

## **ENGINEERING EXHIBIT**

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

**Gray Television Licensee, LLC**  
WDDY-LD Jackson, TN  
Facility ID 185331  
Ch. 15 15 kW Directional

*Gray Television Licensee, LLC* (“Gray”) is the licensee of digital Low Power Television station WDDY-LD, Channel 15, Facility ID 185331, Jackson TN. WDDY-LD is licensed to operate at 1.7 kW effective radiated power (“ERP”) with a directional antenna (file# 0000179490). *Gray* herein seeks a minor modification Construction Permit to relocate WDDY-LD and to utilize a different directional antenna at increased ERP and antenna height.

The proposed facility will employ a new antenna system to be side-mounted on the existing tower structure associated with FCC Antenna Structure Registration number 1252780, located 41.5 km (25.8 miles) from the licensed site. No change to the overall structure height is proposed.

The proposed antenna is a Dielectric model TLP-12J having horizontal polarization. The ERP is 15 kW using a “full service” out of channel emission mask. A plot of the directional antenna’s azimuthal pattern is supplied in Figure 1. Figure 2 depicts the coverage contour of the proposed facility as well as that of the licensed facility, demonstrating compliance with §73.3572 for a minor change.

Interference study per OET Bulletin 69<sup>1</sup> shows that the proposal complies with the FCC’s interference protection requirements toward all digital television, television translator, LPTV, and

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<sup>1</sup>FCC 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.

Class A stations. 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.

### **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  $3.4 \mu\text{W}/\text{cm}^2$ , which is 1.1 percent of the general population / uncontrolled maximum permissible exposure limit. This is 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.

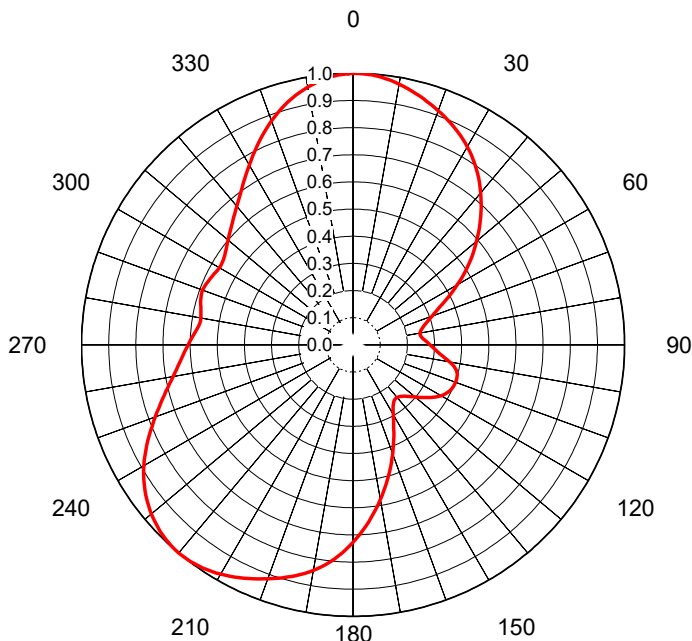
The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power 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	Antenna Azimuthal Pattern
Figure 2	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.	February 2, 2022	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600



## AZIMUTH PATTERN Horizontal Polarization

Proposal No. **20210914jmd**  
Date **14-Sep-21**  
Call Letters **WDDY-LD**  
Channel **15**  
Frequency **479 MHz**  
Antenna Type **TLP-12J**  
Gain **2.08 (3.19dB)**  
Calculated

Pattern Number **TLP-J-15 Hpol**

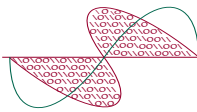
Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	1.000	36	0.780	72	0.292	108	0.402	144	0.257	180	0.728	216	0.996	252	0.752	288	0.588
1	1.000	37	0.769	73	0.284	109	0.402	145	0.260	181	0.741	217	0.998	253	0.741	289	0.589
2	0.999	38	0.756	74	0.277	110	0.402	146	0.265	182	0.755	218	0.999	254	0.731	290	0.591
3	0.998	39	0.744	75	0.271	111	0.401	147	0.271	183	0.767	219	1.000	255	0.720	291	0.588
4	0.996	40	0.731	76	0.265	112	0.401	148	0.279	184	0.780	220	1.000	256	0.710	292	0.586
5	0.994	41	0.718	77	0.260	113	0.399	149	0.287	185	0.792	221	0.999	257	0.700	293	0.584
6	0.991	42	0.705	78	0.256	114	0.397	150	0.296	186	0.803	222	0.998	258	0.691	294	0.582
7	0.988	43	0.692	79	0.252	115	0.395	151	0.307	187	0.814	223	0.997	259	0.682	295	0.580
8	0.984	44	0.678	80	0.250	116	0.392	152	0.318	188	0.825	224	0.994	260	0.673	296	0.577
9	0.980	45	0.664	81	0.250	117	0.389	153	0.330	189	0.834	225	0.991	261	0.665	297	0.574
10	0.975	46	0.650	82	0.251	118	0.385	154	0.342	190	0.844	226	0.988	262	0.657	298	0.572
11	0.970	47	0.637	83	0.252	119	0.380	155	0.355	191	0.852	227	0.984	263	0.650	299	0.570
12	0.965	48	0.623	84	0.255	120	0.374	156	0.369	192	0.861	228	0.979	264	0.643	300	0.568
13	0.960	49	0.608	85	0.259	121	0.368	157	0.383	193	0.869	229	0.974	265	0.637	301	0.568
14	0.954	50	0.594	86	0.263	122	0.361	158	0.397	194	0.876	230	0.969	266	0.630	302	0.569
15	0.948	51	0.580	87	0.268	123	0.354	159	0.412	195	0.883	231	0.963	267	0.624	303	0.571
16	0.942	52	0.566	88	0.273	124	0.346	160	0.427	196	0.891	232	0.957	268	0.619	304	0.573
17	0.936	53	0.551	89	0.279	125	0.338	161	0.442	197	0.897	233	0.950	269	0.613	305	0.577
18	0.930	54	0.536	90	0.284	126	0.330	162	0.457	198	0.904	234	0.943	270	0.608	306	0.581
19	0.924	55	0.521	91	0.290	127	0.322	163	0.472	199	0.911	235	0.935	271	0.602	307	0.585
20	0.918	56	0.506	92	0.295	128	0.314	164	0.487	200	0.917	236	0.927	272	0.597	308	0.590
21	0.911	57	0.491	93	0.301	129	0.306	165	0.502	201	0.923	237	0.919	273	0.592	309	0.595
22	0.905	58	0.475	94	0.308	130	0.299	166	0.518	202	0.930	238	0.910	274	0.586	310	0.601
23	0.898	59	0.460	95	0.315	131	0.291	167	0.533	203	0.936	239	0.900	275	0.581	311	0.606
24	0.891	60	0.444	96	0.323	132	0.285	168	0.548	204	0.942	240	0.890	276	0.576	312	0.612
25	0.883	61	0.428	97	0.331	133	0.278	169	0.564	205	0.948	241	0.879	277	0.573	313	0.618
26	0.876	62	0.413	98	0.340	134	0.273	170	0.579	206	0.954	242	0.868	278	0.570	314	0.624
27	0.868	63	0.397	99	0.351	135	0.268	171	0.594	207	0.960	243	0.857	279	0.569	315	0.630
28	0.859	64	0.382	100	0.361	136	0.263	172	0.609	208	0.965	244	0.845	280	0.569	316	0.637
29	0.851	65	0.368	101	0.371	137	0.259	173	0.625	209	0.970	245	0.834	281	0.570	317	0.644
30	0.842	66	0.355	102	0.380	138	0.256	174	0.640	210	0.975	246	0.822	282	0.572	318	0.651
31	0.833	67	0.342	103	0.387	139	0.254	175	0.655	211	0.980	247	0.810	283	0.575	319	0.658
32	0.823	68	0.330	104	0.392	140	0.253	176	0.670	212	0.984	248	0.798	284	0.578	320	0.666
33	0.813	69	0.319	105	0.396	141	0.252	177	0.685	213	0.987	249	0.786	285	0.581	321	0.674
34	0.803	70	0.309	106	0.399	142	0.253	178	0.699	214	0.991	250	0.775	286	0.584	322	0.683
35	0.792	71	0.300	107	0.401	143	0.254	179	0.713	215	0.994	251	0.763	287	0.586	323	0.692

**Figure 1**  
**Antenna Azimuthal Pattern**  
**WDDY-LD Jackson, TN**  
**Facility ID 185331**  
**Ch. 15 15 kW Directional**

prepared for  
**Gray Television Licensee, LLC**

February, 2022



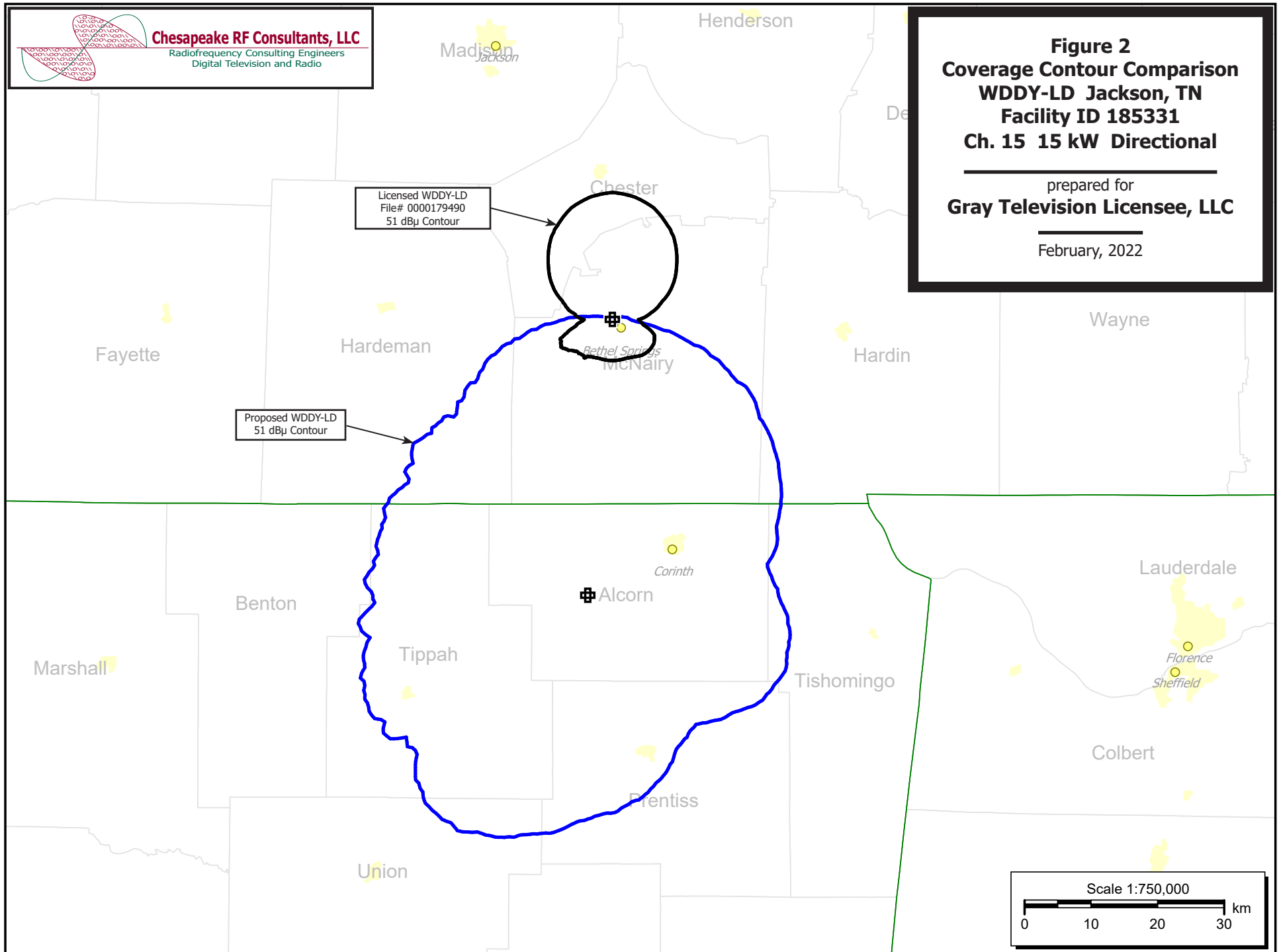


**Chesapeake RF Consultants, LLC**  
Radiofrequency Consulting Engineers  
Digital Television and Radio

**Figure 2**  
**Coverage Contour Comparison**  
**WDDY-LD Jackson, TN**  
**Facility ID 185331**  
**Ch. 15 15 kW Directional**

prepared for  
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February, 2022



# **Table 1 WDDY-LD TVStudy Analysis of Proposal** (page 1 of 4)



tvstudy v2.2.5 (4uoc83)  
Database: localhost, Study: WDDY-LD prop 1252780, Model: Longley-Rice  
Start: 2022.02.02 08:20:43

Study created: 2022.02.02 08:20:43

Study build station data: LMS TV 2022-02-02

Proposal: WDDY-LD D15 LD APP JACKSON, TN  
File number: WDDY-LD prop 1252780  
Facility ID: 185331  
Station data: User record  
Record ID: 4179  
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	WDBB	D14	DT	LIC	BESSEMER, AL	BLANK0000098219	191.7 km
No	K14SW-D	D14	LD	CP	JONESBORO, AR	BLANK0000071893	223.0
No	WYMP-LD	D14	LD	LIC	BRUCE, MS	BLANK0000129753	69.6
No	WYMP-LD	D14	LD	LIC	BRUCE, MS	BLANK0000181617	94.4
No	WYMP-LD	D14	LD	CP	BRUCE, MS	BLANK0000140967	94.4
No	W14EQ-D	D14z	LD	LIC	TUPELO, MS	BLANK0000158096	79.6
No	WMC-TV	D14	LD	APP	MEMPHIS, TN	BLANK0000116802	116.2
No	WIIW-LD	D14	LD	CP	NASHVILLE, TN	BLANK0000143395	229.1
No	W14EJ-D	D14	LD	CP	SPRING HILL, TN	BLANK0000150403	92.4
No	DDW15AZ	N15-	TX	APP	ALABASTER, AL	BLTTL19940809IB	250.9
No	WSSF-LD	D15	LD	LIC	FAYETTE, AL	BLDTL20080626AAG	153.0
Yes	WAFF	D15	DT	LIC	HUNTSVILLE, AL	BLANK0000111344	194.8
No	WBXM-CD	D15	DC	LIC	MONTGOMERY, AL	BLANK0000113013	354.1
No	K27JP-D	D15	LD	CP	LITTLE ROCK, AR	BLANK0000051762	334.1
No	WAGC-LD	D15	LD	CP	ATLANTA, GA	BLANK0000054666	413.8
No	WRBL	D15	DT	LIC	COLUMBUS, GA	BLCDT20061013ABV	456.8
No	W15BU-D	D15	DC	CP	JOHNSON CITY, IL	BLANK0000035857	331.4
No	W15BU-D	D15	DC	LIC	JOHNSON CITY, IL	BLDTA20090804AAF	331.4
No	WYYW-CD	D15	DC	LIC	EVANSVILLE, IN	BLDTA20130109AGB	367.9
No	WPBM-CD	D15	DC	LIC	SCOTTSVILLE, KY	BLANK0000087303	318.5
No	KPOB-TV	D15	DT	LIC	POPLAR BLUFF, MO	BLCDT20090623ABU	268.4
Yes	WFXW	D15	DT	LIC	GREENVILLE, MS	BLCDT20090612ACI	231.3
No	WOOK-LD	D15	LD	LIC	MERIDIAN, MS	BLANK0000148952	282.8
No	WNTZ-TV	D15	DT	LIC	NATCHEZ, MS	BLANK0000071605	453.9
Yes	DW15CG	N15-	TX	APP	PONTOTOC, MS	BLTTL20050308ABV	77.5
No	WCNT-LP	D15-	LD	CP	CHATTANOOGA, TN	BLANK0000051756	316.0
No	WTNZ	D15	DT	LIC	KNOXVILLE, TN	BLANK0000081278	443.9
No	W15EA-D	D15	DC	LIC	MEMPHIS, TN	BLANK0000093191	111.0
No	W15ER-D	D15	LD	LIC	NASHVILLE, TN	BLANK0000154430	223.7
Yes	WLOV-TV	D16	DT	LIC	WEST POINT, MS	BLCDT20070405ABC	126.0
No	WNBj-LD	D16	LD	LIC	JACKSON, TN	BLDTL20141216ABU	82.2
No	WWWN-LD	D16	LD	LIC	MEMPHIS, TN	BLANK0000156897	111.7
No	WHTN	D16	DT	LIC	MURFREESBORO, TN	BLANK0000100650	242.6

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  
Mask: Full Service  
Latitude: 34 52 19.00 N (NAD83)  
Longitude: 88 39 38.60 W  
Height AMSL: 223.1 m  
HAAT: 0.0 m  
Peak ERP: 15.0 kW  
Antenna: DIE TLP-J 290.0 deg  
Elev Pattn: Generic

**Table 1 WDDY-LD TV Study Analysis of Proposal**  
(page 2 of 4)



Elec Tilt: 0.50

48.8 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	15.0 kW	90.4 m	44.0 km
45.0	6.58	85.0	39.2
90.0	1.21	89.0	31.3
135.0	1.14	76.2	29.3
180.0	7.95	57.4	35.9
225.0	14.5	57.4	38.7
270.0	5.54	60.4	34.7
315.0	6.02	69.1	36.5

Database HAAT does not agree with computed HAAT  
Database HAAT: 0 m    Computed HAAT: 73 m

Distance to Canadian border: 916.8 km

Distance to Mexican border: 1265.8 km

Conditions at FCC monitoring station: Powder Springs GA  
Bearing: 106.1 degrees    Distance: 378.2 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 296.7 degrees    Distance: 1569.8 km

No land mobile station failures found

Proposal is not within the Offshore Radio Service protected area

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%

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Interference to BLANK0000111344 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WAFF	D15	DT	LIC	HUNTSVILLE, AL	BLANK0000111344	
Undesireds:	WDDY-LD	D15	LD	APP	JACKSON, TN	WDDY-LD prop 1252780	194.8 km
	WDBB	D14	DT	LIC	BESSEMER, AL	BLANK0000098219	159.7
	WDSI-TV	D14	DT	LIC	CHATTANOOGA, TN	BLANK0000059350	121.6
	WRBL	D15	DT	LIC	COLUMBUS, GA	BLCDT20061013ABV	310.9
	WPBM-CD	D15	DC	LIC	SCOTTSVILLE, KY	BLANK0000087303	239.4
	WFXW	D15	DT	LIC	GREENVILLE, MS	BLCDT20090612ACI	400.8
	WTNZ	D15	DT	LIC	KNOXVILLE, TN	BLANK0000081278	273.9
	W15EA-D	D15	DC	LIC	MEMPHIS, TN	BLANK0000093191	301.8
	W16DS-D	D16	DC	LIC	BIRMINGHAM, AL	BLANK0000080930	138.7
	WPXA-TV	D16	DT	LIC	ROME, GA	BLANK0000081827	178.4
	WHTN	D16	DT	LIC	MURFREESBORO, TN	BLANK0000100650	152.8

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
35099.1    1,530,946	32877.5    1,468,486	31382.9    1,412,039	31379.9    1,411,637	0.01    0.03

Undesired		Total IX	Unique IX, before		Unique IX, after	
WDDY-LD D15 LD APP	5.0	402			3.0	402
WDBB D14 DT LIC	679.7	21,993	627.4	18,601	627.4	18,601
WDSI-TV D14 DT LIC	27.0	564	20.0	116	20.0	116
WRBL D15 DT LIC	445.4	25,469	230.6	14,375	230.6	14,375
WPBM-CD D15 DC LIC	1.0	0	0.0	0	0.0	0
WFXW D15 DT LIC	3.0	164	2.0	164	1.0	164
WTNZ D15 DT LIC	308.6	12,236	184.5	5,824	184.5	5,824
W15EA-D D15 DC LIC	1.0	0	0.0	0	0.0	0
W16DS-D D16 DC LIC	11.9	629	1.0	0	1.0	0
WPXA-TV D16 DT LIC	238.6	7,509	115.7	3,344	115.7	3,344
WHTN D16 DT LIC	69.5	2,102	67.5	2,098	67.5	2,098

**Table 1 WDDY-LD TVStudy Analysis of Proposal**  
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Interference to BLCDT20090612ACI LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance		
Desired:	WFXW	D15	DT	LIC	GREENVILLE, MS	BLCDT20090612ACI			
Undesireds:	WDDY-LD	D15	LD	APP	JACKSON, TN	WDDY-LD prop 1252780	231.3 km		
	WNTZ-TV	D15	DT	LIC	NATCHEZ, MS	BLANK0000071605	239.5		
	W15EA-D	D15	DC	LIC	MEMPHIS, TN	BLANK0000093191	199.0		
	WLOV-TV	D16	DT	LIC	WEST POINT, MS	BLCDT20070405ABC	150.3		
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX		
23412.2	273,953	23404.3	273,486	23396.3	273,307	23396.3	273,307	0.00	0.00
Undesired				Total IX	Unique IX, before		Unique IX, after		
WDDY-LD	D15	LD	APP	3.0	177	0.0	0		
WNTZ-TV	D15	DT	LIC	2.0	2	2.0	2		
W15EA-D	D15	DC	LIC	4.0	177	2.0	42	1.0	0
WLOV-TV	D16	DT	LIC	4.0	135	2.0	0	2.0	0

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Interference to BLTTL20050308ABV APP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance	
Desired:	DW15CG	N15-	TX	APP	PONTOTOC, MS	BLTTL20050308ABV		
Undesireds:	WDDY-LD	D15	LD	APP	JACKSON, TN	WDDY-LD prop 1252780	77.5 km	
	WYMP-LD	D14	LD	LIC	BRUCE, MS	BLANK0000129753	73.9	
	WFXW	D15	DT	LIC	GREENVILLE, MS	BLCDT20090612ACI	171.1	
	WLOV-TV	D16	DT	LIC	WEST POINT, MS	BLCDT20070405ABC	49.1	
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX	
1932.1	77,986	1932.1	77,986	1920.0	77,878	1914.0	77,700	0.31    0.23
Undesired				Total IX	Unique IX, before	Unique IX, after		
WDDY-LD	D15	LD	APP	6.0	178	6.0	178	
WFXW	D15	DT	LIC	7.1	108	7.1	108	
WLOV-TV	D16	DT	LIC	5.0	0	5.0	0	

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Interference to BLCDT20070405ABC LIC scenario 1

Desired:	Call WLOV-TV	Chan D16	Svc DT	Status LIC	City, State WEST POINT, MS	File Number BLCDT20070405ABC	Distance		
Undesireds:	WDDY-LD	D15	LD	APP	JACKSON, TN	WDDY-LD prop 1252780	126.0 km		
	WFXW	D15	DT	LIC	GREENVILLE, MS	BLCDT20090612ACI	150.3		
	W16DS-D	D16	DC	LIC	BIRMINGHAM, AL	BLANK0000080930	213.6		
	WMAH-TV	D16	DT	LIC	BILOXI, MS	BLEDT20110404AGM	338.1		
	WHTN	D16	DT	LIC	MURFREESBORO, TN	BLANK0000100650	351.1		
	WJMY-CD	D17	DC	LIC	TUSCALOOSA, AL	BLANK0000086812	161.5		
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
32889.9	610,673	32760.4	608,310	32631.8	606,632	32620.8	606,510	0.03	0.02
Undesired				Total IX	Unique IX, before		Unique IX, after		
WDDY-LD	D15	LD	APP	18.1	210		11.0	122	
WFXW	D15	DT	LIC	15.8	236	15.8	236	236	
W16DS-D	D16	DC	LIC	30.8	525	24.8	289	24.8	289
WMAH-TV	D16	DT	LIC	34.9	298	32.9	298	32.9	298
WHTN	D16	DT	LIC	51.1	831	49.1	619	42.1	531
WJMY-CD	D17	DC	LIC	3.0	24	0.0	0	0.0	0

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Interference to proposal scenario 1

\*\*MX: 2.94% interference received

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WDDY-LD	D15	LD	APP	JACKSON, TN	WDDY-LD prop 1252780	
Undesireds:	WYMP-LD	D14	LD	LIC	BRUCE, MS	BLANK0000129753	69.6 km
	WAFF	D15	DT	LIC	HUNTSVILLE, AL	BLANK0000111344	194.8

**Table 1 WDDY-LD TVStudy Analysis of Proposal**  
(page 4 of 4)



W15BU-D	D15	DC	CP	JOHNSON CITY, IL	BLANK0000035857	331.4
WFXW	D15	DT	LIC	GREENVILLE, MS	BLCDT20090612ACI	231.3
DW15CG	N15-	TX	APP	PONTOTOC, MS	BLTTL20050308ABV	77.5
W15EA-D	D15	DC	LIC	MEMPHIS, TN	BLANK0000093191	111.0
WLOV-TV	D16	DT	LIC	WEST POINT, MS	BLCDT20070405ABC	126.0

Service area	Terrain-limited	IX-free	Percent IX
4293.5 101,484	4240.4 100,866	4018.6 97,902	5.23 2.94

Undesired	Total IX	Unique IX	Prcnt Unique IX
WAFF D15 DT LIC 40.0 573 13.0 178 0.31 0.18			
WFXW D15 DT LIC 25.1 321 2.0 0 0.05 0.00			
DW15CG N15- TX APP 186.7 2,657 158.6 2,200 3.74 2.18			
W15EA-D D15 DC LIC 23.0 177 10.0 85 0.24 0.08			
WLOV-TV D16 DT LIC 2.0 26 0.0 0 0.00 0.00			



**Channel and  
Facility  
Information**

Section	Question	Response
Facility ID	185331	
State	Tennessee	
City	JACKSON	
LPD Channel	15	

**Primary station proposed to be rebroadcast:**

Facility Id	Call Sign	City	State
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**Antenna Location  
Data**

Section	Question	Response
<b>Antenna Structure Registration</b>	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1252780
<b>Coordinates (NAD83)</b>	Latitude	34° 52' 19.0" N+
	Longitude	088° 39' 38.6" W-
	Structure Type	TOWER-A free standing or guyed struct
	Overall Structure Height	94.8 meters
	Support Structure Height	91.4 meters
	Ground Elevation (AMSL)	143.9 meters
<b>Antenna Data</b>	Height of Radiation Center Above Ground Level	79.2 meters
	Height of Radiation Center Above Mean Sea Level	223.1 meters
	Effective Radiated Power	15 kW

**Antenna  
Technical Data**

Section	Question	Response
<b>Antenna Type</b>	Antenna Type	Directional Custom
	Do you have an Antenna ID?	No
	Antenna ID	
<b>Antenna Manufacturer and Model</b>	Manufacturer:	Dielectric
	Model	TLP-12J
	Rotation	290 degrees
	Electrical Beam Tilt	0.5
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Horizontal
<b>Elevation Radiation Pattern</b>	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

**Directional Antenna Relative Field Values (Pre-rotated Pattern)**

Degree	Value	Degree	Value	Degree	Value	Degree	Value
0	0.591	90	0.918	180	0.402	270	0.917
10	0.568	100	0.842	190	0.374	280	0.975
20	0.601	110	0.731	200	0.299	290	1.000
30	0.666	120	0.594	210	0.253	300	0.969
40	0.764	130	0.444	220	0.296	310	0.890
50	0.878	140	0.309	230	0.427	320	0.775
60	0.964	150	0.250	240	0.579	330	0.673
70	1.000	160	0.284	250	0.728	340	0.608
80	0.975	170	0.361	260	0.844	350	0.569

**Additional Azimuths**

Degree	V <sub>A</sub>
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