted antenna with reduced ERP. On February 26, 2021, KUHF was authorized to operate via a temporary authority on an emergency basis until March 1, 2021 with the understanding that an STA will be filed on March 1, 2021 to continue operating.

KUHF-FM is currently operating from the transmission site, height, and antenna specified in FCC File No. BPED-20181105AAF; however, multiple survey attempts have concluded that the directional antenna may not be properly oriented and thus does not match the antenna azimuth specified in FCC File No. BPED-20181105AAF. Furthermore, the applicant cannot operate pursuant to the licensed¹ facility since it has been decommissioned. Since the azimuth of the directional antenna is unknown at this point, the instant STA shall treat the directional antenna as omnidirectional and the power reduced from 100kW to 68kW to ensure that no ERP in any direction shall be radiated beyond what is currently authorized. While the facility is operating under an STA the applicant will continue to pursue the true azimuth of the antenna and correct the construction permit or rotate the antenna into compliance. Grant of this STA request would be in the public interest because it will keep KUHF-FM on the air

2.0 PREDICTED COVERAGE CONTOUR

Appendix B demonstrates predicted noise limited coverage contours in accordance with the method described in 47 CFR Section 73.215 utilizing the appropriate 60 dBµV/m F(50,50) curves. Appendix B clearly illustrates that the proposed STA contour is 100% subsumed by the permitted contour and thus no

¹ FCC File No.: BLED-19990810KA

new contour overlap to incumbent stations shall occur. The STA shall substantially achieve its goal of providing comparable coverage to its viewers while the necessary work to fix the azimuth issue is investigated and mitigated.

3.0 RADIO FREQUENCY RADIATION COMPLIANCE

A theoretical analysis has been conducted of the human exposure to radio frequency radiation (“RFR”) using the calculation methodology described in OET Bulletin 65, Edition 97-01. The RFR analysis is conducted pursuant to the following methodology:

Terrain² extraction is compiled from the proposed tower site to radial lengths of 0.25 miles in 0.001 mile increments for 360 radials. The power density is calculated for each terrain point at 6 feet above ground level using the elevation and azimuth pattern of the proposed broadcast antenna. The power density calculations are conducted using the lower edge of the proposed channel frequency. To account for ground reflections, a coefficient of 1.6 was included in the calculation.

The resulting cylindrical polar analysis is then summarized into a coordinate plane graph using the following methodology:

Starting from the origin the maximum calculated RFR value is determined among the 360-degree radials for each 0.001 mile increment, the value is then converted into a percentage of the maximum allowable general population or uncontrolled exposure and plotted as a function of perpendicular distance from the tower.

The resulting RFR study in Appendix C demonstrates that the peak exposure is 0.43% of the most restrictive permissible exposure threshold. Pursuant to OET

² Terrain extraction is based upon a 3 arc second point spacing terrain database.

Bulletin 65 concerning multiple-user transmitter sites only those licensees whose transmitters produce power density levels greater than 5.0% of the exposure limit are considered significant contributors to RFR. Since the proposed operation is within 5% of the most permissible exposure at any location 2 meters above the ground, it is not considered a significant contributor to RFR exposure. Thus, contributions to exposure from other RF sources in the vicinity of the proposed facility were not considered. The instant application is compliant with the FCC limits for human exposure to RF radiation and is excluded from further environmental processing since no changes are proposed to the tower structure to accommodate the proposed antenna.

A chain link fence encloses the support structure and the applicant will cooperate with any other users of the tower by reducing the power to the antenna or if necessary, completely cutting it off to protect maintenance workers on the tower.

4.0 CERTIFICATION

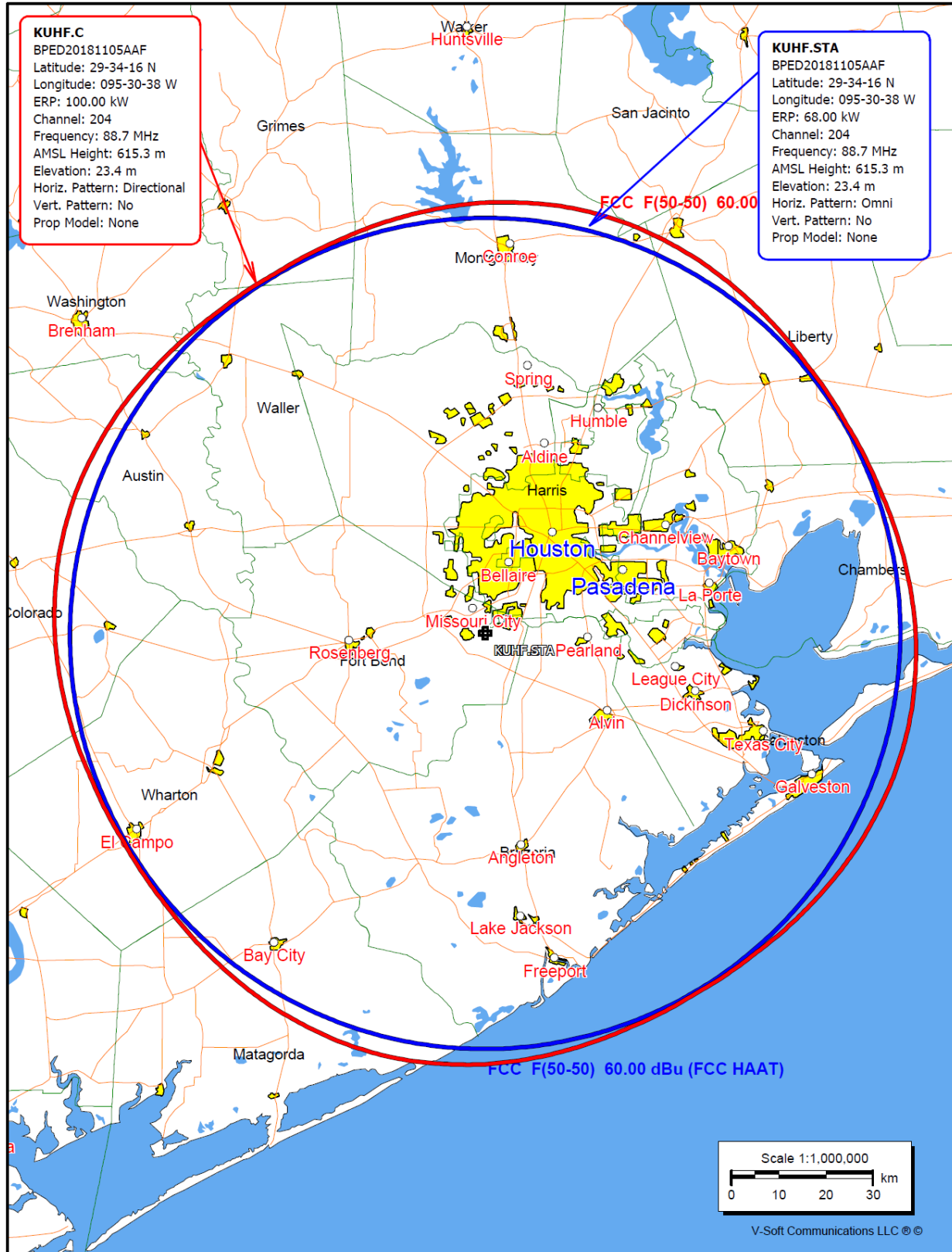
I, Ryan Wilhour, am an engineering associate of Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and have been working in the field of radio and television broadcast consulting since 1996. The foregoing statement and the report regarding the aforementioned engineering work are true and correct to the best of my knowledge.

Ryan Wilhour



Consulting Engineer
March 1, 2021

APPENDIX B – Section 73.215 Contour Map



APPENDIX C – Far Field Exposure to RF Emissions

