

## **ENGINEERING EXHIBIT**

### **Application for Digital Television Station Construction Permit**

prepared for

#### **WGAL Hearst Television, Inc.**

WGAL(DT) Lancaster, PA

Facility ID 53930

Ch. 8 32.2 kW 419 m

*WGAL Hearst Television, Inc. (“Hearst”)* is the licensee of television station WGAL(DT), pre-transition digital Channel 58 and analog Channel 8, Lancaster, PA. A Construction Permit (“CP”, BPCDT-20090710AKB) authorizes WGAL to operate post-transition as digital on Channel 8 at 14.1 kW effective radiated power (“ERP”) at an antenna height above average terrain (“HAAT”) of 419 meters. A license application is pending (BLCDT-20090804ABL) to cover construction of the WGAL digital Channel 8 facility. *Hearst* herein seeks a new CP to increase the ERP to 32.2 kW while maintaining the authorized antenna location and height.

The transmitting antenna (RCA model TW-9A8-R) is located on an antenna supporting structure having FCC Antenna Structure Registration number 1031756. No change to the overall structure height and no tower work are required to carry out this proposal.

A map is supplied as **Figure 1**, which depicts the standard predicted coverage contours. This map includes the location of Lancaster, WGAL’s principal community. As demonstrated thereon, the proposed facility complies with §73.625(a)(1), as the entire principal community will be encompassed by the 43 dBμ contour.

The proposed WGAL facility’s predicted service population provides a 137.9 percent match of the Appendix B facility, as detailed in the following table.

**Post-Transition Population Summary**

Population Summary (2000 Census) OET Bulletin 69 method	Appendix B	Proposed
Within Noise Limited Contour	5,089,460	7,178,486
Not affected by terrain losses	4,241,096	6,228,640
Lost to all interference	152,951	591,016
Net DTV Service	<b>4,088,145</b>	<b>5,637,624</b>
Match of Appendix B	---	<b>137.90%</b>

**Maximum ERP per §73.622(f)**

The proposed 32.2 kW ERP exceeds the §73.622(f) power limit for 419 m HAAT. *Hearst* requests a waiver of §73.622(f). As discussed in the following, and in separate statements provided by *Hearst*, the purpose of the power increase is not intended to expand WGAL's coverage area but rather to restore service losses that have been experienced within its principal community and other areas within the prior analog facility's Grade B service area.

Since switching to Channel 8 on the transition date, WGAL has received numerous calls regarding reception problems, particularly regarding indoor reception at locations that previously had satisfactory service (see the licensee's statements attached separately). These problems persist despite the increases in power that WGAL has already implemented.<sup>1</sup> Problems with digital VHF reception by other stations have been widely publicized since the transition date. It has been found that indoor reception is difficult for digital VHF stations such as WGAL due to the longer wavelength signal's inability to readily pass through buildings (the windows are smaller than the wavelength size), the ineffectiveness of many indoor antennas many of which were designed to emphasize the shorter wavelengths for UHF reception, and issues regarding manmade and environmental noise.

The proposal would increase WGAL's power by a factor of 2.28 (3.59 dB) and would be implemented by raising the WGAL transmitter's power output (no antenna or tower construction is necessary). The proposed power level was chosen as it matches the same amount of power increase

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<sup>1</sup>WGAL commenced digital operation on Channel 8 at 7.5 kW ERP and 419 meters antenna HAAT in June 2009 pursuant to BMPCDT-20080616ABJ. Within a few days of the transition date WGAL implemented a power increase to 8.1kW as authorized by BMPCDT-20090608AAQ. In August 2009 WGAL's ERP was increased further, to 14.1 kW as authorized by BPCDT-20090710AKB. A license application is pending to cover the 14.1 kW operation (BLCDT-20090804ABL).

being proposed by station WNJB(DT) (Ch.8 New Brunswick, NJ). The instant WGAL application is being coordinated with similar applications for construction permit involving WNJB and WABC-TV (Ch. 7, New York, NY), to be filed contemporaneously. WNJB is seeking to increase its ERP to 40.91 kW, a 3.59 dB increase above its currently authorized 17.9 kW operation.

The proposed 3.59 dB power increase is intended to help restore service to that achieved by the former WGAL analog facility. WGAL's analog operation employed the same channel and transmitting antenna as its post-transition digital facility. The significant loss of service suffered by WGAL and other VHF stations indicates that the power levels calculated for replication are too low. Published reports provide a starting point to consider the amount of additional power necessary to restore service. For example, a report<sup>2</sup> by MSW regarding detailed testing of over 100 indoor antennas shows that some are designed for UHF reception only and yield poor performance on the VHF band. The report indicates that VHF performance varies greatly even for antennas intended for VHF and UHF reception, with one antenna even found to have a "gain" of -10 dB on VHF frequencies (in other words, a 10 dB loss) even though a preamplifier was integral to the unit. Of concern was that the report indicates that most indoor antennas tested had a high return loss resulting in impedance mismatch to the receiver. Such impedance mismatch results in a significant signal loss at the input terminal of the receiver.

An IEEE Transactions<sup>3</sup> report examining the planning factors indicates that "expected noise levels could be higher than originally estimated by more than 20 dB at VHF frequencies ..." and suggests that "the effective noise figure for single-conversion receivers, including the VSWR effect of practical antennas, be raised from 7 dB to 12 dB for all bands." It is noted that the VSWR effect cited by the IEEE Transactions report is the same problem of impedance mismatch (return loss) found in the MSW measurements. In any event, these reports suggest that the VHF power levels are insufficient by much more than the 3.59 dB requested herein for WGAL. Thus, it can be concluded that the proposed 3.59 dB power increase does not exceed that necessary to restore service.

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<sup>2</sup> "A Report on Television Indoor Antenna Performance Attributes" Gary Sgrignoli, and Dennis Wallace of Meintel, Sgrignoli & Wallace (MSW), May 8, 2007.

<sup>3</sup> "Planning Factors for Fixed and Portable DTTV Reception" Oded Bendov, Yiyan Wu, Charles W. Rhodes, and John F.X. Browne," IEEE Transactions of Broadcasting, Vol. 50, No. 3, September 2004.

## **Interference Analysis**

A detailed interference study per OET Bulletin 69<sup>4</sup> shows that the proposal complies with the 0.5 percent limit of new interference caused to the Appendix B facilities and authorizations of pertinent nearby stations, except for WNJB and the Appendix B facility for WWCP-TV (Ch. 8 Johnstown, PA).

WNJB would receive 4.29 percent interference to its 17.9 kW Construction Permit facility (BMPEDT-20090729ACO), 4.72 percent interference to its proposed 40.91 kW facility, and 3.29 percent interference to its Appendix B facility. The licensee of WNJB has agreed to accept this interference from WGAL, as well as interference from a proposal by WABC-TV to increase its ERP to 34 kW. A copy of the interference acceptance agreement between WGAL, WNJB, and WABC-TV is attached separately. Since WNJB and WGAL would both be increasing power by the same amount (3.59 dB), there would be no new interference to either station within existing interference-free service areas attributable to the WGAL and WNJB power increases.

WWCP-TV's Appendix B CP facility would receive 0.68 percent interference, however only 0.10 percent interference would be caused to the WWCP-TV Construction Permit facility (BMPCDT-20080620AIX). A license application (BLCDT-20090413AEM) is pending to cover the WWCP-TV Construction Permit. Thus it is believed that the proposal complies with FCC requirements,<sup>5</sup> as it has been over one year since the contour extension (maximization) filing freeze has been lifted, WWCP-TV has been granted an expansion Construction Permit, and the proposal does not cause impermissible interference to the WWCP-TV authorized facility.

The interference study output report is provided as **Table 1**. The interference analysis includes consideration of WNJB at 40.91 kW and WABC-TV at 34 kW. Protection requirements towards authorized Class A stations are also satisfied.

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<sup>4</sup>FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 ("OET-69"). The implementation of OET-69 for this study followed the guidelines of OET-69 as specified therein. A standard cell size of 2 km was employed. Comparisons of various results of this computer program (run on a Sun Sparc processor) to the Commission's implementation of OET-69 show excellent correlation.

<sup>5</sup>¶155 and 162, "Third Periodic Review of the Commission's Rules and Policies Affecting the Conversion to

### **Other Allocation Considerations**

The nearest FCC monitoring station is 98.1 km distant at Laurel, MD. This exceeds the threshold minimum distance specified in §73.1030(c)(3) that would suggest consideration of the monitoring station. The site is not located within the areas requiring coordination with “quiet” zones specified in §73.1030(a) and (b). There are no AM stations within 3.2 kilometers of the site, based on information contained within the Commission’s database. The site location is within the Canadian coordination zone (367 km to the Canada border), thus further international coordination may be necessary beyond that to establish Appendix B parameters.

### **Human Exposure to Radiofrequency Electromagnetic Field (Environmental)**

The proposal will involve use of an existing transmitting antenna. The use of existing transmitting locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of §1.1306 of the FCC Rules. No tower construction or change in structure height is proposed. Therefore, it is believed that this application may be categorically excluded from environmental processing pursuant to §1.1306 of the Commission’s rules.

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission’s OET Bulletin Number 65. Based on OET-65 equation (10), and assuming 30% antenna relative field in downward elevations, the calculated power density attributable to the proposed facility at locations near the transmitter site at a height of two meters above ground level is  $1.7 \mu\text{W}/\text{cm}^2$ , which is 0.9 percent of the “uncontrolled / general public” maximum permissible exposure limit. This is below the five percent threshold limit described in §1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility for taking any corrective action in the areas where the proposal’s contribution is less than five percent.

The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC’s guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will

reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from RF electromagnetic field exposure in excess of FCC guidelines.

### **Certification**

The undersigned hereby certifies that the foregoing statement and associated attachments were prepared by him or under his direction, and that they are true and correct to the best of his knowledge and belief.



Joseph M. Davis, P.E.  
December 17, 2009

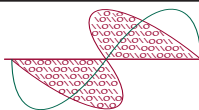
**Chesapeake RF Consultants, LLC**  
11993 Kahns Road  
Manassas, VA 20112  
703-650-9600

### List of Attachments

Figure 1	Proposed Coverage Contours
Table 1	OET Bulletin 69 Interference Study
Form 301	Saved Version of Engineering Sections from FCC Form at Time of Upload

*This material was entered December 17, 2009 for filing electronically. Since the FCC's electronic filing system may be accessed by anyone with the applicant's name and password, and electronic data may otherwise be altered in an unauthorized fashion, we cannot be responsible for changes made subsequent to our entry of this data and related attachments.*



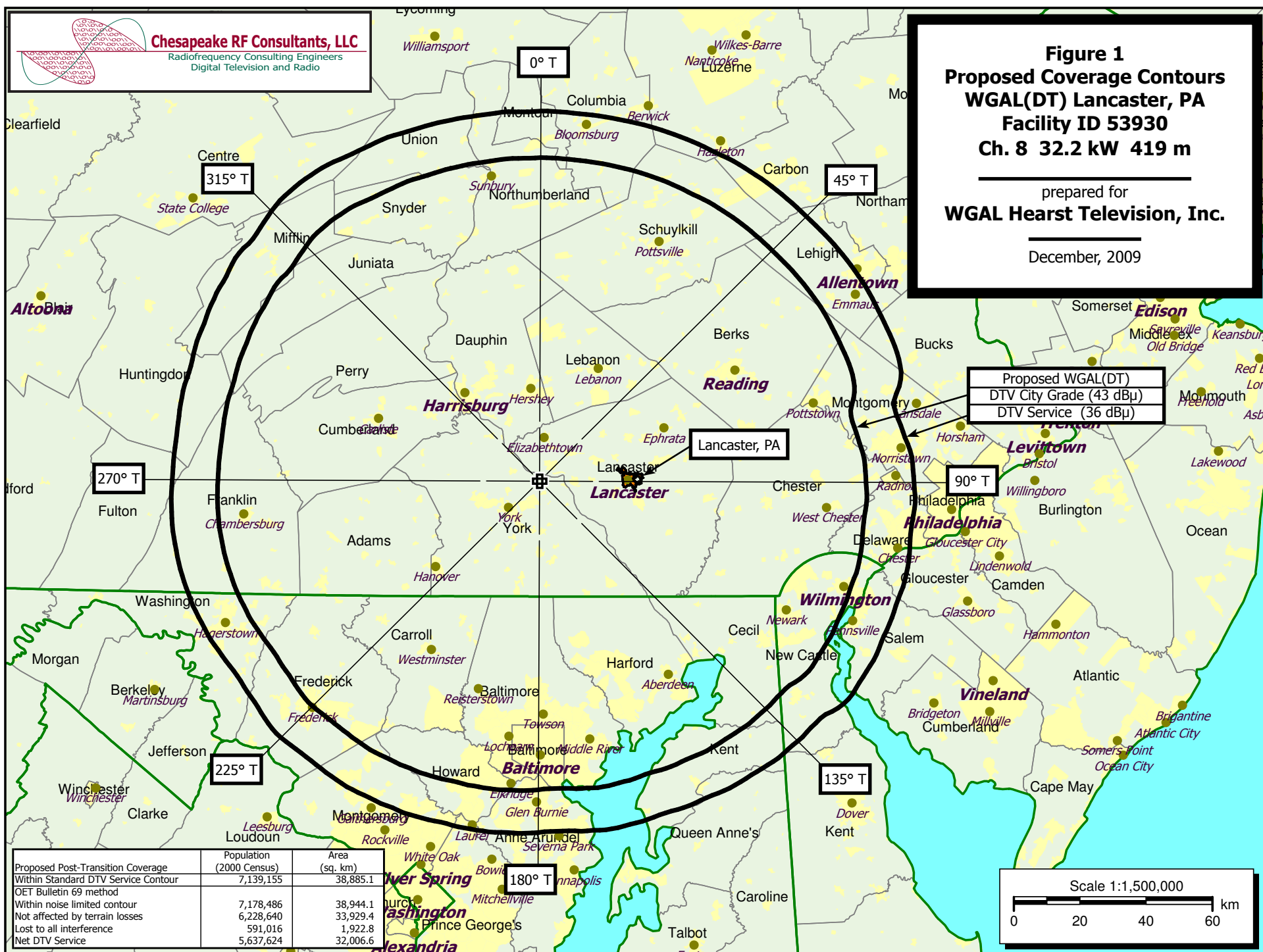


**Chesapeake RF Consultants, LLC**  
Radiofrequency Consulting Engineers  
Digital Television and Radio

**Figure 1**  
**Proposed Coverage Contours**  
**WGAL(DT) Lancaster, PA**  
**Facility ID 53930**  
**Ch. 8 32.2 kW 419 m**

prepared for  
**WGAL Hearst Television, Inc.**

December, 2009



**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 1 of 22)

TW Census data selected 2000  
Post Transition Data Base Selected /space/software/cdbs/pt\_tvdb.sff

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 12-08-2009 Time: 13:55:30

Record Selected for Analysis

WGAL-DT USERRECORD-01 LANCASTER PA US  
Channel 08 ERP 32.2 kW HAAT 419. m RCAMSL 00557 m  
Latitude 040-02-04 Longitude 0076-37-08  
Status APP Zone 1 Border  
Last update Cutoff date Docket  
Comments  
Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility does not meet maximum height/power limits  
Channel 8 ERP = 32.20 HAAT = 419.

Azimuth (Deg)	ERP (kW)	HAAT (m)	36.0 dBu F(50,90) (km)
0.0	32.200	424.8	111.7
45.0	32.200	444.3	113.5
90.0	32.200	440.0	113.2
135.0	32.200	411.9	110.6
180.0	32.200	355.3	106.0
225.0	32.200	404.1	109.9
270.0	32.200	415.4	110.9
315.0	32.200	459.1	114.7

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is within the Canadian coordination distance  
Distance to border = 367.1km

Proposed facility is beyond the Mexican coordination distance

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 2 of 22)

Proposed station is OK toward AM broadcast stations

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Start of Interference Analysis

Channel	Call	City/State	ARN
08	WGAL-DT	LANCASTER PA	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
07	WJLA-TV	WASHINGTON DC	126.8	CP MOD	BMPCDT	-20080620AIH
07	WJLA-TV	WASHINGTON DC	126.8	PLN	DTVPLN	-DTVP0053
07	W07BV	WILKESBARRE/PITTSTON PA	145.9	APP	BDFCDVA	-20070607ACJ
08	WNJB	NEW BRUNSWICK NJ	190.7	CP MOD	BMPCDT	-20090729ACO
08	WNJB	NEW BRUNSWICK NJ	190.7	PLN	DTVPLN	-DTVP0144
08	WICZ-TV	BINGHAMTON NY	231.7	LIC	BLCDT	-20060320AFC
08	WICZ-TV	BINGHAMTON NY	231.7	PLN	DTVPLN	-DTVP0149
08	WWCP-TV	JOHNSTOWN PA	215.9	CP MOD	BMPCDT	-20080620AIX
08	WWCP-TV	JOHNSTOWN PA	215.9	PLN	DTVPLN	-DTVP0156
09	WUSA	WASHINGTON DC	126.8	CP MOD	BMPCDT	-20080425ABL
09	WUSA	WASHINGTON DC	126.8	PLN	DTVPLN	-DTVP0183
09	WBPH-TV	BETHLEHEM PA	116.0	CP	BPCDT	-20080619ALA
09	WBPH-TV	BETHLEHEM PA	116.0	PLN	DTVPLN	-DTVP0211
09	WBPH-TV	BETHLEHEM PA	116.0	LIC	BLCDT	-20060609AAH
08	WNJB	NEW BRUNSWICK NJ	190.7	APP	40.91KW USER	

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Analysis of Interference to Affected Station 1

Analysis of current record  
Channel 07 WJLA-TV WASHINGTON DC Application Ref. No. BMPCDT -20080620AIH

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
07	WBNG-TV	BINGHAMTON NY	358.4	LIC	BLCDT	-20060329ACH
07	WBNG-TV	BINGHAMTON NY	358.4	PLN	DTVPLN	-DTVP0085
07	WABC-TV	NEW YORK NY	326.8	PLN	DTVPLN	-DTVP0087
07	WABC-TV	NEW YORK NY	331.1	CP	BPCDT	-20080529AJT
07	WHRE	VIRGINIA BEACH VA	243.4	CP MOD	BMPCDT	-20080821ADP
07	WHRE	VIRGINIA BEACH VA	243.4	PLN	DTVPLN	-DTVP0102
07	WTRF-TV	WHEELING WV	338.3	CP MOD	BMPCDT	-20080620ALK
07	WTRF-TV	WHEELING WV	338.3	PLN	DTVPLN	-DTVP0105
08	WWCP-TV	JOHNSTOWN PA	224.1	CP MOD	BMPCDT	-20080620AIX
08	WWCP-TV	JOHNSTOWN PA	224.1	PLN	DTVPLN	-DTVP0156
08	WGAL	LANCASTER PA	126.8	PLN	DTVPLN	-DTVP0157
08	WGAL-DT	LANCASTER PA	126.8	APP	USERRECORD-01	
07	WABC-TV	NEW YORK NY	331.1	APP	34KW USER	

Total scenarios = 24

Result key: 5  
Scenario 5 Affected station 1  
Before Analysis



**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 3 of 22)

Results for: 7A DC WASHINGTON BMPCDT 20080620AIH CP  
HAAT 235.0 m, ATV ERP 30.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	7722433	29967.7
not affected by terrain losses	7465256	27707.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	37295	524.1
lost to ATV IX only	37295	524.1
lost to all IX	37295	524.1

Potential Interfering Stations Included in above Scenario 5

7A NY BINGHAMTON	BLCDT	20060329ACH	LIC
7A NY NEW YORK	BPCDT	20080529AJT	CP
7A VA VIRGINIA BEACH	BMPCDT	20080821ADP	CP
7A WV WHEELING	BMPCDT	20080620ALK	CP
8A PA LANCASTER	DTVPLN	DTVP0157	PLN

After Analysis

Results for: 7A DC WASHINGTON BMPCDT 20080620AIH CP  
HAAT 235.0 m, ATV ERP 30.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	7722433	29967.7
not affected by terrain losses	7465256	27707.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	44856	600.1
lost to ATV IX only	44856	600.1
lost to all IX	44856	600.1

Potential Interfering Stations Included in above Scenario 5

7A NY BINGHAMTON	BLCDT	20060329ACH	LIC
7A NY NEW YORK	BPCDT	20080529AJT	CP
7A VA VIRGINIA BEACH	BMPCDT	20080821ADP	CP
7A WV WHEELING	BMPCDT	20080620ALK	CP
8A PA LANCASTER	USERRECORD01		APP

Percent new IX = 0.1018%

Worst case new IX 0.1018% Scenario 5

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Analysis of Interference to Affected Station 2

Channel	Call	City/State	Application Ref. No.
07	WJLA-TV	WASHINGTON DC	DTVPLN -DTVP0053

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
07	WBNG-TV	BINGHAMTON NY	358.4	LIC	BLCDT -20060329ACH
07	WBNG-TV	BINGHAMTON NY	358.4	PLN	DTVPLN -DTVP0085
07	WABC-TV	NEW YORK NY	326.8	PLN	DTVPLN -DTVP0087
07	WABC-TV	NEW YORK NY	331.1	CP	BPCDT -20080529AJT
07	WHRE	VIRGINIA BEACH VA	243.4	CP MOD	BMPCDT -20080821ADP
07	WHRE	VIRGINIA BEACH VA	243.4	PLN	DTVPLN -DTVP0102

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 4 of 22)

07	WTRF-TV	WHEELING WV	338.3	CP MOD	BMPCDT	-20080620ALK
07	WTRF-TV	WHEELING WV	338.3	PLN	DTVPLN	-DTVP0105
08	WWCP-TV	JOHNSTOWN PA	224.1	CP MOD	BMPCDT	-20080620AIX
08	WWCP-TV	JOHNSTOWN PA	224.1	PLN	DTVPLN	-DTVP0156
08	WGAL	LANCASTER PA	126.8	PLN	DTVPLN	-DTVP0157
08	WGAL-DT	LANCASTER PA	126.8	APP	USERRECORD-01	
07	WABC-TV	NEW YORK NY	331.1	APP	34KW USER	

Total scenarios = 24

Result key: 29  
Scenario 5 Affected station 2  
Before Analysis

Results for: 7A DC WASHINGTON DTVPLN DTVP0053 PLN  
HAAT 235.0 m, ATV ERP 13.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	7351660	26015.6
not affected by terrain losses	7256667	24335.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	33906	400.1
lost to ATV IX only	33906	400.1
lost to all IX	33906	400.1

Potential Interfering Stations Included in above Scenario 5

7A NY BINGHAMTON	BLCDT	20060329ACH	LIC
7A NY NEW YORK	BPCDT	20080529AJT	CP
7A VA VIRGINIA BEACH	BMPCDT	20080821ADP	CP
7A WV WHEELING	BMPCDT	20080620ALK	CP
8A PA LANCASTER	DTVPLN	DTVP0157	PLN

After Analysis

Results for: 7A DC WASHINGTON DTVPLN DTVP0053 PLN  
HAAT 235.0 m, ATV ERP 13.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	7351660	26015.6
not affected by terrain losses	7256667	24335.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	36424	452.1
lost to ATV IX only	36424	452.1
lost to all IX	36424	452.1

Potential Interfering Stations Included in above Scenario 5

7A NY BINGHAMTON	BLCDT	20060329ACH	LIC
7A NY NEW YORK	BPCDT	20080529AJT	CP
7A VA VIRGINIA BEACH	BMPCDT	20080821ADP	CP
7A WV WHEELING	BMPCDT	20080620ALK	CP
8A PA LANCASTER	USERRECORD01		APP

Percent new IX = 0.0349%

Worst case new IX 0.0349% Scenario 5

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Analysis of Interference to Affected Station 3

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 5 of 22)

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
07	W07BV	WILKESBARRE/PITTSTON PA	BDFCDVA	-20070607ACJ

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
07	WJLA-TV	WASHINGTON DC	271.9	CP MOD	BMPCDT	-20080620AIH
07	WJLA-TV	WASHINGTON DC	271.9	PLN	DTVPLN	-DTVP0053
07	WXXA-TV	ALBANY NY	218.1	LIC	BLCDT	-20051222AAQ
07	WXXA-TV	ALBANY NY	218.1	PLN	DTVPLN	-DTVP0084
07	WBNG-TV	BINGHAMTON NY	96.2	LIC	BLCDT	-20060329ACH
07	WBNG-TV	BINGHAMTON NY	96.2	PLN	DTVPLN	-DTVP0085
07	WWNY-TV	CARTHAGE NY	306.4	CP MOD	BMPCDT	-20080620AIE
07	WWNY-TV	CARTHAGE NY	306.4	PLN	DTVPLN	-DTVP0086
07	WABC-TV	NEW YORK NY	161.0	PLN	DTVPLN	-DTVP0087
07	WABC-TV	NEW YORK NY	161.8	CP	BPCDT	-20080529AJT
07	WNGS	SPRINGVILLE NY	281.4	CP	BPCDT	-20080328AFD
07	WNGS	SPRINGVILLE NY	281.4	PLN	DTVPLN	-DTVP0088
08	WNJB	NEW BRUNSWICK NJ	127.8	CP MOD	BMPEDT	-20090729ACO
08	WNJB	NEW BRUNSWICK NJ	127.8	PLN	DTVPLN	-DTVP0144
08	WICZ-TV	BINGHAMTON NY	95.9	LIC	BLCDT	-20060320AFC
08	WICZ-TV	BINGHAMTON NY	95.9	PLN	DTVPLN	-DTVP0149
08	WGAL	LANCASTER PA	145.9	PLN	DTVPLN	-DTVP0157
08	WGAL-DT	LANCASTER PA	145.9	APP	USERRECORD-01	
08	WNJB	NEW BRUNSWICK NJ	127.8	APP	40.91KW USER	
07	WABC-TV	NEW YORK NY	161.8	APP	34KW USER	

Proposed station is beyond the site to  
nearest cell evaluation distance

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Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
08	WNJB	NEW BRUNSWICK NJ	BMPEDT	-20090729ACO

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
07	WXXA-TV	ALBANY NY	226.5	LIC	BLCDT	-20051222AAQ
07	WXXA-TV	ALBANY NY	226.5	PLN	DTVPLN	-DTVP0084
07	WBNG-TV	BINGHAMTON NY	200.3	LIC	BLCDT	-20060329ACH
07	WBNG-TV	BINGHAMTON NY	200.3	PLN	DTVPLN	-DTVP0085
07	WABC-TV	NEW YORK NY	42.6	PLN	DTVPLN	-DTVP0087
07	WABC-TV	NEW YORK NY	45.9	CP	BPCDT	-20080529AJT
08	WICZ-TV	BINGHAMTON NY	199.7	LIC	BLCDT	-20060320AFC
08	WICZ-TV	BINGHAMTON NY	199.7	PLN	DTVPLN	-DTVP0149
08	WWCP-TV	JOHNSTOWN PA	396.3	CP MOD	BMPEDT	-20080620AIX
08	WWCP-TV	JOHNSTOWN PA	396.3	PLN	DTVPLN	-DTVP0156
08	WGAL	LANCASTER PA	190.7	PLN	DTVPLN	-DTVP0157
09	WEDN	NORWICH CT	219.8	CP	BPEDT	-20080619AFA
09	WEDN	NORWICH CT	219.8	PLN	DTVPLN	-DTVP0182
09	WBPH-TV	BETHLEHEM PA	79.2	CP	BPCDT	-20080619ALA
09	WBPH-TV	BETHLEHEM PA	79.2	PLN	DTVPLN	-DTVP0211
09	WBPH-TV	BETHLEHEM PA	79.2	LIC	BLCDT	-20060609AAH
08	WGAL-DT	LANCASTER PA	190.7	APP	USERRECORD-01	
07	WABC-TV	NEW YORK NY	45.9	APP	34KW USER	

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 6 of 22)

Total scenarios = 18

Result key: 62

Scenario 14 Affected station 4  
Before Analysis

Results for:	8A NJ NEW BRUNSWICK	BMPEDT	20090729ACO	CP
HAAT	215.0 m, ATV ERP	17.9 kW		
		POPULATION	AREA (sq km)	
	within Noise Limited Contour	19286829	23123.7	
	not affected by terrain losses	18741287	20950.0	
	lost to NTSC IX	0	0.0	
	lost to additional IX by ATV	5961919	2845.0	
	lost to ATV IX only	5961919	2845.0	
	lost to all IX	5961919	2845.0	

Potential Interfering Stations Included in above Scenario 14

7A NY NEW YORK	34KW USER	APP
8A NY BINGHAMTON	BLCDT	20060320AFC LIC
9A PA BETHLEHEM	DTVPLN	DTVP0211 PLN
8A PA LANCASTER	DTVPLN	DTVP0157 PLN

After Analysis

Results for:	8A NJ NEW BRUNSWICK	BMPEDT	20090729ACO	CP
HAAT	215.0 m, ATV ERP	17.9 kW		
		POPULATION	AREA (sq km)	
	within Noise Limited Contour	19286829	23123.7	
	not affected by terrain losses	18741287	20950.0	
	lost to NTSC IX	0	0.0	
	lost to additional IX by ATV	6510362	3740.1	
	lost to ATV IX only	6510362	3740.1	
	lost to all IX	6510362	3740.1	

Potential Interfering Stations Included in above Scenario 14

7A NY NEW YORK	34KW USER	APP
8A NY BINGHAMTON	BLCDT	20060320AFC LIC
9A PA BETHLEHEM	DTVPLN	DTVP0211 PLN
8A PA LANCASTER	USERRECORD01	APP

The following station failed the de minimis interference criteria.  
8D PA LANCASTER USERRECORD01  
ERP 32.20 kW HAAT 419.0 m RCAMSL 557.0 m  
Antenna none

Due to interference to the following station and scenario: 14  
8D NJ NEW BRUNSWICK BMPEDT 20090729ACO  
ERP 17.90 kW HAAT 215.0 m RCAMSL 281.0 m  
Antenna CDB 00000000094321

Percent new interference from proposal: 4.2916 to BMPEDT 20090729ACO

Worst case new IX 4.2916% Scenario 14

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Analysis of Interference to Affected Station 5

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 7 of 22)

Analysis of current record						
Channel	Call	City/State	Application Ref. No.			
08	WNJB	NEW BRUNSWICK NJ	DTVPLN	-DTVP0144		
Stations Potentially Affecting This Station						
Chan	Call	City/State	Dist(km)	Status	Application Ref. No.	
07	WXXA-TV	ALBANY NY	226.5	LIC	BLCDT	-20051222AAQ
07	WXXA-TV	ALBANY NY	226.5	PLN	DTVPLN	-DTVP0084
07	WBNG-TV	BINGHAMTON NY	200.3	LIC	BLCDT	-20060329ACH
07	WBNG-TV	BINGHAMTON NY	200.3	PLN	DTVPLN	-DTVP0085
07	WABC-TV	NEW YORK NY	42.6	PLN	DTVPLN	-DTVP0087
07	WABC-TV	NEW YORK NY	45.9	CP	BPEDT	-20080529AJT
08	WICZ-TV	BINGHAMTON NY	199.7	LIC	BLCDT	-20060320AFC
08	WICZ-TV	BINGHAMTON NY	199.7	PLN	DTVPLN	-DTVP0149
08	WWCP-TV	JOHNSTOWN PA	396.3	CP MOD	BMPCDT	-20080620AIX
08	WWCP-TV	JOHNSTOWN PA	396.3	PLN	DTVPLN	-DTVP0156
08	WGAL	LANCASTER PA	190.7	PLN	DTVPLN	-DTVP0157
09	WEDN	NORWICH CT	219.8	CP	BPEDT	-20080619AFA
09	WEDN	NORWICH CT	219.8	PLN	DTVPLN	-DTVP0182
09	WBPH-TV	BETHLEHEM PA	79.2	CP	BPEDT	-20080619ALA
09	WBPH-TV	BETHLEHEM PA	79.2	PLN	DTVPLN	-DTVP0211
09	WBPH-TV	BETHLEHEM PA	79.2	LIC	BLCDT	-20060609AAH
08	WGAL-DT	LANCASTER PA	190.7	APP	USERRECORD-01	
07	WABC-TV	NEW YORK NY	45.9	APP	34KW USER	

Total scenarios = 18

Result key: 80  
Scenario 14 Affected station 5  
Before Analysis

Results for: 8A NJ NEW BRUNSWICK	DTVPLN	DTVP0144	PLN
HAAT 212.0 m, ATV ERP 20.2 kW			
within Noise Limited Contour	POPULATION 19448063	AREA (sq km) 24839.8	
not affected by terrain losses	18907218	22512.9	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	5696398	2970.5	
lost to ATV IX only	5696398	2970.5	
lost to all IX	5696398	2970.5	

Potential Interfering Stations Included in above Scenario 14

7A NY NEW YORK	34KW USER	APP
8A NY BINGHAMTON	BLCDT 20060320AFC	LIC
9A PA BETHLEHEM	DTVPLN DTVP0211	PLN
8A PA LANCASTER	DTVPLN DTVP0157	PLN

After Analysis

Results for: 8A NJ NEW BRUNSWICK	DTVPLN	DTVP0144	PLN
HAAT 212.0 m, ATV ERP 20.2 kW			
within Noise Limited Contour	POPULATION 19448063	AREA (sq km) 24839.8	
not affected by terrain losses	18907218	22512.9	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	6131268	3742.2	
lost to ATV IX only	6131268	3742.2	
lost to all IX	6131268	3742.2	

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 8 of 22)

Potential Interfering Stations Included in above Scenario 14

7A NY NEW YORK	34KW USER	APP
8A NY BINGHAMTON	BLCDT 20060320AFC	LIC
9A PA BETHLEHEM	DTVPLN DTVP0211	PLN
8A PA LANCASTER	USERRECORD01	APP

The following station failed the de minimis interference criteria.  
8D PA LANCASTER USERRECORD01  
ERP 32.20 kW HAAT 419.0 m RCAMSL 557.0 m  
Antenna none

Due to interference to the following station and scenario: 14  
8D NJ NEW BRUNSWICK DTVPLN DTVP0144  
ERP 20.20 kW HAAT 212.0 m RCAMSL 278.0 m  
Antenna CDB 00000000032754

Percent new interference from proposal: 3.2918 to DTVPLN DTVP0144

Worst case new IX 3.2918% Scenario 14

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Analysis of Interference to Affected Station 6

Analysis of current record			
Channel	Call	City/State	Application Ref. No.
08	WICZ-TV	BINGHAMTON NY	BLCDT -20060320AFC

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.	
07	WXXA-TV	ALBANY NY	171.0	LIC	BLCDT	-20051222AAQ
07	WXXA-TV	ALBANY NY	171.0	PLN	DTVPLN	-DTVP0084
07	WBNG-TV	BINGHAMTON NY	0.7	LIC	BLCDT	-20060329ACH
07	WBNG-TV	BINGHAMTON NY	0.7	PLN	DTVPLN	-DTVP0085
07	WWNY-TV	CARTHAGE NY	211.7	CP MOD	BMPCDT	-20080620AIE
07	WWNY-TV	CARTHAGE NY	211.7	PLN	DTVPLN	-DTVP0086
07	WABC-TV	NEW YORK NY	219.6	PLN	DTVPLN	-DTVP0087
07	WABC-TV	NEW YORK NY	218.6	CP	BPCDT	-20080529AJT
08	WNJB	NEW BRUNSWICK NJ	199.7	CP MOD	BMPEDT	-20090729ACO
08	WNJB	NEW BRUNSWICK NJ	199.7	PLN	DTVPLN	-DTVP0144
08	WWCP-TV	JOHNSTOWN PA	339.9	CP MOD	BMPCDT	-20080620AIX
08	WWCP-TV	JOHNSTOWN PA	339.9	PLN	DTVPLN	-DTVP0156
08	WGAL	LANCASTER PA	231.7	PLN	DTVPLN	-DTVP0157
09	WBPH-TV	BETHLEHEM PA	171.1	CP	BPCDT	-20080619ALA
09	WBPH-TV	BETHLEHEM PA	171.1	PLN	DTVPLN	-DTVP0211
09	WBPH-TV	BETHLEHEM PA	171.1	LIC	BLCDT	-20060609AAH
08	WGAL-DT	LANCASTER PA	231.7	APP	USERRECORD-01	
08	WNJB	NEW BRUNSWICK NJ	199.7	APP	40.91KW USER	
07	WABC-TV	NEW YORK NY	218.6	APP	34KW USER	

Total scenarios = 6

Result key: 85  
Scenario 1 Affected station 6  
Before Analysis

Results for: 8A NY BINGHAMTON	BLCDT	20060320AFC	LIC
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**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 9 of 22)

HAAT	371.0 m, ATV ERP	7.9 kW		
		POPULATION	AREA (sq km)	
within Noise Limited Contour		962229	24331.0	
not affected by terrain losses		762023	21627.6	
lost to NTSC IX		0	0.0	
lost to additional IX by ATV		10186	327.9	
lost to ATV IX only		10186	327.9	
lost to all IX		10186	327.9	
Potential Interfering Stations Included in above Scenario 1				
7A NY BINGHAMTON	BLCDDT	20060329ACH	LIC	
8A NJ NEW BRUNSWICK	BMPEDT	20090729ACO	CP	
8A PA LANCASTER	DTVPLN	DTVP0157	PLN	
After Analysis				
Results for:	8A NY BINGHAMTON	BLCDDT	20060320AFC	LIC
HAAT	371.0 m, ATV ERP	7.9 kW		
		POPULATION	AREA (sq km)	
within Noise Limited Contour		962229	24331.0	
not affected by terrain losses		762023	21627.6	
lost to NTSC IX		0	0.0	
lost to additional IX by ATV		12500	403.9	
lost to ATV IX only		12500	403.9	
lost to all IX		12500	403.9	
Potential Interfering Stations Included in above Scenario 1				
7A NY BINGHAMTON	BLCDDT	20060329ACH	LIC	
8A NJ NEW BRUNSWICK	BMPEDT	20090729ACO	CP	
8A PA LANCASTER	USERRECORD01		APP	

Percent new IX = 0.3078%

Worst case new IX 0.3078% Scenario 1

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Analysis of Interference to Affected Station 7

Analysis of current record

Channel	Call	City/State	Application Ref. No.
08	WICZ-TV	BINGHAMTON NY	DTVPLN -DTVP0149

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
07	WXXA-TV	ALBANY NY	171.0	LIC	BLCDDT -20051222AAQ
07	WXXA-TV	ALBANY NY	171.0	PLN	DTVPLN -DTVP0084
07	WBNG-TV	BINGHAMTON NY	0.7	LIC	BLCDDT -20060329ACH
07	WBNG-TV	BINGHAMTON NY	0.7	PLN	DTVPLN -DTVP0085
07	WWNY-TV	CARTHAGE NY	211.7	CP MOD	BMPEDT -20080620AIE
07	WWNY-TV	CARTHAGE NY	211.7	PLN	DTVPLN -DTVP0086
07	WABC-TV	NEW YORK NY	219.6	PLN	DTVPLN -DTVP0087
07	WABC-TV	NEW YORK NY	218.6	CP	BPCDDT -20080529AJT
08	WNJB	NEW BRUNSWICK NJ	199.7	CP MOD	BMPEDT -20090729ACO
08	WNJB	NEW BRUNSWICK NJ	199.7	PLN	DTVPLN -DTVP0144
08	WWCP-TV	JOHNSTOWN PA	339.9	CP MOD	BMPEDT -20080620AIX
08	WWCP-TV	JOHNSTOWN PA	339.9	PLN	DTVPLN -DTVP0156

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 10 of 22)

08	WGAL	LANCASTER PA	231.7	PLN	DTVPLN	-DTVP0157
09	WBPH-TV	BETHLEHEM PA	171.1	CP	BPCDDT	-20080619ALA
09	WBPH-TV	BETHLEHEM PA	171.1	PLN	DTVPLN	-DTVP0211
09	WBPH-TV	BETHLEHEM PA	171.1	LIC	BLCDDT	-20060609AAH
08	WGAL-DT	LANCASTER PA	231.7	APP	USERRECORD-01	
08	WNJB	NEW BRUNSWICK NJ	199.7	APP	40.91KW USER	
07	WABC-TV	NEW YORK NY	218.6	APP	34KW USER	

Total scenarios = 6

Result key: 91  
Scenario 1 Affected station 7  
Before Analysis

Results for:	8A NY BINGHAMTON	DTVPLN	DTVP0149	PLN
HAAT	371.0 m, ATV ERP	7.9 kW		
		POPULATION	AREA (sq km)	
within Noise Limited Contour		962229	24331.0	
not affected by terrain losses		762023	21627.6	
lost to NTSC IX		0	0.0	
lost to additional IX by ATV		10186	327.9	
lost to ATV IX only		10186	327.9	
lost to all IX		10186	327.9	

Potential Interfering Stations Included in above Scenario 1

7A NY BINGHAMTON	BLCDDT	20060329ACH	LIC
8A NJ NEW BRUNSWICK	BMPEDT	20090729ACO	CP
8A PA LANCASTER	DTVPLN	DTVP0157	PLN

After Analysis

Results for:	8A NY BINGHAMTON	DTVPLN	DTVP0149	PLN
HAAT	371.0 m, ATV ERP	7.9 kW		
		POPULATION	AREA (sq km)	
within Noise Limited Contour		962229	24331.0	
not affected by terrain losses		762023	21627.6	
lost to NTSC IX		0	0.0	
lost to additional IX by ATV		12500	403.9	
lost to ATV IX only		12500	403.9	
lost to all IX		12500	403.9	

Potential Interfering Stations Included in above Scenario 1

7A NY BINGHAMTON	BLCDDT	20060329ACH	LIC
8A NJ NEW BRUNSWICK	BMPEDT	20090729ACO	CP
8A PA LANCASTER	USERRECORD01		APP

Percent new IX = 0.3078%

Worst case new IX 0.3078% Scenario 1

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Analysis of Interference to Affected Station 8

Analysis of current record

Channel	Call	City/State	Application Ref. No.
08	WWCP-TV	JOHNSTOWN PA	BMPEDT -20080620AIX

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 11 of 22)

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
07	WJLA-TV	WASHINGTON DC	224.1	CP MOD	BMPCDT	-20080620AIH
07	WJLA-TV	WASHINGTON DC	224.1	PLN	DTVPLN	-DTVP0053
07	WTRF-TV	WHEELING WV	136.7	CP MOD	BMPCDT	-20080620ALK
07	WTRF-TV	WHEELING WV	136.7	PLN	DTVPLN	-DTVP0105
08	WNJB	NEW BRUNSWICK NJ	396.3	CP MOD	BMPCDT	-20090729ACO
08	WNJB	NEW BRUNSWICK NJ	396.3	PLN	DTVPLN	-DTVP0144
08	WICZ-TV	BINGHAMTON NY	339.9	LIC	BLCDT	-20060320AFC
08	WICZ-TV	BINGHAMTON NY	339.9	PLN	DTVPLN	-DTVP0149
08	WJW	CLEVELAND OH	252.7	CP MOD	BMPCDT	-20080620AHI
08	WJW	CLEVELAND OH	252.7	PLN	DTVPLN	-DTVP0150
08	WLIO	LIMA OH	425.8	CP MOD	BMPCDT	-20060517ABE
08	WLIO	LIMA OH	425.8	PLN	DTVPLN	-DTVP0151
08	WGAL	LANCASTER PA	215.9	PLN	DTVPLN	-DTVP0157
08	WVNS-TV	LEWISBURG WV	299.6	CP MOD	BMPCDT	-20040608ABO
08	WVNS-TV	LEWISBURG WV	299.6	PLN	DTVPLN	-DTVP0168
09	WUSA	WASHINGTON DC	224.1	CP MOD	BMPCDT	-20080425ABL
09	WUSA	WASHINGTON DC	224.1	PLN	DTVPLN	-DTVP0183
09	WTOV-TV	STEUBENVILLE OH	125.9	CP MOD	BMPCDT	-20080619ABG
09	WTOV-TV	STEUBENVILLE OH	125.9	PLN	DTVPLN	-DTVP0208
08	WGAL-DT	LANCASTER PA	215.9	APP	USERRECORD-01	
08	WNJB	NEW BRUNSWICK NJ	396.3	APP	40.91KW USER	

Total scenarios = 32

Result key: 101  
Scenario 5 Affected station 8  
Before Analysis

Results for: 8A PA JOHNSTOWN	BMPCDT	20080620AIX	CP
HAAT 368.0 m, ATV ERP 9.3 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	2879495	25889.7	
not affected by terrain losses	2625311	22984.1	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	19597	209.0	
lost to ATV IX only	19597	209.0	
lost to all IX	19597	209.0	

Potential Interfering Stations Included in above Scenario 5

7A WV WHEELING	BMPCDT	20080620ALK	CP
8A NY BINGHAMTON	BLCDT	20060320AFC	LIC
8A OH CLEVELAND	DTVPLN	DTVP0150	PLN
8A WV LEWISBURG	BMPCDT	20040608ABO	CP
9A OH STEUBENVILLE	BMPCDT	20080619ABG	CP
8A PA LANCASTER	DTVPLN	DTVP0157	PLN

After Analysis

Results for: 8A PA JOHNSTOWN	BMPCDT	20080620AIX	CP
HAAT 368.0 m, ATV ERP 9.3 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	2879495	25889.7	
not affected by terrain losses	2625311	22984.1	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	22198	369.7	
lost to ATV IX only	22198	369.7	
lost to all IX	22198	369.7	

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 12 of 22)

Potential Interfering Stations Included in above Scenario 5

7A WV WHEELING	BMPCDT	20080620ALK	CP
8A NY BINGHAMTON	BLCDT	20060320AFC	LIC
8A OH CLEVELAND	DTVPLN	DTVP0150	PLN
8A WV LEWISBURG	BMPCDT	20040608ABO	CP
9A OH STEUBENVILLE	BMPCDT	20080619ABG	CP
8A PA LANCASTER	USERRECORD01		APP

Percent new IX = 0.0998%

Worst case new IX 0.0998% Scenario 5

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Analysis of Interference to Affected Station 9

Analysis of current record				
Channel 08	Call WWCP-TV	City/State JOHNSTOWN PA	Application DTVPLN	Ref. No. -DTVP0156

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
07	WJLA-TV	WASHINGTON DC	224.1	CP MOD	BMPCDT	-20080620AIH
07	WJLA-TV	WASHINGTON DC	224.1	PLN	DTVPLN	-DTVP0053
07	WTRF-TV	WHEELING WV	136.7	CP MOD	BMPCDT	-20080620ALK
07	WTRF-TV	WHEELING WV	136.7	PLN	DTVPLN	-DTVP0105
08	WNJB	NEW BRUNSWICK NJ	396.3	CP MOD	BMPCDT	-20090729ACO
08	WNJB	NEW BRUNSWICK NJ	396.3	PLN	DTVPLN	-DTVP0144
08	WICZ-TV	BINGHAMTON NY	339.9	LIC	BLCDT	-20060320AFC
08	WICZ-TV	BINGHAMTON NY	339.9	PLN	DTVPLN	-DTVP0149
08	WJW	CLEVELAND OH	252.7	CP MOD	BMPCDT	-20080620AHI
08	WJW	CLEVELAND OH	252.7	PLN	DTVPLN	-DTVP0150
08	WLIO	LIMA OH	425.8	CP MOD	BMPCDT	-20060517ABE
08	WLIO	LIMA OH	425.8	PLN	DTVPLN	-DTVP0151
08	WGAL	LANCASTER PA	215.9	PLN	DTVPLN	-DTVP0157
08	WVNS-TV	LEWISBURG WV	299.6	CP MOD	BMPCDT	-20040608ABO
08	WVNS-TV	LEWISBURG WV	299.6	PLN	DTVPLN	-DTVP0168
09	WUSA	WASHINGTON DC	224.1	CP MOD	BMPCDT	-20080425ABL
09	WUSA	WASHINGTON DC	224.1	PLN	DTVPLN	-DTVP0183
09	WTOV-TV	STEUBENVILLE OH	125.9	CP MOD	BMPCDT	-20080619ABG
09	WTOV-TV	STEUBENVILLE OH	125.9	PLN	DTVPLN	-DTVP0208
08	WGAL-DT	LANCASTER PA	215.9	APP	USERRECORD-01	
08	WNJB	NEW BRUNSWICK NJ	396.3	APP	40.91KW USER	

Total scenarios = 8

Result key: 133  
Scenario 5 Affected station 9  
Before Analysis

Results for: 8A PA JOHNSTOWN	DTVPLN	DTVP0156	PLN
HAAT 352.0 m, ATV ERP 6.5 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	2769479	23804.9	
not affected by terrain losses	2556204	21140.3	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	25589	196.9	

**Table 1** **WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 13 of 22)

lost to ATV IX only	25589	196.9	
lost to all IX	25589	196.9	
Potential Interfering Stations Included in above Scenario		5	
7A WV WHEELING	BMPCDT	20080620ALK	CP
8A OH CLEVELAND	DTVPLN	DTVP0150	PLN
8A WV LEWISBURG	BMPCDT	20040608ABO	CP
9A OH STEUBENVILLE	BMPCDT	20080619ABG	CP
8A PA LANCASTER	DTVPLN	DTVP0157	PLN
After Analysis			
Results for: 8A PA JOHNSTOWN	DTVPLN	DTVP0156	PLN
HAAT 352.0 m, ATV ERP 6.5 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	2769479	23804.9	
not affected by terrain losses	2556204	21140.3	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	42725	385.8	
lost to ATV IX only	42725	385.8	
lost to all IX	42725	385.8	
Potential Interfering Stations Included in above Scenario		5	
7A WV WHEELING	BMPCDT	20080620ALK	CP
8A OH CLEVELAND	DTVPLN	DTVP0150	PLN
8A WV LEWISBURG	BMPCDT	20040608ABO	CP
9A OH STEUBENVILLE	BMPCDT	20080619ABG	CP
8A PA LANCASTER	USERRECORD01	APP	
The following station failed the de minimis interference criteria.			
8D PA LANCASTER	USERRECORD01		
ERP 32.20 kW HAAT 419.0 m	RCAMSL	557.0 m	
Antenna	none		
Due to interference to the following station and scenario:		5	
8D PA JOHNSTOWN	DTVPLN	DTVP0156	
ERP 6.50 kW HAAT 352.0 m	RCAMSL	953.0 m	
Antenna CDB 0000000070335			
Percent new interference from proposal:	0.6771 to DTVPLN	DTVP0156	
Worst case new IX 0.6771% Scenario	5		
#####			
Analysis of Interference to Affected Station 10			
Analysis of current record			
Channel	Call	City/State	Application Ref. No.
09	WUSA	WASHINGTON DC	BMPCDT -20080425ABL
Stations Potentially Affecting This Station			
Chan	Call	City/State	Dist(km) Status Application Ref. No.
08	WWCP-TV	JOHNSTOWN PA	224.1 CP MOD BMPCDT -20080620A
08	WWCP-TV	JOHNSTOWN PA	224.1 PLN DTVPLN -DTVP0156
08	WGAL	LANCASTER PA	126.8 PLN DTVPLN -DTVP0157
09	WSKY-TV	MANTEO NC	278.5 CP MOD BMPCDT -20080616A

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 14 of 22)

09	WSKY-TV	MANTEO NC	278.2	PLN	DTVPLN	-DTVPO202
09	WTOV-TV	STUEBENVILLE OH	340.2	CP MOD	BMPCDT	-20080619ABG
09	WTOV-TV	STUEBENVILLE OH	340.2	PLN	DTVPLN	-DTVPO208
09	WBPH-TV	BETHLEHEM PA	227.6	CP	BPCDT	-20080619ALA
09	WBPH-TV	BETHLEHEM PA	227.6	PLN	DTVPLN	-DTVPO211
09	WBPH-TV	BETHLEHEM PA	227.6	LIC	BLCDT	-20060609AAH
10	WHTM-TV	HARRISBURG PA	152.2	LIC	BLCDT	-20040812AAH
10	WHTM-TV	HARRISBURG PA	152.2	PLN	DTVPLN	-DTVPO281
10	WHTM-TV	HARRISBURG PA	152.2	CP	BPCDT	-20080620AGL
08	WGAL-DT	LANCASTER PA	126.8	APP		USERRECORD-01

Total scenarios = 12

Result key: 138

Scenario 2 Affected station 10

Before Analysis

Results for: 9A DC WASHINGTON BMPCDT 20080425ABL CP

HAAT 235.0 m, ATV ERP 12.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	7353356	25990.7
not affected by terrain losses	7250428	24214.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	50661	792.1
lost to ATV IX only	50661	792.1
lost to all IX	50661	792.1

Potential Interfering Stations Included in above Scenario 2

9A NC MANTEO	BMPCDT	20080616AAG	CP
9A OH STEUBENVILLE	BMPCDT	20080619ABG	CP
9A PA BETHLEHEM	DTVPLN	DTVPO211	PLN
10A PA HARRISBURG	BPCDT	20080620AGL	CP
8A PA LANCASTER	DTVPLN	DTVPO157	PLN

After Analysis

Results for: 9A DC WASHINGTON BMPCDT 20080425ABL CP

HAAT 235.0 m, ATV ERP 12.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	7353356	25990.7
not affected by terrain losses	7250428	24214.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	51807	820.1
lost to ATV IX only	51807	820.1
lost to all IX	51807	820.1

Potential Interfering Stations Included in above Scenario 2

9A NC MANTEO	BMPCDT	20080616AAG	CP
9A OH STEUBENVILLE	BMPCDT	20080619ABG	CP
9A PA BETHLEHEM	DTVPLN	DTVPO211	PLN
10A PA HARRISBURG	BPCDT	20080620AGL	CP
8A PA LANCASTER	USERRECORD01		APP

Percent new IX = 0.0159%

Worst case new IX 0.0159% Scenario 2

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**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 15 of 22)

Analysis of Interference to Affected Station 11

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
09	WUSA	WASHINGTON DC	DTVPLN	-DTVP0183

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
08	WWCP-TV	JOHNSTOWN PA	224.1	CP MOD	BMPCDT	-20080620AIX
08	WWCP-TV	JOHNSTOWN PA	224.1	PLN	DTVPLN	-DTVP0156
08	WGAL	LANCASTER PA	126.8	PLN	DTVPLN	-DTVP0157
09	WSKY-TV	MANTEO NC	278.5	CP MOD	BMPCDT	-20080616AAG
09	WSKY-TV	MANTEO NC	278.2	PLN	DTVPLN	-DTVP0202
09	WTOV-TV	STEUBENVILLE OH	340.2	CP MOD	BMPCDT	-20080619ABG
09	WTOV-TV	STEUBENVILLE OH	340.2	PLN	DTVPLN	-DTVP0208
09	WBPH-TV	BETHLEHEM PA	227.6	CP	BPCDT	-20080619ALA
09	WBPH-TV	BETHLEHEM PA	227.6	PLN	DTVPLN	-DTVP0211
09	WBPH-TV	BETHLEHEM PA	227.6	LIC	BLCDT	-20060609AAH
10	WHTM-TV	HARRISBURG PA	152.2	LIC	BLCDT	-20040812AAH
10	WHTM-TV	HARRISBURG PA	152.2	PLN	DTVPLN	-DTVP0281
10	WHTM-TV	HARRISBURG PA	152.2	CP	BPCDT	-20080620AGL
08	WGAL-DT	LANCASTER PA	126.8	APP	USERRECORD-01	

Total scenarios = 12

Result key: 150  
Scenario 2 Affected station 11  
Before Analysis

Results for: 9A DC WASHINGTON	DTVPLN	DTVP0183	PLN
HAAT 235.0 m, ATV ERP 13.6 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	7351660	26015.6	
not affected by terrain losses	7251458	24259.4	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	52608	764.1	
lost to ATV IX only	52608	764.1	
lost to all IX	52608	764.1	

Potential Interfering Stations Included in above Scenario 2

9A NC MANTEO	BMPCDT	20080616AAG	CP
9A OH STEUBENVILLE	BMPCDT	20080619ABG	CP
9A PA BETHLEHEM	DTVPLN	DTVP0211	PLN
10A PA HARRISBURG	BPCDT	20080620AGL	CP
8A PA LANCASTER	DTVPLN	DTVP0157	PLN

After Analysis

Results for: 9A DC WASHINGTON	DTVPLN	DTVP0183	PLN
HAAT 235.0 m, ATV ERP 13.6 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	7351660	26015.6	
not affected by terrain losses	7251458	24259.4	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	53735	792.1	
lost to ATV IX only	53735	792.1	
lost to all IX	53735	792.1	

Potential Interfering Stations Included in above Scenario 2

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 16 of 22)

9A NC MANTEO	BMPCDT	20080616AAG	CP
9A OH STEUBENVILLE	BMPCDT	20080619ABG	CP
9A PA BETHLEHEM	DTVPLN	DTVP0211	PLN
10A PA HARRISBURG	BPCDT	20080620AGL	CP
8A PA LANCASTER	USERRECORD01		APP

Percent new IX = 0.0157%

Worst case new IX 0.0157% Scenario 2

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Analysis of Interference to Affected Station 12

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
09	WBPH-TV	BETHLEHEM PA	BPCDT	-20080619ALA

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
08	WNJB	NEW BRUNSWICK NJ	79.2	CP MOD	BMPEDT	-20090729ACO
08	WNJB	NEW BRUNSWICK NJ	79.2	PLN	DTVPLN	-DTVP0144
08	WICZ-TV	BINGHAMTON NY	171.1	LIC	BLCDT	-20060320AFC
08	WICZ-TV	BINGHAMTON NY	171.1	PLN	DTVPLN	-DTVP0149
08	WGAL	LANCASTER PA	116.0	PLN	DTVPLN	-DTVP0157
09	WEDN	NORWICH CT	294.2	CP	BPEDT	-20080619AFA
09	WEDN	NORWICH CT	294.2	PLN	DTVPLN	-DTVP0182
09	WUSA	WASHINGTON DC	227.6	CP MOD	BMPCDT	-20080425ABL
09	WUSA	WASHINGTON DC	227.6	PLN	DTVPLN	-DTVP0183
09	WMUR-TV	MANCHESTER NH	417.2	CP	BPCDT	-20080407ABS
09	WMUR-TV	MANCHESTER NH	417.3	PLN	DTVPLN	-DTVP0205
09	WVER	RUTLAND VT	394.0	LIC	BLEDT	-20050608AGC
09	WVER	RUTLAND VT	394.0	PLN	DTVPLN	-DTVP0225
10	WHTM-TV	HARRISBURG PA	130.7	LIC	BLCDT	-20040812AAH
10	WHTM-TV	HARRISBURG PA	130.7	PLN	DTVPLN	-DTVP0281
10	WHTM-TV	HARRISBURG PA	130.7	CP	BPCDT	-20080620AGL
08	WGAL-DT	LANCASTER PA	116.0	APP	USERRECORD-01	
08	WNJB	NEW BRUNSWICK NJ	79.2	APP	40.91KW USER	

Total scenarios = 36

Result key: 173  
Scenario 13 Affected station 12  
Before Analysis

Results for: 9A PA BETHLEHEM	BPCDT	20080619ALA	CP
HAAT 284.0 m, ATV ERP 89.0 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	11200387	32676.3	
not affected by terrain losses	9660912	28603.7	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	1573329	2042.3	
lost to ATV IX only	1573329	2042.3	
lost to all IX	1573329	2042.3	

Potential Interfering Stations Included in above Scenario 13

8A NJ NEW BRUNSWICK	DTVPLN	DTVP0144	PLN
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**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 17 of 22)

9A CT NORWICH	BPEDT	20080619AFA	CP
9A DC WASHINGTON	BMPCDT	20080425ABL	CP
9A VT RUTLAND	BLEDT	20050608AGC	LIC
10A PA HARRISBURG	BLCDT	20040812AAH	LIC
8A PA LANCASTER	DTVPLN	DTVP0157	PLN

After Analysis

Results for: 9A PA BETHLEHEM BPCDT 20080619ALA CP  
HAAT 284.0 m, ATV ERP 89.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	11200387	32676.3
not affected by terrain losses	9660912	28603.7
lost to NTSC IX	0	0.0
lost to additional IX by ATV	1612795	2278.1
lost to ATV IX only	1612795	2278.1
lost to all IX	1612795	2278.1

Potential Interfering Stations Included in above Scenario 13

8A NJ NEW BRUNSWICK	DTVPLN	DTVP0144	PLN
9A CT NORWICH	BPEDT	20080619AFA	CP
9A DC WASHINGTON	BMPCDT	20080425ABL	CP
9A VT RUTLAND	BLEDT	20050608AGC	LIC
10A PA HARRISBURG	BLCDT	20040812AAH	LIC
8A PA LANCASTER	USERRECORD01		APP

Percent new IX = 0.4880%

Worst case new IX 0.4880% Scenario 13

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Analysis of Interference to Affected Station 13

Analysis of current record  
Channel Call City/State Application Ref. No.  
09 WBPB-TV BETHLEHEM PA DTVPLN -DTVP0211

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
08	WNJB	NEW BRUNSWICK NJ	79.2	CP MOD	BMPEDT -20090729ACO
08	WNJB	NEW BRUNSWICK NJ	79.2	PLN	DTVPLN -DTVP0144
08	WICZ-TV	BINGHAMTON NY	171.1	LIC	BLCDT -20060320AFC
08	WICZ-TV	BINGHAMTON NY	171.1	PLN	DTVPLN -DTVP0149
08	WGAL	LANCASTER PA	116.0	PLN	DTVPLN -DTVP0157
09	WEDN	NORWICH CT	294.2	CP	BPEDT -20080619AFA
09	WEDN	NORWICH CT	294.2	PLN	DTVPLN -DTVP0182
09	WUSA	WASHINGTON DC	227.6	CP MOD	BMPCDT -20080425ABL
09	WUSA	WASHINGTON DC	227.6	PLN	DTVPLN -DTVP0183
09	WMUR-TV	MANCHESTER NH	417.2	CP	BPCDT -20080407ABS
09	WMUR-TV	MANCHESTER NH	417.3	PLN	DTVPLN -DTVP0205
09	WVER	RUTLAND VT	394.0	LIC	BLEDT -20050608AGC
09	WVER	RUTLAND VT	394.0	PLN	DTVPLN -DTVP0225
10	WHTM-TV	HARRISBURG PA	130.7	LIC	BLCDT -20040812AAH
10	WHTM-TV	HARRISBURG PA	130.7	PLN	DTVPLN -DTVP0281
10	WHTM-TV	HARRISBURG PA	130.7	CP	BPCDT -20080620AGL
08	WGAL-DT	LANCASTER PA	116.0	APP	USERRECORD-01
08	WNJB	NEW BRUNSWICK NJ	79.2	APP	40.91KW USER

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 18 of 22)

Total scenarios = 6

Result key: 201  
Scenario 5 Affected station 13  
Before Analysis

Results for: 9A PA BETHLEHEM DTVPLN DTVP0211 PLN  
HAAT 284.0 m, ATV ERP 3.2 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6449446	18459.0
not affected by terrain losses	5831102	16686.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	654143	1124.7
lost to ATV IX only	654143	1124.7
lost to all IX	654143	1124.7

Potential Interfering Stations Included in above Scenario 5

8A NJ NEW BRUNSWICK	40.91KW USER	APP
9A CT NORWICH	BPEDT 20080619AFA	CP
9A DC WASHINGTON	BMPCDT 20080425ABL	CP
10A PA HARRISBURG	BPCDT 20080620AGL	CP
8A PA LANCASTER	DTVPLN DTVP0157	PLN

After Analysis

Results for: 9A PA BETHLEHEM DTVPLN DTVP0211 PLN  
HAAT 284.0 m, ATV ERP 3.2 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6449446	18459.0
not affected by terrain losses	5831102	16686.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	660795	1172.7
lost to ATV IX only	660795	1172.7
lost to all IX	660795	1172.7

Potential Interfering Stations Included in above Scenario 5

8A NJ NEW BRUNSWICK	40.91KW USER	APP
9A CT NORWICH	BPEDT 20080619AFA	CP
9A DC WASHINGTON	BMPCDT 20080425ABL	CP
10A PA HARRISBURG	BPCDT 20080620AGL	CP
8A PA LANCASTER	USERRECORD01	APP

Percent new IX = 0.1285%

Worst case new IX 0.1285% Scenario 5

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Analysis of Interference to Affected Station 14

Analysis of current record  
Channel Call City/State Application Ref. No.  
09 WBPB-TV BETHLEHEM PA BLCDT -20060609AAH

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
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**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 19 of 22)

08	WNJB	NEW BRUNSWICK NJ	79.2	CP	MOD	BMPEDT	-20090729ACO
08	WNJB	NEW BRUNSWICK NJ	79.2	PLN	DTVPLN	-DTVP0144	
08	WICZ-TV	BINGHAMTON NY	171.1	LIC	BLCDT	-20060320AFC	
08	WICZ-TV	BINGHAMTON NY	171.1	PLN	DTVPLN	-DTVP0149	
08	WGAL	LANCASTER PA	116.0	PLN	DTVPLN	-DTVP0157	
09	WEDN	NORWICH CT	294.2	CP	BPEDT	-20080619AFA	
09	WEDN	NORWICH CT	294.2	PLN	DTVPLN	-DTVP0182	
09	WUSA	WASHINGTON DC	227.6	CP	MOD	BMPCDT	-20080425ABL
09	WUSA	WASHINGTON DC	227.6	PLN	DTVPLN	-DTVP0183	
09	WMUR-TV	MANCHESTER NH	417.2	CP	BPCDT	-20080407ABS	
09	WMUR-TV	MANCHESTER NH	417.3	PLN	DTVPLN	-DTVP0205	
09	WVER	RUTLAND VT	394.0	LIC	BLEDT	-20050608AGC	
09	WVER	RUTLAND VT	394.0	PLN	DTVPLN	-DTVP0225	
10	WHTM-TV	HARRISBURG PA	130.7	LIC	BLCDT	-20040812AAH	
10	WHTM-TV	HARRISBURG PA	130.7	PLN	DTVPLN	-DTVP0281	
10	WHTM-TV	HARRISBURG PA	130.7	CP	BPCDT	-20080620AGL	
08	WGAL-DT	LANCASTER PA	116.0	APP	USERRECORD-01		
08	WNJB	NEW BRUNSWICK NJ	79.2	APP	40.91KW USER		

Total scenarios = 6

Result key: 207  
Scenario 5 Affected station 14  
Before Analysis

Results for: 9A PA BETHLEHEM BLCDT 20060609AAH LIC  
HAAT 284.0 m, ATV ERP 3.2 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6449446	18459.0
not affected by terrain losses	5831102	16686.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	654143	1124.7
lost to ATV IX only	654143	1124.7
lost to all IX	654143	1124.7

Potential Interfering Stations Included in above Scenario 5

8A NJ NEW BRUNSWICK	40.91KW USER	APP
9A CT NORWICH	BPEDT 20080619AFA	CP
9A DC WASHINGTON	BMPCDT 20080425ABL	CP
10A PA HARRISBURG	BPCDT 20080620AGL	CP
8A PA LANCASTER	DTVPLN DTVP0157	PLN

After Analysis

Results for: 9A PA BETHLEHEM BLCDT 20060609AAH LIC  
HAAT 284.0 m, ATV ERP 3.2 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6449446	18459.0
not affected by terrain losses	5831102	16686.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	660795	1172.7
lost to ATV IX only	660795	1172.7
lost to all IX	660795	1172.7

Potential Interfering Stations Included in above Scenario 5

8A NJ NEW BRUNSWICK	40.91KW USER	APP
9A CT NORWICH	BPEDT 20080619AFA	CP
9A DC WASHINGTON	BMPCDT 20080425ABL	CP
10A PA HARRISBURG	BPCDT 20080620AGL	CP
8A PA LANCASTER	USERRECORD01	APP

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 20 of 22)

Percent new IX = 0.1285%

Worst case new IX 0.1285% Scenario 5

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Analysis of Interference to Affected Station 15

Analysis of current record

Channel	Call	City/State	Application Ref. No.
08	WNJB	NEW BRUNSWICK NJ	40.91KW USER

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
07	WXXA-TV	ALBANY NY	226.5	LIC	BLCDT -20051222AAQ
07	WXXA-TV	ALBANY NY	226.5	PLN	DTVPLN -DTVP0084
07	WBNG-TV	BINGHAMTON NY	200.3	LIC	BLCDT -20060329ACH
07	WBNG-TV	BINGHAMTON NY	200.3	PLN	DTVPLN -DTVP0085
07	WABC-TV	NEW YORK NY	42.6	PLN	DTVPLN -DTVP0087
07	WABC-TV	NEW YORK NY	45.9	CP	BPCDT -20080529AJT
08	WICZ-TV	BINGHAMTON NY	199.7	LIC	BLCDT -20060320AFC
08	WICZ-TV	BINGHAMTON NY	199.7	PLN	DTVPLN -DTVP0149
08	WWCP-TV	JOHNSTOWN PA	396.3	CP	MOD BMPCDT -20080620AIX
08	WWCP-TV	JOHNSTOWN PA	396.3	PLN	DTVPLN -DTVP0156
08	WGAL	LANCASTER PA	190.7	PLN	DTVPLN -DTVP0157
09	WEDN	NORWICH CT	219.8	CP	BPEDT -20080619AFA
09	WEDN	NORWICH CT	219.8	PLN	DTVPLN -DTVP0182
09	WBPH-TV	BETHLEHEM PA	79.2	CP	BPCDT -20080619ALA
09	WBPH-TV	BETHLEHEM PA	79.2	PLN	DTVPLN -DTVP0211
09	WBPH-TV	BETHLEHEM PA	79.2	LIC	BLCDT -20060609AAH
08	WGAL-DT	LANCASTER PA	190.7	APP	USERRECORD-01
07	WABC-TV	NEW YORK NY	45.9	APP	34KW USER

Total scenarios = 18

Result key: 222  
Scenario 14 Affected station 15  
Before Analysis

Results for: 8A NJ NEW BRUNSWICK 40.91KW USER APP  
HAAT 218.0 m, ATV ERP 40.9 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	20669128	26529.0
not affected by terrain losses	19917216	24015.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	4140941	3264.7
lost to ATV IX only	4140941	3264.7
lost to all IX	4140941	3264.7

Potential Interfering Stations Included in above Scenario 14

7A NY NEW YORK	34KW USER	APP
8A NY BINGHAMTON	BLCDT 20060320AFC	LIC
9A PA BETHLEHEM	DTVPLN DTVP0211	PLN
8A PA LANCASTER	DTVPLN DTVP0157	PLN

After Analysis

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 21 of 22)

Results for: 8A NJ NEW BRUNSWICK		40.91KW USER	APP
HAAT	218.0 m, ATV ERP	40.9 kW	
within Noise Limited Contour	20669128	26529.0	
not affected by terrain losses	19917216	24015.5	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	4886330	4095.8	
lost to ATV IX only	4886330	4095.8	
lost to all IX	4886330	4095.8	

Potential Interfering Stations Included in above Scenario 14

7A NY NEW YORK	34KW USER	APP
8A NY BINGHAMTON	BLCDT 20060320AFC	LIC
9A PA BETHLEHEM	DTVPLN DTVP0211	PLN
8A PA LANCASTER	USERRECORD01	APP

The following station failed the de minimis interference criteria.

```

8D PA LANCASTER          USERRECORD01
ERP 32.20 kW HAAT 419.0 m RCAMSL 557.0 m
Antenna none

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Due to interference to the following station and scenario: 14

Due to interference to the following station and  
8D NJ NEW BRUNSWICK 40.91KW USER  
ERP 40.91 kW HAAT 218.0 m RCAMSL 281.0 m  
Antenna CDB 00000000094321

Percent new interference from proposal: 4.7247 to 40.91KW USER

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Analysis of Interference to Affected Station 16

### Analysis of current record

Channel	Call	City/State	Application Ref. No.
08	WGAL-DT	LANCASTER PA	USERRECORD-01

### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
07	WJLA-TV	WASHINGTON DC	126.8	CP MOD	BMPCDT	-20080620AIH
07	WJLA-TV	WASHINGTON DC	126.8	PLN	DTVPLN	-DTVPO053
08	WNJB	NEW BRUNSWICK NJ	190.7	CP MOD	BMPEDT	-20090729ACO
08	WNJB	NEW BRUNSWICK NJ	190.7	PLN	DTVPLN	-DTVPO144
08	WICZ-TV	BINGHAMTON NY	231.7	LIC	BLCDT	-20060320AFC
08	WICZ-TV	BINGHAMTON NY	231.7	PLN	DTVPLN	-DTVPO149
08	WWCP-TV	JOHNSTOWN PA	215.9	CP MOD	BMPCDT	-20080620AIX
08	WWCP-TV	JOHNSTOWN PA	215.9	PLN	DTVPLN	-DTVPO156
09	WUSA	WASHINGTON DC	126.8	CP MOD	BMPCDT	-20080425ABL
09	WUSA	WASHINGTON DC	126.8	PLN	DTVPLN	-DTVPO183
09	WBPH-TV	BETHLEHEM PA	116.0	CP	BPCDT	-20080619ALA
09	WBPH-TV	BETHLEHEM PA	116.0	PLN	DTVPLN	-DTVPO211
09	WBPH-TV	BETHLEHEM PA	116.0	LIC	BLCDT	-20060609AAH
08	WNJB	NEW BRUNSWICK NJ	190.7	APP	40.91KW USER	

Total scenarios = 144

Results for: 8A PA LANCASTER                      USERRECORD01                      APP  
             HAAT 419.0 m, ATV ERP 32.2 kW

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 22 of 22)

	POPULATION	AREA (sq km)
within Noise Limited Contour	7178486	38944.1
not affected by terrain losses	6228640	33929.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	591016	1922.8
lost to ATV IX only	591016	1922.8
lost to all IX	591016	1922.8

Potential Interfering Stations Included in above Scenario 97

7A	DC	WASHINGTON	BMPCDT	20080620AIH	CP
8A	NJ	NEW BRUNSWICK	40.91KW USER		APP
8A	NY	BINGHAMTON	BLCDT	20060320AFC	LIC
8A	PA	JOHNSTOWN	BMPCDT	20080620AIX	CP
9A	DC	WASHINGTON	BMPCDT	20080425ABL	CP
9A	PA	BETHLEHEM	BPCDT	20080619ALA	CP

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FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

<b>SECTION III-D - DTV Engineering</b>	
<b>Complete Questions 1-5, and provide all data and information for the proposed facility, as requested in Technical Specifications, Items 1-13.</b>	
<p><b>Pre-Transition Certification Checklist:</b> An application concerning a pre-transition channel must complete questions 1(a)-(c), and 2-5. A correct answer of "Yes" to all of the questions will ensure an expeditious grant of a construction permit application to change pre-transition facilities. However, if the proposed facility is located within the Canadian or Mexican borders, coordination of the proposal under the appropriate treaties may be required prior to grant of the application. An answer of "No" will require additional evaluation of the applicable information in this form before a construction permit can be granted.</p> <p><b>Post-Transition Expedited Processing.</b> An application concerning a post-transition channel must complete questions 1(a), (d)-(e), and 2-5. A station applying for a construction permit to build its post-transition channel will receive expedited processing if its application (1) does not seek to expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622(i) ("new DTV Table Appendix B"); (2) specifies facilities that match or closely approximate those defined in the new DTV Table Appendix B facilities; and (3) is filed within 45 days of the effective date of Section 73.616 of the rules adopted in the Report and Order in the Third DTV Periodic Review proceeding, MB Docket No. 07-91.</p>	
1. The proposed DTV facility complies with 47 C.F.R. Section 73.622 in the following respects:	
(a) It will operate on the DTV channel for this station as established in 47 C.F.R. Section 73.622.	<input checked="" type="radio"/> Yes <input type="radio"/> No
(b) It will operate a pre-transition facility from a transmitting antenna located within 5.0 km (3.1 miles) of the DTV reference site for this station as established in 47 C.F.R. Section 73.622.	<input type="radio"/> Yes <input type="radio"/> No
(c) It will operate a pre-transition facility with an effective radiated power (ERP) and antenna height above average terrain (HAAT) that do not exceed the DTV reference ERP and HAAT for this station as established in 47 C.F.R. Section 73.622.	<input type="radio"/> Yes <input type="radio"/> No
(d) It will operate at post-transition facilities that do not expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622(i) ("new DTV Table Appendix B").	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> N/A
(e) It will operate at post-transition facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the new DTV Table Appendix B.	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A
2. The proposed facility will not have a significant environmental impact, including exposure of workers or the general public to levels of RF radiation exceeding the applicable health and safety guidelines, and therefore will not come within 47 C.F.R. Section 1.1307. Applicant must <b>submit the Exhibit</b> called for in Item 13.	<input checked="" type="radio"/> Yes <input type="radio"/> No
3. Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community.	<input checked="" type="radio"/> Yes <input type="radio"/> No
4. The requirements of 47 C.F.R. Section 73.1030 regarding notification to radio astronomy installations, radio receiving installations and FCC monitoring stations have either been satisfied or are not applicable.	<input checked="" type="radio"/> Yes <input type="radio"/> No
5. The antenna structure to be used by this facility has been registered by the Commission and will not require registration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely effect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7.	<input checked="" type="radio"/> Yes <input type="radio"/> No

<b>SECTION III-D - DTV Engineering</b>	
<b>TECHNICAL SPECIFICATIONS</b>	
Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.	
<b>TECH BOX</b>	
1. Channel Number:	DTV 8 Analog TV, if any
2. Zone:	<input checked="" type="radio"/> I <input type="radio"/> II <input type="radio"/> III
3. Antenna Location Coordinates: (NAD 27)	Latitude: Degrees 40 Minutes 02 Seconds 04 <input checked="" type="radio"/> North <input type="radio"/> South  Longitude: Degrees 76 Minutes 37 Seconds 08 <input checked="" type="radio"/> West <input type="radio"/> East
4. Antenna Structure Registration Number: 1031756	<input type="checkbox"/> Not Applicable <input type="checkbox"/> Notification filed with FAA
5. Antenna Location Site Elevation Above Mean Sea Level:	317.6 meters
6. Overall Tower Height Above Ground Level:	250.9 meters
7. Height of Radiation Center Above Ground Level:	239.3 meters
8. Height of Radiation Center Above Average Terrain :	419 meters
9. Maximum Effective Radiated Power (average power):	32.2 kW
10. Antenna Specifications:	

a. Manufacturer RCA Model TW-9A8-R	
b. Electrical Beam Tilt: 0.5 degrees <input type="checkbox"/> Not Applicable	
c. Mechanical Beam Tilt: degrees toward azimuth degrees True <input checked="" type="checkbox"/> Not Applicable Attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). [Exhibit 43]	
d. Polarization: <input checked="" type="radio"/> Horizontal <input type="radio"/> Circular <input type="radio"/> Elliptical	
e. Directional Antenna Relative Field Values: <input checked="" type="checkbox"/> Not applicable (Nondirectional)	
[For a composite directional (not off-the-shelf) antenna, press the following button to fill in the relative field values subform.] [Relative Field Values]	
If a directional antenna is proposed, the requirements of 47 C.F.R. Sections 73.625(c) must be satisfied. <b>Exhibit required.</b> [Exhibit 44]	
11.	Does the proposed facility satisfy the pre-transition interference protection provisions of 47 C.F.R. Section 73.623(a) (Applicable only if <b>Certification Checklist</b> Items 1(a), (b), or (c) are answered "No.") and/or the post-transition interference protection provisions of 47 C.F.R. Section 73.616? <input checked="" type="radio"/> Yes <input type="radio"/> No [Exhibit 45] If "No," attach as an Exhibit justification therefor, including a summary of any related previously granted waivers.
12.	If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefore. (Applicable only if <b>Certification Checklist</b> item 3 is answered "No.") [Exhibit 46]
13.	<b>Environmental Protection Act. Submit in an Exhibit</b> the following: [Exhibit 47] If <b>Certification Checklist</b> Item 2 is answered "Yes," a brief explanation of why an Environmental Assessment is not required. Also describe in the Exhibit the steps that will be taken to limit RF radiation exposure to the public and to persons authorized access to the tower site.  By checking "Yes" to <b>Certification Checklist</b> Item 2, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.  If <b>Certification Checklist</b> Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R Section 1.1311.
<b>PREPARERS CERTIFICATION ON SECTION III MUST BE COMPLETED AND SIGNED.</b>	

### SECTION III - PREPARER'S CERTIFICATION

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name JOSEPH M. DAVIS, P.E.		Relationship to Applicant (e.g., Consulting Engineer) CONSULTING ENGINEER
Signature		Date 12/17/2009
Mailing Address CHESAPEAKE RF CONSULTANTS, LLC 11993 KAHNS ROAD		
City MANASSAS	State or Country (if foreign address) VA	Zip Code 20112 -
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