

ENGINEERING EXHIBIT

Incentive Auction Channel Reassignment

Application for Modification of Digital Television Station Construction Permit prepared for

Gray Television Licensee, LLC
WSAZ-TV Huntington, WV
Facility ID 36912
Ch. 22 1000 kW 386 m

Gray Television Licensee, LLC (“Gray”) is the licensee of digital television station WSAZ-TV, Channel 23, Facility ID 36912, Huntington, WV. Reassignment of WSAZ-TV from Channel 23 to Channel 22 was specified in the *Incentive Auction Closing and Channel Reassignment Public Notice (“CCRPN”*, DA 17-317, released April 13, 2017). *Gray* herein proposes modification of the WSAZ-TV post-auction Channel 22 Construction Permit (“CP” file# 0000025191). This application is intended to be filed during the second filing window.¹ The CP authorizes operation at 640 kW effective radiated power (“ERP”) at 386 meters antenna height above average terrain (“HAAT”). *Gray* proposes herein to increase the ERP to 1000 kW.

As with the current authorization, the proposed Channel 22 operation will employ a new broadband antenna system to be top-mounted on the WSAZ-TV tower in lieu of the existing Channel 23 (single channel) antenna. The existing tower structure corresponds to FCC Antenna Structure Registration number 1035121. No change to the overall structure height will result. The proposed antenna will be shared with the post-auction facility for WQCW(DT) (Fac ID 65130, Channel 15, Portsmouth, OH), under common ownership with WSAZ-TV.

The proposed antenna is a nondirectional elliptically polarized Dielectric model TUM-O4-15/60H-R-1-T (30 percent vertical polarization). The horizontally polarized ERP is 1000 kW and the vertically polarized ERP is 300 kW.

¹Public Notice “*Incentive Auction Task Force and Media Bureau Announce the Opening of the Second Filing Window for Eligible Full Power and Class A Television Station—October 3 Through November 2, 2017*” DA 17-911, released September 20, 2017.

Figure 1 supplies a map that demonstrates compliance with §73.625(a)(1) regarding coverage of the entire principal community. The proposed facility's predicted population exceeds 95 percent of the *CCRPN* baseline facility's population.

Interference study per FCC OET Bulletin 69² shows that the proposal complies with the 0.5 percent limit of new interference caused to pertinent nearby post-auction full service and Class A television stations and reassignments as required by §73.616. **FCC processing of this proposal is requested using a 1 km cell size.** The interference study output report is provided as Table 1.

The proposed 1000 kW ERP exceeds the maximum allowed for the proposed antenna HAAT of 386 meters permitted by §73.622(f)(8)(i). Section 73.622(f)(5) permits the maximum ERP to be exceeded in order to provide the same geographic coverage area as the largest station within the same market. As demonstrated in Figure 2, the total area within the proposed WSAZ-TV NLSC is 34,501 square kilometers, which does not exceed the 36,722 sq. km NLSC area of WVAH-TV (Ch. 19, Charleston WV, BLCDDT-20050621AAV) and WCHS-TV (Ch. 41, Charleston WV, BLCDDT-20050621AAQ).³ Thus, the 1000 kW ERP specified herein is in compliance with §73.622(f)(5) of the FCC's Rules.

The nearest FCC monitoring station is 474 km distant at Laurel, MD. This exceeds by a large margin 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). The site location is beyond the border areas requiring international coordination. There are no authorized AM stations within 3 kilometers of the site.

²FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 ("OET-69"). This analysis employed the FCC's current "TVStudy" software with the default application processing template settings, 1 km cell size, and 1 km terrain increment. Comparisons of various results of this computer program (run on a Mac processor) to the FCC's implementation of TVStudy show excellent correlation.

³WVAH-TV and WCHS-TV utilize a shared nondirectional antenna system with identical ERP, therefore the area within their NLSC is also identical.

Human Exposure to Radiofrequency Electromagnetic Field

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the FCC's OET Bulletin Number 65. Based on OET-65 equation (10), and considering 10 percent antenna relative field in downward elevations (pattern data shows less than 10 percent relative field at angles 15 to 90 degrees below the antenna), the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is $4.8 \mu\text{W}/\text{cm}^2$, which is 1.4 percent of the general population/uncontrolled maximum permitted exposure limit. This is well 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.

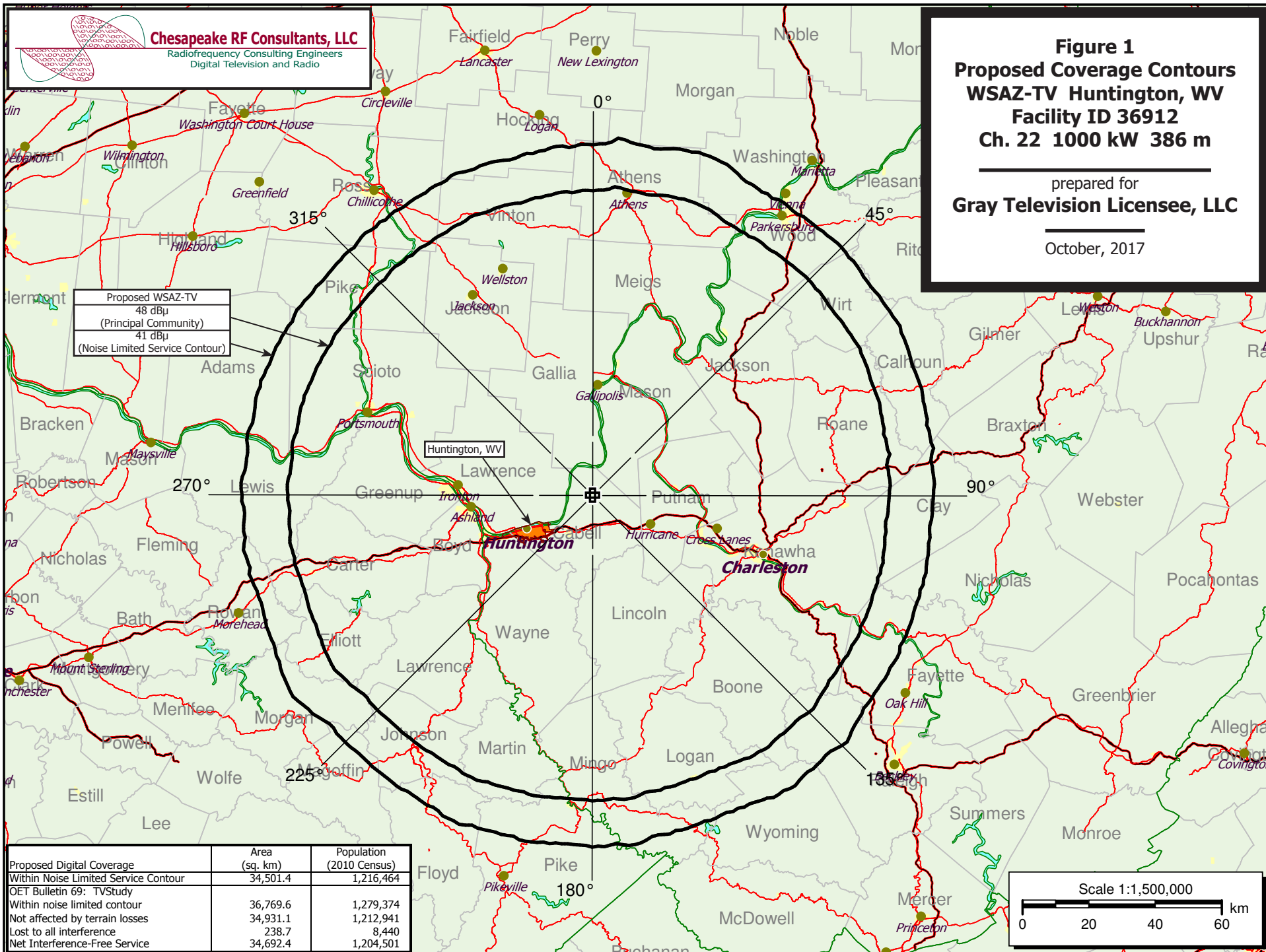
The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power 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. This exhibit is limited to the evaluation of exposure to RF electromagnetic field. No increase in structure height is proposed.

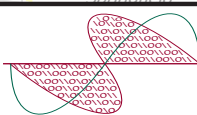
List of Attachments

Figure 1	Proposed Coverage Contours
Figure 2	Maximum ERP per §73.622(f)
Table 1	OET Bulletin 69 Interference Study
Form 2100	Saved Version of Engineering Sections from FCC Form at Time of Upload

Chesapeake RF Consultants, LLC

Joseph M. Davis, P.E.	October 18, 2017	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600





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

Figure 2
Maximum ERP per §73.622(f)
WSAZ-TV Huntington, WV
Facility ID 36912
Ch. 22 1000 kW 386 m

prepared for
Gray Television Licensee, LLC

October, 2017

Proposed WSAZ-TV
41 dBμ Contour (NLSC)
Area: 34,501 sq. km

WVAH-TV Ch. 19 Charleston, WV
BLCDT-20050621AAV
Identical to
WCHS-TV Ch. 41 Charleston, WV
BLCDT-20050621AAQ
41 dBμ Contour (NLSC)
Area: 36,722 sq. km

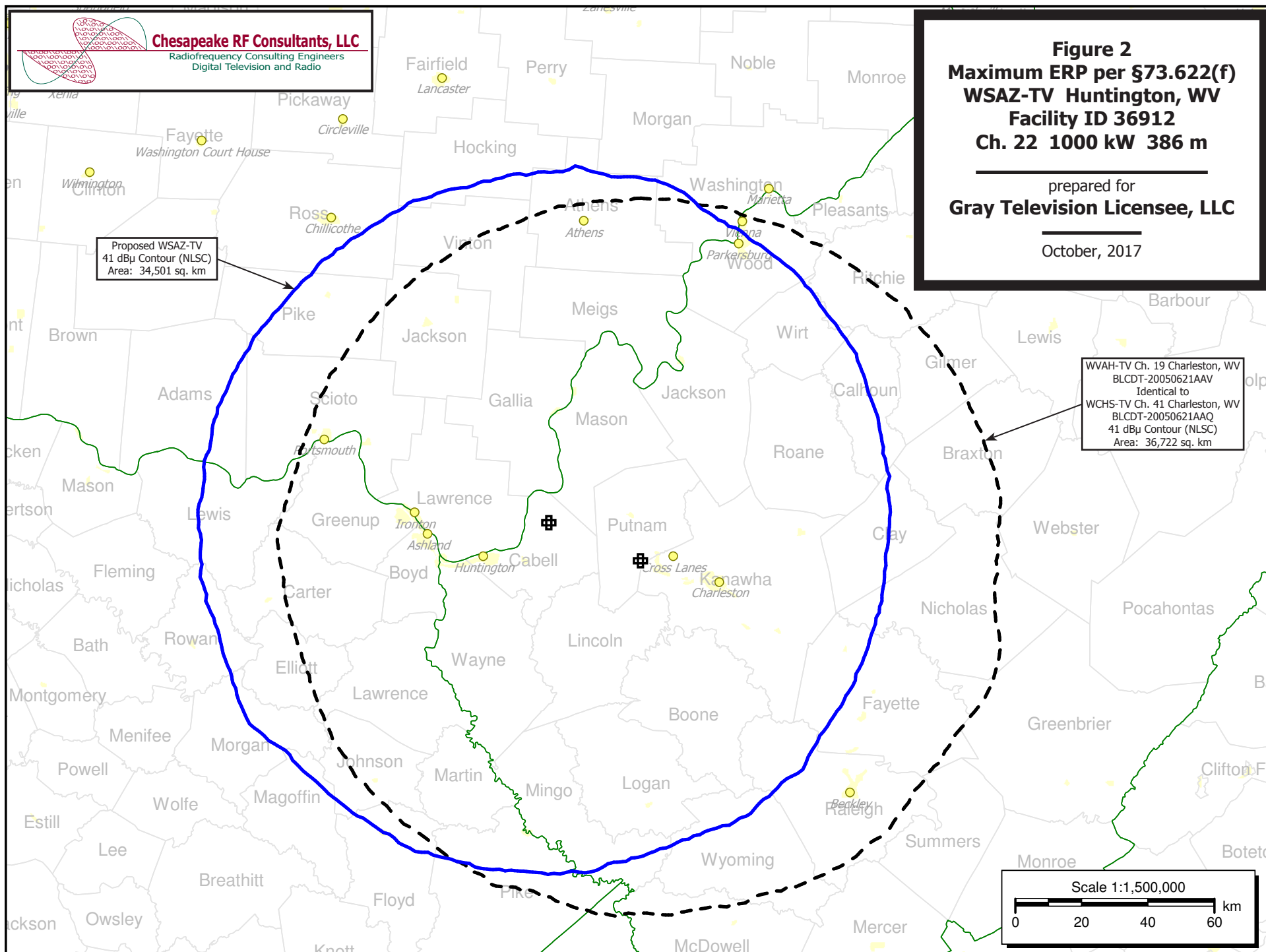
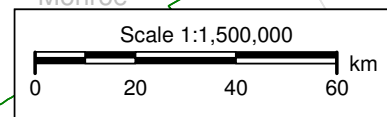
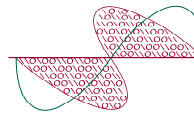


Table 1 WSAZ-TV OET Bulletin 69 Interference Study
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Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

tvstudy v2.2.3 (6K70F1)
Database: localhost, Study: WSAZ-TV 1000KW 1km, Model: Longley-Rice
Start: 2017.10.18 16:46:33

Study created: 2017.10.18 16:44:38

Study build station data: LMS TV 2017-10-07 LMSTV

Proposal: WSAZ-TV D22 DT APP HUNTINGTON, WV
File number: WSAZ-TV 1000KW
Facility ID: 36912
Station data: User record
Record ID: 569
Country: U.S.

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WKYT-TV	D21	DT	CP	LEXINGTON, KY	BLANK0000024945	197.6 km
Yes	WBNS-TV	D21	DT	LIC	COLUMBUS, OH	BLCDT20021025ABK	176.7
No	WWCW	D21	DT	CP	LYNCHBURG, VA	BLANK0000027725	262.5
No	WTVW	D22	DT	APP	EVANSVILLE, IN	BLANK0000028341	452.0
No	WTVW	D22	DT	BL	EVANSVILLE, IN	DTVBL3661	452.0
Yes	WXIN	D22	DT	CP	INDIANAPOLIS, IN	BLANK0000024883	375.7
Yes	WCVN-TV	D22	DT	CP	COVINGTON, KY	BLANK0000025281	206.5
No	WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000025149	440.2
Yes	WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000026965	289.1
No	WBGU-TV	D22	DT	CP	BOWLING GREEN, OH	BLANK0000027978	325.5
No	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000027766	371.1
Yes	WWKH-CD	D22	DC	CP	UNIONTOWN, PA	BLANK0000027838	266.6
Yes	WCTE	D22	DT	LIC	COOKEVILLE, TN	BLEDT20110413ACS	379.0
Yes	WKPT-CD	D22	DC	LIC	KINGSPORT, TN	BLDTA20120420ACJ	222.8
No	WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000027467	419.3
Yes	WKPI-TV	D23	DT	CP	PIKEVILLE, KY	BLANK0000025330	138.8
Yes	WWHO	D23	DT	CP	CHILLICOTHE, OH	BLANK0000027709	142.5
No	WAPW-CD	D23	DC	CP	ABINGDON, ETC., VA	BLANK0000026135	188.4

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D22
Latitude: 38 30 36.30 N (NAD83)
Longitude: 82 13 9.50 W
Height AMSL: 612.1 m
HAAT: 385.7 m
Peak ERP: 1000 kW
Antenna: Omnidirectional
Elev Pattn: Generic
Elec Tilt: 0.75

39.6 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	1000 kW	391.5 m	108.8 km
45.0	1000	393.6	109.0
90.0	1000	356.0	105.3
135.0	1000	399.3	109.5
180.0	1000	394.5	109.1
225.0	1000	387.1	108.3
270.0	1000	390.9	108.7
315.0	1000	372.7	106.9

ERP exceeds maximum

ERP: 1000 kW ERP maximum: 931 kW

**Proposal service area extends beyond baseline plus 1.0%
Proposal service area population is more than 95.0% of baseline

Distance to Canadian border: 352.3 km

Distance to Mexican border: 1957.7 km

Table 1 WSAZ-TV OET Bulletin 69 Interference Study
(page 2 of 7)



Conditions at FCC monitoring station: Laurel MD
Bearing: 79.5 degrees Distance: 472.9 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 282.6 degrees Distance: 1980.8 km

Study cell size: 1.00 km
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

Interference to BLCDT20021025ABK LIC, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WBNS-TV	D21	DT	LIC	COLUMBUS, OH	BLCDT20021025ABK	
Undesireds:	WSAZ-TV	D22	DT	BL	HUNTINGTON, WV	DTVBL36912	176.7 km
	WSAZ-TV	D22	DT	APP	HUNTINGTON, WV	WSAZ-TV 1000KW	176.7
	WLWT	D20	DT	CP	CINCINNATI, OH	BLANK0000024626	158.9
	WOHZ-CD	D20	DC	CP	MANSFIELD, OH	BLANK0000026543	94.7
	WFYI	D21	DT	LIC	INDIANAPOLIS, IN	BLEDT20100803ADB	270.5
	WKYT-TV	D21	DT	CP	LEXINGTON, KY	BLANK0000024945	245.3
	WZPX-TV	D21	DT	CP	BATTLE CREEK, MI	BLANK0000026967	345.7
	WWJ-TV	D21	DT	APP	DETROIT, MI	BLANK0000025826	275.6
	WSEE-TV	D21	DT	CP	ERIE, PA	BLANK0000028628	344.0
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000025702	263.1
	WBGU-TV	D22	DT	CP	BOWLING GREEN, OH	BLANK0000027978	149.3
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
29762.5 2,836,253		28797.9 2,775,662		27422.5 2,700,086		27418.6 2,700,052	0.01 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
WSAZ-TV D22 DT BL		43.7 839		12.9 451			
WSAZ-TV D22 DT APP		50.6 873				16.9 485	
WLWT D20 DT CP		18.8 1,109		5.9 582		5.9 582	
WOHZ-CD D20 DC CP		102.4 12,392		53.7 6,802		53.7 6,802	
WFYI D21 DT LIC		490.6 33,962		254.7 18,134		254.7 18,134	
WKYT-TV D21 DT CP		427.0 20,315		215.5 6,369		214.5 6,369	
WZPX-TV D21 DT CP		11.0 458		0.0 0		0.0 0	
WWJ-TV D21 DT APP		257.1 11,183		42.7 1,380		42.7 1,380	
WSEE-TV D21 DT CP		5.0 100		1.0 0		1.0 0	
WPNT D21 DT CP		481.5 23,618		363.2 17,302		362.2 17,302	
WBGU-TV D22 DT CP		36.8 318		10.0 59		10.0 59	

Interference to BLCDT20021025ABK LIC, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WBNS-TV	D21	DT	LIC	COLUMBUS, OH	BLCDT20021025ABK	
Undesireds:	WSAZ-TV	D22	DT	BL	HUNTINGTON, WV	DTVBL36912	176.7 km
	WSAZ-TV	D22	DT	APP	HUNTINGTON, WV	WSAZ-TV 1000KW	176.7
	WLWT	D20	DT	CP	CINCINNATI, OH	BLANK0000024626	158.9
	WOHZ-CD	D20	DC	CP	MANSFIELD, OH	BLANK0000026543	94.7
	WFYI	D21	DT	LIC	INDIANAPOLIS, IN	BLEDT20100803ADB	270.5
	WKYT-TV	D21	DT	CP	LEXINGTON, KY	BLANK0000024945	245.3
	WZPX-TV	D21	DT	CP	BATTLE CREEK, MI	BLANK0000026967	345.7
	WWJ-TV	D21	DT	BL	DETROIT, MI	DTVBL72123	275.6
	WSEE-TV	D21	DT	CP	ERIE, PA	BLANK0000028628	344.0
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000025702	263.1
	WBGU-TV	D22	DT	CP	BOWLING GREEN, OH	BLANK0000027978	149.3
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
29762.5 2,836,253		28797.9 2,775,662		27426.5 2,700,588		27422.5 2,700,554	0.01 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	

Table 1 WSAZ-TV OET Bulletin 69 Interference Study
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WSAZ-TV D22 DT BL	43.7	839	12.9	451		
WSAZ-TV D22 DT APP	50.6	873			16.9	485
WLWT D20 DT CP	18.8	1,109	5.9	582	5.9	582
WOHZ-CD D20 DC CP	102.4	12,392	55.7	6,880	55.7	6,880
WFYI D21 DT LIC	490.6	33,962	261.7	18,334	261.7	18,334
WKYT-TV D21 DT CP	427.0	20,315	215.5	6,369	214.5	6,369
WZPX-TV D21 DT CP	11.0	458	0.0	0	0.0	0
WWJ-TV D21 DT BL	241.2	10,330	38.7	878	38.7	878
WSEE-TV D21 DT CP	5.0	100	1.0	0	1.0	0
WPNT D21 DT CP	481.5	23,618	366.2	17,365	365.2	17,365
WBGU-TV D22 DT CP	36.8	318	10.9	69	10.9	69

Interference to BLANK0000024883 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WXIN	D22	DT	CP	INDIANAPOLIS, IN	BLANK0000024883	
Undesireds:	WSAZ-TV	D22	DT	BL	HUNTINGTON, WV	DTVBL36912	375.7 km
	WSAZ-TV	D22	DT	APP	HUNTINGTON, WV	WSAZ-TV 1000KW	375.7
	WFYI	D21	DT	LIC	INDIANAPOLIS, IN	BLEDT20100803ADB	1.1
	WLS-TV	D22	DT	CP	CHICAGO, IL	BLANK0000025941	251.9
	WBUI	D22	DT	LIC	DECATUR, IL	BLCDT20091119ACF	224.7
	WTVW	D22	DT	APP	EVANSVILLE, IN	BLANK0000028341	230.2
	WCVN-TV	D22	DT	CP	COVINGTON, KY	BLANK0000025281	174.0
	WBGU-TV	D22	DT	CP	BOWLING GREEN, OH	BLANK0000027978	238.4
	WDTI	D23	DT	CP	INDIANAPOLIS, IN	BLANK0000024986	0.7

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	24752.6 2,655,983	24548.2	2,641,454	23972.6	2,618,778	23972.6 2,618,778	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WSAZ-TV D22 DT BL	6.1 671	0.0 0	
WSAZ-TV D22 DT APP	13.1 2,101		0.0 0
WFYI D21 DT LIC	1.0 0	1.0 0	1.0 0
WLS-TV D22 DT CP	101.8 4,413	54.8 1,343	54.8 1,343
WBUI D22 DT LIC	251.1 5,333	162.4 1,825	162.4 1,825
WTVW D22 DT APP	189.7 11,633	123.1 10,746	123.1 10,746
WCVN-TV D22 DT CP	142.6 5,249	105.4 2,151	105.4 2,151
WBGU-TV D22 DT CP	36.2 3,004	5.0 35	5.0 35
WDTI D23 DT CP	1.0 65	1.0 65	1.0 65

Interference to BLANK0000024883 CP, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WXIN	D22	DT	CP	INDIANAPOLIS, IN	BLANK0000024883	
Undesireds:	WSAZ-TV	D22	DT	BL	HUNTINGTON, WV	DTVBL36912	375.7 km
	WSAZ-TV	D22	DT	APP	HUNTINGTON, WV	WSAZ-TV 1000KW	375.7
	WFYI	D21	DT	LIC	INDIANAPOLIS, IN	BLEDT20100803ADB	1.1
	WLS-TV	D22	DT	CP	CHICAGO, IL	BLANK0000025941	251.9
	WBUI	D22	DT	LIC	DECATUR, IL	BLCDT20091119ACF	224.7
	WTVW	D22	DT	BL	EVANSVILLE, IN	DTVBL3661	230.2
	WCVN-TV	D22	DT	CP	COVINGTON, KY	BLANK0000025281	174.0
	WBGU-TV	D22	DT	CP	BOWLING GREEN, OH	BLANK0000027978	238.4
	WDTI	D23	DT	CP	INDIANAPOLIS, IN	BLANK0000024986	0.7

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	24752.6 2,655,983	24548.2	2,641,454	23924.0	2,613,718	23924.0 2,613,718	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WSAZ-TV D22 DT BL	6.1 671	0.0 0	
WSAZ-TV D22 DT APP	13.1 2,101		0.0 0
WFYI D21 DT LIC	1.0 0	1.0 0	1.0 0
WLS-TV D22 DT CP	101.8 4,413	53.8 1,211	53.8 1,211
WBUI D22 DT LIC	251.1 5,333	151.4 1,744	151.4 1,744
WTVW D22 DT BL	256.3 17,174	171.8 15,806	171.8 15,806
WCVN-TV D22 DT CP	142.6 5,249	104.4 2,151	104.4 2,151
WBGU-TV D22 DT CP	36.2 3,004	5.0 35	5.0 35
WDTI D23 DT CP	1.0 65	1.0 65	1.0 65

Table 1 WSAZ-TV OET Bulletin 69 Interference Study
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Interference to BLANK0000025281 CP, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WCVN-TV	D22	DT	CP	COVINGTON, KY	BLANK0000025281	
Undesireds:	WSAZ-TV	D22	DT	BL	HUNTINGTON, WV	DTVBL36912	206.5 km
	WSAZ-TV	D22	DT	APP	HUNTINGTON, WV	WSAZ-TV 1000KW	206.5
	WKYT-TV	D21	DT	CP	LEXINGTON, KY	BLANK0000024945	110.5
	WTVW	D22	DT	APP	EVANSVILLE, IN	BLANK0000028341	272.3
	WXIN	D22	DT	CP	INDIANAPOLIS, IN	BLANK0000024883	174.0
	WBGU-TV	D22	DT	CP	BOWLING GREEN, OH	BLANK0000027978	239.6
	WCTE	D22	DT	LIC	COOKEVILLE, TN	BLEDT20110413ACS	326.0
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
10965.3 2,106,055		10799.6 2,100,868		10208.6 2,063,914		10052.3 2,059,502	1.53 0.21
Undesired			Total IX		Unique IX, before		Unique IX, after
WSAZ-TV D22 DT BL			336.6 25,184		172.2 11,513		
WSAZ-TV D22 DT APP			548.5 33,619				328.4 15,925
WKYT-TV D21 DT CP			18.0 177		1.0 0		1.0 0
WTVW D22 DT APP			36.0 539		6.0 67		5.0 67
WXIN D22 DT CP			390.9 25,141		223.6 10,046		171.0 6,023
WBGU-TV D22 DT CP			50.8 6,065		5.0 70		5.0 70
WCTE D22 DT LIC			4.0 56		0.0 0		0.0 0

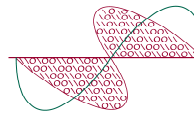
Interference to BLANK0000025281 CP, scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WCVN-TV	D22	DT	CP	COVINGTON, KY	BLANK0000025281	
Undesireds:	WSAZ-TV	D22	DT	BL	HUNTINGTON, WV	DTVBL36912	206.5 km
	WSAZ-TV	D22	DT	APP	HUNTINGTON, WV	WSAZ-TV 1000KW	206.5
	WKYT-TV	D21	DT	CP	LEXINGTON, KY	BLANK0000024945	110.5
	WTVW	D22	DT	BL	EVANSVILLE, IN	DTVBL3661	272.3
	WXIN	D22	DT	CP	INDIANAPOLIS, IN	BLANK0000024883	174.0
	WBGU-TV	D22	DT	CP	BOWLING GREEN, OH	BLANK0000027978	239.6
	WCTE	D22	DT	LIC	COOKEVILLE, TN	BLEDT20110413ACS	326.0
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
10965.3 2,106,055		10799.6 2,100,868		10206.6 2,063,885		10050.3 2,059,473	1.53 0.21
Undesired			Total IX		Unique IX, before		Unique IX, after
WSAZ-TV D22 DT BL			336.6 25,184		170.2 11,513		
WSAZ-TV D22 DT APP			548.5 33,619				326.4 15,925
WKYT-TV D21 DT CP			18.0 177		1.0 0		1.0 0
WTVW D22 DT BL			44.0 568		8.0 96		7.0 96
WXIN D22 DT CP			390.9 25,141		222.6 10,046		170.0 6,023
WBGU-TV D22 DT CP			50.8 6,065		5.0 70		5.0 70
WCTE D22 DT LIC			4.0 56		0.0 0		0.0 0

Interference to BLANK0000026965 CP, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance				
Desired:	WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000026965					
Undesireds:	WSAZ-TV	D22	DT	BL	HUNTINGTON, WV	DTVBL36912	289.1 km				
	WSAZ-TV	D22	DT	APP	HUNTINGTON, WV	WSAZ-TV 1000KW	289.1				
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000025702	147.1				
	WDWO-CD	D22	DC	CP	DETROIT, MI	BLANK0000028102	213.1				
	WBGU-TV	D22	DT	CP	BOWLING GREEN, OH	BLANK0000027978	194.8				
	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000027766	268.7				
	WWKH-CD	D22	DC	CP	UNIONTOWN, PA	BLANK0000027838	211.2				
	WPXI	D23	DT	CP	PITTSBURGH, PA	BLANK0000025328	148.8				
Service area		Terrain-limited			IX-free, before		IX-free, after	Percent New IX			
25717.7	4,149,213	25157.8	4,117,157		24592.9	4,087,864		24546.0	4,087,042	0.19	0.02
239.0	0	239.0	0		236.0	0		236.0	0	0.00	0.00
(in Canada)											
Undesired				Total IX		Unique IX, before		Unique IX, after			
WSAZ-TV	D22	DT	BL	129.7	4,745	71.9	2,277				

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

WSAZ-TV D22 DT APP	187.5	6,297			118.8	3,099
WPNT D21 DT CP	38.8	3,685	10.9	808	10.9	808
WDWO-CD D22 DC CP	15.1	557	0.0	0	0.0	0
WDWO-CD D22 DC CP	1.0	0	0.0	0	0.0	0 (in Canada)
WBGU-TV D22 DT CP	425.4	21,519	332.6	17,265	328.6	16,905
WBGU-TV D22 DT CP	3.0	0	2.0	0	2.0	0 (in Canada)
WTOO-CD D22 DC CP	12.0	474	2.0	161	2.0	161
WWKH-CD D22 DC CP	35.8	2,216	7.0	284	7.0	284
WPXI D23 DT CP	50.7	4,675	24.9	1,909	23.9	1,909

Interference to BLANK0000027838 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WWKH-CD	D22	DC	CP	UNIONTOWN, PA	BLANK0000027838	
Undesireds:	WSAZ-TV	D22	DT	BL	HUNTINGTON, WV	DTVBL36912	266.6 km
	WSAZ-TV	D22	DT	APP	HUNTINGTON, WV	WSAZ-TV 1000KW	266.6
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000025702	77.1
	WMPB	D22	DT	CP	BALTIMORE, MD	BLANK0000025181	250.4
	WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000026965	211.2
	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000027766	104.9
	WPXI	D23	DT	CP	PITTSBURGH, PA	BLANK0000025328	73.8

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	3716.1	415,708	3223.0	384,293	3083.6	369,946	0.00 0.00
Undesired			Total IX	Unique IX, before		Unique IX, after	
WSAZ-TV D22 DT BL			8.0 369	0.0 0			
WSAZ-TV D22 DT APP			12.1 561			0.0 0	
WPNT D21 DT CP			67.1 7,367	10.0 1,870		10.0 1,870	
WVPX-TV D22 DT CP			58.1 6,844	10.0 2,838		10.0 2,838	
WTOO-CD D22 DC CP			42.2 843	30.1 601		29.1 429	
WPXI D23 DT CP			80.2 8,321	18.0 2,804		18.0 2,804	

Interference to BLEDT20110413ACS LIC, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WCTE	D22	DT	LIC	COOKEVILLE, TN	BLEDT20110413ACS	
Undesireds:	WSAZ-TV	D22	DT	BL	HUNTINGTON, WV	DTVBL36912	379.0 km
	WSAZ-TV	D22	DT	APP	HUNTINGTON, WV	WSAZ-TV 1000KW	379.0
	WUXP-TV	D21	DT	LIC	NASHVILLE, TN	BLCDT20060414AAU	130.5
	WFIQ	D22	DT	LIC	FLORENCE, AL	BLEDT20060718ACG	283.5
	WHSG-TV	D22	DT	CP	MONROE, GA	BLANK0000028032	284.5
	WTVW	D22	DT	APP	EVANSVILLE, IN	BLANK0000028341	272.6
	WKPT-CD	D22	DC	LIC	KINGSPORT, TN	BLDTA20120420ACJ	249.9
	WFLI-TV	D23	DT	CP	CLEVELAND, TN	BLANK0000027931	107.3

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	26432.8	614,418	24231.5	542,554	23290.1	511,346	23284.1 511,050 0.03 0.06
Undesired			Total IX	Unique IX, before		Unique IX, after	
WSAZ-TV D22 DT BL			13.0 582	10.0 336			
WSAZ-TV D22 DT APP			21.0 894			16.0 632	
WUXP-TV D21 DT LIC			444.9 23,692	357.9 19,774		357.9 19,774	
WFIQ D22 DT LIC			170.4 4,697	77.6 1,095		77.6 1,095	
WHSG-TV D22 DT CP			198.4 3,143	118.8 1,911		118.8 1,911	
WTVW D22 DT APP			132.5 3,691	89.1 881		87.1 865	
WKPT-CD D22 DC LIC			5.0 40	2.0 0		2.0 0	
WFLI-TV D23 DT CP			179.0 2,682	107.4 1,635		107.4 1,635	

Interference to BLEDT20110413ACS LIC, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WCTE	D22	DT	LIC	COOKEVILLE, TN	BLEDT20110413ACS	
Undesireds:	WSAZ-TV	D22	DT	BL	HUNTINGTON, WV	DTVBL36912	379.0 km
	WSAZ-TV	D22	DT	APP	HUNTINGTON, WV	WSAZ-TV 1000KW	379.0
	WUXP-TV	D21	DT	LIC	NASHVILLE, TN	BLCDT20060414AAU	130.5
	WFIQ	D22	DT	LIC	FLORENCE, AL	BLEDT20060718ACG	283.5

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WHSB-TV	D22	DT	CP	MONROE, GA	BLANK0000028032	284.5
WTVW	D22	DT	BL	EVANSVILLE, IN	DTVBL3661	272.6
WKPT-CD	D22	DC	LIC	KINGSPORT, TN	BLDTA20120420ACJ	249.9
WFLI-TV	D23	DT	CP	CLEVELAND, TN	BLANK0000027931	107.3

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
26432.8 614,418	24231.5 542,554	23236.0 510,074	23231.0 509,908	0.02 0.03

Undesired	Total IX	Unique IX, before	Unique IX, after
WSAZ-TV D22 DT BL	13.0 582	10.0 336	
WSAZ-TV D22 DT APP	21.0 894		15.0 502
WUXP-TV D21 DT LIC	444.9 23,692	351.9 19,429	351.9 19,429
WFIQ D22 DT LIC	170.4 4,697	77.6 1,095	77.6 1,095
WHSB-TV D22 DT CP	198.4 3,143	118.8 1,911	118.8 1,911
WTVW D22 DT BL	196.7 5,320	143.2 2,153	140.2 2,007
WKPT-CD D22 DC LIC	5.0 40	2.0 0	2.0 0
WFLI-TV D23 DT CP	179.0 2,682	107.4 1,635	107.4 1,635

Interference to BLDTA20120420ACJ LIC, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WKPT-CD	D22	DC	LIC	KINGSPORT, TN	BLDTA20120420ACJ	
Undesireds:	WSAZ-TV	D22	DT	BL	HUNTINGTON, WV	DTVBL36912	222.8 km
	WSAZ-TV	D22	DT	APP	HUNTINGTON, WV	WSAZ-TV 1000KW	222.8
	WCTE	D22	DT	LIC	COOKEVILLE, TN	BLEDT20110413ACS	249.9
	WAPW-CD	D23	DC	CP	ABINGDON, ETC., VA	BLANK0000026135	101.9

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
8136.2 559,047	6504.7 494,522	6457.4 490,483	6439.3 490,014	0.28 0.10

Undesired	Total IX	Unique IX, before	Unique IX, after
WSAZ-TV D22 DT BL	31.2 2,494	31.2 2,494	
WSAZ-TV D22 DT APP	49.4 2,963		49.4 2,963
WCTE D22 DT LIC	5.0 164	4.0 60	4.0 60
WAPW-CD D23 DC CP	12.0 1,485	11.0 1,381	11.0 1,381

Interference to BLANK0000025330 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WKPI-TV	D23	DT	CP	PIKEVILLE, KY	BLANK0000025330	
Undesireds:	WSAZ-TV	D22	DT	BL	HUNTINGTON, WV	DTVBL36912	138.8 km
	WSAZ-TV	D22	DT	APP	HUNTINGTON, WV	WSAZ-TV 1000KW	138.8
	WKPT-CD	D22	DC	LIC	KINGSPORT, TN	BLDTA20120420ACJ	84.4
	WBTW	D23	DT	LIC	CHARLOTTE, NC	BLCDT19991025AEB	244.8
	WWHO	D23	DT	CP	CHILLICOTHE, OH	BLANK0000027709	261.1
	WFLI-TV	D23	DT	CP	CLEVELAND, TN	BLANK0000027931	337.8
	WAPW-CD	D23	DC	CP	ABINGDON, ETC., VA	BLANK0000026135	96.9
	WETP-TV	D24	DT	CP	SNEEDVILLE, TN	BLANK0000029748	116.2
	WVAH-TV	D24	DT	CP	CHARLESTON, WV	BLANK0000027764	136.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
19222.1 469,864	16927.3 408,563	16576.6 402,796	16563.5 402,599	0.08 0.05

Undesired	Total IX	Unique IX, before	Unique IX, after
WSAZ-TV D22 DT BL	76.8 818	43.4 354	
WSAZ-TV D22 DT APP	97.0 1,021		56.6 551
WKPT-CD D22 DC LIC	34.1 176	11.0 171	11.0 171
WBTW D23 DT LIC	31.1 906	21.1 654	21.1 654
WWHO D23 DT CP	88.9 1,570	75.8 1,456	74.8 1,456
WFLI-TV D23 DT CP	4.0 103	1.0 0	1.0 0
WAPW-CD D23 DC CP	42.0 324	20.0 146	20.0 146
WETP-TV D24 DT CP	48.1 637	25.0 498	25.0 498
WVAH-TV D24 DT CP	115.2 2,196	80.9 1,624	74.8 1,618

Interference to BLANK0000027709 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WWHO	D23	DT	CP	CHILLICOTHE, OH	BLANK0000027709	

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Undesireds:	WSAZ-TV	D22	DT	BL	HUNTINGTON, WV	DTVBL36912	142.5 km
	WSAZ-TV	D22	DT	APP	HUNTINGTON, WV	WSAZ-TV 1000KW	142.5
	WDTI	D23	DT	CP	INDIANAPOLIS, IN	BLANK0000024986	266.5
	WKPI-TV	D23	DT	CP	PIKEVILLE, KY	BLANK0000025330	261.1
	WNWO-TV	D23	DT	CP	TOLEDO, OH	BLANK0000024772	232.0
	WPXI	D23	DT	CP	PITTSBURGH, PA	BLANK0000025328	281.8
	WDEM-CD	D24	DC	CP	COLUMBUS, OH	BLANK0000028258	43.1
	WVAH-TV	D24	DT	CP	CHARLESTON, WV	BLANK0000027764	167.7
<hr/>							
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	28383.1	2,919,570	27626.1	2,845,341	27097.9	2,805,907	27052.1 2,804,993 0.17 0.03

Undesired	Total IX		Unique IX, before		Unique IX, after	
WSAZ-TV D22 DT BL	156.3	3,239	80.6	1,429		
WSAZ-TV D22 DT APP	202.1	4,042			126.4	2,343
WDTI D23 DT CP	15.0	6,032	11.0	1,473	11.0	1,473
WKPI-TV D23 DT CP	105.5	4,492	56.8	2,986	57.8	2,990
WNWO-TV D23 DT CP	34.1	9,717	15.1	4,860	15.1	4,860
WPXI D23 DT CP	279.0	18,988	228.2	17,663	228.2	17,663
WDEM-CD D24 DC CP	11.0	3,669	11.0	3,669	11.0	3,669
WVAH-TV D24 DT CP	72.6	1,471	12.9	160	12.9	160

Interference to proposal, scenario 1
0.70% interference

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WSAZ-TV	D22	DT	APP	HUNTINGTON, WV	WSAZ-TV 1000KW	
Undesireds:	WKYT-TV	D21	DT	CP	LEXINGTON, KY	BLANK0000024945	197.6 km
	WBNS-TV	D21	DT	LIC	COLUMBUS, OH	BLCDT20021025ABK	176.7
	WXIN	D22	DT	CP	INDIANAPOLIS, IN	BLANK0000024883	375.7
	WCVN-TV	D22	DT	CP	COVINGTON, KY	BLANK0000025281	206.5
	WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000026965	289.1
	WBGU-TV	D22	DT	CP	BOWLING GREEN, OH	BLANK0000027978	325.5
	WCTE	D22	DT	LIC	COOKEVILLE, TN	BLEDT20110413ACS	379.0
	WKPI-TV	D23	DT	CP	PIKEVILLE, KY	BLANK0000025330	138.8
	WWHO	D23	DT	CP	CHILLICOTHE, OH	BLANK0000027709	142.5

Service area				Terrain-limited		IX-free		Percent IX	
36769.6				1,279,374		34931.1		1,212,941	
34692.4				1,204,501		0.68		0.70	
Undesired				Total IX		Unique IX		Prcnt Unique IX	
WKYT-TV	D21	DT	CP	2.0	60	2.0	60	0.01	0.00
WBNS-TV	D21	DT	LIC	5.0	176	1.0	0	0.00	0.00
WXIN	D22	DT	CP	5.0	2	2.0	0	0.01	0.00
WCVN-TV	D22	DT	CP	46.0	976	37.0	876	0.11	0.07
WVPX-TV	D22	DT	CP	54.7	3,992	49.7	3,977	0.14	0.33
WBGU-TV	D22	DT	CP	19.8	337	6.0	75	0.02	0.01
WCTE	D22	DT	LIC	3.0	0	0.0	0	0.00	0.00
WKPI-TV	D23	DT	CP	52.7	1,718	51.7	1,718	0.15	0.14
WWHO	D23	DT	CP	77.4	1,581	69.4	1,357	0.20	0.11

**Channel and
Facility
Information**

Section	Question	Response
Proposed Community of License	Facility ID	36912
	State	West Virginia
	City	HUNTINGTON
	DTV Channel	22
Facility Type	Facility Type	Commercial
	Station Type	Main
Zone	Zone	1

**Antenna Location
Data**

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1035121
Coordinates (NAD83)	Latitude	38° 30' 36.3" N+
	Longitude	082° 13' 09.5" W-
	Structure Type	GTOWER-Guyed Structure Used for Communication Purposes
	Overall Structure Height	313.9 meters
	Support Structure Height	294.5 meters
	Ground Elevation (AMSL)	308.2 meters
Antenna Data	Height of Radiation Center Above Ground Level	303.9 meters
	Height of Radiation Center Above Average Terrain	385.7 meters
	Height of Radiation Center Above Mean Sea Level	612.1 meters
	Effective Radiated Power	1000 kW

**Antenna
Technical Data**

Section	Question	Response
Antenna Type	Antenna Type	Non-Directional
	Do you have an Antenna ID?	
	Antenna ID	
Antenna Manufacturer and Model	Manufacturer:	DIE
	Model	TUM-O4-15/60H-R-1-T
	Rotation	
	Electrical Beam Tilt	0.75
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Elliptical
DTV and DTS: Elevation Pattern	Does the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	No
	Uploaded file for elevation antenna (or radiation) pattern data	

**Construction
Permit
Certifications**

Section	Question	Response
Post-Incentive Auction Expedited Processing	It will operate on the DTV channel for this station as established in the post-incentive auction channel reassignment public notice.	Yes
	It will operate post-incentive auction facilities that do not expand the noise-limited service contour in any direction beyond that established by the post-incentive auction channel reassignment public notice.	No
	It will operate post-incentive auction facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the post-incentive auction channel reassignment public notice.	Yes
	The antenna structure to be used by this facility has been registered by the Commission and will not require re-registration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely affect 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.	Yes
Environmental Effect	Would a Commission grant of Authorization for this location be an action which may have a significant environmental effect? (See Section 1.1306 of 47 C.F.R.)	No
Broadcast Facility	The proposed facility complies with the applicable engineering standards and assignment requirements of 47 C. F.R. Sections 73.616, 73.622(i), 73.623(e), 73.625, 73.1030, and 73.1125.	Yes