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February 17, 2010

## BY HAND DELIVERY

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, DC 20054

FILED/ACCEPTED

FEB 17 2010

Federal Communications Commission  
Office of the Secretary

ATTN: Media Bureau

Re: WTVF-DT, Nashville, Tennessee (Fac. ID No. 36504)  
File No. BLSTA-20090714ACU  
Submission of Field Test Data Regarding Operation of a  
Replacement Digital Translator on Channel 50 at 100 kW ERP

Dear Ms. Dortch:

On July 17, 2009, the Media Bureau granted for a six-month term a request for special temporary authority ("STA") filed by NewsChannel 5 Network, LLC ("NewsChannel 5"), licensee of full-power commercial television station WTVF-DT, Nashville, Tennessee (Facility ID No. 36504) ("WTVF"), to operate a UHF replacement digital television translator on Channel 50 at 100 kW effective radiated power ("ERP"). The STA grant requires NewsChannel 5 to submit at the end of the initial six-month STA term a report detailing the results of field strength measurements from operation of the replacement digital translator at 15 kW and 100 kW ERP. The purpose of such tests was to determine whether the increased power level resolved signal reception problems experienced by viewers within 15 miles of WTVF's transmitter site following the station's digital transition on June 12, 2009.

The results of NewsChannel 5's field strength measurements are attached hereto accompanied by a statement from WTVF's chief engineer. The field tests were conducted at various locations within 15 miles of WTVF's transmitter before and after increasing the replacement digital translator's power from 15 kW ERP to 100 kW ERP. The test results demonstrate that operation of the replacement digital translator at 100 kW ERP, as opposed to the 15 kW power limit permitted under the Commission's rules, resulted in markedly improved reception of WTVF's signal (as rebroadcast by the translator) at each test site. Specifically, operation of the replacement digital translator at 15 kW ERP continued to produce reception problems, ranging from complete loss of picture to some level of pixilation, whereas operation at 100 kW ERP resulted in a picture quality described as "very good" in each instance.

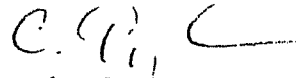
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Based on the test results, and the positive feedback WTVF has received from its viewers, NewsChannel 5 has concluded that operation of the replacement digital translator at the increased power level of 100 kW has been very effective in restoring over-the-air reception of WTVF's digital signal to viewers residing within 15 miles of the station's main transmitter site.

Please contact the undersigned with questions concerning this matter.

Respectfully submitted,



Christopher G. Tygh

*Counsel to NewsChannel 5 Network, LLC*

cc: Barbara Kreisman (via e-mail)  
Clay Pendarvis (via e-mail)  
Hossein Hashemzadeh (via e-mail)  
Kevin Harding (via e-mail)

# NewsChannel 5 HD NETWORK

On June 12, 2009, WTVF Nashville ceased operations on digital channel 56 and analog channel 5 and began post-transition digital operations to channel 5 at 22kw ERP. Throughout that day and continuing throughout the month of June, WTVF was inundated with calls and emails from viewers that were experiencing difficulty receiving our signal. Many of the viewers were using indoor antennas in urban areas, where reception of our analog signal had been possible. While many of the people could be instructed through re-scanning their converter box or adjusting their antennas, many were simply unable to receive our VHF signal despite significant efforts from our station engineering staff. Throughout the month of June, WTVF estimated that we received around 10,000 calls & emails from viewers with reception issues. In response to WTVF's requests, Doug Miller, the FCC's Atlanta Bureau Chief, brought members of his staff to Nashville on two occasions to assist WTVF's staff in ascertaining why reception problems were so widespread. Most problems could be traced to the type and orientation of the antennas that the homeowner was using. In several instances, FCC staff engineers were able to adjust antennas using a spectrum analyzer to receive WTVF's transmissions on channel 5. However, in almost as many locations, reception was deemed not possible, usually due to significant multipath and reflections in the low-band VHF signal.

In light of these circumstances, in July 2009 WTVF applied to operate a replacement digital television translator on UHF channel 50 at 15kw. We followed that application with a Special Temporary Authority request for 100kw ERP to solve the reception issues experienced by viewers within a 15-mile radius of our tower. In the grant of that STA, the FCC requested that WTVF "submit a report detailing the results of field strength measurements taken before and after the requested power increase to help us determine whether the power increase resolved the reception issues." These field strength measurements follow and show that the power increase did indeed improve reception measurably. In every site visited by WTVF engineers, the power increase made reception of WTVF's UHF translator possible. These tests were done in Nashville homes with average equipment. The equipment complement used to conduct the reception tests included a traditional "UHF loop" indoor antenna and a coupon-eligible digital converter box, as well as a spectrum analyzer to see the received spectrum with precision.

The Special Temporary Authority grant of 100kw has been beneficial for WTVF and our viewers in and around Nashville. Subsequent communication with our viewers has shown that the 100kw operation has largely solved the reception issues within the 15 mile radius of our tower, including the city of Nashville.

Gibson Prichard  
WTVF Chief Engineer

474 James Robertson Parkway • Nashville, Tennessee 37219 • 615-244-5000

 A CBS AFFILIATE

WTVF Pre and Post STA Field Visit Signal Strength Measurements

Address	Decimal Degrees		15kw ERP		15kw ERP		15kw ERP		100kw ERP		100kw ERP	
	Lat	Long	Signal	Set Top Box Signal	STB Picture Quality	Signal	Set Top Box Signal	STB Picture Quality	Signal	Set Top Box Signal	STB Picture Quality	100kw ERP
3940 Apache Trail Building CC#5, Antioch, TN 37013	36.06778	-86.69062	-79dBm	10-20% varying	loss of picture	-70dBm	50-75%	viewable, but some pixelation	-58dBm	70-86%	very good	very good
706 Center St, Madison TN 37115	36.24949	-86.68918	-75dBm	13-22% varying	viewable, but some pixelation	-58dBm	70-86%	acceptable	-56dBm	72-75%	very good	very good
4505 Harding Rd, #144 Nashville, TN 37205 - 1st TV Set	36.12434	-86.84826	-70dBm	20-35% varying	loss of picture	-72dBm	70-80%	loss of picture	-72dBm	80%	very good	very good
4505 Harding Rd, #144 Nashville, TN 37205 - 2nd TV Set	36.12434	-86.84826	-81dBm	10-20% varying	pixelated to acceptable	-67dBm	80%	pixelated to acceptable	-68dBm	70%	very good	very good
2406 Felts Ave, Nashville, TN 37211	36.11848	-86.75702	-75dBm	50% varying	loss of picture	-68dBm	70%	loss of picture	-74dBm	65-75%	very good	very good
4733 Volunteer Dr, Antioch, TN 37013	36.07183	-86.66928	-79dBm	10%	loss of picture	-62dBm	75-90%	loss of picture	-62dBm	73-83%	very good	very good
905 Green Valley Dr, Nashville, TN 37220	36.05267	-86.78244	-72dBm	0-10% varying	loss of picture	-63dBm	75-90%	loss of picture	-63dBm	73-83%	very good	very good
1607 S. Observatory, Nashville TN 37215	36.10531	-86.80531	-78dBm	10-20% varying	loss of picture	-63dBm	75-90%	loss of picture	-63dBm	73-83%	very good	very good
625 Benton Ave., Apt 707, Nashville, TN 37204	36.13186	-86.76994	-79dBm	10-25% varying	loss of picture	-63dBm	75-90%	loss of picture	-63dBm	73-83%	very good	very good
2619 Colbert Dr, Nashville, TN 37206	36.18906	-86.70533	-79dBm	10-25% varying	frozen/pixelated	-67dBm	75-79%	frozen/pixelated	-67dBm	75-79%	very good	very good

Note: These tests were conducted using a passive UHF loop antenna feeding an Insignia DXA1 set top converter box. Signal measurements were made with an Anritsu MS2721B Spectrum Analyzer and the same UHF loop antenna.