

ENGINEERING NARRATIVE ASSOCIATED
WITH W237CD, HARRISONVILLE, NJ MINOR CHANGE APP

JULY, 2021

OVERLAP REQUIREMENTS

THE PROPOSED FACILITY COMPLIES WITH OVERLAP REQUIREMENTS AS SPECIFIED IN SECTION 74.1204 OF THE RULES.

THERE IS NO PROHIBITED OVERLAP BETWEEN THE PROPOSED FACILITY AND ANY CO OR FIRST ADJACENT CHANNEL FULL OR SECONDARY SERVICE FACILITIES IN THE CURRENT ALLOCATION PICTURE AS SHOWN ON TABLE I AND FIGURE 2. AAT DATA FOR THE PROPOSED FACILITY WAS DERIVED FROM COMSTUDY 3 SECOND TERRAIN DATA WHICH CLOSELY CORRESPONDS WITH THE FCC'S 30 SECOND TERRAIN DATABASE.

THE PROPOSED SITE IS LOCATED WITHIN THE PROTECTED 54 COVERAGE CONTOURS OF SECOND ADJACENT FULL-SERVICE STATION WBEN-FM, PHILADELPHIA, PA, CH 239B AND THIRD ADJACENT FULL-SERVICE STATION WDSB, DOVER, DE, CH 234B.

THE WBEN-FM SIGNAL STRENGTH AT THE PROPOSED TRANSLATOR SITE IS 55 DBU AND THE ACCOMPANYING TRANSLATOR INTERFERING CONTOUR IS 95 DBU. THE WDSB SIGNAL AT THE PROPOSED TRANSLATOR SITE IS 63 DBU AND THE ACCOMPANYING TRANSLATOR INTERFERING CONTOUR IS 103 DBU.

THE PROPOSED W237CD FACILITY CONSISTS OF A BERT TFC2K, 2 BAY, 0.5 WAVELENGTH ANTENNA LOCATED 145 METERS ABOVE GROUND WITH A MAXIMUM ERP OF 10 WATTS. FIGURE 3 DEPICTS THE FREE SPACE COMPUTATION OF THE SIGNAL LEVEL FROM THE PROPOSED TRANSLATOR AT 2 METERS ABOVE GROUND, OR 143 METERS AGL. IT IS NOTED THAT THE GREATEST TRANSLATOR SIGNAL STRENGTH AT ANY DEPRESSION ANGLE IS 93.59 DBU WHICH IS 1.41 DB LESS THAN THE 95 DBU LEVEL WHICH WOULD RESULT IN PREDICTED INTERFERENCE TO THE MORE RESTRICTIVE FACILITY DESCRIBED ABOVE, WBEN-FM. THIS IS A CONSERVATIVE ESTIMATE AS THERE IS NO LIKELIHOOD OF ACTUAL INTERFERENCE UNDER ANY CIRCUMSTANCES. HOWEVER, IN AN ABUNDANCE OF CAUTION, A WAIVER OF SECTION 74.1204 OF THE RULES IS RESPECTFULLY REQUESTED.

RF STATEMENT

THIS ENVIRONMENTAL STATEMENT IS LIMITED TO THE STUDY OF POTENTIAL RF RADIATION FROM THE PROPOSED FACILITY.

RF RADIATION FROM THE PROPOSED FACILITY HAS BEEN REVIEWED IN ACCORDANCE WITH THE "RADIO FREQUENCY PROTECTION GUIDES", ADOPTED BY THE COMMISSION IN OET BULLETIN NO. 65, EDITION 97-01. RF RADIATION FROM THE PROPOSED FACILITY WILL NOT HAVE A SIGNIFICANT ENVIRONMENTAL IMPACT.

THE PROPOSED W237CD ANTENNA SYSTEM CONSISTS OF A BEXT TFC2K, CIRCULARLY POLARIZED 2 BAY, 0.5 WAVE SPACED ANTENNA, WITH ITS RADIATION CENTER 145 METERS ABOVE GROUND. UTILIZING FORMULA 10 OF OET BULLETIN NO. 65, EDITION 97-01, WITH A WORST CASE VALUE F OF 1.0, THE MAXIMUM POWER DENSITY 2 METERS ABOVE GROUND FOR AN ERP OF 10 WATTS H & V HAS BEEN CALCULATED TO BE 0.0327 MICROWATTS PER CENTIMETER SQUARED WHICH IS 0.0163% OF THE ALLOWABLE 200 MICROWATTS PER CENTIMETER SQUARED POWER DENSITY FOR UNCONTROLLED ENVIRONMENTS AS ADOPTED ON AUGUST 1, 1996 IN REPORT AND ORDER, ET DOCKET 93-62, FCC 96-326.

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BASED ON THE ABOVE, AND THAT THE RF LEVEL IS LESS THAN 5%, IT IS BELIEVED THAT THE PROPOSED FACILITY SHOULD BE CATEGORICALLY EXCLUDED FROM ENVIRONMENTAL PROCESSING WITH RESPECT TO SECTION 1.1306. APPLICANT WILL IMPLEMENT A POLICIES AND PROCEDURES PLAN CONCERNING WORKER EXPOSURE AND WILL COORDINATE WITH OTHER USERS ON THE TOWER TO REDUCE POWER OR CEASE TRANSMISSION AS REQUIRED TO MEET OET 65 GUIDELINES AS NECESSARY.