

**EXHIBIT 30
FM AUXILIARY ANTENNA
WQCD(FM) 6.2 KW 396 M HAAT CH. 270B
NEW YORK, NEW YORK**

INTRODUCTION

This application is prepared on behalf of Emmis Radio License, LLC, licensee of FM station WQCD(FM) at New York City, Facility ID No. 67846. It requests authority to employ a new auxiliary back-up antenna for FM broadcast station WQCD(FM), Channel 270B. The new auxiliary antenna is the FM “Mini-master Backup” two layer wrap around antenna that is positioned above the top of the mooring mast and below the main two layer “master” FM antenna on the Empire State Building, ASRN 1007048.

TECHNICAL PROPOSAL

WQCD presently operates with 6.2 kW Effective Radiated Power (ERP) from the Empire State Building master antenna at a height of 413m AAT. The proposed auxiliary facility that will operate at 6.2 kW ERP using the nondirectional Mini-master Backup antenna on the same building at a radiation center height of 396m AAT, 17 meters less than the main licensed facility. The new auxiliary antenna will also be used for future IBOC transmissions pursuant to the provision in MM Docket No. 99-325. Accordingly, use of separate antennas for analog and digital signals is permissible provided the following requirements are met: 1) the hybrid system will involve a licensed auxiliary antenna (the subject of this engineering proposal) for digital transmission; 2) the auxiliary antenna location is within three seconds of latitude and longitude of the main facility; and, 3) the auxiliary antenna HAAT is between 70 and 100 percent of the HAAT of the main antenna.

The back-up facility will be constructed in compliance with this criteria and Special Temporary Authority (STA) will be requested to cover the implementation of the IBOC system.

60 dBu AUXILIARY ANTENNA PREDICTED CONTOUR

The proposed auxiliary antenna will radiate the same ERP as the main antenna, in an omnidirectional pattern, from the same location, but at 17 meters less antenna height. It is apparent that the this auxiliary facility will not result in any extension of coverage beyond the 60 dBu (1.0 mV/m) contour of the main authorization as required in Section 73.1675(a) of the Commission's rules. A contour map demonstrating compliance is not necessary since the auxiliary and main antennas will be co-located and ERP and HAAT for the back-up proposal do not exceed the licensed operating parameters of the main station.

ENVIRONMENTAL EXCLUSION

The new auxiliary antenna will not have a significant effect on the quality of the human environment and does not require an environmental assessment. It is categorically excluded from environmental processing by Section 1.1306 since the auxiliary antenna will be supported by an existing tower (ASRN 1007048) and does not exceed the standards for human exposure to radio-frequency (RF) energy in Section 1.1307(b) as described below.

R. F. EXPOSURE

Operation of the new auxiliary antenna will not result in RF contributions exceeding

the *RF Exposure Limits* specified in Section 1.1310. The proposed back-up facility will transmit on FM Channel 270, 101.9 MHz, and the maximum permissible exposure (MPE) limits for this frequency are 200 $\mu\text{W}/\text{cm}^2$ for general (uncontrolled) exposure and 1,000 $\mu\text{W}/\text{cm}^2$ for occupational (controlled) exposure. Compliance with these limits will be established based on a calculation of power density levels accessible at locations two meters above access surfaces for various FM antenna types.

The applicant plans to operate into a two-bay, circularly polarized, ERI “Mini-master Backup” antenna at an elevated location on the Empire State Building. The backup antenna is manufactured by ERI and consists of a two layer type 1084-2CP panel array, two high and four around the supporting column. Vertical plane patterns supplied by ERI indicate the relative field from the antenna does not exceed 33% of maximum for any angle exceeding 29 degrees below the horizontal plane. The Empire State Building Mini-master antenna is located at an elevated position, approximately 70 meters above the highest generally accessible level, the 86th floor observation level of the building. The observation area extends approximately 17 meters out from the antenna centerline. The geometry of potential exposure areas is thus well defined with strictly controlled access. Within this controlled access area the depression angle from the antenna is approximately 76 degrees and the relative field at that angle does not exceed 29% of the maximum.

Based on the proposed ERP and the above geometry the maximum observation level power density is calculated to not exceed 7.1 $\mu\text{W}/\text{cm}^2$ at the perimeter of the observation deck. The uncontrolled exposure limit is 200 $\mu\text{W}/\text{cm}^2$ and the calculated exposure is 3.55% of this limit. Since this estimated level is less than 5% of the MPE limits

for both uncontrolled and controlled exposure, the applicant is not required to further evaluate the antenna location with respect to other RF contributors.

OCCUPATIONAL R.F. EXPOSURE

It has been demonstrated that the proposal will comply with the uncontrolled, and thus the occupational exposure limit, at any observation-level location. At higher elevations on the building and antenna structure, however, workers will be protected from excessive exposure to RF fields in accordance with the methods recommended in *OET Bulletin No. 65, Version 97-01*. In regard to other site users, the applicant acknowledges their obligation to participate in the coordination of projects involving work at higher elevations. The Empire State Building has an active users group which tracks and controls all potential RF Exposure. Preventive steps to protect workers during such scheduled events shall include reducing power or shutting down facilities.

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