

## **ENGINEERING EXHIBIT**

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

prepared for

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

WGAL(DT) Lancaster, PA

Facility ID 53930

Ch. 8 59 kW 419 m

*WGAL Hearst Television, Inc. (“Hearst”)* is the licensee of television station WGAL(DT), Facility ID 53930, Lancaster, PA. Pre-transition, WGAL operated as digital on Channel 58 and as analog on Channel 8, WGAL is now licensed (BLCDT-20090804ABL) 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. WGAL is currently operating at 32.2 kW ERP pursuant to a Construction Permit (“CP” BPCDT-20100111AER), and a license application is pending (BLCDT-20110323ABF) to cover that CP. *Hearst* herein seeks a new CP to increase the ERP to 59 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 dB $\mu$  contour.

The proposed WGAL facility’s predicted service population provides a 148.4 percent match of the Appendix B facility, as detailed in the following table.

**Digital Television Population Summary**

Population Summary (2000 Census) OET Bulletin 69 method	Appendix B	Proposed
Within Noise Limited Contour	5,089,460	8,348,991
Not affected by terrain losses	4,241,096	6,986,875
Lost to all interference	152,951	919,032
Net DTV Service	<b>4,088,145</b>	<b>6,067,843</b>
Match of Appendix B	---	<b>148.43%</b>

**Maximum ERP per §73.622(f)**

As with the present 32.2 kW operation, the proposed 59 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.

WGAL has executed a series of power increases since switching to Channel 8 on the transition date.<sup>1</sup> As discussed in the FCC Form 301 CP application underlying the present 32.2 kW facility, WGAL has received numerous calls regarding reception problems, particularly regarding indoor reception at locations that previously had satisfactory analog service. WGAL has operated the present 32.2 kW ERP level for over one year. These problems continue to persist despite the prior increases in power.

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

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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 to 14.1 kW as authorized by BPCDT-20090710AKB and licensed by BLCDT-20090804ABL. In February 2010 WGAL's ERP was increased to 32.2 kW as authorized by BDSTA-20100122AAT and made permanent by BPCDT-20100111AER. A license application is pending to cover the 32.2 kW operation (BLCDT-20110323ABF).

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.

WGAL is located in Zone I as described in §73.609. In ET Docket 10-235, the FCC has opened a Notice of Proposed Rulemaking<sup>2</sup> which would to raise the §73.622(f) maximum allowable ERP for VHF stations in Zone I (such as WGAL) to help overcome widespread reception problems. The NPRM describes significant VHF reception problems that have become apparent since the transition date along with possible solutions (para. 42-49), including a proposed 6 dB increase in the maximum allowable ERP for VHF stations in Zone I.

The proposal herein would increase WGAL's power by a factor of 1.83 (2.63 dB) and would be implemented by raising the WGAL transmitter's power output. The WGAL transmitting system has enough capacity to implement the proposed power increase upon authorization (no antenna or tower construction is necessary). The proposed power level was chosen as any further increase beyond 59 kW would result in predicted interference in excess of the 0.5 percent limit being caused to WICZ-TV (Ch. 8, Binghamton, NY, 232 km distant).

### **Interference Analysis**

The proposed facility expands the WGAL service contour beyond that established by Appendix B values. A detailed interference study per OET Bulletin 69<sup>3</sup> shows that the proposal complies with the 0.5 percent limit of new interference caused to pertinent nearby stations except with respect to those stations described in the following which have provided consent. The consent agreements with each of the following stations are attached separately.

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<sup>2</sup>“*Innovation in the Broadcast Television Bands: Allocations, Channel Sharing and Improvements to VHF*”, ET Docket 10-235, released November 30, 2010.

<sup>3</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.

WNJB(DT) Ch. 8 New Brunswick, NJ Facility ID 48457

5.79% interference to Licensed facility BLEDT-20090820AAL

5.81% interference to Construction Permit facility BMPEDT-20110328AAR

WNJB consents to accept up to 6.0 percent interference from WGAL

WBPH-TV Ch. 9 Bethlehem, PA Facility ID 60850

1.33% interference to Construction Permit facility BMPCDT-20110330AAN

WBPH-TV consents to accept up to 2.0 percent interference from WGAL

The interference study output report is provided as Table 1. Protection requirements towards authorized Class A stations are also satisfied.

### **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.

### **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  $3.15 \mu\text{W}/\text{cm}^2$ , which is 1.6 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.  
April 29, 2011

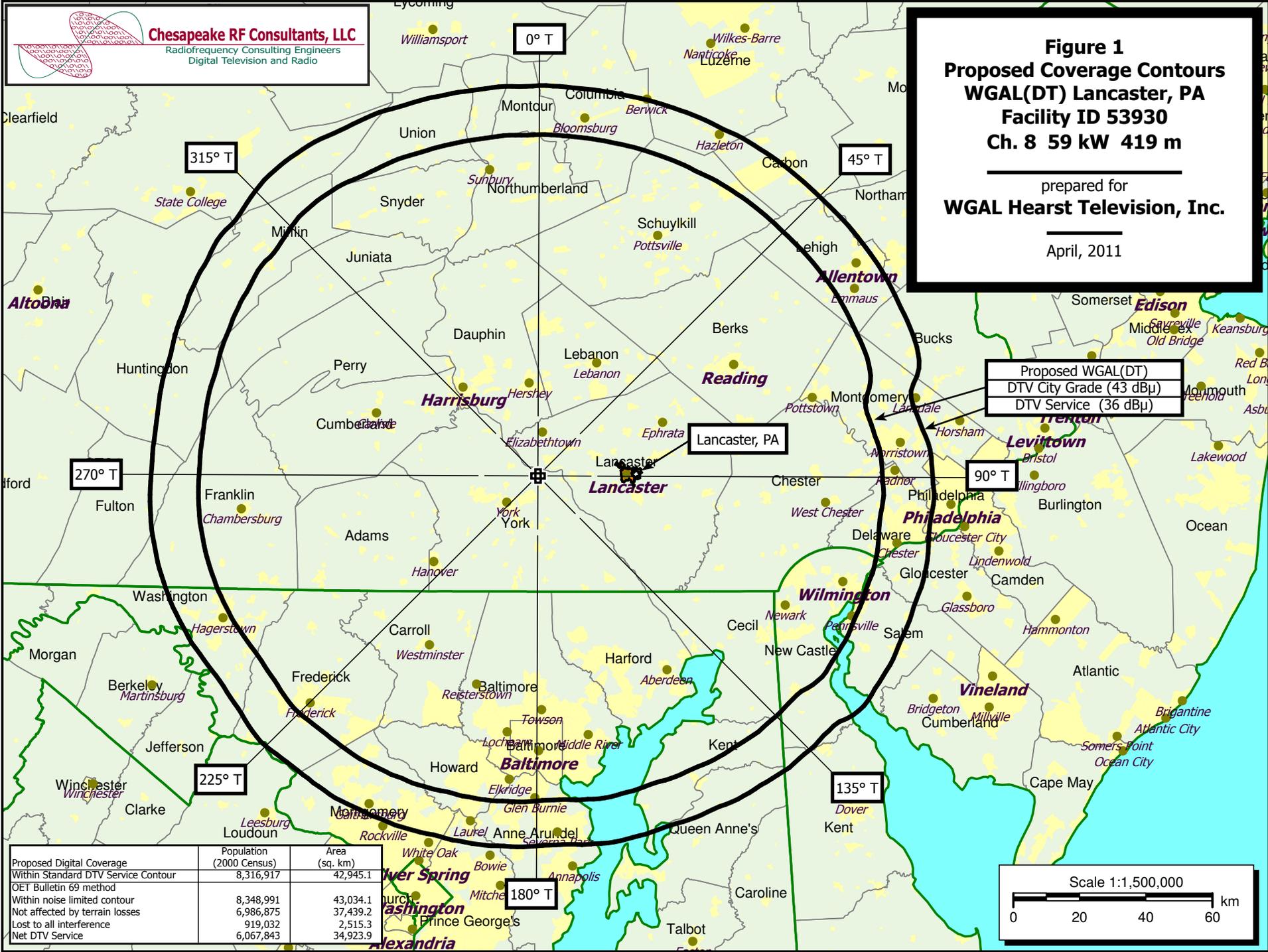
**Chesapeake RF Consultants, LLC**  
207 Old Dominion Road  
Yorktown, VA 23692  
703-650-9600

### 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 April 29, 2011 for filing electronically. Since the FCC's electronic filing system may be accessed by anyone with the applicant's account number 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.*

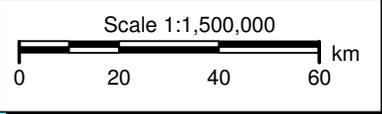
**Figure 1**  
**Proposed Coverage Contours**  
**WGAL(DT) Lancaster, PA**  
**Facility ID 53930**  
**Ch. 8 59 kW 419 m**  
 prepared for  
**WGAL Hearst Television, Inc.**  
 April, 2011



Proposed WGAL(DT)  
 DTV City Grade (43 dBu)  
 DTV Service (36 dBu)

Lancaster, PA

Proposed Digital Coverage	Population (2000 Census)	Area (sq. km)
Within Standard DTV Service Contour	8,316,917	42,945.1
OET Bulletin 69 method		
Within noise limited contour	8,348,991	43,034.1
Not affected by terrain losses	6,986,875	37,439.2
Lost to all interference	919,032	2,515.3
Net DTV Service	6,067,843	34,923.9



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

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

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 04-28-2011 Time: 10:15:24

Record Selected for Analysis

WGAL-DT USERRECORD-01 LANCASTER PA US  
Channel 08 ERP 59.0 kW HAAT 419.0 m RCAMSL 00557 m  
Latitude 040-02-04 Longitude 0076-37-08  
Status APP Zone 1 Border Site number: 01  
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 (site # 01) does not meet maximum height/power limits  
Channel 8 ERP = 59.00 HAAT = 419.

Site number	1		
Azimuth (Deg)	ERP (kW)	HAAT (m)	36.0 dBu F(50,90) (km)
0.0	59.000	424.8	117.5
45.0	59.000	444.3	119.5
90.0	59.000	440.0	119.1
135.0	59.000	411.9	116.1
180.0	59.000	355.3	111.2
225.0	59.000	404.1	115.4
270.0	59.000	415.4	116.5
315.0	59.000	459.1	120.7

Evaluation toward Class A Stations from site # 01

No Spacing violations or contour overlap  
to Class A stations from site # 01

Class A Evaluation Complete

Checks to Site Number 01

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 2 of 16)

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

Proposed station is OK toward AM broadcast stations

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Start of Interference Analysis

Channel	Proposed Station 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	20100624AHO
07	WJLA-TV	WASHINGTON DC	126.8	LIC	BLCDT	20090615ABY
07	W07BV	WILKESBARRE/PITTSTON PA	145.9	APP	BDFCDVA	20070607ACJ
08	WNJB	NEW BRUNSWICK NJ	190.7	CP MOD	BMPEDT	20110328AAR
08	WNJB	NEW BRUNSWICK NJ	190.7	LIC	BLEDT	20090820AAL
08	WICZ-TV	BINGHAMTON NY	231.7	LIC	BLCDT	20060320AFC
08	WWCP-TV	JOHNSTOWN PA	215.9	LIC	BLCDT	20090413AEM
09	WUSA	WASHINGTON DC	126.8	CP	BPCDT	20100625AZO
09	WUSA	WASHINGTON DC	126.8	LIC	BLCDT	20090617ABW
09	WBPH-TV	BETHLEHEM PA	116.0	LIC	BLCDT	20060609AAH
09	WBPH-TV	BETHLEHEM PA	116.5	CP MOD	BMPCDT	20110330AAN

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Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
07	WJLA-TV	WASHINGTON DC	BMPCDT	-20100624AHO

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	WABC-TV	NEW YORK NY	331.1	CP	BPCDT	-20090626ABL
07	WABC-TV	NEW YORK NY	326.7	APP	BMPCDT	-20080620AMV
07	WNGS	SPRINGVILLE NY	425.2	CP MOD	BMPCDT	-20100322ABL
07	WTPC-TV	VIRGINIA BEACH VA	243.4	LIC	BLCDT	-20090615ADP
07	WTRF-TV	WHEELING WV	338.3	CP MOD	BMPCDT	-20080620ALK
08	WWCP-TV	JOHNSTOWN PA	224.1	LIC	BLCDT	-20090413AEM
08	WGAL	LANCASTER PA	126.8	PLN	DTVPLN	-DTV0157
08	WGAL-DT	LANCASTER PA	126.8	APP	USERRECORD-01	

Total scenarios = 2

Result key: 2  
Scenario 2 Affected station 1  
Before Analysis

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 3 of 16)

Results for: 7A DC WASHINGTON                    BMPCDT    20100624AHO   CP  
 HAAT 236.0 m, ATV ERP 52.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	7914337	32752.2
not affected by terrain losses	7614891	30355.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	36721	752.1
lost to ATV IX only	36721	752.1
lost to all IX	36721	752.1

Potential Interfering Stations Included in above Scenario 2

7A NY BINGHAMTON	BLCDDT	20060329ACH	LIC
7A NY NEW YORK	BMPCDT	20080620AMV	APP
7A VA VIRGINIA BEACH	BLCDDT	20090615ADP	LIC
7A WV WHEELING	BMPCDT	20080620ALK	CP
8A PA LANCASTER	DTVPLN	DTVP0157	PLN

After Analysis

Results for: 7A DC WASHINGTON                    BMPCDT    20100624AHO   CP  
 HAAT 236.0 m, ATV ERP 52.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	7914337	32752.2
not affected by terrain losses	7614891	30355.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	55481	972.1
lost to ATV IX only	55481	972.1
lost to all IX	55481	972.1

Potential Interfering Stations Included in above Scenario 2

7A NY BINGHAMTON	BLCDDT	20060329ACH	LIC
7A NY NEW YORK	BMPCDT	20080620AMV	APP
7A VA VIRGINIA BEACH	BLCDDT	20090615ADP	LIC
7A WV WHEELING	BMPCDT	20080620ALK	CP
8A PA LANCASTER	USERRECORD01		APP

Percent new IX = 0.2476%

Worst case new IX 0.2476% Scenario 2

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Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
07	WJLA-TV	WASHINGTON DC	BLCDDT	-20090615ABY

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
07	WBNG-TV	BINGHAMTON NY	358.4	LIC	BLCDDT	-20060329ACH
07	WABC-TV	NEW YORK NY	331.1	CP	BPCDDT	-20090626ABL
07	WABC-TV	NEW YORK NY	326.7	APP	BMPCDDT	-20080620AMV
07	WNGS	SPRINGVILLE NY	425.2	CP MOD	BMPCDDT	-20100322ABL
07	WTPC-TV	VIRGINIA BEACH VA	243.4	LIC	BLCDDT	-20090615ADP
07	WTRF-TV	WHEELING WV	338.3	CP MOD	BMPCDDT	-20080620ALK
08	WWCP-TV	JOHNSTOWN PA	224.1	LIC	BLCDDT	-20090413AEM

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 4 of 16)

08	WGAL	LANCASTER PA	126.8	PLN	DTVPLN	-DTVP0157
08	WGAL-DT	LANCASTER PA	126.8	APP	USERRECORD-01	

Total scenarios = 2

Result key: 3  
 Scenario 1 Affected station 2  
 Before Analysis

Results for: 7A DC WASHINGTON                    BLCDDT    20090615ABY   LIC  
 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	42503	548.1
lost to ATV IX only	42503	548.1
lost to all IX	42503	548.1

Potential Interfering Stations Included in above Scenario 1

7A NY BINGHAMTON	BLCDDT	20060329ACH	LIC
7A NY NEW YORK	BPCDDT	20090626ABL	CP
7A VA VIRGINIA BEACH	BLCDDT	20090615ADP	LIC
7A WV WHEELING	BMPCDDT	20080620ALK	CP
8A PA LANCASTER	DTVPLN	DTVP0157	PLN

After Analysis

Results for: 7A DC WASHINGTON                    BLCDDT    20090615ABY   LIC  
 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	56772	712.1
lost to ATV IX only	56772	712.1
lost to all IX	56772	712.1

Potential Interfering Stations Included in above Scenario 1

7A NY BINGHAMTON	BLCDDT	20060329ACH	LIC
7A NY NEW YORK	BPCDDT	20090626ABL	CP
7A VA VIRGINIA BEACH	BLCDDT	20090615ADP	LIC
7A WV WHEELING	BMPCDDT	20080620ALK	CP
8A PA LANCASTER	USERRECORD01		APP

Percent new IX = 0.1922%

Worst case new IX 0.1922% Scenario 1

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Analysis of Interference to Affected Station 3

Analysis of current record

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

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 5 of 16)

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	-20100624AHO
07	WJLA-TV	WASHINGTON DC	271.9	LIC	BLCDDT	-20090615ABY
07	WXXA-TV	ALBANY NY	218.1	LIC	BLCDDT	-20051222AAQ
07	WBNG-TV	BINGHAMTON NY	96.2	LIC	BLCDDT	-20060329ACH
07	WVNY-TV	CARTHAGE NY	306.4	LIC	BLCDDT	-20090622AGM
07	WABC-TV	NEW YORK NY	161.8	CP	BPCDDT	-20090626ABL
07	WABC-TV	NEW YORK NY	161.1	APP	BMPCDT	-20080620AMV
07	WNGS	SPRINGVILLE NY	284.4	CP MOD	BMPCDT	-20100322ABL
07	W07DC-D	ALLENTOWN/BETHLEHEM PA	76.9	LIC	BLDTV	-20090806AAJ
07	W07DP-D	HARRISBURG PA	140.9	LIC	BLDVL	-20100929AFP
07	WWJT-LP	PHILADELPHIA PA	148.7	APP	BSTA	-20060505ACN
07	WWJT-LP	PHILADELPHIA PA	149.0	LIC	BLTVL	-20070112AIC
08	WNJB	NEW BRUNSWICK NJ	127.8	CP MOD	BMPEDT	-20110328AAR
08	WNJB	NEW BRUNSWICK NJ	127.8	LIC	BLEDDT	-20090820AAL
08	WICZ-TV	BINGHAMTON NY	95.9	LIC	BLCDDT	-20060320AFC
08	WGAL-DT	LANCASTER PA	145.9	APP	USERRECORD-01	

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	-20110328AAR

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
07	WXXA-TV	ALBANY NY	226.5	LIC	BLCDDT	-20051222AAQ
07	WBNG-TV	BINGHAMTON NY	200.3	LIC	BLCDDT	-20060329ACH
07	WABC-TV	NEW YORK NY	45.9	CP	BPCDDT	-20090626ABL
07	WABC-TV	NEW YORK NY	42.5	APP	BMPCDT	-20080620AMV
08	WICZ-TV	BINGHAMTON NY	199.7	LIC	BLCDDT	-20060320AFC
08	WWCP-TV	JOHNSTOWN PA	396.3	LIC	BLCDDT	-20090413AEM
08	WGAL	LANCASTER PA	190.7	PLN	DTVPLN	-DTVPO157
09	WEDN	NORWICH CT	219.8	LIC	BLEDDT	-20090618ACB
09	WBPH-TV	BETHLEHEM PA	79.2	LIC	BLCDDT	-20060609AAH
09	WBPH-TV	BETHLEHEM PA	78.8	CP MOD	BMPCDT	-20110330AAN
08	WGAL-DT	LANCASTER PA	190.7	APP	USERRECORD-01	

Total scenarios = 4

Result key: 5  
Scenario 1 Affected station 4  
Before Analysis

Results for: 8A NJ NEW BRUNSWICK BMPEDT 20110328AAR CP  
HAAT 218.0 m, ATV ERP 40.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	20668171	26517.0
not affected by terrain losses	19916767	24007.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	3585604	3092.8

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 6 of 16)

lost to ATV IX only	3585604	3092.8
lost to all IX	3585604	3092.8

Potential Interfering Stations Included in above Scenario 1

7A NY NEW YORK	BPCDDT	20090626ABL	CP
8A NY BINGHAMTON	BLCDDT	20060320AFC	LIC
9A PA BETHLEHEM	BLCDDT	20060609AAH	LIC
8A PA LANCASTER	DTVPLN	DTVPO157	PLN

After Analysis

Results for: 8A NJ NEW BRUNSWICK BMPEDT 20110328AAR CP  
HAAT 218.0 m, ATV ERP 40.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	20668171	26517.0
not affected by terrain losses	19916767	24007.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	4534823	4487.4
lost to ATV IX only	4534823	4487.4
lost to all IX	4534823	4487.4

Potential Interfering Stations Included in above Scenario 1

7A NY NEW YORK	BPCDDT	20090626ABL	CP
8A NY BINGHAMTON	BLCDDT	20060320AFC	LIC
9A PA BETHLEHEM	BLCDDT	20060609AAH	LIC
8A PA LANCASTER	USERRECORD01		APP

The following station failed the de minimis interference criteria.

8D PA LANCASTER	USERRECORD01	
ERP 59.00 kW HAAT 419.0 m RCAMSL 557.0 m		
Antenna none		

Due to interference to the following station and scenario: 1

8D NJ NEW BRUNSWICK	BMPEDT	20110328AAR
ERP 40.82 kW HAAT 218.0 m RCAMSL 281.0 m		
Antenna CDB 00000000104545		

Percent new interference from proposal: 5.8123 to BMPEDT 20110328AAR

Worst case new IX 5.8123% Scenario 1

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Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
08	WNJB	NEW BRUNSWICK NJ	BLEDDT	-20090820AAL

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
07	WXXA-TV	ALBANY NY	226.5	LIC	BLCDDT	-20051222AAQ
07	WBNG-TV	BINGHAMTON NY	200.3	LIC	BLCDDT	-20060329ACH
07	WABC-TV	NEW YORK NY	45.9	CP	BPCDDT	-20090626ABL
07	WABC-TV	NEW YORK NY	42.5	APP	BMPCDT	-20080620AMV
08	WICZ-TV	BINGHAMTON NY	199.7	LIC	BLCDDT	-20060320AFC
08	WWCP-TV	JOHNSTOWN PA	396.3	LIC	BLCDDT	-20090413AEM

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 7 of 16)

08	WGAL	LANCASTER PA	190.7	PLN	DTVPLN	-DTVP0157
09	WEDN	NORWICH CT	219.8	LIC	BLEDT	-20090618ACB
09	WBPH-TV	BETHLEHEM PA	79.2	LIC	BLCDT	-20060609AAH
09	WBPH-TV	BETHLEHEM PA	78.8	CP MOD	BMPCDT	-20110330AAN
08	WGAL-DT	LANCASTER PA	190.7	APP	USERRECORD-01	

Total scenarios = 4

Result key: 9  
Scenario 1 Affected station 5  
Before Analysis

Results for: 8A NJ NEW BRUNSWICK BLEDT 20090820AAL LIC  
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	5486547	2657.2
lost to ATV IX only	5486547	2657.2
lost to all IX	5486547	2657.2

Potential Interfering Stations Included in above Scenario 1

7A NY NEW YORK	BPCDT	20090626ABL	CP
8A NY BINGHAMTON	BLCDT	20060320AFC	LIC
9A PA BETHLEHEM	BLCDT	20060609AAH	LIC
8A PA LANCASTER	DTVPLN	DTVP0157	PLN

After Analysis

Results for: 8A NJ NEW BRUNSWICK BLEDT 20090820AAL LIC  
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	6254440	4087.7
lost to ATV IX only	6254440	4087.7
lost to all IX	6254440	4087.7

Potential Interfering Stations Included in above Scenario 1

7A NY NEW YORK	BPCDT	20090626ABL	CP
8A NY BINGHAMTON	BLCDT	20060320AFC	LIC
9A PA BETHLEHEM	BLCDT	20060609AAH	LIC
8A PA LANCASTER	USERRECORD01		APP

The following station failed the de minimis interference criteria.  
8D PA LANCASTER USERRECORD01  
ERP 59.00 kW HAAT 419.0 m RCAMSL 557.0 m  
Antenna none

Due to interference to the following station and scenario: 1  
8D NJ NEW BRUNSWICK BLEDT 20090820AAL  
ERP 17.90 kW HAAT 215.0 m RCAMSL 281.0 m  
Antenna CDB 0000000094321

Percent new interference from proposal: 5.7933 to BLEDT 20090820AAL

Worst case new IX 5.7933% Scenario 1

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 8 of 16)

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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	WBNG-TV	BINGHAMTON NY	0.7	LIC	BLCDT	-20060329ACH
07	WVNY-TV	CARTHAGE NY	211.7	LIC	BLCDT	-20090622AGM
07	WABC-TV	NEW YORK NY	218.6	CP	BPCDT	-20090626ABL
07	WABC-TV	NEW YORK NY	219.8	APP	BMPCDT	-20080620AMV
08	WNJB	NEW BRUNSWICK NJ	199.7	CP MOD	BMPCDT	-20110328AAR
08	WNJB	NEW BRUNSWICK NJ	199.7	LIC	BLEDT	-20090820AAL
08	WWCP-TV	JOHNSTOWN PA	339.9	LIC	BLCDT	-20090413AEM
08	WGAL	LANCASTER PA	231.7	PLN	DTVPLN	-DTVP0157
09	WBPH-TV	BETHLEHEM PA	171.1	LIC	BLCDT	-20060609AAH
09	WBPH-TV	BETHLEHEM PA	170.9	CP MOD	BMPCDT	-20110330AAN
08	WGAL-DT	LANCASTER PA	231.7	APP	USERRECORD-01	

Total scenarios = 2

Result key: 14  
Scenario 2 Affected station 6  
Before Analysis

Results for: 8A NY BINGHAMTON BLCDT 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	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 2

7A NY BINGHAMTON	BLCDT	20060329ACH	LIC
8A NJ NEW BRUNSWICK	BLEDT	20090820AAL	LIC
8A PA LANCASTER	DTVPLN	DTVP0157	PLN

After Analysis

Results for: 8A NY BINGHAMTON BLCDT 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	13653	507.9
lost to ATV IX only	13653	507.9
lost to all IX	13653	507.9

Potential Interfering Stations Included in above Scenario 2

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 9 of 16)

7A NY BINGHAMTON BLCDT 20060329ACH LIC  
8A NJ NEW BRUNSWICK BLEDT 20090820AAL LIC  
8A PA LANCASTER USERRECORD01 APP

Percent new IX = 0.4611%

Worst case new IX 0.4611% Scenario 2

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Analysis of Interference to Affected Station 7

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
08	WWCP-TV	JOHNSTOWN PA	BLCDT	-20090413AEM

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	-20100624AHO
07	WJLA-TV	WASHINGTON DC	224.1	LIC	BLCDT	-20090615ABY
07	WTRF-TV	WHEELING WV	136.7	CP MOD	BMPCDT	-20080620ALK
08	WNJB	NEW BRUNSWICK NJ	396.3	CP MOD	BMPEDT	-20110328AAR
08	WNJB	NEW BRUNSWICK NJ	396.3	LIC	BLEDT	-20090820AAL
08	WICZ-TV	BINGHAMTON NY	339.9	LIC	BLCDT	-20060320AFC
08	WJW	CLEVELAND OH	252.7	LIC	BLCDT	-20090612AJC
08	WJW	CLEVELAND OH	252.7	CP MOD	BMPCDT	-20080620AHI
08	WLIO	LIMA OH	425.8	CP MOD	BMPCDT	-20060517ABE
08	WGAL	LANCASTER PA	215.9	PLN	DTVPLN	-DTVPO157
08	WVNS-TV	LEWISBURG WV	299.6	CP MOD	BMPCDT	-20040608ABO
09	WUSA	WASHINGTON DC	224.1	CP	BPCDT	-20100625AZO
09	WUSA	WASHINGTON DC	224.1	LIC	BLCDT	-20090617ABW
09	WTOV-TV	STEUBENVILLE OH	125.9	LIC	BLCDT	-20090507AAC
09	WTOV-TV	STEUBENVILLE OH	125.9	APP	BPCDT	-20110308ABN
08	WGAL-DT	LANCASTER PA	215.9	APP	USERRECORD-01	

Total scenarios = 4

Result key: 17

Scenario 3 Affected station 7

Before Analysis

Results for: 8A PA JOHNSTOWN BLCDT 20090413AEM LIC

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	22270	225.1		
lost to ATV IX only	22270	225.1		
lost to all IX	22270	225.1		

Potential Interfering Stations Included in above Scenario 3

7A WV WHEELING BMPCDT 20080620ALK CP  
8A NY BINGHAMTON BLCDT 20060320AFC LIC  
8A OH CLEVELAND BLCDT 20090612AJC LIC  
8A WV LEWISBURG BMPCDT 20040608ABO CP  
9A OH STEUBENVILLE BPCDT 20110308ABN APP

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 10 of 16)

8A PA LANCASTER DTVPLN DTVPO157 PLN

After Analysis

Results for: 8A PA JOHNSTOWN BLCDT 20090413AEM LIC

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	30911	522.5		
lost to ATV IX only	30911	522.5		
lost to all IX	30911	522.5		

Potential Interfering Stations Included in above Scenario 3

7A WV WHEELING BMPCDT 20080620ALK CP  
8A NY BINGHAMTON BLCDT 20060320AFC LIC  
8A OH CLEVELAND BLCDT 20090612AJC LIC  
8A WV LEWISBURG BMPCDT 20040608ABO CP  
9A OH STEUBENVILLE BPCDT 20110308ABN APP  
8A PA LANCASTER USERRECORD01 APP

Percent new IX = 0.3320%

Worst case new IX 0.3320% Scenario 3

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Analysis of Interference to Affected Station 8

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
09	WUSA	WASHINGTON DC	BPCDT	-20100625AZO

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
08	WWCP-TV	JOHNSTOWN PA	224.1	LIC	BLCDT	-20090413AEM
08	WGAL	LANCASTER PA	126.8	PLN	DTVPLN	-DTVPO157
09	WSKY-TV	MANTEO NC	278.5	LIC	BLCDT	-20100514ADM
09	WTOV-TV	STEUBENVILLE OH	340.2	LIC	BLCDT	-20090507AAC
09	WTOV-TV	STEUBENVILLE OH	340.2	APP	BPCDT	-20110308ABN
09	WBPH-TV	BETHLEHEM PA	227.6	LIC	BLCDT	-20060609AAH
09	WBPH-TV	BETHLEHEM PA	228.2	CP MOD	BMPCDT	-20110330AAN
10	WHTM-TV	HARRISBURG PA	152.2	LIC	BLCDT	-20040812AAH
10	WHTM-TV	HARRISBURG PA	152.2	CP	BPCDT	-20080620AGL
08	WGAL-DT	LANCASTER PA	126.8	APP	USERRECORD-01	

Total scenarios = 4

Result key: 21

Scenario 3 Affected station 8

Before Analysis

Results for: 9A DC WASHINGTON BPCDT 20100625AZO CP

HAAT	236.0 m, ATV ERP	52.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	7914337	32752.2		
not affected by terrain losses	7604761	30263.9		

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 11 of 16)

lost to NTSC IX 0 0.0  
lost to additional IX by ATV 40738 1096.1  
lost to ATV IX only 40738 1096.1  
lost to all IX 40738 1096.1

Potential Interfering Stations Included in above Scenario 3

9A NC MANTEO	BLCDDT	20100514ADM	LIC
9A OH STEUBENVILLE	BPCDDT	20110308ABN	APP
9A PA BETHLEHEM	BLCDDT	20060609AAH	LIC
10A PA HARRISBURG	BPCDDT	20080620AGL	CP
8A PA LANCASTER	DTVPLN	DTVP0157	PLN

After Analysis

Results for: 9A DC WASHINGTON BPCDDT 20100625AZO CP  
HAAT 236.0 m, ATV ERP 52.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	7914337	32752.2
not affected by terrain losses	7604761	30263.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	52688	1244.2
lost to ATV IX only	52688	1244.2
lost to all IX	52688	1244.2

Potential Interfering Stations Included in above Scenario 3

9A NC MANTEO	BLCDDT	20100514ADM	LIC
9A OH STEUBENVILLE	BPCDDT	20110308ABN	APP
9A PA BETHLEHEM	BLCDDT	20060609AAH	LIC
10A PA HARRISBURG	BPCDDT	20080620AGL	CP
8A PA LANCASTER	USERRECORD01		APP

Percent new IX = 0.1580%

Worst case new IX 0.1580% Scenario 3

#####

Analysis of Interference to Affected Station 9

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
09	WUSA	WASHINGTON DC	BLCDDT	-20090617ABW

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
08	WWCP-TV	JOHNSTOWN PA	224.1	LIC	BLCDDT	-20090413AEM
08	WGAL	LANCASTER PA	126.8	PLN	DTVPLN	-DTVP0157
09	WSKY-TV	MANTEO NC	278.5	LIC	BLCDDT	-20100514ADM
09	WTOV-TV	STEUBENVILLE OH	340.2	LIC	BLCDDT	-20090507AAC
09	WTOV-TV	STEUBENVILLE OH	340.2	APP	BPCDDT	-20110308ABN
09	WBPH-TV	BETHLEHEM PA	227.6	LIC	BLCDDT	-20060609AAH
09	WBPH-TV	BETHLEHEM PA	228.2	CP MOD	BMPDDT	-20110330AAN
10	WHTM-TV	HARRISBURG PA	152.2	LIC	BLCDDT	-20040812AAH
10	WHTM-TV	HARRISBURG PA	152.2	CP	BPCDDT	-20080620AGL
08	WGAL-DT	LANCASTER PA	126.8	APP	USERRECORD-01	

Total scenarios = 4

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 12 of 16)

Result key: 25  
Scenario 3 Affected station 9  
Before Analysis

Results for: 9A DC WASHINGTON BLCDDT 20090617ABW LIC  
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	48614	752.1
lost to ATV IX only	48614	752.1
lost to all IX	48614	752.1

Potential Interfering Stations Included in above Scenario 3

9A NC MANTEO	BLCDDT	20100514ADM	LIC
9A OH STEUBENVILLE	BPCDDT	20110308ABN	APP
9A PA BETHLEHEM	BLCDDT	20060609AAH	LIC
10A PA HARRISBURG	BPCDDT	20080620AGL	CP
8A PA LANCASTER	DTVPLN	DTVP0157	PLN

After Analysis

Results for: 9A DC WASHINGTON BLCDDT 20090617ABW LIC  
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	52105	820.1
lost to ATV IX only	52105	820.1
lost to all IX	52105	820.1

Potential Interfering Stations Included in above Scenario 3

9A NC MANTEO	BLCDDT	20100514ADM	LIC
9A OH STEUBENVILLE	BPCDDT	20110308ABN	APP
9A PA BETHLEHEM	BLCDDT	20060609AAH	LIC
10A PA HARRISBURG	BPCDDT	20080620AGL	CP
8A PA LANCASTER	USERRECORD01		APP

Percent new IX = 0.0485%

Worst case new IX 0.0485% Scenario 3

#####

Analysis of Interference to Affected Station 10

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
09	WBPH-TV	BETHLEHEM PA	BLCDDT	-20060609AAH

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
08	WNJB	NEW BRUNSWICK NJ	79.2	CP MOD	BMPDDT	-20110328AAR
08	WNJB	NEW BRUNSWICK NJ	79.2	LIC	BLEDT	-20090820AAL

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 13 of 16)

08	WICZ-TV	BINGHAMTON NY	171.1	LIC	BLCDDT	-20060320AFC
08	WGAL	LANCASTER PA	116.0	PLN	DTVPLN	-DTV0157
09	WEDN	NORWICH CT	294.2	LIC	BLEDDT	-20090618ACB
09	WUSA	WASHINGTON DC	227.6	CP	BPCDDT	-20100625AZO
09	WUSA	WASHINGTON DC	227.6	LIC	BLCDDT	-20090617ABW
09	WMUR-TV	MANCHESTER NH	417.2	CP	BPCDDT	-20080407ABS
09	WVER	RUTLAND VT	394.0	LIC	BLEDDT	-20050608AGC
10	WHTM-TV	HARRISBURG PA	130.7	LIC	BLCDDT	-20040812AAH
10	WHTM-TV	HARRISBURG PA	130.7	CP	BPCDDT	-20080620AGL
08	WGAL-DT	LANCASTER PA	116.0	APP	USERRECORD-01	

Total scenarios = 4

Result key: 28  
Scenario 2 Affected station 10  
Before Analysis

Results for: 9A PA BETHLEHEM BLCDDT 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 2

8A NJ NEW BRUNSWICK	BMPEDT	20110328AAR	CP
9A CT NORWICH	BLEDDT	20090618ACB	LIC
9A DC WASHINGTON	BLCDDT	20090617ABW	LIC
10A PA HARRISBURG	BPCDDT	20080620AGL	CP
8A PA LANCASTER	DTVPLN	DTVP0157	PLN

After Analysis

Results for: 9A PA BETHLEHEM BLCDDT 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	1176.7
lost to ATV IX only	660795	1176.7
lost to all IX	660795	1176.7

Potential Interfering Stations Included in above Scenario 2

8A NJ NEW BRUNSWICK	BMPEDT	20110328AAR	CP
9A CT NORWICH	BLEDDT	20090618ACB	LIC
9A DC WASHINGTON	BLCDDT	20090617ABW	LIC
10A PA HARRISBURG	BPCDDT	20080620AGL	CP
8A PA LANCASTER	USERRECORD01	APP	

Percent new IX = 0.1285%

Worst case new IX 0.1285% Scenario 2

#####

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 14 of 16)

Analysis of Interference to Affected Station 11

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
09	WBPH-TV	BETHLEHEM PA	BMPDDT	-20110330AAN

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
08	WNJB	NEW BRUNSWICK NJ	78.8	CP MOD	BMPEDT	-20110328AAR
08	WNJB	NEW BRUNSWICK NJ	78.8	LIC	BLEDDT	-20090820AAL
08	WICZ-TV	BINGHAMTON NY	170.9	LIC	BLCDDT	-20060320AFC
08	WGAL	LANCASTER PA	116.5	PLN	DTVPLN	-DTV0157
09	WEDN	NORWICH CT	293.6	LIC	BLEDDT	-20090618ACB
09	WUSA	WASHINGTON DC	228.2	CP	BPCDDT	-20100625AZO
09	WUSA	WASHINGTON DC	228.2	LIC	BLCDDT	-20090617ABW
09	WMUR-TV	MANCHESTER NH	416.7	CP	BPCDDT	-20080407ABS
09	WVER	RUTLAND VT	393.5	LIC	BLEDDT	-20050608AGC
10	WTHN	NEW HAVEN CT	229.0	LIC	BLCDDT	-20040701AEC
10	WHTM-TV	HARRISBURG PA	131.2	LIC	BLCDDT	-20040812AAH
10	WHTM-TV	HARRISBURG PA	131.2	CP	BPCDDT	-20080620AGL
08	WGAL-DT	LANCASTER PA	116.5	APP	USERRECORD-01	

Total scenarios = 8

Result key: 33  
Scenario 3 Affected station 11  
Before Analysis

Results for: 9A PA BETHLEHEM BMPDDT 20110330AAN CP  
HAAT 302.0 m, ATV ERP 80.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	12111304	36312.4
not affected by terrain losses	10648677	32212.8
lost to NTSC IX	0	0.0
lost to additional IX by ATV	1859771	2379.8
lost to ATV IX only	1859771	2379.8
lost to all IX	1859771	2379.8

Potential Interfering Stations Included in above Scenario 3

8A NJ NEW BRUNSWICK	BMPEDT	20110328AAR	CP
9A CT NORWICH	BLEDDT	20090618ACB	LIC
9A DC WASHINGTON	BLCDDT	20090617ABW	LIC
9A VT RUTLAND	BLEDDT	20050608AGC	LIC
10A PA HARRISBURG	BLCDDT	20040812AAH	LIC
8A PA LANCASTER	DTVPLN	DTVP0157	PLN

After Analysis

Results for: 9A PA BETHLEHEM BMPDDT 20110330AAN CP  
HAAT 302.0 m, ATV ERP 80.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	12111304	36312.4
not affected by terrain losses	10648677	32212.8
lost to NTSC IX	0	0.0
lost to additional IX by ATV	1976846	2991.7
lost to ATV IX only	1976846	2991.7
lost to all IX	1976846	2991.7

Potential Interfering Stations Included in above Scenario 3

**Table 1 WGAL(DT) OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 15 of 16)

8A NJ NEW BRUNSWICK	BMPEDT	20110328AAR	CP
9A CT NORWICH	BLEDT	20090618ACB	LIC
9A DC WASHINGTON	BLCDT	20090617ABW	LIC
9A VT RUTLAND	BLEDT	20050608AGC	LIC
10A PA HARRISBURG	BLCDT	20040812AAH	LIC
8A PA LANCASTER	USERRECORD01		APP

The following station failed the de minimis interference criteria.

8D PA LANCASTER USERRECORD01  
ERP 59.00 kW HAAT 419.0 m RCAMSL 557.0 m  
Antenna none

Due to interference to the following station and scenario: 3  
9D PA BETHLEHEM BMPCDT 20110330AAN  
ERP 80.60 kW HAAT 302.0 m RCAMSL 452.0 m  
Antenna CDB 00000000104583

Percent new interference from proposal: 1.3321 to BMPCDT 20110330AAN

Worst case new IX 1.3321% Scenario 3

#####

Analysis of Interference to Affected Station 12

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 -20100624AHO
07	WJLA-TV	WASHINGTON DC	126.8	LIC	BLCDT -20090615ABY
08	WNJB	NEW BRUNSWICK NJ	190.7	CP MOD	BMPEDT -20110328AAR
08	WNJB	NEW BRUNSWICK NJ	190.7	LIC	BLEDT -20090820AAL
08	WICZ-TV	BINGHAMTON NY	231.7	LIC	BLCDT -20060320AFC
08	WWCP-TV	JOHNSTOWN PA	215.9	LIC	BLCDT -20090413AEM
09	WUSA	WASHINGTON DC	126.8	CP	BPCDT -20100625AZO
09	WUSA	WASHINGTON DC	126.8	LIC	BLCDT -20090617ABW
09	WBPH-TV	BETHLEHEM PA	116.0	LIC	BLCDT -20060609AAH
09	WBPH-TV	BETHLEHEM PA	116.5	CP MOD	BMPCDT -20110330AAN

Total scenarios = 16

Result key: 39  
Scenario 1 Affected station 12  
Before Analysis

Results for: 8A PA LANCASTER USERRECORD01 APP  
HAAT 419.0 m, ATV ERP 59.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	8348991	43034.1
not affected by terrain losses	6986875	37439.2
lost to NTSC IX	0	0.0
lost to additional IX by ATV	919032	2515.3
lost to ATV IX only	919032	2515.3
lost to all IX	919032	2515.3

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

Potential Interfering Stations Included in above Scenario 1

7A DC WASHINGTON	BMPCDT	20100624AHO	CP
8A NJ NEW BRUNSWICK	BMPEDT	20110328AAR	CP
8A NY BINGHAMTON	BLCDT	20060320AFC	LIC
8A PA JOHNSTOWN	BLCDT	20090413AEM	LIC
9A DC WASHINGTON	BPCDT	20100625AZO	CP
9A PA BETHLEHEM	BLCDT	20060609AAH	LIC

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SECTION III-D - DTV Engineering	
<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

SECTION III-D - DTV Engineering	
<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): 59 kW

10.	<p>Antenna Specifications:</p> <p>a. Manufacturer RCA Model TW-9A8-R</p> <p>b. Electrical Beam Tilt: 0.5 degrees <input type="checkbox"/> Not Applicable</p> <p>c. Mechanical Beam Tilt: degrees toward azimuth degrees True <input checked="" type="checkbox"/> Not Applicable</p> <p>Attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). <span style="float:right;">[Exhibit 45]</span></p> <p>d. Polarization: <input checked="" type="radio"/> Horizontal <input type="radio"/> Circular <input type="radio"/> Elliptical</p> <p>e. Directional Antenna Relative Field Values: <input checked="" type="checkbox"/> Not applicable (Nondirectional)</p> <p>[For a composite directional (not off-the-shelf) antenna, press the following button to fill in the relative field values subform.] [Relative Field Values]</p> <hr/> <p>If a directional antenna is proposed, the requirements of 47 C.F.R. Sections 73.625(c) must be satisfied. <b>Exhibit required.</b> <span style="float:right;">[Exhibit 46]</span></p>
11.	<p>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? <span style="float:right;"><input checked="" type="radio"/> Yes <input type="radio"/> No</span></p> <p style="text-align:right;">[Exhibit 47]</p> <p>If "No," attach as an Exhibit justification therefor, including a summary of any related previously granted waivers.</p>
12.	<p>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.") <span style="float:right;">[Exhibit 48]</span></p>
13.	<p><b>Environmental Protection Act. Submit in an Exhibit</b> the following: <span style="float:right;">[Exhibit 49]</span></p> <p>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.</p> <p>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.</p> <p>If <b>Certification Checklist</b> Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R Section 1.1311.</p>
<p><b>PREPARERS CERTIFICATION ON SECTION III MUST BE COMPLETED AND SIGNED.</b></p>	

**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 4/29/2011	
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Telephone Number (include area code) 7036509600	E-Mail Address (if available) JOSEPH.DAVIS@RF-CONSULTANTS.COM		