

INTERFERENCE STUDY
PROPOSED WPGD-DT
CHANNEL 51 – HENDERSONVILLE, TENNESSEE
[MODIFICATION OF BPCDT-19991101AHR]

The Commission allotted Channel 51 to WPGD-DT with a nominal ERP of 141 kw (directional) at 235 meters above average terrain. The instant application specifies an ERP of 264 kw (directional) at 417 meters from a new site, which we have determined to be allowable under the FCC's *de minimis* standards with respect to various NTSC and DTV facilities.

In evaluating the interference effect of this proposal, we have relied upon the V-Soft Communications "Probe II" computer program, which has been found generally to mimic the FCC's program. In conducting our studies, we employed a signal resolution of 2.0 kilometers, an increment spacing of 1.0 kilometer along each radial, and the 1990 U.S. Census. Changes in interference caused by proposed WPGD-DT to other pertinent stations are tabulated in Exhibit E-2.

As indicated, the proposed WPGD-DT facility would not contribute more than two percent DTV interference to the service population of any affected NTSC or DTV station. In addition, this proposal does not result in any NTSC or DTV station receiving more than ten percent total DTV interference to viewers living within its present service area.

Therefore, this proposal meets the FCC's *de minimis* interference standards for DTV operations.

EXHIBIT E-2

DIV FACILITIES

INTERFERENCE LOSSES (POPULATION)											
Call Sign WPXA-DT (Lic)	City, State Rome, GA	NTSC/DTV ³ Grade B Pop. Longley-Rice Ch. 51	NTSC & DTV		NTSC & DTV		NTSC & DTV		NTSC & DTV		WPGD-DT Contribution % ²
			NTSC Only	Without WPGD-DT	Unmasked DTV	% ¹	With WPGD-DT	Unmasked DTV	% ¹		
		3,874,127	0	30,162	30,162	0.8	37,254	37,254	1.0	7,092	0.2
WTLK-DT (Allot.)	Rome, GA	3,415,123	0	37,439	37,439	1.1	39,225	39,225	1.1	1,786	<0.1
WFTE-DT (CP)	Salem, IN	1,618,385	678	11,573	10,895	0.7	13,814	13,136	0.8	2,241	0.1
WFTE-DT (STA)	Salem, IN	1,080,093	0	2,280	2,280	0.2	2,481	2,481	0.2	201	<0.1
WFTE-DT (Allot.)	Salem, IN	1,238,159	72	13,131	13,059	1.1	13,145	13,073	1.1	14	<0.1
WAGV-DT (CP)	Harlan, KY	1,183,105	857	102,195	101,338	8.6	102,273	101,416	8.6	78	<0.1
WAGV-DT (Allot.)	Harlan, KY	604,156	0	28,763	28,763	4.8	28,922	28,922	4.8	159	<0.1
WAGV-DT (App.)	Harlan, KY	1,122,452	521	78,124	77,603	6.9	78,124	77,603	6.9	0	0
WAGV-DT (STA)	Harlan, KY	917,204	234	48,758	48,524	5.3	48,766	48,532	5.3	8	<0.1

EXHIBIT E-2

DTV FACILITIES

<u>INTERFERENCE LOSSES (POPULATION)</u>										
<u>Call Sign</u> <u>WCTE-DT</u> (CP)	<u>City, State</u> <u>Cookeville, TN</u>	<u>Ch.</u> <u>51</u>	<u>NTSC/DTV³</u> <u>Grade B Pop.</u> <u>Longley-Rice</u>		<u>NTSC & DTV</u>		<u>NTSC & DTV</u>		<u>NTSC & DTV</u>	
			<u>Only</u>		<u>Without</u>		<u>With</u>		<u>Unmasked</u>	
			<u>NTSC</u>	<u>DTV</u>	<u>WPGD-DT</u>	<u>DTV</u>	<u>WPGD-DT</u>	<u>DTV</u>	<u>WPGD-DT</u>	<u>DTV</u>
			<u>530</u>	<u>0</u>	<u>530</u>	<u>0</u>	<u>2,109</u>	<u>1,579</u>	<u>0.6</u>	<u>1,579</u>
									<u>%¹</u>	<u>Contribution</u>
										<u>%²</u>
WCTE-DT (Allot.)	Cookeville, TN	51	352,671	1,009	1,428	419	8,088	7,079	2.0	6,660
WPXX-DT (Lic.)	Memphis, TN	51	1,307,944	0	1,806	1,806	2,620	2,620	0.2	814
WFBI-DT (Allot.)	Memphis, TN	51	1,138,353	0	9,802	9,802	10,099	10,099	0.9	297
										<0.1

- 1 Cannot exceed 10%, under FCC de minimis interference standards.
- 2 Cannot exceed 2%, under FCC de minimis interference standards.
- 3 Larger of either NTSC Grade B population (with no DTV losses) or DTV Grade B population with all losses.