Technical Exhibit

Clear Channel Broadcasting Licenses LLC
WHQC(FM) – 96.1 MHz
Shelby, NC (FID 74194)

302-FM to cover
Construction Permit #BPH-20101122ABH

Summary

This application seeks to cover Construction Permit BPH-20101122ABH and change the proposed antenna model. Because licensee seeks to change the antenna, an new Radio Frequency Radiation statement is included.

Facilities:

WHQC (FM) will utilize a SPX/Dielectric model DCBR-C3-5FMB/12H custom directional FM antenna, which consists of "Cavity Backed Radiators" with 5 elements mounted on two tower faces and 2 elements mounted on the remaining tower face of a triangular tower. The antenna is mounted on a 592 meter, guyed tower with a center of radiation of 522 meters above ground level. WHQC will operate with an maximum ERP of (H & V) of 100 kW. 1 degree of Beam tilt is employed resulting in an ERP (H&V) of 98 KW.

The Vertical Plane Radiation Pattern supplied by the antenna manufacturer results in a minor change to the Effective Radiated Power in the Horizontal Plane but the Maximum Effective Radiated power remains unchanged.

ERP in the Horizontal Plane (kW - H & V):

Construction Permit	Proposed Licensed Value
99 KW	98 KW

Maximum ERP (kW – H & V):

Construction Permit	Proposed Licensed Value
100 KW	100 KW

This is a common tower site with WPEG(FM), WNKS-FM, WJZY-DT, WMYT-DT and WFVT(TV)-DT, All stations utilize antennas that are separate from that of WHQC. There are several other FM and TV stations located on towers within 3.0 kilometers of the WHQC site.

When the antenna installation was surveyed, it determined the Antenna orientation varies from installation design by 1.1 degree along the 143 degree radial (Tower face B.).

	Design	Actual
Azimuth True North	142.9	144

Therefore the Manufacturer, Dielectric/SPX has supplied a statement under condition #3 finding the orientation variance does not impact pattern compliance.

Radio Frequency Radiation Statement

Radio Frequency Radiation Statement

The facility was evaluated in terms of potential radio frequency radiation exposure at ground level and was found not to be eligible to use OET Bulletin No. 65, "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation" evaluation methodology. An alternative methodology has been used.

G**eneral Population/Uncontrolled Exposure:**
To determine the level of RF exposure, measurements were made during the experimental period, on December 21, 2011 utilizing the facilities authorized in Construction Permit BPH-20101122ABH. The measurements were made in all accessible areas at the transmitter site and surrounding areas. A Narda survey meter model 8718B with an A8742D probe was utilized. The probe is calibrated in percent of limit for Controlled Exposure for frequencies ranging from 300KHz to 3.0 GHz. The "Max Hold" setting was used to record the highest levels measured. Measurements were made at 2 meters above the ground while walking the entire area at the site and in the adjacent areas out to a distance of 200 meters from the tower base. The maximum RF exposure level measured was 6.23 % of the Occupational/Controlled Exposure limit, which occurs at a distance of 111 meters from the tower base, and drops off as the distance from the tower is increased. This is below the 20% limit for General Population/Uncontrolled Exposure. Therefore, WHQC (FM) does comply with OET Bulletin 65 Edition 97-01 with regard to General Population/Uncontrolled Exposure.

Occupational/Controlled Exposure:
Using the measurement methods described above, measurements were also taken inside the WHQC (FM) transmitter room and inside the fence that surrounds the tower. The maximum RF Exposure level measured inside the transmitter room was 2.3. % of the ccupational/Controlled Exposure Limit, which was observed near each WHQC Continental Transmitter. The maximum RF Exposure level measured inside the fence and around the base of the tower was 2.38 % of the Exposure Limit. A security fence that is securely locked surrounds the WHQC(FM) tower and RF Radiation warning signs are posted at appropriate intervals along the fence. WHQC (FM) in coordination with other users of the site, will reduce power or cease operations as necessary to protect persons having access to the site, tower or antenna from RF Exposure in excess of FCC guidelines. Therefore, WHQC (FM) also complies with OET Bulletin 65 Edition 97-01 with regard to Occupational/Controlled Exposure.

Benjamin H Brinitzer
Regional Vice President Engineering
Clear Channel Radio

Condition #1

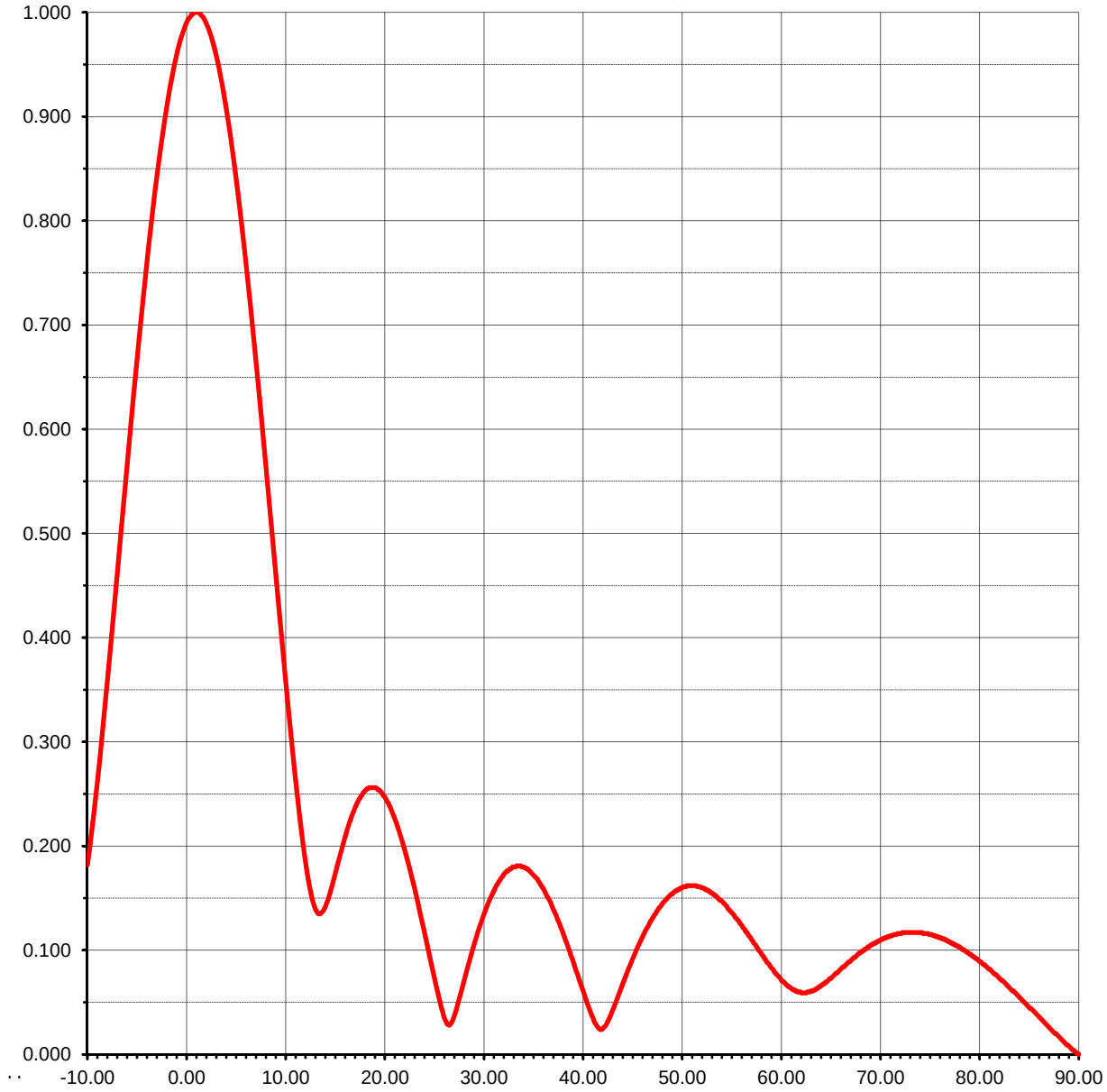
Antenna Vertical Plane Plot

COMMUNICATION TECHNOLOGY

Proposal Number	**C-04463**
Date	**9/26/2011**
Call Letters	**WIBT**
Location	**Shelby, NC**
Customer	**Clear Channel**
Antenna Type	**DCBR-C3-5FMB/12H-2**
Frequency	**96.1**
Drawing #	**12**

ELEVATION PATTERN

RMS Gain at Main Lobe	**2.25**	**(3.52 dB)**		
RMS Gain at Horizontal	**2.20**	**(3.42 dB)**	Beam Tilt	**1.00 deg**
Per Polarization			Frequency	**96.1 MHz**
Calculated / Measured	**Calculated**			



Condition #2

Antenna Proof of Preformance

COMMUNICATION TECHNOLOGY

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PATTERN CERTIFICATION

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PATTERN CERTIFICATION

Method of Measurement

The azimuth pattern for WIBT, Dielectric Document Sketch #12, was measured in the following manner.

A single 4.4 to 1 scale model "DCBR-C3-5FMB/12H-2" bay radiator was mounted on a similarly scaled model of the tower according to information provided to SPX Communication Technology by the customer; refer to SPX Communication Technology Document Sketch #12. The antenna under test, all parasitics, all known tower appurtenances, and the tower section were rotated through 360 degrees while receiving a signal at the appropriate frequency from a log periodic source antenna. Both the horizontal and vertical polarization azimuth patterns were measured in an tapered anechoic test range.

The transmit and scale model antennas are mounted at identical elevations and at opposite ends of the chamber. An Agilent model N5230C network analyzer was used to supply the RF signal to the source antenna at 4.4 times the fundamental FM frequency and to receive the signal intercepted by the antenna under test. The received signal was converted to a relative level, referenced to the source. This level was stored on a computer acting as the master controller. The computer interacts with an Orbit FR 959 controlling system.

Statement of Qualifications

Keith L. Pelletier is a the Director of Engineering here at SPX Communication Technology. He received a BS in Electrical Engineering Technology from the University of Maine in 1998. He has over 14 years experience in RF antenna engineering and has been employed by SPX Communication Technology since 1997.

Signed by: Keith L Pelletier

Date: 12/15/11

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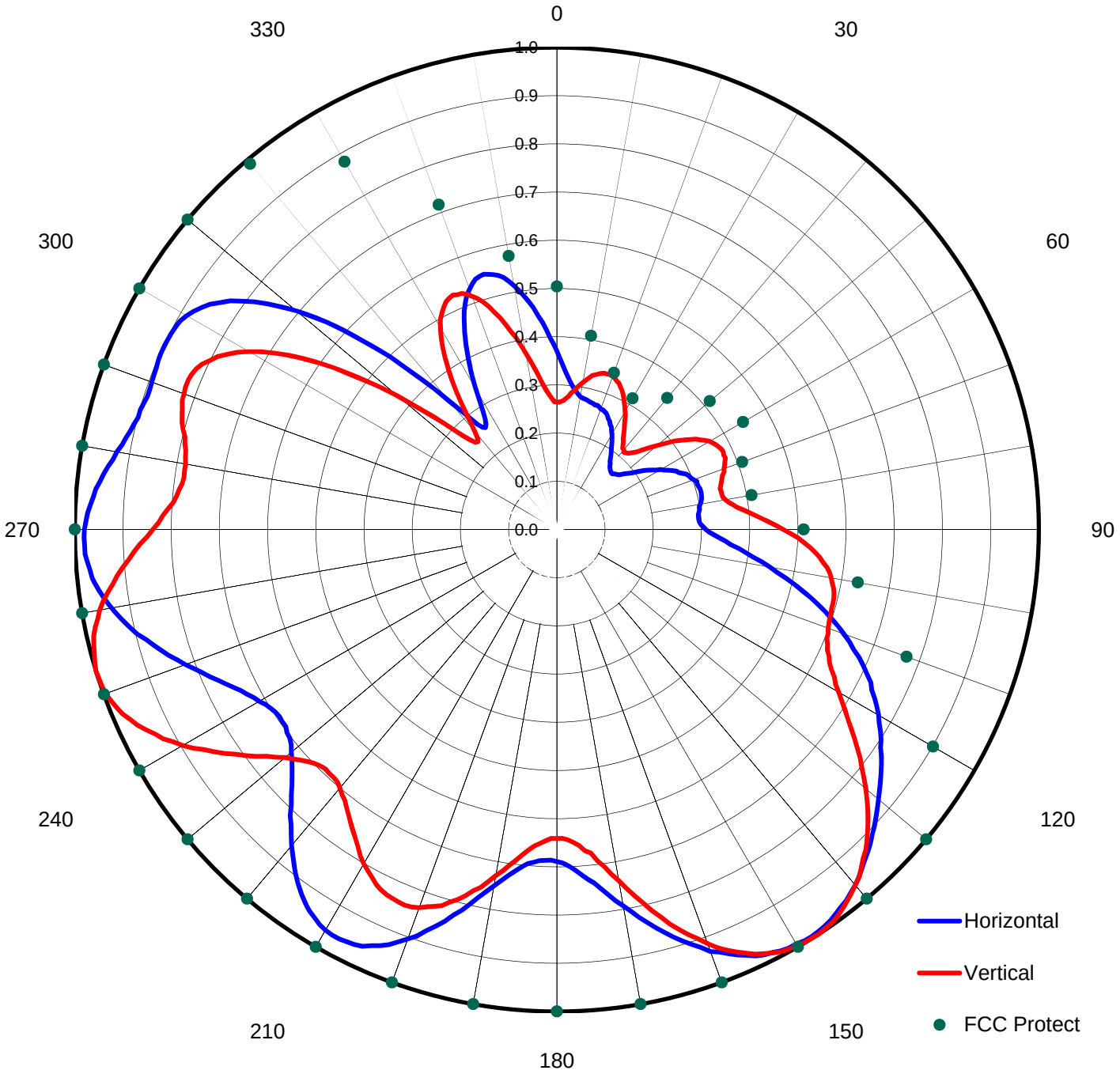
AZIMUTH PATTERN

85.16% Ccov 50.89% Hrms - 49.11% Vrms

Gain **2.11 (3.24 dB) HPOL**
2.28 (3.58 dB) VPOL

Calculated / Measured **Measured**



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TABULATION OF HORIZONTAL AZIMUTH PATTERN

Angle	Field	dBk	ERP kW
	0.370	11.364	13.690
10	0.280	8.943	7.840
20	0.266	8.498	7.076
30	0.229	7.197	5.244
40	0.171	4.660	2.924
50	0.179	5.057	3.204
60	0.249	7.924	6.200
70	0.302	9.600	9.120
80	0.302	9.600	9.120
90	0.309	9.799	9.548
100	0.449	13.045	20.160
110	0.633	16.028	40.069
120	0.771	17.741	59.444
130	0.871	18.800	75.864
140	0.963	19.673	92.737
150	0.993	19.939	98.605
160	0.932	19.388	86.862
170	0.793	17.985	62.885
180	0.689	16.764	47.472
190	0.751	17.513	56.400
200	0.904	19.123	81.722
210	0.960	19.645	92.160
220	0.856	18.649	73.274
230	0.719	17.135	51.696
240	0.713	17.062	50.837
250	0.820	18.276	67.240
260	0.938	19.444	87.984
270	0.980	19.825	96.040
280	0.927	19.342	85.933
290	0.894	19.027	79.924
300	0.887	18.958	78.677
310	0.706	16.976	49.844
320	0.348	10.832	12.110
330	0.336	10.527	11.290
340	0.530	14.486	28.090
350	0.514	14.219	26.420

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TABULATION OF VERTICAL AZIMUTH PATTERN

Angle	Field	dBk	ERP kW
	0.265	8.465	7.023
10	0.310	9.827	9.610
20	0.338	10.578	11.424
30	0.283	9.036	8.009
40	0.216	6.689	4.666
50	0.271	8.659	7.344
60	0.366	11.270	13.396
70	0.369	11.341	13.616
80	0.355	11.005	12.603
90	0.469	13.423	21.996
100	0.578	15.239	33.408
110	0.599	15.549	35.880
120	0.675	16.586	45.563
130	0.837	18.455	70.057
140	0.963	19.673	92.737
150	0.997	19.974	99.401
160	0.914	19.219	83.540
170	0.740	17.385	54.760
180	0.641	16.137	41.088
190	0.729	17.255	53.144
200	0.835	18.434	69.723
210	0.801	18.073	64.160
220	0.700	16.902	49.000
230	0.736	17.338	54.170
240	0.896	19.046	80.282
250	0.996	19.965	99.202
260	0.963	19.673	92.737
270	0.838	18.465	70.224
280	0.782	17.864	61.152
290	0.823	18.308	67.733
300	0.738	17.361	54.464
310	0.431	12.690	18.576
320	0.264	8.432	6.970
330	0.482	13.661	23.232
340	0.515	14.236	26.523
350	0.371	11.387	13.764

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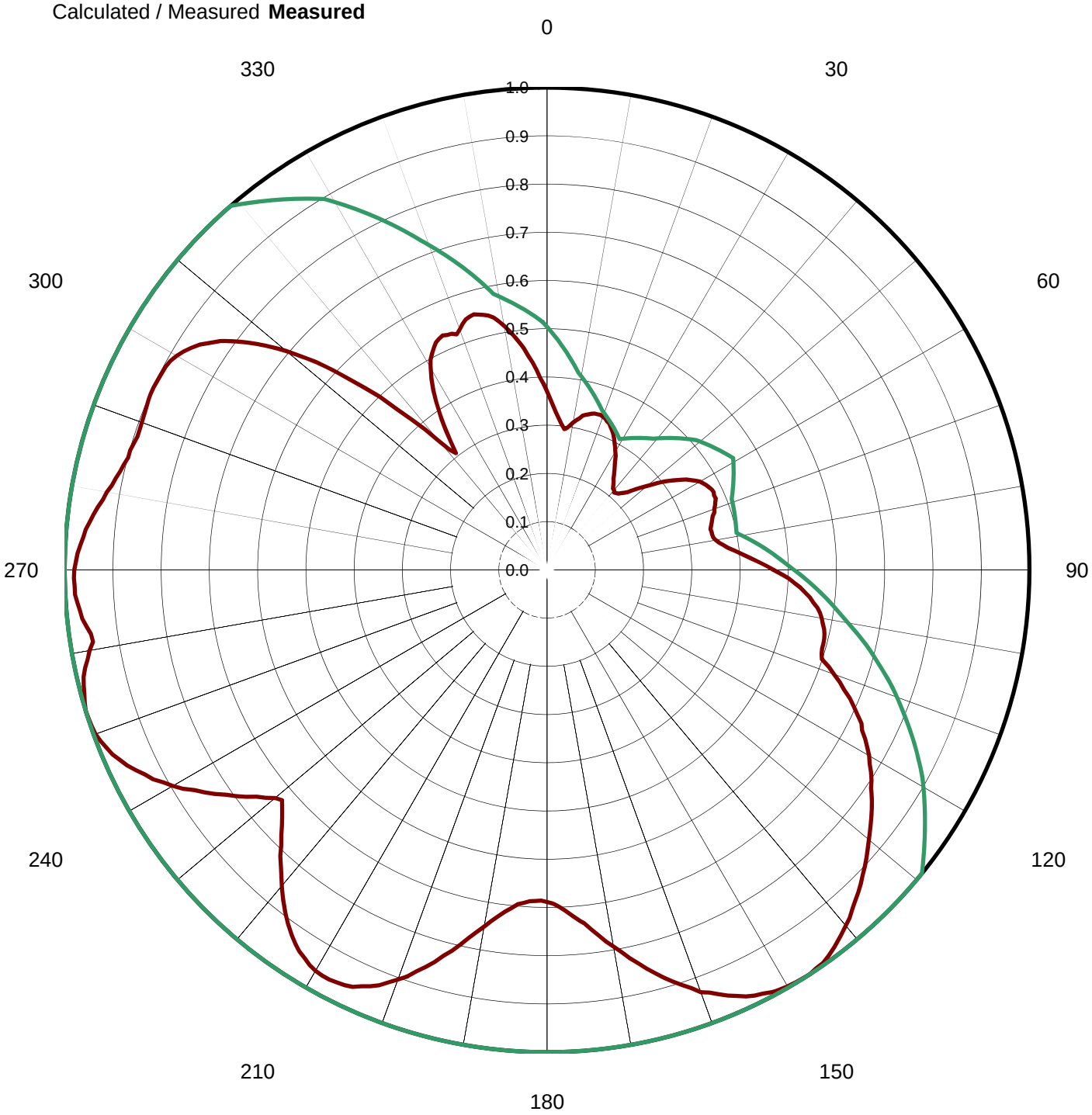
COMPOSITE AZIMUTH PATTERN

Calculated / Measured **Measured**



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TABULATION OF COMPOSITE AZIMUTH PATTERN

Angle	Field	dBk	Power kW	Input Power
	0.370	11.364	13.690	100.000
10	0.310	9.827	9.610	100.000
20	0.338	10.578	11.424	100.000
30	0.283	9.036	8.009	100.000
40	0.216	6.689	4.666	100.000
50	0.271	8.659	7.344	100.000
60	0.366	11.270	13.396	100.000
70	0.369	11.341	13.616	100.000
80	0.355	11.005	12.603	100.000
90	0.469	13.423	21.996	100.000
100	0.578	15.239	33.408	100.000
110	0.633	16.028	40.069	100.000
120	0.771	17.741	59.444	100.000
130	0.871	18.800	75.864	100.000
140	0.963	19.673	92.737	100.000
150	0.997	19.974	99.401	100.000
160	0.932	19.388	86.862	100.000
170	0.793	17.985	62.885	100.000
180	0.689	16.764	47.472	100.000
190	0.751	17.513	56.400	100.000
200	0.904	19.123	81.722	100.000
210	0.960	19.645	92.160	100.000
220	0.856	18.649	73.274	100.000
230	0.736	17.338	54.170	100.000
240	0.896	19.046	80.282	100.000
250	0.996	19.965	99.202	100.000
260	0.963	19.673	92.737	100.000
270	0.980	19.825	96.040	100.000
280	0.927	19.342	85.933	100.000
290	0.894	19.027	79.924	100.000
300	0.887	18.958	78.677	100.000
310	0.706	16.976	49.844	100.000
320	0.348	10.832	12.110	100.000
330	0.482	13.661	23.232	100.000
340	0.530	14.486	28.090	100.000
350	0.514	14.219	26.420	100.000

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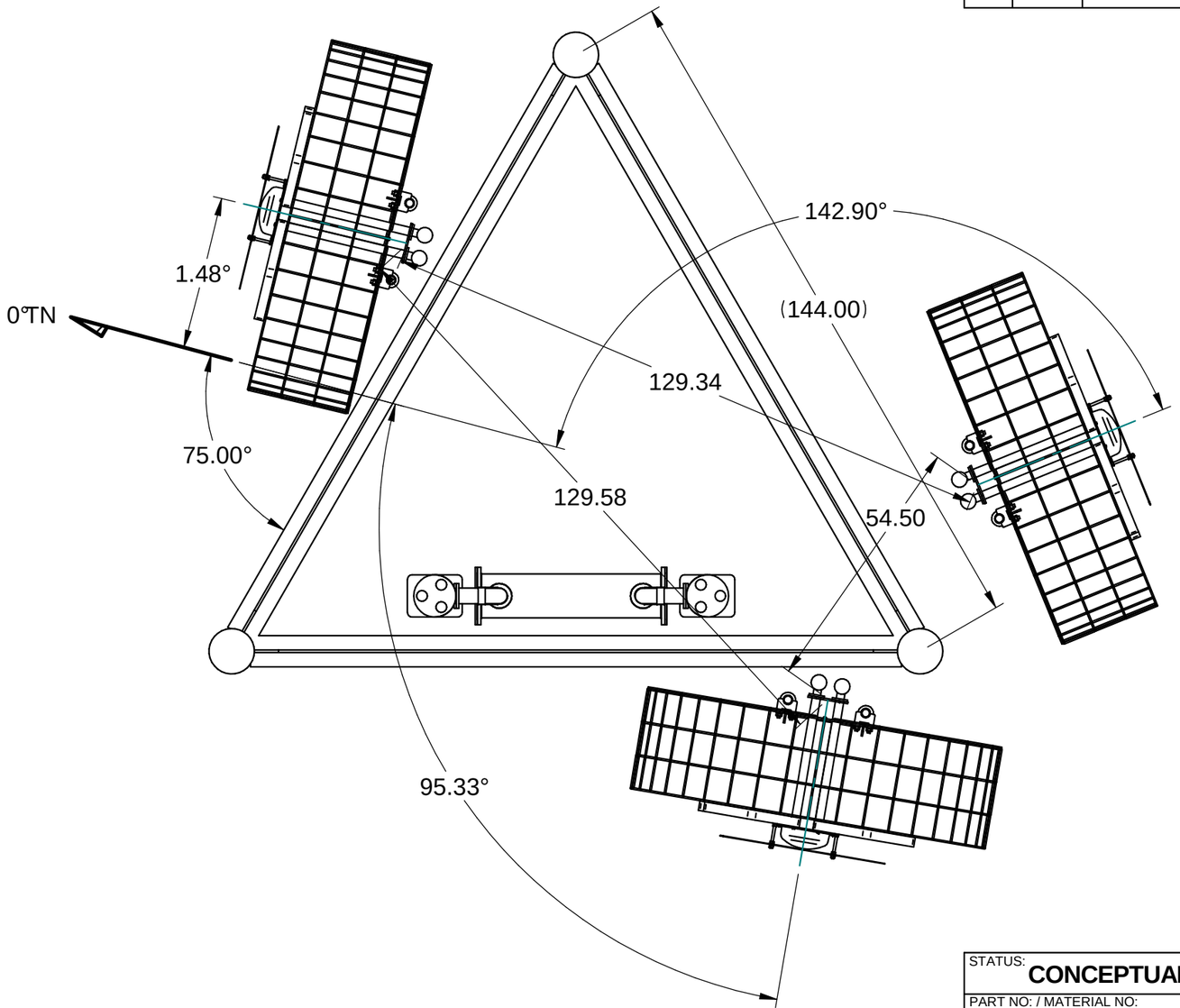
CUSTOMER GAIN SUMMARY

Azimuth Pattern Gain of Horizontal Polarization	2.11	(3.24 dB)
Elevation Pattern Gain Per Polarization	2.25	(3.52 dB)
Peak Gain at Horizontal Polarization	4.75	(6.76 dB)

REV:	SHEET	REVISION NOTE CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.	ECO	DATE APPR
A		PRODUCTION RELEASE		



STATUS: **CONCEPTUAL**

PART NO: / MATERIAL NO:

SAP DOCUMENT NO:

MATERIAL:

FINISH:
N/A

REFER TO D8110 FOR PLATING
REFER TO D17800 FOR PAINT

DIMENSIONAL TOLERANCES
(UNLESS OTHERWISE NOTED)
DECIMAL DIMENSIONS
3 PLACE DIMENSIONS ±.005
2 PLACE DIMENSIONS ±.02
FRACTIONAL DIMENSIONS
0"-6" ±1/32"
ABOVE 6" UP TO 12" ±1/16"
ABOVE 12" UP TO 48" ±1/8"
ABOVE 48" ±1/4"
ANGULAR DIMENSIONS ±1/2°
REFERENCE DIMENSIONS ARE NOT FOR MANUFACTURING OR INSPECTION

ANGLE PROJECTION

	NAME	DATE
DESIGNED BY	mpoisson	9/2/2011
DETAIL BY	mpoisson	9/2/2011
CHKD. BY		
ENG. 1 APPR.		
ENG. 2 APPR.		
MANUFACT.		

SPX®
COMMUNICATION TECHNOLOGY
Raymond, ME

TITLE:

PATTERN STUDY

WIBT DCBR 96.1
PROJECT C-04463

B	GAGE CODE 08441	DRAWING NO: 015A69801
12:04:31 PM		SHEET: 1 OF 1

UNLESS OTHERWISE SPECIFIED

MANUFACTURING TOLERANCE AND PROCEDURES MUST BE IN ACCORDANCE WITH D78691. ALL ALUMINUM, COPPER, AND BRASS WELDING MUST COMPLY WITH A-62700, SECT. XIV "PRODUCTION WELDING PROCEDURES". STRUCTURAL STEEL WELDING MUST COMPLY WITH "AWS 1.1 CURRENT REVISION".

Condition #3

Surveyor certification

SPX
COMMUNICATION TECHNOLOGY

SPX Communication Technology
22 Tower Road
Raymond, ME 04071
Tel: 207-655-4555

Date: **12/20/2011**

Benjamin Brinitzer
Regional VP Engineering
Clear Channel Media & Entertainment

Ben,

When reviewing the WHQC (WIBT) surveyor data and the impact on the pattern with face B being off by 1.1 degree on the directional antenna will be minimal in nature in still meets the FCC requirements. This is certainly within the manufacturer's degree of tolerance and when reviewing the FCC protect from 40 degrees through 150 there is certainly some wiggle room with the measured data not being right on the protection limits, so the 1.1 degree swing towards the North East will not present a problem.

I hope this clarifies the situation. As always let me know if you have questions or need additional information.

Thanks
Keith

Keith Pelletier
Director, Engineering
SPX Communication Technology

HARRIS ENGINEERING
Engineering
Planning · Surveying

December 20, 2011

Mr. Ben Brinitzer
ClearChannel Charlottte
801 Wood Ridge Center Drive
Charlotte, North Carolina 28217

SUBJECT: ClearChannel Radio Antenna Upfit
WJZY Transmission Site
945 Old Willis School Road, Dallas, North Carolina
Harris Engineering File: 21116

Dear Mr. Brinitzer:

This letter is to confirm that the ClearChannel directional antenna elements that were installed on the existing antenna located at 945 Old Willis School Road, Dallas, North Carolina, were oriented relative to True North as follows:
Face 'A' (N – 2 elements) is -1°
Face 'B' (SE – 5 elements) is 144°
Face 'C' (W – 5 elements) is -95°.

The Azimuth measurements were rounded from the actual measurements
Face 'A' = -0.79°
Face 'B' = 144.39°
Face 'C' = -94.60°.

Sincerely,

Elizabeth A. Brandt, P.L.S.
Project Manager
Harris Engineering
North Carolina Registration L-4147

1325 Harding Place
Charlotte, NC 28204
704.334.1325
704.334.1330 Fax

Condition #4

Qualified Engineer Certification

CLEAR CHANNEL
RADIO

Benjamin Brinitzer
Regional Vice President Engineering

Thursday, December 20, 2011

FCC Installation Statement

Benjamin Hans Brinitzer, CPBE,AMD does hereby certify the WHQC FM (FID #74194) Directional Antenna SPX Model DCBR-C3-5FMB/12H was correctly installed as called for under the Construction Permit # BPH-20101122ABH and to the Manufacturers specifications.

Mr. Brinitzer was present and observed the unpacking, assembly and erection of the SPX/Dielectric DCBR antenna per directions provided by the manufacturer. The antenna was orientated using supplied fixed azimuth mounts assembled per the instructions and diagrams provided by the manufacturer.

Mr Brinitzer also observed Harris Engineering LLC's professional survey work establishing the alignment markers that were used to initially verify orientation of the antenna sections to the correct geographic azimuth, and subsequently the survey work completed to verify the orientation azimuth of the antenna installation.

Mr. Brinitzer's credentials are a matter of public record with the FCC and include more than 27 years of continuous broadcast engineering field work, including managing major RF projects. He has filed many applications with the FCC for his employers over the past 27 years. Mr. Brinitzer is certified as a Professional Broadcast Engineer (CPBE) for Life, by the Society of Broadcast Engineers. He is a Associate Member of the AFFCE in good standing.

I, Benjamin Brinitzer attest the above to be true this 20th Day of December 2011.

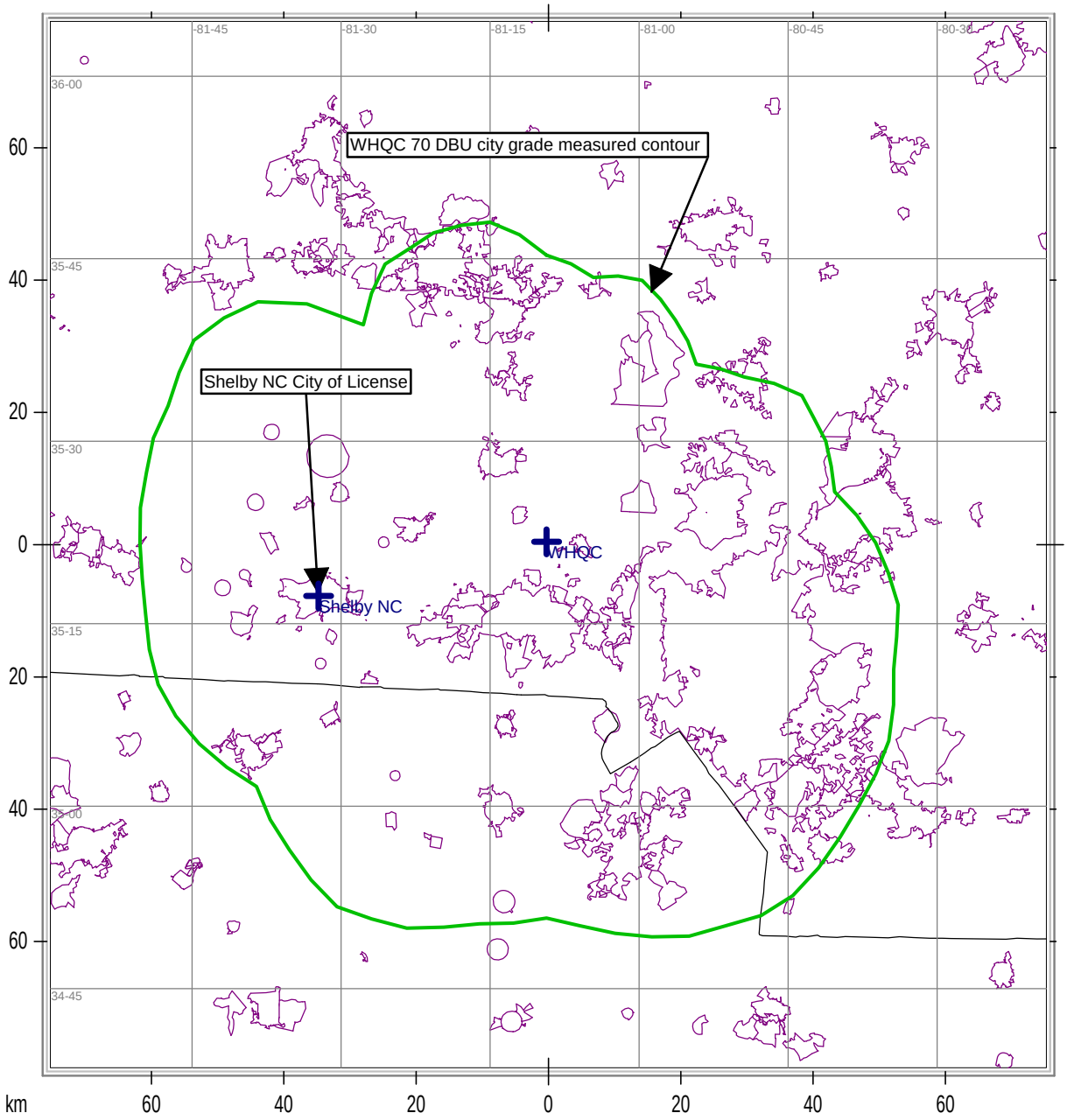
Benjamin Brinitzer CPBE AMD

Clear Channel **Radio**
801 Woodridge center Dr. ♦ Charlotte NC 27604 Benb@clearchannel.com ♦ Phone: 704-714-9489 ♦ Fax: 801-729-2218

Condition #6

Measured Antenna pattern map showing compliance with 47CFR 73.315

The Measured Directional pattern



Complies with provisions of 47 C.F.R. Sections 73.315 or 73.515

State Borders City Borders Lat/Lon Grid

Map Scale: 1:1000000 1 cm = 10.00 km V|H Size: 158.19 x 150.52 km

Condition #8

Manufacturer Statement

SPX
COMMUNICATION TECHNOLOGY

SPX Communication Technology
22 Tower Road
Raymond, ME 04071
Tel: 207-655-4555

Date: **10/12/2011**

Benjamin Brinitzer
Regional VP Engineering
Clear Channel Media & Entertainment

Ben,

When reviewing the WHQC impact on the WPEG directional antenna I have found the following points that show the potential interference from WIBT on WPEG to be non-existent.

1. The two antennas are separated in COR by 137'. The air gap from the bottom of WPEG bay to the top of the WHQC top bay is 97'. Typical Isolation numbers from two FM arrays will yield about 10 dB per 10 feet of separation.
2. Standard Manufacturing processes do not include another FM array in the aperture of the DA when performing the DA study if the array is more than 1 wavelength away.
3. WHQC pattern was developed using a panel FM antenna. The same pattern that was used for the existing ERI antenna for WIBT. The existing ERI caused no interference to the WPEG antenna to my knowledge.
4. WHQC utilizes a 0.93 wavelength bay to bay spacing which helps reduce the energy at +90 and -90 in the vertical elevation pattern. The signals in these directions are less than a typical 1 wavelength spaced array.

I hope this clarifies the situation and satisfies the stipulation in the WHQC construction permit. As always let me know if you have questions or need additional information.

Thanks
Keith

Keith Pelletier
Director, Engineering
SPX Communication Technology