

ENGINEERING EXHIBIT

Incentive Auction Channel Reassignment

Application for Digital Television Station Construction Permit

prepared for

Gray Television Licensee, LLC

WQCW(DT) Portsmouth, OH

Facility ID 65130

Ch. 15 1000 kW 386 m

Gray Television Licensee, LLC (“Gray”) is the licensee of digital television station WQCW(DT), Channel 17, Facility ID 65130, Portsmouth, OH. *Gray* herein proposes construction of the WQCW post-auction facility on Channel 15. Reassignment of WQCW from Channel 17 to Channel 15 was specified in the *Incentive Auction Closing and Channel Reassignment Public Notice (“CCRPN”, DA 17-317, released April 13, 2017)*.

As proposed herein, WQCW will be relocated to a different tower which is 1.0 km distant from the licensed WQCW site. The proposed Channel 15 operation will employ a new broadband antenna system to be top-mounted on the tower structure associated with FCC Antenna Structure Registration number 1035121 (owned by *Gray*). The proposed antenna will be shared with the post-auction facility for WSAZ-TV (Fac ID 36912, Channel 22, Huntington, WV), under common ownership with WQCW. No change to the overall structure height will result.

Gray proposes to operate WQCW with an effective radiated power (“ERP”) of 1000 kW at 386 meters antenna height above average terrain (“HAAT”). 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.

A map is supplied as Figure 1 which depicts the standard predicted coverage contours. This map includes the location of Portsmouth, WQCW'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 48 dBμ contour.

The proposed noise limited service contour ("NLSC") extends beyond that of the *CCRPN* parameters of 952 kW ERP and 396 meters HAAT. The proposal complies with §73.3700(b)(ii) as described in the following.

The 1.0 km change in transmitting location results in a corresponding shift in coverage contour. WQCW therefore qualifies under §73.3700(b)(ii)(A) for a contour extension due to the loss of coverage area that would otherwise result from use of the proposed site.

Interference study per FCC OET Bulletin 69¹ 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. The interference study output report is provided as Table 1. This satisfies §73.3700(b)(ii)(C) for the proposed NLSC extension.

The amount of NLSC extension does not exceed one percent in any direction. Figure 2 supplies a coverage contour comparison of the proposed WQCW facility to the reassignment facility's contour and a one percent extension distance of the reassignment facility's contour. Here, the contour level is adjusted with the dipole factor to match FCC application processing. Table 1's results also demonstrate that the proposed contour is within the baseline contour plus one percent. Therefore the proposed contour extension complies with §73.3700(b)(ii)(B).

¹FCC 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, 2 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 proposed WQCW facility's terrain-limited population provides a 98.8 percent match of the *CCRPN* baseline facility, as detailed in the following table. The OET Bulletin 69 report summary in Table 1 also concludes that the proposed service area population is more than 95 percent of the baseline population.

Terrain Limited Population - Match of Reassignment

Population Summary (2010 Census) OET Bulletin 69: TVStudy	Reassignment Parameters	Proposed
Within Noise Limited Contour	1,319,479	1,307,345
Not affected by terrain losses	1,250,426	1,236,020
Match of Reassignment	---	98.85%

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 3, the total area within the proposed WQCW 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).² 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.

Human Exposure to Radiofrequency Electromagnetic Field (Environmental)

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

²WVAH-TV and WCHS-TV utilize a shared nondirectional antenna system with identical ERP, therefore the area within their NLSC is also identical.

less than 10 percent relative field at angles 10 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 1.5 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.

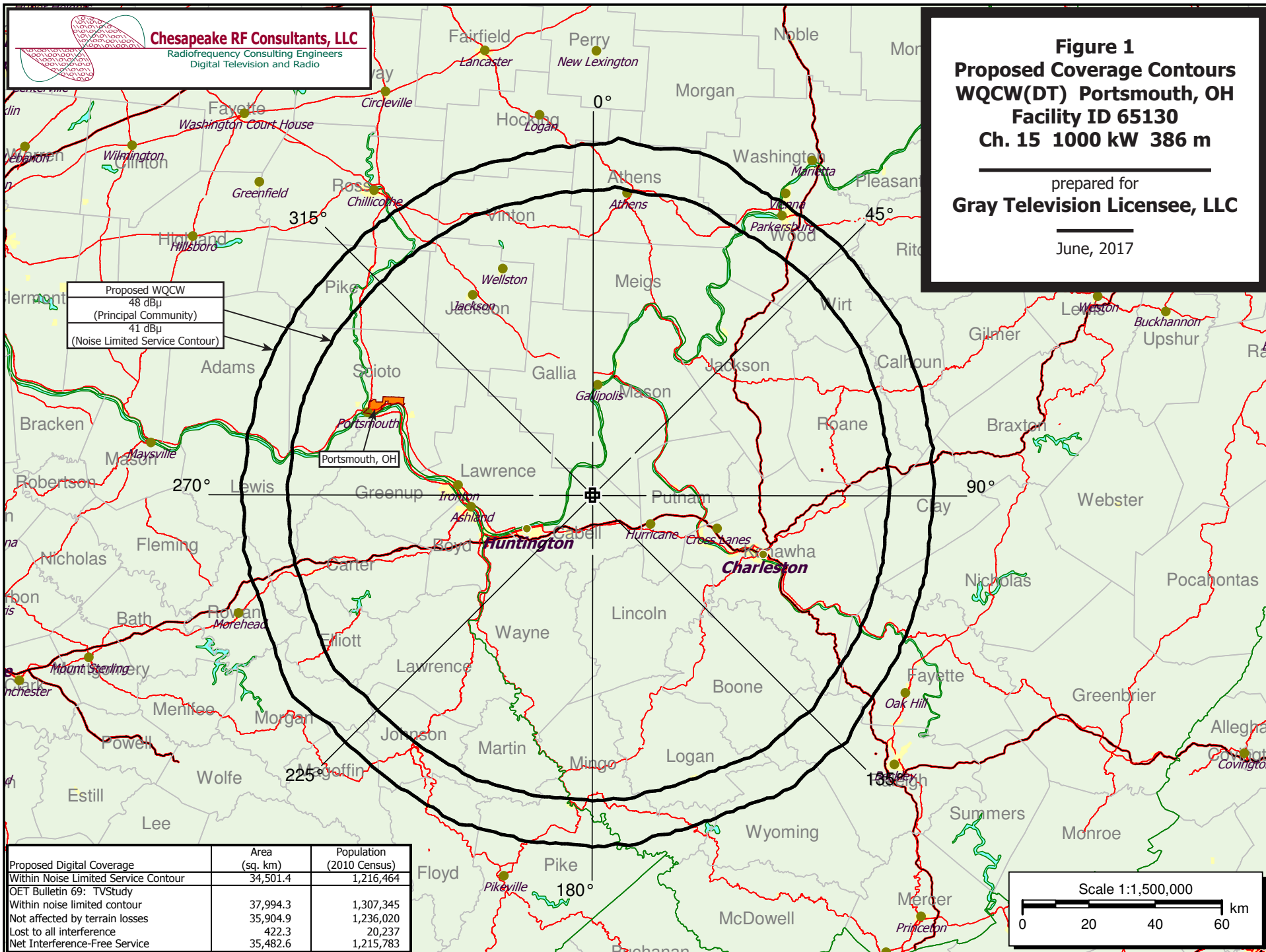
The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power 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	Proposed Contour Expansion
Figure 3	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.	June 22, 2017	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600



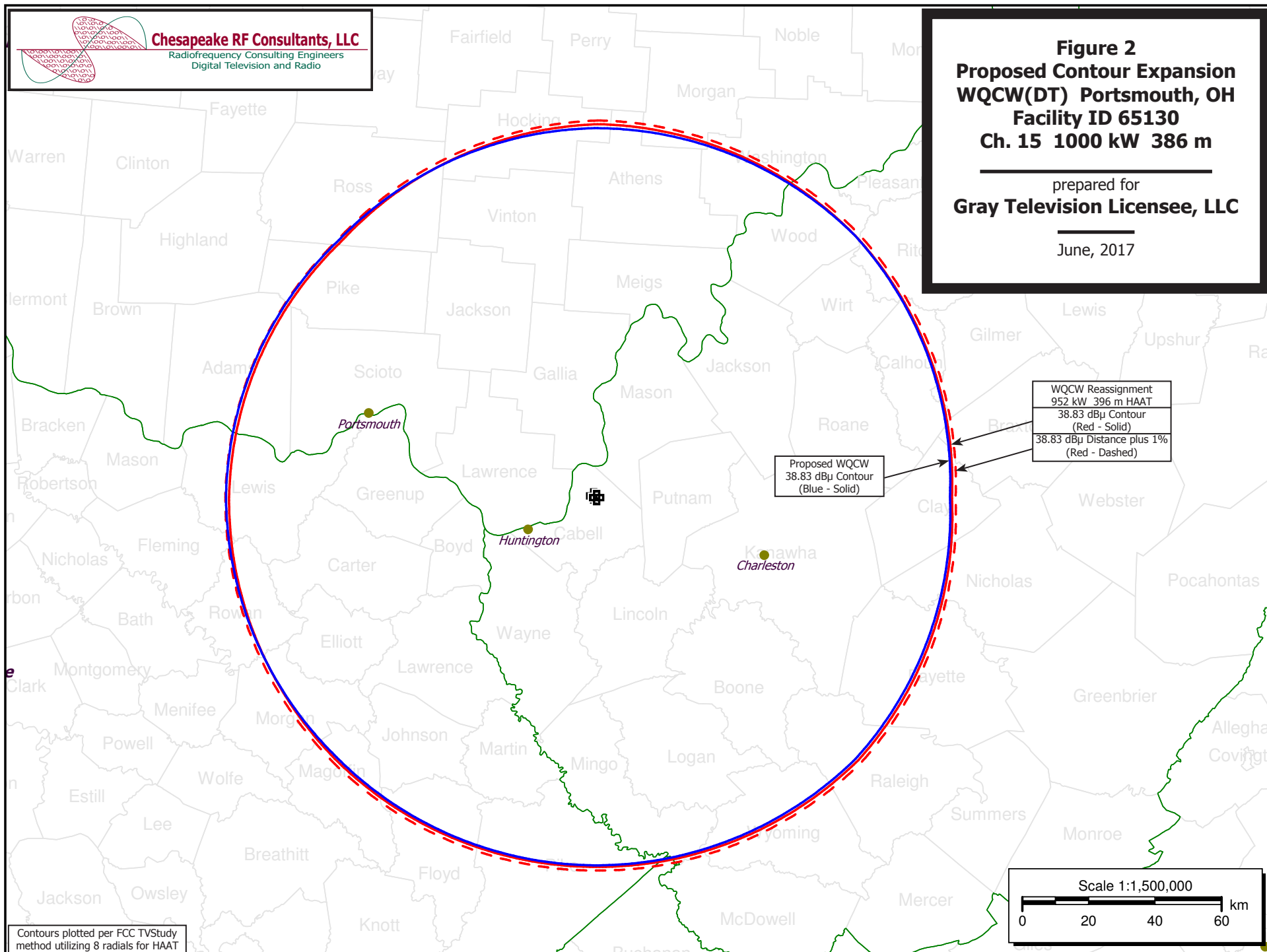


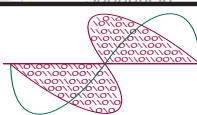
Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Figure 2
Proposed Contour Expansion
WQCW(DT) Portsmouth, OH
Facility ID 65130
Ch. 15 1000 kW 386 m

prepared for
Gray Television Licensee, LLC

June, 2017





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

Figure 3
Maximum ERP per §73.622(f)
WQCW(DT) Portsmouth, OH
Facility ID 65130
Ch. 15 1000 kW 386 m

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Gray Television Licensee, LLC

June, 2017

Proposed WQCW
41 dBμ Contour (NLSC)
Area: 34,501 sq. km

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

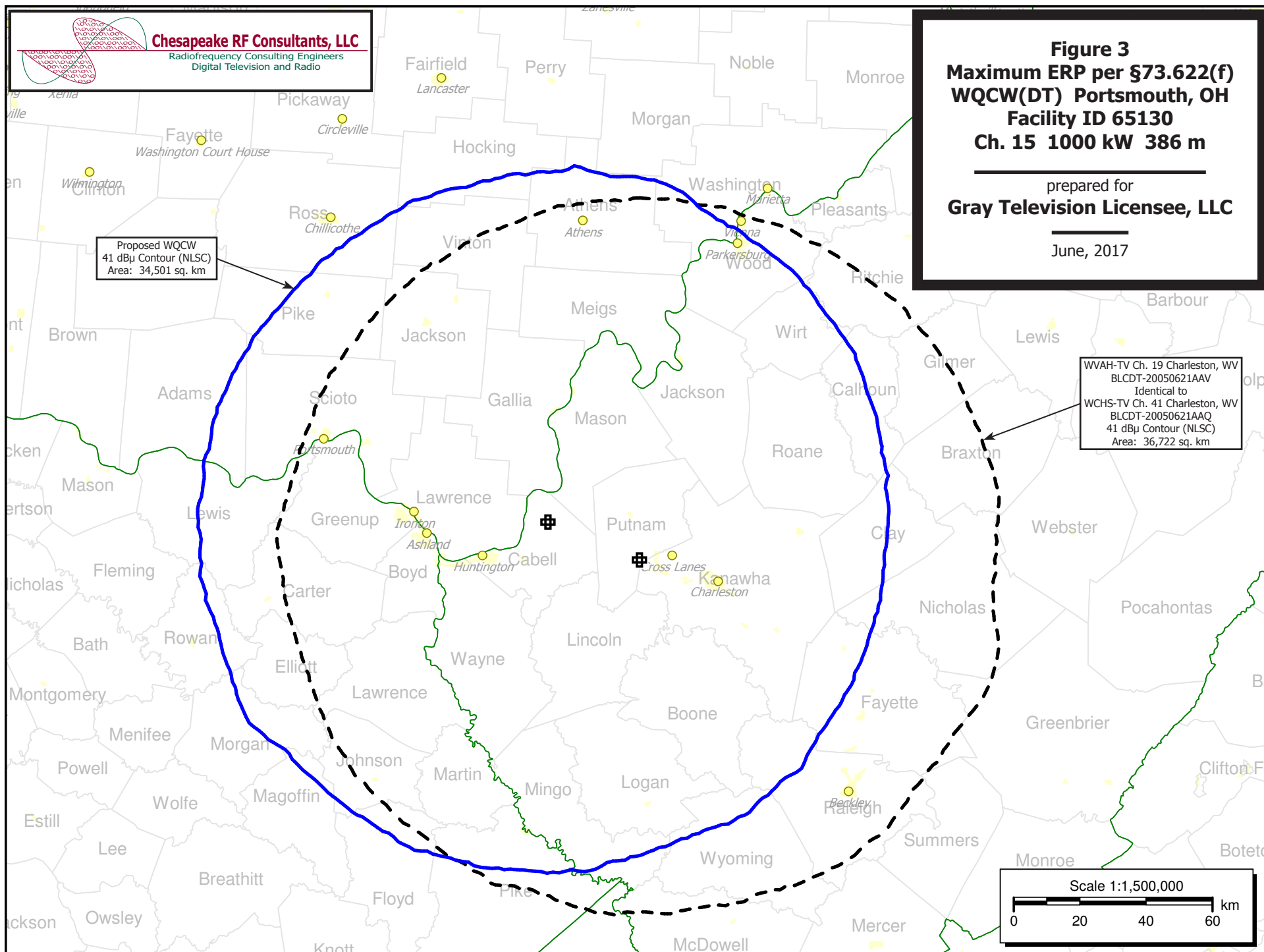
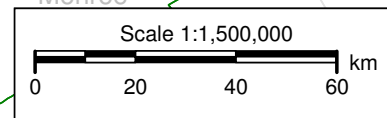


Table 1 WQCW OET Bulletin 69 Interference Study
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tvstudy v2.2.2

Database: localhost, Study: WQCW 1000KW PROP, Model: Longley-Rice
Start: 2017.06.22 09:49:34

Study created: 2017.06.22 09:49:23

Study build station data: LMS TV 2017-06-21 LMSTV

Proposal: WQCW D15 DT APP PORTSMOUTH, OH
File number: WQCW 1000KW PROP
Facility ID: 65130
Station data: User record
Record ID: 565
Country: U.S.

Stations potentially affected:

Call	Chan	Svc	Status	City, State	File Number	Distance
WCMH-TV	D14	DT	LIC	COLUMBUS, OH	BLCDT20050823AAD	176.7 km
WLFG	D14	DT	BL	GRUNDY, VA	DTVBL37808	187.2
WTTK	D15	DT	CP	KOKOMO, IN	BLANK0000024884	375.7
WTTK	D15	DT	BL	KOKOMO, IN	DTVBL56526	375.7
WLCU-CD	D15	DC	BL	CAMPBELLSVILLE, KY	DTVBL8500	304.3
WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	212.8
WPBM-CD	D15	DC	BL	SCOTTSVILLE, KY	DTVBL30580	387.6
WRAZ	D15	DT	BL	RALEIGH, NC	DTVBL64611	454.3
WEWS-TV	D15	DT	LIC	CLEVELAND, OH	BLCDT20091211ACS	321.2
WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	297.7
WPSU-TV	D15	DD	LIC	CLEARFIELD, PA	BLEDT20130614ACC	433.9
WTNZ	D15	DT	BL	KNOXVILLE, TN	DTVBL19200	317.6
WFDC-DT	D15	DT	LIC	ARLINGTON, VA	BLCDT20120515ABF	448.0
WOSU-TV	D16	DT	BL	COLUMBUS, OH	DTVBL66185	193.0

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D15
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

38.8 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	1000 kW	391.5 m	110.6 km
45.0	1000	393.6	110.8
90.0	1000	356.0	107.0
135.0	1000	399.3	111.3
180.0	1000	394.5	110.9
225.0	1000	387.1	110.1
270.0	1000	390.9	110.5
315.0	1000	372.7	108.7

ERP exceeds maximum

ERP: 1000 kW ERP maximum: 931 kW

Proposal service area is within 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

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

Table 1 WQCW OET Bulletin 69 Interference Study
(page 2 of 13)



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

No land mobile station failures found

Study cell size: 2.00 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 BLCDT20050823AAD LIC, scenario 1

Desired:	Call WCMH-TV	Chan D14	Svc DT	Status LIC	City, State COLUMBUS, OH	File Number BLCDT20050823AAD	Distance		
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	177.5 km		
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	176.7		
	WLKY	D14	DT	APP	LOUISVILLE, KY	BLANK0000025154	300.0		
	WLAJ	D14	DT	BL	LANSING, MI	DTVBL36533	299.6		
	WLFG	D14	DT	BL	GRUNDY, VA	DTVBL37808	358.8		
	WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	160.9		
	WEWS-TV	D15	DT	LIC	CLEVELAND, OH	BLCDT20091211ACS	191.1		
	WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	127.2		
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
28659.8	2,756,260	27872.2	2,712,989	27412.2	2,693,355	27420.1	2,693,293	-0.03	0.00
Undesired				Total IX	Unique IX, before		Unique IX, after		
WQCW	D15	DT	BL	43.8	507	31.9	403		
WQCW	D15	DT	APP	31.9	547			23.9	465
WLKY	D14	DT	APP	156.3	9,682	100.1	2,630	100.1	2,630
WLAJ	D14	DT	BL	168.5	12,663	8.0	374	8.0	374
WLFG	D14	DT	BL	99.6	2,277	71.7	1,861	75.7	1,883
WOHL-CD	D15	DC	BL	192.3	7,622	60.1	1,661	60.1	1,661

Interference to BLCDT20050823AAD LIC, scenario 2

Desired:	Call WCMH-TV	Chan D14	Svc DT	Status LIC	City, State COLUMBUS, OH	File Number BLCDT20050823AAD	Distance				
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	177.5 km				
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	176.7				
	WLKY	D14	DT	BL	LOUISVILLE, KY	DTVBL53939	300.0				
	WLAJ	D14	DT	BL	LANSING, MI	DTVBL36533	299.6				
	WLFG	D14	DT	BL	GRUNDY, VA	DTVBL37808	358.8				
	WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	160.9				
	WEWS-TV	D15	DT	LIC	CLEVELAND, OH	BLCDT20091211ACS	191.1				
	WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	127.2				
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX			
28659.8	2,756,260	27872.2	2,712,989	27384.1	2,691,741	27392.1	2,691,679	-0.03	0.00		
Undesired				Total IX	Unique IX, before		Unique IX, after				
WQCW	D15	DT	BL	43.8	507	31.9	403				
WQCW	D15	DT	APP	31.9	547			23.9	465		
WLKY	D14	DT	BL	184.4	11,296	128.1	4,244	128.1	4,244		
WLAJ	D14	DT	BL	168.5	12,663	8.0	374	8.0	374		
WLFG	D14	DT	BL	99.6	2,277	71.7	1,861	75.7	1,883		
WOHL-CD	D15	DC	BL	192.3	7,622	60.1	1,661	60.1	1,661		

Interference to DTVBL37808 BL, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WLFG	D14	DT	BL	GRUNDY, VA	DTVBL37808	
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	186.6 km
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	187.2

Table 1 WQCW OET Bulletin 69 Interference Study
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WSKC-CD	D14	DC	BL	ATLANTA, GA	DTVBL35090	368.7
WLKY	D14	DT	APP	LOUISVILLE, KY	BLANK0000025154	371.9
WRDC	D14	DT	BL	DURHAM, NC	DTVBL54963	342.5
WHKY-TV	D14	DD	CP	HICKORY, NC	BLANK0000024614	139.1
WCMH-TV	D14	DT	LIC	COLUMBUS, OH	BLCDT20050823AAD	358.8
WDSI-TV	D14	DT	BL	CHATTANOOGA, TN	DTVBL71353	339.3
W21CK-D	D15	DC	BL	CHARLOTTE, NC	DTVBL67022	211.0
WTNZ	D15	DT	BL	KNOXVILLE, TN	DTVBL19200	190.3

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
46547.5 1,614,321	38181.3 1,289,306	36972.4 1,257,829	36972.5 1,257,711	-0.00 0.01

Undesired	Total IX	Unique IX, before	Unique IX, after
WQCW D15 DT BL	67.4 1,450	55.5 645	
WQCW D15 DT APP	67.4 1,654		55.5 763
WLKY D14 DT APP	88.0 2,149	60.1 1,600	56.1 1,152
WRDC D14 DT BL	355.1 10,513	187.6 5,722	187.6 5,722
WHKY-TV D14 DD CP	782.3 19,879	571.0 13,884	571.0 13,884
WCMH-TV D14 DT LIC	111.3 3,618	67.5 2,128	67.5 2,490
WDSI-TV D14 DT BL	16.0 145	16.0 145	16.0 145
WTNZ D15 DT BL	24.0 737	20.0 339	20.0 339

Interference to DTVBL37808 BL, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WLFG	D14	DT	BL	GRUNDY, VA	DTVBL37808	
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	186.6 km
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	187.2
	WSKC-CD	D14	DC	BL	ATLANTA, GA	DTVBL35090	368.7
	WLKY	D14	DT	BL	LOUISVILLE, KY	DTVBL53939	371.9
	WRDC	D14	DT	BL	DURHAM, NC	DTVBL54963	342.5
	WHKY-TV	D14	DD	CP	HICKORY, NC	BLANK0000024614	139.1
	WCMH-TV	D14	DT	LIC	COLUMBUS, OH	BLCDT20050823AAD	358.8
	WDSI-TV	D14	DT	BL	CHATTANOOGA, TN	DTVBL71353	339.3
	W21CK-D	D15	DC	BL	CHARLOTTE, NC	DTVBL67022	211.0
	WTNZ	D15	DT	BL	KNOXVILLE, TN	DTVBL19200	190.3

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
46547.5 1,614,321	38181.3 1,289,306	36976.5 1,257,829	36976.5 1,257,711	-0.00 0.01

Undesired	Total IX	Unique IX, before	Unique IX, after
WQCW D15 DT BL	67.4 1,450	55.5 645	
WQCW D15 DT APP	67.4 1,654		55.5 763
WLKY D14 DT BL	84.0 2,149	56.0 1,600	52.1 1,152
WRDC D14 DT BL	355.1 10,513	187.6 5,722	187.6 5,722
WHKY-TV D14 DD CP	782.3 19,879	571.0 13,884	571.0 13,884
WCMH-TV D14 DT LIC	111.3 3,618	67.5 2,128	67.5 2,490
WDSI-TV D14 DT BL	16.0 145	16.0 145	16.0 145
WTNZ D15 DT BL	24.0 737	20.0 339	20.0 339

Interference to DTVBL37808 BL, scenario 3

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WLFG	D14	DT	BL	GRUNDY, VA	DTVBL37808	
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	186.6 km
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	187.2
	WSKC-CD	D14	DC	BL	ATLANTA, GA	DTVBL35090	368.7
	WLKY	D14	DT	APP	LOUISVILLE, KY	BLANK0000025154	371.9
	WRDC	D14	DT	BL	DURHAM, NC	DTVBL54963	342.5
	WHKY-TV	D14	DD	BL	HICKORY, NC	DTVBL65919	139.1
	WCMH-TV	D14	DT	LIC	COLUMBUS, OH	BLCDT20050823AAD	358.8
	WDSI-TV	D14	DT	BL	CHATTANOOGA, TN	DTVBL71353	339.3
	W21CK-D	D15	DC	BL	CHARLOTTE, NC	DTVBL67022	211.0
	WTNZ	D15	DT	BL	KNOXVILLE, TN	DTVBL19200	190.3

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
46547.5 1,614,321	38181.3 1,289,306	36964.5 1,257,594	36964.5 1,257,476	-0.00 0.01

Undesired	Total IX	Unique IX, before	Unique IX, after
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Table 1 WQCW OET Bulletin 69 Interference Study
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WQCW D15 DT BL	67.4	1,450	55.5	645		
WQCW D15 DT APP	67.4	1,654			55.5	763
WLKY D14 DT APP	88.0	2,149	60.1	1,600	56.1	1,152
WRDC D14 DT BL	355.1	10,513	187.6	5,722	187.6	5,722
WHKY-TV D14 DD BL	786.3	20,089	578.9	14,119	578.9	14,119
WCMH-TV D14 DT LIC	111.3	3,618	71.5	2,153	71.5	2,515
WDSI-TV D14 DT BL	16.0	145	16.0	145	16.0	145
WTNZ D15 DT BL	24.0	737	20.0	339	20.0	339

Interference to DTVBL37808 BL, scenario 4

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WLFG	D14	DT	BL	GRUNDY, VA	DTVBL37808	
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	186.6 km
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	187.2
	WSKC-CD	D14	DC	BL	ATLANTA, GA	DTVBL35090	368.7
	WLKY	D14	DT	BL	LOUISVILLE, KY	DTVBL53939	371.9
	WRDC	D14	DT	BL	DURHAM, NC	DTVBL54963	342.5
	WHKY-TV	D14	DD	BL	HICKORY, NC	DTVBL65919	139.1
	WCMH-TV	D14	DT	LIC	COLUMBUS, OH	BLCDT20050823AAD	358.8
	WDSI-TV	D14	DT	BL	CHATTANOOGA, TN	DTVBL71353	339.3
	W21CK-D	D15	DC	BL	CHARLOTTE, NC	DTVBL67022	211.0
	WTNZ	D15	DT	BL	KNOXVILLE, TN	DTVBL19200	190.3

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	46547.5	1,614,321	38181.3	1,289,306	36968.5	1,257,594	-0.00 0.01

Undesired	Total IX		Unique IX, before		Unique IX, after	
WQCW D15 DT BL	67.4	1,450	55.5	645		
WQCW D15 DT APP	67.4	1,654			55.5	763
WLKY D14 DT BL	84.0	2,149	56.0	1,600	52.1	1,152
WRDC D14 DT BL	355.1	10,513	187.6	5,722	187.6	5,722
WHKY-TV D14 DD BL	786.3	20,089	578.9	14,119	578.9	14,119
WCMH-TV D14 DT LIC	111.3	3,618	71.5	2,153	71.5	2,515
WDSI-TV D14 DT BL	16.0	145	16.0	145	16.0	145
WTNZ D15 DT BL	24.0	737	20.0	339	20.0	339

Interference to BLANK0000024884 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WTTK	D15	DT	CP	KOKOMO, IN	BLANK0000024884	
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	376.7 km
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	375.7
	WLKY	D14	DT	APP	LOUISVILLE, KY	BLANK0000025154	172.0
	W15BU-D	D15	DC	LIC	JOHNSON CITY, IL	BLDTA20090804AAF	327.6
	WICS	D15	DT	BL	SPRINGFIELD, IL	DTVBL25686	278.3
	WYYW-CD	D15	DC	LIC	EVANSVILLE, IN	BLDTA20130109AGE	230.7
	WLCU-CD	D15	DC	BL	CAMPBELLSVILLE, KY	DTVBL8500	292.1
	WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	165.5
	WPBM-CD	D15	DC	BL	SCOTTSVILLE, KY	DTVBL30580	339.8
	W33BY-D	D15	DC	BL	DETROIT, MI	DTVBL25722	382.3
	WXSP-CD	D15	DC	LIC	GRAND RAPIDS, MI	BLDTA20100714AAG	349.8
	WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	199.7
	WFWC-CD	D16	DC	BL	FORT WAYNE, IN	DTVBL67485	161.5
	WDNI-CD	D16	DC	BL	INDIANAPOLIS, IN	DTVBL28199	14.5
	WMYO	D16	DT	BL	SALEM, IN	DTVBL34167	173.7

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	27338.7	2,817,698	27143.1	2,795,837	26045.5	2,760,599	0.00 0.00

Undesired	Total IX		Unique IX, before		Unique IX, after	
WQCW D15 DT BL	55.7	2,599	0.0	0		
WQCW D15 DT APP	51.7	2,545			0.0	0
WICS D15 DT BL	299.3	8,959	247.4	4,360	247.4	4,360
WYYW-CD D15 DC LIC	4.0	0	4.0	0	4.0	0
WXIX-TV D15 DT BL	842.1	30,813	714.6	23,086	718.6	23,140
WOHL-CD D15 DC BL	4.0	807	0.0	0	0.0	0
WDNI-CD D16 DC BL	8.0	215	4.0	65	4.0	65
WMYO D16 DT BL	20.0	529	0.0	0	0.0	0

Table 1 WQCW OET Bulletin 69 Interference Study
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Interference to BLANK0000024884 CP, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WTTK	D15	DT	CP	KOKOMO, IN	BLANK0000024884	
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	376.7 km
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	375.7
	WLKY	D14	DT	BL	LOUISVILLE, KY	DTVBL53939	172.0
	W15BU-D	D15	DC	LIC	JOHNSON CITY, IL	BLDTA20090804AAF	327.6
	WICS	D15	DT	BL	SPRINGFIELD, IL	DTVBL25686	278.3
	WYYW-CD	D15	DC	LIC	EVANSVILLE, IN	BLDTA20130109AGB	230.7
	WLCU-CD	D15	DC	BL	CAMPBELLSVILLE, KY	DTVBL8500	292.1
	WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	165.5
	WPBM-CD	D15	DC	BL	SCOTTSVILLE, KY	DTVBL30580	339.8
	W33BY-D	D15	DC	BL	DETROIT, MI	DTVBL25722	382.3
	WXSP-CD	D15	DC	LIC	GRAND RAPIDS, MI	BLDTA20100714AAG	349.8
	WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	199.7
	WFWC-CD	D16	DC	BL	FORT WAYNE, IN	DTVBL67485	161.5
	WDNI-CD	D16	DC	BL	INDIANAPOLIS, IN	DTVBL28199	14.5
	WMYO	D16	DT	BL	SALEM, IN	DTVBL34167	173.7
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
27338.7 2,817,698		27143.1 2,795,837		26045.5 2,760,599		26045.5 2,760,599	0.00 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
WQCW D15 DT BL		55.7 2,599		0.0 0			
WQCW D15 DT APP		51.7 2,545				0.0 0	
WICS D15 DT BL		299.3 8,959		247.4 4,360		247.4 4,360	
WYYW-CD D15 DC LIC		4.0 0		4.0 0		4.0 0	
WXIX-TV D15 DT BL		842.1 30,813		714.6 23,086		718.6 23,140	
WOHL-CD D15 DC BL		4.0 807		0.0 0		0.0 0	
WDNI-CD D16 DC BL		8.0 215		4.0 65		4.0 65	
WMYO D16 DT BL		20.0 529		0.0 0		0.0 0	

Interference to DTVBL56526 BL, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WTTK	D15	DT	BL	KOKOMO, IN	DTVBL56526	
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	376.7 km
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	375.7
	WLKY	D14	DT	APP	LOUISVILLE, KY	BLANK0000025154	172.0
	W15BU-D	D15	DC	LIC	JOHNSON CITY, IL	BLDTA20090804AAF	327.6
	WICS	D15	DT	BL	SPRINGFIELD, IL	DTVBL25686	278.3
	WYYW-CD	D15	DC	LIC	EVANSVILLE, IN	BLDTA20130109AGB	230.7
	WLCU-CD	D15	DC	BL	CAMPBELLSVILLE, KY	DTVBL8500	292.2
	WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	165.5
	WPBM-CD	D15	DC	BL	SCOTTSVILLE, KY	DTVBL30580	339.8
	W33BY-D	D15	DC	BL	DETROIT, MI	DTVBL25722	382.3
	WXSP-CD	D15	DC	LIC	GRAND RAPIDS, MI	BLDTA20100714AAG	349.7
	WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	199.7
	WFWC-CD	D16	DC	BL	FORT WAYNE, IN	DTVBL67485	161.5
	WDNI-CD	D16	DC	BL	INDIANAPOLIS, IN	DTVBL28199	14.5
	WMYO	D16	DT	BL	SALEM, IN	DTVBL34167	173.7
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
27338.7 2,817,698		27143.1 2,795,808		26061.4 2,760,894		26061.4 2,760,894	0.00 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
WQCW D15 DT BL		55.7 2,599		0.0 0			
WQCW D15 DT APP		51.7 2,545				0.0 0	
WICS D15 DT BL		299.4 8,401		239.5 4,320		239.5 4,320	
WYYW-CD D15 DC LIC		8.0 110		4.0 0		4.0 0	
WXIX-TV D15 DT BL		838.1 30,594		698.7 23,275		702.6 23,329	
WOHL-CD D15 DC BL		4.0 807		0.0 0		0.0 0	
WDNI-CD D16 DC BL		4.0 150		0.0 0		0.0 0	
WMYO D16 DT BL		20.0 529		0.0 0		0.0 0	

Interference to DTVBL56526 BL, scenario 2

Table 1 WQCW OET Bulletin 69 Interference Study
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Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WTTK	D15	DT	BL	KOKOMO, IN	DTVBL56526	
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	376.7 km
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	375.7
	WLKY	D14	DT	BL	LOUISVILLE, KY	DTVBL53939	172.0
	W15BU-D	D15	DC	LIC	JOHNSON CITY, IL	BLDTA20090804AAF	327.6
	WICS	D15	DT	BL	SPRINGFIELD, IL	DTVBL25686	278.3
	WYYW-CD	D15	DC	LIC	EVANSVILLE, IN	BLDTA20130109AGB	230.7
	WLCU-CD	D15	DC	BL	CAMPBELLSVILLE, KY	DTVBL8500	292.2
	WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	165.5
	WPBM-CD	D15	DC	BL	SCOTTSVILLE, KY	DTVBL30580	339.8
	W33BY-D	D15	DC	BL	DETROIT, MI	DTVBL25722	382.3
	WXSP-CD	D15	DC	LIC	GRAND RAPIDS, MI	BLDTA20100714AAG	349.7
	WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	199.7
	WFWC-CD	D16	DC	BL	FORT WAYNE, IN	DTVBL67485	161.5
	WDNI-CD	D16	DC	BL	INDIANAPOLIS, IN	DTVBL28199	14.5
	WMYO	D16	DT	BL	SALEM, IN	DTVBL34167	173.7
<hr/>							
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	27338.7	2,817,698	27143.1	2,795,808	26061.4	2,760,894	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WQCW D15 DT BL	55.7	2,599	0.0 0
WQCW D15 DT APP	51.7	2,545	0.0 0
WICS D15 DT BL	299.4	8,401	239.5 4,320
WYYW-CD D15 DC LIC	8.0	110	4.0 0
WXIX-TV D15 DT BL	838.1	30,594	698.7 23,275
WOHL-CD D15 DC BL	4.0	807	0.0 0
WDNI-CD D16 DC BL	4.0	150	0.0 0
WMYO D16 DT BL	20.0	529	0.0 0

Interference to DTVBL8500 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL8500 BL, scenario 2
Proposal causes no interference.

Interference to DTVBL8500 BL, scenario 3
Proposal causes no interference.

Interference to DTVBL8500 BL, scenario 4
Proposal causes no interference.

Interference to DTVBL8500 BL, scenario 5
Proposal causes no interference.

Interference to DTVBL8500 BL, scenario 6
Proposal causes no interference.

Interference to DTVBL8500 BL, scenario 7
Proposal causes no interference.

Interference to DTVBL8500 BL, scenario 8
Proposal causes no interference.

Interference to DTVBL39738 BL, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	213.8 km
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	212.8

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WLKY	D14	DT	APP	LOUISVILLE, KY	BLANK0000025154	139.1
WCMH-TV	D14	DT	LIC	COLUMBUS, OH	BLCDDT20050823AAD	160.9
WYYW-CD	D15	DC	LIC	EVANSVILLE, IN	BLDTA20130109AGB	268.1
WTTK	D15	DT	CP	KOKOMO, IN	BLANK0000024884	165.5
WLCU-CD	D15	DC	BL	CAMPBELLSVILLE, KY	DTVBL8500	209.9
WPBM-CD	D15	DC	BL	SCOTTSVILLE, KY	DTVBL30580	287.8
WEWS-TV	D15	DT	LIC	CLEVELAND, OH	BLCDDT20091211ACS	346.8
WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	184.1
WTNZ	D15	DT	BL	KNOXVILLE, TN	DTVBL19200	350.7
WDNI-CD	D16	DC	BL	INDIANAPOLIS, IN	DTVBL28199	151.4
WMYO	D16	DT	BL	SALEM, IN	DTVBL34167	141.7
WOSU-TV	D16	DT	BL	COLUMBUS, OH	DTVBL66185	180.6

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
19502.8 2,825,515	19362.4 2,809,282	17361.8 2,703,389	17354.1 2,701,834	0.04 0.06

Undesired	Total IX	Unique IX, before	Unique IX, after
WQCW D15 DT BL	836.1 47,786	392.1 24,357	
WQCW D15 DT APP	835.7 48,443		399.8 25,912
WTTK D15 DT CP	1596.5 75,615	1144.4 47,332	1148.6 48,230
WEWS-TV D15 DT LIC	16.1 16,930	0.0 0	0.0 0
WOHL-CD D15 DC BL	16.1 11,095	0.0 0	0.0 0
WMYO D16 DT BL	28.0 43	4.0 0	4.0 0

Interference to DTVBL39738 BL, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	213.8 km
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	212.8
	WLKY	D14	DT	BL	LOUISVILLE, KY	DTVBL53939	139.1
	WCMH-TV	D14	DT	LIC	COLUMBUS, OH	BLCDDT20050823AAD	160.9
	WYYW-CD	D15	DC	LIC	EVANSVILLE, IN	BLDTA20130109AGB	268.1
	WTTK	D15	DT	CP	KOKOMO, IN	BLANK0000024884	165.5
	WLCU-CD	D15	DC	BL	CAMPBELLSVILLE, KY	DTVBL8500	209.9
	WPBM-CD	D15	DC	BL	SCOTTSVILLE, KY	DTVBL30580	287.8
	WEWS-TV	D15	DT	LIC	CLEVELAND, OH	BLCDDT20091211ACS	346.8
	WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	184.1
	WTNZ	D15	DT	BL	KNOXVILLE, TN	DTVBL19200	350.7
	WDNI-CD	D16	DC	BL	INDIANAPOLIS, IN	DTVBL28199	151.4
	WMYO	D16	DT	BL	SALEM, IN	DTVBL34167	141.7
	WOSU-TV	D16	DT	BL	COLUMBUS, OH	DTVBL66185	180.6

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
19502.8 2,825,515	19362.4 2,809,282	17361.8 2,703,389	17354.1 2,701,834	0.04 0.06

Undesired	Total IX	Unique IX, before	Unique IX, after
WQCW D15 DT BL	836.1 47,786	392.1 24,357	
WQCW D15 DT APP	835.7 48,443		399.8 25,912
WTTK D15 DT CP	1596.5 75,615	1144.4 47,332	1148.6 48,230
WEWS-TV D15 DT LIC	16.1 16,930	0.0 0	0.0 0
WOHL-CD D15 DC BL	16.1 11,095	0.0 0	0.0 0
WMYO D16 DT BL	28.0 43	4.0 0	4.0 0

Interference to DTVBL39738 BL, scenario 3

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	213.8 km
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	212.8
	WLKY	D14	DT	APP	LOUISVILLE, KY	BLANK0000025154	139.1
	WCMH-TV	D14	DT	LIC	COLUMBUS, OH	BLCDDT20050823AAD	160.9
	WYYW-CD	D15	DC	LIC	EVANSVILLE, IN	BLDTA20130109AGB	268.1
	WTTK	D15	DT	BL	KOKOMO, IN	DTVBL56526	165.5
	WLCU-CD	D15	DC	BL	CAMPBELLSVILLE, KY	DTVBL8500	209.9
	WPBM-CD	D15	DC	BL	SCOTTSVILLE, KY	DTVBL30580	287.8
	WEWS-TV	D15	DT	LIC	CLEVELAND, OH	BLCDDT20091211ACS	346.8
	WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	184.1
	WTNZ	D15	DT	BL	KNOXVILLE, TN	DTVBL19200	350.7

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WDNI-CD	D16	DC	BL	INDIANAPOLIS, IN	DTVBL28199	151.4
WMYO	D16	DT	BL	SALEM, IN	DTVBL34167	141.7
WOSU-TV	D16	DT	BL	COLUMBUS, OH	DTVBL66185	180.6

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
19502.8 2,825,515	19362.4 2,809,282	17357.7 2,703,331	17350.0 2,701,776	0.04 0.06

Undesired	Total IX	Unique IX, before	Unique IX, after
WQCW D15 DT BL	836.1 47,786	396.1 24,394	
WQCW D15 DT APP	835.7 48,443		403.8 25,949
WTTK D15 DT BL	1596.5 75,636	1148.5 47,390	1152.6 48,288
WEWS-TV D15 DT LIC	16.1 16,930	0.0 0	0.0 0
WOHL-CD D15 DC BL	16.1 11,095	0.0 0	0.0 0
WMYO D16 DT BL	28.0 43	4.0 0	4.0 0

Interference to DTVBL39738 BL, scenario 4

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	213.8 km
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	212.8
	WLKY	D14	DT	BL	LOUISVILLE, KY	DTVBL53939	139.1
	WCMH-TV	D14	DT	LIC	COLUMBUS, OH	BLCDT20050823AAD	160.9
	WYYW-CD	D15	DC	LIC	EVANSVILLE, IN	BLDTA20130109AGB	268.1
	WTTK	D15	DT	BL	KOKOMO, IN	DTVBL56526	165.5
	WLCU-CD	D15	DC	BL	CAMPBELLSVILLE, KY	DTVBL8500	209.9
	WPBM-CD	D15	DC	BL	SCOTTSVILLE, KY	DTVBL30580	287.8
	WEWS-TV	D15	DT	LIC	CLEVELAND, OH	BLCDT20091211ACS	346.8
	WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	184.1
	WTNZ	D15	DT	BL	KNOXVILLE, TN	DTVBL19200	350.7
	WDNI-CD	D16	DC	BL	INDIANAPOLIS, IN	DTVBL28199	151.4
	WMYO	D16	DT	BL	SALEM, IN	DTVBL34167	141.7
	WOSU-TV	D16	DT	BL	COLUMBUS, OH	DTVBL66185	180.6

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
19502.8 2,825,515	19362.4 2,809,282	17357.7 2,703,331	17350.0 2,701,776	0.04 0.06

Undesired	Total IX	Unique IX, before	Unique IX, after
WQCW D15 DT BL	836.1 47,786	396.1 24,394	
WQCW D15 DT APP	835.7 48,443		403.8 25,949
WTTK D15 DT BL	1596.5 75,636	1148.5 47,390	1152.6 48,288
WEWS-TV D15 DT LIC	16.1 16,930	0.0 0	0.0 0
WOHL-CD D15 DC BL	16.1 11,095	0.0 0	0.0 0
WMYO D16 DT BL	28.0 43	4.0 0	4.0 0

Interference to DTVBL30580 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL30580 BL, scenario 2
Proposal causes no interference.

Interference to DTVBL30580 BL, scenario 3
Proposal causes no interference.

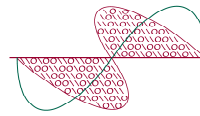
Interference to DTVBL30580 BL, scenario 4
Proposal causes no interference.

Interference to DTVBL30580 BL, scenario 5
Proposal causes no interference.

Interference to DTVBL30580 BL, scenario 6
Proposal causes no interference.

Interference to DTVBL30580 BL, scenario 7

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

Proposal causes no interference.

Interference to DTVBL30580 BL, scenario 8
Proposal causes no interference.

Interference to DTVBL30580 BL, scenario 9
Proposal causes no interference.

Interference to DTVBL30580 BL, scenario 10
Proposal causes no interference.

Interference to DTVBL30580 BL, scenario 11
Proposal causes no interference.

Interference to DTVBL30580 BL, scenario 12
Proposal causes no interference.

Interference to DTVBL30580 BL, scenario 13
Proposal causes no interference.

Interference to DTVBL30580 BL, scenario 14
Proposal causes no interference.

Interference to DTVBL30580 BL, scenario 15
Proposal causes no interference.

Interference to DTVBL30580 BL, scenario 16
Proposal causes no interference.

Interference to DTVBL64611 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL64611 BL, scenario 2
Proposal causes no interference.

Interference to DTVBL64611 BL, scenario 3
Proposal causes no interference.

Interference to DTVBL64611 BL, scenario 4
Proposal causes no interference.

Interference to DTVBL64611 BL, scenario 5
Proposal causes no interference.

Interference to DTVBL64611 BL, scenario 6
Proposal causes no interference.

Interference to DTVBL64611 BL, scenario 7
Proposal causes no interference.

Interference to DTVBL64611 BL, scenario 8
Proposal causes no interference.

Interference to BLCDT20091211ACS LIC, scenario 1

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Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WEWS-TV	D15	DT	LIC	CLEVELAND, OH	BLCDT20091211ACS	
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	321.5 km
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	321.2
	WCMH-TV	D14	DT	LIC	COLUMBUS, OH	BLCDT20050823AAD	191.1
	WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	346.8
	WDCQ-TV	D15	DT	LIC	BAD AXE, MI	BLEDT20030922ABG	288.9
	W33BY-D	D15	DC	BL	DETROIT, MI	DTVBL25722	161.7
	WXSP-CD	D15	DC	LIC	GRAND RAPIDS, MI	BLDTA20100714AAG	378.2
	WBNF-CD	D15	DC	LIC	BUFFALO, NY	BLDTA20111130LWW	294.0
	WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	214.0
	WPSU-TV	D15	DD	LIC	CLEARFIELD, PA	BLEDT20130614ACC	275.2
	WOSU-TV	D16	DT	BL	COLUMBUS, OH	DTVBL66185	168.9
	WINP-TV	D16	DT	BL	PITTSBURGH, PA	DTVBL41314	179.8
<hr/>							
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	26596.2	4,112,984	26279.5	4,078,299	25488.3	3,962,701	0.03 0.06
	4966.2	22,068	4966.2	22,068	4966.2	22,068	0.00 0.00
	(in Canada)						

Undesired	Total IX		Unique IX, before		Unique IX, after	
WQCW D15 DT BL	135.8	7,565	99.9	4,631		
WQCW D15 DT APP	143.8	9,624			107.9	6,937
WPSU-TV D15 DD LIC	691.3	110,967	655.4	108,033	655.4	108,280

Interference to BLCDT20091211ACS LIC, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WEWS-TV	D15	DT	LIC	CLEVELAND, OH	BLCDT20091211ACS	
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	321.5 km
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	321.2
	WCMH-TV	D14	DT	LIC	COLUMBUS, OH	BLCDT20050823AAD	191.1
	WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	346.8
	WDCQ-TV	D15	DT	LIC	BAD AXE, MI	BLEDT20030922ABG	288.9
	W33BY-D	D15	DC	BL	DETROIT, MI	DTVBL25722	161.7
	WXSP-CD	D15	DC	LIC	GRAND RAPIDS, MI	BLDTA20100714AAG	378.2
	WBNF-CD	D15	DC	LIC	BUFFALO, NY	BLDTA20111130LWW	294.0
	WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	214.0
	WPSU-TV	D15	DD	LIC	CLEARFIELD, PA	BLEDT20130614ACC	275.2
	WOSU-TV	D16	DT	BL	COLUMBUS, OH	DTVBL66185	168.9
	WINP-TV	D16	DT	BL	PITTSBURGH, PA	DTVBL41314	179.8
<hr/>							
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	26596.2	4,112,984	26279.5	4,078,299	25488.3	3,962,701	0.03 0.06
	4966.2	22,068	4966.2	22,068	4966.2	22,068	0.00 0.00
	(in Canada)						

Undesired	Total IX		Unique IX, before		Unique IX, after	
WQCW D15 DT BL	135.8	7,565	99.9	4,631		
WQCW D15 DT APP	143.8	9,624			107.9	6,937
WPSU-TV D15 DD LIC	691.3	110,967	655.4	108,033	655.4	108,280

Interference to DTVBL68549 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL68549 BL, scenario 2
Proposal causes no interference.

Interference to BLEDT20130614ACC LIC, scenario 1
Proposal causes no interference.

Interference to DTVBL19200 BL, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WTNZ	D15	DT	BL	KNOXVILLE, TN	DTVBL19200	

Table 1 WQCW OET Bulletin 69 Interference Study
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Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	317.6 km
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	317.6
	WDSI-TV	D14	DT	BL	CHATTANOOGA, TN	DTVBL71353	149.5
	WLFG	D14	DT	BL	GRUNDY, VA	DTVBL37808	190.3
	WAFF	D15	DT	CP	HUNTSVILLE, AL	BLANK0000025101	275.4
	WYYW-CD	D15	DC	LIC	EVANSVILLE, IN	BLDTA20130109AGB	368.5
	WLCU-CD	D15	DC	BL	CAMPBELLSVILLE, KY	DTVBL8500	195.3
	WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	350.7
	WPBM-CD	D15	DC	BL	SCOTTSVILLE, KY	DTVBL30580	212.5
	W21CK-D	D15	DC	BL	CHARLOTTE, NC	DTVBL67022	291.2
	WLTX	D15	DT	BL	COLUMBIA, SC	DTVBL37176	358.5
	WPXA-TV	D16	DT	BL	ROME, GA	DTVBL51969	198.5
	WAPK-CD	D16	DC	BL	BRISTOL VA/KINGSPORT, TN	DTVBL77677	168.7

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
37847.9 1,722,327	30979.0 1,530,634	30087.4 1,504,870	30063.3 1,505,389	0.08 -0.03

Undesired	Total IX	Unique IX, before	Unique IX, after
WQCW D15 DT BL	351.2 8,172	271.4 6,874	
WQCW D15 DT APP	375.3 7,883		295.4 6,355
WDSI-TV D14 DT BL	84.8 1,976	76.8 1,847	76.8 1,847
WLFG D14 DT BL	79.8 2,342	63.9 1,415	63.9 1,415
WAFF D15 DT CP	112.1 4,257	56.1 1,496	56.1 1,496
WLCU-CD D15 DC BL	151.6 2,840	63.7 831	63.7 745
WXIX-TV D15 DT BL	44.0 1,173	8.0 207	8.0 33
WPBM-CD D15 DC BL	116.0 5,173	56.0 2,497	56.0 2,497
WLTX D15 DT BL	28.2 0	28.2 0	28.2 0
WPXA-TV D16 DT BL	7.9 0	7.9 0	7.9 0
WAPK-CD D16 DC BL	115.9 6,421	91.9 5,338	91.9 5,368

Interference to DTVBL19200 BL, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WTNZ	D15	DT	BL	KNOXVILLE, TN	DTVBL19200	
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	317.6 km
	WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	317.6
	WDSI-TV	D14	DT	BL	CHATTANOOGA, TN	DTVBL71353	149.5
	WLFG	D14	DT	BL	GRUNDY, VA	DTVBL37808	190.3
	WAFF	D15	DT	CP	HUNTSVILLE, AL	BLANK0000025101	275.4
	WYYW-CD	D15	DC	LIC	EVANSVILLE, IN	BLDTA20130109AGB	368.5
	WLCU-CD	D15	DC	BL	CAMPBELLSVILLE, KY	DTVBL8500	195.3
	WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	350.7
	WPBM-CD	D15	DC	BL	SCOTTSVILLE, KY	DTVBL30580	212.5
	W21CK-D	D15	DC	BL	CHARLOTTE, NC	DTVBL67022	291.2
	WLTX	D15	DT	BL	COLUMBIA, SC	DTVBL37176	358.5
	WPXA-TV	D16	DT	BL	ROME, GA	DTVBL51969	198.5
	WAPK-CD	D16	DC	BL	BRISTOL VA/KINGSPORT, TN	DTVBL77677	168.7

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
37847.9 1,722,327	30979.0 1,530,634	30087.4 1,504,870	30063.3 1,505,389	0.08 -0.03

Undesired	Total IX	Unique IX, before	Unique IX, after
WQCW D15 DT BL	351.2 8,172	271.4 6,874	
WQCW D15 DT APP	375.3 7,883		295.4 6,355
WDSI-TV D14 DT BL	84.8 1,976	76.8 1,847	76.8 1,847
WLFG D14 DT BL	79.8 2,342	63.9 1,415	63.9 1,415
WAFF D15 DT CP	112.1 4,257	56.1 1,496	56.1 1,496
WLCU-CD D15 DC BL	151.6 2,840	63.7 831	63.7 745
WXIX-TV D15 DT BL	44.0 1,173	8.0 207	8.0 33
WPBM-CD D15 DC BL	116.0 5,173	56.0 2,497	56.0 2,497
WLTX D15 DT BL	28.2 0	28.2 0	28.2 0
WPXA-TV D16 DT BL	7.9 0	7.9 0	7.9 0
WAPK-CD D16 DC BL	115.9 6,421	91.9 5,338	91.9 5,368

Interference to DTVBL19200 BL, scenario 3

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WTNZ	D15	DT	BL	KNOXVILLE, TN	DTVBL19200	
Undesireds:	WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	317.6 km

Table 1 WQCW OET Bulletin 69 Interference Study
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WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	317.6
WDSI-TV	D14	DT	BL	CHATTANOOGA, TN	DTVBL71353	149.5
WLFG	D14	DT	BL	GRUNDY, VA	DTVBL37808	190.3
WAFF	D15	DT	BL	HUNTSVILLE, AL	DTVBL591	275.4
WYYW-CD	D15	DC	LIC	EVANSVILLE, IN	BLDTA20130109AGB	368.5
WLCU-CD	D15	DC	BL	CAMPBELLSVILLE, KY	DTVBL8500	195.3
WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	350.7
WPBM-CD	D15	DC	BL	SCOTTSVILLE, KY	DTVBL30580	212.5
W21CK-D	D15	DC	BL	CHARLOTTE, NC	DTVBL67022	291.2
WLTX	D15	DT	BL	COLUMBIA, SC	DTVBL37176	358.5
WPXA-TV	D16	DT	BL	ROME, GA	DTVBL51969	198.5
WAPK-CD	D16	DC	BL	BRISTOL VA/KINGSPORT, TN	DTVBL77677	168.7

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
37847.9 1,722,327	30979.0 1,530,634	30087.4 1,504,870	30063.3 1,505,389	0.08 -0.03

Undesired	Total IX	Unique IX, before	Unique IX, after
WQCW D15 DT BL	351.2 8,172	271.4 6,874	
WQCW D15 DT APP	375.3 7,883		295.4 6,355
WDSI-TV D14 DT BL	84.8 1,976	76.8 1,847	76.8 1,847
WLFG D14 DT BL	79.8 2,342	63.9 1,415	63.9 1,415
WAFF D15 DT BL	112.1 4,257	56.1 1,496	56.1 1,496
WLCU-CD D15 DC BL	151.6 2,840	63.7 831	63.7 745
WXIX-TV D15 DT BL	44.0 1,173	8.0 207	8.0 33
WPBM-CD D15 DC BL	116.0 5,173	56.0 2,497	56.0 2,497
WLTX D15 DT BL	28.2 0	28.2 0	28.2 0
WPXA-TV D16 DT BL	7.9 0	7.9 0	7.9 0
WAPK-CD D16 DC BL	115.9 6,421	91.9 5,338	91.9 5,368

Interference to DTVBL19200 BL, scenario 4

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: WTNZ	D15	DT	BL	KNOXVILLE, TN	DTVBL19200	
Undesireds: WQCW	D15	DT	BL	PORTSMOUTH, OH	DTVBL65130	317.6 km
WQCW	D15	DT	APP	PORTSMOUTH, OH	WQCW 1000KW PROP	317.6
WDSI-TV	D14	DT	BL	CHATTANOOGA, TN	DTVBL71353	149.5
WLFG	D14	DT	BL	GRUNDY, VA	DTVBL37808	190.3
WAFF	D15	DT	BL	HUNTSVILLE, AL	DTVBL591	275.4
WYYW-CD	D15	DC	LIC	EVANSVILLE, IN	BLDTA20130109AGB	368.5
WLCU-CD	D15	DC	BL	CAMPBELLSVILLE, KY	DTVBL8500	195.3
WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	350.7
WPBM-CD	D15	DC	BL	SCOTTSVILLE, KY	DTVBL30580	212.5
W21CK-D	D15	DC	BL	CHARLOTTE, NC	DTVBL67022	291.2
WLTX	D15	DT	BL	COLUMBIA, SC	DTVBL37176	358.5
WPXA-TV	D16	DT	BL	ROME, GA	DTVBL51969	198.5
WAPK-CD	D16	DC	BL	BRISTOL VA/KINGSPORT, TN	DTVBL77677	168.7

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
37847.9 1,722,327	30979.0 1,530,634	30087.4 1,504,870	30063.3 1,505,389	0.08 -0.03

Undesired	Total IX	Unique IX, before	Unique IX, after
WQCW D15 DT BL	351.2 8,172	271.4 6,874	
WQCW D15 DT APP	375.3 7,883		295.4 6,355
WDSI-TV D14 DT BL	84.8 1,976	76.8 1,847	76.8 1,847
WLFG D14 DT BL	79.8 2,342	63.9 1,415	63.9 1,415
WAFF D15 DT BL	112.1 4,257	56.1 1,496	56.1 1,496
WLCU-CD D15 DC BL	151.6 2,840	63.7 831	63.7 745
WXIX-TV D15 DT BL	44.0 1,173	8.0 207	8.0 33
WPBM-CD D15 DC BL	116.0 5,173	56.0 2,497	56.0 2,497
WLTX D15 DT BL	28.2 0	28.2 0	28.2 0
WPXA-TV D16 DT BL	7.9 0	7.9 0	7.9 0
WAPK-CD D16 DC BL	115.9 6,421	91.9 5,338	91.9 5,368

Interference to BLCDT20120515ABF LIC, scenario 1
Proposal causes no interference.

Interference to DTVBL66185 BL, scenario 1
Proposal causes no interference.

Table 1 WQCW OET Bulletin 69 Interference Study
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Interference to proposal, scenario 1
1.64% interference

Desired:	Call WQCW	Chan D15	Svc DT	Status APP	City, State PORTSMOUTH, OH	File Number WQCW 1000KW PROP	Distance
Undesireds:	WCMH-TV	D14	DT	LIC	COLUMBUS, OH	BLCDDT20050823AAD	176.7 km
	WLFG	D14	DT	BL	GRUNDY, VA	DTVBL37808	187.2
	WTTK	D15	DT	CP	KOKOMO, IN	BLANK0000024884	375.7
	WLCU-CD	D15	DC	BL	CAMPBELLSVILLE, KY	DTVBL8500	304.3
	WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	212.8
	WPBM-CD	D15	DC	BL	SCOTTSVILLE, KY	DTVBL30580	387.6
	W21CK-D	D15	DC	BL	CHARLOTTE, NC	DTVBL67022	386.9
	WEWS-TV	D15	DT	LIC	CLEVELAND, OH	BLCDDT20091211ACS	321.2
	WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	297.7
	WTNZ	D15	DT	BL	KNOXVILLE, TN	DTVBL19200	317.6
	WOSU-TV	D16	DT	BL	COLUMBUS, OH	DTVBL66185	193.0

Service area	Terrain-limited	IX-free	Percent IX
37994.3 1,307,345	35904.9 1,236,020	35482.6 1,215,783	1.18 1.64

Undesired	Total IX	Unique IX	Prcnt Unique IX
WLFG D14 DT BL	15.9 639	11.9 639	0.03 0.05
WTTK D15 DT CP	12.0 76	8.0 71	0.02 0.01
WXIX-TV D15 DT BL	187.5 2,511	159.6 2,354	0.44 0.19
WEWS-TV D15 DT LIC	199.1 17,019	179.1 16,867	0.50 1.36
WTNZ D15 DT BL	39.7 149	31.7 149	0.09 0.01

Interference to proposal, scenario 2
1.64% interference

Desired:	Call WQCW	Chan D15	Svc DT	Status APP	City, State PORTSMOUTH, OH	File Number WQCW 1000KW PROP	Distance
Undesireds:	WCMH-TV	D14	DT	LIC	COLUMBUS, OH	BLCDDT20050823AAD	176.7 km
	WLFG	D14	DT	BL	GRUNDY, VA	DTVBL37808	187.2
	WTTK	D15	DT	BL	KOKOMO, IN	DTVBL56526	375.7
	WLCU-CD	D15	DC	BL	CAMPBELLSVILLE, KY	DTVBL8500	304.3
	WXIX-TV	D15	DT	BL	NEWPORT, KY	DTVBL39738	212.8
	WPBM-CD	D15	DC	BL	SCOTTSVILLE, KY	DTVBL30580	387.6
	W21CK-D	D15	DC	BL	CHARLOTTE, NC	DTVBL67022	386.9
	WEWS-TV	D15	DT	LIC	CLEVELAND, OH	BLCDDT20091211ACS	321.2
	WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	297.7
	WTNZ	D15	DT	BL	KNOXVILLE, TN	DTVBL19200	317.6
	WOSU-TV	D16	DT	BL	COLUMBUS, OH	DTVBL66185	193.0

Service area	Terrain-limited	IX-free	Percent IX
37994.3 1,307,345	35904.9 1,236,020	35482.6 1,215,783	1.18 1.64

Undesired	Total IX	Unique IX	Prcnt Unique IX
WLFG D14 DT BL	15.9 639	11.9 639	0.03 0.05
WTTK D15 DT BL	12.0 76	8.0 71	0.02 0.01
WXIX-TV D15 DT BL	187.5 2,511	159.6 2,354	0.44 0.19
WEWS-TV D15 DT LIC	199.1 17,019	179.1 16,867	0.50 1.36
WTNZ D15 DT BL	39.7 149	31.7 149	0.09 0.01

Channel and Facility Information

Section	Question	Response
Proposed Community of License	Facility ID	65130
	State	Ohio
	City	PORTSMOUTH
	DTV Channel	15
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