

TECHNICAL SUMMARY

APPLICATION PURPOSE/ELIGIBILITY TO CHANGE FREQUENCY: IT IS PROPOSED TO CHANGE W234DF FROM CURRENT CHANNEL 234 (94.7 MHz) TO CHANNEL 288 (105.5 MHz) IN ORDER TO MITIGATE POTENTIAL INTERFERENCE. SPECIFICALLY, APPLICANT HAS RECEIVED CORRESPONDENCE FROM COUNSEL FOR FM TRANSLATOR STATION W235BW ON FIRST UPPER ADJACENT CHANNEL 235 (94.9 MHz), NASHVILLE, TN AND FULL POWER STATION WHPY-FM ON FIRST LOWER ADJACENT CHANNEL 233A (94.5 MHz), BELLEVUE, TN ASSERTING THAT ACTIVATION OF W234DF'S AUTHORIZED OPERATION WILL CAUSE INTERFERENCE TO THOSE STATIONS AND THAT BOTH W235BW AND WHPY-FM WERE FULLY PREPARED TO FILE OBJECTIONS TO THE OPERATION OF W234DF UNDER THE FCC'S RECENTLY REVISED INTERFERENCE RULES. IN PRDRER TO AVOID THE POTENTIAL CONFLICT AND SAVE LIMITED FUNDS, APPLICANT SEEKS THIS MINOR MODIFICATION.

FILL-IN TRANSLATOR COVERAGE & MINOR CHANGE COMPLIANCE: THE PROPOSAL WILL BE A FILL-IN TRANSLATOR FOR AM STATION WYJV ON 710 KHZ AT SMYRNA, TN (FACILITY ID 58737). FIGURE 1 IS A MAP DEMONSTRATING THAT THE PROPOSED 60 DBU CONTOUR IS ENTIRELY WITHIN THE GREATER OF THE WYJV DAYTIME 2 MV/M CONTOUR AND A 25 MILE CIRCLE FROM THE WYJV TRANSMITTER SITE AS REQUIRED FOR FILL-IN COMPLIANCE. IN ADDITION, THE PROPOSAL WILL COMPLY WITH THE FCC'S MINOR CHANGE RULES AS THERE WILL BE NO CHANGE IN TRANSMITTER SITE.

SECTION 74.1204 COMPLIANCE: FIGURE 2 IS AN ALLOCATION STUDY FOR CHANNEL 288 BASED ON SECTION 74.1204. FIGURE 2 LISTS THE RESULTS OF A NUMERICAL ANALYSIS OF THE POTENTIAL FOR CONTOUR OVERLAP TO ALL NEARBY CO-CHANNEL, FIRST, SECOND AND THIRD-ADJACENT CHANNEL FACILITIES AS WELL AS IF RELATED STATIONS. FOR THE PURPOSES OF THE NUMERICAL STUDY, THE MAXIMUM HAAT (90 METERS) AND ERP (250 W) VALUES WERE USED IN DETERMINING THE MAXIMUM DISTANCE IN ANY DIRECTION TO THE PREDICTED COVERAGE AND INTERFERING CONTOURS. FIGURE 3 DEMONSTRATES THAT THE PROPOSAL COMPLIES WITH THE CONTOUR OVERLAP PROVISIONS OF SECTION 73.1204 OF THE FCC RULES, EXCEPT WITH RESPECT TO WNRQ ON 2ND ADJACENT CHANNEL 290C.

THE PROPOSAL DOES NOT COMPLY WITH THE CONTOUR OVERLAP PROVISIONS OF SECTION 73.1204 OF THE FCC RULES WITH RESPECT TO SECOND ADJACENT CHANNEL STATION WNRQ. HOWEVER, BASED ON THE UNDESIRE-TO-DESIRED (U/D) SIGNAL STRENGTH INTERFERENCE RATIO METHODOLOGY, WHICH IS PERMITTED BY THE FCC (PER LIVING WAY MINISTRIES, INC.), IT HAS BEEN DETERMINED THAT NO ACTUAL INTERFERENCE WOULD OCCUR DUE TO LACK OF POPULATION UNDER SECTION 73.1204(D). SPECIFICALLY, THE CALCULATED WNRQ F(50,50) FIELD STRENGTH AT THE PROPOSED SITE IS 85.1 DBU. USING THE 40 DB U/D RATIO CONTAINED IN SECTION 73.1204 OF THE FCC RULES, THE PROPOSED F(50,10) INTERFERING SIGNAL IS 125.1 DBU. FIGURE 4 IS A GRAPH OF THE PROPOSED 125.1 DBU SIGNAL USING THE VERTICAL PLANE RELATIVE FIELD PATTERN FOR THE PROPOSED SHIVELY MODEL 6812-1, 1BAY DIRECTIONAL ANTENNA (SEE FIGURE 5) AND ASSUMING FREE-SPACE PROPAGATION. AS SHOWN ON FIGURE 4, THE INTERFERING 125.1 DBU SIGNAL WILL NOT REACH GROUND LEVEL AND, THEREFORE, WILL CONTAIN NO POPULATION.

RFR COMPLIANCE: THE PROPOSED FACILITIES WERE EVALUATED IN TERMS OF POTENTIAL RADIO FREQUENCY (RF) ENERGY EXPOSURE TO WORKERS AND THE GENERAL PUBLIC. THE PROPOSED TRANSMITTING ANTENNA WILL BE MOUNTED 61 METERS ABOVE GROUND LEVEL ON AN EXISTING 57 METER TOWER. USING A WORST-CASE VERTICAL PLANE RELATIVE FIELD VALUE OF 1.0, A TOTAL ERP OF 0.5 KW (HORIZONTAL & VERTICAL POLARIZATION), THE CALCULATED POWER DENSITY AT 2 METERS ABOVE GROUND LEVEL AT THE BASE OF THE TOWER IS 4.8 MICROWATTS PER SQUARE CENTIMETER (UW/CM²), OR 2.4 PERCENT OF THE

COMMISSION'S RECOMMENDED LIMIT FOR AN UNCONTROLLED ENVIRONMENT (200 UW/CM² FOR FM FREQUENCIES).

ACCESS TO THE TRANSMITTING SITE WILL BE RESTRICTED AND APPROPRIATELY MARKED WITH WARNING SIGNS. FURTHERMORE, AS THIS WILL BE A MULTI-USER SITE, A PROTOCOL WILL BE IN PLACE TO ENSURE THAT APPROPRIATE MEASURES WILL BE TAKEN TO ASSURE WORKER SAFETY WITH RESPECT TO RADIO FREQUENCY RADIATION EXPOSURE. SUCH MEASURES INCLUDE REDUCING THE AVERAGE EXPOSURE BY SPREADING OUT THE WORK OVER A LONGER PERIOD OF TIME, WEARING "ACCEPTED" RFR PROTECTIVE CLOTHING AND/OR RFR EXPOSURE MONITORS OR SCHEDULING WORK WHEN THE STATIONS ARE AT REDUCED POWER OR SHUT DOWN.