

TECHNICAL EXHIBIT  
APPLICATION FOR CONSTRUCTION PERMIT  
CLASS A STATION WXSX-CA  
FACILITY ID 70427  
SAVANNAH, GEORGIA  
CH 46 150 KW (MAX-DA)

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of an application for construction permit for Class A station WXSX-CA at Savannah, Georgia (Facility ID: 70427; File No. BLTTA-20060106ADJ). Specifically, this application proposes to increase the radio horizon effective radiated power (ERP) from 50 kW to 133 kW and to modify the transmitter site coordinates to conform to registered tower data. No other changes are proposed, including no change in channel (46), frequency offset designation (-), maximum ERP at any horizontal or vertical angle (150 kW), antenna radiation center height above mean sea level (RCAMSL, 136 m), antenna system or community of license (Savannah). As detailed elsewhere in this application, a waiver of the freeze on Class facility modifications which result in an expansion in coverage is requested.<sup>1</sup>

It is proposed to operate on channel 46 (662-668 MHz) with a "minus" carrier frequency offset using a PSI model PSILP16AOC "off-the-shelf" directional antenna (Antenna ID 20379) oriented at 35° true. The maximum ERP towards the radio horizon will be 133 kW and the maximum ERP at any horizontal or vertical angle will be 150 kW.<sup>2</sup> The PSI directional antenna will be mounted at the 131 meter level on the existing tower (ASR 1037652) resulting in an antenna radiation center height above mean sea level of 136 meters.

---

<sup>1</sup> See FCC Public Notice (DA 04-2446) released August 3, 2004, Freeze on the Filing of Certain TV and DTV Requests for Allotment or Service Area Changes.

<sup>2</sup> Appropriate electrical beam tilting will be used to achieve the proposed ERP levels.

Response to Paragraph 13

The proposed facility complies with all the following applicable rule Sections: Sections 74.705, 74.706, 74.707, 74.708, 74.709 and 74.710. Figure 1 provides the summary of the output of a study based on OET-69 Bulletin which demonstrates that the proposed WXSX-CA operation complies with the FCC's NTSC, DTV, LPTV/TV translator and Class A interference criteria.<sup>3</sup>

Response to Paragraph 14 - Environmental Protection Act

The proposed WXSX-CA LPTV facilities were evaluated in terms of potential radiofrequency radiation exposure at ground level in accordance with OST Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation."<sup>4</sup> The calculated power density at towards the base of the tower (-60° to -90° elevation) was calculated using the appropriate equation of the Bulletin. Using a greater than expected vertical relative field value of 0.2, a maximum visual effective radiated power of 150.0 kilowatts and 10 percent aural power, the calculated power density at 2 meters above ground level at the base of the tower is 0.0060 milliwatt per square centimeter (mW/cm<sup>2</sup>), or 1.4 percent of the Commission's recommended limit applicable to general population/uncontrolled exposure areas (0.44 mW/cm<sup>2</sup> for TV channel 46). Therefore, based on the responsibility threshold of 5%, the WXSX-CA proposal will comply with the RF emission rules.

Access to the transmitting site will be restricted and appropriately marked with warning signs. Furthermore, as this is a multi-user site, an agreement will be in effect in

---

<sup>3</sup> The du Treil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 1 km was employed. A Sun computer system was employed. The results have been found to be in agreement with the results of the FCC implementation of OET Bulletin 69.

<sup>4</sup> See *Report and Order* in ET Docket 93-62, FCC 96-326, adopted August 1, 1996, 11 FCC Rcd 15123 (1997). See also *First Memorandum Opinion and Order*, ET Docket 93-62, FCC 96-487, adopted December 23, 1996, 11 FCC Rcd 17512 (1997), and *Second Memorandum Opinion and Order and Notice of Proposed Rulemaking*, ET Docket 93-62, FCC 97-303, adopted August 25, 1997.

the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down.



W. Jeffrey Reynolds

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Avenue  
Sarasota, Florida 34237  
(941)329-6000  
JEFF@DLR.COM

March 24, 2006

OET-69 DTV/TV INTERFERENCE and SPACING ANALYSIS PROGRAM

1990 Census data selected

Record Selected for Analysis

WXSX-CA USERRECORD-01 SAVANNAH GA US  
 Channel 46 ERP 133. kW HAAT 135. m RCAMSL 00136 m  
 Latitude 032-02-42 Longitude 0081-07-21  
 Status APP Zone 2 Border Offset -  
 Dir Antenna Make CDB Model 00000000020379 Beam tilt N Ref Azimuth 35.  
 Last update Cutoff date Docket  
 Comments  
 Applicant

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Not full service station

Facility meets maximum power limit

Azimuth (Deg)	ERP (kW)	HAAT (m)	74.0 dBu F(50,50) (km)
0.0	115.775	135.2	30.3
45.0	131.409	133.7	31.0
90.0	95.078	133.7	29.1
135.0	52.955	132.4	25.7
180.0	53.207	133.1	25.8
225.0	60.061	132.7	26.4
270.0	48.681	130.6	25.1
315.0	67.993	130.9	27.0

Evaluation from Class A Station

Station inside contour of station

WVAN-DT 46 SAVANNAH GA DTVPLN DTVP1324

Contour overlap to station

WCTV 46 THOMASVILLE GA BPRM 20000328AAL

Contour overlap to station

WCTV 46 THOMASVILLE GA BLCDT 20050815AAA

Contour overlap to station

WWAY 46 WILMINGTON NC BLCDT 20051221AOQ

Contour overlap to station  
WWAY-DT 46 WILMINGTON NC DTVPLN DTVP1333

Contour Overlap Evaluation from Class A Complete

Contour Overlap Evaluation from LPTV Station to LPTV Stations

No Spacing violations or contour overlap from LPTV station

Contour Overlap Evaluation from LPTV to LPTV Stations Complete

Contour Overlap to Proposed Station

Contour Overlap Evaluation to Proposed Station Complete

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite zone

Proposed facility OK toward Table Mountian

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

\*\*\*\*\*

Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
46	WXSX-CA	SAVANNAH GA	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
46	WVAN-DT	SAVANNAH GA	48.0	PLN	DTVPLN	-DTVP1324
46	WCTV	THOMASVILLE GA	308.0	LIC	BPRM	-20000328AAL
46	WCTV	THOMASVILLE GA	308.0	LIC	BLCDT	-20050815AAA
46	WWAY	WILMINGTON NC	358.4	LIC	BLCDT	-20051221AOQ
46	WWAY-DT	WILMINGTON NC	358.4	PLN	DTVPLN	-DTVP1333

\*\*\*\*\*



46	WJZY	BELMONT NC	360.0	LIC	BLCT	-19870320KU
46	WWAY-DT	WILMINGTON NC	388.0	PLN	DTVPLN	-DTVPL333
47	WTEV-TV	JACKSONVILLE FL	208.0	LIC	BLCT	-19881116KG
47	WCSC-TV	CHARLESTON SC	199.5	LIC	BPRM	-20000731AAA
47	WCSC-TV	CHARLESTON SC	199.5	LIC	BLCDT	-20030501ABA
47	WZRB	COLUMBIA SC	218.6	LIC	BLCT	-20050110ABA
47	960722KG	COLUMBIA SC	218.7	APP	BPCT	-19960722KG
46	WXSX-CA	SAVANNAH GA	48.0	APP	USERRECORD-01	

Total scenarios = 2

Result key: 1  
Scenario 1 Affected station 1 WVAN-DT  
Before Analysis

Results for: 46A GA SAVANNAH DTVPLN DTVP1324 PLN  
HAAT 320.0 m, ATV ERP 958.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	642957	29418.1
not affected by terrain losses	642541	29356.3
lost to NTSC IX	139	61.8
lost to additional IX by ATV	1655	121.7
lost to ATV IX only	1789	170.8
lost to all IX	1794	183.5

Potential Interfering Stations Included in above Scenario 1

46N GA ATLANTA	BLCT	2619	LIC
46N NC BELMONT	BLCT	19870320KU	LIC
46A GA THOMASVILLE	BPRM	20000328AAL	LIC

After Analysis

Results for: 46A GA SAVANNAH DTVPLN DTVP1324 PLN  
HAAT 320.0 m, ATV ERP 958.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	642957	29418.1
not affected by terrain losses	642541	29356.3
lost to NTSC IX	181375	4311.7
lost to additional IX by ATV	1589	111.9
lost to ATV IX only	1789	170.8
lost to all IX	182964	4423.6

Potential Interfering Stations Included in above Scenario 1

46N GA ATLANTA	BLCT	2619	LIC
46N NC BELMONT	BLCT	19870320KU	LIC
46A GA THOMASVILLE	BPRM	20000328AAL	LIC
46N GA SAVANNAH	USERRECORD01		APP

The following station failed the de minimis interference criteria.

46N GA SAVANNAH USERRECORD01  
ERP 150.00 kW HAAT 135.0 m RCAMSL 136.0 m  
Antenna CDB 00000000020379

Due to interference to the following station and scenario: 1

46D GA SAVANNAH DTVPLN DTVP1324  
ERP 958.00 kW HAAT 320.0 m RCAMSL 343.0 m  
Antenna rep GASAVANNAH\_\_46

Percent Service lost without proposal: 0.3 to DTVPLN DTVP1324  
 Percent Service lost with proposal: 28.5 to DTVPLN DTVP1324

Result key: 2  
 Scenario 2 Affected station 1 WVAN-DT  
 Before Analysis

Results for: 46A GA SAVANNAH DTVPLN DTVP1324 PLN  
 HAAT 320.0 m, ATV ERP 958.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	642957	29418.1
not affected by terrain losses	642541	29356.3
lost to NTSC IX	139	61.8
lost to additional IX by ATV	1489	120.7
lost to ATV IX only	1623	168.8
lost to all IX	1628	182.6

Potential Interfering Stations Included in above Scenario 2

46N GA ATLANTA	BLCT	2619	LIC
46N NC BELMONT	BLCT	19870320KU	LIC
46A GA THOMASVILLE	BLCDT	20050815AAA	LIC

After Analysis

Results for: 46A GA SAVANNAH DTVPLN DTVP1324 PLN  
 HAAT 320.0 m, ATV ERP 958.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	642957	29418.1
not affected by terrain losses	642541	29356.3
lost to NTSC IX	181375	4311.7
lost to additional IX by ATV	1423	110.9
lost to ATV IX only	1623	168.8
lost to all IX	182798	4422.6

Potential Interfering Stations Included in above Scenario 2

46N GA ATLANTA	BLCT	2619	LIC
46N NC BELMONT	BLCT	19870320KU	LIC
46A GA THOMASVILLE	BLCDT	20050815AAA	LIC
46N GA SAVANNAH	USERRECORD01		APP

The following station failed the de minimis interference criteria.  
 46N GA SAVANNAH USERRECORD01  
 ERP 150.00 kW HAAT 135.0 m RCMSL 136.0 m  
 Antenna CDB 00000000020379

Due to interference to the following station and scenario: 2  
 46D GA SAVANNAH DTVPLN DTVP1324  
 ERP 958.00 kW HAAT 320.0 m RCMSL 343.0 m  
 Antenna rep GASAVANNAH\_\_46

Percent Service lost without proposal: 0.2 to DTVPLN DTVP1324  
 Percent Service lost with proposal: 28.4 to DTVPLN DTVP1324

#####

Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application Ref. No.
46	WCTV	THOMASVILLE GA	BPRM -20000328AAL

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
46	WMCF-TV	MOBILE AL	287.7	APP	BMPCDT -20051025AAY
46	WMCF-TV	MONTGOMERY AL	287.7	CP	BPCDT -19991013ABR
46	WMCF-DT	MONTGOMERY AL	287.7	PLN	DTVPLN -DTVP1316
46	WMCF-TV	MONTGOMERY AL	287.7	APP	BMPCDT -20051025AAY
46	WLCB-TV	LEESBURG FL	360.4	LIC	BLEDT -20050915ALL
46	WLCB-DT	LEESBURG FL	290.1	PLN	DTVPLN -DTVP1322
46	WPCT	PANAMA CITY BEACH FL	184.3	LIC	BMLCT -20030616AAW
46	WGCL-TV	ATLANTA GA	350.7	LIC	BLCT -2619
46	WVAN-DT	SAVANNAH GA	274.7	PLN	DTVPLN -DTVP1324
47	WPCT-DT	PANAMA CITY BEACH FL	184.3	PLN	DTVPLN -DTVP1355
47	WTVM-DT	COLUMBUS GA	200.2	PLN	DTVPLN -DTVP1357
46	WXSX-CA	SAVANNAH GA	308.0	APP	USERRECORD-01

Proposal causes no interference

#####

Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application Ref. No.
46	WCTV	THOMASVILLE GA	BLCDT -20050815AAA

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
46	WMCF-TV	MOBILE AL	287.7	APP	BMPCDT -20051025AAY
46	WMCF-TV	MONTGOMERY AL	287.7	CP	BPCDT -19991013ABR
46	WMCF-DT	MONTGOMERY AL	287.7	PLN	DTVPLN -DTVP1316
46	WMCF-TV	MONTGOMERY AL	287.7	APP	BMPCDT -20051025AAY
46	WLCB-TV	LEESBURG FL	360.4	LIC	BLEDT -20050915ALL
46	WLCB-DT	LEESBURG FL	290.1	PLN	DTVPLN -DTVP1322
46	WPCT	PANAMA CITY BEACH FL	184.3	LIC	BMLCT -20030616AAW
46	WGCL-TV	ATLANTA GA	350.7	LIC	BLCT -2619
46	WVAN-DT	SAVANNAH GA	274.7	PLN	DTVPLN -DTVP1324
47	WPCT-DT	PANAMA CITY BEACH FL	184.3	PLN	DTVPLN -DTVP1355
47	WTVM-DT	COLUMBUS GA	200.2	PLN	DTVPLN -DTVP1357
46	WXSX-CA	SAVANNAH GA	308.0	APP	USERRECORD-01

Proposal causes no interference

#####

Analysis of Interference to Affected Station 4

DTV Baseline Analysis

Channel	Call	City/State	Application Ref. No.
---------	------	------------	----------------------

46 WWAY-DT WILMINGTON NC DTVPLN -DTVP1333

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
45	WJPM-DT	FLORENCE SC	144.0	PLN	DTVPLN	-DTVP1314
46	WVAN-DT	SAVANNAH GA	388.0	PLN	DTVPLN	-DTVP1324
46	WJZY	BELMONT NC	303.6	PLN	DTVPLN	-NPLN1704
46	WJCB-DT	NORFOLK VA	334.4	PLN	DTVPLN	-DTVP1345
47	WRMY	ROCKY MOUNT NC	219.2	PLN	DTVPLN	-NPLN1720

Results for: 46A NC WILMINGTON DTVPLN DTVP1333 PLN  
HAAT 594.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1055466	51324.1
not affected by terrain losses	1054844	51307.3
lost to NTSC IX	1470	20.7
lost to additional IX by ATV	720	124.1
lost to ATV IX only	784	128.0
lost to all IX	2190	144.8

NTSC Baseline Analysis

Channel Call City/State Application Ref. No.  
03 WWAY WILMINGTON NC DTVPLN -NPLN0241

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
02	WCBDTV	CHARLESTON SC	192.5	PLN	DTVPLN	-NPLN0194
03	WSAVTV	SAVANNAH GA	370.1	PLN	DTVPLN	-NPLN0220
03	WBTV	CHARLOTTE NC	306.3	PLN	DTVPLN	-NPLN0240
03	WTKR	NORFOLK VA	336.6	PLN	DTVPLN	-NPLN0266
03	WBRA-DT	ROANOKE VA	384.2	PLN	DTVPLN	-DTVP0012
04	WUNCTV	CHAPEL HILL NC	212.5	PLN	DTVPLN	-NPLN0301
04	WCIV	CHARLESTON SC	193.9	PLN	DTVPLN	-NPLN0316

Results for: 3N NC WILMINGTON DTVPLN NPLN0241 PLN

	POPULATION	AREA (sq km)
within Noise Limited Contour	1055466	51324.1
not affected by terrain losses	1053721	51260.0
lost to NTSC IX	303437	9809.4
lost to additional IX by ATV	0	0.0
lost to all IX	303437	9809.4

Analysis of current record

Channel Call City/State Application Ref. No.  
46 WWAY WILMINGTON NC BLCDT -20051221AQ

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
45	WJPM-DT	FLORENCE SC	143.9	PLN	DTVPLN	-DTVP1314
46	WVAN-DT	SAVANNAH GA	388.0	PLN	DTVPLN	-DTVP1324
46	WJZY	BELMONT NC	303.6	LIC	BLCT	-19870320KU
46	WHTJ	CHARLOTTEVILLE VA	428.9	LIC	BLEDT	-20050819ADO
46	WHTJ	CHARLOTTEVILLE VA	428.9	LIC	BPRM	-20000414AAB
46	WPXV	NORFOLK VA	334.3	LIC	BLCDT	-20020510AAI
46	WJCB-DT	NORFOLK VA	334.4	PLN	DTVPLN	-DTVP1345
47	WRPX	ROCKY MOUNT NC	219.2	LIC	BLCT	-19960709KN
47	WCSC-TV	CHARLESTON SC	193.9	LIC	BPRM	-20000731AAA

47 WCSC-TV CHARLESTON SC 193.9 LIC BLCDT -20030501ABA  
 46 WXSX-CA SAVANNAH GA 358.4 APP USERRECORD-01  
 Proposal causes no interference

#####

Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application Ref. No.
46	WWAY-DT	WILMINGTON NC	DTVPLN -DTVP1333

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
45	WJPM-DT	FLORENCE SC	144.0	PLN	DTVPLN -DTVP1314
46	WVAN-DT	SAVANNAH GA	388.0	PLN	DTVPLN -DTVP1324
46	WJZY	BELMONT NC	303.6	LIC	BLCT -19870320KU
46	WHTJ	CHARLOTTEVILLE VA	429.0	LIC	BLEDT -20050819ADO
46	WHTJ	CHARLOTTEVILLE VA	429.0	LIC	BPRM -20000414AAB
46	WPXV	NORFOLK VA	334.4	LIC	BLCDT -20020510AAI
46	WJCB-DT	NORFOLK VA	334.4	PLN	DTVPLN -DTVP1345
47	WRPX	ROCKY MOUNT NC	219.2	LIC	BLCT -19960709KN
47	WCSC-TV	CHARLESTON SC	193.9	LIC	BPRM -20000731AAA
47	WCSC-TV	CHARLESTON SC	193.9	LIC	BLCDT -20030501ABA
46	WXSX-CA	SAVANNAH GA	358.4	APP	USERRECORD-01

Proposal causes no interference

#####

Analysis of Interference to Affected Station 6

Analysis of current record

Channel	Call	City/State	Application Ref. No.
46	WXSX-CA	SAVANNAH GA	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
39	WSAV-DT	SAVANNAH GA	16.7	PLN	DTVPLN -DTVP1085
44	WJWJ-TV	BEAUFORT SC	84.9	CP MOD	BMPEDT -20050906ACA
44	WJWJ-DT	BEAUFORT SC	85.0	PLN	DTVPLN -DTVP1280
46	WLCB-TV	LEESBURG FL	384.4	LIC	BLEDT -20050915ALL
46	WLCB-DT	LEESBURG FL	359.5	PLN	DTVPLN -DTVP1322
46	WGCL-TV	ATLANTA GA	358.5	LIC	BLCT -2619
46	WCTV	THOMASVILLE GA	308.0	LIC	BPRM -20000328AAL
46	WCTV	THOMASVILLE GA	308.0	LIC	BLCDT -20050815AAA
46	WPHJ-CA	VIDALIA GA	130.6	LIC	BLTTL -19950206IC
46	WJZY	BELMONT NC	368.7	LIC	BLCT -19870320KU
46	WWAY-DT	WILMINGTON NC	358.4	PLN	DTVPLN -DTVP1333

Total scenarios = 1

Result key: 3  
 Scenario 1 Affected station 6 WXSX-CA

Before Analysis

Results for: 46N GA SAVANNAH	USERRECORD01	APP
	POPULATION	AREA (sq km)
within Noise Limited Contour	236047	2362.5
not affected by terrain losses	236047	2362.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 1

#####

Summary of Results

1 46 WVAN-DT SAVANNAH GA	48.0 PLN	DTVPLN	-DTVP1324 <sup>1</sup>
2 46 WCTV THOMASVILLE GA	308.0 LIC	BPRM	-20000328AAL
3 46 WCTV THOMASVILLE GA	308.0 LIC	BLCDT	-20050815AAA
4 46 WWAY WILMINGTON NC	358.4 LIC	BLCDT	-20051221AOQ
5 46 WWAY-DT WILMINGTON NC	358.4 PLN	DTVPLN	-DTVP1333

<u>Result Key</u>	<u>Scenario</u>	<u>Affected Station</u>	<u>Before</u>	<u>After</u>	<u>Baseline</u>	<u>Net Change</u>	<u>Percentage</u>
	1	1	1	1794	182964	642402	181170 28.2
There is no interference to station		2					
There is no interference to station		3					
There is no interference to station		4					
There is no interference to station		5					

<sup>1</sup> Does not require protection as the DTV allotment for WVAN-TV was changed from 46 to 13 (BPRM-20010327AJC).