

ENGINEERING EXHIBIT

Digital Low Power Television Station Application for Minor Modification of Licensed Facility prepared for

Gray Television Licensee, LLC
WFET-LD Lewisburg, TN
Facility ID 168849
Ch. 29 15 kW Nondirectional

Gray Television Licensee, LLC (“Gray”) is the licensee of digital Low Power Television station WFET-LD, Channel 29, Facility ID 168849, Lewisburg TN. WFET-LD is licensed to operate at 5.2 kW effective radiated power (“ERP”) with a directional antenna (file# 0000091947). *Gray* herein seeks a minor modification Construction Permit to relocate WFET-LD and to utilize a nondirectional antenna at increased ERP and antenna height.

The proposed facility will employ a new antenna to be side-mounted on the tower structure associated with FCC Antenna Structure Registration number 1043392, located 10.9 km (6.8 miles) from the licensed site. No change to the overall structure height is proposed.

The proposed antenna is a Dielectric model TLP-12A/VP-R having elliptical polarization. The proposed ERP is 15 kW horizontally polarized and 4.5 kW vertically polarized using a “full service” out of channel emission mask. Figure 1 depicts the 51 dB μ coverage contour of the proposed and licensed facilities, 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, and Class A stations. The results, summarized in Table 1, show that any new interference does not

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, 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.

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.

Human Exposure to Radiofrequency Electromagnetic Field (Environmental)

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 20 percent antenna relative field in downward elevations (pattern data shows 20 percent or less relative field at angles 10 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 $2.3 \mu\text{W}/\text{cm}^2$, which is 0.6 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.

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 of FCC Form at Time of Upload

Chesapeake RF Consultants, LLC

Joseph M. Davis, P.E.	August 12, 2022	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600



prepared for
Gray Television Licensee, LLC

August, 2022

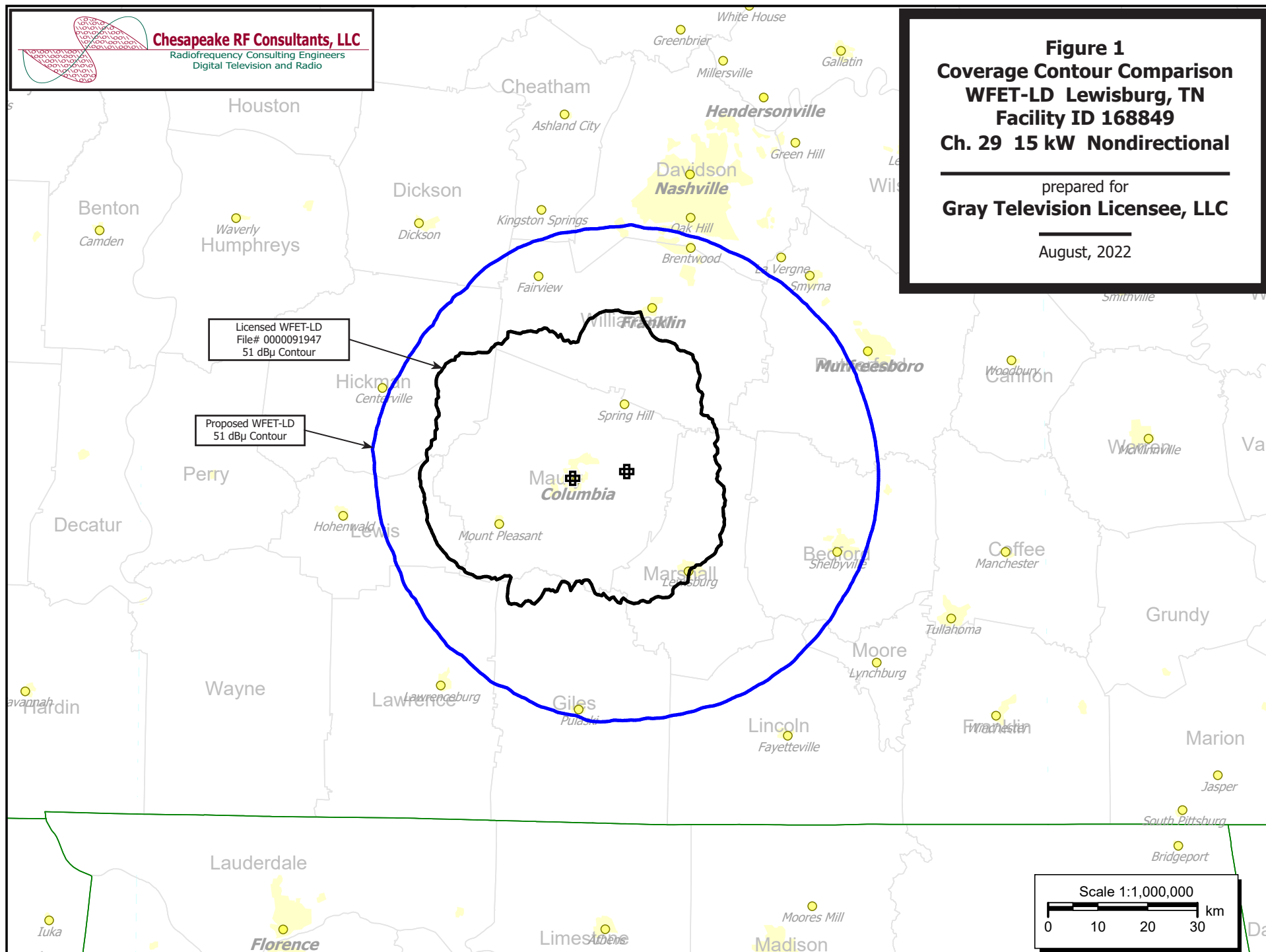


Table 1 WFET-LD TVStudy Analysis of Proposal (page 1 of 7)



tvstudy v2.2.5 (4uoc83)
Database: localhost, Study: WFET-LD 1043392 prop, Model: Longley-Rice
Start: 2022.08.12 15:40:11

Study created: 2022.08.12 15:40:11

Study build station data: LMS TV 2022-08-12

Proposal: WFET-LD D29 LD APP LEWISBURG, TN
File number: WFET-LD 1043392 prop
Facility ID: 168849
Station data: User record
Record ID: 4576
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	DWIIW-LP	N14z	TX	APP	NASHVILLE, TN	BLANK0000010767	63.8 km
No	WNTU-LD	N26-	TX	LIC	NASHVILLE, TN	BLTTL20001018ABZ	60.8
No	WYAM-LD	D28	LD	LIC	PRICEVILLE, AL	BLANK0000095679	118.1
No	WELF-TV	D28	DT	LIC	DALTON, GA	BLANK0000090766	163.5
No	WEVV-TV	D28	DT	LIC	EVANSVILLE, IN	BLANK0000087480	257.0
No	DDWQTV-LPD28+		LD	APP	MURRAY, KY	BLANK0000054105	162.6
No	WREG-TV	D28	DT	LIC	MEMPHIS, TN	BLCDT20050513AAE	268.0
Yes	WKUW-LD	D28	LD	LIC	WHITE HOUSE, TN	BLANK0000142042	71.9
Yes	WBRC	D29	DT	LIC	BIRMINGHAM, AL	BLANK0000192788	238.2
No	WQMK-LD	D29	LD	LIC	CUSSETA, AL	BLANK0000143981	354.0
No	W29FP-D	D29	LD	CP	MONTGOMERY, AL	BNPDTL20090825BZR	374.3
No	W29DN-D	D29	LD	LIC	ATHENS, GA	BLANK0000179566	366.6
No	WYGA-CD	D29	DC	CP	ATLANTA, GA	BLANK0000127583	314.4
No	WYGA-CD	D29	DC	LIC	ATLANTA, GA	BLANK0000081313	314.4
No	W29FD-D	D29	LD	LIC	COLUMBUS, GA	BLANK0000095112	417.0
No	W29CI-D	D29	DC	LIC	SALEM, IL	BLDTA20120913AAP	374.3
No	WLEH-LD	D29	LD	LIC	ST. LOUIS, IL	BLANK0000080775	402.1
No	WJYL-CD	D29	DC	LIC	JEFFERSONVILLE, IN	BLANK0000162183	319.7
Yes	WKGB-TV	D29	DT	LIC	BOWLING GREEN, KY	BLANK0000087457	164.4
No	WVTN-LD	D29	LD	LIC	CORBIN, KY	BLANK0000080149	291.8
No	W29DE-D	D29	LD	LIC	HAYESVILLE, NC	BLANK0000138231	286.7
No	WPTO	D29	DT	LIC	OXFORD, OH	BLANK0000113643	442.6
No	WSQY-LD	D29	LD	LIC	SPARTANBURG, SC	BLANK0000136293	416.6
Yes	WTCI	D29	DT	LIC	CHATTANOOGA, TN	BLANK0000001535	156.1
Yes	WKOP-TV	D29	DT	LIC	KNOXVILLE, TN	BLANK0000081273	270.6
Yes	W29FR-D	D29	LD	LIC	LEBANON-NASHVILLE, TN	BLANK0000154284	76.2
Yes	WKNO	D29	DT	LIC	MEMPHIS, TN	BLEDT20060627ABE	267.8
Yes	WIIW-LD	D29	LD	LIC	NASHVILLE, TN	BLANK0000140083	63.8
No	WIAT	D30	DT	LIC	BIRMINGHAM, AL	BLANK0000191819	238.6
No	WMC-TV	D30	DT	APP	MEMPHIS, TN	BLANK0000127522	273.1
Yes	WNAB	D30	DT	LIC	NASHVILLE, TN	BLANK0000159669	71.5

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D29
Mask: Full Service
Latitude: 35 37 45.20 N (NAD83)
Longitude: 86 55 30.10 W
Height AMSL: 411.8 m
HAAT: 0.0 m
Peak ERP: 15.0 kW
Antenna: Omnidirectional
Elev Pattn: Generic
Elec Tilt: 1.00

Table 1 WFET-LD TV Study Analysis of Proposal
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50.2 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	15.0 kW	192.6 m	50.3 km
45.0	15.0	186.7	49.9
90.0	15.0	210.7	51.3
135.0	15.0	208.4	51.2
180.0	15.0	200.2	50.7
225.0	15.0	204.0	50.9
270.0	15.0	213.3	51.4
315.0	15.0	191.3	50.2

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 201 m

Distance to Canadian border: 766.3 km

Distance to Mexican border: 1434.5 km

Conditions at FCC monitoring station: Powder Springs GA

Bearing: 133.7 degrees Distance: 281.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 292.8 degrees Distance: 1677.8 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 BLANK0000142042 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WKUW-LD	D28	LD	LIC	WHITE HOUSE, TN	BLANK0000142042	
Undesireds:	WFET-LD	D29	LD	APP	LEWISBURG, TN	WFET-LD 1043392 prop	71.9 km
	WKRN-TV	D27	DT	LIC	NASHVILLE, TN	BLANK0000115874	24.7
	WELF-TV	D28	DT	LIC	DALTON, GA	BLANK0000090766	203.2
	WSIU-TV	D28	LD	APP	CARBONDALE, IL	BLANK0000054907	277.1
	WEVV-TV	D28	DT	LIC	EVANSVILLE, IN	BLANK0000087480	191.9
	WLEX-TV	D28	DT	CP	LEXINGTON, KY	BLANK0000157703	289.5
	DDDQTV-LPD28+	LD	APP	MURRAY, KY	BLANK0000054105		140.9
	WREG-TV	D28	DT	LIC	MEMPHIS, TN	BLCDT20050513AAE	299.4
	W29FR-D	D29	LD	LIC	LEBANON-NASHVILLE, TN	BLANK0000154284	39.4

	Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
	9697.6	1,388,628	9536.6	1,376,134	8364.4	1,220,138	8364.4	1,220,138	0.00 0.00
Undesired				Total IX		Unique IX, before		Unique IX, after	
WFET-LD D29 LD APP			5.9	212			0.0	0	
WKRN-TV D27 DT LIC			1115.7	148,619	1033.9	137,768	1029.9	137,617	
WELF-TV D28 DT LIC			22.1	2,559	4.0	68	4.0	68	
WEVV-TV D28 DT LIC			52.5	7,039	4.0	7	4.0	7	
DDDQTV-LP D28+ LD APP			3.0	202	2.0	202	2.0	202	
WREG-TV D28 DT LIC			3.0	58	1.0	46	1.0	46	
W29FR-D D29 LD LIC			76.8	10,804	41.4	7,033	41.4	7,033	

Interference to BLANK0000192788 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WBRC	D29	DT	LIC	BIRMINGHAM, AL	BLANK0000192788	
Undesireds:	WFET-LD	D29	LD	APP	LEWISBURG, TN	WFET-LD 1043392 prop	238.2 km
	WMCF-TV	D28	DT	LIC	MONTGOMERY, AL	BLANK0000107502	133.0
	WFBD	D29	DT	LIC	DESTIN, FL	BLANK0000131443	276.9
	WFXL	D29	DT	CP	ALBANY, GA	BLANK0000150485	365.3
	WYGA-CD	D29	DC	CP	ATLANTA, GA	BLANK0000127583	227.6

Table 1 WFET-LD TV Study Analysis of Proposal
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WKOP-TV	D29	DT	LIC	KNOXVILLE, TN	BLANK0000081273	380.9
WKNO	D29	DT	LIC	MEMPHIS, TN	BLEDT20060627ABE	333.6
WIAT	D30	DT	LIC	BIRMINGHAM, AL	BLANK0000191819	0.8

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
35203.0 1,883,707	33743.0 1,847,092	32673.8 1,820,667	32667.7 1,820,539	0.02 0.01

Undesired	Total IX	Unique IX, before	Unique IX, after
WFET-LD D29 LD APP	43.3 1,071	6.0 128	
WMCF-TV D28 DT LIC	220.3 6,328	195.3 5,659	195.3 5,659
WFBD D29 DT LIC	210.2 1,584	157.2 769	157.2 769
WFXL D29 DT CP	157.5 2,716	94.7 1,552	94.7 1,552
WYGA-CD D29 DC CP	51.8 1,649	18.9 392	18.9 392
WKOP-TV D29 DT LIC	6.0 882	4.0 544	3.0 544
WKNO D29 DT LIC	138.9 2,613	134.0 2,558	98.7 1,828
WIAT D30 DT LIC	385.4 13,053	377.4 12,917	377.4 12,917

Interference to BLANK0000192788 LIC scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WBRC	D29	DT	LIC	BIRMINGHAM, AL	BLANK0000192788	
Undesireds:	WFET-LD	D29	LD	APP	LEWISBURG, TN	WFET-LD 1043392 prop	238.2 km
	WMCF-TV	D28	DT	LIC	MONTGOMERY, AL	BLANK0000107502	133.0
	WFBD	D29	DD	APP	DESTIN, FL	BLANK0000182313	289.8
	WFXL	D29	DT	CP	ALBANY, GA	BLANK0000150485	365.3
	WYGA-CD	D29	DC	CP	ATLANTA, GA	BLANK0000127583	227.6
	WKOP-TV	D29	DT	LIC	KNOXVILLE, TN	BLANK0000081273	380.9
	WKNO	D29	DT	LIC	MEMPHIS, TN	BLEDT20060627ABE	333.6
	WIAT	D30	DT	LIC	BIRMINGHAM, AL	BLANK0000191819	0.8

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
35203.0 1,883,707	33743.0 1,847,092	32673.8 1,820,667	32667.7 1,820,539	0.02 0.01

Undesired	Total IX	Unique IX, before	Unique IX, after
WFET-LD D29 LD APP	43.3 1,071	6.0 128	
WMCF-TV D28 DT LIC	220.3 6,328	195.3 5,659	195.3 5,659
WFBD D29 DD APP	210.2 1,584	157.2 769	157.2 769
WFXL D29 DT CP	157.5 2,716	94.7 1,552	94.7 1,552
WYGA-CD D29 DC CP	51.8 1,649	18.9 392	18.9 392
WKOP-TV D29 DT LIC	6.0 882	4.0 544	3.0 544
WKNO D29 DT LIC	138.9 2,613	134.0 2,558	98.7 1,828
WIAT D30 DT LIC	385.4 13,053	377.4 12,917	377.4 12,917

Interference to BLANK0000192788 LIC scenario 3

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WBRC	D29	DT	LIC	BIRMINGHAM, AL	BLANK0000192788	
Undesireds:	WFET-LD	D29	LD	APP	LEWISBURG, TN	WFET-LD 1043392 prop	238.2 km
	WMCF-TV	D28	DT	LIC	MONTGOMERY, AL	BLANK0000107502	133.0
	WFBD	D29	DT	LIC	DESTIN, FL	BLANK0000131443	276.9
	WFXL	D29	DT	CP	ALBANY, GA	BLANK0000150485	365.3
	WYGA-CD	D29	DC	LIC	ATLANTA, GA	BLANK0000081313	227.6
	WKOP-TV	D29	DT	LIC	KNOXVILLE, TN	BLANK0000081273	380.9
	WKNO	D29	DT	LIC	MEMPHIS, TN	BLEDT20060627ABE	333.6
	WIAT	D30	DT	LIC	BIRMINGHAM, AL	BLANK0000191819	0.8

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
35203.0 1,883,707	33743.0 1,847,092	32673.8 1,820,667	32667.7 1,820,539	0.02 0.01

Undesired	Total IX	Unique IX, before	Unique IX, after
WFET-LD D29 LD APP	43.3 1,071	6.0 128	
WMCF-TV D28 DT LIC	220.3 6,328	195.3 5,659	195.3 5,659
WFBD D29 DT LIC	210.2 1,584	157.2 769	157.2 769
WFXL D29 DT CP	157.5 2,716	94.7 1,552	94.7 1,552
WYGA-CD D29 DC LIC	50.8 1,524	18.9 392	18.9 392
WKOP-TV D29 DT LIC	6.0 882	5.0 669	4.0 669
WKNO D29 DT LIC	138.9 2,613	134.0 2,558	98.7 1,828
WIAT D30 DT LIC	385.4 13,053	377.4 12,917	377.4 12,917

Table 1 WFET-LD TV Study Analysis of Proposal
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Interference to BLANK0000192788 LIC scenario 4

	Call	Chan	Svc	Status	City, State	File Number	Distance				
Desired:	WBRC	D29	DT	LIC	BIRMINGHAM, AL	BLANK0000192788					
Undesireds:	WFET-LD	D29	LD	APP	LEWISBURG, TN	WFET-LD 1043392 prop	238.2 km				
	WMCF-TV	D28	DT	LIC	MONTGOMERY, AL	BLANK0000107502	133.0				
	WFBD	D29	DD	APP	DESTIN, FL	BLANK0000182313	289.8				
	WFXL	D29	DT	CP	ALBANY, GA	BLANK0000150485	365.3				
	WYGA-CD	D29	DC	LIC	ATLANTA, GA	BLANK0000081313	227.6				
	WKOP-TV	D29	DT	LIC	KNOXVILLE, TN	BLANK0000081273	380.9				
	WKNO	D29	DT	LIC	MEMPHIS, TN	BLEDT20060627ABE	333.6				
	WIAT	D30	DT	LIC	BIRMINGHAM, AL	BLANK0000191819	0.8				
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX			
35203.0	1,883,707	33743.0	1,847,092	32673.8	1,820,667	32667.7	1,820,539	0.02	0.01		
Undesired				Total IX	Unique IX, before		Unique IX, after				
WFET-LD	D29	LD	APP	43.3	1,071	6.0		128			
WMCF-TV	D28	DT	LIC	220.3	6,328	195.3	5,659	195.3	5,659		
WFBD	D29	DD	APP	210.2	1,584	157.2	769	157.2	769		
WFXL	D29	DT	CP	157.5	2,716	94.7	1,552	94.7	1,552		
WYGA-CD	D29	DC	LIC	50.8	1,524	18.9	392	18.9	392		
WKOP-TV	D29	DT	LIC	6.0	882	5.0	669	4.0	669		
WKNO	D29	DT	LIC	138.9	2,613	134.0	2,558	98.7	1,828		
WIAT	D30	DT	LIC	385.4	13,053	377.4	12,917	377.4	12,917		

Interference to BLANK0000087457 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance			
Desired:	WKGB-TV	D29	DT	LIC	BOWLING GREEN, KY	BLANK0000087457				
Undesireds:	WFET-LD	D29	LD	APP	LEWISBURG, TN	WFET-LD 1043392 prop	164.4 km			
	WEVV-TV	D28	DT	LIC	EVANSVILLE, IN	BLANK0000087480	119.6			
	WJYL-CD	D29	DC	LIC	JEFFERSONVILLE, IN	BLANK0000162183	158.8			
	WPTO	D29	DT	LIC	OXFORD, OH	BLANK0000113643	292.0			
	WKNO	D29	DT	LIC	MEMPHIS, TN	BLEDT20060627ABE	358.0			
	WNAB	D30	DT	LIC	NASHVILLE, TN	BLANK0000159669	92.9			
<hr/>										
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX			
15074.1	414,718	14959.5		411,811	14782.8	405,300	14777.7	405,241	0.03	0.01
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Undesired				Total IX	Unique IX, before		Unique IX, after			
WFET-LD	D29	LD	APP	20.2	371		5.1	59		
WEVV-TV	D28	DT	LIC	53.7	790	53.7	790	53.7	790	
WJYL-CD	D29	DC	LIC	60.8	428	53.7	398	49.7	387	
WPTO	D29	DT	LIC	8.1	40	4.0	10	4.0	10	
WKNO	D29	DT	LIC	7.0	2	4.0	2	1.0	0	
WNAB	D30	DT	LIC	55.3	5,281	53.3	5,281	50.3	4,998	

Interference to BLANK0000001535 LIC scenario 1

Desired:	Call WTCI	Chan D29	Svc DT	Status LIC	City, State CHATTANOOGA, TN	File Number BLANK0000001535	Distance		
Undesireds:	WFET-LD	D29	LD	APP	LEWISBURG, TN	WFET-LD 1043392 prop	156.1 km		
	WELF-TV	D28	DT	LIC	DALTON, GA	BLANK0000090766	44.5		
	WBRC	D29	DT	LIC	BIRMINGHAM, AL	BLANK0000192788	236.4		
	WYGA-CD	D29	DC	LIC	ATLANTA, GA	BLANK0000081313	183.2		
	WKGB-TV	D29	DT	LIC	BOWLING GREEN, KY	BLANK0000087457	241.9		
	WKOP-TV	D29	DT	LIC	KNOXVILLE, TN	BLANK0000081273	148.4		
	WDGA-CD	D30	DC	LIC	DALTON, GA	BLANK0000098047	57.9		
<hr/>									
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX		
23928.8	1,204,075	20123.2	1,089,027	16564.5	924,019	16427.1	922,330	0.83	0.18
<hr/>									
Undesired				Total IX	Unique IX, before		Unique IX, after		
WFET-LD D29 LD APP				205.3	2,694		137.4 1,689		
WELF-TV D28 DT LIC				708.3	18,431		347.8 8,757		
WBRC D29 DT LIC				911.5	32,704		445.6 15,301		

Table 1 WFET-LD TV Study Analysis of Proposal
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WYGA-CD D29 DC LIC	215.0	5,942	46.2	1,027	46.2	1,027
WKGB-TV D29 DT LIC	31.0	281	11.0	27	8.0	0
WKOP-TV D29 DT LIC	1688.3	55,497	1280.8	45,671	1268.8	45,439
WDGA-CD D30 DC LIC	951.7	82,916	716.5	68,523	715.5	68,492

Interference to BLANK0000081273 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WKOP-TV	D29	DT	LIC	KNOXVILLE, TN	BLANK0000081273	
Undesireds:	WFET-LD	D29	LD	APP	LEWISBURG, TN	WFET-LD 1043392 prop	270.6 km
	WELF-TV	D28	DT	LIC	DALTON, GA	BLANK0000090766	185.8
	WEMT	D28	DT	LIC	GREENEVILLE, TN	BLANK0000072087	173.2
	WBRC	D29	DT	LIC	BIRMINGHAM, AL	BLANK0000192788	380.9
	WYGA-CD	D29	DC	CP	ATLANTA, GA	BLANK0000127583	252.9
	WJYL-CD	D29	DC	LIC	JEFFERSONVILLE, IN	BLANK0000162183	311.6
	WKGB-TV	D29	DT	LIC	BOWLING GREEN, KY	BLANK0000087457	268.3
	WXLV-TV	D29	DT	LIC	WINSTON-SALEM, NC	BLANK0000158591	372.2
	WPTO	D29	DT	LIC	OXFORD, OH	BLANK0000113643	351.3
	WCHS-TV	D29	DT	LIC	CHARLESTON, WV	BLANK0000167887	323.9
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
32648.4		1,555,950		25727.6		1,372,297	0.02

Undesired	Total IX	Unique IX, before	Unique IX, after
WFET-LD D29 LD APP	14.2	715	6.1
WELF-TV D28 DT LIC	14.9	192	12.9
WEMT D28 DT LIC	120.2	5,294	119.2
WBRC D29 DT LIC	30.8	616	28.8
WYGA-CD D29 DC CP	11.0	0	11.0
WJYL-CD D29 DC LIC	6.0	359	0.0
WKGB-TV D29 DT LIC	96.8	3,367	88.7
WXLV-TV D29 DT LIC	3.0	0	3.0
WPTO D29 DT LIC	23.1	359	7.0
WCHS-TV D29 DT LIC	71.2	1,625	54.2

Interference to BLANK0000081273 LIC scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WKOP-TV	D29	DT	LIC	KNOXVILLE, TN	BLANK0000081273	
Undesireds:	WFET-LD	D29	LD	APP	LEWISBURG, TN	WFET-LD 1043392 prop	270.6 km
	WELF-TV	D28	DT	LIC	DALTON, GA	BLANK0000090766	185.8
	WEMT	D28	DT	LIC	GREENEVILLE, TN	BLANK0000072087	173.2
	WBRC	D29	DT	LIC	BIRMINGHAM, AL	BLANK0000192788	380.9
	WYGA-CD	D29	DC	LIC	ATLANTA, GA	BLANK0000081313	252.9
	WJYL-CD	D29	DC	LIC	JEFFERSONVILLE, IN	BLANK0000162183	311.6
	WKGB-TV	D29	DT	LIC	BOWLING GREEN, KY	BLANK0000087457	268.3
	WXLV-TV	D29	DT	LIC	WINSTON-SALEM, NC	BLANK0000158591	372.2
	WPTO	D29	DT	LIC	OXFORD, OH	BLANK0000113643	351.3
	WCHS-TV	D29	DT	LIC	CHARLESTON, WV	BLANK0000167887	323.9
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
32648.4		1,555,950		25727.6		1,372,297	0.02

Undesired	Total IX	Unique IX, before	Unique IX, after
WFET-LD D29 LD APP	14.2	715	6.1
WELF-TV D28 DT LIC	14.9	192	12.9
WEMT D28 DT LIC	120.2	5,294	119.2
WBRC D29 DT LIC	30.8	616	28.8
WYGA-CD D29 DC LIC	5.0	0	5.0
WJYL-CD D29 DC LIC	6.0	359	0.0
WKGB-TV D29 DT LIC	96.8	3,367	88.7
WXLV-TV D29 DT LIC	3.0	0	3.0
WPTO D29 DT LIC	23.1	359	7.0
WCHS-TV D29 DT LIC	71.2	1,625	54.2

Interference to BLANK0000154284 LIC scenario 1

Call	Chan	Svc	Status	City, State	File Number	Distance
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Table 1 WFET-LD TVStudy Analysis of Proposal
(page 6 of 7)



Desired:	W29FR-D	D29	LD	LIC	LEBANON-NASHVILLE, TN	BLANK0000154284		
Undesireds:	WFET-LD	D29	LD	APP	LEWISBURG, TN	WFET-LD 1043392 prop	76.2	km
	WKUW-LD	D28	LD	LIC	WHITE HOUSE, TN	BLANK0000142042	39.4	
	WBRC	D29	DT	LIC	BIRMINGHAM, AL	BLANK0000192788	298.7	
	WYGA-CD	D29	DC	CP	ATLANTA, GA	BLANK0000127583	324.9	
	WKGB-TV	D29	DT	LIC	BOWLING GREEN, KY	BLANK0000087457	106.5	
	WKOP-TV	D29	DT	LIC	KNOXVILLE, TN	BLANK0000081273	218.4	
	WIIW-LD	D29	LD	LIC	NASHVILLE, TN	BLANK0000140083	34.1	
	WNAB	D30	DT	LIC	NASHVILLE, TN	BLANK0000159669	39.2	
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
6100.0	918,323	5717.5	902,806	5385.6	838,742	5232.6	826,959	2.84 1.40
Undesired		Total IX		Unique IX, before		Unique IX, after		
WFET-LD	D29 LD APP	241.6	23,389			153.0	11,783	
WKUW-LD	D28 LD LIC	10.1	4,295	0.0	0	0.0	0	
WBRC	D29 DT LIC	3.0	167	0.0	0	0.0	0	
WKGB-TV	D29 DT LIC	103.6	6,489	79.5	2,540	62.4	2,126	
WKOP-TV	D29 DT LIC	3.0	2,437	1.0	57	0.0	0	
WIIW-LD	D29 LD LIC	4.0	4,862	3.0	4,862	3.0	4,862	
WNAB	D30 DT LIC	245.3	56,438	219.1	50,122	167.7	42,273	

Interference to BLEDT20060627ABE LIC scenario 1								
Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance	
	WKNO	D29	DT	LIC	MEMPHIS, TN	BLEDT20060627ABE		
Undesireds:	WFET-LD	D29	LD	APP	LEWISBURG, TN	WFET-LD 1043392 prop	267.8	km
	WREG-TV	D28	DT	LIC	MEMPHIS, TN	BLCDDT20050513AAE	3.1	
	WBRC	D29	DT	LIC	BIRMINGHAM, AL	BLANK0000192788	333.6	
	WMC-TV	D30	DT	APP	MEMPHIS, TN	BLANK0000127522	6.0	
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
30784.1	1,646,039	30595.4	1,642,533	30344.7	1,636,287	30344.7	1,636,287	0.00 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after		
WFET-LD	D29 LD APP	3.0	0			0.0	0	
WREG-TV	D28 DT LIC	48.1	765	35.1	422	34.1	422	
WBRC	D29 DT LIC	193.6	4,690	187.6	4,679	185.6	4,679	
WMC-TV	D30 DT APP	25.0	1,145	12.0	791	12.0	791	

Interference to BLANK0000140083 LIC scenario 1								
Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance	
	WIIW-LD	D29	LD	LIC	NASHVILLE, TN	BLANK0000140083		
Undesireds:	WFET-LD	D29	LD	APP	LEWISBURG, TN	WFET-LD 1043392 prop	63.8	km
	WKUW-LD	D28	LD	LIC	WHITE HOUSE, TN	BLANK0000142042	9.6	
	WKGB-TV	D29	DT	LIC	BOWLING GREEN, KY	BLANK0000087457	100.9	
	WKOP-TV	D29	DT	LIC	KNOXVILLE, TN	BLANK0000081273	252.5	
	W29FR-D	D29	LD	LIC	LEBANON-NASHVILLE, TN	BLANK0000154284	34.1	
	WNAB	D30	DT	LIC	NASHVILLE, TN	BLANK0000159669	9.1	
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
67.6	56,250	56.5	49,776	33.3	27,614	33.3	27,614	0.00 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after		
WFET-LD	D29 LD APP	11.1	8,722			0.0	0	
WKUW-LD	D28 LD LIC	15.1	14,863	0.0	0	0.0	0	
WKGB-TV	D29 DT LIC	6.1	7,515	0.0	0	0.0	0	
WKOP-TV	D29 DT LIC	1.0	143	0.0	0	0.0	0	
W29FR-D	D29 LD LIC	20.2	20,702	4.0	3,261	4.0	3,261	
WNAB	D30 DT LIC	19.2	18,901	1.0	47	0.0	0	

Interference to BLANK0000159669 LIC scenario 1								
Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance	
	WNAB	D30	DT	LIC	NASHVILLE, TN	BLANK0000159669		

Table 1 WFET-LD TV Study Analysis of Proposal
(page 7 of 7)



Undesireds:	WFET-LD	D29	LD	APP	LEWISBURG, TN	WFET-LD 1043392 prop	71.5 km
	WKGB-TV	D29	DT	LIC	BOWLING GREEN, KY	BLANK0000087457	92.9
	WIAT	D30	DT	LIC	BIRMINGHAM, AL	BLANK0000191819	308.9
	WTCT	D30	DT	LIC	MARION, IL	BLANK0000096223	244.8
	WKPC-TV	D30	DT	LIC	LOUISVILLE, KY	BLANK0000087420	248.8
	WMC-TV	D30	DT	APP	MEMPHIS, TN	BLANK0000127522	304.4
	WKMA-TV	D31	DT	LIC	MADISONVILLE, KY	BLANK0000087442	121.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
28816.0 2,176,241	28092.8 2,165,861	27235.5 2,137,779	26981.2 2,129,178	0.93 0.40

Undesired	Total IX	Unique IX, before	Unique IX, after
WFET-LD D29 LD APP	281.1 9,371		254.2 8,601
WKGB-TV D29 DT LIC	164.9 15,387	126.9 14,277	126.9 14,277
WIAT D30 DT LIC	236.0 5,618	202.2 4,803	183.3 4,134
WTCT D30 DT LIC	457.1 7,113	319.7 4,878	318.7 4,865
WKPC-TV D30 DT LIC	31.0 1,237	11.0 777	11.0 777
WMC-TV D30 DT APP	130.6 1,896	35.3 437	34.3 437
WKMA-TV D31 DT LIC	14.0 80	1.0 0	1.0 0

Interference to proposal scenario 1
22.10% interference received

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WFET-LD	D29	LD	APP	LEWISBURG, TN	WFET-LD 1043392 prop	
Undesireds:	WBRC	D29	DT	LIC	BIRMINGHAM, AL	BLANK0000192788	238.2 km
	WYGA-CD	D29	DC	CP	ATLANTA, GA	BLANK0000127583	314.4
	WKGB-TV	D29	DT	LIC	BOWLING GREEN, KY	BLANK0000087457	164.4
	W29FR-D	D29	LD	LIC	LEBANON-NASHVILLE, TN	BLANK0000154284	76.2
	WKNO	D29	DT	LIC	MEMPHIS, TN	BLANK0000159669	267.8
	WNAB	D30	DT	LIC	NASHVILLE, TN		71.5

Service area	Terrain-limited	IX-free	Percent IX
8071.5 523,968	7459.3 438,087	6806.8 341,291	8.75 22.10

Undesired	Total IX	Unique IX	Prcnt Unique IX
WBRC D29 DT LIC	72.1 7,335	39.0 2,406	0.52 0.55
WKGB-TV D29 DT LIC	38.4 11,902	2.0 0	0.03 0.00
W29FR-D D29 LD LIC	436.6 73,919	317.5 33,728	4.26 7.70
WKNO D29 DT LIC	13.9 248	4.0 75	0.05 0.02
WNAB D30 DT LIC	274.1 59,198	152.8 18,199	2.05 4.15

**Channel and
Facility
Information**

Section	Question	Response
Facility ID	168849	
State	Tennessee	
City	LEWISBURG	
LPD Channel	29	

**Antenna Location
Data**

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1043392
Coordinates (NAD83)	Latitude	35° 37' 45.2" N+
	Longitude	086° 55' 30.1" W-
	Structure Type	MAST-Self-support struct
	Overall Structure Height	125.0 meters
	Support Structure Height	122.0 meters
	Ground Elevation (AMSL)	303.6 meters
Antenna Data	Height of Radiation Center Above Ground Level	108.2 meters
	Height of Radiation Center Above Mean Sea Level	411.8 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:	Dielectric
	Model	TLP-12A/VP-R
	Rotation	
	Electrical Beam Tilt	1.0
	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