

ENGINEERING EXHIBIT

Application for Minor Modification of Digital Low Power Television Station Construction Permit

prepared for

Gray Television Licensee, LLC

W22CY Clarksburg, WV

Facility ID 125359

Ch. 22 (digital) 15 kW

Gray Television Licensee, LLC (“Gray”) is the licensee of analog Low Power Television station W22CY, Channel 22, Clarksburg WV, Facility ID 125359 (BLTTL-20060120ADM). A Construction Permit (“CP”, BDFCDTL-20120329AOH) authorizes W22CY to flashcut to digital operation on its current Channel 22, at 1 kW effective radiated power (“ERP”) with a directional antenna. *Gray* herein seeks a minor modification of the flashcut CP to specify a different transmitting location, an increase in ERP to 15 kW, and use of a nondirectional transmitting antenna.

As proposed herein, W22CY will utilize the tower structure associated with FCC Antenna Structure Registration number 1034466, located 5.0 km from the W22CY licensed analog and flashcut CP site. The proposed W22CY antenna will be side-mounted on the tower and no change to the overall structure height will result.

The proposed antenna is an ERI model AL120-22-E having elliptical polarization. The ERP is 15 kW using a “full service” out of channel emission mask. Figure 1 depicts the relevant coverage contours of the licensed analog facility (74 dBμ) and those of the current flashcut CP and proposed digital facilities (51 dBμ), demonstrating compliance with §73.3572 for a minor change.

Interference study per OET Bulletin 69¹ shows that the proposal complies with the FCC’s interference protection requirements toward all digital television, television translator, LPTV,

¹FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for*

and Class A stations (existing and post-auction). The results, summarized in Table 1, show that any new interference does not exceed the FCC's interference limits (0.5 percent to full power and Class A stations, and 2.0 percent to secondary stations) to any facility except with respect to W30CH which does not present a conflict for the proposal.

The licensed W30CH analog facility (BLTTL-20070319AAK, Ch. 30, Clarksburg WV, Fac ID 130131) would receive 11.8 percent new interference, which exceeds the 2.0 percent limit towards LPTV stations. *Gray* is also the licensee of K30CH and consents to interference exceeding 2.0 percent from the W22CY minor modification. As a practical matter, the interference will not actually occur because *Gray* intends to convert W30CH and W22CY to digital at the same time (no interference will occur from the proposed W22CY to the W30CH digital flashcut facility). Accordingly, the proposal complies with §74.793 regarding interference protection to digital television, low power television, television translator, and Class A television facilities.

Human Exposure to Radiofrequency Electromagnetic Field

The proposed facility 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 10 percent antenna relative field in downward elevations (pattern data shows less than 10 percent relative field at angles 30 to 90 degrees below the antenna), 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 $0.7 \mu\text{W}/\text{cm}^2$, which is 0.2 percent of the general population / uncontrolled maximum permissible 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.

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.

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	Coverage Contour Comparison
Table 1	TVStudy Analysis of Proposal
Form 2100	Saved Version of Engineering Sections from FCC Form at Time of Upload

Chesapeake RF Consultants, LLC

Joseph M. Davis, P.E.	April 7, 2019	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600



prepared for
Gray Television Licensee, LLC

April, 2019

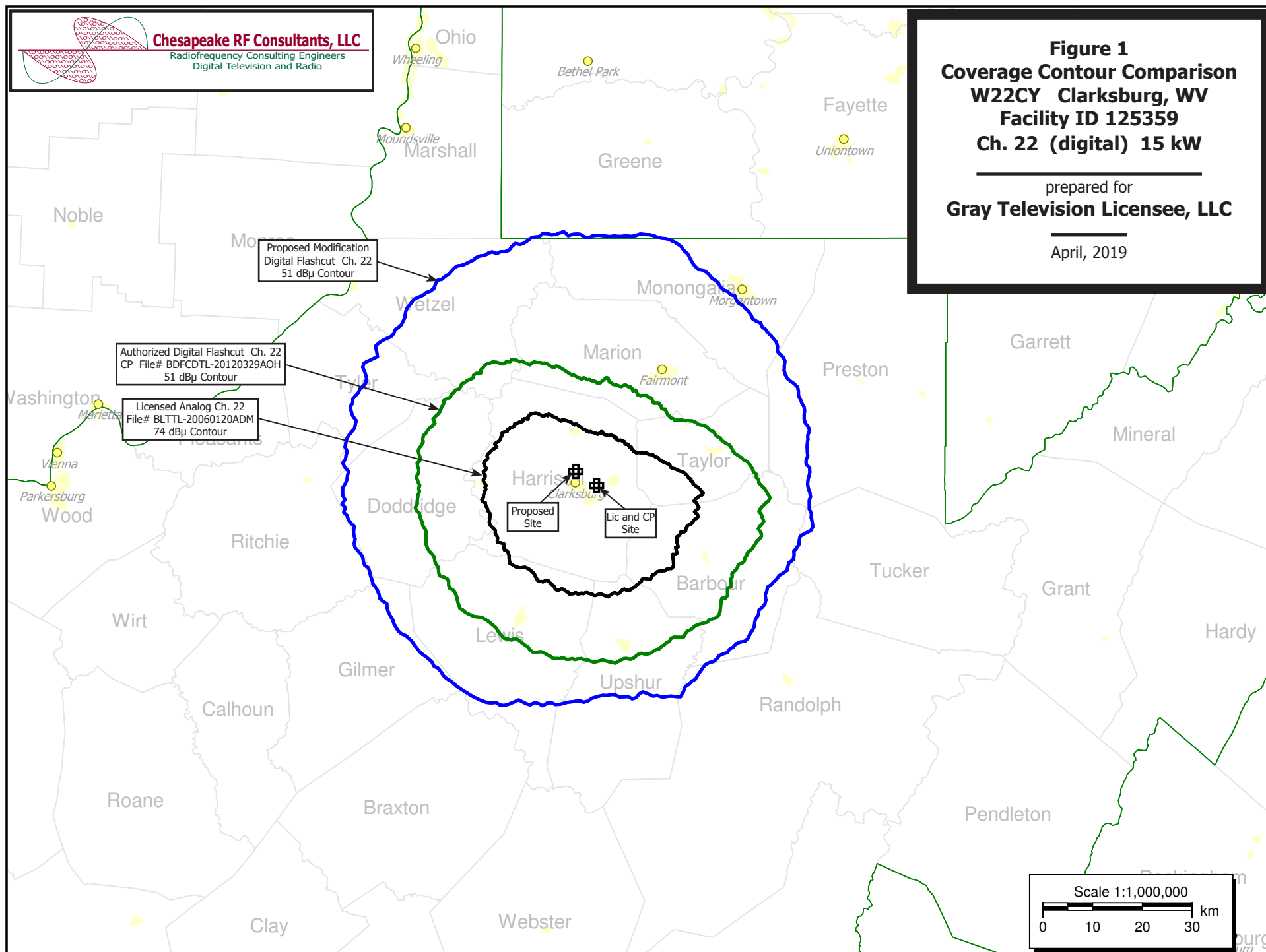


Table 1 W22CY TVStudy Analysis of Proposal (page 1 of 8)



tvstudy v2.2.5 (4uoc83)
Database: localhost, Study: W22CY amend, Model: Longley-Rice
Start: 2019.04.07 11:44:46

Study created: 2019.04.07 11:44:45

Study build station data: LMS TV 2019-04-06

Proposal: W22CY D22 LD APP CLARKSBURG, WV
File number: W22CY amend
Facility ID: 125359
Station data: User record
Record ID: 2640
Country: U.S.

Build options:
Protect pre-transition records not on baseline channel

Search options:
Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WQDI-LD	D21	LD	LIC	CANTON, OH	BLDTL20150129ABN	151.6 km
No	WJW	D21	LD	CP	CLEVELAND, OH	BDRTCDT20101123AOJ	184.9
No	WBNS-TV	D21	DT	LIC	COLUMBUS, OH	BLCDT20021025ABK	241.6
No	WSSS-LP	D21	LD	CP	STEUBENVILLE, OH	BDISDTL20121022AAR	120.3
Yes	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000034376	135.9
No	WWCW	D21	DT	CP	LYNCHBURG, VA	BLANK0000027725	228.6
No	WOCW-LP	N21+	TX	LIC	CHARLESTON, WV	BLTTL20051114AGM	153.2
No	W24DS-D	D21	LD	CP	PARKERSBURG, WV	BLANK0000051781	105.2
No	W23DR-D	D21	LD	CP	ROMNEY, WV	BLANK0000054636	139.9
No	WCVN-TV	D22	DT	CP	COVINGTON, KY	BLANK0000034633	360.0
No	WMPB	D22	DT	CP	BALTIMORE, MD	BLANK0000029875	306.6
No	WCNC-TV	D22	DT	LIC	CHARLOTTE, NC	BLCDT20031211ABN	445.5
No	WIRP-LD	D22	LD	LIC	FAYETTEVILLE, NC	BLANK0000010748	395.2
No	WUVV-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000034450	438.0
No	W51EE-D	D22	LD	CP	MARION, NC	BLANK0000053445	429.2
No	WNJS	D22	DT	LIC	CAMDEN, NJ	BLANK0000040675	473.9
No	WECY-LD	D22	LD	LIC	Elmira, NY	BLANK0000024397	418.8
Yes	WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000055357	222.1
No	WBGU-TV	D22	DT	LIC	BOWLING GREEN, OH	BLANK0000063785	364.8
No	WCPO-TV	D22	DT	LIC	CINCINNATI, OH	BLCDT20101216AAF	358.4
No	W22DE	N22+	TX	LIC	DAYTON, OH	BLTTL20100511AAU	339.2
No	WOCB-CD	D22	DC	CP	MARION, OH	BLANK0000034205	257.1
No	WIVD-LD	D22	LD	LIC	NEWCOMERTOWN, OH	BLDTL20090617AAR	153.6
Yes	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000034570	166.2
No	WFXP	D22	DT	LIC	ERIE, PA	BLCDT20081023ABA	305.4
No	WOLF-TV	D22	DT	CP	HAZLETON, PA	BLANK0000027934	433.3
No	WJAC-TV	D22	LD	LIC	JOHNSTOWN, PA	BLCDT20110105ABC	214.9
No	WJAC-TV	D22	LD	LIC	JOHNSTOWN, PA	BLCDT20101105AAU	214.6
Yes	WTAE-TV	D22	LD	CP	PITTSBURGH, PA	BLANK0000058307	131.4
Yes	WTAE-TV	D22	LD	LIC	PITTSBURGH, PA	BLCDT20091223AKV	131.4
Yes	WWKH-CD	D22	DC	CP	UNIONTOWN, PA	BLANK0000027838	85.1
No	WKPT-CD	D22	DC	LIC	KINGSPORT, TN	BLDTA20120420ACJ	365.7
No	WRIC-TV	D22	DT	LIC	PETERSBURG, VA	BLCDT20090209ABZ	310.7
No	WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000034128	310.7
No	W22EX-D	D22	LD	LIC	STAUNTON, VA	BLANK0000055155	154.6
Yes	WSAZ-TV	D22	DT	CP	HUNTINGTON, WV	BLANK0000034103	184.5
No	W22CV-D	D22	LD	LIC	MOOREFIELD, WV	BLDTT20120608ABX	128.7
Yes	WOVA-LD	D22	LD	LIC	PARKERSBURG, WV	BLDTL20120904ABM	105.2
Yes	W22ES-D	D22	LD	CP	SUTTON, WV	BNPDTL20100514AAM	81.7
No	WDVM-TV	D23	DT	CP	HAGERSTOWN, MD	BLANK0000034764	208.0
No	WVPX-TV	D23	DT	LIC	AKRON, OH	BLANK0000050597	222.5
No	WWHO	D23	DT	CP	CHILLICOTHE, OH	BLANK0000034759	239.9
No	WTOO-CD	D23	DC	LIC	BOLIVAR, PA	BLANK0000001414	187.7
No	WPXI	D23	LD	LIC	PITTSBURGH, PA	BLCDT20100429ADA	85.1
No	WPXI	D23	DT	CP	PITTSBURGH, PA	BLANK0000034876	132.4
No	WSAZ-TV	D23	DT	LIC	HUNTINGTON, WV	BLANK0000001039	184.5
No	W23DR-D	D23	LD	LIC	ROMNEY, WV	BLDTT20090609AAZ	139.9
No	WIIC-LD	N29+	TX	LIC	PITTSBURGH, PA	BLTTL19981230JB	131.4
Yes	W30CH	N30-	TX	LIC	CLARKSBURG, WV	BLTTL20070319AAK	0.0

Table 1 W22CY TVStudy Analysis of Proposal
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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
Mask: Full Service
Latitude: 39 18 2.00 N (NAD83)
Longitude: 80 20 36.00 W
Height AMSL: 513.3 m
HAAT: 0.0 m
Peak ERP: 15.0 kW
Antenna: Omnidirectional
Elev Pattn: Generic
Elec Tilt: 1.25

49.6 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	15.0 kW	164.3 m	49.4 km
45.0	15.0	156.8	48.9
90.0	15.0	152.4	48.6
135.0	15.0	169.1	49.7
180.0	15.0	140.1	47.7
225.0	15.0	159.4	49.0
270.0	15.0	133.0	47.2
315.0	15.0	157.3	48.9

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 154 m

Distance to Canadian border: 316.0 km

Distance to Mexican border: 2138.5 km

Conditions at FCC monitoring station: Laurel MD
Bearing: 91.7 degrees Distance: 303.6 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 280.5 degrees Distance: 2122.2 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 BLANK0000034376 CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000034376	
Undesireds:	W22CY	N22-	TX	LIC	CLARKSBURG, WV	BLTTTL20060120ADM	137.8 km
	W22CY	D22	LD	APP	CLARKSBURG, WV	W22CY amend	135.9
	WMPT	D21	DT	CP	ANNAPOLIS, MD	BLANK0000029874	333.8
	WWJ-TV	D21	DT	CP	DETROIT, MI	BLANK0000025826	341.6
	WROC-TV	D21	DT	CP	ROCHESTER, NY	BLANK0000055351	355.4
	WBNS-TV	D21	DT	LIC	COLUMBUS, OH	BLCDT20021025ABK	263.1
	WSEE-TV	D21	DT	CP	ERIE, PA	BLANK0000063404	171.5
	WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000055357	147.5
	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000034570	87.5
	WWKH-CD	D22	DC	CP	UNIONTOWN, PA	BLANK0000027838	77.1

	Service area		Terrain-limited		IX-free, before	IX-free, after	Percent New IX
	27311.3	3,272,865	25604.5	3,145,932	24639.3	3,085,217	0.00 0.00
Undesired			Total IX		Unique IX, before	Unique IX, after	

Table 1 W22CY TVStudy Analysis of Proposal
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W22CY N22- TX LIC	0.0	0	0.0	0		
W22CY D22 LD APP	3.0	75			1.0	2
WMPT D21 DT CP	86.4	3,740	58.3	2,794	58.3	2,794
WWJ-TV D21 DT CP	53.8	3,510	7.0	1,289	7.0	1,289
WROC-TV D21 DT CP	1.0	27	0.0	0	0.0	0
WBNS-TV D21 DT LIC	419.1	26,404	289.3	12,904	288.3	12,904
WSEE-TV D21 DT CP	374.1	30,897	239.1	16,266	238.1	16,193
WVPX-TV D22 DT CP	84.4	4,400	36.7	1,641	36.7	1,641
WTOO-CD D22 DC CP	174.9	11,413	147.9	8,862	147.9	8,862
WWKH-CD D22 DC CP	4.0	20	3.0	20	3.0	20

Interference to BLANK0000055357 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance		
Desired:	WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000055357			
Undesireds:	W22CY	N22-	TX	LIC	CLARKSBURG, WV	BLTTL20060120ADM	226.5 km		
	W22CY	D22	LD	APP	CLARKSBURG, WV	W22CY amend	222.1		
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000034376	147.5		
	WDWO-CD	D22	DC	CP	DETROIT, MI	BLANK0000028102	213.3		
	WLLA	D22	DT	CP	KALAMAZOO, MI	BLANK0000034932	361.4		
	WBGU-TV	D22	DT	LIC	BOWLING GREEN, OH	BLANK0000063785	194.0		
	WOCB-CD	D22	DC	CP	MARION, OH	BLANK0000034205	148.0		
	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000034570	232.7		
	WWKH-CD	D22	DC	CP	UNIONTOWN, PA	BLANK0000027838	211.3		
	WSAZ-TV	D22	DT	CP	HUNTINGTON, WV	BLANK0000034103	287.9		
	WNWO-TV	D23	DT	CP	TOLEDO, OH	BLANK0000033631	162.0		
	WPXI	D23	DT	CP	PITTSBURGH, PA	BLANK0000034876	149.1		
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
25730.5	4,149,104	25167.6	4,120,788	24471.8	4,081,176	24468.8	4,081,065	0.01	0.00
184.1	0	184.1	0	184.1	0	184.1	0	0.00	0.00
(in Canada)									

Undesired	Total IX	Unique IX, before	Unique IX, after
W22CY N22- TX LIC	0.0	0.0	0
W22CY D22 LD APP	23.9	771	3.0 111
WPNT D21 DT CP	42.8	3,393	8.0 661
WDWO-CD D22 DC CP	20.0	2,371	0.0 0
WLLA D22 DT CP	1.0	8	0.0 0
WBGU-TV D22 DT LIC	450.6	27,558	337.8 20,551 333.8 20,444
WOCB-CD D22 DC CP	23.9	949	4.0 117
WTOO-CD D22 DC CP	134.5	8,150	63.7 3,119 63.7 3,119
WWKH-CD D22 DC CP	31.9	1,259	3.0 439 1.0 184
WSAZ-TV D22 DT CP	177.5	5,607	107.8 3,266 105.8 3,242
WNWO-TV D23 DT CP	5.0	71	0.0 0 0.0 0
WPXI D23 DT CP	42.8	3,064	12.9 1,485 12.9 1,485

Interference to BLANK0000034570 CP scenario 1

Desired:	Call WTOO-CD	Chan D22	Svc DC	Status CP	City, State BOLIVAR, PA	File Number BLANK0000034570	Distance		
Undesireds:	W22CY	N22-	TX	LIC	CLARKSBURG, WV	BLTTL20060120ADM	165.4 km		
	W22CY	D22	LD	APP	CLARKSBURG, WV	W22CY amend	166.2		
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000034376	87.5		
	WMPB	D22	DT	CP	BALTIMORE, MD	BLANK0000029875	214.1		
	WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000055357	232.7		
	WOLF-TV	D22	DT	CP	HAZLETON, PA	BLANK0000027934	277.2		
	WWKH-CD	D22	DC	CP	UNIONTOWN, PA	BLANK0000027838	81.1		
	WDVM-TV	D23	DT	CP	HAGERSTOWN, MD	BLANK0000034764	117.1		
	WPXI	D23	DT	CP	PITTSBURGH, PA	BLANK0000034876	87.0		
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
9352.5	639,018	7374.1	408,241	6933.9	384,117	6933.9	384,117	0.00	0.00
Undesired				Total IX	Unique IX, before		Unique IX, after		
W22CY N22- TX LIC		0.0	0	0.0	0				
W22CY D22 LD APP		1.0	0			0.0	0		
WPNT D21 DT CP		69.9	9,402	3.0	15	2.0	15		
WMPB D22 DT CP		1.0	0	1.0	0	1.0	0		

Table 1 W22CY TVStudy Analysis of Proposal
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WVPX-TV D22 DT CP	119.8	6,748	37.9	495	37.9	495
WOLF-TV D22 DT CP	13.0	69	3.0	69	3.0	69
WWKH-CD D22 DC CP	345.2	20,712	238.4	9,763	238.4	9,763
WDVM-TV D23 DT CP	1.0	0	1.0	0	1.0	0
WPXI D23 DT CP	103.8	10,614	18.9	1,536	18.9	1,536

Interference to BLANK0000058307 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WTAE-TV	D22	LD	CP	PITTSBURGH, PA	BLANK0000058307	
Undesireds:	W22CY	N22-	TX	LIC	CLARKSBURG, WV	BLTTL20060120ADM	133.1 km
	W22CY	D22	LD	APP	CLARKSBURG, WV	W22CY amend	131.4
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000034376	6.4
	WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000055357	153.0
	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000034570	83.4
	WJAC-TV	D22	LD	LIC	JOHNSTOWN, PA	BLCDT20110105ABC	129.5
	WWKH-CD	D22	DC	CP	UNIONTOWN, PA	BLANK0000027838	70.7
	WSAZ-TV	D22	DT	CP	HUNTINGTON, WV	BLANK0000034103	289.4
	WOVA-LD	D22	LD	LIC	PARKERSBURG, WV	BLDTL20120904ABM	183.0
	WPXI	D23	LD	LIC	PITTSBURGH, PA	BLCDT20100429ADA	70.7
	WPXI	D23	DT	CP	PITTSBURGH, PA	BLANK0000034876	3.9

	Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
	5833.8	1,794,695	5520.8	1,736,080	3502.0	1,260,428	3502.0	1,260,428	0.00 0.00
Undesired			Total IX		Unique IX, before		Unique IX, after		
W22CY N22- TX LIC		0.0	0		0.0	0			
W22CY D22 LD APP		6.0	388				0.0	0	
WPNT D21 DT CP		1025.9	302,490		170.6	37,979	169.7	37,863	
WVPX-TV D22 DT CP		244.5	34,899		31.9	2,667	31.9	2,667	
WTOO-CD D22 DC CP		537.6	60,413		145.3	13,271	145.3	13,271	
WWKH-CD D22 DC CP		602.1	137,180		65.8	12,582	65.8	12,582	
WSAZ-TV D22 DT CP		8.0	897		0.0	0	0.0	0	
WOVA-LD D22 LD LIC		1.0	111		0.0	0	0.0	0	
WPXI D23 LD LIC		4.0	184		0.0	0	0.0	0	
WPXI D23 DT CP		1417.8	382,108		397.5	92,154	397.5	92,154	

Interference to BLANK0000058307 CP scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WTAE-TV	D22	LD	CP	PITTSBURGH, PA	BLANK0000058307	
Undesireds:	W22CY	N22-	TX	LIC	CLARKSBURG, WV	BLTTL20060120ADM	133.1 km
	W22CY	D22	LD	APP	CLARKSBURG, WV	W22CY amend	131.4
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000034376	6.4
	WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000055357	153.0
	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000034570	83.4
	WJAC-TV	D22	LD	LIC	JOHNSTOWN, PA	BLCDT20101105AAU	129.2
	WWKH-CD	D22	DC	CP	UNIONTOWN, PA	BLANK0000027838	70.7
	WSAZ-TV	D22	DT	CP	HUNTINGTON, WV	BLANK0000034103	289.4
	WOVA-LD	D22	LD	LIC	PARKERSBURG, WV	BLDTL20120904ABM	183.0
	WPXI	D23	LD	LIC	PITTSBURGH, PA	BLCDT20100429ADA	70.7
	WPXI	D23	DT	CP	PITTSBURGH, PA	BLANK0000034876	3.9

	Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
	5833.8	1,794,695	5520.8	1,736,080	3502.0	1,260,428	3502.0	1,260,428	0.00 0.00
Undesired			Total IX		Unique IX, before		Unique IX, after		
W22CY N22- TX LIC		0.0	0		0.0	0			
W22CY D22 LD APP		6.0	388				0.0	0	
WPNT D21 DT CP		1025.9	302,490		170.6	37,979	169.7	37,863	
WVPX-TV D22 DT CP		244.5	34,899		31.9	2,667	31.9	2,667	
WTOO-CD D22 DC CP		537.6	60,413		145.3	13,271	145.3	13,271	
WJAC-TV D22 LD LIC		10.0	357		0.0	0	0.0	0	
WWKH-CD D22 DC CP		602.1	137,180		65.8	12,582	65.8	12,582	
WSAZ-TV D22 DT CP		8.0	897		0.0	0	0.0	0	
WOVA-LD D22 LD LIC		1.0	111		0.0	0	0.0	0	
WPXI D23 LD LIC		4.0	184		0.0	0	0.0	0	
WPXI D23 DT CP		1417.8	382,108		397.5	92,154	397.5	92,154	

Table 1 W22CY TVStudy Analysis of Proposal
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Interference to BLCDT20091223AKV LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WTAE-TV	D22	LD	LIC	PITTSBURGH, PA	BLCDT20091223AKV	
Undesireds:	W22CY	N22-	TX	LIC	CLARKSBURG, WV	BLTTL20060120ADM	133.1 km
	W22CY	D22	LD	APP	CLARKSBURG, WV	W22CY amend	131.4
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000034376	6.5
	WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000055357	153.0
	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000034570	83.4
	WJAC-TV	D22	LD	LIC	JOHNSTOWN, PA	BLCDT20110105ABC	129.5
	WWKH-CD	D22	DC	CP	UNIONTOWN, PA	BLANK0000027838	70.7
	WSAZ-TV	D22	DT	CP	HUNTINGTON, WV	BLANK0000034103	289.4
	WOVA-LD	D22	LD	LIC	PARKERSBURG, WV	BLDTL20120904ABM	183.0
	WPXI	D23	LD	LIC	PITTSBURGH, PA	BLCDT20100429ADA	70.7
	WPXI	D23	DT	CP	PITTSBURGH, PA	BLANK0000034876	3.9

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	5181.0 1,815,313	4845.8	1,744,415	2717.0	1,237,938	2717.0 1,237,938	0.00 0.00

Undesired			Total IX	Unique IX, before		Unique IX, after	
W22CY N22- TX LIC			0.0	0		0	
W22CY D22 LD APP			7.0	493		0.0 0	
WPNT D21 DT CP			1175.9	303,716	123.8	33,369	123.8 33,369
WVPX-TV D22 DT CP			235.7	52,903	20.0	3,426	20.0 3,426
WTOO-CD D22 DC CP			581.8	67,959	112.5	10,229	112.5 10,229
WJAC-TV D22 LD LIC			1.0	0	0.0	0	0.0 0
WWKH-CD D22 DC CP			782.3	153,175	123.8	24,319	123.8 24,319
WSAZ-TV D22 DT CP			2.0	1,663	0.0	0	0.0 0
WOVA-LD D22 LD LIC			1.0	0	0.0	0	0.0 0
WPXI D23 LD LIC			18.0	3,365	0.0	0	0.0 0
WPXI D23 DT CP			1554.1	403,950	353.9	109,001	353.9 109,001

Interference to BLCDT20091223AKV LIC scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WTAE-TV	D22	LD	LIC	PITTSBURGH, PA	BLCDT20091223AKV	
Undesireds:	W22CY	N22-	TX	LIC	CLARKSBURG, WV	BLTTL20060120ADM	133.1 km
	W22CY	D22	LD	APP	CLARKSBURG, WV	W22CY amend	131.4
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000034376	6.5
	WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000055357	153.0
	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000034570	83.4
	WJAC-TV	D22	LD	LIC	JOHNSTOWN, PA	BLCDT20101105AAU	129.2
	WWKH-CD	D22	DC	CP	UNIONTOWN, PA	BLANK0000027838	70.7
	WSAZ-TV	D22	DT	CP	HUNTINGTON, WV	BLANK0000034103	289.4
	WOVA-LD	D22	LD	LIC	PARKERSBURG, WV	BLDTL20120904ABM	183.0
	WPXI	D23	LD	LIC	PITTSBURGH, PA	BLCDT20100429ADA	70.7
	WPXI	D23	DT	CP	PITTSBURGH, PA	BLANK0000034876	3.9

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	5181.0 1,815,313	4845.8	1,744,415	2717.0	1,237,938	2717.0 1,237,938	0.00 0.00

Undesired			Total IX	Unique IX, before		Unique IX, after	
W22CY N22- TX LIC			0.0	0		0	
W22CY D22 LD APP			7.0	493		0.0 0	
WPNT D21 DT CP			1175.9	303,716	123.8	33,369	123.8 33,369
WVPX-TV D22 DT CP			235.7	52,903	20.0	3,426	20.0 3,426
WTOO-CD D22 DC CP			581.8	67,959	112.5	10,229	112.5 10,229
WJAC-TV D22 LD LIC			5.0	141	0.0	0	0.0 0
WWKH-CD D22 DC CP			782.3	153,175	123.8	24,319	123.8 24,319
WSAZ-TV D22 DT CP			2.0	1,663	0.0	0	0.0 0
WOVA-LD D22 LD LIC			1.0	0	0.0	0	0.0 0
WPXI D23 LD LIC			18.0	3,365	0.0	0	0.0 0
WPXI D23 DT CP			1554.1	403,950	353.9	109,001	353.9 109,001

Interference to BLANK0000027838 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WWKH-CD	D22	DC	CP	UNIONTOWN, PA	BLANK0000027838	

Table 1 W22CY TVStudy Analysis of Proposal
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Undesireds:	W22CY	N22-	TX	LIC	CLARKSBURG, WV	BLTTL20060120ADM	84.5 km
	W22CY	D22	LD	APP	CLARKSBURG, WV	W22CY amend	85.1
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000034376	77.1
	WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000055357	211.3
	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000034570	81.1
	WSAZ-TV	D22	DT	CP	HUNTINGTON, WV	BLANK0000034103	266.6
	WPXI	D23	DT	CP	PITTSBURGH, PA	BLANK0000034876	73.8

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
3716.1 415,708	3223.0 384,293	3049.6 369,024	3026.4 367,587	0.76 0.39

Undesired	Total IX	Unique IX, before	Unique IX, after
W22CY N22- TX LIC	3.0 2	0.0 0	
W22CY D22 LD APP	60.3 3,336		23.1 1,437
WPNT D21 DT CP	73.2 7,979	10.0 2,031	9.0 1,813
WVPX-TV D22 DT CP	55.1 5,858	6.0 1,172	3.0 816
WTOO-CD D22 DC CP	100.3 6,307	60.2 1,653	49.2 1,337
WSAZ-TV D22 DT CP	12.1 561	1.0 45	0.0 0
WPXI D23 DT CP	80.2 8,321	11.0 1,971	11.0 1,971

Interference to BLANK0000034103 CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WSAZ-TV	D22	DT	CP	HUNTINGTON, WV	BLANK0000034103	
Undesireds:	W22CY	N22-	TX	LIC	CLARKSBURG, WV	BLTTL20060120ADM	186.9 km
	W22CY	D22	LD	APP	CLARKSBURG, WV	W22CY amend	184.5
	WKYT-TV	D21	DT	CP	LEXINGTON, KY	BLANK0000064310	197.6
	WUPX-TV	D21	DT	LIC	RICHMOND, KY	BLANK0000067614	140.5
	WBNS-TV	D21	DT	LIC	COLUMBUS, OH	BLCDT20021025ABK	176.7
	WXIN	D22	DT	CP	INDIANAPOLIS, IN	BLANK0000034056	375.7
	WCVN-TV	D22	DT	CP	COVINGTON, KY	BLANK0000034633	206.5
	WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000055357	287.9
	WBGU-TV	D22	DT	LIC	BOWLING GREEN, OH	BLANK0000063785	325.5
	WOCB-CD	D22	DC	CP	MARION, OH	BLANK0000034205	212.7
	WCTE	D22	DT	LIC	COOKEVILLE, TN	BLCDT20110413ACS	379.0
	WKPI-TV	D23	DT	CP	PIKEVILLE, KY	BLANK0000034629	138.8
	WWHO	D23	DT	CP	CHILLICOTHE, OH	BLANK0000034759	173.0

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
36769.6 1,279,374	34931.1 1,212,941	34612.2 1,201,504	34561.3 1,200,727	0.15 0.06

Undesired	Total IX	Unique IX, before	Unique IX, after
W22CY N22- TX LIC	14.9 478	8.0 413	
W22CY D22 LD APP	80.8 1,780		58.8 1,190
WKYT-TV D21 DT CP	2.0 60	1.0 0	1.0 0
WUPX-TV D21 DT LIC	91.8 1,040	81.7 980	81.7 980
WBNS-TV D21 DT LIC	5.0 176	0.0 0	0.0 0
WXIN D22 DT CP	7.0 88	2.0 0	2.0 0
WCVN-TV D22 DT CP	102.0 1,813	75.0 1,441	70.0 1,251
WVPX-TV D22 DT CP	52.7 6,492	39.7 6,339	35.8 6,080
WBGU-TV D22 DT LIC	19.8 337	4.0 90	3.0 90
WOCB-CD D22 DC CP	29.8 362	7.9 40	7.9 40
WCTE D22 DT LIC	3.0 0	0.0 0	0.0 0
WKPI-TV D23 DT CP	53.7 1,270	52.7 1,270	52.7 1,270
WWHO D23 DT CP	3.0 249	1.0 136	1.0 136

Interference to BLDTL20120904ABM LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WOVA-LD	D22	LD	LIC	PARKERSBURG, WV	BLDTL20120904ABM	
Undesireds:	W22CY	N22-	TX	LIC	CLARKSBURG, WV	BLTTL20060120ADM	109.5 km
	W22CY	D22	LD	APP	CLARKSBURG, WV	W22CY amend	105.2
	WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000055357	189.6
	WOCB-CD	D22	DC	CP	MARION, OH	BLANK0000034205	166.0
	WIVD-LD	D22	LD	LIC	NEWCOMERSTOWN, OH	BLDTL20090617AAR	112.3
	WJAC-TV	D22	LD	LIC	JOHNSTOWN, PA	BLCDT20110105ABC	298.7
	WTAE-TV	D22	LD	CP	PITTSBURGH, PA	BLANK0000058307	183.0
	WSAZ-TV	D22	DT	CP	HUNTINGTON, WV	BLANK0000034103	109.1

Table 1 W22CY TVStudy Analysis of Proposal
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Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
8138.5 261,709	7755.5 248,731	6562.0 227,384	6534.3 227,102	0.42 0.12
Undesired	Total IX	Unique IX, before	Unique IX, after	
W22CY N22- TX LIC	19.8 183	6.9 87		
W22CY D22 LD APP	102.2 2,856		34.7 369	
WVPX-TV D22 DT CP	36.8 511	13.9 117	13.0 113	
WOCB-CD D22 DC CP	1.0 0	0.0 0	0.0 0	
WIVD-LD D22 LD LIC	4.0 77	2.0 34	0.0 0	
WSAZ-TV D22 DT CP	1169.5 21,066	1136.8 20,619	1091.1 18,291	

Interference to BNPDTL20100514AAM CP scenario 1

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: W22ES-D	D22	LD	CP	SUTTON, WV	BNPDTL20100514AAM	
Undesireds: W22CY	N22-	TX	LIC	CLARKSBURG, WV	BLTTL20060120ADM	80.9 km
W22CY	D22	LD	APP	CLARKSBURG, WV	W22CY amend	81.7
WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000055357	281.4
WJAC-TV	D22	LD	LIC	JOHNSTOWN, PA	BLCDT20110105ABC	290.5
WTAE-TV	D22	LD	CP	PITTSBURGH, PA	BLANK0000058307	212.6
WSAZ-TV	D22	DT	CP	HUNTINGTON, WV	BLANK0000034103	132.7
WOVA-LD	D22	LD	LIC	PARKERSBURG, WV	BLDTL20120904ABM	110.5

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
1479.2 15,905	1293.0 14,091	1154.7 12,845	1145.7 12,778	0.78 0.52
Undesired	Total IX	Unique IX, before	Unique IX, after	
W22CY N22- TX LIC	9.0 12	1.0 8		
W22CY D22 LD APP	29.1 220		10.0 75	
WVPX-TV D22 DT CP	1.0 0	0.0 0	0.0 0	
WSAZ-TV D22 DT CP	129.3 1,008	116.2 1,002	107.2 944	
WOVA-LD D22 LD LIC	17.0 236	8.0 230	6.0 149	

Interference to BLTTL20070319AAK LIC scenario 1

**IX: 11.81% interference caused

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: W30CH	N30-	TX	LIC	CLARKSBURG, WV	BLTTL20070319AAK	
Undesireds: W22CY	N22-	TX	LIC	CLARKSBURG, WV	BLTTL20060120ADM	5.0 km
W22CY	D22	LD	APP	CLARKSBURG, WV	W22CY amend	0.0
WHIZ-TV	D30	DT	CP	ZANESVILLE, OH	BLANK0000024560	156.9
WPCW	D30	LD	CP	JEANNETTE, PA	BLANK0000053374	142.6

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
201.2 29,981	188.3 21,349	186.3 20,534	183.3 18,109	1.60 11.81
Undesired	Total IX	Unique IX, before	Unique IX, after	
W22CY D22 LD APP	4.0 2,896		3.0 2,425	
WHIZ-TV D30 DT CP	2.0 815	2.0 815	1.0 344	

Interference to BLTTL20070319AAK LIC scenario 2

**IX: 11.81% interference caused

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: W30CH	N30-	TX	LIC	CLARKSBURG, WV	BLTTL20070319AAK	
Undesireds: W22CY	N22-	TX	LIC	CLARKSBURG, WV	BLTTL20060120ADM	5.0 km
W22CY	D22	LD	APP	CLARKSBURG, WV	W22CY amend	0.0
WHIZ-TV	D30	DT	APP	ZANESVILLE, OH	BLANK0000068718	156.9
WPCW	D30	LD	CP	JEANNETTE, PA	BLANK0000053374	142.6

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
201.2 29,981	188.3 21,349	186.3 20,534	183.3 18,109	1.60 11.81
Undesired	Total IX	Unique IX, before	Unique IX, after	
W22CY D22 LD APP	4.0 2,896		3.0 2,425	
WHIZ-TV D30 DT APP	2.0 815	2.0 815	1.0 344	

Table 1 W22CY TVStudy Analysis of Proposal
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Interference to proposal scenario 1
3.89% interference received

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	W22CY	D22	LD	APP	CLARKSBURG, WV	W22CY amend	
Undesireds:	WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000055357	222.1 km
	WJAC-TV	D22	LD	LIC	JOHNSTOWN, PA	BLCDT20110105ABC	214.9
	WTAE-TV	D22	LD	CP	PITTSBURGH, PA	BLANK0000058307	131.4
	WWKH-CD	D22	DC	CP	UNIONTOWN, PA	BLANK0000027838	85.1
	WSAZ-TV	D22	DT	CP	HUNTINGTON, WV	BLANK0000034103	184.5
	WOVA-LD	D22	LD	LIC	PARKERSBURG, WV	BLDTL20120904ABM	105.2
	W22ES-D	D22	LD	CP	SUTTON, WV	BNPDTL20100514AAM	81.7
	W23DR-D	D23	LD	LIC	ROMNEY, WV	BLDTT20090609AAZ	139.9

	Service area	Terrain-limited		IX-free		Percent IX	
	7512.4	242,888	6855.0	227,156	6420.0	218,327	6.35 3.89
Undesired				Total IX	Unique IX	Prcnt Unique IX	
WVPX-TV D22 DT CP				98.5 2,590	49.7 1,416	0.73	0.62
WWKH-CD D22 DC CP				11.0 498	4.0 268	0.06	0.12
WSAZ-TV D22 DT CP				289.0 6,681	200.5 5,435	2.92	2.39
WOVA-LD D22 LD LIC				132.9 769	73.3 235	1.07	0.10
W22ES-D D22 LD CP				17.9 12	9.0 0	0.13	0.00

Interference to proposal scenario 2
3.89% interference received

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	W22CY	D22	LD	APP	CLARKSBURG, WV	W22CY amend	
Undesireds:	WVPX-TV	D22	DT	CP	AKRON, OH	BLANK0000055357	222.1 km
	WJAC-TV	D22	LD	LIC	JOHNSTOWN, PA	BLCDT20110105ABC	214.9
	WTAE-TV	D22	LD	LIC	PITTSBURGH, PA	BLCDT20091223AKV	131.4
	WWKH-CD	D22	DC	CP	UNIONTOWN, PA	BLANK0000027838	85.1
	WSAZ-TV	D22	DT	CP	HUNTINGTON, WV	BLANK0000034103	184.5
	WOVA-LD	D22	LD	LIC	PARKERSBURG, WV	BLDTL20120904ABM	105.2
	W22ES-D	D22	LD	CP	SUTTON, WV	BNPDTL20100514AAM	81.7
	W23DR-D	D23	LD	LIC	ROMNEY, WV	BLDTT20090609AAZ	139.9

	Service area	Terrain-limited		IX-free		Percent IX	
	7512.4	242,888	6855.0	227,156	6420.0	218,327	6.35 3.89
Undesired				Total IX	Unique IX	Prcnt Unique IX	
WVPX-TV D22 DT CP				98.5 2,590	49.7 1,416	0.73	0.62
WTAE-TV D22 LD LIC				1.0 0	0.0 0	0.00	0.00
WWKH-CD D22 DC CP				11.0 498	4.0 268	0.06	0.12
WSAZ-TV D22 DT CP				289.0 6,681	200.5 5,435	2.92	2.39
WOVA-LD D22 LD LIC				132.9 769	73.3 235	1.07	0.10
W22ES-D D22 LD CP				17.9 12	9.0 0	0.13	0.00

Channel and Facility Information

Section	Question	Response
Proposed Community of License	Facility ID	125359
	State	West Virginia
	City	CLARKSBURG
	LPD Channel	22

Antenna Location Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1034466
Coordinates (NAD83)	Latitude	39° 18' 02.0" N+
	Longitude	080° 20' 36.0" W-
	Structure Type	TOWER-A free standing or guyed struct
	Overall Structure Height	192.7 meters
	Support Structure Height	182.9 meters
	Ground Elevation (AMSL)	414.5 meters
Antenna Data	Height of Radiation Center Above Ground Level	98.8 meters
	Height of Radiation Center Above Mean Sea Level	513.3 meters
	Effective Radiated Power	15 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:	ERI
	Model	AL12O-22-E
	Rotation	
	Electrical Beam Tilt	1.25
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Elliptical
Elevation Radiation 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	
	Out-of-Channel Emission Mask:	Full Service