

WCES-DT CHANNEL 6 MINOR
CHANGE IN LICENSED FACILITY
APPLICATION FOR FINAL
POST-TRANSITION DTV OPERATION
WRENS, GEORGIA
(Georgia Public Telecommunications Commission)

KESSLER AND GEHMAN ASSOCIATES, INC.
TELECOMMUNICATIONS CONSULTING ENGINEERS

20080404

Prepared by William T. Godfrey, Jr.

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Kessler and Gehman Associates, Inc.

Telecommunications Consulting Engineers

ENGINEERING TECHNICAL STATEMENT PREPARED BY WILLIAM T. GODFREY, JR. OF THE FIRM KESSLER AND GEHMAN ASSOCIATES, INC., TELECOMMUNICATIONS CONSULTING ENGINEERS IN CONNECTION WITH A MINOR CHANGE IN LICENSED FACILITY APPLICATION REQUESTING A CONSTRUCTION PERMIT FOR AUTHORIZATION TO OPERATE THE GEORGIA PUBLIC TELECOMMUNICATIONS COMMISSION (GPTC) DIGITAL TELEVISION BROADCAST FACILITY, WCES-DT CHANNEL 6, ON ITS FINAL POST-TRANSITION DIGITAL CHANNEL AS ADOPTED IN THE DTV TABLE OF ALLOTMENTS (DTV TOA).

The firm Kessler and Gehman Associates, Inc. has been retained by Georgia Public Telecommunications Commission (GPTC), Atlanta, GA to prepare engineering studies and the engineering portion of a minor change in licensed facility application requesting authorization to operate the WCES-DT facility on its final post-transition digital channel as adopted in the Report and Order in MB Docket No. 07-91, FCC 07-228 *In the Matter of Third Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television*, released on December 31, 2007 (R&O). This application also requests to utilize the 5-mile expansion filing freeze waiver policy adopted in the R&O which will permit rapid approval of minor expansion applications for stations, such as WCES-DT, which will not use their pre-transition DTV channel for post-transition operation.

Discussion

The final DTV Table of Allotments (TOA) assigns Channel 6 as the WCES-DT post-transition digital channel. It also assigns the following parameters for the WCES-DT Channel 6 post-transition facility: 1) an antenna radiation center Height Above Average Terrain (HAAT) of 436 meters; 2) an Effective Radiated Power (ERP) of 30.0 kW; and 3) antenna ID 74332.

WCES-DT was allotted Channel 36 in the initial pre-transition DTV TOA and GPTC filed a Petition for Rule Making shortly thereafter to amend the pre-transition DTV TOA to



change channels from Channel 36 to Channel 2 so that it could operate in the lower-VHF band which would result in significant savings. It was determined that a highly narrow cardioid antenna azimuth pattern would be required to protect numerous Channel 2 pre-transition stations¹ (Antenna ID 74332). GPTC timely filed an FCC Form 382 Digital Channel Election application and requested to release Channel 2 and lock-in Channel 6 for its final post-transition DTV channel. The FCC approved GPTC's request for Channel 6 and assigned it the same highly directional antenna azimuth pattern that was required for the Channel 2 facility.

Referring to Exhibit 10, it can be seen that the F(50,90) 28.0 dBuV/m contour, resulting from the WCES-DT Channel 6 facility assigned in the DTV TOA (green contour), would fall well short of replicating its F(50,50) 62.3 dBuV/m Grade B contour (black). For this reason, and because the WCES-DT facility will not be using its pre-transition channel for post-transition operation, GPTC requests use of the 5-mile expansion waiver policy so that it can lessen the reduction in post-transition service from its analog service area. Accordingly, this application for post-transition DTV authorization requests the following: 1) 5-mile expansion waiver to closer match Grade B service; 2) increase ERP from assigned 30.0 kW to 45.0 kW which will remain well within the 5-mile expansion boundary; and 3) decrease antenna HAAT from assigned 436.0 meters to 429.4 meters.

5-mile Expansion Waiver Request

In its 3rd R&O, the FCC adopted a waiver policy to permit rapid approval of minor expansion applications filed by stations that will not use their pre-transition DTV Channel for post-transition operation. The expansion is limited to no more than five miles, in any direction, beyond that authorized service area defined in the DTV TOA and it cannot cause more than 0.5% additional interference to other post-transition DTV stations. This application qualifies for the 5-mile expansion waiver since WCES-DT will not be using its pre-transition DTV Channel (2) and will move to Channel 6 for its final post-transition DTV operation.

¹ • WFMY-TV Channel 2 (LIC) • WCBD-TV Channel 2 (LIC) • WSJK-TV Channel 2 (LIC) • WSBTV Channel 2 (LIC)



Exhibit 10 demonstrates that the WCES-DT Channel 6 F(50,90) 28.0 dBuV/m contour assigned in the DTV TOA (green) falls short of replicating the WCES-TV Channel 20 F(50.50) 62.3 dBuV/m Grade B contour (black). The 5-mile expansion freeze waiver will allow GPTC to operate the WCES-DT Channel 6 facility with an increased ERP that will help avoid a significant reduction in post-transition service from its analog service area. Exhibit 10 also demonstrates that the proposed WCES-DT Channel 6 post-transition facility's F(50,90) 28.0 dBuV/m noise limited contour (blue) will be completely encompassed by the 5-mile expansion boundary (dashed red) along all azimuths.

It should be noted that §73.622(f)(6)(i) of the FCC rules deals with maximum power and antenna heights for DTV stations operating in Zones II or III on Channels 2-6. Based on the antenna HAAT of 429.4 meters requested in this application, the maximum ERP allowable is only 21.6 kW; however, the FCC, in its final DTV TOA, assigned an ERP of 30 kW based on an antenna HAAT of 436 meters. §73.622(f)(5) of the FCC rules states that an increase in ERP may be requested that exceed the initial technical facilities specified for the allotment in Appendix B, up to the maximum permissible limits on DTV power and antenna height set forth in paragraph (f)(6) of the FCC rules. Paragraph (f)(6) of the FCC rules states that the maximum ERP for a station operating on Channel 6 in Zone II is 45 kW. Additional studies demonstrated that it would take an ERP of 55 kW to expand the proposed WCES-DT Channel 6 facility to the five full miles beyond the authorized service area as defined by the post-transition DTV TOA. GPTC was initially going to request an ERP of 55 kW based on providing the same geographic coverage area as the largest station within their market as defined in §73.622(f)(5) of the FCC rules; however, such a station was not identified and, as a result, GPTC is only requesting an ERP of 45 kW which will result in only a 3.5 mile expansion.

Exhibit 11 is the same as Exhibit 10 except it is a close-up view of the northern side of the 5-mile expansion boundary (dashed red) and the proposed WCES-DT Channel 6 F(50,90) 28.0 dBuV/m noise limited contour (blue). Exhibit 11 clearly demonstrates that the proposed



facility would not expand coverage beyond 5 miles in any direction between 315° and 45°. Exhibit 12 demonstrates that the proposed facility would not expand coverage beyond 5 miles in any direction between 225° and 315° (W view). Exhibit 13 demonstrates that the proposed facility would not expand coverage beyond 5 miles in any direction between 135° and 225° (S view). Exhibit 14 demonstrates that the proposed facility would not expand coverage beyond 5 miles in any direction between 45° and 135° (E view). Therefore, it has been demonstrated on all azimuths that the proposed facility would not exceed the 5-mile boundary in any direction.

Exhibit 15 is a distance to contour tabulation of the WCES-DT Channel 6 Final DTV TOA facility. This exhibit depicts the distance, in kilometers, from the transmitter to the WCES-DT Final DTV TOA facility's noise limited contour in all azimuthal directions. Exhibit 16 is a distance to contour tabulation of the proposed WCES-DT Channel 6 facility. This exhibit depicts the distance, in kilometers, from the transmitter to the proposed WCES-DT noise limited contour in all azimuthal directions. Exhibit 17 is a distance to contour comparison spreadsheet which compares the distance from the transmitter to the noise limited contour of the WCES-DT Final DTV TOA facility (Exhibit 15) and the proposed facility (Exhibit 16). The last column in Exhibit 17 depicts the distance, in miles, from the assigned DTV TOA F(50,90) 28.0 dBuV/m noise limited contour to the proposed F(50,90) 28.0 dBu noise limited contour along 360 radials in one degree increments. It can be seen that the maximum distance between the assigned DTV TOA F(50,90) 28.0 dBuV/m noise limited contour to the proposed F(50,90) 28.0 dBu noise limited contour along all 360 radials is 3.5 miles which occurs at the 125° radial. Therefore, it has been further demonstrated quantitatively along all azimuths that the proposed facility would not exceed the 5-mile boundary in any direction.

0.5% New Interference Limit

There are three criteria to qualify for the 5-mile expansion waiver of which two have been demonstrated: 1) WCES-DT will operate with a new antenna on a post-transition DTV Channel that is different than its pre-transition DTV channel; and 2) proposed F(50,50) 28.0 dBuV/m noise limited contour will remain within 5-mile expansion boundary. The third criteria



required to qualify for the 5-mile filing freeze waiver is compliance with the 0.5% new interference limit. Longley-Rice interference studies are required to demonstrate that the proposed post-transition DTV facility would not be predicted to cause more than 0.5% new interference to other post-transition stations.

Exhibits 18 and 19 are Longley-Rice interference studies that were computed using a Sun Microsystems SPARC 5 computer work station loaded with the FCC's DTV analysis software. The interference percentages are exactly the same as the FCC calculations since the studies were performed using the same type computers and the same interference analysis software. Exhibit 18 was run to determine the baseline population for each desired station as well as the interference predicted to each desired station from the proposed WCES-DT Channel 6 post-transition DTV facility. The FCC program recognized a mutually exclusive situation between the proposed WCES-DT facility and the allotted WCES-DT TOA facility because they both had the same community of license (Wrens) and they both were assigned Channel 6. As a result, the program threw out the allotted Channel 6 facility in the "Before" studies and used the proposed Channel 6 facility in the "After" studies. Therefore, only the populations in the "After" studies were used in Exhibit 18 to identify the population predicted to receive interference from the proposed facility. Exhibit 19 is the exact same study as Exhibit 18 except the community of license was purposely changed from "Wrens" to "Wrens_2" for the proposed facility so that the program would not throw out the allotted Channel 6 facility. Referring to Exhibit 19, it can be seen that the "Before" studies now contain the allotted Channel 6 facility so that the population predicted to be received by the desired stations from the allotted Channel 6 facility could be calculated for masking purposes. Referring to Exhibits 18 and 19, it can be seen that the proposed WCES-DT Channel 6 facility is predicted to cause 0.0% interference to all stations considered in the culling list.

Accordingly, GPTC respectfully requests processing based on the 5-mile expansion filing freeze waiver policy pursuant to §V.E. (¶151) of the R&O. This application meets all three of the following conditions required to qualify for 5-mile expansion processing because the proposed WCES-DT Channel 6 post-transition DTV facility demonstrates that such expansion:



- 1) Would allow the station to use a new antenna to avoid a significant reduction in post-transition service from its analog service area;
- 2) Would be no more than five miles larger in any direction than its authorized service area, as defined by the post-transition DTV Table Appendix B; and
- 3) Would not cause impermissible interference, *i.e.*, more than 0.5 percent new interference, to other stations.

Exhibits

Exhibits 1 and 2 represent WCES's administration data, antenna and antenna structure specifications.

Exhibit 3 depicts the profile view of the proposed antenna on the antenna structure with all the appropriate elevations.

Exhibit 4 displays the proposed WCES-DT Channel 6 antenna azimuth pattern and Exhibit 5 displays the associated relative field values in one-degree increments.

Exhibits 6 (11 deg) and 7 (90 deg) display the elevation pattern and Exhibit 8 displays the elevation pattern tabulation.

Exhibit 9 depicts the location of the WCES-DT transmitter site on a USGS 7.5-Minute (Series) Topographic map.

Exhibit 10 is an FCC contour map depicting the licensed WCES-TV Channel 20 F(50,50) 62.3 dBuV/m Grade B contour (black), the WCES-DT Channel 6 DTV TOA facility's F(50,90) 28.0 dBuV/m noise limited contour (green), the proposed WCES-DT Channel 6 facility's F(50,90) 28.0 dBuV/m noise limited contour (blue), and the 5-mile expansion boundary (dashed red).



Exhibit 11 is the same as Exhibit 10 except it provides a close-up view of the northern side of the 5-mile expansion boundary (dashed red) and the proposed WCES-DT Channel 6 F(50,90) 28.0 dBuV/m noise limited contour (blue).

Exhibit 12 is the same as Exhibit 10 except it provides a close-up view of the western side of the 5-mile expansion boundary (dashed red) and the proposed WCES-DT Channel 6 F(50,90) 28.0 dBuV/m noise limited contour (blue).

Exhibit 13 is the same as Exhibit 10 except it provides a close-up view of the southern side of the 5-mile expansion boundary (dashed red) and the proposed WCES-DT Channel 6 F(50,90) 28.0 dBuV/m noise limited contour (magenta)

Exhibit 14 is the same as Exhibit 10 except it provides a close-up view of the eastern side of the 5-mile expansion boundary (dashed red) and the proposed WCES-DT Channel 6 F(50,90) 28.0 dBuV/m noise limited contour (magenta).

Exhibit 15 is a distance to contour tabulation of the WCES-DT DTV TOA facility. This exhibit depicts the distance, in kilometers, from the transmitter to the authorized WCES-DT Final DTV TOA noise limited contour in all azimuthal directions.

Exhibit 16 is a distance to contour tabulation of the proposed WCES-DT facility. This exhibit depicts the distance, in kilometers, from the transmitter to the proposed WCES-DT noise limited contour in all azimuthal directions.

Exhibit 17 is a distance to contour comparison tabulation spreadsheet between the WCES-DT DTV TOA facility and the proposed WCES-DT facility. The spreadsheet depicts the distance, in miles, from the assigned DTV TOA F(50,90) 28.0 dBuV/m noise limited contour to the proposed F(50,90) 28.0 dBu noise limited contour along 360 radials in one degree increments.



Exhibits 18 and 19 are Longley-Rice interference studies that were computed using a Sun Microsystems SPARC 5 computer work station loaded with the FCC's DTV analysis software. The exhibits demonstrate compliance with the 0.5% new interference criteria.

Exhibit 20 is a principal community contour map demonstrating that the proposed WCES-DT Channel 6 post-transition DTV facility's F(50,90) 35.0 dBuV/m Principal Community contour would completely encompass the principal community of Wrens, GA.

Environmental Impact

The proposed construction would have no significant environmental impact as defined in §1.1307 of the FCC Rules. The digital transmitter, 3-inch transmission line and antenna system shall produce an ERP of 45 kW. Assuming the maximum lobe of radiation were oriented toward the base of the tower, the proposed WCES-DT Channel 6 post-transition DTV facility's power density six feet above the ground would be 0.00897 mW/cm^2 which equates to only 0.90% of the Maximum Permissible Exposure (MPE) limits for Occupational/Controlled Exposure and only 4.48% of the MPE limits for General Population/Uncontrolled Exposure authorized by the American National Standards Institute (ANSI). Since operation of the proposed WCES-DT Channel 6 post-transition DTV facility would not exceed 5.0% of the MPE limit for Occupational/Controlled Exposure or General Population/Uncontrolled Exposure at any point on the ground, the proposed WCES-DT facility would not be considered a "significant contributor" to the RF exposure environment pursuant to OET Bulletin 65, Edition 97-01. Therefore, contributions of exposure from other sources were not accounted for in this analysis. It is safe to conclude that the emissions would be insignificant and well within the maximum allowable requirements.

If other antennas are placed on the tower in the future, the licensee will cooperate with those users by reducing or completely terminating the power to the antenna when maintenance workers are in danger from the electromagnetic radiation emanating from the antenna. It is also understood that additional antennas on the support structure could increase the overall RF



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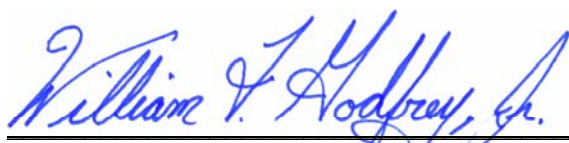
exposure levels and it is the responsibility of each licensee to ensure that the total RF exposure resulting from the operation of all antennas on the support structure do not exceed the maximum permissible exposure level at any point on the ground.

Certification

This technical statement was prepared by William T. Godfrey, Telecommunications Consultant with Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and has been working in the field of radio and television broadcast consulting since 1998. He graduated from the University of North Florida with a Bachelor of Arts degree in Criminal Justice and a minor in Mathematics in 1993. As a Professional in the field of Telecommunications he states under penalty of perjury that the information contained in this report is true and correct to the best of his knowledge and belief.



KESSLER AND GEHMAN ASSOCIATES, INC.


WILLIAM T. GODFREY, JR.
Telecommunications Technical Consultant

4 April, 2008

WCES-DT CHANNEL 6 POST-TRANSITION DTV FACILITY

WRENS, GEORGIA

ENGINEERING SPECIFICATIONS

A. Transmitter Site:

Geographic coordinates (NAD27):

| | |
|----------------------|-------------|
| North Latitude | 33° 15' 33" |
| West Longitude | 82° 17' 09" |

Transmitter Site Address: **2316 Miller Place Road**
 Wrens, GA

B. Main Studio Site Address: 260 14th Street N.W., Atlanta, GA 30318.

C. Post-Transition Facility:

| | | |
|-------------|-----------------|-----------|
| DTV Channel | Number | 6 |
| | Frequency | 82-88 MHz |
| | Offset | N/A |

D. Antenna Height:

| | |
|----------------------------------------------------------|---------|
| Height of Site Above Mean Sea Level (AMSL) | 132.5 M |
| Overall Height of Structure Above Ground | 446.0 M |
| (including all appurtenances) | |
| Overall Height of Structure Above Mean Sea Level | 578.5 M |
| (including all appurtenances) | |
| Height of Site Above Average Terrain | 17.9 M |
| Antenna Height Radiation Center (R/C) Above Ground | 411.5 M |
| Antenna Height R/C Above Mean Sea Level | 544.0 M |
| Average of All Non-Odd Radials | 114.6 M |
| Antenna Height R/C Above Average Terrain | 429.4 M |

E. System Parameters – Horizontal Polarization:

| | |
|------------------------------------------------|-----------|
| Transmitter Power Required | 2.0 kW |
| Maximum Power Input to Antenna | 1.4 kW |
| Total System Loss | 1.53 dB |
| Transmission Line Efficiency | 70.3% |
| Maximum Antenna Gain in Beam Maximum | 15.02 dB |
| Maximum Antenna Gain in Horizontal Plane | 14.99 dB |
| Maximum Effective Radiated Power | 16.53 dBk |
| In Beam Maximum | 45.0 kW |
| Maximum Effective Radiated Power | 16.50 dBk |
| In Horizontal Plane | 44.7 kW |

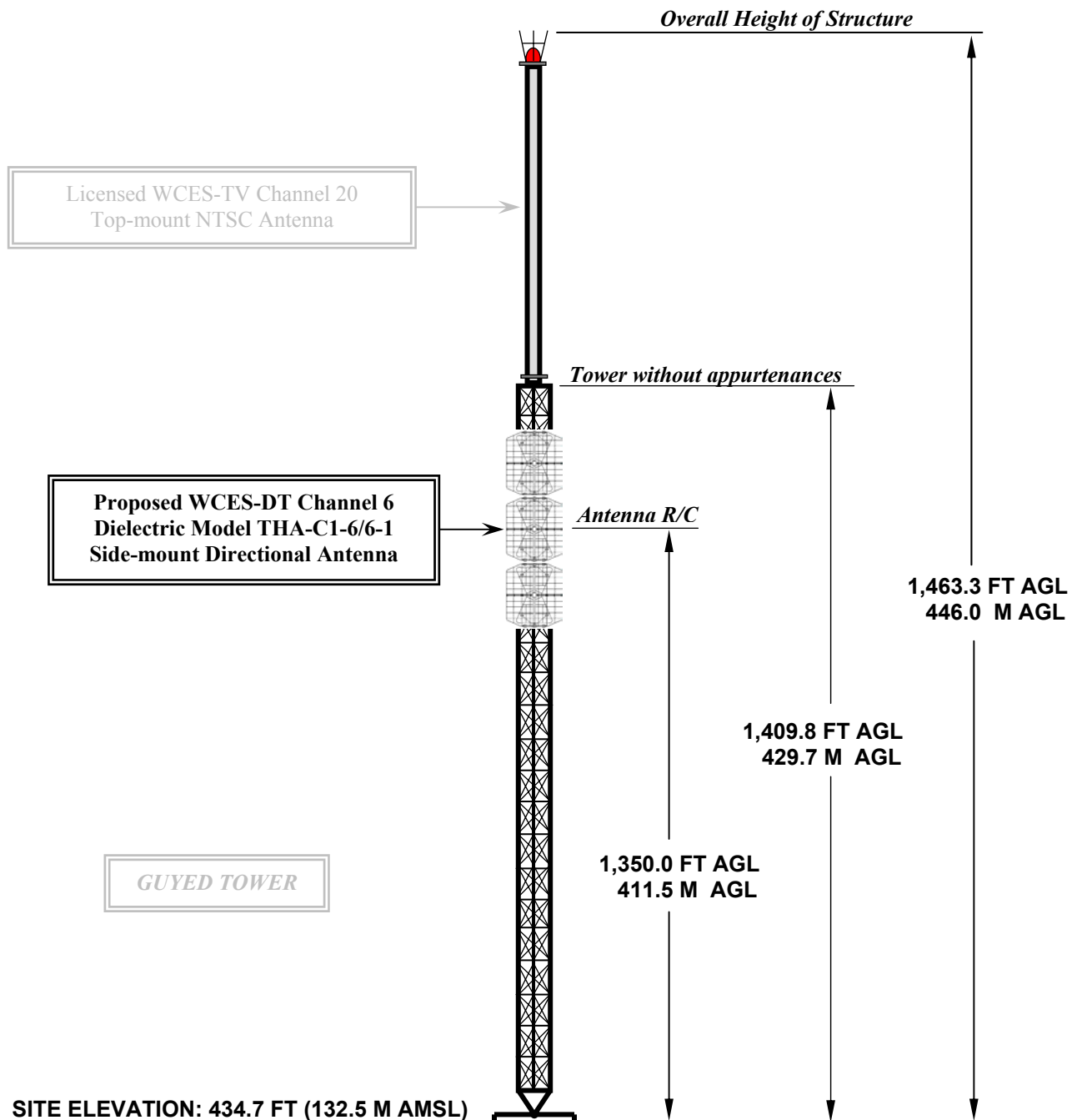
WCES-DT CHANNEL 6 POST-TRANSITION DTV FACILITY
PELHAM, GEORGIA

**DATA FOR PROPOSED DIRECTIONAL
TRANSMITTING ANTENNA**

- A. **Antenna:** Dielectric Model THA-C1-6/6-1 horizontally polarized, directional side-mount antenna.
- B. **Electrical Beam Tilt:** 0.60 degrees
- C. **Mechanical Beam Tilt:** None
- D.

| | |
|-------------------------|---------------------------------------|
| <u>Peak Gain</u> | <u>Horizontal Polarization</u> |
| Maximum: | 31.8 (15.02 dBd) |
| Horizontal: | 31.6 (14.99 dBd) |
- E. **Length:** 80.1 feet (24.4 meters)
- F. **Transmitter Power Output (TPO):** 2.0 kW
- G. **Transmission Line:** 3" 50-ohm FLEXLine®
- H. **Transmission Line Efficiency:** 70.3%
- I. **Transmission Line Length:** 1,380 feet
- J. **Transmission Line Loss:** 0.111 dB/100 ft
- K. **Transmission Line Attenuation:** 1.53 dB

PROPOSED WCES-DT CHANNEL 6 TOWER ELEVATION VIEW



OVERALL HEIGHT AGL: 446.0 M
OVERALL HEIGHT AMSL: 578.5 M
RADIATION CENTER AGL: 411.5 M
RADIATION CENTER AMSL: 544.0 M
RADIATION CENTER HAAT: 429.4 M
AVG OF ALL NON-ODD RADIALS: 114.6 M
SITE HAAT: 17.9 M

COORDINATES (NAD 27):

N. LATITUDE 33° 15' 33"

W. LONGITUDE 82° 17' 09"

Antenna Structure Registration Number:

1018796

NOTE: NOT TO SCALE

KESSLER AND GEHMAN

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WCES-DT CHANNEL 6

WRENS, GEORGIA

20080403

EXHIBIT 3



Date
Call Letters
Location
Customer
Antenna Type

04 Apr 2008
WCES-DT
Wrens, GA
GPTC
THA-C1-6/6-1

Channel 6

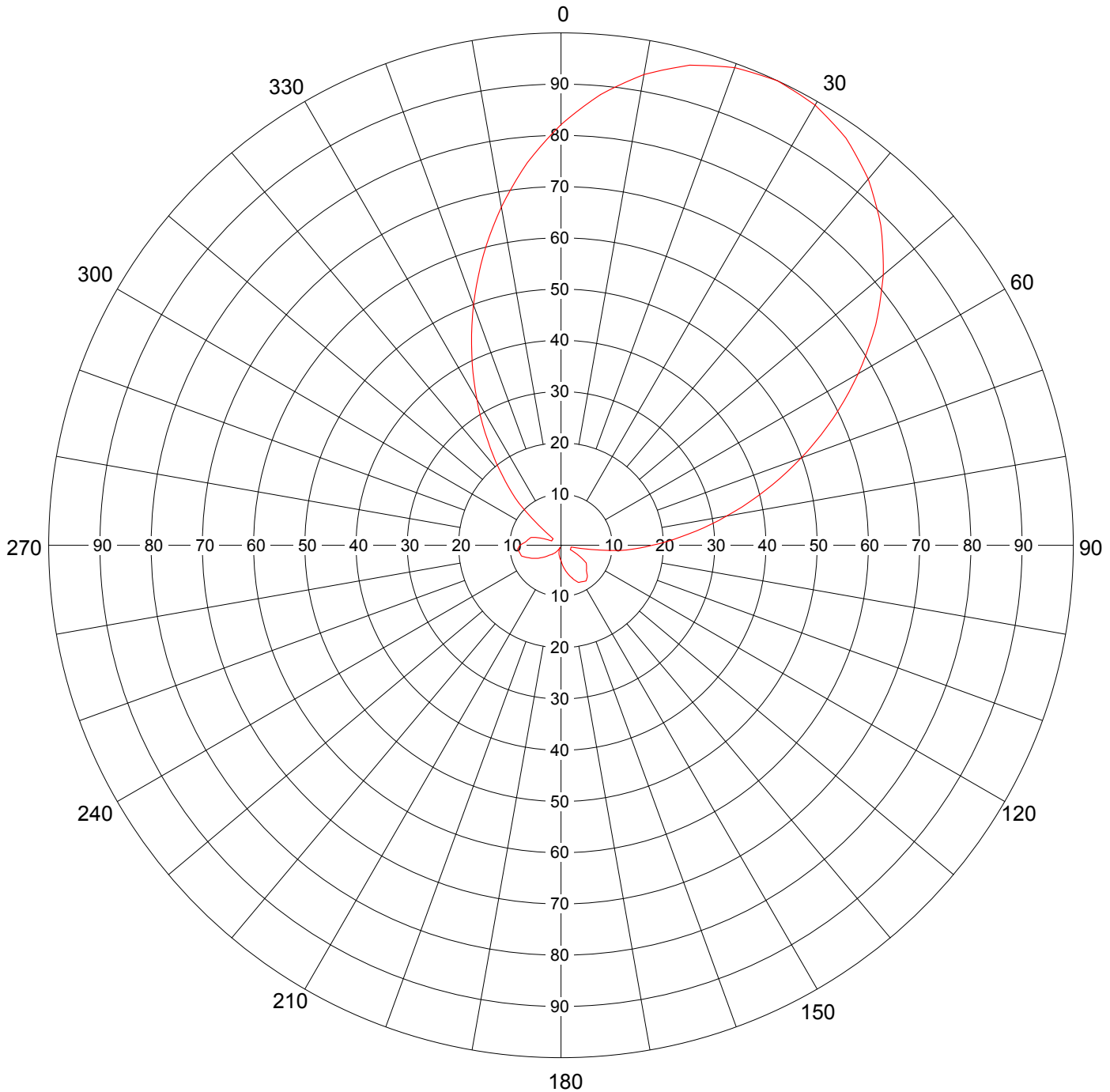
AZIMUTH PATTERN

Gain
Calculated / Measured

5.30 (7.24 dB)
Calculated

Frequency
Drawing #

85 MHz
THA-S1-H



Remarks: EXHIBIT 4



Date **04 Apr 2008**
 Call Letters **WCES-DT** Channel **6**
 Location **Wrens, GA**
 Customer **GPTC**
 Antenna Type **THA-C1-6/6-1**

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # **THA-S1-H**

| Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0 | 0.821 | 45 | 0.883 | 90 | 0.178 | 135 | 0.070 | 180 | 0.030 | 225 | 0.025 | 270 | 0.080 | 315 | 0.116 |
| 1 | 0.833 | 46 | 0.871 | 91 | 0.166 | 136 | 0.072 | 181 | 0.029 | 226 | 0.026 | 271 | 0.078 | 316 | 0.128 |
| 2 | 0.846 | 47 | 0.858 | 92 | 0.153 | 137 | 0.074 | 182 | 0.028 | 227 | 0.027 | 272 | 0.076 | 317 | 0.141 |
| 3 | 0.858 | 48 | 0.846 | 93 | 0.141 | 138 | 0.076 | 183 | 0.027 | 228 | 0.028 | 273 | 0.074 | 318 | 0.153 |
| 4 | 0.871 | 49 | 0.833 | 94 | 0.128 | 139 | 0.078 | 184 | 0.026 | 229 | 0.029 | 274 | 0.072 | 319 | 0.166 |
| 5 | 0.883 | 50 | 0.821 | 95 | 0.116 | 140 | 0.080 | 185 | 0.025 | 230 | 0.030 | 275 | 0.070 | 320 | 0.178 |
| 6 | 0.893 | 51 | 0.807 | 96 | 0.097 | 141 | 0.081 | 186 | 0.024 | 231 | 0.032 | 276 | 0.069 | 321 | 0.192 |
| 7 | 0.903 | 52 | 0.793 | 97 | 0.078 | 142 | 0.082 | 187 | 0.023 | 232 | 0.034 | 277 | 0.068 | 322 | 0.206 |
| 8 | 0.913 | 53 | 0.778 | 98 | 0.058 | 143 | 0.083 | 188 | 0.022 | 233 | 0.036 | 278 | 0.067 | 323 | 0.221 |
| 9 | 0.923 | 54 | 0.764 | 99 | 0.039 | 144 | 0.084 | 189 | 0.021 | 234 | 0.038 | 279 | 0.066 | 324 | 0.235 |
| 10 | 0.933 | 55 | 0.750 | 100 | 0.020 | 145 | 0.085 | 190 | 0.020 | 235 | 0.040 | 280 | 0.065 | 325 | 0.249 |
| 11 | 0.940 | 56 | 0.734 | 101 | 0.020 | 146 | 0.084 | 191 | 0.019 | 236 | 0.042 | 281 | 0.064 | 326 | 0.265 |
| 12 | 0.948 | 57 | 0.718 | 102 | 0.020 | 147 | 0.084 | 192 | 0.018 | 237 | 0.044 | 282 | 0.063 | 327 | 0.281 |
| 13 | 0.955 | 58 | 0.702 | 103 | 0.020 | 148 | 0.083 | 193 | 0.017 | 238 | 0.046 | 283 | 0.062 | 328 | 0.296 |
| 14 | 0.963 | 59 | 0.686 | 104 | 0.020 | 149 | 0.083 | 194 | 0.016 | 239 | 0.048 | 284 | 0.061 | 329 | 0.312 |
| 15 | 0.970 | 60 | 0.670 | 105 | 0.020 | 150 | 0.082 | 195 | 0.015 | 240 | 0.050 | 285 | 0.060 | 330 | 0.328 |
| 16 | 0.974 | 61 | 0.653 | 106 | 0.020 | 151 | 0.082 | 196 | 0.014 | 241 | 0.052 | 286 | 0.056 | 331 | 0.345 |
| 17 | 0.979 | 62 | 0.636 | 107 | 0.020 | 152 | 0.081 | 197 | 0.013 | 242 | 0.054 | 287 | 0.052 | 332 | 0.362 |
| 18 | 0.983 | 63 | 0.620 | 108 | 0.020 | 153 | 0.081 | 198 | 0.012 | 243 | 0.056 | 288 | 0.048 | 333 | 0.378 |
| 19 | 0.988 | 64 | 0.603 | 109 | 0.020 | 154 | 0.080 | 199 | 0.011 | 244 | 0.058 | 289 | 0.044 | 334 | 0.395 |
| 20 | 0.992 | 65 | 0.586 | 110 | 0.020 | 155 | 0.080 | 200 | 0.010 | 245 | 0.060 | 290 | 0.040 | 335 | 0.412 |
| 21 | 0.994 | 66 | 0.569 | 111 | 0.020 | 156 | 0.078 | 201 | 0.009 | 246 | 0.062 | 291 | 0.036 | 336 | 0.429 |
| 22 | 0.995 | 67 | 0.551 | 112 | 0.020 | 157 | 0.076 | 202 | 0.008 | 247 | 0.064 | 292 | 0.032 | 337 | 0.447 |
| 23 | 0.997 | 68 | 0.534 | 113 | 0.020 | 158 | 0.074 | 203 | 0.007 | 248 | 0.066 | 293 | 0.028 | 338 | 0.464 |
| 24 | 0.998 | 69 | 0.516 | 114 | 0.020 | 159 | 0.072 | 204 | 0.006 | 249 | 0.068 | 294 | 0.024 | 339 | 0.482 |
| 25 | 1.000 | 70 | 0.499 | 115 | 0.020 | 160 | 0.070 | 205 | 0.005 | 250 | 0.070 | 295 | 0.020 | 340 | 0.499 |
| 26 | 0.998 | 71 | 0.482 | 116 | 0.024 | 161 | 0.068 | 206 | 0.006 | 251 | 0.072 | 296 | 0.020 | 341 | 0.516 |
| 27 | 0.997 | 72 | 0.464 | 117 | 0.028 | 162 | 0.066 | 207 | 0.007 | 252 | 0.074 | 297 | 0.020 | 342 | 0.534 |
| 28 | 0.995 | 73 | 0.447 | 118 | 0.032 | 163 | 0.064 | 208 | 0.008 | 253 | 0.076 | 298 | 0.020 | 343 | 0.551 |
| 29 | 0.994 | 74 | 0.429 | 119 | 0.036 | 164 | 0.062 | 209 | 0.009 | 254 | 0.078 | 299 | 0.020 | 344 | 0.569 |
| 30 | 0.992 | 75 | 0.412 | 120 | 0.040 | 165 | 0.060 | 210 | 0.010 | 255 | 0.080 | 300 | 0.020 | 345 | 0.586 |
| 31 | 0.988 | 76 | 0.395 | 121 | 0.044 | 166 | 0.058 | 211 | 0.011 | 256 | 0.080 | 301 | 0.020 | 346 | 0.603 |
| 32 | 0.983 | 77 | 0.378 | 122 | 0.048 | 167 | 0.056 | 212 | 0.012 | 257 | 0.081 | 302 | 0.020 | 347 | 0.620 |
| 33 | 0.979 | 78 | 0.362 | 123 | 0.052 | 168 | 0.054 | 213 | 0.013 | 258 | 0.081 | 303 | 0.020 | 348 | 0.636 |
| 34 | 0.974 | 79 | 0.345 | 124 | 0.056 | 169 | 0.052 | 214 | 0.014 | 259 | 0.082 | 304 | 0.020 | 349 | 0.653 |
| 35 | 0.970 | 80 | 0.328 | 125 | 0.060 | 170 | 0.050 | 215 | 0.015 | 260 | 0.082 | 305 | 0.020 | 350 | 0.670 |
| 36 | 0.963 | 81 | 0.312 | 126 | 0.061 | 171 | 0.048 | 216 | 0.016 | 261 | 0.083 | 306 | 0.020 | 351 | 0.686 |
| 37 | 0.955 | 82 | 0.296 | 127 | 0.062 | 172 | 0.046 | 217 | 0.017 | 262 | 0.083 | 307 | 0.020 | 352 | 0.702 |
| 38 | 0.948 | 83 | 0.281 | 128 | 0.063 | 173 | 0.044 | 218 | 0.018 | 263 | 0.084 | 308 | 0.020 | 353 | 0.718 |
| 39 | 0.940 | 84 | 0.265 | 129 | 0.064 | 174 | 0.042 | 219 | 0.019 | 264 | 0.084 | 309 | 0.020 | 354 | 0.734 |
| 40 | 0.933 | 85 | 0.249 | 130 | 0.065 | 175 | 0.040 | 220 | 0.020 | 265 | 0.085 | 310 | 0.020 | 355 | 0.750 |
| 41 | 0.923 | 86 | 0.235 | 131 | 0.066 | 176 | 0.038 | 221 | 0.021 | 266 | 0.084 | 311 | 0.039 | 356 | 0.764 |
| 42 | 0.913 | 87 | 0.221 | 132 | 0.067 | 177 | 0.036 | 222 | 0.022 | 267 | 0.083 | 312 | 0.058 | 357 | 0.778 |
| 43 | 0.903 | 88 | 0.206 | 133 | 0.068 | 178 | 0.034 | 223 | 0.023 | 268 | 0.082 | 313 | 0.078 | 358 | 0.793 |
| 44 | 0.893 | 89 | 0.192 | 134 | 0.069 | 179 | 0.032 | 224 | 0.024 | 269 | 0.081 | 314 | 0.097 | 359 | 0.807 |

Remarks: EXHIBIT 5



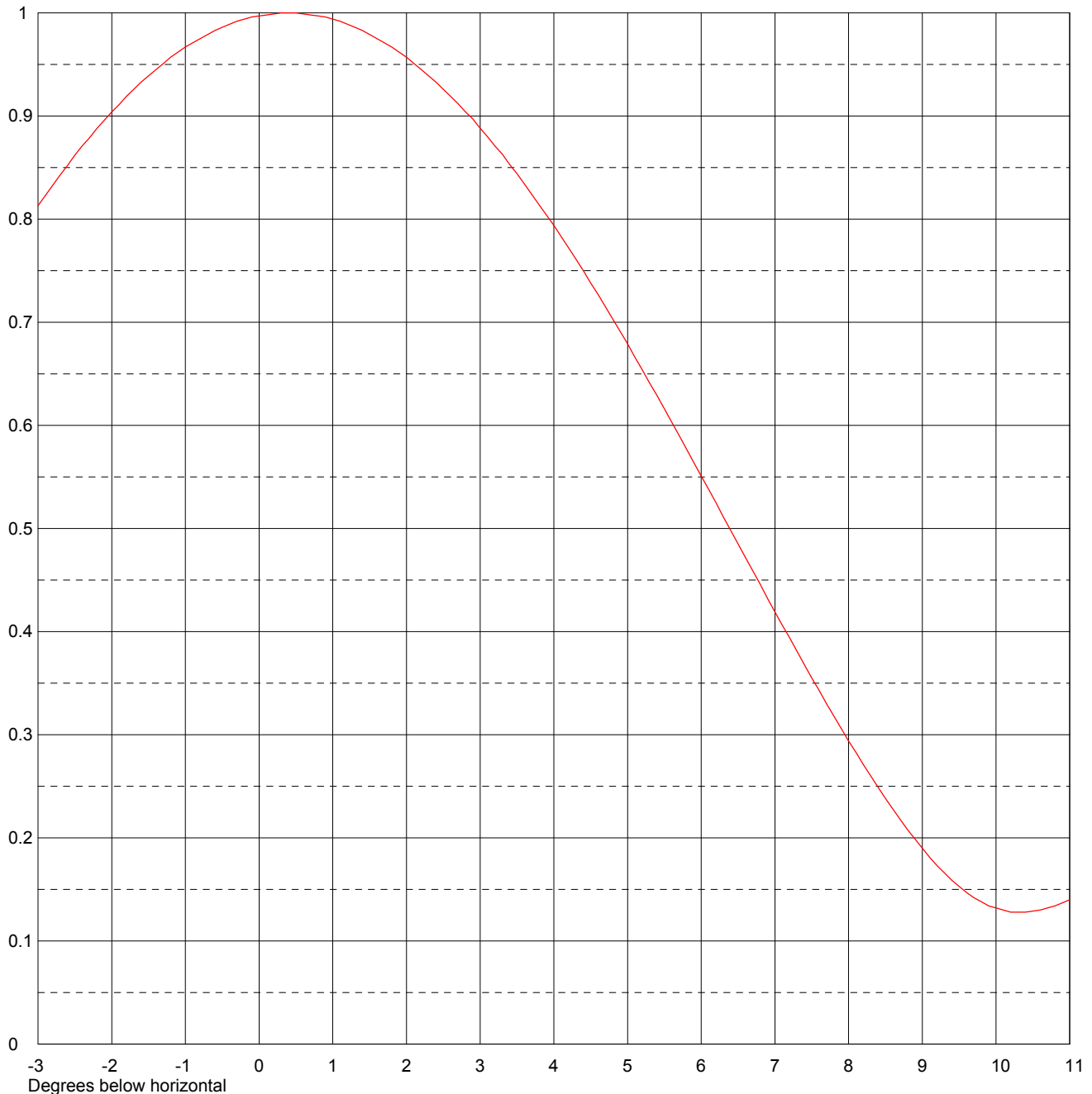
Date
Call Letters
Location
Customer
Antenna Type

04 Apr 2008
WCES-DT
Wrens, GA
GPTC
THA-C1-6/6-1

Channel 6

ELEVATION PATTERN

| | | | |
|------------------------|---------------|-----------|--------------|
| RMS Gain at Main Lobe | 6.0 (7.78 dB) | Beam Tilt | 0.60 Degrees |
| RMS Gain at Horizontal | 6.0 (7.78 dB) | Frequency | 85.00 MHz |
| Calculated / Measured | Calculated | Drawing # | 06H060060 |



Remarks: EXHIBIT 6



Date
Call Letters
Location
Customer
Antenna Type

04 Apr 2008
WCES-DT
Wrens, GA
GPTC
THA-C1-6/6-1

Channel 6

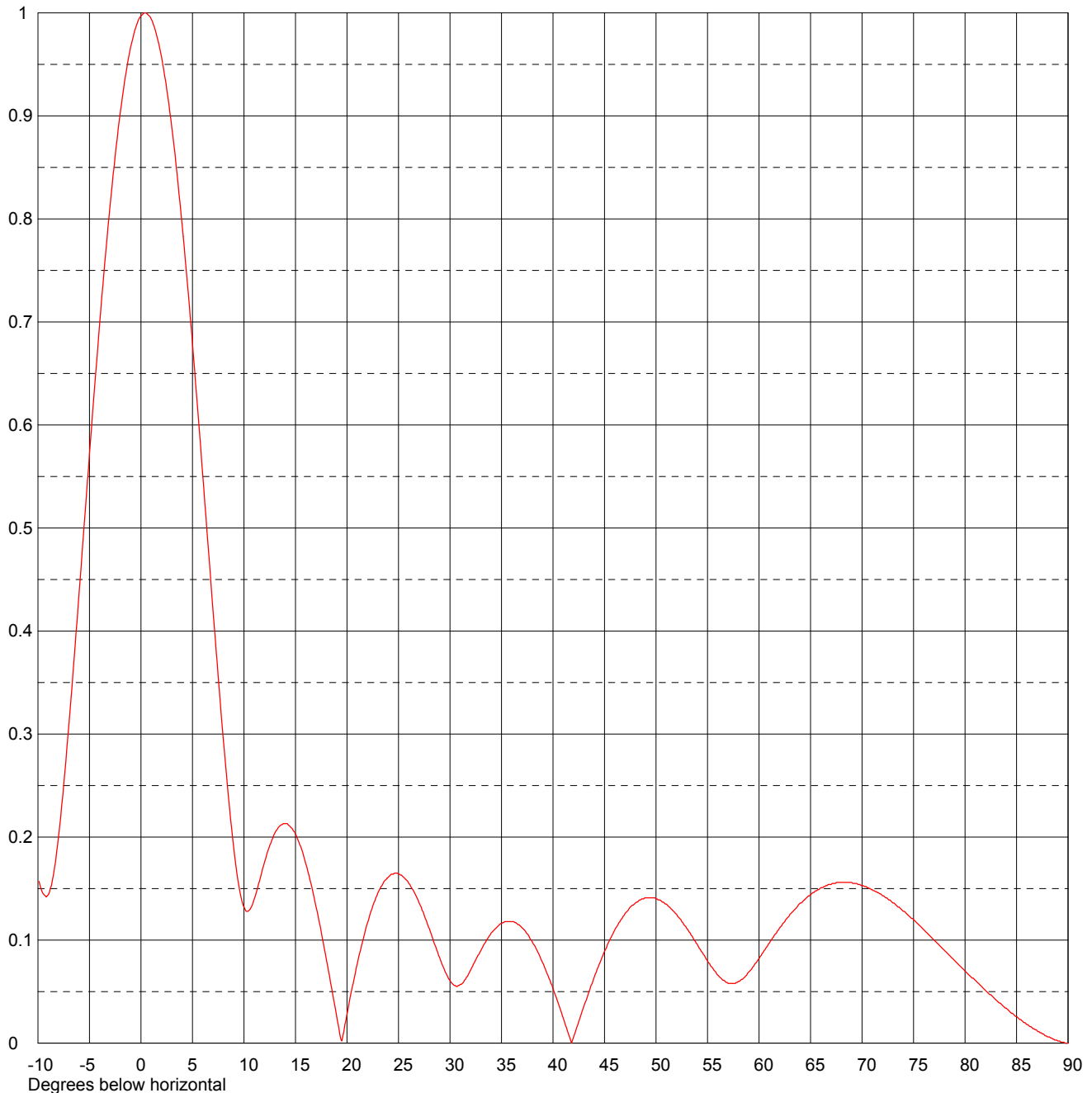
ELEVATION PATTERN

RMS Gain at Main Lobe
RMS Gain at Horizontal
Calculated / Measured

6.0 (7.78 dB)
6.0 (7.78 dB)
Calculated

Beam Tilt
Frequency
Drawing #

0.60 Degrees
85.00 MHz
06H060060-90



Remarks: EXHIBIT 7



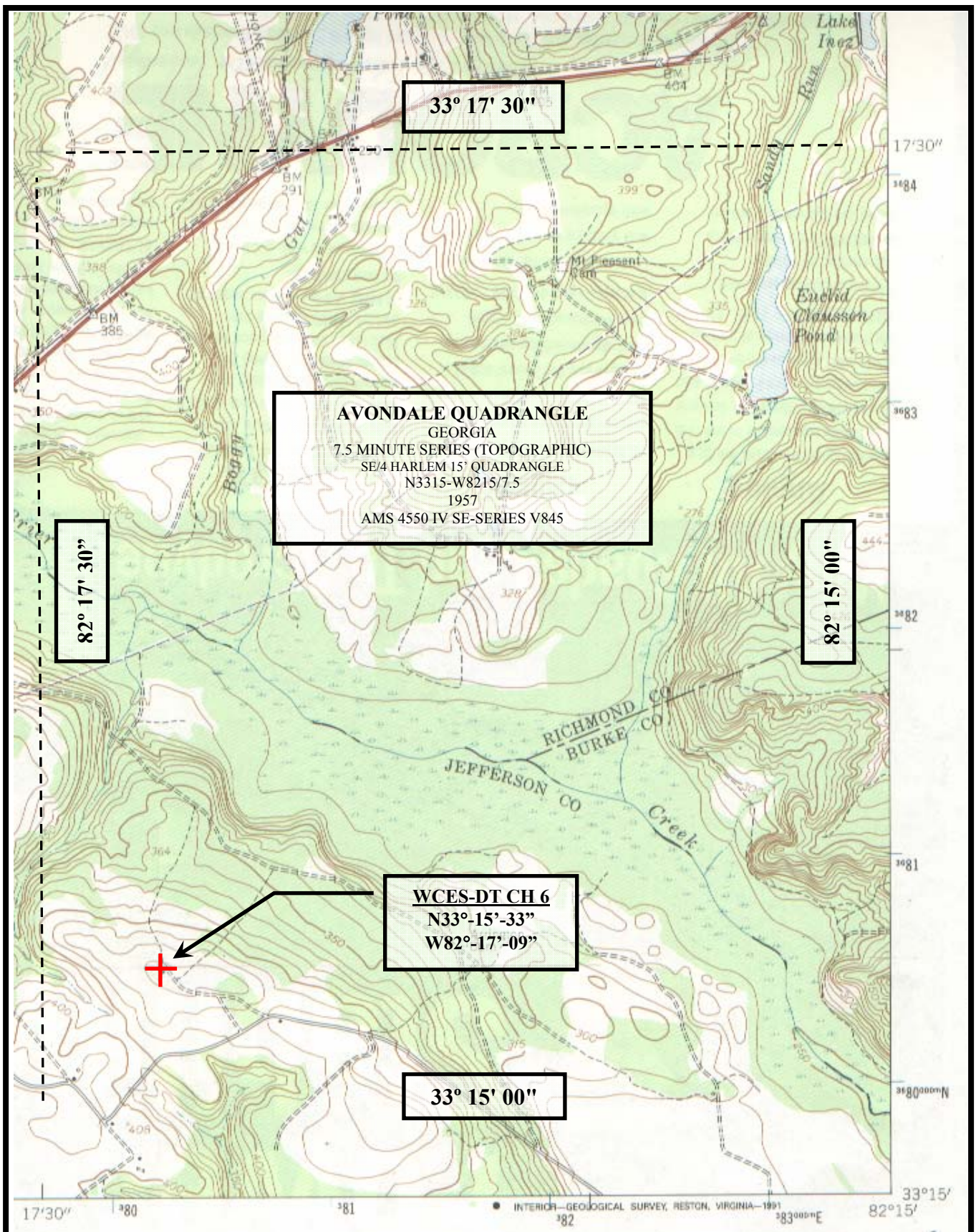
Date **04 Apr 2008**
 Call Letters **WCES-DT** Channel **6**
 Location **Wrens, GA**
 Customer **GPTC**
 Antenna Type **THA-C1-6/6-1**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing # **06H060060-90**

| Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| -10.0 | 0.161 | 2.4 | 0.933 | 10.6 | 0.130 | 30.5 | 0.056 | 51.0 | 0.135 | 71.5 | 0.146 |
| -9.5 | 0.145 | 2.6 | 0.919 | 10.8 | 0.134 | 31.0 | 0.057 | 51.5 | 0.130 | 72.0 | 0.143 |
| -9.0 | 0.144 | 2.8 | 0.904 | 11.0 | 0.140 | 31.5 | 0.062 | 52.0 | 0.125 | 72.5 | 0.140 |
| -8.5 | 0.163 | 3.0 | 0.888 | 11.5 | 0.157 | 32.0 | 0.071 | 52.5 | 0.118 | 73.0 | 0.136 |
| -8.0 | 0.201 | 3.2 | 0.871 | 12.0 | 0.176 | 32.5 | 0.081 | 53.0 | 0.111 | 73.5 | 0.132 |
| -7.5 | 0.251 | 3.4 | 0.853 | 12.5 | 0.192 | 33.0 | 0.090 | 53.5 | 0.104 | 74.0 | 0.128 |
| -7.0 | 0.309 | 3.6 | 0.834 | 13.0 | 0.204 | 33.5 | 0.099 | 54.0 | 0.096 | 74.5 | 0.124 |
| -6.5 | 0.372 | 3.8 | 0.814 | 13.5 | 0.211 | 34.0 | 0.107 | 54.5 | 0.088 | 75.0 | 0.120 |
| -6.0 | 0.438 | 4.0 | 0.794 | 14.0 | 0.213 | 34.5 | 0.112 | 55.0 | 0.080 | 75.5 | 0.115 |
| -5.5 | 0.505 | 4.2 | 0.772 | 14.5 | 0.210 | 35.0 | 0.116 | 55.5 | 0.073 | 76.0 | 0.110 |
| -5.0 | 0.572 | 4.4 | 0.750 | 15.0 | 0.203 | 35.5 | 0.118 | 56.0 | 0.066 | 76.5 | 0.105 |
| -4.5 | 0.637 | 4.6 | 0.727 | 15.5 | 0.191 | 36.0 | 0.118 | 56.5 | 0.061 | 77.0 | 0.100 |
| -4.0 | 0.700 | 4.8 | 0.703 | 16.0 | 0.174 | 36.5 | 0.116 | 57.0 | 0.058 | 77.5 | 0.095 |
| -3.5 | 0.759 | 5.0 | 0.679 | 16.5 | 0.155 | 37.0 | 0.112 | 57.5 | 0.058 | 78.0 | 0.090 |
| -3.0 | 0.813 | 5.2 | 0.654 | 17.0 | 0.132 | 37.5 | 0.106 | 58.0 | 0.060 | 78.5 | 0.085 |
| -2.8 | 0.833 | 5.4 | 0.629 | 17.5 | 0.108 | 38.0 | 0.098 | 58.5 | 0.063 | 79.0 | 0.080 |
| -2.6 | 0.852 | 5.6 | 0.603 | 18.0 | 0.081 | 38.5 | 0.089 | 59.0 | 0.069 | 79.5 | 0.075 |
| -2.4 | 0.871 | 5.8 | 0.577 | 18.5 | 0.054 | 39.0 | 0.078 | 59.5 | 0.075 | 80.0 | 0.070 |
| -2.2 | 0.888 | 6.0 | 0.551 | 19.0 | 0.026 | 39.5 | 0.066 | 60.0 | 0.082 | 80.5 | 0.065 |
| -2.0 | 0.904 | 6.2 | 0.525 | 19.5 | 0.002 | 40.0 | 0.053 | 60.5 | 0.090 | 81.0 | 0.061 |
| -1.8 | 0.919 | 6.4 | 0.498 | 20.0 | 0.028 | 40.5 | 0.039 | 61.0 | 0.097 | 81.5 | 0.056 |
| -1.6 | 0.933 | 6.6 | 0.472 | 20.5 | 0.054 | 41.0 | 0.024 | 61.5 | 0.105 | 82.0 | 0.051 |
| -1.4 | 0.945 | 6.8 | 0.446 | 21.0 | 0.077 | 41.5 | 0.009 | 62.0 | 0.112 | 82.5 | 0.047 |
| -1.2 | 0.957 | 7.0 | 0.419 | 21.5 | 0.098 | 42.0 | 0.006 | 62.5 | 0.118 | 83.0 | 0.042 |
| -1.0 | 0.967 | 7.2 | 0.394 | 22.0 | 0.117 | 42.5 | 0.021 | 63.0 | 0.125 | 83.5 | 0.038 |
| -0.8 | 0.975 | 7.4 | 0.368 | 22.5 | 0.133 | 43.0 | 0.036 | 63.5 | 0.130 | 84.0 | 0.034 |
| -0.6 | 0.983 | 7.6 | 0.343 | 23.0 | 0.146 | 43.5 | 0.050 | 64.0 | 0.136 | 84.5 | 0.029 |
| -0.4 | 0.989 | 7.8 | 0.318 | 23.5 | 0.155 | 44.0 | 0.064 | 64.5 | 0.140 | 85.0 | 0.026 |
| -0.2 | 0.994 | 8.0 | 0.294 | 24.0 | 0.161 | 44.5 | 0.077 | 65.0 | 0.144 | 85.5 | 0.022 |
| 0.0 | 0.997 | 8.2 | 0.271 | 24.5 | 0.164 | 45.0 | 0.089 | 65.5 | 0.148 | 86.0 | 0.018 |
| 0.2 | 0.999 | 8.4 | 0.249 | 25.0 | 0.164 | 45.5 | 0.100 | 66.0 | 0.151 | 86.5 | 0.015 |
| 0.4 | 1.000 | 8.6 | 0.228 | 25.5 | 0.161 | 46.0 | 0.110 | 66.5 | 0.153 | 87.0 | 0.012 |
| 0.6 | 0.999 | 8.8 | 0.208 | 26.0 | 0.155 | 46.5 | 0.118 | 67.0 | 0.154 | 87.5 | 0.009 |
| 0.8 | 0.997 | 9.0 | 0.190 | 26.5 | 0.147 | 47.0 | 0.126 | 67.5 | 0.156 | 88.0 | 0.006 |
| 1.0 | 0.994 | 9.2 | 0.173 | 27.0 | 0.136 | 47.5 | 0.132 | 68.0 | 0.156 | 88.5 | 0.004 |
| 1.2 | 0.989 | 9.4 | 0.159 | 27.5 | 0.124 | 48.0 | 0.136 | 68.5 | 0.156 | 89.0 | 0.002 |
| 1.4 | 0.983 | 9.6 | 0.147 | 28.0 | 0.111 | 48.5 | 0.139 | 69.0 | 0.156 | 89.5 | 0.001 |
| 1.6 | 0.975 | 9.8 | 0.138 | 28.5 | 0.096 | 49.0 | 0.141 | 69.5 | 0.155 | 90.0 | 0.000 |
| 1.8 | 0.967 | 10.0 | 0.132 | 29.0 | 0.083 | 49.5 | 0.141 | 70.0 | 0.153 | | |
| 2.0 | 0.957 | 10.2 | 0.128 | 29.5 | 0.070 | 50.0 | 0.140 | 70.5 | 0.151 | | |
| 2.2 | 0.945 | 10.4 | 0.128 | 30.0 | 0.061 | 50.5 | 0.138 | 71.0 | 0.149 | | |

Remarks: EXHIBIT 8

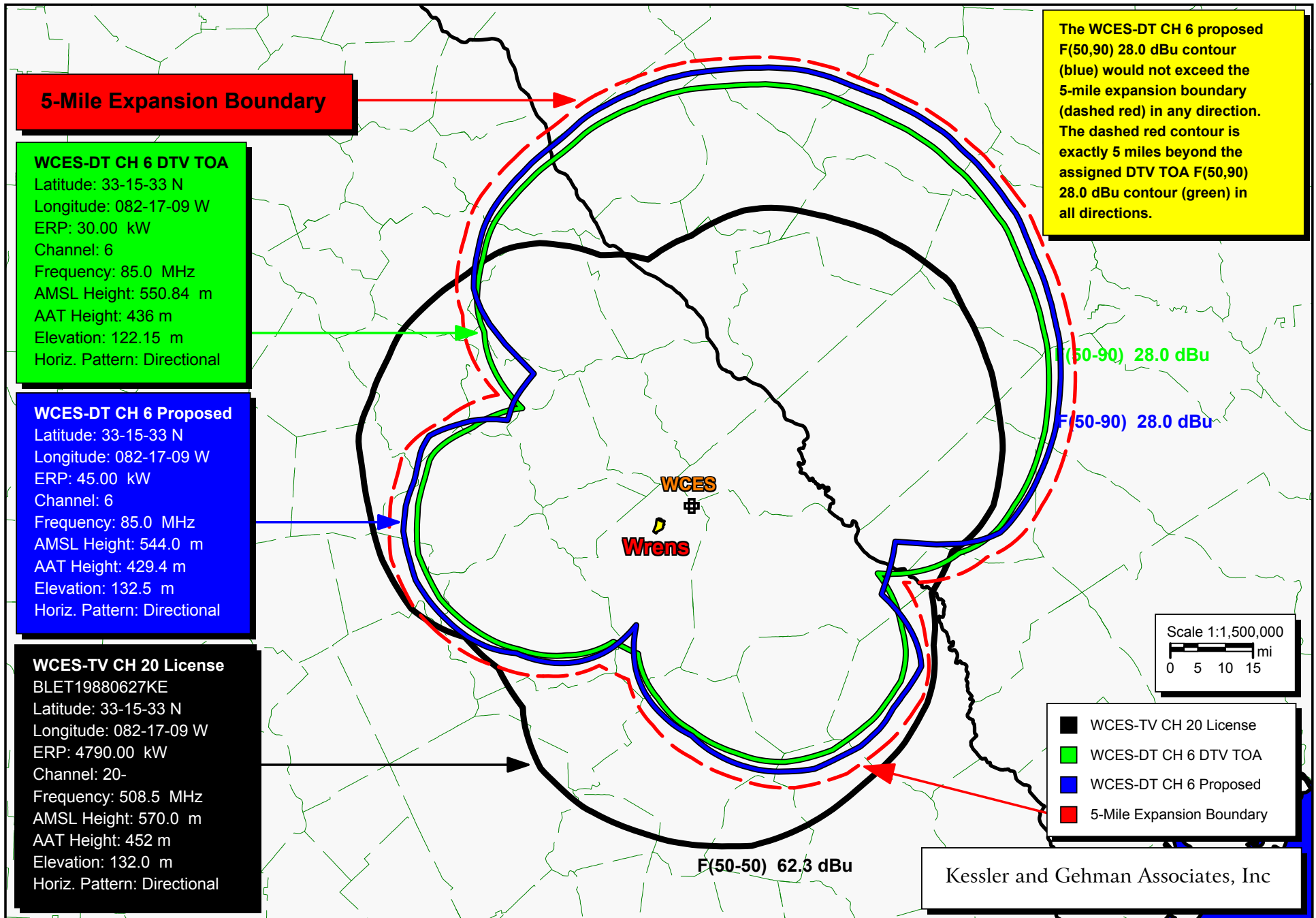


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Gainesville, Florida 32607

WCS-DT CHANNEL 6
WRENS, GEORGIA

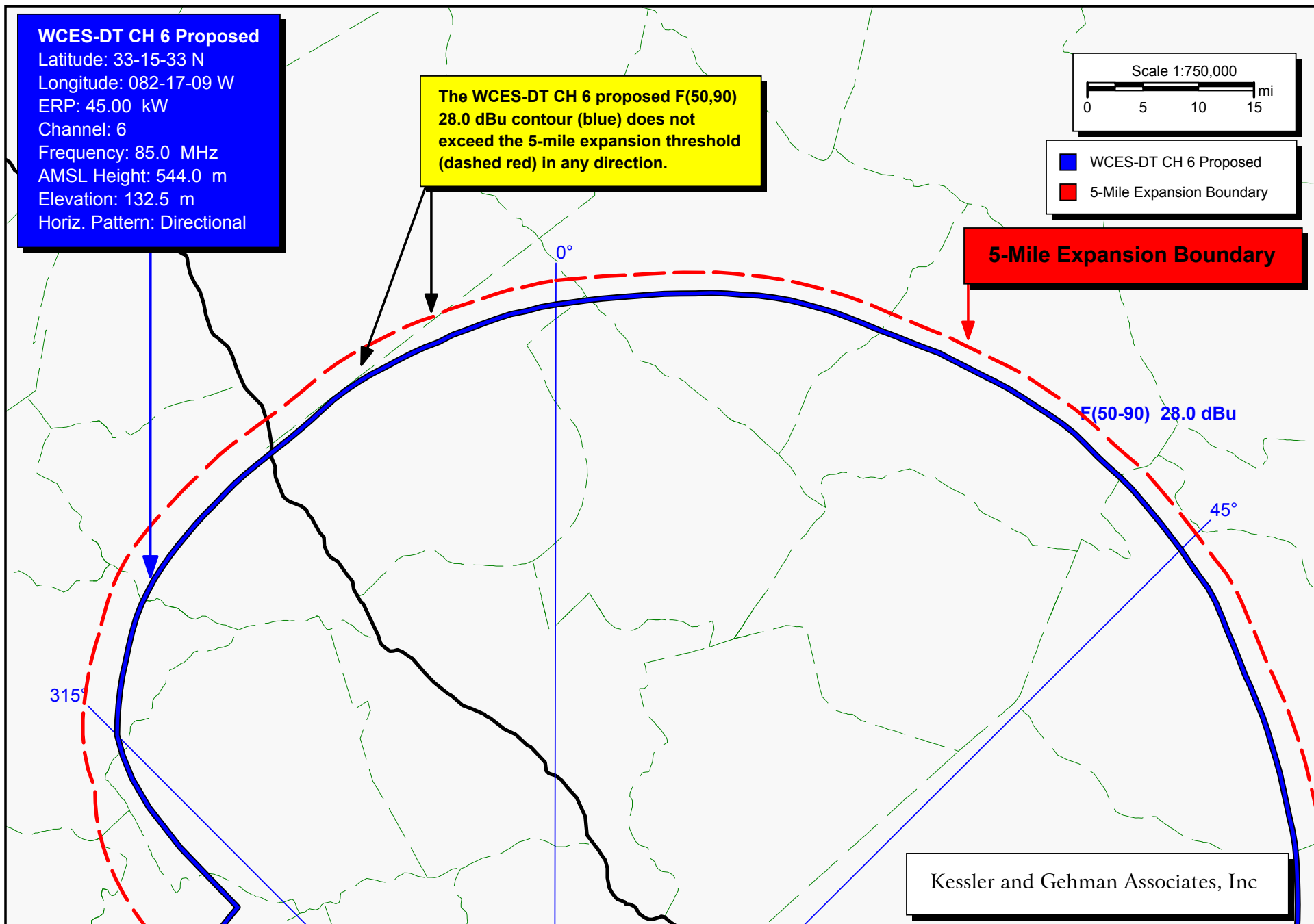
20080404

EXHIBIT 9

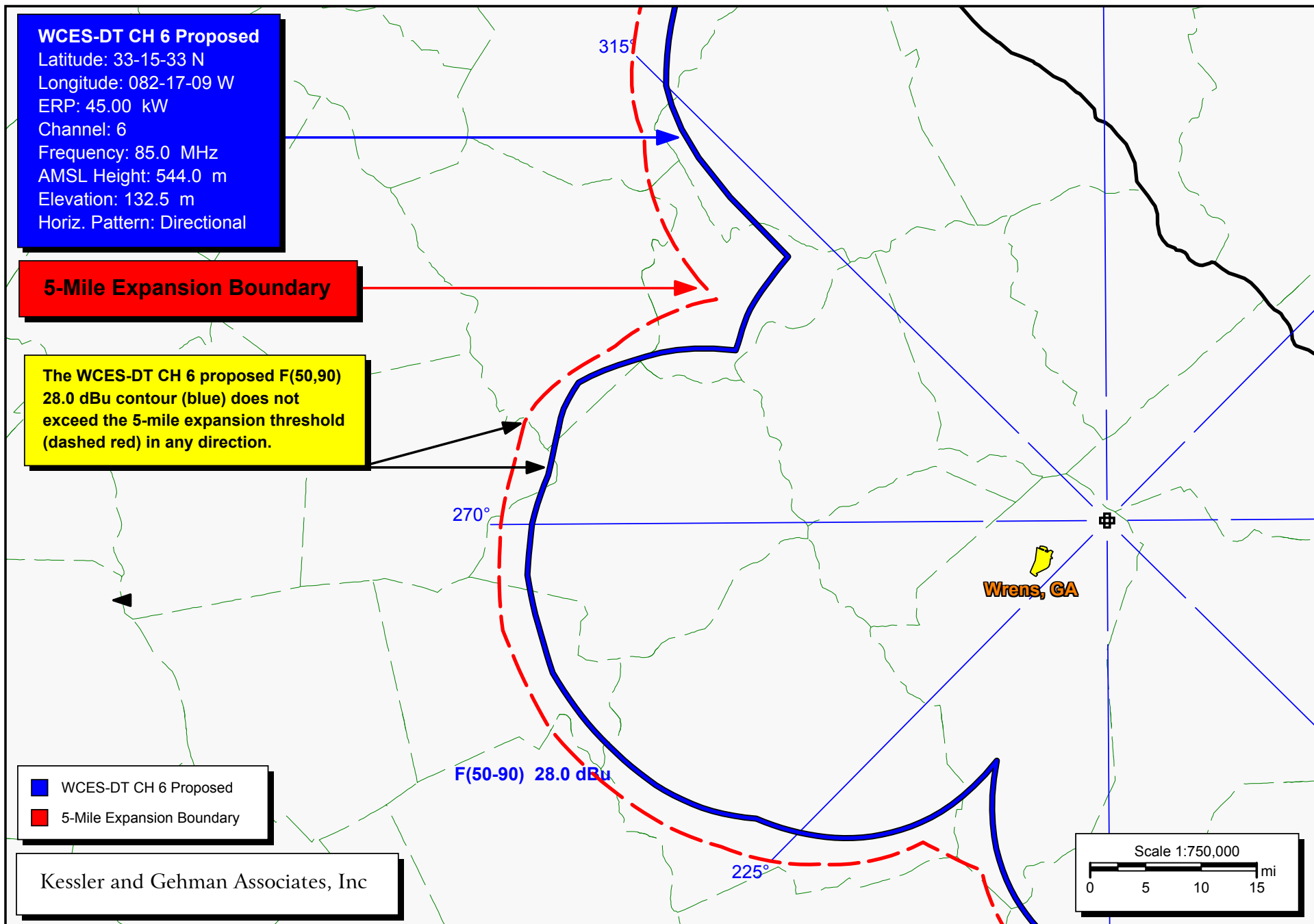


I) Licensed NTSC [black]; II) DTV TOA [green]; III) Proposed [blue]; & IV) 5-mile expansion boundary [dashed red]

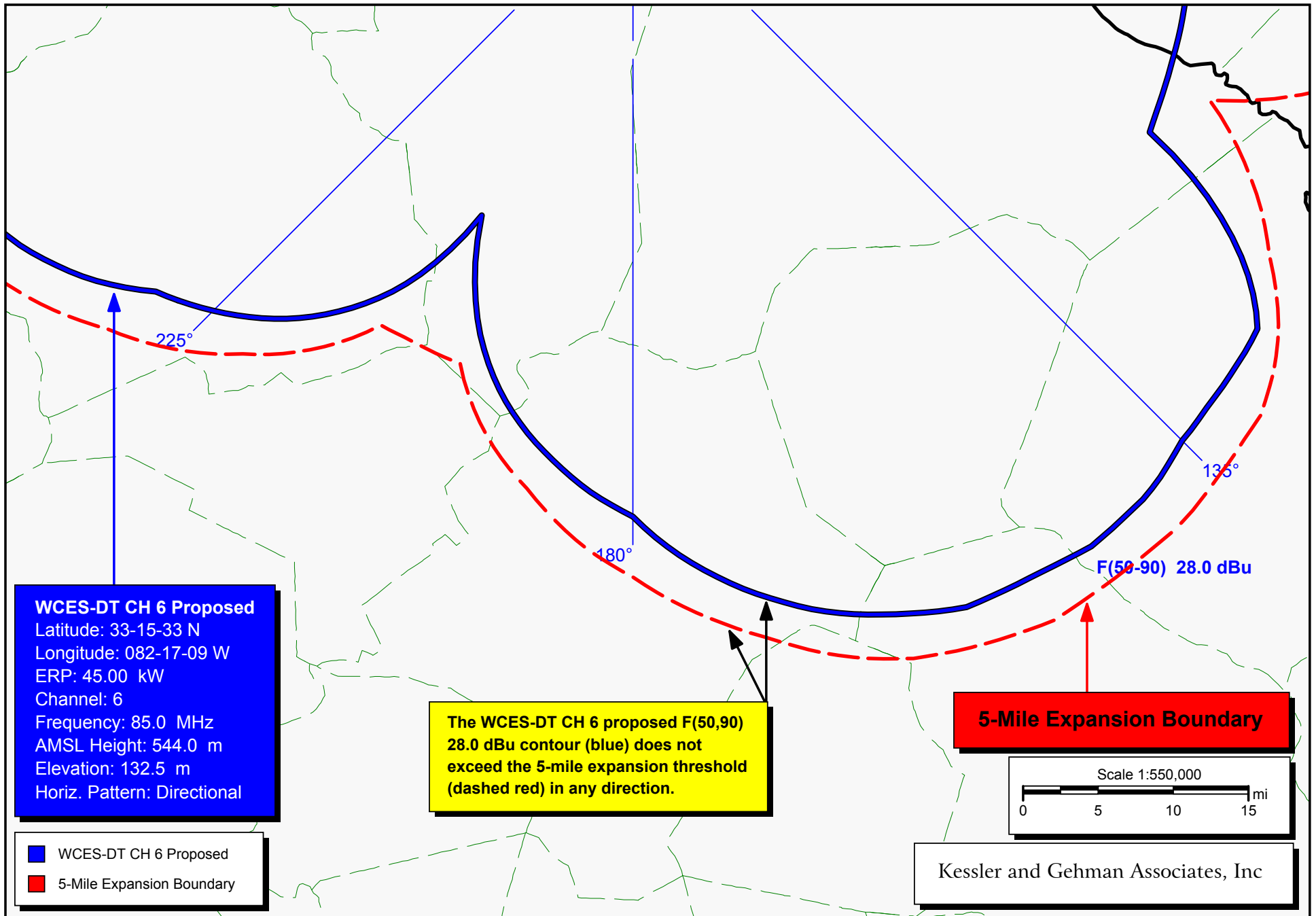
EXHIBIT 10



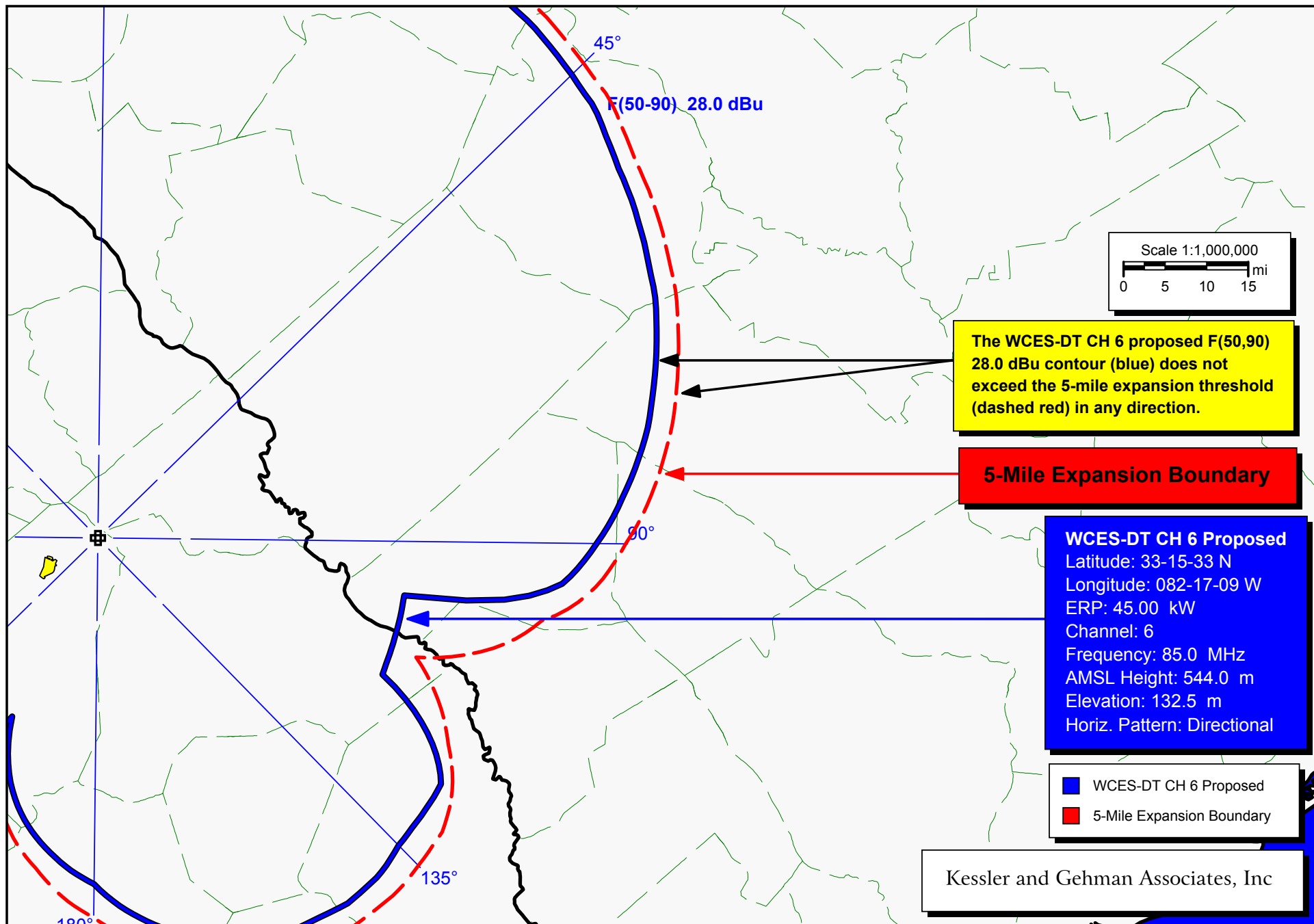
5-mile expansion exhibit (zoomed-in) - Northern View



5-mile expansion exhibit (zoomed-in) - Western View



5-mile expansion exhibit (zoomed-in) - Southern View



5-mile expansion exhibit (zoomed-in) - Eastern View

Distance to Contour Values for WCES-DT Channel 6 Final DTV TOA Facility

Call Letters: WCES-DT CH 6 DTV TOA
Latitude: 33-15-33 N
Longitude: 082-17-09 W
ERP: 30.00 kW
Channel: 6
Frequency: 85.0 MHz
AMSL Height: 550.84 m
Elevation: 122.15 m
Horiz. Antenna Pattern: Directional

Type of contour: FCC
Location Variability: 50.0 %
Time Variability: 90.0 %
of Radials Calculated: 360
Field Strength: 28.00 dBuV/m

Primary Terrain: 3 Second US Terrain

| Bearing (deg) | Distance (km) | HAAT (m) |
|---------------|---------------|----------|
| ----- | ----- | ----- |
| 0.0 | 121.5 | 426.3 |
| 1.0 | 121.7 | 425.3 |
| 2.0 | 122.0 | 425.0 |
| 3.0 | 122.3 | 424.7 |
| 4.0 | 122.5 | 424.1 |
| 5.0 | 122.8 | 423.9 |
| 6.0 | 123.2 | 424.7 |
| 7.0 | 123.6 | 425.9 |
| 8.0 | 123.9 | 426.5 |
| 9.0 | 124.3 | 427.0 |
| 10.0 | 124.7 | 428.6 |
| 11.0 | 125.0 | 429.8 |
| 12.0 | 125.2 | 430.4 |
| 13.0 | 125.5 | 432.1 |
| 14.0 | 125.7 | 432.4 |
| 15.0 | 125.8 | 432.2 |
| 16.0 | 125.9 | 431.2 |
| 17.0 | 126.0 | 430.5 |
| 18.0 | 126.1 | 429.5 |
| 19.0 | 126.0 | 427.3 |
| 20.0 | 126.0 | 425.0 |
| 21.0 | 125.9 | 423.5 |
| 22.0 | 125.9 | 423.5 |
| 23.0 | 125.8 | 423.3 |
| 24.0 | 125.9 | 423.8 |
| 25.0 | 126.0 | 425.3 |
| 26.0 | 126.0 | 424.8 |
| 27.0 | 126.0 | 425.3 |
| 28.0 | 126.1 | 426.0 |
| 29.0 | 126.2 | 427.5 |
| 30.0 | 126.3 | 428.5 |
| 31.0 | 126.2 | 429.3 |
| 32.0 | 126.1 | 430.0 |
| 33.0 | 126.1 | 431.2 |
| 34.0 | 126.0 | 432.3 |
| 35.0 | 125.8 | 431.9 |
| 36.0 | 125.5 | 430.5 |

Distance to Contour Values for WCES-DT Channel 6 Final DTV TOA Facility

| | | |
|------|-------|-------|
| 37.0 | 125.2 | 428.8 |
| 38.0 | 125.1 | 428.8 |
| 39.0 | 125.0 | 429.9 |
| 40.0 | 124.9 | 430.0 |
| 41.0 | 124.5 | 429.4 |
| 42.0 | 124.2 | 429.2 |
| 43.0 | 123.9 | 429.0 |
| 44.0 | 123.5 | 428.5 |
| 45.0 | 123.2 | 428.6 |
| 46.0 | 122.9 | 428.3 |
| 47.0 | 122.7 | 429.0 |
| 48.0 | 122.5 | 430.8 |
| 49.0 | 122.1 | 429.6 |
| 50.0 | 121.5 | 426.2 |
| 51.0 | 120.8 | 423.1 |
| 52.0 | 120.2 | 421.5 |
| 53.0 | 119.6 | 419.6 |
| 54.0 | 119.1 | 417.9 |
| 55.0 | 118.7 | 418.6 |
| 56.0 | 118.3 | 419.1 |
| 57.0 | 117.9 | 420.5 |
| 58.0 | 117.5 | 420.8 |
| 59.0 | 117.0 | 420.5 |
| 60.0 | 116.5 | 420.8 |
| 61.0 | 116.0 | 421.8 |
| 62.0 | 115.5 | 421.7 |
| 63.0 | 114.9 | 422.2 |
| 64.0 | 114.4 | 423.3 |
| 65.0 | 114.0 | 425.6 |
| 66.0 | 113.5 | 427.1 |
| 67.0 | 112.9 | 427.2 |
| 68.0 | 112.2 | 426.7 |
| 69.0 | 111.5 | 426.4 |
| 70.0 | 110.9 | 426.6 |
| 71.0 | 110.2 | 426.8 |
| 72.0 | 109.5 | 427.0 |
| 73.0 | 108.8 | 427.2 |
| 74.0 | 108.1 | 427.8 |
| 75.0 | 107.4 | 428.4 |
| 76.0 | 106.7 | 429.4 |
| 77.0 | 106.0 | 431.2 |
| 78.0 | 105.3 | 432.7 |
| 79.0 | 104.4 | 433.1 |
| 80.0 | 103.5 | 433.1 |
| 81.0 | 102.7 | 432.5 |
| 82.0 | 101.9 | 432.5 |
| 83.0 | 101.0 | 432.7 |
| 84.0 | 100.1 | 432.9 |
| 85.0 | 99.2 | 433.4 |
| 86.0 | 98.3 | 434.5 |
| 87.0 | 97.3 | 435.5 |
| 88.0 | 96.2 | 436.4 |
| 89.0 | 95.1 | 437.4 |
| 90.0 | 94.0 | 438.7 |
| 91.0 | 93.0 | 439.4 |
| 92.0 | 92.0 | 440.2 |
| 93.0 | 91.0 | 441.9 |

Distance to Contour Values for WCES-DT Channel 6 Final DTV TOA Facility

| | | |
|-------|------|-------|
| 94.0 | 89.9 | 444.2 |
| 95.0 | 88.7 | 445.2 |
| 96.0 | 87.3 | 445.4 |
| 97.0 | 85.7 | 445.4 |
| 98.0 | 83.9 | 445.9 |
| 99.0 | 81.8 | 446.4 |
| 100.0 | 79.2 | 447.0 |
| 101.0 | 77.9 | 447.5 |
| 102.0 | 76.6 | 448.4 |
| 103.0 | 75.0 | 449.5 |
| 104.0 | 73.3 | 450.4 |
| 105.0 | 71.4 | 451.1 |
| 106.0 | 69.2 | 451.6 |
| 107.0 | 66.8 | 452.1 |
| 108.0 | 64.1 | 452.9 |
| 109.0 | 61.2 | 454.1 |
| 110.0 | 57.7 | 455.0 |
| 111.0 | 59.3 | 456.0 |
| 112.0 | 60.8 | 457.2 |
| 113.0 | 62.2 | 458.4 |
| 114.0 | 63.6 | 460.2 |
| 115.0 | 64.9 | 462.4 |
| 116.0 | 66.2 | 464.7 |
| 117.0 | 67.4 | 466.0 |
| 118.0 | 68.5 | 466.3 |
| 119.0 | 69.6 | 466.6 |
| 120.0 | 70.6 | 467.4 |
| 121.0 | 71.9 | 468.5 |
| 122.0 | 73.1 | 469.4 |
| 123.0 | 74.2 | 470.2 |
| 124.0 | 75.2 | 470.7 |
| 125.0 | 76.1 | 470.5 |
| 126.0 | 76.9 | 469.6 |
| 127.0 | 77.7 | 468.3 |
| 128.0 | 78.3 | 466.2 |
| 129.0 | 78.9 | 464.4 |
| 130.0 | 79.5 | 462.8 |
| 131.0 | 79.7 | 460.7 |
| 132.0 | 79.9 | 458.8 |
| 133.0 | 80.1 | 458.1 |
| 134.0 | 80.4 | 457.3 |
| 135.0 | 80.6 | 455.9 |
| 136.0 | 80.8 | 455.4 |
| 137.0 | 81.1 | 455.2 |
| 138.0 | 81.3 | 455.1 |
| 139.0 | 81.5 | 453.7 |
| 140.0 | 81.6 | 451.7 |
| 141.0 | 81.6 | 450.2 |
| 142.0 | 81.7 | 449.1 |
| 143.0 | 81.7 | 448.4 |
| 144.0 | 81.8 | 447.3 |
| 145.0 | 81.8 | 446.5 |
| 146.0 | 81.9 | 445.6 |
| 147.0 | 81.9 | 444.7 |
| 148.0 | 82.0 | 444.1 |
| 149.0 | 82.0 | 443.7 |
| 150.0 | 82.2 | 444.0 |

Distance to Contour Values for WCES-DT Channel 6 Final DTV TOA Facility

| | | |
|-------|------|-------|
| 151.0 | 81.9 | 444.2 |
| 152.0 | 81.7 | 444.1 |
| 153.0 | 81.4 | 444.1 |
| 154.0 | 81.2 | 444.4 |
| 155.0 | 80.9 | 444.6 |
| 156.0 | 80.7 | 444.5 |
| 157.0 | 80.4 | 444.4 |
| 158.0 | 80.1 | 443.9 |
| 159.0 | 79.8 | 443.3 |
| 160.0 | 79.4 | 443.2 |
| 161.0 | 78.9 | 443.0 |
| 162.0 | 78.4 | 443.3 |
| 163.0 | 77.9 | 443.6 |
| 164.0 | 77.3 | 443.6 |
| 165.0 | 76.7 | 443.3 |
| 166.0 | 76.1 | 443.0 |
| 167.0 | 75.3 | 442.1 |
| 168.0 | 74.6 | 440.9 |
| 169.0 | 73.8 | 440.4 |
| 170.0 | 73.1 | 440.2 |
| 171.0 | 72.4 | 439.9 |
| 172.0 | 71.7 | 439.5 |
| 173.0 | 71.0 | 439.0 |
| 174.0 | 70.2 | 439.1 |
| 175.0 | 69.5 | 439.5 |
| 176.0 | 68.7 | 439.7 |
| 177.0 | 68.0 | 440.0 |
| 178.0 | 67.1 | 440.4 |
| 179.0 | 66.3 | 440.8 |
| 180.0 | 65.4 | 441.2 |
| 181.0 | 64.7 | 441.5 |
| 182.0 | 64.0 | 441.8 |
| 183.0 | 63.3 | 442.6 |
| 184.0 | 62.5 | 443.0 |
| 185.0 | 61.7 | 442.5 |
| 186.0 | 60.8 | 441.6 |
| 187.0 | 59.9 | 440.8 |
| 188.0 | 58.9 | 440.3 |
| 189.0 | 58.0 | 440.4 |
| 190.0 | 56.9 | 440.8 |
| 191.0 | 56.1 | 440.8 |
| 192.0 | 55.2 | 441.0 |
| 193.0 | 54.3 | 441.1 |
| 194.0 | 53.3 | 441.3 |
| 195.0 | 52.3 | 441.1 |
| 196.0 | 51.2 | 440.8 |
| 197.0 | 50.0 | 440.6 |
| 198.0 | 48.7 | 440.6 |
| 199.0 | 47.3 | 441.1 |
| 200.0 | 45.8 | 440.6 |
| 201.0 | 45.8 | 440.1 |
| 202.0 | 45.8 | 439.8 |
| 203.0 | 45.8 | 439.1 |
| 204.0 | 45.7 | 438.1 |
| 205.0 | 45.7 | 437.1 |
| 206.0 | 45.6 | 436.4 |
| 207.0 | 45.6 | 436.2 |

Distance to Contour Values for WCES-DT Channel 6 Final DTV TOA Facility

| | | |
|-------|------|-------|
| 208.0 | 45.7 | 436.7 |
| 209.0 | 45.7 | 437.5 |
| 210.0 | 45.7 | 437.5 |
| 211.0 | 47.1 | 436.7 |
| 212.0 | 48.5 | 435.9 |
| 213.0 | 49.7 | 435.5 |
| 214.0 | 50.9 | 435.2 |
| 215.0 | 52.0 | 435.4 |
| 216.0 | 53.1 | 435.8 |
| 217.0 | 54.1 | 436.4 |
| 218.0 | 55.0 | 436.8 |
| 219.0 | 55.9 | 437.1 |
| 220.0 | 56.8 | 437.2 |
| 221.0 | 57.8 | 437.2 |
| 222.0 | 58.8 | 437.1 |
| 223.0 | 59.7 | 437.1 |
| 224.0 | 60.6 | 437.1 |
| 225.0 | 61.4 | 437.1 |
| 226.0 | 62.3 | 437.2 |
| 227.0 | 63.0 | 437.2 |
| 228.0 | 63.8 | 437.0 |
| 229.0 | 64.5 | 437.0 |
| 230.0 | 65.2 | 436.4 |
| 231.0 | 66.0 | 436.1 |
| 232.0 | 66.9 | 435.8 |
| 233.0 | 67.7 | 435.7 |
| 234.0 | 68.5 | 435.7 |
| 235.0 | 69.3 | 435.4 |
| 236.0 | 70.0 | 434.4 |
| 237.0 | 70.6 | 433.5 |
| 238.0 | 71.3 | 433.0 |
| 239.0 | 71.9 | 432.6 |
| 240.0 | 72.5 | 431.7 |
| 241.0 | 73.1 | 429.8 |
| 242.0 | 73.8 | 428.5 |
| 243.0 | 74.4 | 427.8 |
| 244.0 | 75.0 | 426.7 |
| 245.0 | 75.5 | 425.8 |
| 246.0 | 76.1 | 425.4 |
| 247.0 | 76.6 | 425.2 |
| 248.0 | 77.2 | 425.2 |
| 249.0 | 77.7 | 425.0 |
| 250.0 | 78.2 | 424.7 |
| 251.0 | 78.5 | 424.2 |
| 252.0 | 78.7 | 423.7 |
| 253.0 | 79.0 | 423.4 |
| 254.0 | 79.3 | 423.2 |
| 255.0 | 79.5 | 423.2 |
| 256.0 | 79.8 | 423.2 |
| 257.0 | 80.1 | 423.3 |
| 258.0 | 80.3 | 423.2 |
| 259.0 | 80.6 | 423.7 |
| 260.0 | 80.9 | 424.6 |
| 261.0 | 80.9 | 425.3 |
| 262.0 | 80.8 | 425.4 |
| 263.0 | 80.6 | 425.2 |
| 264.0 | 80.5 | 424.9 |

Distance to Contour Values for WCES-DT Channel 6 Final DTV TOA Facility

| | | |
|-------|------|-------|
| 265.0 | 80.4 | 424.7 |
| 266.0 | 80.3 | 424.2 |
| 267.0 | 80.1 | 423.6 |
| 268.0 | 80.0 | 423.0 |
| 269.0 | 79.9 | 423.0 |
| 270.0 | 79.8 | 423.5 |
| 271.0 | 79.6 | 424.2 |
| 272.0 | 79.3 | 424.8 |
| 273.0 | 79.0 | 424.7 |
| 274.0 | 78.8 | 425.2 |
| 275.0 | 78.5 | 425.0 |
| 276.0 | 78.2 | 425.4 |
| 277.0 | 78.0 | 426.9 |
| 278.0 | 77.8 | 429.1 |
| 279.0 | 77.7 | 431.5 |
| 280.0 | 77.5 | 434.1 |
| 281.0 | 77.0 | 437.5 |
| 282.0 | 76.4 | 439.0 |
| 283.0 | 75.5 | 437.6 |
| 284.0 | 74.6 | 435.7 |
| 285.0 | 73.5 | 432.9 |
| 286.0 | 72.4 | 429.1 |
| 287.0 | 71.1 | 424.7 |
| 288.0 | 69.9 | 420.1 |
| 289.0 | 68.6 | 416.6 |
| 290.0 | 67.5 | 416.6 |
| 291.0 | 66.8 | 419.3 |
| 292.0 | 65.9 | 421.2 |
| 293.0 | 65.0 | 422.5 |
| 294.0 | 64.0 | 423.7 |
| 295.0 | 63.0 | 425.4 |
| 296.0 | 61.9 | 427.3 |
| 297.0 | 60.8 | 430.9 |
| 298.0 | 59.7 | 435.3 |
| 299.0 | 58.4 | 438.4 |
| 300.0 | 57.0 | 441.6 |
| 301.0 | 60.6 | 443.4 |
| 302.0 | 63.7 | 444.1 |
| 303.0 | 66.3 | 443.9 |
| 304.0 | 68.7 | 443.5 |
| 305.0 | 70.8 | 443.0 |
| 306.0 | 72.8 | 442.3 |
| 307.0 | 74.5 | 442.2 |
| 308.0 | 76.1 | 441.9 |
| 309.0 | 77.5 | 441.4 |
| 310.0 | 78.8 | 441.3 |
| 311.0 | 81.5 | 441.1 |
| 312.0 | 83.6 | 440.3 |
| 313.0 | 85.3 | 438.8 |
| 314.0 | 86.9 | 437.6 |
| 315.0 | 88.3 | 436.7 |
| 316.0 | 89.6 | 437.0 |
| 317.0 | 90.9 | 438.6 |
| 318.0 | 92.1 | 440.9 |
| 319.0 | 93.3 | 443.5 |
| 320.0 | 94.5 | 445.4 |
| 321.0 | 95.8 | 447.1 |

Distance to Contour Values for WCES-DT Channel 6 Final DTV TOA Facility

| | | |
|-------|-------|-------|
| 322.0 | 97.1 | 449.8 |
| 323.0 | 98.4 | 452.1 |
| 324.0 | 99.5 | 452.7 |
| 325.0 | 100.4 | 451.7 |
| 326.0 | 101.2 | 449.5 |
| 327.0 | 101.9 | 446.0 |
| 328.0 | 102.6 | 442.7 |
| 329.0 | 103.2 | 439.4 |
| 330.0 | 103.7 | 435.9 |
| 331.0 | 104.4 | 432.6 |
| 332.0 | 105.0 | 429.1 |
| 333.0 | 105.6 | 425.4 |
| 334.0 | 106.2 | 423.2 |
| 335.0 | 106.9 | 421.6 |
| 336.0 | 107.5 | 418.8 |
| 337.0 | 108.0 | 415.6 |
| 338.0 | 108.5 | 412.7 |
| 339.0 | 109.0 | 410.7 |
| 340.0 | 109.6 | 409.1 |
| 341.0 | 110.3 | 409.5 |
| 342.0 | 111.0 | 411.2 |
| 343.0 | 111.9 | 414.5 |
| 344.0 | 112.8 | 418.4 |
| 345.0 | 113.6 | 420.5 |
| 346.0 | 114.3 | 421.6 |
| 347.0 | 114.9 | 422.0 |
| 348.0 | 115.4 | 421.3 |
| 349.0 | 116.0 | 421.8 |
| 350.0 | 116.6 | 422.4 |
| 351.0 | 117.1 | 422.5 |
| 352.0 | 117.5 | 421.5 |
| 353.0 | 118.2 | 424.2 |
| 354.0 | 118.7 | 424.1 |
| 355.0 | 119.2 | 424.8 |
| 356.0 | 119.7 | 426.3 |
| 357.0 | 120.3 | 427.6 |
| 358.0 | 120.6 | 426.3 |
| 359.0 | 121.1 | 427.2 |

Distance to Contour Values for WCES-DT Channel 6 Proposed Facility

Call Letters: WCES-DT CH 6 Proposed
Latitude: 33-15-33 N
Longitude: 082-17-09 W
ERP: 45.00 kW
Channel: 6
Frequency: 85.0 MHz
AMSL Height: 544.0 m
Elevation: 132.5 m
Horiz. Antenna Pattern: Directional

Type of contour: FCC
Location Variability: 50.0 %
Time Variability: 90.0 %
of Radials Calculated: 360
Field Strength: 28.00 dBuV/m

Primary Terrain: 3 Second US Terrain

| Bearing (deg) | Distance (km) | HAAT (m) |
|---------------|---------------|----------|
| ----- | ----- | ----- |
| 0.0 | 126.0 | 419.5 |
| 1.0 | 126.3 | 418.5 |
| 2.0 | 126.7 | 418.2 |
| 3.0 | 127.0 | 417.8 |
| 4.0 | 127.4 | 417.3 |
| 5.0 | 127.7 | 417.0 |
| 6.0 | 128.1 | 417.9 |
| 7.0 | 128.5 | 419.1 |
| 8.0 | 128.9 | 419.6 |
| 9.0 | 129.2 | 420.1 |
| 10.0 | 129.7 | 421.8 |
| 11.0 | 130.0 | 423.0 |
| 12.0 | 130.3 | 423.5 |
| 13.0 | 130.7 | 425.2 |
| 14.0 | 131.0 | 425.6 |
| 15.0 | 131.1 | 425.3 |
| 16.0 | 131.2 | 424.4 |
| 17.0 | 131.3 | 423.6 |
| 18.0 | 131.3 | 422.7 |
| 19.0 | 131.2 | 420.4 |
| 20.0 | 131.1 | 418.1 |
| 21.0 | 131.0 | 416.7 |
| 22.0 | 131.1 | 416.7 |
| 23.0 | 131.1 | 416.5 |
| 24.0 | 131.2 | 417.0 |
| 25.0 | 131.4 | 418.5 |
| 26.0 | 131.3 | 418.0 |
| 27.0 | 131.3 | 418.4 |
| 28.0 | 131.3 | 419.1 |
| 29.0 | 131.4 | 420.6 |
| 30.0 | 131.5 | 421.7 |
| 31.0 | 131.4 | 422.4 |
| 32.0 | 131.3 | 423.1 |
| 33.0 | 131.3 | 424.4 |
| 34.0 | 131.3 | 425.5 |
| 35.0 | 131.1 | 425.1 |
| 36.0 | 130.8 | 423.6 |

Distance to Contour Values for WCES-DT Channel 6 Proposed Facility

| | | |
|------|-------|-------|
| 37.0 | 130.4 | 422.0 |
| 38.0 | 130.2 | 421.9 |
| 39.0 | 130.1 | 423.1 |
| 40.0 | 129.8 | 423.2 |
| 41.0 | 129.5 | 422.6 |
| 42.0 | 129.1 | 422.3 |
| 43.0 | 128.8 | 422.2 |
| 44.0 | 128.5 | 421.6 |
| 45.0 | 128.2 | 421.8 |
| 46.0 | 127.8 | 421.4 |
| 47.0 | 127.4 | 422.1 |
| 48.0 | 127.2 | 424.0 |
| 49.0 | 126.7 | 422.7 |
| 50.0 | 126.0 | 419.3 |
| 51.0 | 125.3 | 416.2 |
| 52.0 | 124.7 | 414.6 |
| 53.0 | 124.1 | 412.8 |
| 54.0 | 123.5 | 411.1 |
| 55.0 | 123.1 | 411.7 |
| 56.0 | 122.6 | 412.3 |
| 57.0 | 122.2 | 413.7 |
| 58.0 | 121.7 | 413.9 |
| 59.0 | 121.1 | 413.6 |
| 60.0 | 120.6 | 414.0 |
| 61.0 | 120.1 | 414.9 |
| 62.0 | 119.5 | 414.9 |
| 63.0 | 118.9 | 415.4 |
| 64.0 | 118.4 | 416.5 |
| 65.0 | 117.9 | 418.8 |
| 66.0 | 117.4 | 420.3 |
| 67.0 | 116.7 | 420.3 |
| 68.0 | 116.0 | 419.8 |
| 69.0 | 115.2 | 419.6 |
| 70.0 | 114.5 | 419.7 |
| 71.0 | 113.8 | 420.0 |
| 72.0 | 113.0 | 420.1 |
| 73.0 | 112.3 | 420.3 |
| 74.0 | 111.5 | 420.9 |
| 75.0 | 110.7 | 421.5 |
| 76.0 | 110.0 | 422.5 |
| 77.0 | 109.2 | 424.4 |
| 78.0 | 108.5 | 425.9 |
| 79.0 | 107.6 | 426.3 |
| 80.0 | 106.6 | 426.2 |
| 81.0 | 105.7 | 425.7 |
| 82.0 | 104.7 | 425.6 |
| 83.0 | 103.8 | 425.9 |
| 84.0 | 102.8 | 426.0 |
| 85.0 | 101.7 | 426.6 |
| 86.0 | 100.8 | 427.6 |
| 87.0 | 99.8 | 428.6 |
| 88.0 | 98.7 | 429.5 |
| 89.0 | 97.6 | 430.6 |
| 90.0 | 96.5 | 431.8 |
| 91.0 | 95.3 | 432.6 |
| 92.0 | 94.2 | 433.4 |
| 93.0 | 93.0 | 435.1 |

Distance to Contour Values for WCES-DT Channel 6 Proposed Facility

| | | |
|-------|------|-------|
| 94.0 | 91.7 | 437.3 |
| 95.0 | 90.2 | 438.4 |
| 96.0 | 87.5 | 438.5 |
| 97.0 | 84.2 | 438.6 |
| 98.0 | 79.5 | 439.0 |
| 99.0 | 72.3 | 439.5 |
| 100.0 | 60.3 | 440.2 |
| 101.0 | 60.3 | 440.6 |
| 102.0 | 60.3 | 441.5 |
| 103.0 | 60.4 | 442.7 |
| 104.0 | 60.4 | 443.5 |
| 105.0 | 60.5 | 444.3 |
| 106.0 | 60.5 | 444.8 |
| 107.0 | 60.5 | 445.3 |
| 108.0 | 60.6 | 446.1 |
| 109.0 | 60.6 | 447.2 |
| 110.0 | 60.7 | 448.1 |
| 111.0 | 60.7 | 449.2 |
| 112.0 | 60.8 | 450.3 |
| 113.0 | 60.8 | 451.6 |
| 114.0 | 60.9 | 453.3 |
| 115.0 | 61.0 | 455.6 |
| 116.0 | 64.3 | 457.8 |
| 117.0 | 67.1 | 459.1 |
| 118.0 | 69.7 | 459.5 |
| 119.0 | 72.0 | 459.8 |
| 120.0 | 74.1 | 460.6 |
| 121.0 | 76.0 | 461.7 |
| 122.0 | 77.7 | 462.6 |
| 123.0 | 79.2 | 463.4 |
| 124.0 | 80.5 | 463.8 |
| 125.0 | 81.7 | 463.7 |
| 126.0 | 81.9 | 462.7 |
| 127.0 | 82.0 | 461.5 |
| 128.0 | 82.2 | 459.4 |
| 129.0 | 82.3 | 457.5 |
| 130.0 | 82.4 | 455.9 |
| 131.0 | 82.6 | 453.8 |
| 132.0 | 82.7 | 451.9 |
| 133.0 | 82.9 | 451.2 |
| 134.0 | 83.0 | 450.5 |
| 135.0 | 83.2 | 449.1 |
| 136.0 | 83.6 | 448.6 |
| 137.0 | 84.0 | 448.4 |
| 138.0 | 84.4 | 448.2 |
| 139.0 | 84.7 | 446.8 |
| 140.0 | 85.0 | 444.9 |
| 141.0 | 85.1 | 443.4 |
| 142.0 | 85.2 | 442.2 |
| 143.0 | 85.4 | 441.6 |
| 144.0 | 85.5 | 440.5 |
| 145.0 | 85.6 | 439.6 |
| 146.0 | 85.5 | 438.8 |
| 147.0 | 85.3 | 437.9 |
| 148.0 | 85.2 | 437.3 |
| 149.0 | 85.0 | 436.8 |
| 150.0 | 84.9 | 437.2 |

Distance to Contour Values for WCES-DT Channel 6 Proposed Facility

| | | |
|-------|------|-------|
| 151.0 | 84.9 | 437.4 |
| 152.0 | 84.8 | 437.3 |
| 153.0 | 84.7 | 437.3 |
| 154.0 | 84.6 | 437.6 |
| 155.0 | 84.6 | 437.8 |
| 156.0 | 84.2 | 437.7 |
| 157.0 | 83.8 | 437.6 |
| 158.0 | 83.3 | 437.0 |
| 159.0 | 82.8 | 436.5 |
| 160.0 | 82.4 | 436.3 |
| 161.0 | 81.9 | 436.2 |
| 162.0 | 81.4 | 436.5 |
| 163.0 | 80.9 | 436.8 |
| 164.0 | 80.4 | 436.7 |
| 165.0 | 79.8 | 436.5 |
| 166.0 | 79.2 | 436.2 |
| 167.0 | 78.6 | 435.3 |
| 168.0 | 77.8 | 434.1 |
| 169.0 | 77.1 | 433.6 |
| 170.0 | 76.4 | 433.4 |
| 171.0 | 75.6 | 433.1 |
| 172.0 | 74.8 | 432.7 |
| 173.0 | 74.0 | 432.2 |
| 174.0 | 73.1 | 432.3 |
| 175.0 | 72.2 | 432.7 |
| 176.0 | 71.3 | 432.9 |
| 177.0 | 70.3 | 433.1 |
| 178.0 | 69.2 | 433.5 |
| 179.0 | 68.1 | 433.9 |
| 180.0 | 67.0 | 434.3 |
| 181.0 | 66.4 | 434.6 |
| 182.0 | 65.8 | 435.0 |
| 183.0 | 65.2 | 435.8 |
| 184.0 | 64.5 | 436.1 |
| 185.0 | 63.8 | 435.6 |
| 186.0 | 63.1 | 434.8 |
| 187.0 | 62.3 | 434.0 |
| 188.0 | 61.5 | 433.5 |
| 189.0 | 60.8 | 433.5 |
| 190.0 | 60.0 | 433.9 |
| 191.0 | 59.1 | 434.0 |
| 192.0 | 58.2 | 434.1 |
| 193.0 | 57.3 | 434.3 |
| 194.0 | 56.3 | 434.4 |
| 195.0 | 55.2 | 434.2 |
| 196.0 | 54.1 | 434.0 |
| 197.0 | 52.9 | 433.7 |
| 198.0 | 51.6 | 433.7 |
| 199.0 | 50.2 | 434.3 |
| 200.0 | 48.7 | 433.7 |
| 201.0 | 47.0 | 433.3 |
| 202.0 | 45.2 | 432.9 |
| 203.0 | 43.2 | 432.3 |
| 204.0 | 40.9 | 431.3 |
| 205.0 | 38.3 | 430.3 |
| 206.0 | 40.9 | 429.6 |
| 207.0 | 43.1 | 429.3 |

Distance to Contour Values for WCES-DT Channel 6 Proposed Facility

| | | |
|-------|------|-------|
| 208.0 | 45.1 | 429.8 |
| 209.0 | 46.9 | 430.7 |
| 210.0 | 48.5 | 430.6 |
| 211.0 | 50.0 | 429.8 |
| 212.0 | 51.4 | 429.1 |
| 213.0 | 52.6 | 428.6 |
| 214.0 | 53.8 | 428.4 |
| 215.0 | 55.0 | 428.5 |
| 216.0 | 56.0 | 429.0 |
| 217.0 | 57.1 | 429.6 |
| 218.0 | 58.0 | 430.0 |
| 219.0 | 58.9 | 430.3 |
| 220.0 | 59.8 | 430.3 |
| 221.0 | 60.6 | 430.4 |
| 222.0 | 61.4 | 430.3 |
| 223.0 | 62.1 | 430.3 |
| 224.0 | 62.9 | 430.3 |
| 225.0 | 63.6 | 430.3 |
| 226.0 | 64.2 | 430.4 |
| 227.0 | 64.9 | 430.3 |
| 228.0 | 65.5 | 430.2 |
| 229.0 | 66.1 | 430.1 |
| 230.0 | 66.7 | 429.6 |
| 231.0 | 67.9 | 429.2 |
| 232.0 | 69.0 | 429.0 |
| 233.0 | 70.0 | 428.9 |
| 234.0 | 71.0 | 428.9 |
| 235.0 | 72.0 | 428.6 |
| 236.0 | 72.8 | 427.6 |
| 237.0 | 73.6 | 426.6 |
| 238.0 | 74.4 | 426.1 |
| 239.0 | 75.1 | 425.7 |
| 240.0 | 75.8 | 424.9 |
| 241.0 | 76.4 | 422.9 |
| 242.0 | 77.0 | 421.7 |
| 243.0 | 77.6 | 421.0 |
| 244.0 | 78.2 | 419.9 |
| 245.0 | 78.7 | 418.9 |
| 246.0 | 79.2 | 418.6 |
| 247.0 | 79.8 | 418.4 |
| 248.0 | 80.3 | 418.4 |
| 249.0 | 80.8 | 418.2 |
| 250.0 | 81.2 | 417.9 |
| 251.0 | 81.7 | 417.4 |
| 252.0 | 82.1 | 416.9 |
| 253.0 | 82.5 | 416.6 |
| 254.0 | 82.9 | 416.4 |
| 255.0 | 83.3 | 416.4 |
| 256.0 | 83.4 | 416.4 |
| 257.0 | 83.5 | 416.4 |
| 258.0 | 83.6 | 416.4 |
| 259.0 | 83.7 | 416.9 |
| 260.0 | 83.8 | 417.8 |
| 261.0 | 83.9 | 418.5 |
| 262.0 | 84.1 | 418.6 |
| 263.0 | 84.2 | 418.3 |
| 264.0 | 84.3 | 418.1 |

Distance to Contour Values for WCES-DT Channel 6 Proposed Facility

| | | |
|-------|------|-------|
| 265.0 | 84.4 | 417.9 |
| 266.0 | 84.1 | 417.3 |
| 267.0 | 83.9 | 416.8 |
| 268.0 | 83.7 | 416.1 |
| 269.0 | 83.5 | 416.2 |
| 270.0 | 83.3 | 416.6 |
| 271.0 | 83.0 | 417.4 |
| 272.0 | 82.6 | 417.9 |
| 273.0 | 82.1 | 417.9 |
| 274.0 | 81.7 | 418.3 |
| 275.0 | 81.3 | 418.1 |
| 276.0 | 81.0 | 418.6 |
| 277.0 | 80.9 | 420.1 |
| 278.0 | 80.8 | 422.2 |
| 279.0 | 80.7 | 424.6 |
| 280.0 | 80.6 | 427.3 |
| 281.0 | 80.5 | 430.6 |
| 282.0 | 80.4 | 432.2 |
| 283.0 | 80.0 | 430.7 |
| 284.0 | 79.6 | 428.9 |
| 285.0 | 79.1 | 426.1 |
| 286.0 | 77.7 | 422.3 |
| 287.0 | 76.1 | 417.9 |
| 288.0 | 74.3 | 413.3 |
| 289.0 | 72.6 | 409.8 |
| 290.0 | 70.8 | 409.8 |
| 291.0 | 69.1 | 412.4 |
| 292.0 | 67.1 | 414.3 |
| 293.0 | 64.8 | 415.6 |
| 294.0 | 62.2 | 416.8 |
| 295.0 | 59.2 | 418.6 |
| 296.0 | 59.3 | 420.5 |
| 297.0 | 59.5 | 424.0 |
| 298.0 | 59.7 | 428.4 |
| 299.0 | 59.8 | 431.6 |
| 300.0 | 60.0 | 434.7 |
| 301.0 | 60.1 | 436.6 |
| 302.0 | 60.1 | 437.2 |
| 303.0 | 60.1 | 437.1 |
| 304.0 | 60.1 | 436.7 |
| 305.0 | 60.1 | 436.1 |
| 306.0 | 60.0 | 435.5 |
| 307.0 | 60.0 | 435.4 |
| 308.0 | 60.0 | 435.0 |
| 309.0 | 60.0 | 434.5 |
| 310.0 | 60.0 | 434.5 |
| 311.0 | 71.9 | 434.2 |
| 312.0 | 79.2 | 433.4 |
| 313.0 | 83.8 | 431.9 |
| 314.0 | 87.1 | 430.8 |
| 315.0 | 89.8 | 429.8 |
| 316.0 | 91.3 | 430.1 |
| 317.0 | 92.8 | 431.8 |
| 318.0 | 94.2 | 434.1 |
| 319.0 | 95.6 | 436.7 |
| 320.0 | 96.9 | 438.6 |
| 321.0 | 98.2 | 440.3 |

Distance to Contour Values for WCES-DT Channel 6 Proposed Facility

| | | |
|-------|-------|-------|
| 322.0 | 99.6 | 442.9 |
| 323.0 | 100.9 | 445.2 |
| 324.0 | 102.0 | 445.9 |
| 325.0 | 103.0 | 444.8 |
| 326.0 | 103.9 | 442.6 |
| 327.0 | 104.7 | 439.2 |
| 328.0 | 105.5 | 435.9 |
| 329.0 | 106.2 | 432.6 |
| 330.0 | 106.9 | 429.0 |
| 331.0 | 107.6 | 425.7 |
| 332.0 | 108.2 | 422.3 |
| 333.0 | 108.8 | 418.5 |
| 334.0 | 109.5 | 416.3 |
| 335.0 | 110.2 | 414.8 |
| 336.0 | 110.8 | 411.9 |
| 337.0 | 111.4 | 408.8 |
| 338.0 | 112.0 | 405.8 |
| 339.0 | 112.6 | 403.8 |
| 340.0 | 113.2 | 402.3 |
| 341.0 | 114.0 | 402.6 |
| 342.0 | 114.8 | 404.3 |
| 343.0 | 115.7 | 407.7 |
| 344.0 | 116.7 | 411.6 |
| 345.0 | 117.5 | 413.7 |
| 346.0 | 118.2 | 414.8 |
| 347.0 | 118.9 | 415.1 |
| 348.0 | 119.4 | 414.5 |
| 349.0 | 120.1 | 415.0 |
| 350.0 | 120.7 | 415.5 |
| 351.0 | 121.3 | 415.6 |
| 352.0 | 121.7 | 414.6 |
| 353.0 | 122.5 | 417.4 |
| 354.0 | 123.0 | 417.3 |
| 355.0 | 123.6 | 417.9 |
| 356.0 | 124.2 | 419.5 |
| 357.0 | 124.8 | 420.8 |
| 358.0 | 125.1 | 419.5 |
| 359.0 | 125.7 | 420.3 |

WCES-DT (Final DTV TOA) and WCES-DT (Proposed) Distance to Contour Comparison Chart

| Radial | WCES-DT DTV TOA distance to contours (km) | WCES-DT Proposed distance to contours (km) | PASS OR FAIL | Difference |
|--------|-------------------------------------------------|--------------------------------------------------|-----------------|------------|
| 0 | 121.5 | 126.0 | PASS | 2.8 |
| 1 | 121.7 | 126.3 | PASS | 2.9 |
| 2 | 122.0 | 126.7 | PASS | 2.9 |
| 3 | 122.3 | 127.0 | PASS | 2.9 |
| 4 | 122.5 | 127.4 | PASS | 3.0 |
| 5 | 122.8 | 127.7 | PASS | 3.0 |
| 6 | 123.2 | 128.1 | PASS | 3.0 |
| 7 | 123.6 | 128.5 | PASS | 3.0 |
| 8 | 123.9 | 128.9 | PASS | 3.1 |
| 9 | 124.3 | 129.2 | PASS | 3.0 |
| 10 | 124.7 | 129.7 | PASS | 3.1 |
| 11 | 125.0 | 130.0 | PASS | 3.1 |
| 12 | 125.2 | 130.3 | PASS | 3.2 |
| 13 | 125.5 | 130.7 | PASS | 3.2 |
| 14 | 125.7 | 131.0 | PASS | 3.3 |
| 15 | 125.8 | 131.1 | PASS | 3.3 |
| 16 | 125.9 | 131.2 | PASS | 3.3 |
| 17 | 126.0 | 131.3 | PASS | 3.3 |
| 18 | 126.1 | 131.3 | PASS | 3.2 |
| 19 | 126.0 | 131.2 | PASS | 3.2 |
| 20 | 126.0 | 131.1 | PASS | 3.2 |
| 21 | 125.9 | 131.0 | PASS | 3.2 |
| 22 | 125.9 | 131.1 | PASS | 3.2 |
| 23 | 125.8 | 131.1 | PASS | 3.3 |
| 24 | 125.9 | 131.2 | PASS | 3.3 |
| 25 | 126.0 | 131.4 | PASS | 3.4 |
| 26 | 126.0 | 131.3 | PASS | 3.3 |
| 27 | 126.0 | 131.3 | PASS | 3.3 |
| 28 | 126.1 | 131.3 | PASS | 3.2 |
| 29 | 126.2 | 131.4 | PASS | 3.2 |
| 30 | 126.3 | 131.5 | PASS | 3.2 |
| 31 | 126.2 | 131.4 | PASS | 3.2 |
| 32 | 126.1 | 131.3 | PASS | 3.2 |
| 33 | 126.1 | 131.3 | PASS | 3.2 |
| 34 | 126.0 | 131.3 | PASS | 3.3 |
| 35 | 125.8 | 131.1 | PASS | 3.3 |
| 36 | 125.5 | 130.8 | PASS | 3.3 |
| 37 | 125.2 | 130.4 | PASS | 3.2 |
| 38 | 125.1 | 130.2 | PASS | 3.2 |
| 39 | 125.0 | 130.1 | PASS | 3.2 |
| 40 | 124.9 | 129.8 | PASS | 3.0 |
| 41 | 124.5 | 129.5 | PASS | 3.1 |
| 42 | 124.2 | 129.1 | PASS | 3.0 |
| 43 | 123.9 | 128.8 | PASS | 3.0 |
| 44 | 123.5 | 128.5 | PASS | 3.1 |
| 45 | 123.2 | 128.2 | PASS | 3.1 |
| 46 | 122.9 | 127.8 | PASS | 3.0 |
| 47 | 122.7 | 127.4 | PASS | 2.9 |

WCES-DT (Final DTV TOA) and WCES-DT (Proposed) Distance to Contour Comparison Chart

| | | | | |
|----|-------|-------|------|------|
| 48 | 122.5 | 127.2 | PASS | 2.9 |
| 49 | 122.1 | 126.7 | PASS | 2.9 |
| 50 | 121.5 | 126.0 | PASS | 2.8 |
| 51 | 120.8 | 125.3 | PASS | 2.8 |
| 52 | 120.2 | 124.7 | PASS | 2.8 |
| 53 | 119.6 | 124.1 | PASS | 2.8 |
| 54 | 119.1 | 123.5 | PASS | 2.7 |
| 55 | 118.7 | 123.1 | PASS | 2.7 |
| 56 | 118.3 | 122.6 | PASS | 2.7 |
| 57 | 117.9 | 122.2 | PASS | 2.7 |
| 58 | 117.5 | 121.7 | PASS | 2.6 |
| 59 | 117.0 | 121.1 | PASS | 2.5 |
| 60 | 116.5 | 120.6 | PASS | 2.5 |
| 61 | 116.0 | 120.1 | PASS | 2.5 |
| 62 | 115.5 | 119.5 | PASS | 2.5 |
| 63 | 114.9 | 118.9 | PASS | 2.5 |
| 64 | 114.4 | 118.4 | PASS | 2.5 |
| 65 | 114.0 | 117.9 | PASS | 2.4 |
| 66 | 113.5 | 117.4 | PASS | 2.4 |
| 67 | 112.9 | 116.7 | PASS | 2.4 |
| 68 | 112.2 | 116.0 | PASS | 2.4 |
| 69 | 111.5 | 115.2 | PASS | 2.3 |
| 70 | 110.9 | 114.5 | PASS | 2.2 |
| 71 | 110.2 | 113.8 | PASS | 2.2 |
| 72 | 109.5 | 113.0 | PASS | 2.2 |
| 73 | 108.8 | 112.3 | PASS | 2.2 |
| 74 | 108.1 | 111.5 | PASS | 2.1 |
| 75 | 107.4 | 110.7 | PASS | 2.1 |
| 76 | 106.7 | 110.0 | PASS | 2.1 |
| 77 | 106.0 | 109.2 | PASS | 2.0 |
| 78 | 105.3 | 108.5 | PASS | 2.0 |
| 79 | 104.4 | 107.6 | PASS | 2.0 |
| 80 | 103.5 | 106.6 | PASS | 1.9 |
| 81 | 102.7 | 105.7 | PASS | 1.9 |
| 82 | 101.9 | 104.7 | PASS | 1.7 |
| 83 | 101.0 | 103.8 | PASS | 1.7 |
| 84 | 100.1 | 102.8 | PASS | 1.7 |
| 85 | 99.2 | 101.7 | PASS | 1.6 |
| 86 | 98.3 | 100.8 | PASS | 1.6 |
| 87 | 97.3 | 99.8 | PASS | 1.6 |
| 88 | 96.2 | 98.7 | PASS | 1.6 |
| 89 | 95.1 | 97.6 | PASS | 1.6 |
| 90 | 94.0 | 96.5 | PASS | 1.6 |
| 91 | 93.0 | 95.3 | PASS | 1.4 |
| 92 | 92.0 | 94.2 | PASS | 1.4 |
| 93 | 91.0 | 93.0 | PASS | 1.2 |
| 94 | 89.9 | 91.7 | PASS | 1.1 |
| 95 | 88.7 | 90.2 | PASS | 0.9 |
| 96 | 87.3 | 87.5 | PASS | 0.1 |
| 97 | 85.7 | 84.2 | PASS | -0.9 |
| 98 | 83.9 | 79.5 | PASS | -2.7 |

WCES-DT (Final DTV TOA) and WCES-DT (Proposed) Distance to Contour Comparison Chart

| | | | | |
|-----|------|------|------|-------|
| 99 | 81.8 | 72.3 | PASS | -5.9 |
| 100 | 79.2 | 60.3 | PASS | -11.7 |
| 101 | 77.9 | 60.3 | PASS | -10.9 |
| 102 | 76.6 | 60.3 | PASS | -10.1 |
| 103 | 75.0 | 60.4 | PASS | -9.1 |
| 104 | 73.3 | 60.4 | PASS | -8.0 |
| 105 | 71.4 | 60.5 | PASS | -6.8 |
| 106 | 69.2 | 60.5 | PASS | -5.4 |
| 107 | 66.8 | 60.5 | PASS | -3.9 |
| 108 | 64.1 | 60.6 | PASS | -2.2 |
| 109 | 61.2 | 60.6 | PASS | -0.4 |
| 110 | 57.7 | 60.7 | PASS | 1.9 |
| 111 | 59.3 | 60.7 | PASS | 0.9 |
| 112 | 60.8 | 60.8 | PASS | 0.0 |
| 113 | 62.2 | 60.8 | PASS | -0.9 |
| 114 | 63.6 | 60.9 | PASS | -1.7 |
| 115 | 64.9 | 61.0 | PASS | -2.4 |
| 116 | 66.2 | 64.3 | PASS | -1.2 |
| 117 | 67.4 | 67.1 | PASS | -0.2 |
| 118 | 68.5 | 69.7 | PASS | 0.7 |
| 119 | 69.6 | 72.0 | PASS | 1.5 |
| 120 | 70.6 | 74.1 | PASS | 2.2 |
| 121 | 71.9 | 76.0 | PASS | 2.5 |
| 122 | 73.1 | 77.7 | PASS | 2.9 |
| 123 | 74.2 | 79.2 | PASS | 3.1 |
| 124 | 75.2 | 80.5 | PASS | 3.3 |
| 125 | 76.1 | 81.7 | PASS | 3.5 |
| 126 | 76.9 | 81.9 | PASS | 3.1 |
| 127 | 77.7 | 82.0 | PASS | 2.7 |
| 128 | 78.3 | 82.2 | PASS | 2.4 |
| 129 | 78.9 | 82.3 | PASS | 2.1 |
| 130 | 79.5 | 82.4 | PASS | 1.8 |
| 131 | 79.7 | 82.6 | PASS | 1.8 |
| 132 | 79.9 | 82.7 | PASS | 1.7 |
| 133 | 80.1 | 82.9 | PASS | 1.7 |
| 134 | 80.4 | 83.0 | PASS | 1.6 |
| 135 | 80.6 | 83.2 | PASS | 1.6 |
| 136 | 80.8 | 83.6 | PASS | 1.7 |
| 137 | 81.1 | 84.0 | PASS | 1.8 |
| 138 | 81.3 | 84.4 | PASS | 1.9 |
| 139 | 81.5 | 84.7 | PASS | 2.0 |
| 140 | 81.6 | 85.0 | PASS | 2.1 |
| 141 | 81.6 | 85.1 | PASS | 2.2 |
| 142 | 81.7 | 85.2 | PASS | 2.2 |
| 143 | 81.7 | 85.4 | PASS | 2.3 |
| 144 | 81.8 | 85.5 | PASS | 2.3 |
| 145 | 81.8 | 85.6 | PASS | 2.4 |
| 146 | 81.9 | 85.5 | PASS | 2.2 |
| 147 | 81.9 | 85.3 | PASS | 2.1 |
| 148 | 82.0 | 85.2 | PASS | 2.0 |
| 149 | 82.0 | 85.0 | PASS | 1.9 |

WCES-DT (Final DTV TOA) and WCES-DT (Proposed) Distance to Contour Comparison Chart

| | | | | |
|-----|------|------|------|-----|
| 150 | 82.2 | 84.9 | PASS | 1.7 |
| 151 | 81.9 | 84.9 | PASS | 1.9 |
| 152 | 81.7 | 84.8 | PASS | 1.9 |
| 153 | 81.4 | 84.7 | PASS | 2.1 |
| 154 | 81.2 | 84.6 | PASS | 2.1 |
| 155 | 80.9 | 84.6 | PASS | 2.3 |
| 156 | 80.7 | 84.2 | PASS | 2.2 |
| 157 | 80.4 | 83.8 | PASS | 2.1 |
| 158 | 80.1 | 83.3 | PASS | 2.0 |
| 159 | 79.8 | 82.8 | PASS | 1.9 |
| 160 | 79.4 | 82.4 | PASS | 1.9 |
| 161 | 78.9 | 81.9 | PASS | 1.9 |
| 162 | 78.4 | 81.4 | PASS | 1.9 |
| 163 | 77.9 | 80.9 | PASS | 1.9 |
| 164 | 77.3 | 80.4 | PASS | 1.9 |
| 165 | 76.7 | 79.8 | PASS | 1.9 |
| 166 | 76.1 | 79.2 | PASS | 1.9 |
| 167 | 75.3 | 78.6 | PASS | 2.1 |
| 168 | 74.6 | 77.8 | PASS | 2.0 |
| 169 | 73.8 | 77.1 | PASS | 2.1 |
| 170 | 73.1 | 76.4 | PASS | 2.1 |
| 171 | 72.4 | 75.6 | PASS | 2.0 |
| 172 | 71.7 | 74.8 | PASS | 1.9 |
| 173 | 71.0 | 74.0 | PASS | 1.9 |
| 174 | 70.2 | 73.1 | PASS | 1.8 |
| 175 | 69.5 | 72.2 | PASS | 1.7 |
| 176 | 68.7 | 71.3 | PASS | 1.6 |
| 177 | 68.0 | 70.3 | PASS | 1.4 |
| 178 | 67.1 | 69.2 | PASS | 1.3 |
| 179 | 66.3 | 68.1 | PASS | 1.1 |
| 180 | 65.4 | 67.0 | PASS | 1.0 |
| 181 | 64.7 | 66.4 | PASS | 1.1 |
| 182 | 64.0 | 65.8 | PASS | 1.1 |
| 183 | 63.3 | 65.2 | PASS | 1.2 |
| 184 | 62.5 | 64.5 | PASS | 1.2 |
| 185 | 61.7 | 63.8 | PASS | 1.3 |
| 186 | 60.8 | 63.1 | PASS | 1.4 |
| 187 | 59.9 | 62.3 | PASS | 1.5 |
| 188 | 58.9 | 61.5 | PASS | 1.6 |
| 189 | 58.0 | 60.8 | PASS | 1.7 |
| 190 | 56.9 | 60.0 | PASS | 1.9 |
| 191 | 56.1 | 59.1 | PASS | 1.9 |
| 192 | 55.2 | 58.2 | PASS | 1.9 |
| 193 | 54.3 | 57.3 | PASS | 1.9 |
| 194 | 53.3 | 56.3 | PASS | 1.9 |
| 195 | 52.3 | 55.2 | PASS | 1.8 |
| 196 | 51.2 | 54.1 | PASS | 1.8 |
| 197 | 50.0 | 52.9 | PASS | 1.8 |
| 198 | 48.7 | 51.6 | PASS | 1.8 |
| 199 | 47.3 | 50.2 | PASS | 1.8 |
| 200 | 45.8 | 48.7 | PASS | 1.8 |

WCES-DT (Final DTV TOA) and WCES-DT (Proposed) Distance to Contour Comparison Chart

| | | | | |
|-----|------|------|------|------|
| 201 | 45.8 | 47.0 | PASS | 0.7 |
| 202 | 45.8 | 45.2 | PASS | -0.4 |
| 203 | 45.8 | 43.2 | PASS | -1.6 |
| 204 | 45.7 | 40.9 | PASS | -3.0 |
| 205 | 45.7 | 38.3 | PASS | -4.6 |
| 206 | 45.6 | 40.9 | PASS | -2.9 |
| 207 | 45.6 | 43.1 | PASS | -1.6 |
| 208 | 45.7 | 45.1 | PASS | -0.4 |
| 209 | 45.7 | 46.9 | PASS | 0.7 |
| 210 | 45.7 | 48.5 | PASS | 1.7 |
| 211 | 47.1 | 50.0 | PASS | 1.8 |
| 212 | 48.5 | 51.4 | PASS | 1.8 |
| 213 | 49.7 | 52.6 | PASS | 1.8 |
| 214 | 50.9 | 53.8 | PASS | 1.8 |
| 215 | 52.0 | 55.0 | PASS | 1.9 |
| 216 | 53.1 | 56.0 | PASS | 1.8 |
| 217 | 54.1 | 57.1 | PASS | 1.9 |
| 218 | 55.0 | 58.0 | PASS | 1.9 |
| 219 | 55.9 | 58.9 | PASS | 1.9 |
| 220 | 56.8 | 59.8 | PASS | 1.9 |
| 221 | 57.8 | 60.6 | PASS | 1.7 |
| 222 | 58.8 | 61.4 | PASS | 1.6 |
| 223 | 59.7 | 62.1 | PASS | 1.5 |
| 224 | 60.6 | 62.9 | PASS | 1.4 |
| 225 | 61.4 | 63.6 | PASS | 1.4 |
| 226 | 62.3 | 64.2 | PASS | 1.2 |
| 227 | 63.0 | 64.9 | PASS | 1.2 |
| 228 | 63.8 | 65.5 | PASS | 1.1 |
| 229 | 64.5 | 66.1 | PASS | 1.0 |
| 230 | 65.2 | 66.7 | PASS | 0.9 |
| 231 | 66.0 | 67.9 | PASS | 1.2 |
| 232 | 66.9 | 69.0 | PASS | 1.3 |
| 233 | 67.7 | 70.0 | PASS | 1.4 |
| 234 | 68.5 | 71.0 | PASS | 1.6 |
| 235 | 69.3 | 72.0 | PASS | 1.7 |
| 236 | 70.0 | 72.8 | PASS | 1.7 |
| 237 | 70.6 | 73.6 | PASS | 1.9 |
| 238 | 71.3 | 74.4 | PASS | 1.9 |
| 239 | 71.9 | 75.1 | PASS | 2.0 |
| 240 | 72.5 | 75.8 | PASS | 2.1 |
| 241 | 73.1 | 76.4 | PASS | 2.1 |
| 242 | 73.8 | 77.0 | PASS | 2.0 |
| 243 | 74.4 | 77.6 | PASS | 2.0 |
| 244 | 75.0 | 78.2 | PASS | 2.0 |
| 245 | 75.5 | 78.7 | PASS | 2.0 |
| 246 | 76.1 | 79.2 | PASS | 1.9 |
| 247 | 76.6 | 79.8 | PASS | 2.0 |
| 248 | 77.2 | 80.3 | PASS | 1.9 |
| 249 | 77.7 | 80.8 | PASS | 1.9 |
| 250 | 78.2 | 81.2 | PASS | 1.9 |
| 251 | 78.5 | 81.7 | PASS | 2.0 |

WCES-DT (Final DTV TOA) and WCES-DT (Proposed) Distance to Contour Comparison Chart

| | | | | |
|-----|------|------|------|------|
| 252 | 78.7 | 82.1 | PASS | 2.1 |
| 253 | 79.0 | 82.5 | PASS | 2.2 |
| 254 | 79.3 | 82.9 | PASS | 2.2 |
| 255 | 79.5 | 83.3 | PASS | 2.4 |
| 256 | 79.8 | 83.4 | PASS | 2.2 |
| 257 | 80.1 | 83.5 | PASS | 2.1 |
| 258 | 80.3 | 83.6 | PASS | 2.1 |
| 259 | 80.6 | 83.7 | PASS | 1.9 |
| 260 | 80.9 | 83.8 | PASS | 1.8 |
| 261 | 80.9 | 83.9 | PASS | 1.9 |
| 262 | 80.8 | 84.1 | PASS | 2.1 |
| 263 | 80.6 | 84.2 | PASS | 2.2 |
| 264 | 80.5 | 84.3 | PASS | 2.4 |
| 265 | 80.4 | 84.4 | PASS | 2.5 |
| 266 | 80.3 | 84.1 | PASS | 2.4 |
| 267 | 80.1 | 83.9 | PASS | 2.4 |
| 268 | 80.0 | 83.7 | PASS | 2.3 |
| 269 | 79.9 | 83.5 | PASS | 2.2 |
| 270 | 79.8 | 83.3 | PASS | 2.2 |
| 271 | 79.6 | 83.0 | PASS | 2.1 |
| 272 | 79.3 | 82.6 | PASS | 2.1 |
| 273 | 79.0 | 82.1 | PASS | 1.9 |
| 274 | 78.8 | 81.7 | PASS | 1.8 |
| 275 | 78.5 | 81.3 | PASS | 1.7 |
| 276 | 78.2 | 81.0 | PASS | 1.7 |
| 277 | 78.0 | 80.9 | PASS | 1.8 |
| 278 | 77.8 | 80.8 | PASS | 1.9 |
| 279 | 77.7 | 80.7 | PASS | 1.9 |
| 280 | 77.5 | 80.6 | PASS | 1.9 |
| 281 | 77.0 | 80.5 | PASS | 2.2 |
| 282 | 76.4 | 80.4 | PASS | 2.5 |
| 283 | 75.5 | 80.0 | PASS | 2.8 |
| 284 | 74.6 | 79.6 | PASS | 3.1 |
| 285 | 73.5 | 79.1 | PASS | 3.5 |
| 286 | 72.4 | 77.7 | PASS | 3.3 |
| 287 | 71.1 | 76.1 | PASS | 3.1 |
| 288 | 69.9 | 74.3 | PASS | 2.7 |
| 289 | 68.6 | 72.6 | PASS | 2.5 |
| 290 | 67.5 | 70.8 | PASS | 2.1 |
| 291 | 66.8 | 69.1 | PASS | 1.4 |
| 292 | 65.9 | 67.1 | PASS | 0.7 |
| 293 | 65.0 | 64.8 | PASS | -0.1 |
| 294 | 64.0 | 62.2 | PASS | -1.1 |
| 295 | 63.0 | 59.2 | PASS | -2.4 |
| 296 | 61.9 | 59.3 | PASS | -1.6 |
| 297 | 60.8 | 59.5 | PASS | -0.8 |
| 298 | 59.7 | 59.7 | PASS | 0.0 |
| 299 | 58.4 | 59.8 | PASS | 0.9 |
| 300 | 57.0 | 60.0 | PASS | 1.9 |
| 301 | 60.6 | 60.1 | PASS | -0.3 |
| 302 | 63.7 | 60.1 | PASS | -2.2 |

WCES-DT (Final DTV TOA) and WCES-DT (Proposed) Distance to Contour Comparison Chart

| | | | | |
|-----|-------|-------|------|-------|
| 303 | 66.3 | 60.1 | PASS | -3.9 |
| 304 | 68.7 | 60.1 | PASS | -5.3 |
| 305 | 70.8 | 60.1 | PASS | -6.6 |
| 306 | 72.8 | 60.0 | PASS | -8.0 |
| 307 | 74.5 | 60.0 | PASS | -9.0 |
| 308 | 76.1 | 60.0 | PASS | -10.0 |
| 309 | 77.5 | 60.0 | PASS | -10.9 |
| 310 | 78.8 | 60.0 | PASS | -11.7 |
| 311 | 81.5 | 71.9 | PASS | -6.0 |
| 312 | 83.6 | 79.2 | PASS | -2.7 |
| 313 | 85.3 | 83.8 | PASS | -0.9 |
| 314 | 86.9 | 87.1 | PASS | 0.1 |
| 315 | 88.3 | 89.8 | PASS | 0.9 |
| 316 | 89.6 | 91.3 | PASS | 1.1 |
| 317 | 90.9 | 92.8 | PASS | 1.2 |
| 318 | 92.1 | 94.2 | PASS | 1.3 |
| 319 | 93.3 | 95.6 | PASS | 1.4 |
| 320 | 94.5 | 96.9 | PASS | 1.5 |
| 321 | 95.8 | 98.2 | PASS | 1.5 |
| 322 | 97.1 | 99.6 | PASS | 1.6 |
| 323 | 98.4 | 100.9 | PASS | 1.6 |
| 324 | 99.5 | 102.0 | PASS | 1.6 |
| 325 | 100.4 | 103.0 | PASS | 1.6 |
| 326 | 101.2 | 103.9 | PASS | 1.7 |
| 327 | 101.9 | 104.7 | PASS | 1.7 |
| 328 | 102.6 | 105.5 | PASS | 1.8 |
| 329 | 103.2 | 106.2 | PASS | 1.9 |
| 330 | 103.7 | 106.9 | PASS | 2.0 |
| 331 | 104.4 | 107.6 | PASS | 2.0 |
| 332 | 105.0 | 108.2 | PASS | 2.0 |
| 333 | 105.6 | 108.8 | PASS | 2.0 |
| 334 | 106.2 | 109.5 | PASS | 2.1 |
| 335 | 106.9 | 110.2 | PASS | 2.1 |
| 336 | 107.5 | 110.8 | PASS | 2.1 |
| 337 | 108.0 | 111.4 | PASS | 2.1 |
| 338 | 108.5 | 112.0 | PASS | 2.2 |
| 339 | 109.0 | 112.6 | PASS | 2.2 |
| 340 | 109.6 | 113.2 | PASS | 2.2 |
| 341 | 110.3 | 114.0 | PASS | 2.3 |
| 342 | 111.0 | 114.8 | PASS | 2.4 |
| 343 | 111.9 | 115.7 | PASS | 2.4 |
| 344 | 112.8 | 116.7 | PASS | 2.4 |
| 345 | 113.6 | 117.5 | PASS | 2.4 |
| 346 | 114.3 | 118.2 | PASS | 2.4 |
| 347 | 114.9 | 118.9 | PASS | 2.5 |
| 348 | 115.4 | 119.4 | PASS | 2.5 |
| 349 | 116.0 | 120.1 | PASS | 2.5 |
| 350 | 116.6 | 120.7 | PASS | 2.5 |
| 351 | 117.1 | 121.3 | PASS | 2.6 |
| 352 | 117.5 | 121.7 | PASS | 2.6 |
| 353 | 118.2 | 122.5 | PASS | 2.7 |

WCES-DT (Final DTV TOA) and WCES-DT (Proposed) Distance to Contour Comparison Chart

| | | | | |
|-----|-------|-------|------|-----|
| 354 | 118.7 | 123.0 | PASS | 2.7 |
| 355 | 119.2 | 123.6 | PASS | 2.7 |
| 356 | 119.7 | 124.2 | PASS | 2.8 |
| 357 | 120.3 | 124.8 | PASS | 2.8 |
| 358 | 120.6 | 125.1 | PASS | 2.8 |
| 359 | 121.1 | 125.7 | PASS | 2.9 |
| | | | MAX: | 3.5 |

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 04-04-2008 Time: 13:03:42

Record Selected for Analysis

WCES-DT USERRECORD-01 WRENS GA US
Channel 06 ERP 45. kW HAAT 429. m RCAMSL 00544 m
Latitude 033-15-33 Longitude 0082-17-09
Status APP Zone 2 Border
Dir Antenna Make usr Model USRPAT01 Beam tilt N Ref Azimuth 0.
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility does not meet maximum height/power limits
Channel 6 ERP = 45.00 HAAT = 429.

| Azimuth (Deg) | ERP (kW) | HAAT (m) | 28.0 dBu F(50,90) (km) |
|------------------|-------------|-------------|---------------------------|
| 0.0 | 30.332 | 419.8 | 126.1 |
| 45.0 | 34.611 | 421.3 | 128.0 |
| 90.0 | 1.426 | 432.3 | 96.4 |
| 135.0 | 0.237 | 449.2 | 83.8 |
| 180.0 | 0.041 | 433.9 | 66.9 |
| 225.0 | 0.028 | 430.3 | 63.6 |
| 270.0 | 0.288 | 416.5 | 83.4 |
| 315.0 | 0.441 | 429.9 | 87.4 |

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

SPACING VIOLATION FOUND BETWEEN STATION

WCES-DT 06 WRENS GA USERRECORD01

and station

SHORT TO: WCES-TV 06 WRENS GA BMPEDT 20020923ABB
033-15-33 0082-17- 9
Req. separation 273.6 Actual separation 0.0 Short 273.6 km

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite zone

Proposed facility OK toward Table Mountain

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 |
|---------|--------------------------|------------|--------------|
| 06 | WCES-DT | WRENS GA | USERRECORD01 |

Stations Potentially Affected by Proposed Station

| Chan | Call | City/State | Dist(km) | Status | Application Ref. No. |
|------|---------|------------|----------|---------------|----------------------|
| 06 | WABW-TV | PELHAM GA | 327.3 | CP MOD BMPEDT | -20020923ABD |

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Analysis of Interference to Affected Station 1

Analysis of current record

| Channel | Call | City/State | Application Ref. No. |
|---------|---------|------------|----------------------|
| 06 | WABW-TV | PELHAM GA | BMPEDT -20020923ABD |

Stations Potentially Affecting This Station

| Chan | Call | City/State | Dist(km) | Status | Application Ref. No. |
|------|---------|------------|----------|--------|----------------------|
| 06 | WCES-DT | WRENS GA | 327.3 | APP | USERRECORD-01 |

Proposal causes no interference

#####

Analysis of Interference to Affected Station 2

Analysis of current record

| Channel | Call | City/State | Application Ref. No. |
|---------|---------|------------|----------------------|
| 06 | WCES-DT | WRENS GA | USERRECORD-01 |

Stations Potentially Affecting This Station

| Chan | Call | City/State | Dist(km) | Status | Application | Ref. No. |
|------|---------|------------|----------|--------|-------------|--------------|
| 06 | WABW-TV | PELHAM GA | 327.3 | CP MOD | BMPEDT | -20020923ABD |

Total scenarios = 1

Result key: 1
Scenario 1 Affected station 2
Before Analysis

Results for: 6A GA WRENS USERRECORD01 APP
HAAT 429.0 m, ATV ERP 45.0 kW

| | POPULATION | AREA (sq km) |
|--------------------------------|------------|--------------|
| within Noise Limited Contour | 851005 | 27140.7 |
| not affected by terrain losses | 845602 | 27003.6 |
| lost to NTSC IX | 0 | 0.0 |
| lost to additional IX by ATV | 1028 | 44.3 |
| lost to ATV IX only | 1028 | 44.3 |
| lost to all IX | 1028 | 44.3 |

Potential Interfering Stations Included in above Scenario 1

6A GA PELHAM BMPEDT 20020923ABD CP

#####

FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 04-04-2008 Time: 13:07:32

Record Selected for Analysis

WCES-DT USERRECORD-01 WRENS_2 GA US
Channel 06 ERP 45. kW HAAT 429. m RCAMSL 00544 m
Latitude 033-15-33 Longitude 0082-17-09
Status APP Zone 2 Border
Dir Antenna Make usr Model USRPAT01 Beam tilt N Ref Azimuth 0.
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility does not meet maximum height/power limits
Channel 6 ERP = 45.00 HAAT = 429.

| Azimuth (Deg) | ERP (kW) | HAAT (m) | 28.0 dBu F(50,90) (km) |
|------------------|-------------|-------------|---------------------------|
| 0.0 | 30.332 | 419.8 | 126.1 |
| 45.0 | 34.611 | 421.3 | 128.0 |
| 90.0 | 1.426 | 432.3 | 96.4 |
| 135.0 | 0.237 | 449.2 | 83.8 |
| 180.0 | 0.041 | 433.9 | 66.9 |
| 225.0 | 0.028 | 430.3 | 63.6 |
| 270.0 | 0.288 | 416.5 | 83.4 |
| 315.0 | 0.441 | 429.9 | 87.4 |

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

SPACING VIOLATION FOUND BETWEEN STATION

WCES-DT 06 WRENS_2 GA USERRECORD01

and station

SHORT TO: WCES-TV 06 WRENS GA BMPEDT 20020923ABB
 033-15-33 0082-17- 9
 Req. separation 273.6 Actual separation 0.0 Short 273.6 km

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite zone

Proposed facility OK toward Table Mountain

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 |
|---------|--------------------------|------------|--------------|
| 06 | WCES-DT | WRENS_2 GA | USERRECORD01 |

Stations Potentially Affected by Proposed Station

| Chan | Call | City/State | Dist(km) | Status | Application Ref. No. |
|------|---------|------------|----------|---------------|----------------------|
| 06 | WABW-TV | PELHAM GA | 327.3 | CP MOD BMPEDT | -20020923ABD |
| 06 | WCES-TV | WRENS GA | 0.0 | CP MOD BMPEDT | -20020923ABB |

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Analysis of Interference to Affected Station 1

Analysis of current record

| Channel | Call | City/State | Application Ref. No. |
|---------|---------|------------|----------------------|
| 06 | WABW-TV | PELHAM GA | BMPEDT -20020923ABD |

Stations Potentially Affecting This Station

| Chan | Call | City/State | Dist(km) | Status | Application Ref. No. |
|------|---------|------------|----------|---------------|----------------------|
| 06 | WCES-TV | WRENS GA | 327.3 | CP MOD BMPEDT | -20020923ABB |
| 06 | WCES-DT | WRENS_2 GA | 327.3 | APP | USERRECORD-01 |

Proposal causes no interference

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Analysis of Interference to Affected Station 2

Analysis of current record

| | | | | |
|---------|---------|------------|-------------|--------------|
| Channel | Call | City/State | Application | Ref. No. |
| 06 | WCES-TV | WRENS GA | BMPEDT | -20020923ABB |

Stations Potentially Affecting This Station

| Chan | Call | City/State | Dist(km) | Status | Application | Ref. No. |
|------|---------|------------|----------|--------|---------------|--------------|
| 06 | WABW-TV | PELHAM GA | 327.3 | CP MOD | BMPEDT | -20020923ABD |
| 06 | WCES-DT | WRENS_2 GA | 0.0 | APP | USERRECORD-01 | |

Total scenarios = 2

Result key: 1
Scenario 1 Affected station 2
Before Analysis

Results for: 6A GA WRENS BMPEDT 20020923ABB CP
HAAT 436.0 m, ATV ERP 30.0 kW

| | POPULATION | AREA (sq km) |
|--------------------------------|------------|--------------|
| within Noise Limited Contour | 786164 | 25692.4 |
| not affected by terrain losses | 782612 | 25571.5 |
| lost to NTSC IX | 0 | 0.0 |
| lost to additional IX by ATV | 0 | 0.0 |
| lost to ATV IX only | 0 | 0.0 |
| lost to all IX | 0 | 0.0 |

Potential Interfering Stations Included in above Scenario 1

After Analysis

Results for: 6A GA WRENS BMPEDT 20020923ABB CP
HAAT 436.0 m, ATV ERP 30.0 kW

| | POPULATION | AREA (sq km) |
|--------------------------------|------------|--------------|
| within Noise Limited Contour | 786164 | 25692.4 |
| not affected by terrain losses | 782612 | 25571.5 |
| lost to NTSC IX | 0 | 0.0 |
| lost to additional IX by ATV | 716030 | 23592.1 |
| lost to ATV IX only | 716030 | 23592.1 |
| lost to all IX | 716030 | 23592.1 |

Potential Interfering Stations Included in above Scenario 1

6A GA WRENS_2 USERRECORD01 APP

The following station failed the de minimis interference criteria.

6D GA WRENS_2 USERRECORD01
ERP 45.00 kW HAAT 429.0 m RCAMSL 544.0 m
Antenna usr USRPAT01

Due to interference to the following station and scenario: 1
6D GA WRENS BMPEDT 20020923ABB
ERP 30.00 kW HAAT 436.0 m RCAMSL 551.0 m
Antenna CDB 00000000074332

| | | | |
|----------------------------------------|------|-----------|-------------|
| Percent Service lost without proposal: | 0.0 | to BMPEDT | 20020923ABB |
| Percent Service lost with proposal: | 91.5 | to BMPEDT | 20020923ABB |

Result key: 2
 Scenario 2 Affected station 2
 Before Analysis

Results for: 6A GA WRENS BMPEDT 20020923ABB CP
 HAAT 436.0 m, ATV ERP 30.0 kW

| | POPULATION | AREA (sq km) |
|--------------------------------|------------|--------------|
| within Noise Limited Contour | 786164 | 25692.4 |
| not affected by terrain losses | 782612 | 25571.5 |
| lost to NTSC IX | 0 | 0.0 |
| lost to additional IX by ATV | 0 | 0.0 |
| lost to ATV IX only | 0 | 0.0 |
| lost to all IX | 0 | 0.0 |

Potential Interfering Stations Included in above Scenario 2

After Analysis

Results for: 6A GA WRENS BMPEDT 20020923ABB CP
 HAAT 436.0 m, ATV ERP 30.0 kW

| | POPULATION | AREA (sq km) |
|--------------------------------|------------|--------------|
| within Noise Limited Contour | 786164 | 25692.4 |
| not affected by terrain losses | 782612 | 25571.5 |
| lost to NTSC IX | 0 | 0.0 |
| lost to additional IX by ATV | 716030 | 23592.1 |
| lost to ATV IX only | 716030 | 23592.1 |
| lost to all IX | 716030 | 23592.1 |

Potential Interfering Stations Included in above Scenario 2

6A GA WRENS_2 USERRECORD01 APP

The following station failed the de minimis interference criteria.

6D GA WRENS_2 USERRECORD01
 ERP 45.00 kW HAAT 429.0 m RCAMSL 544.0 m
 Antenna usr USRPAT01

Due to interference to the following station and scenario: 2

6D GA WRENS BMPEDT 20020923ABB
 ERP 30.00 kW HAAT 436.0 m RCAMSL 551.0 m
 Antenna CDB 00000000074332

Percent Service lost without proposal: 0.0 to BMPEDT 20020923ABB
 Percent Service lost with proposal: 91.5 to BMPEDT 20020923ABB

Proposed station is MX
 6A GA WRENS_2 USERRECORD01 APP

Proposal MX with group in scenario 2 of station 2

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Analysis of Interference to Affected Station 3

Analysis of current record

| Channel | Call | City/State | Application Ref. No. |
|---------|---------|------------|----------------------|
| 06 | WCES-DT | WRENS_2 GA | USERRECORD-01 |

Stations Potentially Affecting This Station

| Chan | Call | City/State | Dist(km) | Status | Application Ref. No. |
|------|---------|------------|----------|---------------|----------------------|
| 06 | WABW-TV | PELHAM GA | 327.3 | CP MOD BMPEDT | -20020923ABD |
| 06 | WCES-TV | WRENS GA | 0.0 | CP MOD BMPEDT | -20020923ABB |

Total scenarios = 1

Result key: 3
Scenario 1 Affected station 3
Before Analysis

Results for: 6A GA WRENS_2 USERRECORD01 APP
HAAT 429.0 m, ATV ERP 45.0 kW

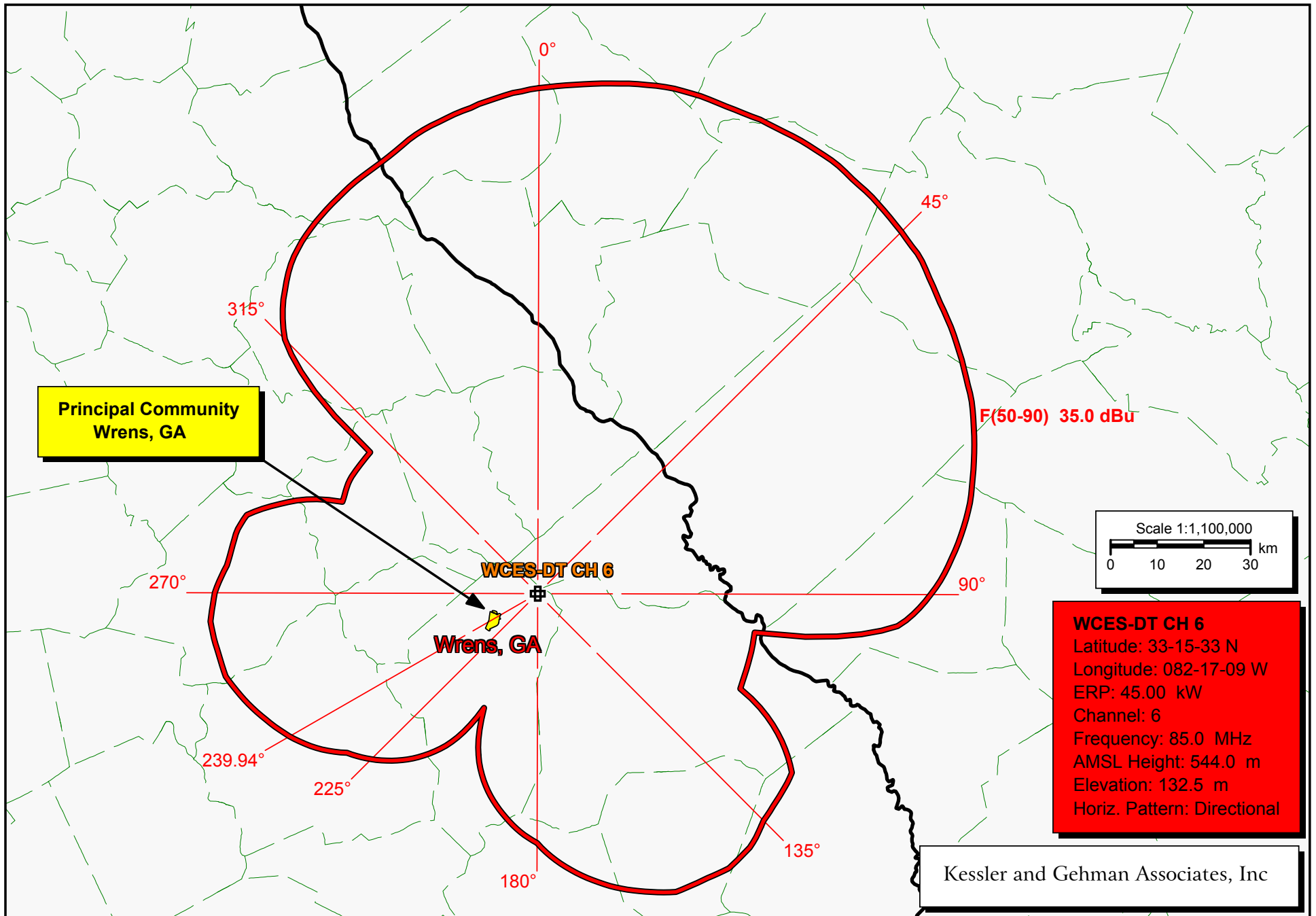
| | POPULATION | AREA (sq km) |
|--------------------------------|------------|--------------|
| within Noise Limited Contour | 851005 | 27140.7 |
| not affected by terrain losses | 845602 | 27003.6 |
| lost to NTSC IX | 0 | 0.0 |
| lost to additional IX by ATV | 767920 | 24830.9 |
| lost to ATV IX only | 767920 | 24830.9 |
| lost to all IX | 767920 | 24830.9 |

Potential Interfering Stations Included in above Scenario 1

| | | | |
|--------------|--------|-------------|----|
| 6A GA PELHAM | BMPEDT | 20020923ABD | CP |
| 6A GA WRENS | BMPEDT | 20020923ABB | CP |

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Proposed WCES-DT Channel 6 Post-Transition Facility's Principal Community Contour