



**STATEMENT OF JOHN E. HIDLE, P.E.
IN SUPPORT OF AN APPLICATION FOR
POST REPACK CONSTRUCTION PERMIT
WPSD-TV - PADUCAH, KENTUCKY
DTV - CH. 19 - 675 kW - 492 m HAAT**

Prepared for: WPSD-TV, LLC

I am a Consulting Engineer, an employee in the firm of Carl T. Jones Corporation, with offices located in Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission. I am a Licensed Professional Engineer in the Commonwealth of Virginia, License No. 7418, and in the State of New York, License No. 63418.

GENERAL

This office has been authorized by WPSD-TV, LLC, licensee of WPSD-TV channel 32, facility ID number 51991, licensed to Paducah, Kentucky, to prepare this statement, FCC Form 2100, Schedule A, its technical sections, and the associated exhibits in support of an application for construction permit, in accordance with the Incentive Auction Closing and Channel Reassignment Public Notice, DA 17-314, and the technical information provided in the confidential reassignment letter from the FCC announcing the substitution for DTV channel 32 with new DTV channel 19 to be used by WPSD-TV for its post-reassignment broadcasting.

OMNI-DIRECTIONAL ANTENNA

The applicant proposes to install a new Dielectric TFU-31JTH/VP-R O4SP elliptically polarized omni-directional transmitting antenna with its center of radiation located at a height above ground of 490 meters, and a height above average terrain of 492 meters. The antenna manufacturer's vertical plane elevation radiation pattern, illustrating the antenna's radiation characteristics above and below the horizontal plane is shown and tabulated in Exhibit 2.

PREDICTED COVERAGE CONTOURS

The predicted coverage contours were calculated in accordance with the method described in Section 73.625(b) of the Rules, utilizing the appropriate F(50,90) propagation curves (47 CFR Section 73.699, Figure 9), proposed Effective Radiated Power, and antenna height above average terrain as determined for each profile radial. The average terrain on the eight cardinal radials from 3 kilometers to 16 kilometers from the site, was determined using the NED Three Second US Terrain Database as permitted in the FCC Rules. The antenna site elevation and coordinates were determined from FCC antenna registration data. Exhibit 1 shows the predicted Noise Limited (39.25 dBu) contour, and the principal community (48 dBu) contour. The 48 dBu contour completely encompasses the principal community of license, Paducah, Kentucky.

ALLOCATION CONSIDERATIONS

Post-Transition DTV Considerations

A study was performed, using the FCC's software, tv_study, v. 2.2.2, to determine if the instant application for construction permit is predicted to cause new prohibited interference to post reassignment DTV stations, construction permits, DTV allotments or Class A DTV stations. The study results, shown in Appendix B, indicate that the instant application for construction permit is predicted to cause no new interference exceeding 0.5% to the populations served by any post reassignment DTV station, construction permit, allotment or Class A DTV stations. The study also shows that WPSD-TV's proposed service area is within the baseline plus 1%. (See Appendix B)

International DTV Considerations

The WPSD-TV site is located more than 700 kilometers from the nearest points on both the US-Canadian border and US-Mexican border. Therefore no international coordination is required.

BLANKETING AND INTERMODULATION INTERFERENCE

Other broadcast and non-broadcast facilities are either co-located with, or located within 10 km of the proposed WPSD-TV site. The applicant does recognize its responsibility to remedy complaints of interference that might result from this proposal in accordance with applicable Rules.

RADIO_FREQUENCY IMPACT

The FCC's guidelines and procedures for evaluating environmental effects of radio frequency (RF) emissions are generally based on recommendations by the National Council on Radiation Protection and Measurements (NCRP) in NCRP Report No. 86 (1986) and by the American National Standards Institute and the Institute of Electrical and Electronic Engineers, LLC (IEEE) in ANSI/IEEE C95.1-1992 (IEEE C95.1-1991). The guidelines define a maximum permissible exposure (MPE) level for occupational or "controlled" situations, and for "uncontrolled" environments that apply in all other cases that might affect the general public. The FCC Office of Engineering and Technology's technical bulletin No. 65 entitled, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields" (Edition 97-01, August 1997), provides assistance to determine whether FCC-regulated transmitting facilities, operations or devices comply with guidelines for human exposure to radio frequency electromagnetic fields as adopted by the Commission in 1996. OET Bulletin No. 65 contains the technical information necessary to evaluate compliance with the FCC's policies and guidelines.

The Maximum Permitted Exposure (MPE) level for broadcast facilities that operate on a frequency between 30 MHz and 300 MHz is 200 microwatts per centimeter squared ($\mu\text{W}/\text{cm}^2$) for an "uncontrolled" environment, and is 1000 microwatts per centimeter squared ($\mu\text{W}/\text{cm}^2$) for a "controlled" environment. The MPE level for broadcast facilities that operate on a frequency between 300 MHz and 1500 MHz, primarily UHF TV stations, is determined for an "uncontrolled" environment by dividing the operating frequency in MHz by 1.5, and is similarly determined for a "controlled" environment by dividing the operating

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frequency in MHZ by 0.3.

The predicted emissions of WPSD-TV must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WPSD-TV, which will operate on television Channel 19 (500-506 MHZ), the MPE is 335.33 microwatts per centimeter squared ($\mu\text{W}/\text{cm}^2$) in an "uncontrolled" environment and 1,676.7 $\mu\text{W}/\text{cm}^2$ in a "controlled" environment. The proposed WPSD-TV facility will operate with a maximum ERP of 675 kW from an elliptically polarized omni-directional transmitting antenna with a centerline height of 490 meters above ground level (AGL). Considering a conservative predicted vertical plane relative field factor of 0.300 the WPSD-TV facility is predicted to produce a power density at two meters above ground level of 17.186 $\mu\text{W}/\text{cm}^2$, which is 5.13% of the FCC guideline value for an "uncontrolled" environment, and 1.026% of the FCC's guideline value for "controlled" environments. There is one full-power FM station that is located at the WPSD-TV site. The total estimated percentage of the ANSI value at the proposed site, including the cumulative radiation from all authorizations located within the relevant proximity, is 37.97% of the limit applicable to "uncontrolled" environments, and 7.594% of the limit for "controlled" environments. (See Appendix A)

OCCUPATIONAL SAFETY

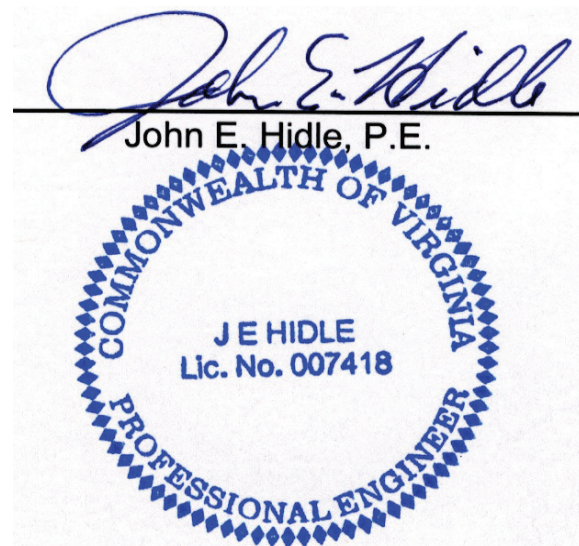
The licensee of WPSD-TV is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WPSD-TV antenna, and is committed to reducing power or ceasing operation during times of maintenance of the transmission systems, when necessary, to ensure protection to personnel.

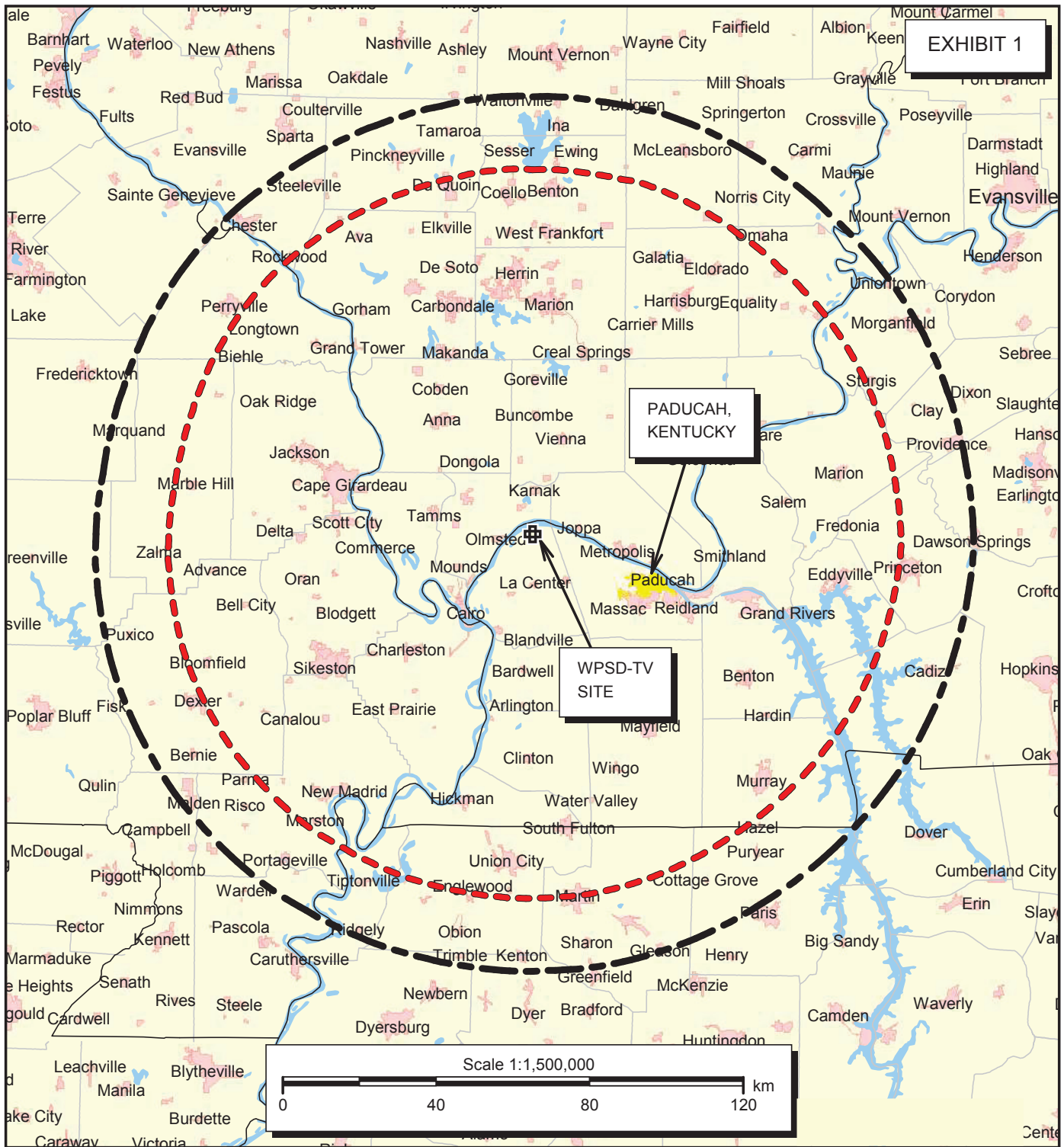
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SUMMARY

It is submitted that the instant application for construction permit to change WPSD-TV from channel 32 to channel 19, as described herein, complies with the Rules, Regulations and relevant Policies of the Federal Communications Commission. This statement, FCC Form 2100, its technical sections, and the attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct to the best of my knowledge and belief.

DATED: June 15, 2017





PREDICTED COVERAGE CONTOURS

WPSD-TV - PADUCAH, KENTUCKY
DTV Channel 19 - 679 kW ERP - 492 M HAAT
JUNE, 2017

Predicted Noise Limited 39.25 dBu
 F(50,90) Coverage Contour



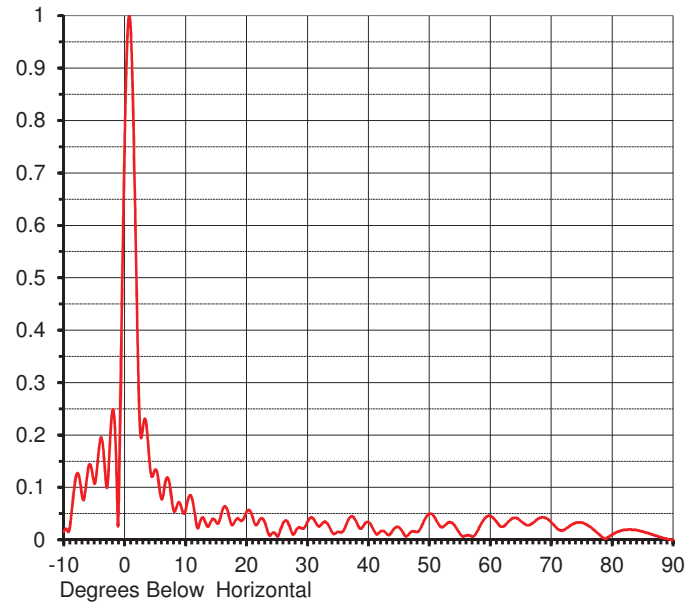
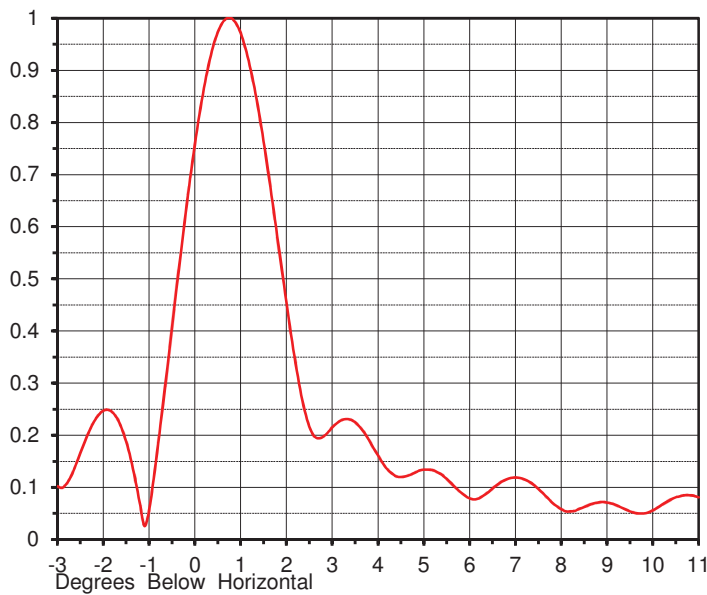
Predicted Principal Community 48 dBu
 F(50,90) Coverage Contour

ELEVATION PATTERN

Proposal No. **C-70321**
 Date **25-Feb-17**
 Call Letters **WPSD 19**
 Frequency **503 MHz**
 Antenna Type **TFU-31JTH/VP-R 04 (SP)**

RMS Directivity at Main Lobe **31.00 (14.91 dB)**
 RMS Directivity at Horizontal **17.80 (12.50 dB)**
Calculated

Beam Tilt **0.75 deg**
 Drawing Number **31J310075**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.015	10.0	0.056	30.0	0.034	50.0	0.050	70.0	0.034
-9.0	0.024	11.0	0.081	31.0	0.040	51.0	0.041	71.0	0.021
-8.0	0.120	12.0	0.022	32.0	0.026	52.0	0.024	72.0	0.018
-7.0	0.085	13.0	0.041	33.0	0.034	53.0	0.032	73.0	0.026
-6.0	0.135	14.0	0.031	34.0	0.015	54.0	0.029	74.0	0.032
-5.0	0.108	15.0	0.034	35.0	0.015	55.0	0.012	75.0	0.033
-4.0	0.192	16.0	0.055	36.0	0.019	56.0	0.008	76.0	0.028
-3.0	0.102	17.0	0.051	37.0	0.043	57.0	0.006	77.0	0.019
-2.0	0.247	18.0	0.033	38.0	0.035	58.0	0.019	78.0	0.009
-1.0	0.055	19.0	0.037	39.0	0.024	59.0	0.039	79.0	0.002
0.0	0.757	20.0	0.053	40.0	0.034	60.0	0.045	80.0	0.010
1.0	0.972	21.0	0.043	41.0	0.016	61.0	0.035	81.0	0.016
2.0	0.455	22.0	0.035	42.0	0.016	62.0	0.025	82.0	0.019
3.0	0.215	23.0	0.033	43.0	0.012	63.0	0.035	83.0	0.020
4.0	0.161	24.0	0.010	44.0	0.018	64.0	0.042	84.0	0.018
5.0	0.134	25.0	0.007	45.0	0.024	65.0	0.036	85.0	0.016
6.0	0.079	26.0	0.032	46.0	0.008	66.0	0.028	86.0	0.012
7.0	0.119	27.0	0.028	47.0	0.015	67.0	0.032	87.0	0.008
8.0	0.058	28.0	0.015	48.0	0.015	68.0	0.041	88.0	0.005
9.0	0.071	29.0	0.022	49.0	0.033	69.0	0.042	89.0	0.002
								90.0	0.000

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SUMMARY OF RADIOFREQUENCY RADIATION STUDY

WPSD-TV, Paducah, KY
Channel 19, 675 kW, 492 m HAAT
June, 2017

<u>CALL</u>	<u>SERVICE</u>	<u>CHANNEL</u>	<u>FREQUENCY</u>	<u>POLAR- IZATION</u>	<u>ANTENNA HEIGHT</u>	<u>ERP (kW)</u>	<u>VERT. RELATIVE FIELD FACTOR</u>	<u>WORST-CASE PREDICTED POWER DENSITY ($\mu\text{W}/\text{cm}^2$)</u>	<u>FCC UNCONTROLLED LIMIT ($\mu\text{W}/\text{cm}^2$)</u>	<u>PERCENT OF UNCONTROLLED LIMIT</u>
WPSD-TV	DT	19	503	H & V	488	675.000	0.300	17.186	335.33	5.13%
WGCF	FM	207	89.3	H & V	142	12.000	1.000	65.698	200.00	32.85%
TOTAL PERCENTAGE OF FCC GUIDELINE VALUE =										37.97%

* For television stations a very conservative vertical relative field factor of 0.3 was assumed pursuant to OET Bulletin 65.

** The antenna heights indicated above are 2 meters less than the actual antenna heights
so that the predicted power densities consider the 2 meter human height allowance.

This evaluation includes facilities collocated at the site, and facilities located within 315 meters.



WPSD-TV - PADUCAH, KENTUCKY Longley-Rice Interference Analysis

tvstudy v2.2.2

Database: localhost, Study: WPSD_19_OMNI_492H_679K, Model: Longley-Rice
Start: 2017.06.12 13:51:16

Study created: 2017.06.12 13:51:05

Study build station data: LMS TV 2017-06-07 (14)

Proposal: WPSD-TV D19 DT APP PADUCAH, KY
File number: WPSD_19_OMNI_492H_679K
Facility ID: 51991
Station data: User record
Record ID: 588
Country: U.S.
Zone: II

Non-U.S. records included

Stations potentially affected:

Call	Chan	Svc	Status	City, State	File Number	Distance
KVTJ-DT	D18	DT	BL	JONESBORO, AR	DTVBL2784	223.9 km
WKYU-TV	D18	DT	LIC	BOWLING GREEN, KY	BLEDT20040803AAG	226.1
WHNT-TV	D19	DT	LIC	HUNTSVILLE, AL	BLCDT20111118COZ	350.6
WIPB	D19	DT	BL	MUNCIE, IN	DTVBL3646	448.4
WDKY-TV	D19	DT	BL	DANVILLE, KY	DTVBL64017	417.8
KYTV	D19	DT	BL	SPRINGFIELD, MO	DTVBL36003	350.6
KTEJ	D20	DT	LIC	JONESBORO, AR	BLEDT20110818AAQ	214.5
WTSN-CD	D20	DC	LIC	EVANSVILLE, IN	BLDTL20120328AJA	174.7
WZTV	D20	DT	BL	NASHVILLE, TN	DTVBL418	220.5

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D19
Latitude: 37 11 31.20 N (NAD83)
Longitude: 88 58 53.20 W
Height AMSL: 600.0 m
HAAT: 492.0 m
Peak ERP: 679 kW
Antenna: DIE-TFU-31JTH/VP-R 04 (SP)

39.3 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	679 kW	489.0 m	113.9 km
45.0	679	486.9	113.7
90.0	679	502.3	114.8
135.0	679	482.6	113.4
180.0	679	488.8	113.9
225.0	679	503.1	114.9
270.0	679	485.3	113.6

Appendix B - Interference Analysis
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Channel 19 - 675 kW - Page 2

315.0 679 497.2 114.5

ERP exceeds maximum

ERP: 679 kW ERP maximum: 535 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: 725.3 km

Distance to Mexican border: 1407.5 km

Conditions at FCC monitoring station: Powder Springs GA

Bearing: 132.6 degrees Distance: 534.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 288.0 degrees Distance: 1444.7 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 DTVBL2784 BL, scenario 1

Proposal causes no interference.

Interference to BLEDT20040803AAG LIC, scenario 1

Proposal causes no interference.

Interference to BLCDDT20111118COZ LIC, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WHNT-TV	D19	DT	LIC	HUNTSVILLE, AL	BLCDDT20111118COZ	
Undesireds:	WPSD-TV	D19	DT	BL	PADUCAH, KY	DTVBL51991	350.6 km
	WPSD-TV	D19	DT	APP	PADUCAH, KY	WPSD_19_OMNI_492H_679K	350.6
	WZDX	D18	DT	BL	HUNTSVILLE, AL	DTVBL28119	0.2
	WIIQ	D19	DT	LIC	DEMOPOLIS, AL	BLEDT20090511AHE	291.9
	WIYC	D19	DT	BL	TROY, AL	DTVBL62207	302.5
	WGCL-TV	D19	DT	LIC	ATLANTA, GA	BLCDDT20060113ACO	226.5
	WDKY-TV	D19	DT	BL	DANVILLE, KY	DTVBL64017	401.5
	WPDP-CD	D19	DC	BL	CLEVELAND, TN	DTVBL52078	179.5
	WABM	D20	DT	BL	BIRMINGHAM, AL	DTVBL16820	141.7
	WDNN-CD	D20	DC	BL	DALTON, GA	DTVBL49236	138.4
	WZTV	D20	DT	BL	NASHVILLE, TN	DTVBL418	171.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
36360.2 1,569,885	34222.1 1,487,578	32492.1 1,426,845	32492.1 1,426,845	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WPSD-TV D19 DT BL 100.8 2,921 88.6 2,695			
WPSD-TV D19 DT APP 100.8 2,921 88.6 2,695			
WZDX D18 DT BL 120.3 2,400 120.3 2,400			

Appendix B - Interference Analysis
WPSD-TV - Paducah, Kentucky
Channel 19 - 675 kW - Page 3

WIIQ D19 DT LIC	604.9	20,807	340.3	7,355	340.3	7,355
WIYC D19 DT BL	8.0	389	0.0	0	0.0	0
WGCL-TV D19 DT LIC	988.1	41,500	759.9	29,225	759.9	29,225
WDKY-TV D19 DT BL	8.1	194	8.1	194	8.1	194
WPDP-CD D19 DC BL	23.9	144	7.9	0	7.9	0
WABM D20 DT BL	228.7	9,568	48.2	3,032	48.2	3,032
WDNN-CD D20 DC BL	35.8	215	0.0	0	0.0	0
WZTV D20 DT BL	24.2	349	20.1	322	20.1	322

Interference to BLCDT20111118COZ LIC, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WHNT-TV	D19	DT	LIC	HUNTSVILLE, AL	BLCDT20111118COZ	
Undesireds:	WPSD-TV	D19	DT	BL	PADUCAH, KY	DTVBL51991	350.6 km
	WPSD-TV	D19	DT	APP	PADUCAH, KY	WPSD_19_OMNI_492H_679K	350.6
	WZDX	D18	DT	BL	HUNTSVILLE, AL	DTVBL28119	0.2
	WIIQ	D19	DT	LIC	DEMOPOLIS, AL	BLEDT20090511AHE	291.9
	WIYC	D19	DT	BL	TROY, AL	DTVBL62207	302.5
	WGCL-TV	D19	DT	LIC	ATLANTA, GA	BLCDT20060113ACO	226.5
	WDKY-TV	D19	DT	BL	DANVILLE, KY	DTVBL64017	401.5
	WPDP-CD	D19	DC	BL	CLEVELAND, TN	DTVBL52078	179.5
	WABM	D20	DT	BL	BIRMINGHAM, AL	DTVBL16820	141.7
	WDNN-CD	D20	DC	BL	DALTON, GA	DTVBL49236	138.4
	WZTV	D20	DT	BL	NASHVILLE, TN	DTVBL418	171.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
36360.2 1,569,885	34222.1 1,487,578	32492.1 1,426,845	32492.1 1,426,845	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WPSD-TV D19 DT BL	100.8 2,921	88.6 2,695	
WPSD-TV D19 DT APP	100.8 2,921		88.6 2,695
WZDX D18 DT BL	120.3 2,400	120.3 2,400	120.3 2,400
WIIQ D19 DT LIC	604.9 20,807	340.3 7,355	340.3 7,355
WIYC D19 DT BL	8.0 389	0.0 0	0.0 0
WGCL-TV D19 DT LIC	988.1 41,500	759.9 29,225	759.9 29,225
WDKY-TV D19 DT BL	8.1 194	8.1 194	8.1 194
WPDP-CD D19 DC BL	23.9 144	7.9 0	7.9 0
WABM D20 DT BL	228.7 9,568	48.2 3,032	48.2 3,032
WDNN-CD D20 DC BL	35.8 215	0.0 0	0.0 0
WZTV D20 DT BL	24.2 349	20.1 322	20.1 322

Interference to DTVBL3646 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL3646 BL, scenario 2
Proposal causes no interference.

Interference to DTVBL64017 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL64017 BL, scenario 2
Proposal causes no interference.

Interference to DTVBL64017 BL, scenario 3
Proposal causes no interference.

Interference to DTVBL64017 BL, scenario 4

Appendix B - Interference Analysis
WPSD-TV - Paducah, Kentucky
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Proposal causes no interference.

Interference to DTVBL36003 BL, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KYTV	D19	DT	BL	SPRINGFIELD, MO	DTVBL36003	
Undesireds:	WPSD-TV	D19	DT	BL	PADUCAH, KY	DTVBL51991	350.6 km
	WPSD-TV	D19	DT	APP	PADUCAH, KY	WPSD_19_OMNI_492H_679K	350.6
	KFSM-TV	D18	DT	LIC	FORT SMITH, AR	BLCDT20060530AIM	184.7
	KSJF-CD	D19	DC	BL	Fort Smith, AR	DTVBL52425	281.5
	KNLJ	D20	DT	LIC	JEFFERSON CITY, MO	BLCDT20110121ACA	185.7

Service area	Terrain-limited		IX-free, before		IX-free, after		Percent New IX
45525.9	1,041,080	44817.1	1,028,992	44533.9	1,024,051	44533.9	0.00 0.00

Undesired	Total IX		Unique IX, before		Unique IX, after	
WPSD-TV D19 DT BL	215.7	4,078	215.7	4,078		
WPSD-TV D19 DT APP	215.7	4,078			215.7	4,078
KFSM-TV D18 DT LIC	24.0	229	24.0	229	24.0	229
KNLJ D20 DT LIC	43.5	634	43.5	634	43.5	634

Interference to BLEDT20110818AAQ LIC, scenario 1

Proposal causes no interference.

Interference to BLDLTL20120328AJA LIC, scenario 1

Proposal causes no interference.

Interference to BLDLTL20120328AJA LIC, scenario 2

Proposal causes no interference.

Interference to DTVBL418 BL, scenario 1

Proposal causes no interference.

Interference to DTVBL418 BL, scenario 2

Proposal causes no interference.

Interference to proposal, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WPSD-TV	D19	DT	APP	PADUCAH, KY	WPSD_19_OMNI_492H_679K	
Undesireds:	WHNT-TV	D19	DT	LIC	HUNTSVILLE, AL	BLCDT20111118COZ	350.6 km
	KYTV	D19	DT	BL	SPRINGFIELD, MO	DTVBL36003	350.6
	KTEJ	D20	DT	LIC	JONESBORO, AR	BLEDT20110818AAQ	214.5
	WTSN-CD	D20	DC	LIC	EVANSVILLE, IN	BLDLTL20120328AJA	174.7

Service area	Terrain-limited		IX-free		Percent IX	
40909.3	883,812	40435.6	879,211	40216.2	875,559	0.54 0.42

Undesired	Total IX		Unique IX		Prct Unique IX	
WHNT-TV D19 DT LIC	119.8	2,782	119.8	2,782	0.30	0.32
KYTV D19 DT BL	95.6	629	95.6	629	0.24	0.07
WTSN-CD D20 DC LIC	4.0	241	4.0	241	0.01	0.03