JOHN J. MULLANEY JOHN H. MULLANEY, P.E. (1994) ALAN E. GEARING, P.E. TIMOTHY Z. SAWYER

MULLANEY ENGINEERING, INC.

9049 SHADY GROVE COURT GAITHERSBURG, MD 20877

### **ENGINEERING EXHIBIT EE-1**:

## APPLICATION FOR CONSTRUCTION PERMIT

## APPLICATION FOR MAXIMIZATION OF POST-TRANSITION DIGITAL TELEVISION PERMIT

## CORNERSTONE TELEVISION, INC. WKBS-DT DIGITAL TELEVISION CHANNEL 46 ALTOONA, PENNSYLVANIA

### FCC FACILITY NUMBER 13929

### **JUNE 2008**

# ENGINEERING EXHIBIT IN SUPPORT OF APPLICATION FOR A CONSTRUCTION PERMIT FOR MAXIMIZATION OF POST-TRANSITION DIGITAL TELEVISION FACILITY

# DIGITAL TELEVISION STATION WKBS-DT ALTOONA, PENNSYLVANIA

### **ENGINEERING EXHIBIT EE-1**:

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### CORNERSTONE TELEVISION, INC. WKBS-DT

# DIGITAL TELEVISION CHANNEL 46 ALTOONA, PENNSYLVANIA

### FCC FACILITY NUMBER 13929

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6.	Figure 2, Proposed Digital Service Contours
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## **DECLARATION**

I, Timothy Z. Sawyer, declare and that I have provided engineering services in the area of telecommunications since 1969. My qualifications are a matter of record with the Federal Communications Commission. I am a senior engineer with the firm of Mullaney Engineering, Inc., consulting radio telecommunications engineers with offices in Gaithersburg, Maryland.

The firm of Mullaney Engineering, Inc., has been retained by GOCOM MEDIA OF ILLINOIS, LLC, to prepare the instant engineering exhibit in support of <u>an Application</u> for a Construction Permit - Digital Television Broadcast Station - WKBS-DT, Altoona, Pennsylvania for Maximization of a Post-Transition Facility, FCCFACILITYIDNUMBER: 13929.

All facts contained herein are true of my own knowledge except those stated to be on information and belief, and as to those facts, I believe them to be true. I declare under the penalty of perjury that the foregoing is true and correct.

Timothy Z. Sawyer Executed on the 19<sup>th</sup> day of June 2008

#### **ENGINEERING EXHIBIT EE-1**:

## APPLICATION FOR CONSTRUCTION PERMIT

# APPLICATION FOR MAXIMIZATION OF POST-TRANSITION DIGITAL TELEVISION PERMIT

### **CORNERSTONE TELEVISION, INC.**

# WKBS-DT DIGITAL TELEVISION CHANNEL 46 ALTOONA, PENNSYLVANIA

### FCC FACILITY NUMBER 13929

#### **ENGINEERING STATEMENT**

The technical exhibit, of which this narrative is part, was prepared on behalf of CORNERSTONE TELEVISION, INC., in support of an application for a construction permit to maximize the facilities of Digital Television Station WKBS-DT, Altoona, Pennsylvania. The FCC facility identification number is 13929.

The proposed station will operate on Digital TV Channel 46 with an effective radiated power (ERP) of 200 kilowatts and an antenna height above average terrain (HAAT) of 309 meters utilizing a nondirectional antenna.

The request to modify the current digital facility is a result of the Commission's lifting of the August 3, 2004 "freeze" concerning expansion of service area. <sup>1</sup> This

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Public Notice "Commission Lifts the Freeze On the Filing of Maximization Applications and Petitions for Digital Channel Substitutions, Effective Immediately" DA 08-1213, released May 30, 2008.

instant application is intended to be filed by June 20, 2008 in response to the FCC notice.

WKBS-DT is licensed to operate on Channel 46 as a digital television facility with an effective radiated power of 50 kilowatts and a height above average terrain of 309 meters. That permit authorizes the use of a nondirectional antenna. The supporting structure is an existing structure that does not require notice to the FAA or FCC tower registration. The structure is 61 meters in overall height and is not located in the vicinity of any known public airports or landing zones. The structure passes the FCC Tower/Air slope program and is the current supporting structure for the licensed permit. No changes are proposed in the currently authorized antenna system. This application simply proposes to increase the effective radiated power of the station.

WKBS-DT proposes to modify its license by increasing the authorized effective radiated power to 200 kilowatts. No other changes are proposed.

The proposal would not be subject to environmental processing in accordance with 47 C.F.R. §1.1306. This proposal does not involve a site location specified under 47 C.F.R. §1.1307 (a)(1)-(7), or involve high intensity lighting under 47 C.F.R. §1.1307(a)(8) or result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in 47 C.F.R. §1.1307(b).

This application conforms with all applicable rules and regulations of the Federal Communications Commission.

The proposed transmitting facility will use the authorized nondirectional antenna a SWR SWED16OI/46, mounted on the existing guyed, uniform cross-section, steel tower. No increase in tower height will occur, and no changes to the nondirectional antenna radiation pattern or its mounting height above ground or sea level will occur.

### ANTENNA DETAILS (FIGURE 1)

Figure 1 contains the details of the proposed antenna as required by the Commission's rules. The antenna employs horizontal polarization and an electrical

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beam tilt of 0.5 degrees. There are no changes to the antenna system from that previously authorized and in use by the station.

#### FCC F(50,90)COVERAGE CONTOURS (FIGURE 2)

The predicted 41 and 48 dBu f(50,90) coverage contours were calculated in accordance with the provisions of 47 C.F.R. §73.313. In accordance with current FCC practice, no consideration was given to terrain roughness correction factors.

The average terrain elevations from 3 to 16 kilometers from the proposed site were obtained from the N.G.D.C. <u>3-second</u> terrain database. 360 radials, evenly spaced at 1-degree intervals were used for determining the average terrain elevations and the distance to the service contours.

The antenna radiation center heights above average terrain in the individual radial directions and the effective radiated power in the appropriate directions were used in conjunction with the appropriate F(50,90) curve contained with the Commission's rules.

The proposed digital service contours have been drawn on the map in Figure 2. As the map in Figure 2 shows, the 48 dBu (City Grade) contour from this proposal completely encompasses the city of license, Altoona, Pennsylvania.

#### **POPULATION AND AREA**

The population to be served within the predicted digital service contour was determined by a computer program that adds the population of census districts whose centroids lie within the contour as defined in OET Bulletin 69. The 2000 U.S. Census data was employed. The area within the digital service contour was calculated by a computer program using a root mean square algorithm.

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Post-Transition Population Summary

Population Summary (2000 Census)		
OET Bulletin 69 Method	Appendix B	Proposed
Within Noise Limited Contour	575000	908555
Service Match to Appendix B		158.0%

### **INTERFERENCE STUDY**

Figure 3, contains a detailed interference study using the procedures outlined in OET Bulletin Number 69<sup>2</sup> and complies with the 0.5 percent limit of new interference caused to Appendix B facilities and/or current post-transition authorizations of nearby stations of concern. Protection requirements to Class A television stations were also considered in this study if applicable. The proposed facility is fully spaced to all post-transition facilities or allotments.

### **ENVIRONMENTAL CONSIDERATIONS**

The proposed facilities were evaluated in terms of potential radiofrequency radiation exposure at ground level in accordance with OET Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields."

Power density contribution from the proposed operation was computed using the appropriate equations of the OET Bulletin 65. The maximum radiated power is 200 kilowatts. Using a "worst-case" relative field pattern of 0.5 for all values 10 degrees and greater below the horizon, the power density was computed at a level of 2 meters

<sup>2</sup> 

The implementation of OET Bulletin number 69 for this study followed the guidelines of the bulletin as specified therein. A standard cell size of 2-kilometers was employed. Comparisons of various results of this computer program to the Commission's implementation of the bulletin shows excellent correlation.

above ground to be 0.2529 mW/cm<sup>2</sup> or 11.4% of the recommended limit of 2.217  $mW/cm^2$  for a controlled area at the base of the tower and 58.4% of the recommended limit of 0.433 mW/cm<sup>2</sup> for an uncontrolled area.

Therefore, at ground level (and 2 meters above), at the base of the tower, the potential for radiofrequency radiation exposure will be well within the FCC guidelines.

The "worst-case" minimum distance from the antenna was computed to be 19.8 meters for a controlled environment. As the minimum distance is more than 33.6 meters above ground level, no exposure in excess of the guidelines to workers is predicted to occur from this proposal at ground level.

The permittee/licensee/applicant will coordinate with other users of the site and will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of the FCC guidelines.

Suitable warning signs and a fence or other devices have been placed at the base of the tower to prevent unauthorized access. If work is required on the tower, the power to the antenna will be terminated or reduced as required. The applicant will fully comply with the provisions contained within the OET bulletin.

The tower has been in service for a number of years and as no new tower construction will occur this proposal is fully exempt from further environmental processing or notification. Inquiries concerning the technical portion of this application should be directed to the office of the undersigned.

June 19, 2008

Timothy Z Sawyer Mullaney Engineering, Inc.



# TABULATED DATA FOR ELEVATION PATTERN

Type: SWR SWED16OI/46 PolarizationHorizontal

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
5.00	0.058	-24.73	-6.75	0.160	-15.92	-27.00	0.043	-27.33	-50.50	0.053	-25.51	-74.00	0.193	-14.29
4.75	0.026	-31.70	-7.00	0.190	-14.42	-27.50	0.031	-30.17	-51.00	0.059	-24.58	-74.50	0.180	-14.89
4.50	0.089	-21.01	-7.25	0.206	-13.72	-28.00	0.017	-35.39	-51.50	0.061	-24.29	-75.00	0.166	-15.60
4.25	0.156	-16.14	-7.50	0.209	-13.60	-28.50	0.004	-47.96	-52.00	0.057	-24.88	-75.50	0.152	-16.36
4.00	0.217	-13.27	-7.75	0.199	-14.02	-29.00	0.003	-50.46	-52.50	0.049	-26.20	-76.00	0.138	-17.20
3.75	0.265	-11.55	-8.00	0.179	-14.94	-29.50	0.004	-47.96	-53.00	0.039	-28.18	-76.50	0.124	-18.13
3.50	0.297	-10.54	-8.25	0.152	-16.33	-30.00	0.000	-40.00	-53.50	0.031	-30.17	-77.00	0.110	-19.17
3.25	0.312	-10.12	-8.50	0.127	-17.92	-30.50	0.007	-43.10	-54.00	0.033	-29.63	-77.50	0.098	-20.18
3.00	0.308	-10.23	-8.75	0.116	-18.71	-31.00	0.012	-38.42	-54.50	0.043	-27.33	-78.00	0.086	-21.31
2.75	0.287	-10.84	-9.00	0.126	-17.99	-31.50	0.014	-37.08	-55.00	0.056	-25.04	-78.50	0.075	-22.50
2.50	0.255	-11.87	-9.25	0.155	-16.19	-32.00	0.017	-35.39	-55.50	0.065	-23.74	-79.00	0.065	-23.74
2.25	0.227	-12.88	-9.50	0.191	-14.38	-32.50	0.031	-30.17	-56.00	0.071	-22.97	-79.50	0.056	-25.04
2.00	0.226	-12.92	-9.75	0.226	-12.94	-33.00	0.055	-25.19	-56.50	0.071	-22.97	-80.00	0.048	-26.38
1.75	0.274	-11.24	-10.00	0.255	-11.87	-33.50	0.085	-21.41	-57.00	0.065	-23.74	-80.50	0.041	-27.74
1.50	0.359	-8.90	-10.50	0.289	-10.78	-34.00	0.115	-18.79	-57.50	0.054	-25.35	-81.00	0.036	-28.87
1.25	0.467	-6.62	-11.00	0.284	-10.93	-34.50	0.140	-17.08	-58.00	0.039	-28.18	-81.50	0.031	-30.17
1.00	0.580	-4.73	-11.50	0.246	-12.18	-35.00	0.156	-16.14	-58.50	0.020	-33.98	-82.00	0.027	-31.37
0.75	0.693	-3.19	-12.00	0.186	-14.61	-35.50	0.159	-15.97	-59.00	0.005	-46.02	-82.50	0.024	-32.40
0.50	0.794	-2.00	-12.50	0.120	-18.42	-36.00	0.149	-16.54	-59.50	0.024	-32.40	-83.00	0.021	-33.56
0.25	0.880	-1.11	-13.00	0.063	-24.01	-36.50	0.128	-17.86	-60.00	0.044	-27.13	-83.50	0.019	-34.42
0.00	0.945	-0.49	-13.50	0.024	-32.40	-37.00	0.098	-20.18	-60.50	0.062	-24.15	-84.00	0.017	-35.39
-0.25	0.986	-0.13	-14 00	0.007	-43 10	-37 50	0.066	-23.61	-61.00	0.076	-22.38	-84 50	0.016	-35.92
-0.50	1 000	0.00	-14 50	0.000	-40.00	-38.00	0.043	-27 33	-61 50	0.086	-21.31	-85.00	0.015	-36 48
-0.75	0.986	-0.12	-15.00	0.000	-37 72	-38 50	0.045	-26.94	-62.00	0.000	-20.82	-85.50	0.013	-37 72
-1 00	0.946	-0.48	-15 50	0.010	-32.04	-39.00	0.058	-24 73	-62.50	0.001	-20.82	-86.00	0.012	-38 42
-1 25	0.881	-1 10	-16.00	0.020	-30 75	-39.50	0.068	-23.35	-63.00	0.086	-21.31	-86.50	0.011	-39 17
-1 50	0.001	-1 98	-16 50	0.020	-33 56	-40.00	0.000	-23 35	-63 50	0.000	-22.05	-87.00	0.009	-40 92
-1 75	0.693	-3.19	-17 00	0.021	-50.46	-40.50	0.000	-24 58	-64 00	0.070	-23 10	-87 50	0.008	-41 94
-2.00	0.579	-4 75	-17 50	0.000	-31 37	-41 00	0.000	-27 54	-64 50	0.064	-23.88	-88.00	0.007	-43 10
-2.00	0.462	-6 71	-18.00	0.027	-25 51	-41.50	0.042	-33 56	-65.00	0.066	-23.61	-88 50	0.007	-46.02
-2.20	0.402	-9.12	-18 50	0.000	-23.27	-42.00	0.021	-47.96	-65 50	0.000	-22.01	-89.00	0.000	-50.02
-2.50	0.000	-11 78	-19.00	0.000	-22 97	-42.00	0.004	-33 56	-66.00	0.077	-20 45	-89 50	0.000	-53 98
-3.00	0.200	-13.85	-19 50	0.071	-24 58	-43.00	0.021	-20 12	-66 50	0.000	-18 64	-90.00	0.002	-40.00
-3.25	0.200	-13.83	-20.00	0.000	-24.88	-43 50	0.000	-27 54	-67.00	0.140	-17.08	50.00	0.000	40.00
-3 50	0.204	-12 54	-20.00	0.007	-20.02	-44 00	0.042	-27 54	-67 50	0.140	-15 76			
-3 75	0.230	-11 21	-21.00	0.000	-17 02	-44 50	0.042	-28.64	-68.00	0.103	-14 75			
-4.00	0.273	-10.3/	-21.00	0.141	-11.02	-44.00	0.037	-20.04	-68 50	0.103	-13.0/			
-4.00	0.304	-10.04	-21.00	0.130	-13.00	-45.00	0.023	-33 56	-60.00	0.201	-12 21			
-4.23	0.313	-10.03	-22.00	0.224	-12.00	-45.50	0.021	-34.80	-09.00	0.210	-12.84			
-4.50	0.300	-10.23	-22.00	0.237	-12.01	-40.00	0.010	-33 56	-09.00	0.220	-12.04			
-4.75	0.202	10.00	-23.00	0.227	1/ 15	47.00	0.021	20.00	70.00	0.230	12.04			
-5.00	0.242	1/ /5	-23.50	0.190	16 10	47.00	0.023	-32.11	71.00	0.240	12.40			
-5.20	0.190	-14.40	-24.00	0.100	-10.40	-47.50	0.021	-33.00	-71.00	0.241	-12.30			
-5.50	0.129	-11.19	-24.00	0.100	-20.00	40.00	0.014	-31.00	72.00	0.239	12.43			
-0.70	0.000	25.14	-20.00	0.000	20.04	40.00	0.002	20.90	72 50	0.204	12.02			
-0.00	0.010	-33.92	-20.00	0.030	-20.01	-49.00	0.012	-30.42	-72.00	0.227	-12.00			
-0.23	0.000	10 50	-20.00	0.042	-21.04	-49.00	0.027	-31.3/	-13.00	0.217	10.27			
-0.50	0.110	96.01-	-20.50	0.047	-20.00	-50.00	0.041	-21.14	-13.50	0.200	-13.72			

Preliminary, subject to final design and review.



FIGURE 3 OET BULLETIN NUMBER 69 INTERFERENCE STUDY

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 06-20-2008 Time: 08:31:16

Record Selected for Analysis

WKBS-D 2 USERRECORD-01ALTOONAPA USChannel 46 ERP 200.kW HAAT 357. m RCAMSL 00881 mLatitude 040-34-12Longitude 0078-26-26Status APPZone 1Dir Antenna Make usrModel USRPAT01Last updateCutoff dateCommentsApplicant

Cell Size for Service Analysis 2.0 km/side Distance Increments for Longley-Rice Analysis 1.00 km

Facility meets maximum height/power limits

Azimuth	ERP	HAAT	41.0 dBu F(50,90)
(Deg)	(kW)	(m)	(km)
0.0	200.000	238.8	77.1
45.0	200.000	407.5	92.7
90.0	200.000	472.0	96.9
135.0	200.000	437.8	94.5
180.0	200.000	471.3	96.9
225.0	200.000	175.9	72.4
270.0	200.000	300.4	83.0
315.0	200.000	350.0	88.5

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

No spacing violations found to other full service stations

LANDMOBILE SPACING VIOLATIONS FOUND

NONE

	Propos	sed Station	
Channel 46	Call WKBS-D 2	City/State ALTOONA PA	ARN USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Applicati	on Ref.
No.						
45	WNEO	ALLIANCE OH	211.4	LIC	BDTV	-1185
45	WOLF-TV	HAZLETON PA	226.6	LIC	BDTV	-1313
46	WBFF	BALTIMORE MD	205.2	LIC	BDTV	-0737
46	WWHO	CHILLICOTHE OH	411.9	LIC	BDTV	-1191
46	WFMZ-TV	ALLENTOWN PA	253.3	LIC	BDTV	-1298
46	WHTJ	CHARLOTTESVILLE VA	287.6	LIC	BDTV	-1649
47	WPMT	YORK PA	167.2	LIC	BDTV	-1342

#### 

Analysis of Interference to Affected Station 1

Analysis	of current	record		
Channel	Call	City/State	Application	Ref. No.
45	WNEO	ALLIANCE OH	BDTV	-1185

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Applicatio	on Ref.
No.						
45	WDIV-TV	DETROIT MI	258.8	LIC	BDTV	-0781
45	WLLA	KALAMAZOO MI	419.7	LIC	BDTV	-0796
45	WROC-TV	ROCHESTER NY	369.9	LIC	BDTV	-1163
45	WOLF-TV	HAZLETON PA	423.7	LIC	BDTV	-1313
46	WUPW	TOLEDO OH	227.5	LIC	BDTV	-1228
46	WKBS-D 2	ALTOONA PA	211.4	APP	USERRECORI	D-01

Proposed station is beyond the site to nearest cell evaluation distance

Analysis of Interference to Affected Station 2

Analysis	of	current	record				
Channel		Call	(	City/State	Application	Ref.	No.
45	V	IOLF-TV	HAZLE	FON PA	BDTV	-132	13

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Applicati	on Ref.
No.						
44	WMCN-TV	ATLANTIC CITY NJ	183.5	LIC	BDTV	-1054
44	WNYW	NEW YORK NY	164.4	LIC	BDTV	-1153
44	WNYS-TV	SYRACUSE NY	190.6	LIC	BDTV	-1175
45	WEDH	HARTFORD CT	259.5	LIC	BDTV	-0269
45	WROC-TV	ROCHESTER NY	258.9	LIC	BDTV	-1163
45	WNEO	ALLIANCE OH	423.7	LIC	BDTV	-1185
46	WBFF	BALTIMORE MD	215.7	LIC	BDTV	-0737
46	WFMZ-TV	ALLENTOWN PA	77.7	LIC	BDTV	-1298
46	WKBS-D 2	ALTOONA PA	226.6	APP	USERRECOR	D-01

Proposed station is beyond the site to nearest cell evaluation distance

#### \*\*\*\*\*\*

Analysis of Interference to Affected Station 3

Analysis	of	current	record				
Channel		Call	C	ity/State	Application	Ref.	No.
46	V	<b>VBFF</b>	BALTIM	ORE MD	BDTV	-073	37

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Applicat	tion Ref.
No.						
45	WOLF-TV	HAZLETON PA	215.7	LIC	BDTV	-1313
46	WUVN	HARTFORD CT	423.1	LIC	BDTV	-0270
46	WFMZ-TV	ALLENTOWN PA	171.1	LIC	BDTV	-1298
46	WHTJ	CHARLOTTESVILLE VA	219.0	LIC	BDTV	-1649
46	WPXV	NORFOLK VA	281.2	LIC	BDTV	-1664
47	WMDT	SALISBURY MD	122.0	LIC	BDTV	-0745
47	WPMT	YORK PA	77.0	LIC	BDTV	-1342
47	WUPV	ASHLAND VA	184.8	LIC	BDTV	-1645
46	WKBS-D 2	ALTOONA PA	205.2	APP	USERREC	ORD-01
Tota	l scenari	os = 2				

Result key:		1		
Scenario	1	Affected statio	on	3
Before Analysis				

Results for: 46A MD BALTIMORE HAAT 373.0 m, ATV ERP 550.0 kW BDTV 0737 LIC

within Noise Limited Cont not affected by terrain I lost to NTSC IX lost to additional IX by lost to ATV IX only lost to all IX	I cour losses ATV	POPULATION 7533370 7449726 0 386621 386621 386621 386621	AREA (sq km) 25522.3 24700.5 0.0 1817.0 1817.0 1817.0	
Potential Interfering Stat:	ions Ind	cluded in ab	oove Scenario	1
<ul><li>46A PA ALLENTOWN</li><li>46A VA CHARLOTTESVILLE</li><li>46A VA NORFOLK</li><li>47A PA YORK</li></ul>	BDTV BDTV BDTV BDTV	1298 1649 1664 1342	LIC LIC LIC LIC	
After Analysis				
Results for: 46A MD BALTIMON HAAT 373.0 m, ATV ERP	RE 550.0 ku	BDTV	0737	LIC
within Noise Limited Cont not affected by terrain I lost to NTSC IX lost to additional IX by lost to ATV IX only lost to all IX	tour losses ATV	7533370 7449726 0 387064 387064 387064	AREA (sq km) 25522.3 24700.5 0.0 1825.0 1825.0 1825.0	
Potential Interfering Stat:	ions Ind	cluded in ab	oove Scenario	1
<pre>46A PA ALLENTOWN 46A VA CHARLOTTESVILLE 46A VA NORFOLK 47A PA YORK 46A PA ALTOONA *Percent Service lost with *Percent Service lost with</pre>	BDTV BDTV BDTV USERREC propose	1298 1649 1664 1342 CORD01 posal: al:	LIC LIC LIC APP 0.0 to BDTV 0.0 to BDTV	0737 0737
Result key: 2 Scenario 2 Affected Before Analysis	station	n 3		
Results for: 46A MD BALTIMON HAAT 373.0 m, ATV ERP within Noise Limited Cont not affected by terrain lost to NTSC IX lost to additional IX by lost to ATV IX only lost to all IX	RE 550.0 ku I cour losses ATV	BDTV POPULATION 7533370 7449726 0 386621 386621 386621 386621	0737 AREA (sq km) 25522.3 24700.5 0.0 1817.0 1817.0 1817.0	LIC
Potential Interfering Stat:	ions Ind	cluded in ab	oove Scenario	2
<ul><li>46A PA ALLENTOWN</li><li>46A VA CHARLOTTESVILLE</li><li>46A VA NORFOLK</li><li>47A PA YORK</li></ul>	BDTV BDTV BDTV BDTV	1298 1649 1664 1342	LIC LIC LIC LIC	

After Analysis

Results for: 46A MD BALTIMORE BDTV 0737 LIC HAAT 373.0 m, ATV ERP 550.0 kW POPULATION AREA (sq km) within Noise Limited Contour 7533370 25522.3 not affected by terrain losses 7449726 24700.5 lost to NTSC IX 0 0.0 lost to additional IX by ATV 387064 1825.0 lost to ATV IX only 387064 1825.0 387064 lost to all IX 1825.0 Potential Interfering Stations Included in above Scenario 2 46A PA ALLENTOWN BDTV 1298 LTC 46A VA CHARLOTTESVILLE BDTV 1649 LIC 46A VA NORFOLK 1664 BDTV LIC 47A PA YORK BDTV 1342 LIC 46A PA ALTOONA USERRECORD01 APP \*Percent Service lost without proposal: 0.0 to BDTV 0737 \*Percent Service lost with proposal: 0.0 to BDTV 0737 \*\*\*\*\*\* Analysis of Interference to Affected Station 4 Analysis of current record Call Application Ref. No. Channel City/State 46 WWHO CHILLICOTHE OH BDTV -1191 Stations Potentially Affecting This Station Chan Call City/State Dist(km) Status Application Ref. No. 46 WFIE EVANSVILLE IN 426.2 LIC BDTV -0572231.5 LIC WUPW -1228 46 TOLEDO OH BDTV 309.0 LIC WVVA BLUEFIELD WV BDTV -177746 226.2 LIC CANTON OH BDTV 47 WOAC -1190411.9 APP WKBS-D 2 ALTOONA PA 46 USERRECORD-01 Proposal causes no interference Analysis of Interference to Affected Station 5 Analysis of current record Channel Call City/State Application Ref. No. 46 WFMZ-TV BDTV -1298 ALLENTOWN PA Stations Potentially Affecting This Station Chan Call City/State Dist(km) Status Application Ref. No. 45 WOLF-TV HAZLETON PA 77.7 LIC BDTV -1313 46 WUVN HARTFORD CT 258.5 LIC BDTV -0270 46 WBFF BDTV -0737 BALTIMORE MD 171.1 LIC

 
 46
 WHTJ
 CHARLOTTESVILLE VA
 388.4
 LIC
 BDTV
 -1649

 46
 WPXV
 NORFOLK VA
 427.5
 LIC
 BDTV
 -1664

 47
 WLNY
 RIVERHEAD NY
 215.8
 LIC
 BDTV
 -1158

 47
 WPMT
 YORK PA
 115.0
 LIC
 BDTV
 -1342

 46
 WKBS-D 2
 ALTOONA PA
 253.3
 APP
 USERRECORD-01
Total scenarios = 2 Result key:3Scenario1Affected station5 Before Analysis Results for: 46A PA ALLENTOWN BDTV 1298 LIC HAAT 331.0 m, ATV ERP 400.0 kW POPULATION AREA (sq km) within Noise Limited Contour 5724930 19127.3 not affected by terrain losses 5535958 17633.8 lost to NTSC IX0lost to additional IX by ATV110441lost to ATV IX only110441 0.0 1125.1 lost to ATV IX only 1125.1 lost to all IX 110441 1125.1 Potential Interfering Stations Included in above Scenario 1 45A PA HAZLETON BDTV 1313 LIC BDTV BDTV BDTV 46A CT HARTFORD 0270 LIC 46A MD BALTIMORE 0737 LIC 47A PA YORK 1342 LIC After Analysis Results for: 46A PA ALLENTOWN BDTV 1298 LTC HAAT 331.0 m, ATV ERP 400.0 kW POPULATION AREA (sq km) within Noise Limited Contour 5724930 19127.3 not affected by terrain losses 5535958 17633.8 0 lost to NTSC IX0lost to additional IX by ATV116346 0.0 1161.2 lost to ATV IX only 116346 1161.2 lost to all IX 116346 1161.2 Potential Interfering Stations Included in above Scenario 1 LIC 45A PA HAZLETON BDTV 1313 46A CT HARTFORD 0270 LIC BDTV 46A MD BALTIMORE BDTV 0737 LIC 1342 BDTV LIC 47A PA YORK 46A PA ALTOONAUSERRECORD01APP\*Percent Service lost without proposal:0.0 to BDTV\*Percent Service lost with proposal:0.1 to BDTV 46A PA ALTOONA 1298 1298 Result key: 4 Scenario 2 Affected station 5 Before Analysis HAAT 331.0 m, ATV ERP 400.0 kW Results for: 46A PA ALLENTOWN POPULATION AREA (sq km)

within Noise Limited Con not affected by terrain lost to NTSC IX	ntour losses	5724930 5535958 0	1:	9127.3 7633.8 0.0	
lost to additional IX by	7 ATV	110441		1125.1	
lost to ATV IX only		110441		1125.1	
lost to all IX		110441		1125.1	
Potential Interfering Stat	ions Ind	cluded in a	bove a	Scenario	2
45A PA HAZLETON	BDTV	1313		LIC	
46A CT HARTFORD	BDTV	0270		LIC	
46A MD BALTIMORE	BDTV	0737		LIC	
47A PA YORK	BDTV	1342		LIC	
After Analysis					
Results for: 46A PA ALLENTC HAAT 331.0 m. ATV ERP	) WN 400.0 ki	BDTV	r	1298	LIC
	]	POPULATION	ARE	A (sa km)	
within Noise Limited Cor	ntour	5724930	1	9127.3	
not affected by terrain	losses	5535958	1	7633.8	
lost to NTSC IX		0		0.0	
lost to additional IX by	r ATV	116346		1161.2	
lost to ATV IX only		116346		1161.2	
lost to all IX		116346		1161.2	
Potential Interfering Stat	ions Ind	cluded in a	bove	Scenario	2
45A PA HAZLETON	BDTV	1313		LIC	
46A CT HARTFORD	BDTV	0270		LIC	
46A MD BALTIMORE	BDTV	0737		LIC	
47A PA YORK	BDTV	1342		LIC	
46A PA ALTOONA	USERRE	CORD01		APP	
*Percent Service lost with	nout prop	posal:	0.0	to BDTV	1298
*Percent Service lost with	n proposa	al:	0.1	to BDTV	1298

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Analysis of Interference to Affected Station 6

Analysis	of	current	record				
Channel		Call	City/State		Application	Ref.	No.
46	Μ	IHTJ	CHARLOTTESVILLE	VA	BDTV	-164	49

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Applicat	ion Ref.
No.						
46	WBFF	BALTIMORE MD	219.0	LIC	BDTV	-0737
46	WWAY	WILMINGTON NC	429.0	LIC	BDTV	-0986
46	WFMZ-TV	ALLENTOWN PA	388.4	LIC	BDTV	-1298
46	WPXV	NORFOLK VA	218.2	LIC	BDTV	-1664
46	WVVA	BLUEFIELD WV	250.9	LIC	BDTV	-1777
47	WUPV	ASHLAND VA	111.2	LIC	BDTV	-1645
46	WKBS-D 2	ALTOONA PA	287.6	APP	USERRECO	DRD-01

Total scenarios = 2

Result key: 5 Scenario 1 Affected Before Analysis	station	6		
Results for: 46A VA CHARLOT HAAT 332.0 m, ATV ERP	FESVILLE 340.0 kW	BDTV	1649	LIC
	PO	PULATION	AREA (sa km)	
within Noise Limited Con	tour	669946	21599.2	
not affected by terrain	losses	474562	17513.1	
lost to NTSC IX		0	0.0	
lost to additional IX by	ATV	35361	1176.6	
lost to ATV IX only		35361	1176.6	
lost to all IX		35361	1176.6	
Potential Interfering Stat.	ions Incl	uded in ab	oove Scenario	1
46A MD BALTIMORE	BDTV	0737	LIC	
46A VA NORFOLK	BDTV	1664	LIC	
46A WV BLUEFIELD	BDTV	1777	LIC	
47A VA ASHLAND	BDTV	1645	LIC	
After Analysis				
Results for: 46A VA CHARLOT	TESVILLE	BDTV	1649	LIC
HAAT 332.0 m, ATV ERP	340.0 kW			
	PO	PULATION	AREA (sq km)	
within Noise Limited Con	tour	669946	21599.2	
not affected by terrain	losses	474562	17513.1	
lost to NTSC IX		0	0.0	
lost to additional IX by	ATV	35361	1184.6	
lost to ATV IX only		35361	1184.6	
lost to all IX		35361	1184.6	
Potential Interfering Stat	ions Incl	uded in ab	oove Scenario	1
46A MD BALTIMORE	BDTV	0737	LIC	
46A VA NORFOLK	BDTV	1664	LIC	
46A WV BLUEFIELD	BDTV	1777	LIC	
47A VA ASHLAND	BDTV	1645	LIC	
46A PA ALTOONA	USERRECO	RD01	APP	
*Percent Service lost with	out propo	sal:	0.0 to BDTV	1649
*Percent Service lost with	proposal	:	0.0 to BDTV	1649
Pequit key: 6				
Scenario 2 Affected	station	6		
Before Analysis				
Results for: 46A VA CHARLOT HAAT 332.0 m, ATV ERP	FESVILLE 340.0 kW	BDTV	1649	LIC
	PO	PULATION	AREA (sq km)	
within Noise Limited Con	tour	669946	21599.2	
not affected by terrain	losses	474562	17513.1	
lost to NTSC IX		0	0.0	
lost to additional IX by	ATV	35361	1176.6	
lost to ATV IX only		35361	1176.6	
lost to all IX		35361	1176.6	

Potential Interfering Stations Included in above Scenario 2 46A MD BALTIMORE BDTV 0737 LIC 46A VA NORFOLK BDTV 1664 LIC 46A WV BLUEFIELD BDTV 1777 LIC 47A VA ASHLAND BDTV 1645 LIC After Analysis Results for: 46A VA CHARLOTTESVILLE BDTV 1649 LIC HAAT 332.0 m, ATV ERP 340.0 kW POPULATION AREA (sq km) 21599.2 669946 within Noise Limited Contour not affected by terrain losses 474562 17513.1 lost to NTSC IX 0 0.0 lost to additional IX by ATV 35361 1184.6 lost to ATV IX only 35361 1184.6 lost to all IX 35361 1184.6 Potential Interfering Stations Included in above Scenario 2 46A MD BALTIMORE BDTV 0737 LIC 46A VA NORFOLK BDTV 1664 LIC 46A WV BLUEFIELD BDTV 1777 LIC 47a va ashland BDTV 1645 LIC 46A PA ALTOONA USERRECORD01 APP \*Percent Service lost without proposal: 0.0 to BDTV 1649 \*Percent Service lost with proposal: 0.0 to BDTV 1649 

Analysis of Interference to Affected Station 7

Analysis	of	current	record				
Channel		Call		City/State	Application	Ref.	No.
47	V	<b>VPMT</b>	YORK	PA	BDTV	-134	42

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Applicat	ion Ref.
No.						
46	WBFF	BALTIMORE MD	77.0	LIC	BDTV	-0737
46	WFMZ-TV	ALLENTOWN PA	115.0	LIC	BDTV	-1298
47	WMDT	SALISBURY MD	185.3	LIC	BDTV	-0745
47	WLNY	RIVERHEAD NY	326.2	LIC	BDTV	-1158
47	WTVH	SYRACUSE NY	327.9	LIC	BDTV	-1176
47	WOAC	CANTON OH	417.5	LIC	BDTV	-1190
47	WUPV	ASHLAND VA	260.3	LIC	BDTV	-1645
48	WRC-TV	WASHINGTON DC	127.8	LIC	BDTV	-0284
46	WKBS-D 2	ALTOONA PA	167.2	APP	USERRECO	DRD-01
Prop	osal caus	es no interference				

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Analysis of Interference to Affected Station 8

Analysis of current record Channel Call City/State Application Ref. No. 46 WKBS-D 2 ALTOONA PA USERRECORD-01 Stations Potentially Affecting This Station Chan Call City/State Dist(km) Status Application Ref. No. 45WNEOALLIANCEOH45WOLF-TVHAZLETONPA 211.4 LIC BDTV -1185 
 211.4
 LIC
 BDTV

 226.6
 LIC
 BDTV

 205.2
 LIC
 BDTV

 411.9
 LIC
 BDTV

 253.3
 LIC
 BDTV

 287.6
 LIC
 BDTV
-1313 46 WBFF BALTIMORE MD -0737 46 WWHO CHILLICOTHE OH -1191 WFMZ-TV ALLENTOWN PA 46 -1298 46 WHTJ CHARLOTTESVILLE VA -1649 167.2 LIC BDTV 47 WPMT YORK PA -1342 Total scenarios = 1 Result key: 7 Scenario 1 Affected station 8 Before Analysis USERRECORD01 Results for: 46A PA ALTOONA APP HAAT 357.0 m, ATV ERP 200.0 kW POPULATION AREA (sq km) within Noise Limited Contour 886060 23763.6 not affected by terrain losses 715848 19041.3 lost to NTSC IX 0 0.0 252.3 lost to additional IX by ATV 3138 lost to ATV IX only 3138 252.3 lost to all IX 3138 252.3 Potential Interfering Stations Included in above Scenario 1 46A MD BALTIMORE BDTV 0737 LIC 46A VA CHARLOTTESVILLE 1649 BDTV LIC 47A PA YORK BDTV 1342 LIC

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