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Technical Statement for Construction Permit Minor Modification:

**WSOC Television, LLC
Station WSOC-TV, Facility ID 74070
Channel 19
Charlotte, NC**

Modification of Construction Permit in File No. 0000025119

Introduction

This Technical Statement provides supplemental technical data and information associated with an application for a Minor Modification of the FCC Construction Permit (CP) for Minor Modification of a Licensed Facility associated with the Commission's Broadcast Television Spectrum Repack, in File Number 0000025119 granted on June 23, 2017 and expiring on September 6, 2019. The current application for modification of the WSOC-TV facilities on Channel 19 in Charlotte, NC seeks to change the antenna type and model number, to maximize the station's Effective Radiated Power (ERP) and to convert from a horizontally polarized configuration to one using elliptical polarization. The substitute antenna will retain the Non-Directional azimuth pattern of the original. Due to the changes, several of the attachments to the original CP application are updated with the filing of the current application, and the updates are described in the following sections.

Facilities

The antenna currently authorized for use by WSOC-TV on Channel 19 post-repack is horizontally polarized. The station seeks to upgrade to elliptical polarization and at the same time to convert from a broadband panel design to a single-channel slotted coaxial antenna. The Effective Radiated Power (ERP) of the station also will be maximized to 1000 kW. Since the antenna previously included in the application and the one now proposed both are non-directional, no pattern plots are required by the FCC rules, and consequently, none are provided with this Construction Permit modification application.

The results of recent interference studies are described in the following section of this Technical Statement.

Interference Analysis

As a result of the proposed power increase described in the preceding section, interference studies were conducted to confirm that interference protection to neighboring stations would be maintained after the proposed changes. The studies were conducted using the Commission’s TVStudy software, version 2.2.3. The Licensing and Management System (LMS) database dated October 26, 2017 was applied.

TVStudy found a total of eighteen records requiring analysis, representing the respective Construction Permit and Baseline facilities for a total of eight television stations – four full-service, three Class A, and a pair of members of a Distributed Transmission System (DTS) network. There also were records for a station that had not been repacked and had only a single record and for an application filed in the current filing window by a station also appearing on the list with a pair of records. The stations, records, and results are included in the following table.

Call	Chan	Svc	Status	City, State	File Number	Dist. km	IX % Incr.
WCCB	D18	DT	CP	CHARLOTTE, NC	BLANK0000027051	0.9	0.04
WCCB	D18	DT	BL	CHARLOTTE, NC	DTVBL49157	0.9	0.03
WGCL-TV	D19	DT	LIC	ATLANTA, GA	BLCDT20060113ACO	368.1	0.02
WBPI-CD	D19	DC	CP	AUGUSTA, GA	BLANK0000025874	223.7	0.01
WBPI-CD	D19	DC	BL	AUGUSTA, GA	DTVBL17464	223.8	0.01
WYDO	D19	DT	CP	GREENVILLE, NC	BLANK0000028140	308.5	0.00
WYDO	D19	DT	BL	GREENVILLE, NC	DTVBL35582	308.5	0.00
WCSC-TV	D19	DT	APP	CHARLESTON, SC	BLANK0000034155	276.4	0.02
WCSC-TV	D19	DT	CP	CHARLESTON, S	BLANK0000025160	276.4	0.03
WCSC-TV	D19	DT	BL	CHARLESTON, SC	DTVBL71297	276.4	0.03
WKPZ-CD	D19	DC	LIC	KINGSPORT, TN	BLANK0000001584	218.7	0.04
WKPZ-CD	D19	DC	LIC	KINGSPORT, TN	BLANK0000001597	218.7	0.04
WLHG-CD	D19	DC	CP	LYNCHBURG, VA	BLANK0000027226	272.2	0.10
WLHG-CD	D19	DC	BL	LYNCHBURG, VA	DTVBL168095	272.2	0.10
WUNF-TV	D20	DD	CP	ASHEVILLE, NC	BLANK0000029742	165.5	0.00
WUNF-TV	D20	(D25)DD	BL	ASHEVILLE, NC	DTVBL69300	184.9	0.01
WUNC-TV	D20	DT	CP	CHAPEL HILL, NC	BLANK0000025215	156.3	0.01
WUNC-TV	D20	DT	BL	CHAPEL HILL, NC	DTVBL69080	156.3	0.01

As can be seen in the table, out of the eighteen records, three show zero increase in predicted interference from the proposed modification of WSOC-TV, and all the rest show predicted interference increases of 0.1 percent or much less – well within the allowed level of 0.5 percent increase. Thus, no impermissible new interference is predicted to be caused by the proposal. Complete data from the interference studies are provided in a file uploaded to the LMS record named < WSOC Ch19 DIE TFU-31EBT-VP-R O6 1MW tvixstudy.pdf>.

Environmental Impact/Radio Frequency Radiation

The change of antenna design and model plus the power increase and addition of vertically polarized energy in the change from horizontal polarization to elliptical polarization implicates the determination of predicted Radio Frequency Radiation (RFR) previously made. Consequently, the RFR percentage of the Maximum Permissible Exposure (MPE) has been recalculated using the characteristics of the proposed antenna and the increased power levels, and the results are reported in the file <Environmental Impact - Radio Frequency Radiation - WSOC Charlotte - 306.1mAGL 1000kW Epol v3.pdf>, which has been uploaded to the LMS record for this application.

Other Changes

The recent run of TVStudy regarding WSOC-TV produced a different value for Height Above Average Terrain (HAAT) for the Center of Radiation of the antenna than was in the LMS database previously. Consequently, the value in the LMS record has been updated to the value computed by TVStudy.