

**RF EXPOSURE CALCULATION AND  
RF COMPLIANCE STATEMENT  
WHSG-DT 1000 KW 332 M AGL CH. 44  
MONROE, GEORGIA  
DECEMBER, 2010**

**INTRODUCTION**

This statement presents an analysis of the calculated RF Exposure from the WHSG-DT facility to be relocated to and operated from the Richland Atlanta multiple user tower, ASRN 1223132. All information contained in this statement has been prepared and presented in compliance with the current FCC Rules and policies.

**PROPOSED FACILITY**

The facilities requested for WHSG-DT involve a maximum ERP of 1000 kW at an antenna height of 332 meters AGL. The antenna to be used is a Dielectric type TUD-05-14/70U-2-13, with 0.70 degrees of electrical beam tilt. It is a broadband UHF antenna, the bottom of two corner mounted antennas on the top candelabra platform of the existing Richland Towers Atlanta multiple user tower. The general antenna site is located in a mixed use area, in an industrial site in the city of Atlanta. The immediate site is an extensive heavy industrial site with existing tall broadcast towers. There is no access by the public onto this industrial site and near the base area of the antenna supporting structure. The immediate antenna site access is controlled by gates, fences and signs as necessary to assure no unauthorized access.

**R.F. EXPOSURE ANALYSIS**

The antenna radiated field was evaluated using the power and height listed above and elevation pattern data supplied by the manufacturer in drawing No. 14UCH44070-90,

a copy of which is attached. The pattern shows the relative field is limited in the downward direction to less than 5% of maximum for all angles exceeding 65 degrees below the horizontal. Exposure calculations have been made in accordance with FCC and ANSI methods and the method specified in *FCC OET Bulletin No. 65*. It was assumed that the antenna emissions are undistorted by the tower mounting and that the RF signals are projected uniformly around the tower.

The Richland facility will contribute a portion of the RF exposure at this site which also includes other RF transmission facilities nearby. From the antenna vertical field pattern described above, the maximum probable ground level RF Exposure has been calculated. For all angles more than 65 degrees below the horizontal, including the worst case directly below the antenna, was RF Exposure will not exceed 3.03  $\mu\text{W}/\text{cm}^2$  (microwatts per square centimeter). Lesser exposure levels occur at greater distances out from the base of the antenna.

The FCC specified maximum Controlled Environment continuous exposure level at TV channel 44 is 2180  $\mu\text{W}/\text{cm}^2$ . The proposed WHSG-DT operation contributes approximately 0.14% of the FCC Controlled Environment exposure guideline and 0.69% of the Un-Controlled Environment exposure guideline. Both are far less than 5% of the FCC adopted exposure guideline for either environment. Since the estimated “worst case” contribution for the facility is less than 5% of the FCC adopted limits, the applicant is not required to further evaluate the antenna location with respect to other RF contributors.

## **R.F EXPOSURE CERTIFICATION**

R.F. exposure will not exceed the FCC adopted guidelines around the base of the tower. When maintenance climbing is required, for a limited distance above ground level,

the RF Exposure will not exceed the Controlled Environment guideline. A consideration of the currently proposed and various eventual users of the tower suggests that the controlled exposure limit will be reached at various elevations on the tower, near any operating antennas.

At higher elevations on the antenna structure workers will be protected from excessive exposure to RF fields in accordance with the methods recommended in OET Bulletin No. 65, Version 97-01. WHSG-DT will conform with the other users of the tower and adopt the existing work policy for coordinating with other site users. Preventive steps for avoiding excessive exposure may include scheduling work while the facility operates at reduced power or is shut down.

Respectfully Submitted  
**Lohnes and Culver**

by   
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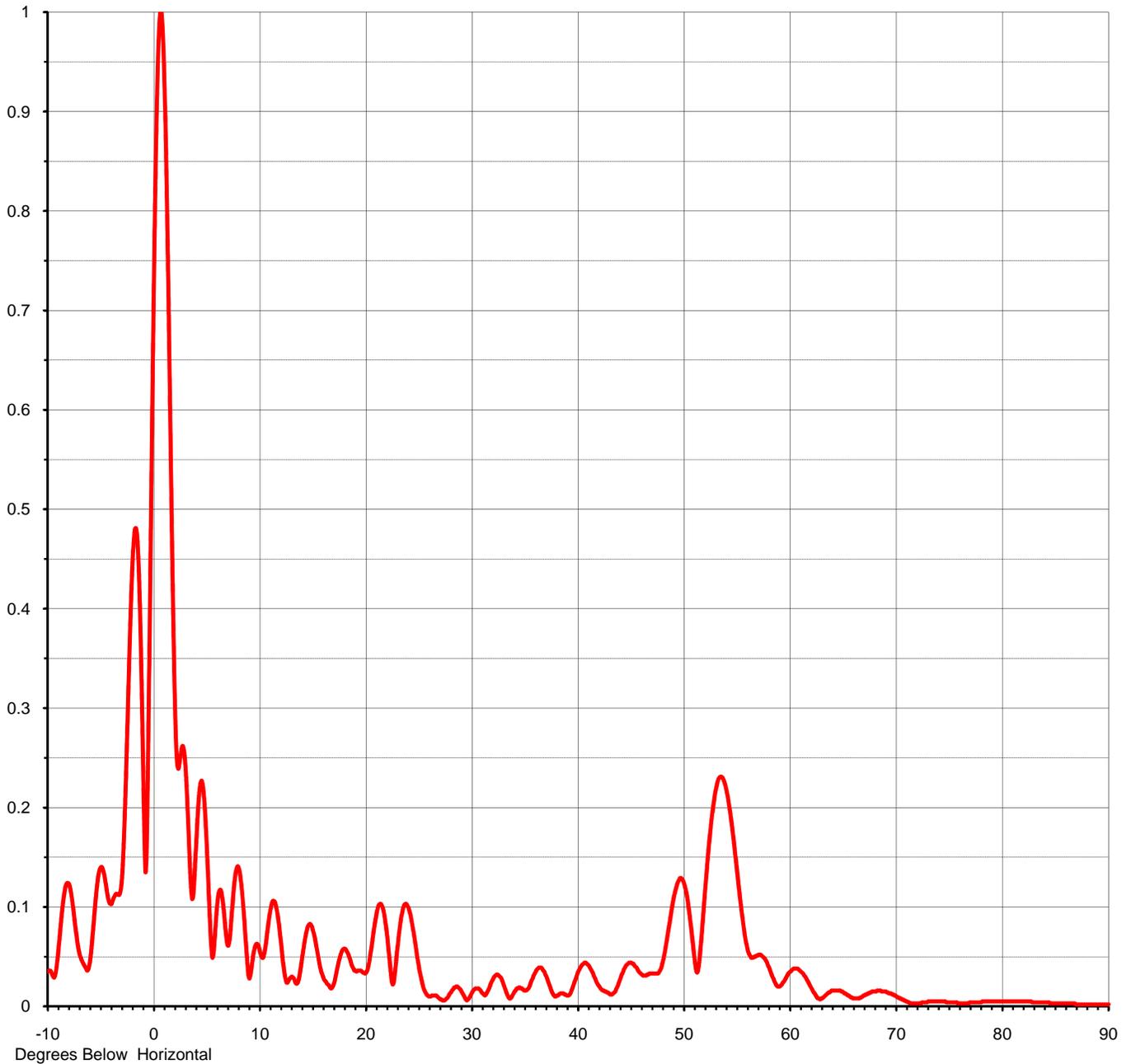
December, 2010



Proposal Number **C-DCA-9044**  
Date **16-Dec-09**  
Call Letters **x** Channel **44**  
Location **Atlanta, GA**  
Customer **Richland**  
Antenna Type **TUD-O5-14/70U-2-B**

### ELEVATION PATTERN

RMS Gain at Main Lobe	<b>26.97 ( 14.31 dB )</b>	Beam Tilt	<b>0.70 deg</b>
RMS Gain at Horizontal	<b>14.60 ( 11.64 dB )</b>	Frequency	<b>653.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>14UCH44070-90</b>



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