

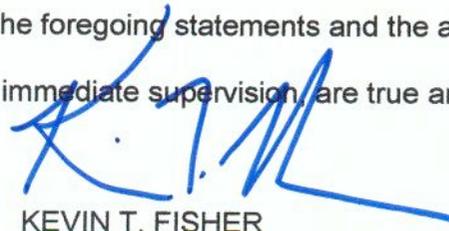
ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of NATIONAL MINORITY T.V., INC., licensee of television translator W31CA, Channel 31 in Charleston, West Virginia, in support of this Application for Construction Permit to specify digital operation on Channel 27 from the licensed W31CA site. This proposal is being submitted in response to the Commission's assignment of Channel 31 to WXII-DT in Winston-Salem, North Carolina. The site of WXII-DT is located 251.4 kilometers from that of W31CA, thereby placing this translator in a displacement situation.

It is proposed to mount a standard ERI omnidirectional antenna at the authorized height on the side of the existing 86-meter communications tower. Exhibit B is a map upon which the predicted service contours are plotted. It is important to note that the newly proposed 51 dBu contour encompasses a significant portion of the Grade A contour that obtains from the licensed W31CA facility. Operating parameters for the proposed facility are tabulated in Exhibit C. An interference study is provided in Exhibit D, and a power density calculation follows as Exhibit E.

Because no change in the overall height or location of the existing tower is proposed, the FAA has not been notified of this application. The FCC issued Antenna Structure Registration Number 1200757 to this tower.

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.



KEVIN T. FISHER

March 14, 2006

PROPOSED OPERATING PARAMETERS

PROPOSED W31CA-D
CHANNEL 27 – CHARLESTON, WEST VIRGINIA

Transmitter Power Output:	1.3 kw
Transmission Line Efficiency:	81.2%
Antenna Power Gain – Toward Horizon:	14.06
Antenna Power Gain – Main Lobe:	14.06
Effective Radiated Power – Toward Horizon:	15.0 kw
Effective Radiated Power – Main Lobe:	15.0 kw
Transmitter Make and Model:	Type-accepted
Rated Output	2.0 kw
Transmission Line Make and Model:	Andrew HJ7-50A
Size and Type:	1-5/8" air heliax
Length:	180 feet*
Antenna Make and Model:	ERI AL8
Orientation	Omnidirectional
Beam Tilt	1.75 degrees
Radiation Center Above Ground:	47 meters
Radiation Center Above Mean Sea Level:	334 meters

*estimated

LONGLEY-RICE INTERFERENCE STUDIES
PROPOSED W31CA-D
CHANNEL 27 – CHARLESTON, WEST VIRGINIA

We conducted detailed interference studies using the Longley-Rice methodology contained in the Commission's *OET Bulletin No. 69*, with respect to all facilities of concern. The software utilizes a 1-square kilometer cell size, calculates signal strength at 0.1 kilometer increments along each radial studied, and employs the 1990 U.S. Census to count population within cells. In addition, the program does not attribute interference to the proposed facility in cells within the protected contour of the station under study where interference from another source (other than proposed W31CA-D) already is predicted to exist (also known as "masking"). The results of these studies are provided in Exhibit D-2. They conclude that the facility proposed herein causes no significant new interference to any of the potentially affected stations.

As a result, it is believed that the proposed W31CA-D facility complies with the requirements of Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030 of the Commission's Rules.

INTERFERENCE SUMMARY

PROPOSED W31CA-D
CHANNEL 27 – CHARLESTON, WEST VIRGINIA

<u>Call Sign</u>	<u>Status</u>	<u>City, State</u>	<u>Ch.</u>	<u>Longley-Rice Service Population</u>	<u>Unmasked Interference From Proposed Facility</u>	<u>%</u>
WKAS-DT BLEDT-20020404ABM	Lic.	Ashland, KY	26	471,643	594	0.1
WOUB-DT BLEDT-20030411ABC	Lic.	Athens, OH	27	678,445	2,421	0.4*

*Interference partially masked by WKYT-TV.

POWER DENSITY CALCULATION

PROPOSED W31CA-D
CHANNEL 27 – CHARLESTON, WEST VIRGINIA

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Charleston facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 15.0 kw, an antenna radiation center 47 meters above ground, and the vertical pattern of the ERI antenna, maximum power density two meters above ground of 0.0023 mw/cm^2 is calculated to occur 41 meters from the base of the tower. Since this is only 0.6 percent of the 0.37 mw/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 27 (548-554 MHz), this proposal may be excluded from consideration with respect to public exposure to nonionizing 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 nonionizing radiation.