

TECHNICAL EXHIBIT
APPLICATION FOR CONSTRUCTION PERMIT
LOW POWER TV STATION W52CT
FACILITY ID 41793
NASHVILLE, TENNESSEE

February 26, 2002

CHANNEL 42 25 KW

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Table of Contents

Technical Statement

Figure 1

Summary of OET-69 Analysis

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Technical Statement

This Technical Exhibit was prepared on behalf of Low Power TV station W52CT, Nashville, Tennessee, in support of an application for construction permit proposing a change in channel. This application was prepared pursuant to the displacement relief provisions of Section 73.3572(a)(4) of the FCC Rules. The instant application proposes the operation of W52CT on Channel 42 with a peak visual effective radiated power (ERP) of 25 kW. There is no change in the transmitter site location or antenna radiation center height above mean sea level. The antenna type remains non-directional. The instant displacement application is considered a “minor change” in facilities pursuant to Section 73.3572.

Proposed Facilities

It is proposed to operate on Channel 42 (638-644 MHz) with a "zero" carrier frequency offset using an RFS, RD8UO non-directional antenna. The nominal non-directional ERP will be 25 kW. The antenna will be mounted on the roof of the building located at 509 5th Avenue South. The overall height of the antenna structure above roof level will be 5 m (112 m AGL). The antenna radiation center height above ground will be 110 m, with a radiation center height above mean sea level of 259 m. These elevations are identical to what is now licensed for W52CT.

The proposed facility is located beyond the Canadian and Mexican coordination zones.

Response to Paragraph 13(a) – TV Broadcast Analog Protection

An allocation study has been conducted pursuant to the provisions of Section 74.705 of the FCC Rules. The proposed facility meets the contour overlap and spacing requirements with respect to all pertinent facilities with the exception of the following:

WNPX(TV), Cookeville-TN, Channel 28, BLCT-19980626KE.

Pursuant to Section 73.705(e) of the FCC Rules, a waiver of the interference protection rules is requested to permit the use of the Longley-Rice propagation methodology as provided in FCC OET Bulletin No. 69 (OET-69).

An interference analysis using the procedures of OET-69 reveals that the proposed facility will cause 0.0% interference to WNPX(TV). The OET-69 analysis is summarized in Figure 1 herein.

It is noted that the one single application for the former Channel 42 analog TV allotment in Nashville, FCC File No. BPET-19960920IZ, was dismissed by the Commission on June 6, 2001.

Response to Paragraph 13(b) – DTV Station Protection

Calculations based on OET-69 indicate that the proposed W52CT operation on channel 42 complies with the FCC's 0.5% interference threshold criteria to all allotted, proposed or actual DTV operating facilities on channels 41, 42 and 43. Figure 1 provides the output of study based on OET-69, which demonstrates that the

proposed W52CT operation complies with the FCC's DTV de minimis interference protection criteria.

Response to Paragraph 13(c) – LPTV/TV Translator/Class A TV Protection

An allocation study has been conducted pursuant to the provisions of Section 74.707 of the FCC Rules. The proposed facility meets the contour overlap requirements with respect to all pertinent facilities pursuant to Section 74.707 of the FCC Rules.

Environmental Considerations

With respect to the potential for human exposure to radio frequency (RF) radiation, calculations prepared in accordance with FCC Bulletin OET-65 (Edition 97-01) indicate that the proposal will not result in human exposure to RF radiation at ground level in excess of FCC standards. Power density calculations were conducted at 2-m above ground* based on the following conservative assumptions, with the following results:

Call Sign	Channel	Peak Visual ERP or Average ERP (kW)	Aural ERP (kW)	Relative Field Factor [†]	FCC Limit [‡] (mW/cm ²)	Percentage of Limit
W52CT	42	25	2.5	0.50	0.425	2.1 %

As indicated above, the exposure to RF radiation at 2-m above ground level will not exceed 2.1% of the FCC limit for general population / uncontrolled exposure.

* The radiation center height above ground is 110 m.

† This relative field level is not exceeded for elevation angles greater than 10° below horizontal.

‡ for general population/uncontrolled environments

With respect to the rooftop, the building roof is restricted from access. RF exposure measurements shall be conducted on the roof as necessary when service on Channel 42 is initiated to verify continued compliance with the FCC limits to human exposure to RF energy. Work rules concerning access to the building roof shall continue. Therefore, the proposal complies with the FCC limits for human exposure to RF radiation and it is categorically excluded from environmental processing.

Louis Robert du Treil, Jr.

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Stations Potentially Affected by Proposed Station							
Facility Number	Channel	Call	City State	Distance (km)	Status	Application Prefix	Application Reference Number
1	28	WNPX	COOKEVILLE TN	78.1	LIC	BLCT	19980626KE
2	41	WZDX-DT	HUNTSVILLE AL	172	CP	BPCDT	19991027AAT
3	41	WZDX-DT	HUNTSVILLE AL	171.7	PLN	DTVPLN	DTVP1088
4	41	WKPD-DT	PADUCAH KY	197.8	PLN	DTVPLN	DTVP1100
5	42	WKLE-DT	LEXINGTON KY	289.3	PLN	DTVPLN	DTVP1132
6	42	WKMA-DT	MADISONVILLE KY	131.3	PLN	DTVPLN	DTVP1133
7	42	WFLI-DT	CLEVELAND TN	172.3	CP	BPCDT	19991013ABS
8	42	WFLI-DT	CLEVELAND TN	213.1	PLN	DTVPLN	DTVP1147
9	43	WKZT-DT	ELIZABETHTOWN KY	188	PLN	DTVPLN	DTVP1163
10	43	WBBJ-DT	JACKSON TN	181.9	PLN	DTVPLN	DTVP1179

Summary of Interference Analysis for Worst-Case Scenarios							
Facility Number	Interference Population Before Analysis	Interference Population After Analysis	Baseline Population	Net Change in Interference	Percent of Baseline	Permissible Percent of Baseline	Result
1	381326	381326	1122725	0	0.00	0.5	pass
2	--	--	--	--	0.00	--	pass
3	--	--	--	--	0.00	--	pass
4	--	--	--	--	0.00	--	pass
5	--	--	--	--	0.00	--	pass
6	--	--	--	--	0.00	--	pass
7	25154	25451	708781	297	0.04	0.5	pass
8	11011	11011	708781	0	0.00	0.5	pass
9	--	--	--	--	0.00	--	pass
10	--	--	--	--	0.00	--	pass