

MULLANEY ENGINEERING, INC.

9049 SHADY GROVE COURT
GAITHERSBURG, MD 20877

ENGINEERING EXHIBIT EE-1:

**RADIO STATION WHTG-FM
PRESS COMMUNICATIONS, LLC
EATONTOWN, NEW JERSEY**

Ch. 292A 1.0 KW 155 M HAAT

AUGUST 2, 2001

ENGINEERING STATEMENT IN SUPPORT OF
A REQUEST FOR A
MODIFICATION OF C.P.
TO SPECIFY A
CHANGE OF SITE WITH N-DA FACILITIES

Facility ID: 72324

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TABLE OF CONTENTS:

1. Declaration of Engineer
2. Narrative Statement
3. Figure 1, Vertical Tower Sketch
4. Figure 2, Existing vs: Proposed - 60 dBu Contours.
5. Figure 3, FM Antenna Elevation Pattern.
6. Figure 3-A, RF Exposure Analysis.
7. Figure 4, Channel Study - Proposed Site.
8. Figure 4-A, Channel Study - CP / LIC Site.

Declaration

I, John J. Mullaney, declare and state that I am a graduate electrical engineer with a B.E.E.E. and my qualifications are known to the Federal Communications Commission, and that I am an principal engineer in the firm of Mullaney Engineering, Inc., and that I have provided engineering services in the area of telecommunications since 1977. My qualifications as an expert in radio engineering are a matter of record with the Federal Communications Commission.

The firm of Mullaney Engineering, Inc., has been requested by Press Communications, LLC, to prepare the instant engineering exhibit in support of a request for a modification of C.P. for FM radio station WHTG-FM, licensed to Eatontown, New Jersey (FCC Facility ID Number: 72324).

All facts contained herein are true of my own knowledge except where stated to be on information or belief, and as to those facts, I believe them to be true. I declare under penalty of perjury that the foregoing is true and correct.

/s/ John J. Mullaney

John J. Mullaney, Consulting Engineer

Executed on the 2nd day of August 2001.

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NARRATIVE STATEMENT:

I. General:

This engineering statement has been prepared on behalf of Press Communications, LLC, licensee of WHTG-FM at Eatontown, NJ. The purpose of this statement is to request a modification of C.P. to specify the use of its existing auxiliary facility as its main FM site. WHTG-FM proposes to simply increase the power of the auxiliary to the maximum permitted under the rules based upon WHTG's newly issued CP authorizing an increase to equivalent maximum 3 kW Class A facilities.

Press is presently licensed to operate WHTG-FM from their co-owned AM facility tower. Press hoped to replace the existing AM tower by a taller tower which will permit the FM to achieve maximum equivalent 3 kW Class A facilities. However, the proposal to increase the tower height has run into considerable local opposition in multiple zoning hearings. In lieu of continuing the zoning fight, Press desires to use its auxiliary FM site as its main FM site since it already yields an HAAT of 155 meters.

Figure 1 is a sketch of the tower upon which the auxiliary facility is mounted. The auxiliary antenna is mounted in the proximity of several other two-way type antennas.

Figure 2 is a map illustrating the 60 dBu coverages of the existing CP and of the auxiliary facility operating at 1.0 kW requested herein. Press proposes to operate at an ERP of 1.0 kW using the existing 2 bay ERI half-wave spaced FM antenna at its presently authorized height.

Figures 4 & 4-A are channel studies on 292A from the proposed site and the existing CP / Licensed site respectively. The proposed site remains short spaced under the 6 kW rules to two stations and the separation continues to exceed that required by the old 3 kW rules (73.213(c)). In addition, the proposed site remains grandfathered short spaced to two other stations (WJJZ & WLTW). However, WHTG-FM facility was created after November 1964 and, therefore, is not constrained by 73.213(a). The proposed site is newly short spaced to WHCY on 292A at Blairstown. Figure 2 demonstrates that the protected contour and the interfering co-channel 48 dBu contour is totally contained within the existing contour of the CP / License. Consequently, WHTG-FM complies with 73.215.

A. Environmental Assessment Statement:

WHTG-FM believes its proposal will not significantly affect the environment since it does not meet any of the criteria specified in Section 1.1307 of the rules. Since an existing tower will be used with no change in overall height the only remaining environmental issue is R.F. Exposure. Specifically the proposed facility:

1) Will NOT involve the exposure of workers or the general public to levels of Radio Frequency radiation in excess of the guidelines recommended by the FCC - OET Bulletin 65 (August 25, 1997).

The following is a more detailed discussion of this protection standard:

1. National Environmental Policy Act of 1969:

In 1969, Congress enacted the National Environmental Policy Act (NEPA), which requires the FCC to evaluate the potential environmental significance of the facilities it regulates and authorizes. Human exposure to Radio Frequency (RF) radiation had been identified as an issue that the FCC must consider.

Beginning with the filing of applications after January 1, 1986, broadcast stations were required to “certify compliance” with FCC prescribed guidelines on human exposure to RF radiation. The FCC standard was based upon the American National Standards Institute’s (ANSI) RF radiation protection guides (ANSI C95.1-1982). These exposure limits are expressed in terms of milli-watts per square centimeter.

In October 1997, the FCC implemented a two tier evaluation criteria utilizing recommendations of the National Council on Radiation Protection and Measurement (NCRP). The “controlled” tier involves areas which have restricted access while the “un-controlled” tier involves areas which have unrestricted access. The Maximum Permissible Exposure (MPE) limits for “controlled” areas are the same as adopted in 1985, while the “un-controlled” limits for FM and TV frequencies are one-fifth or 20% of the limits for “controlled” areas.

These exposure limits are time-averaged over any six minute period and vary depending upon the frequency involved. The following are the Maximum Permissible Exposure (MPE) limits for “controlled” areas:

Frequency Range (MHz)	Power Density (mW/sq.cm)
*****	*****
0.3 to 3	100 AM
3 to 30	900/(Freq ²)
30 to 300	1.0 VHF TV & FM
300 to 1,500	Freq/300 UHF TV
1500 to 100,000	5.0

WHTG-FM recognizes that compliance with the above criteria at sites involving multiple AM, FM and/or TV facilities is based upon the contributions of all such facilities. At the site discussed in this application, there are multiple tow-way type facilities in existence. However, as will be shown, because of the small contribution at ground level WHTG-FM is **categorically excluded** from a complete evaluation of all contributors.

FM Broadcast Stations

For FM Broadcast Stations the following formula is used:

$$D = \frac{\text{SQRT}(F^2 * [HERP + VERP])}{1.667 * \text{SQRT}(PD) * 3.2808}$$

Where:

- D = the closest distance in meters that a human should come to an operating antenna (To obtain feet multiply by 3.2808)
- F = typical relative field factor in downward direction (F=1 is worst case main lobe)
- HERP = Horizontal ERP in watts (above a dipole)
- VERP = Vertical ERP in watts (above a dipole)
- PD = highest Power Density in milli-watts/cm²
- SQRT = Square Root
- Freq = Frequency in mega-cycles/sec. (MHz)

The vertical radiation pattern of the FM antenna specified in this application is very narrow and, therefore, the power density as seen by an observer on the ground near the base of the tower will be less than 20 percent of the total ERP.

The application of the above equation (assuming maximum ERP), in our case, for a frequency of 106.3 MHz and an “un-controlled” Power Density of 0.2 milliwatts results in a minimum distance of 18.3 meters (60 feet) from the antenna. Inasmuch as the lowest element on the proposed antenna will be approximately 145.1 meters (476 feet) above the ground level, it is self-evident that no hazard from radiation will exist to persons at ground level. At approximately 2 meters above the ground and assuming maximum downward radiation, the proposed FM facility contributes 0.1% of the FCC “controlled” standard. For FM, the “un-controlled” standard is 20.0% and, therefore, this proposal is in full compliance and is **categorically excluded** from further consideration since it is less than 5.0%.

Figure 3 & 3-A are plots of the antenna vertical elevation pattern and RF Exposure analysis. In reality, the exposure at ground level is expected to be **less than 0.02%** of the standard.

The tower is surrounded by a locked fence to limit access.

Access to the tower is currently restricted such that workers are not permitted in an area subject to over exposure.

II. SUMMARY:

Press Communications, LLC, requests a modification of C.P. to specify the use of its existing auxiliary facility as its main FM site. WHTG-FM proposes to simply increase the power of the auxiliary to the maximum permitted under the rules based upon WHTG's newly issued CP authorizing an increase to equivalent maximum 3 kW Class A facilities. This engineering proposal is in full compliance with the Commission's Rules.

/s/ John J. Mullaney

John J. Mullaney, Consulting Engineer

August 2, 2001.