

Cary, North Carolina
Application for Modified Facilities for FM Translator W253CY
On Channel 252
by
First State Communications, Inc.

Nonionizing Radio Frequency Radiation Analysis

September 2020

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Declaration

I declare, under penalty of perjury, that I am a technical consultant to broadcasting and other communications systems, that I have over twenty-five years of experience in the engineering of broadcast and other communications systems, that I am familiar with the Federal Communications Commission's Rules found in the Code of Federal Regulations Title 47, that I am a Professional Engineer registered in North Carolina, that I have prepared or supervised the preparation of the attached Nonionizing Radio Frequency Radiation Analysis, for First State Communications, Inc., and that all of the facts therein, except for facts of which the Federal Communications Commission may take official notice, are true to the best of my knowledge and belief.



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Narrative

This Exhibit supports an application for modified facilities for FM translator W253CY, Cary, North Carolina. The application proposes fill-in service with station WPTF, Raleigh, North Carolina.

This Exhibit shows that the proposed operation is in compliance with nonionizing radiation regulations.

Radio Frequency Radiation Evaluation

The proposed W253CY facilities, when evaluated under worst case methods in OET-65¹, will create 0.00058 mW/cm² two meters above ground level. The worst case power density is 0.29% of the maximum permitted 0.20 mW/cm² for general population/uncontrolled exposure. This level is de minimis, and less than the threshold of responsibility for nonionizing electromagnetic radiofrequency radiation.

A single bay SWR FMEC/1-TA antenna is proposed which reduces the power density at ground level.

Because the proposed level is below the threshold of responsibility, no showings are provided for the other facilities at the site. The radiation center, maximum ERP, and antenna configuration are unchanged from the licensed W253CY facilities.

¹Cleveland, Robert F., Jr., Sylvar, David M., and Ulcek, Jerry L., *Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*, OET Bulletin 65, Edition 97-01.