

KESSLER AND GEHMAN ASSOCIATES, INC.

ENGINEERING STATEMENT PREPARED BY RYAN WILLOUR OF THE FIRM
KESSLER AND GEHMAN ASSOCIATES, INC., CONSULTING ENGINEERS IN
CONNECTION WITH A REQUEST FOR SPECIAL TEMPORARY AUTHORIZATION
TO OPERATE A POST-TRANSITION CHANNEL FACILITY PRIOR TO THE
JUNE 12, 2009 FINAL TRANSITION MANDATE
WBIQ-DT
BIRMINGHAM, ALABAMA

DISCUSSION

Alabama Educational Television Commission ("AETV") is the licensee of WBIQ which is licensed to operate its analog facility on channel 10 (FCC File No.: BLET-20040412ACV), its pre-transition digital facility on channel 53 (FCC File No.: BLEDT-20030430AAV), and its post-transition digital facility on channel 10 (FCC File No.: BPEDT-20080306ABA).

The instant STA is being filed pursuant to the Commission's February 5, 2009 Public Notice¹ which authorizes the termination of analog service between February 17, 2009 and June 12, 2009 and operation of post transition digital facilities by means of an STA. It is the intent of AETV to operate using its post transition facilities as specified in its construction permit (FCC File No.: BPEDT-20080306ABA) by means of an STA.

The proposed facility meets all the criteria for an STA in order to terminate analog service and operate a post-transition facility as stated in the above reference public notice. As per the STA requirements, Exhibit E5 demonstrates that the STA facility is not predicted to cause any non compliant interference to pre-transition analog or digital facilities and Exhibit E4 demonstrates that the proposed STA facility has an identical coverage contour with respect to the permitted post transition facility (FCC File No.: BPEDT-20080306ABA).

ATTACHED FIGURES

In carrying out the engineering studies the following attached figures were prepared:

1. Engineering Specifications (Exhibit E1)
2. Elevation drawing of the antenna system (Exhibit E2)
3. USGS 7.5 minute topographic quadrangle showing the proposed transmitter location and the coordinate lines (Exhibit E3)
4. Map showing the predicted DTV coverage contour relative to the allotted coverage contour. (Exhibit E4)
5. Allocation Analysis (Exhibit E5)

¹ FCC 09-6 "FCC Announces Procedures Regarding Termination of Analog Television Service On or After February 17, 2009 Termination Notifications for February 17, 2009 Must Be Filed By Monday, February 9"

6. Environmental Impact/ RFR Hazard Analysis (Exhibit E6)

ENVIRONMENTAL IMPACT/RFR HAZARD ANALYSIS

An analysis has been made of the human exposure to RFR using the calculation methodology described in OET Bulletin 65, Edition, 97-01. Exhibit E6 is a RFR study demonstrating compliance within 5% of the most restrictive permissible exposure at any location 2 meters above the ground. Exhibit E6 calculations were made using a frequency of 192 MHz, which is the lower edge of the proposed channel. To account for ground reflections, a coefficient of 1.6 was included in the calculations.

Pursuant to OET Bulletin 65 concerning multiple-user transmitter sites only those licensees whose transmitters produce power density levels greater than 5.0% of the exposure limit are considered significant contributors to RFR. Since the proposed operation is well within 5% of the most permissible exposure at any location 2 meters above the ground, it is not considered a significant contributor to RFR exposure. Thus, contributions to exposure from other RF sources in the vicinity of WBIQ-DT were not taken into account. The instant proposal complies with the FCC limits for human exposure to RF radiation and thus is excluded from further environmental processing.

DECLARATION OF ENGINEER

The foregoing statement and the report regarding the aforementioned engineering work are true and correct to the best of my knowledge. Executed on February 10, 2008.

The logo for Kessler and Gehman Associates, Inc. (KGA) features the letters "KGA" in a stylized, serif font. The letters are white and are superimposed on a thick, horizontal gray bar.

Ryan Wilhour

A handwritten signature in blue ink that reads "Ryan Wilhour". The signature is written in a cursive, flowing style.

Consulting Engineer

WBIQ-DT CHANNEL 10 STA

BIRMINGHAM, ALABAMA

ENGINEERING SPECIFICATIONS

A. Transmitter Site:

Geographic coordinates (NAD 27):

North Latitude **33° 29' 04"**

West Longitude **86° 48' 25"**

Transmitter Site Address: **Golden Crest Drive, Birmingham, AL 35209**

B. Main Studio Site:

Street Address **2112 11TH Avenue South, Birmingham, AL 35205**

C. Post-Transition Facility:

DTV Channel Number **10**
Frequency **192 - 198 MHz**
Offset **N/A**

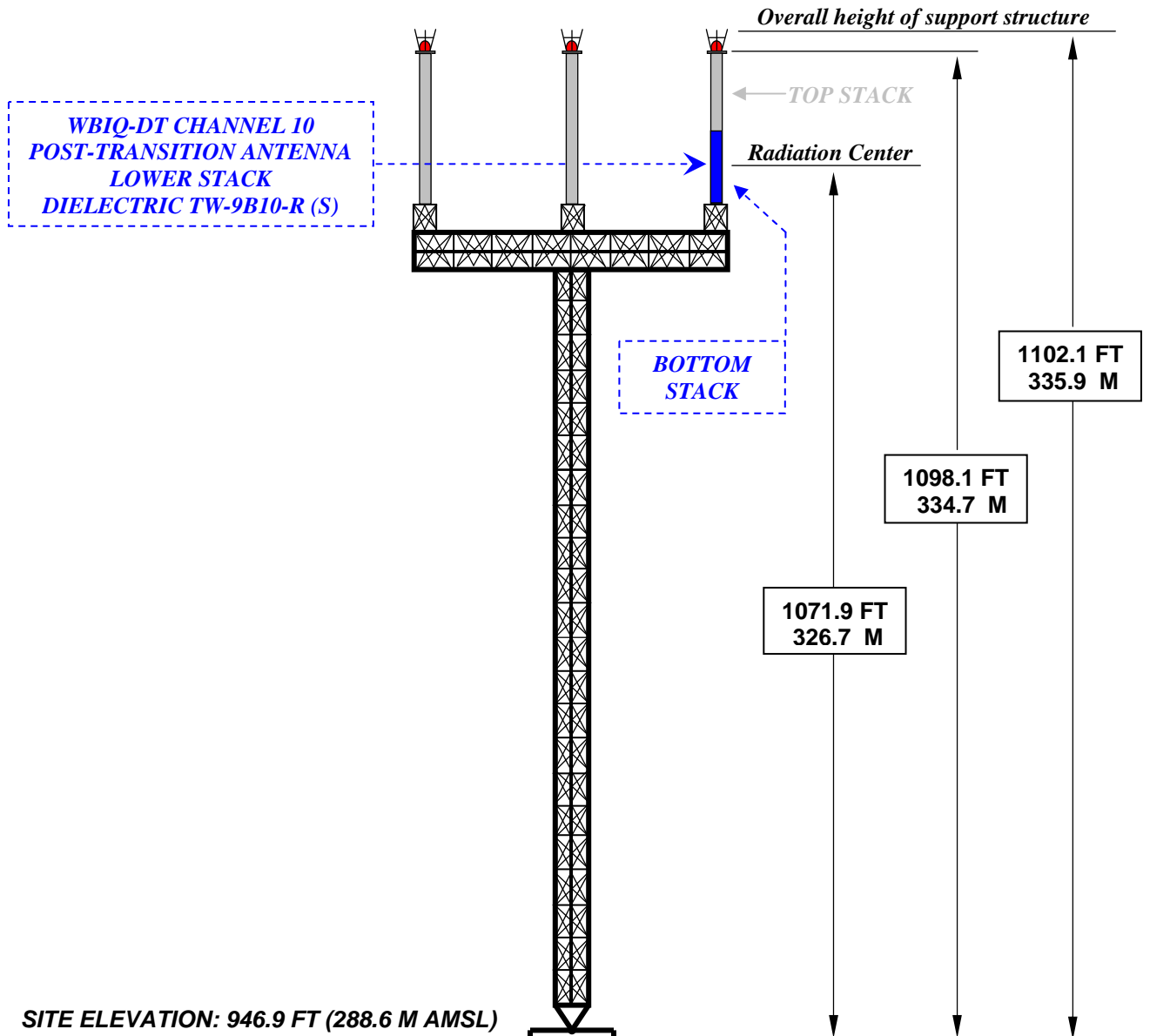
D. Antenna Height:

Height of Site Above Mean Sea Level (AMSL) **288.6 M**
Overall Height of Structure Above Ground **335.9 M**
(including all appurtenances)
Overall Height of Structure Above Mean Sea Level **624.5 M**
(including all appurtenances)
Height of Site Above Average Terrain **99.5 M**
Antenna Height Radiation Center (R/C) Above Ground **326.7 M**
Antenna Height R/C Above Average Terrain **426.2 M**
Antenna Height R/C Above Mean Sea Level **615.3 M**
Average of All Non-Odd Radials **189.1 M**

E. System Parameters – Horizontal Polarization:

Transmitter Power Required **0.41 kW**
Maximum Power Input to Antenna **0.33 kW**
Transmission Line Loss **0.88 dB**
Transmission Line Efficiency **81.7%**
Maximum Antenna Gain in Beam Maximum **9.54 dB**
Maximum Antenna Gain in Horizontal Plane **9.34 dB**
Maximum Effective Radiated Power **4.77 dBk**
In Beam Maximum **3.00 kW**
Maximum Effective Radiated Power **4.57 dBk**
In Horizontal Plane **2.86 kW**

SUPPORT STRUCTURE ELEVATION VIEW



OVERALL HEIGHT AGL: 335.9 M
OVERALL HEIGHT AMSL: 624.5 M
RADIATION CENTER AGL: 326.7 M
RADIATION CENTER AMSL: 615.3 M
AVG OF NON-ODD RADIALS: 189.1 M
RADIATION CENTER HAAT: 426.2 M
SITE HAAT: 99.5 M

COORDINATES: (NAD27)
N. LATITUDE 33° 29' 04"
W. LONGITUDE 86° 48' 25"

Antenna Structure Registration Number:
1226663

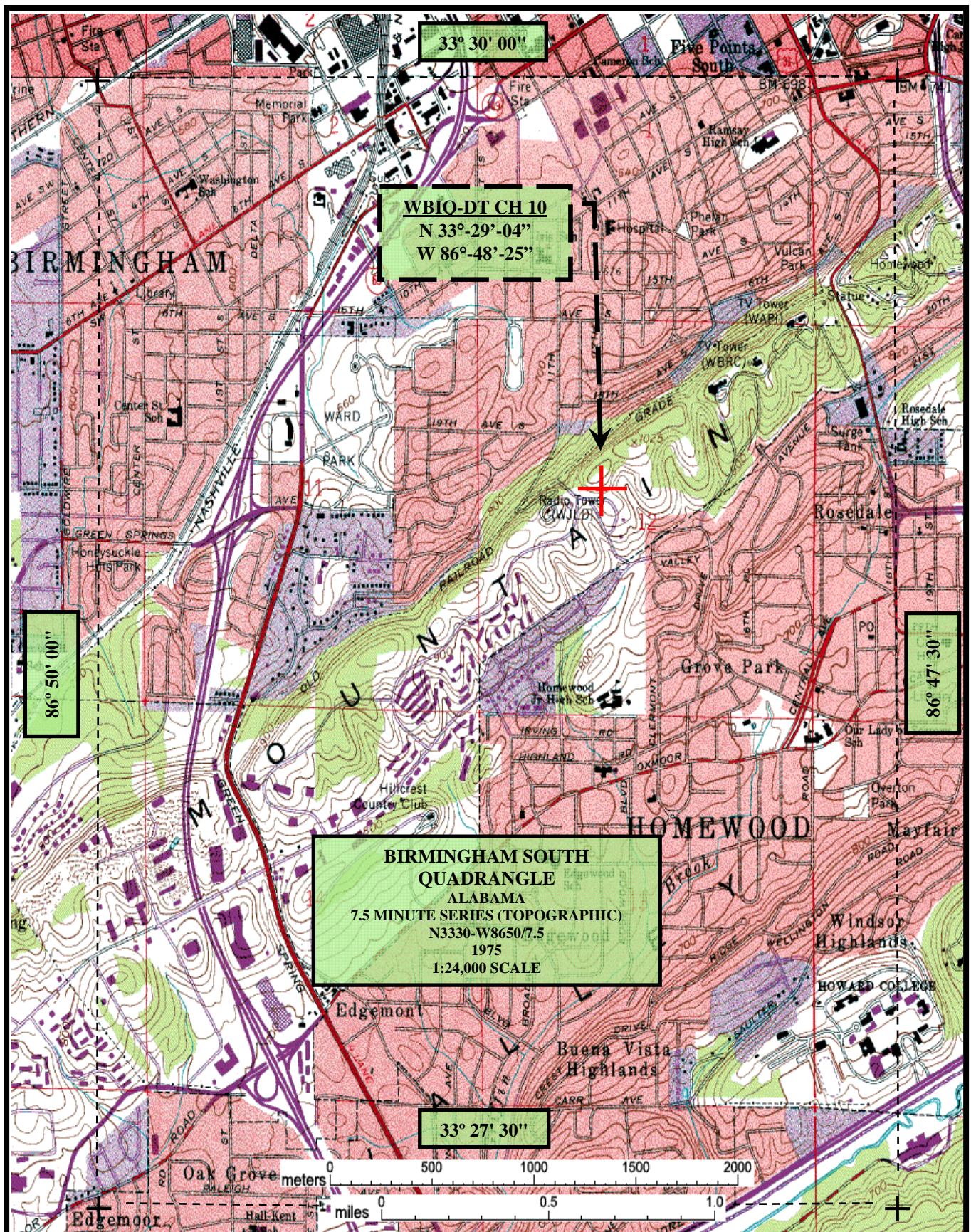
NOTE: NOT TO SCALE

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WBIQ-DT CHANNEL 10 STA
BIRMINGHAM, ALABAMA

20090210

EXHIBIT E2



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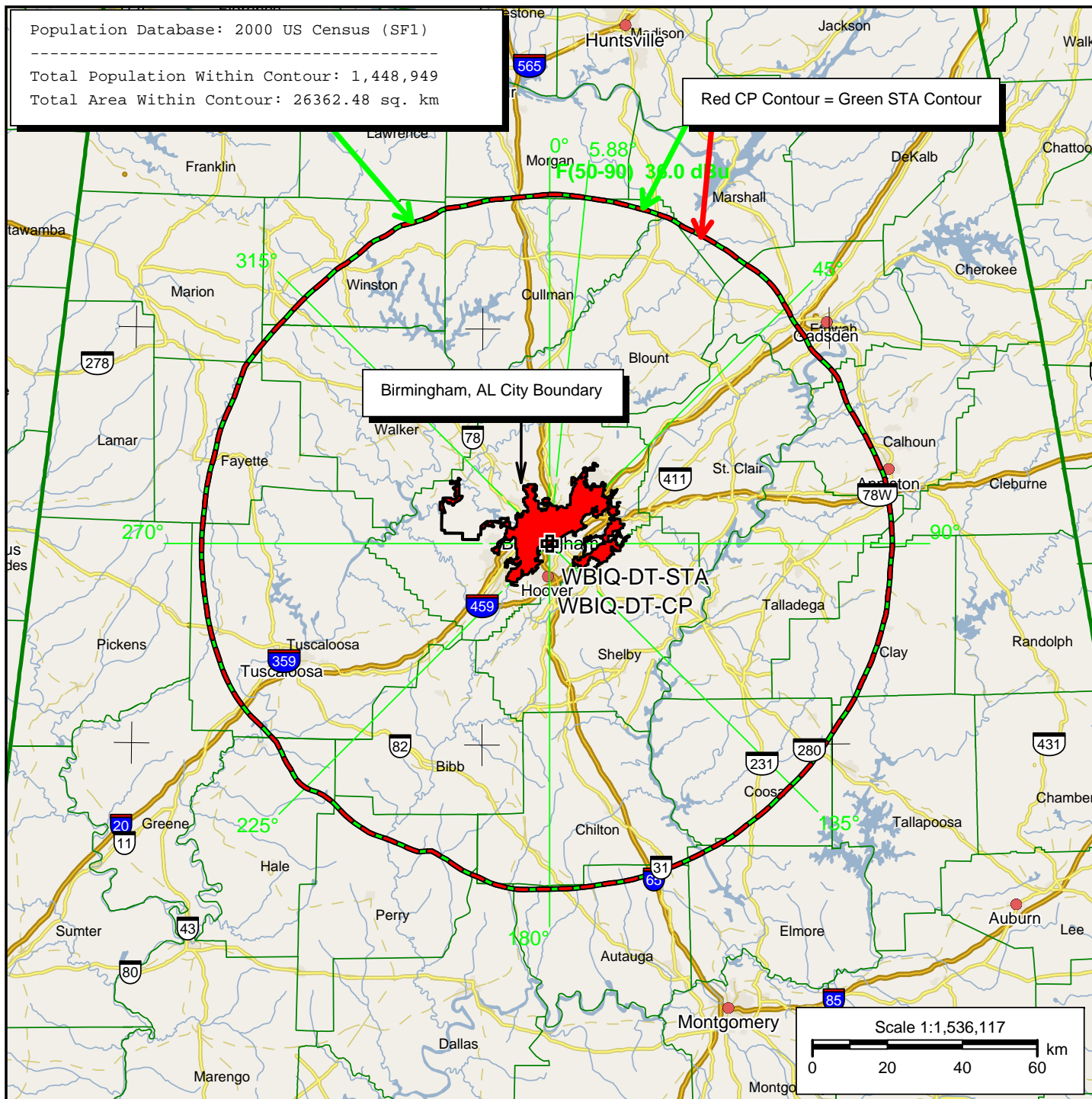
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WBIQ-DT CHANNEL 10

Birmingham, Alabama

20090210

EXHIBIT E3



WB IQ-DT-STA
Green Contour
Proposed STA
Latitude: 33-29-04 N
Longitude: 086-48-25 W
ERP: 3.00 kW
Channel: 10
AMSL Height: 615.3 m
Elevation: 288.6 m

WB IQ-DT-CP
Red Contour
BPEDT20080306ABA
Latitude: 33-29-04 N
Longitude: 086-48-25 W
ERP: 3.00 kW
Channel: 10
Frequency: 195.0 MHz
AMSL Height: 615.3 m
Elevation: 288.6 m

EXHIBIT E4

KESSLER AND GEHMAN ASSOCIATES, INC.

WBIQ-DT BIRMINGHAM, AL - STA APPLICATION

Exhibit E5, PAGE 1 of 3

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 02-10-2009 Time: 07:08:19

Record Selected for Analysis

WBIQ-D10 USERRECORD-01 BIRMINGHAM AL US
Channel 10 ERP 3. kW HAAT 426. m RCAMSL 00615 m
Latitude 033-29-04 Longitude 0086-48-25
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 meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	36.0 dBu F(50,90) (km)
0.0	3.000	448.0	93.0
45.0	3.000	381.8	89.0
90.0	3.000	418.8	91.3
135.0	3.000	414.2	91.0
180.0	3.000	432.0	92.1
225.0	3.000	427.7	91.8
270.0	3.000	443.7	92.8
315.0	3.000	438.0	92.4

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

SPACING VIOLATION FOUND BETWEEN STATION

WBIQ-D10 10 BIRMINGHAM AL USERRECORD01

and station

SHORT TO: WJSU-TV 09 ANNISTON AL BLCDT 20050222ACG
033-36-24 0086-25- 3
Req. separation => 23.0 <= 110.0 Actual separation 38.6 Short 71.4(15.6) km

SHORT TO: WJSU-TV 09 ANNISTON AL BPCDT 20080620AGV
033-36-24 0086-25- 3
Req. separation => 23.0 <= 110.0 Actual separation 38.6 Short 71.4(15.6) km

SHORT TO: WJSU-DR 09 ANNISTON AL BPRM 20030127AEY
033-36-24 0086-25- 3

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WBIQ-DT BIRMINGHAM, AL - STA APPLICATION

Exhibit E5, PAGE 2 of 3

Req. separation => 23.0 <= 110.0 Actual separation 38.6 Short 71.4(15.6) km

SHORT TO: WBIQ 10 BIRMINGHAM AL BLET 20040412ACV
033-29- 4 0086-48-25
Req. separation 273.6 Actual separation 0.0 Short 273.6 km

SHORT TO: WDIQ 10 DOZIER AL BPRM 20060619ABS
031-33-16 0086-23-32
Req. separation 273.6 Actual separation 217.5 Short 56.1 km

SHORT TO: WDIQ 10 DOZIER AL BMPEDT 20080619AGY
031-33-16 0086-23-32
Req. separation 273.6 Actual separation 217.5 Short 56.1 km

SHORT TO: WXIA-TV 10 ATLANTA GA BLCDDT 20040302AAO
033-45-24 0084-19-55
Req. separation 273.6 Actual separation 231.6 Short 42.0 km

SHORT TO: WXIA-DT 10 ATLANTA GA DTVPLN DTVP0070
33-45-24 84-19-55
Req. separation 273.6 Actual separation 231.6 Short 42.0 km

SHORT TO: WMAB-TV 10 MISSISSIPPI STATE MS BLEDT 20030326ABX
033-21-14 0089-09- 0
Req. separation 273.6 Actual separation 218.4 Short 55.2 km

SHORT TO: WMAB-TV 10 MISSISSIPPI STATE MS BPEDT 20080619AGS
033-21-14 0089-09- 0
Req. separation 273.6 Actual separation 218.4 Short 55.2 km

SHORT TO: WMAB-DT 10 MISSISSIPPI STATE MS BPRM 20010629ACP
033-21-14 0089-09- 0
Req. separation 273.6 Actual separation 218.4 Short 55.2 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

Interference Analysis Summary

Channel	Proposed Station Call	City/State	ARN
10	WBIQ-D10	BIRMINGHAM AL	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.	Received Interference
09	WJSU-TV	ANNISTON AL	38.5	LIC	BLCDDT -20050222ACG	2.0%
09	WJSU-TV	ANNISTON AL	38.5	CP	BPCDDT -20080620AGV	1.6%

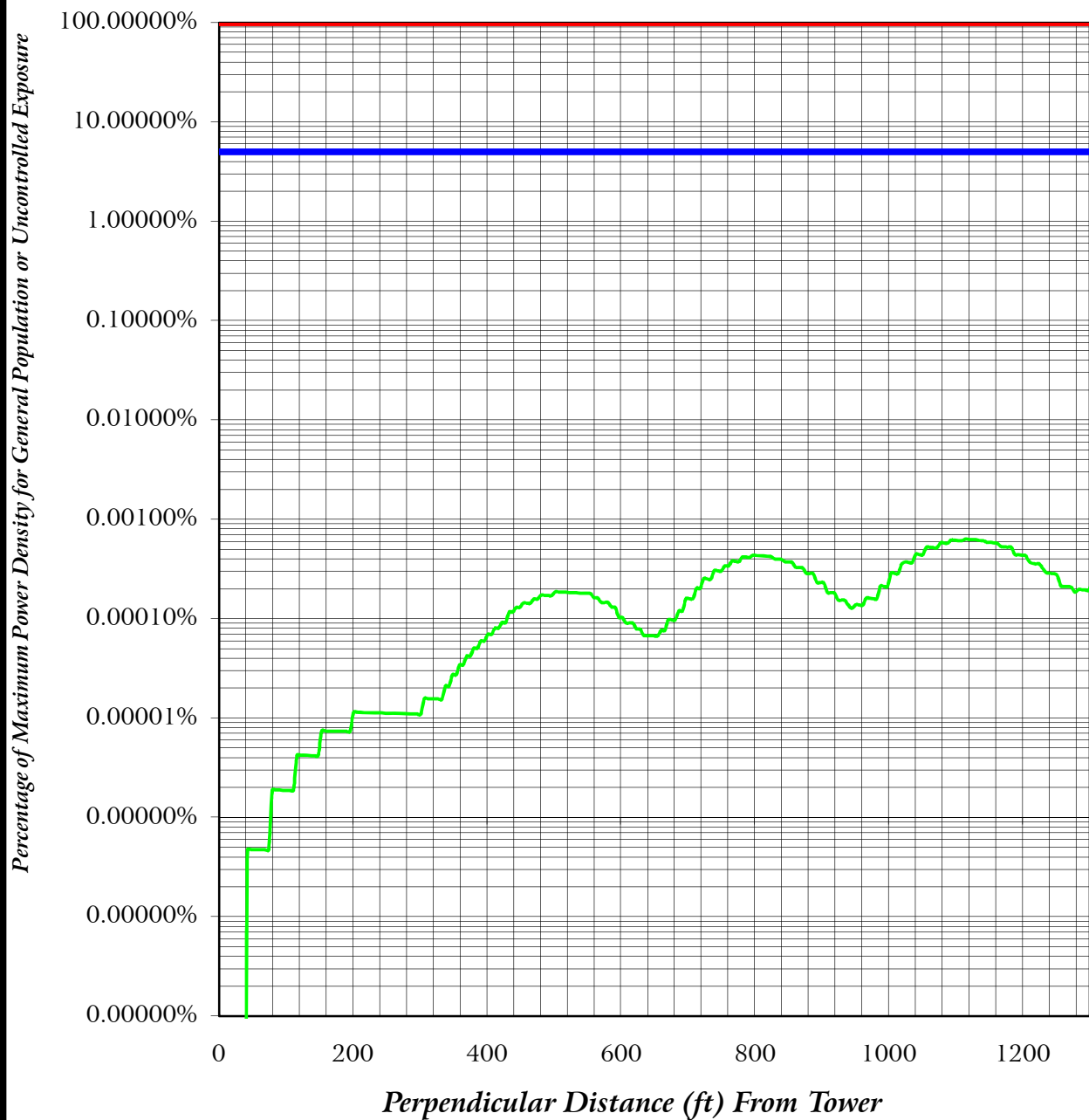
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WBIQ-DT BIRMINGHAM, AL - STA APPLICATION

Exhibit E5, PAGE 3 of 3

09	WJSU-DR	ANNISTON AL	38.5	LIC	BPRM	-20030127AEY	2.0%
09	WTVA	TUPELO MS	213.9	LIC	BLCT	-1234	0.0%
10	WDIQ	DOZIER AL	218.0	APP	BPRM	-20060619ABS	0.0%
10	WDIQ	DOZIER AL	218.0	CP MOD	BMPEDT	-20080619AGY	0.0%
10	WALA-TV	MOBILE AL	324.5	LIC	BLCT	-2347	0.0%
10	WALB	ALBANY GA	365.6	CP MOD	BMPCDT	-20080620ALA	0.0%
10	WALB	ALBANY GA	321.6	APP	BSTA	-20060612AAN	0.0%
10	WALB	ALBANY GA	365.6	LIC	BLCT	-20070713AFP	0.0%
10	WXIA-TV	ATLANTA GA	231.1	LIC	BLCDT	-20040302AAO	0.1%
10	WXIA-DT	ATLANTA GA	231.1	PLN	DTVPLN	-DTV0070	0.1%
10	WBMS-CA	JACKSON MS	362.5	LIC	BLTVA	-20051130AWM	0.0%
10	WMAB-TV	MISSISSIPPI STATE MS	217.9	LIC	BLEDT	-20030326ABX	0.1%
10	WMAB-TV	MISSISSIPPI STATE MS	217.9	APP	BPEDT	-20080619AGS	0.1%
10	WMAB-DT	MISSISSIPPI STATE MS	217.9	LIC	BPRM	-20010629ACP	0.1%
10	WBIR-TV	KNOXVILLE TN	383.5	CP MOD	BMPCDT	-20080620AMO	0.0%
10	WBIR-TV	KNOXVILLE TN	383.5	LIC	BLCT	-19800109KE	0.0%
10	NEW	MEMPHIS TN	333.2	CP MOD	BMPEDT	-20080317ACF	0.0%
10	NEW	MEMPHIS TN	333.2	APP	BMPEDT	-20080620ABP	0.0%
10	WKNO	MEMPHIS TN	333.2	LIC	BLET	-20031020ABF	0.0%
10	WSMV-DT	NASHVILLE TN	295.3	PLN	DTVPLN	-DTV0077	0.0%
10	WSMV-TV	NASHVILLE TN	295.3	CP	BPCDT	-20080619AFW	0.0%
11	WDIQ	DOZIER AL	218.0	LIC	BLEDT	-20060619AAT	0.0%
11	WDIQ-DR	DOZIER AL	218.0	LIC	BPRM	-20000328AAJ	0.0%
11	WJSP-DR	COLUMBUS GA	208.1	APP	BPRM	-20080619ALS	0.0%
11	WTOK-TV	MERIDIAN MS	217.8	APP	BMPCDT	-20080618ACJ	0.0%
11	WTOK-TV	MERIDIAN MS	217.8	CP	BPCDT	-20080501AAQ	0.0%
11	WTOK-TV	MERIDIAN MS	217.8	LIC	BLCT	-2503	0.0%

FAR FIELD EXPOSURE TO RF EMISSIONS



- Maximum Allowable General Population or Uncontrolled Exposure
- 5 % of Maximum General Population or Uncontrolled Exposure
- Percentage of Maximum General Population or Uncontrolled Exposure

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EXHIBIT E6



METHODOLOGY AND EXPLANATION OF
ENVIRONMENTAL IMPACT / RADIO FREQUENCY RADIATION
HAZARD ANALYSIS

A theoretical analysis has been conducted of the human exposure to radio frequency radiation ("RFR") using the calculation methodology described in *OET Bulletin 65, Edition 97-01*. The RFR analysis is conducted pursuant to the following methodology:

Terrain¹ extraction is compiled from the proposed tower site to radial lengths of 0.25 miles in 0.001 mile increments for 360 radials. The power density is calculated for each terrain point at 6 feet above ground level using the elevation and azimuth pattern of the proposed broadcast antenna. The power density calculations are conducted using the lower edge of the proposed channel frequency. To account for ground reflections, a coefficient of 1.6 was included in the calculation.

The resulting cylindrical polar analysis is then summarized into a coordinate plane graph using the following methodology:

Starting from the origin the maximum calculated RFR value is determined among the 360 degree radials for each 0.001 mile increment, the value is then converted into a percentage of the maximum allowable general population or uncontrolled exposure and plotted as a function of perpendicular distance from the tower.

¹ Terrain extraction is based upon a 3 arc second point spacing terrain database.