



Engineering Statement

Minor Change Application for WTTG Channel 36 at Washington, DC November 27, 2017

This Engineering Statement has been prepared on behalf of Fox Television Stations, LLC (WTTG), licensee of Full Power Digital TV Station WTTG at Washington, DC. The statement was prepared in support of a Minor Change Construction Permit Application seeking to change transmitter locations to another nearby tower.

This Minor Change Application is being filed pursuant to the lifting of the Freeze of Minor Change Applications on November 28, 2017 as part of the FCC's post-auction repacking process. WTTG is a Non-Repack station and will not be changing channels in the FCC's repacking process. However, WTTG would like to modify its existing facilities to relocate its transmitting facilities to another nearby location.

Following the FCC prescribed procedures, WTTG respectfully files the accompanying Minor Change Application in accordance with the procedures released by the FCC in a Public Notice DA-17-1086 dated November 6, 2017 regarding filing procedures for such situations.



The parameters of the proposed facility are as follows:

Proposed Parameters:

Transmitter Location:	38-57-49.9 N 77-06-17.2 W (NAD 83)
ASRN:	1035708
Channel:	36
ERP:	1,000 KW
Emission Mask:	Full Service
Antenna Pattern:	Non-Directional (Omni)
Antenna Manufacturer:	ERI
Antenna Model:	ATW30HS3-ETO-36H
Antenna RCAGL:	235.0 Meters
Overall Structure AGL:	246.6 Meters
RCAMSL	308.2 Meters
Electrical Beam Tilt:	0.75 Degrees

Interference Study:

An interference study was undertaken utilizing the FCC's TVStudy program to analyze the co-channel and adjacent channel interference scenarios for the new location and proposed parameters.

The results of the study indicated that no impermissible interference would result from the proposed operations. A copy of the TVStudy IX result file is attached to this application.

Based upon the forgoing interference study, it is believed that the proposed facility can operate without any impermissible interference to other stations.

FCC Monitoring Station:

The results of the TVStudy analysis of the proposal indicates that the proposal would be located approximately 33.2KM from the FCC Monitoring Station at Laurel, Maryland. However, the existing WTTG facilities are also located within this approximate distance and no substantial change in field strength or adverse impact at the Laurel location is anticipated based upon the proposed facility parameters. Thus, no change or increase in signal level is anticipated at the monitoring station. However, in an abundance of caution, the licensee will coordinate the proposed facility changes with the appropriate FCC personnel with respect to the Laurel Monitoring station.



RF Exposure Study:

Furthermore, a study was conducted to determine compliance with the RF Radiation Maximum Permissible Exposure (MPE) limits of the proposed operation. The study was conducted using the methodology outlined in the FCC's OET Bulletin 65 regarding RF Radiation Compliance.

The study utilized the proposed antenna height of 235 meters AGL and a reference height of 2 meters AGL for the reference location. This yields a distance from the antenna of 233 meters.

The proposed antenna elevation pattern indicates that the downward radiation from the antenna from 30° to 90° below horizontal has a maximum relative field value of 0.034. This value was used in conjunction with the distance from the antenna and the prescribed formula from OET Bulletin 65 to determine a maximum predicted power density of 20.9 μ W/cm² at 2 meters above ground level near the base of the tower. The Maximum Permissible Exposure Level (MPE) for the Uncontrolled/General Population environment for Channel 36 is approximately 403.3 μ W/cm². Thus, the proposal is approximately 5.2% of the General Population MPE level and well within the allowable limit.

Based upon the forgoing it is believed that the proposed facility is in compliance with the required RF Exposure limits.

The licensee and all station personnel and contractors are required to follow appropriate safety procedures before the commencement of any work on the tower or in close proximity to the antenna. These procedures including reducing power or turning off the transmitter before any work is undertaken at the site. The licensee in coordination with any other users of the site must reduce power or cease operations as necessary to ensure workers having access to the site, tower, and antenna locations are not exposed to RF Radiation levels in excess of those prescribed by FCC Guidelines.

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