

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of RADIANT LIFE MINISTRIES, INC., licensee of full-power digital television station WFXW(TV), Channel 15 in Greenville, Mississippi, in support of its amendment to its pending Application for Construction Permit LMS-0000216203, to operate with reduced effective radiated power. It is now proposed to operate with an effective radiated power of 190 kW in order to satisfy the Commission's concerns regarding the creation of loss area. No change in site location, antenna make/model or antenna height is proposed herein.

It is proposed to continue to utilize the licensed Dielectric omnidirectional horizontally-polarized antenna, which is mounted at the 268.6-meter level of the existing WFXW(TV) 281.3-meter tower. The proposed effective radiated power for the proposed facility will increase from the originally proposed 176 kW to now specify an ERP of 190 kW. Exhibit B is a map upon which the predicted service contours are plotted. As shown, the community of Greenville continues to be completely encompassed by the proposed 48 dBu city-grade service contour.

Exhibit C is a map upon which the licensed and newly proposed noise-limited, dipole-adjusted service contours are plotted. According to the Commission's own analysis, the amended WFXW(TV) facility results in a loss area population that they consider to be de minimis.

Elevation pattern information for a Dielectric antenna similar to that licensed is provided in Exhibit D. Because the proposed noise-limited dipole-adjusted service contour is

completely contained within that licensed to WFXW(TV) under FCC File Number BLCDDT-20090612ACI, no interference study is included herein.

A power density calculation appears as Exhibit E.

Since no change in the overall height or location of the existing WFXW(TV) tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the Federal Communications Commission issued Antenna Structure Registration Number 1042326 to this tower.

I declare under penalty of perjury that the foregoing statements and the attached exhibits are true and correct to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read "K. T. Fisher". The signature is stylized with a large initial "K" and a long horizontal stroke at the end.

KEVIN T. FISHER

August 25, 2023

SMITH AND FISHER, LLC

CONTOUR POPULATION (2020 U.S. CENSUS DATA)
CITY-GRADE (48 DBU) : 183,046 (80,960 HOUSEHOLDS)
NOISE-LIMITED 38.83 DBU : 219,035 (98,689 HOUSEHOLDS)

PROPOSED N/L FCC SERVICE CONTOUR

PROPOSED 48 DBU FCC CITY-GRADE SERVICE CONTOUR

WFXW(TV) CITY-OF-LICENSE

WFXW(TV)

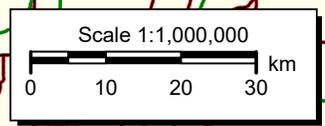
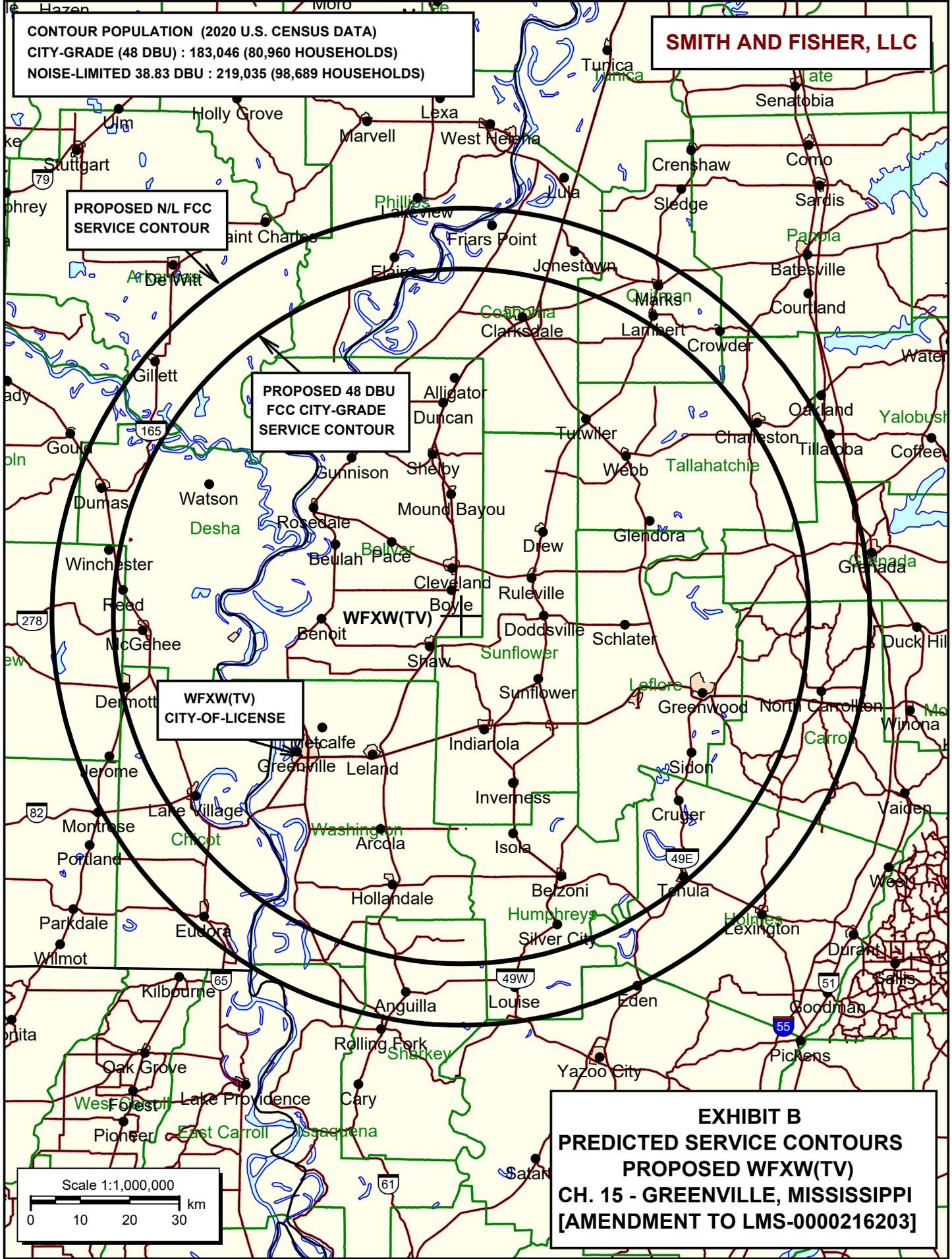
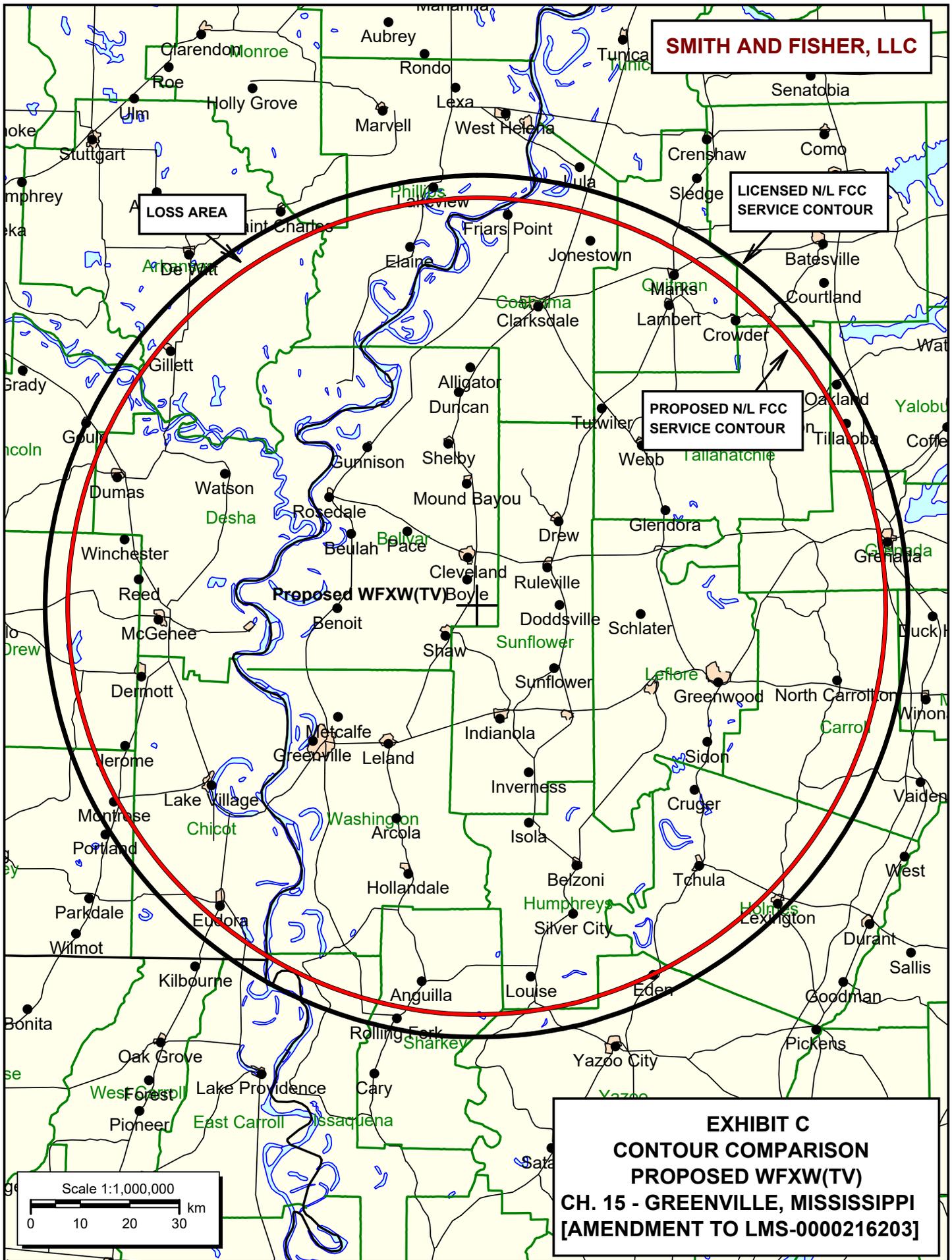


EXHIBIT B
PREDICTED SERVICE CONTOURS
PROPOSED WFXW(TV)
CH. 15 - GREENVILLE, MISSISSIPPI
[AMENDMENT TO LMS-0000216203]





ELEVATION PATTERN

EXHIBIT D

Exhibit No.

Date **2 Jun 2023**

Call Letters

Channel **15**

Antenna Type **TFU-29JSC TFU**

Location

Customer

Future fill is available!

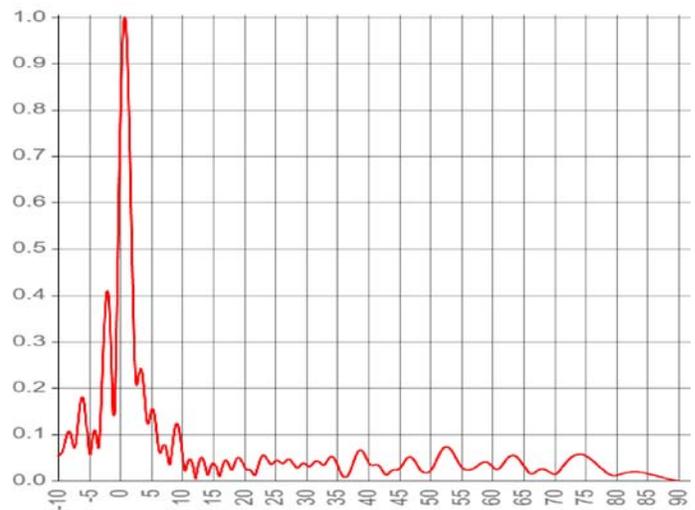
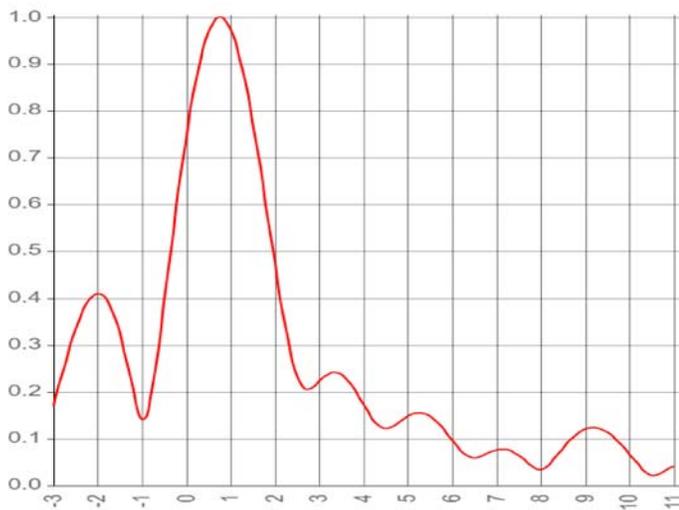
RMS Gain at Main Lobe **28.0 (14.47 dB)**

Beam Tilt **0.75 Degrees**

RMS Gain at Horizontal **15.6 (11.94 dB)**

Drawing # **29Y280075**

Calculated



Degrees below horizontal

Degrees below horizontal

Angle	Field								
-10	0.055	10	0.067	30	0.035	50	0.021	70	0.014
-9	0.077	11	0.041	31	0.035	51	0.044	71	0.024
-8	0.103	12	0.012	32	0.041	52	0.068	72	0.041
-7	0.091	13	0.049	33	0.035	53	0.071	73	0.052
-6	0.180	14	0.017	34	0.052	54	0.052	74	0.057
-5	0.065	15	0.038	35	0.036	55	0.030	75	0.054
-4	0.108	16	0.009	36	0.009	56	0.023	76	0.045
-3	0.169	17	0.044	37	0.018	57	0.026	77	0.034
-2	0.410	18	0.023	38	0.053	58	0.036	78	0.022
-1	0.141	19	0.049	39	0.065	59	0.040	79	0.013
0	0.747	20	0.031	40	0.042	60	0.031	80	0.011
1	0.975	21	0.023	41	0.034	61	0.025	81	0.015
2	0.474	22	0.018	42	0.028	62	0.041	82	0.018
3	0.223	23	0.054	43	0.012	63	0.054	83	0.019
4	0.173	24	0.040	44	0.023	64	0.051	84	0.018
5	0.148	25	0.042	45	0.026	65	0.034	85	0.015
6	0.097	26	0.038	46	0.044	66	0.016	86	0.012
7	0.076	27	0.045	47	0.050	67	0.019	87	0.008
8	0.034	28	0.035	48	0.032	68	0.025	88	0.005
9	0.121	29	0.032	49	0.017	69	0.021	89	0.002

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POWER DENSITY CALCULATION

PROPOSED WFXW(TV)
CHANNEL 15 – GREENVILLE, MISSISSIPPI
[AMENDMENT TO LMS-0000216203]

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Greenville facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 190 kW, an antenna radiation center 268.6 meters above ground, and the specific elevation pattern of the licensed Dielectric TFU-29JTH-R-04 antenna, maximum power density two meters above ground of 0.00029 mW/cm² is calculated to occur 201 meters from the base of the tower. Since this is less than 0.1 percent of the 0.32 mW/cm² reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 15 (476-482 MHz), a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.