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NON-COMMERCIAL FM BROADCAST STATION LICENSE MODIFICATION

CALL SIGN: WMAH-FM
FACILITY ID: 43198
FCC FILE NO.: BMLED-20090522AAR
LOCATION: BILOXI, MS

Prepared For:

Mississippi Authority for
Educational TV
3825 Ridgewood Rd
Jackson, MS 39211

Prepared By:

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August 3, 2023

1.0 Executive Summary

Mississippi Authority for Educational Television is the licensee of an FM broadcast station having call sign WMAH-FM facility ID 43198. The stations' existing Jampro JHPC-10 omni-directional antenna has been removed and replaced with an ERI SHPX-10AC omni-directional antenna at the same center of radiation height above ground level. Although the azimuth pattern and ERP have not changed, the elevation gain of the antennas are slightly different and as such the transmitter power output is being adjusted to retain the licensed 100kW ERP. The antenna replacement is compliant pursuant to 47 CFR § 73.1690(c).

2.0 National Environmental Policy Act (NEPA)

2.1 General Environmental Requirements

The existing structure has been previously accepted by the FAA and the FCC and it is thus presumed that the following has already been mitigated:

- Require high intensity white lighting.
- Is not located in an official designated wilderness area or wildlife preserve.
- Does not threaten the existence or habitat of endangered species.
- Does not affect districts, sites, buildings, structures or objects significant in American history, architecture, archaeology, engineering or culture that are listed in the National Register of Historic Places or are eligible for listing.
- Does not affect Indian religious sites.
- Is not located in a floodplain
- Does not require construction that involves significant changes in surface features (e.g., wetland fill, deforestation, or water diversion).

2.2 Radio Frequency Radiation (RFR) 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:

Terrain extraction is compiled from the support structure site, if the support structure is on a rooftop with no higher elevations (e.g., elevator shaft) then flat terrain is compiled. Terrain is extracted using 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.

Appendix A is an RFR analysis which demonstrates that the peak RFR exposure is less than 5% of the most restrictive permissible exposure threshold standing anywhere at ground level and in any proximity to the proposed support structure. Pursuant to OET Bulletin 65, since the

proposed operation does not exceed 5% of the most permissible exposure at any location 2 meters above the ground, it is not considered a significant contributor to RFR and other sources of RFR need not be taken into consideration for a net effect. The instant application is compliant with the FCC limits for human exposure to RFR and thus is excluded from further environmental processing.

3.0 Certification

The foregoing statement and the report regarding the aforementioned engineering work are true and correct to the best of my knowledge. Executed on August 3, 2023.

KESSLER AND GEHMAN ASSOCIATES, INC.



Ryan Wilhour
Consulting Engineer

APPENDIX A – OET65 Far Field Exposure to RF Emissions

