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

ENGINEERING STATEMENT

Request for
Special Temporary Authorization

prepared for

WPB TV Licensee Corp.
WTVX-DT Fort Pierce, FL
Facility ID 35575
Digital Ch. 50

WPB TV Licensee Corp. ("WPB") is the licensee of television station WTVX(TV), analog Channel 34 and digital Channel 50, Fort Pierce, FL. This statement supports *WPB's* request for Special Temporary Authority ("STA") to operate the digital WTVX-DT facility at reduced power for the remainder of the digital television transition.

The licensed digital operation involves an effective radiated power ("ERP") of 704 kW with a directional antenna. The proposed STA facility will operate with the current digital antenna at 176 kW ERP, which is 25 percent of the licensed ERP. The reduction in digital power is necessary in order for sections of the WTVX-DT Channel 50 transmitter to be modified for operation on Channel 34 to meet the transition date.[1] A construction permit (BMPCDT-20080612ACN) authorizes WTVX-DT to operate its post-transition digital facility on Channel 34, its current analog channel. This channel was established in Appendix B of the Seventh Report and Order in MB Docket 87-278.

A map is supplied as **Figure 1,** which depicts the standard predicted coverage contours. As demonstrated thereon, the STA facility's 48 dBμ (city grade) contour will encompass the principal

[1]An early transition to Channel 34 would still require a reduction in digital service on Channel 50 prior to the change, and would result in loss of all analog service prior to the transition date. Regardless of the transition date, digital operation on Channel 50 must be reduced in advance to allow sections of the digital transmitter to be modified to operate on Channel 34.

community. The population achieved by the licensed 704 kW WTVX-DT digital Channel 50 facility is 2,144,578 persons, according to OET Bulletin 69[2] analysis and 2000 Census data. The licensed analog WTVX Channel 34 facility provides a service population of 1,369,545 persons. The proposed 176 kW STA operation would result in a service population of 1,631,584 persons, which is 76.1 percent of the licensed digital facility population and 119.1 percent of the licensed analog service population. The licensed digital and analog service contours are also provided on **Figure 1**.

The proposed STA operation complies with the FCC's limits concerning human exposure to RF energy. Based on FCC OET Bulletin Number 65 equation (10), and assuming 25% antenna relative field in downward elevations, the calculated power density attributable to the proposed STA facility at locations near the transmitter site at a height of two meters above ground level is 1.9 $\mu W/cm^2$, which is 0.4 percent of the "uncontrolled / general public" 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 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.

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[2]FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 ("OET-69"). A standard cell size of 2 km was employed. Comparisons of various results of this computer program (run on a Sun Sparc processor) to the Commission's implementation of OET-69 show excellent correlation.

The undersigned hereby certifies that the foregoing statement and associated attachments were prepared by him or under his direction, and that they are true and correct to the best of his knowledge and belief.

Joseph M. Davis, P.E.
July 22, 2008

Chesapeake RF Consultants, LLC
11993 Kahns Road
Manassas, VA 20112
703-650-9600

List of Attachments

Figure 1	STA Coverage Contour Comparison
STA Form	Saved Version of Engineering Sections from FCC Form at Time of Upload

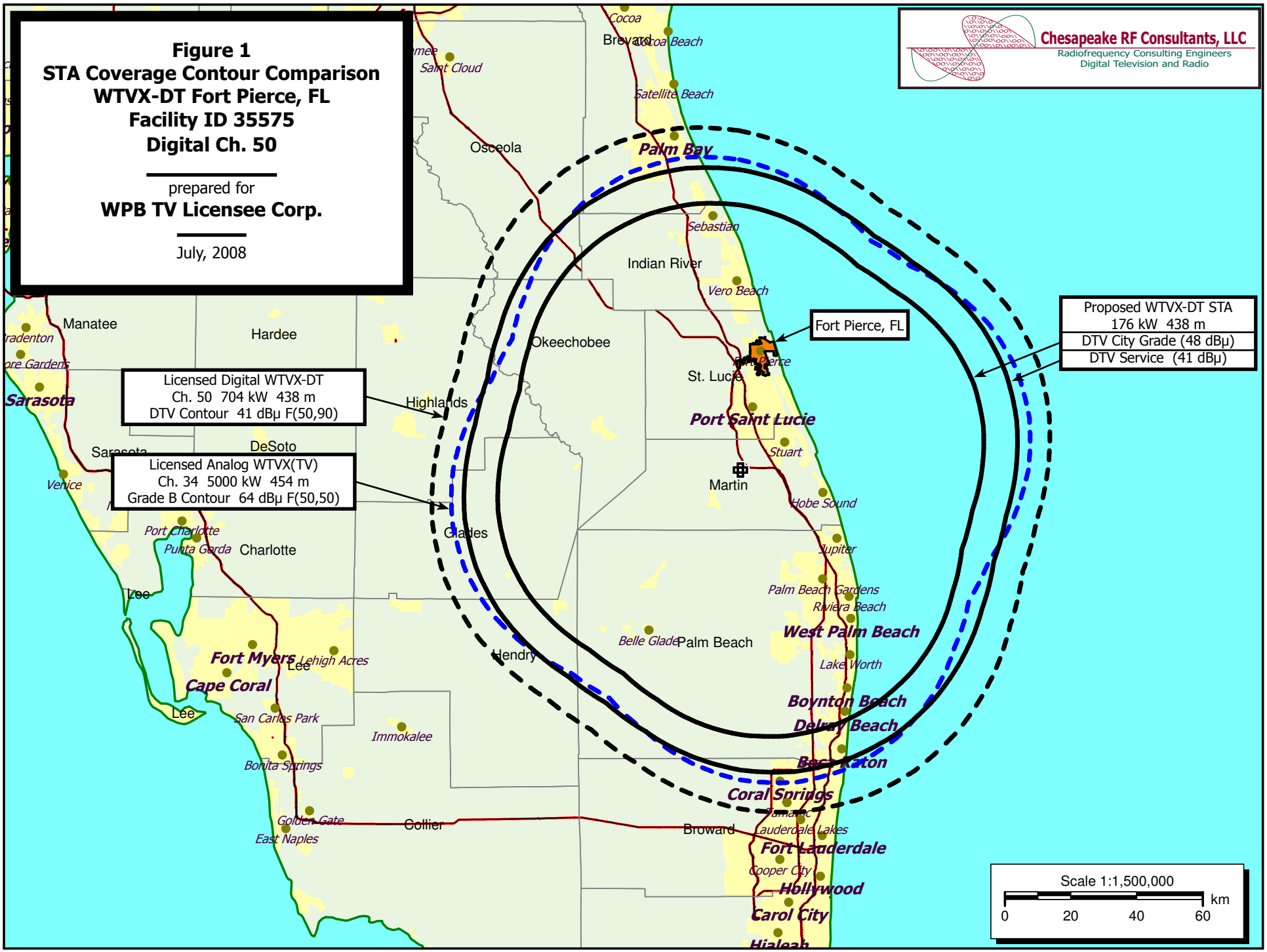
Figure 1
STA Coverage Contour Comparison
WTVX-DT Fort Pierce, FL
Facility ID 35575
Digital Ch. 50
prepared for
WPB TV Licensee Corp.
July, 2008
Chesapeake RF Consultants, LLC
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Digital Television and Radio
Proposed WTVX-DT STA
176 kW 438 m
DTV City Grade (48 dBµ)
DTV Service (41 dBµ)
Fort Pierce, FL
Licensed Digital WTVX-DT
Ch. 50 704 kW 438 m
DTV Contour 41 dBµ F(50,90)
Licensed Analog WTVX(TV)
Ch. 34 5000 kW 454 m
Grade B Contour 64 dBµ F(50,50)
Cocoa
Brevard
Cocoa Beach
Saint Cloud
Satellite Beach
Palm Bay
Osceola
Sebastian
Indian River
Vero Beach
Manatee
Hardee
Okeechobee
St. Lucie
Port Saint Lucie
Stuart
Sarasota
Highlands
DeSoto
Martin
Hobe Sound
Venice
Port Charlotte
Punta Gorda
Charlotte
Glades
Jupiter
Palm Beach Gardens
Riviera Beach
West Palm Beach
Lee
Belle Glade
Palm Beach
Hendry
Fort Myers
Lehigh Acres
Lake Worth
Cape Coral
Boynton Beach
Delray Beach
San Carlos Park
Immokalee
Bonita Springs
Coral Springs
Golden Gate
East Naples
Collier
Broward
Lauderdale Lakes
Fort Lauderdale
Cooper City
Hollywood
Carol City
Hialeah
Scale 1:1,500,000
km
0
20
40
60

TECHNICAL SPECIFICATIONS

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

TECH BOX

7.1. Channel:
50

7.2. Zone: ○ I ○ II ◉ III

7.3. Antenna Location Coordinates: (NAD 27)
Latitude:
Degrees 27 Minutes 7 Seconds 19 ◉ North ○ South

Longitude:
Degrees 80 Minutes 23 Seconds 20 ◉ West ○ East

7.4. Antenna Structure Registration Number: 1029632
☐ Not Applicable ☐ Notification filed with FAA

7.5.	Antenna Location Site Elevation Above Mean Sea Level:	8.8 meters
7.6.	Overall Tower Height Above Ground Level:	463.5 meters
7.7.	Height of Radiation Center Above Ground Level:	437.3 meters
7.8.	Height of Radiation Center Above Average Terrain:	438.3 meters
7.9.	Maximum Effective Radiated Power (average):	176 kW

7.10. Antenna Specifications:
○ Nondirectional ◉ Directional

a. Manufacturer DIE Model TFU-18DSC P230

b. Electrical Beam Tilt:
0.75 degrees ☐ Not Applicable

c. Mechanical Beam Tilt:
degrees toward azimuth
degrees True ☑ Not Applicable

d. Polorization:
◉ Horizontal ○ Circular ○ Elliptical

Directional Antenna Relative Field Values:
Rotation (Degrees): ☑ No Rotation

Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value
0	0.844	10	0.683	20	0.520	30	0.417	40	0.418	50	0.482
60	0.542	70	0.566	80	0.542	90	0.482	100	0.418	110	0.417
120	0.520	130	0.683	140	0.844	150	0.959	160	1.0	170	0.959
180	0.844	190	0.683	200	0.520	210	0.417	220	0.418	230	0.482
240	0.542	250	0.566	260	0.542	270	0.482	280	0.418	290	0.417
300	0.520	310	0.683	320	0.844	330	0.959	340	1.0	350	0.959
Additional Azimuths											

8.	Please explain in detail the "extraordinary circumstances" which warrant temporary operations at variance from the Commission's Rules. In addition, please specify 1)the specific rules and/or policies from which the applicant seeks temporary relief; 2) how the public interest will be furthered by grant; and 3) the expected duration of the STA and the licensee's plan for restoration of licensed operation. If requesting variance with other than authorized technical facilities, please specify the exact facilities sought	[Exhibit 21]
9.	Anti-Drug Abuse Act Certification. Applicant certifies that neither applicant nor any party to the application is subject to denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862.	◉ Yes ○ No

I certify that I have prepared Engineering Data on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name JOSEPH M. DAVIS, P.E.		Relationship to Applicant (e.g., Consulting Engineer) CONSULTING ENGINEER
Signature		Date (mm/dd/yyyy) 7/22/2008
Mailing Address CHESAPEAKE RF CONSULTANTS, LLC 11993 KAHNS ROAD		
City MANASSAS	State or Country (if foreign address) VA	Zip Code 20112 -
Telephone Number (No dashes or parentheses, include area code) 7036509600	E-Mail Address (if available) JOSEPH.DAVIS@RF-CONSULTANTS.COM	

Any specified rotation has already been applied to the plotted pattern.
Field strength values shown on a rotated pattern may differ from the listed values because intermediate azimuths are interpolated between entered azimuths.