Consulting Engineers
CTJC
CARL T. JONES CORPORATION

STATEMENT OF JOHN E. HIDLE, P.E.
IN SUPPORT OF AN APPLICATION FOR
MODIFICATION OF LICENSE
BLCDT-20100929AGW
WTVD - DURHAM, NORTH CAROLINA
CH. 11 - 45.0 kW - 615 meters HAAT

Prepared for: WTVD TELEVISION, LLC

I am a Consulting Engineer, an employee in the firm of Carl T. Jones Corporation, with offices located in Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission. I am a Licensed Professional Engineer in the Commonwealth of Virginia, License No. 7418, and in the State of New York, License No. 63418.

GENERAL

This office has been authorized by WTVD TELEVISION, LLC, Licensee of WTVD, channel 11, Durham, North Carolina, to prepare this statement, FCC Form 302-DTV, and associated exhibits, in support of an application for modification of its license, BLCDT-20100920AGW.

PURPOSE OF APPLICATION

WTVD, in accordance with Section 73.1690(c)(1), is reporting the replacement of its licensed horizontally polarized omnidirectional antenna with a new circularly polarized omnidirectional antenna. The radiation center line height of the new antenna is identical to the centerline height of the antenna which was replaced. The elevation gain of the new antenna is different from that of the licensed antenna which it replaced. Changes have

also been made in the routing and length of the transmission line system. Together these alterations have required a change in transmitter power output in order to maintain WTVD's licensed Effective Radiated Power (ERP) of 45 kW.

AUTHORIZED FACILITY

WTVD's current authorization permits a facility with an ERP of 45.0 kW at a Height Above Average Terrain (HAAT) of 615 meters. WTVD's replacement antenna is a Dielectric Model THV-9A11/CP-R channel 11 omnidirectional circularly polarized antenna mounted on the tower bearing registration number 1010348, with its radiation center line located at WTVD's licensed height of 598.9 meters above ground level, and 615 meters above average terrain. The replacement antenna employs an electrical beam-tilt of 1 degree below the horizontal plane. The manufacturer's elevation plane radiation pattern is shown in exhibits 1 and 2, and is tabulated in exhibit 3.

BLANKETING AND INTERMODULATION INTERFERENCE

No other broadcast facilities are co-located with WTVD, but there are other broadcast and non-broadcast technical facilities that are located within 10 km of WTVD's transmitter/antenna site. The applicant recognizes its responsibility to remedy complaints of interference which might result from this proposal in accordance with applicable Rules.

RADIO FREQUENCY IMPACT

Effective October 15, 1997 the FCC adopted modified guidelines and procedures for evaluating environmental effects of radio frequency (RF) emissions. The guidelines are

generally based on recommendations by the National Council on Radiation Protection and Measurements (NCRP) in NCRP Report No. 86 (1986) and by the American National Standards Institute and the Institute of Electrical and Electronic Engineers, LLC (IEEE) in ANSI/IEEE C95.1-1992 (IEEE C95.1-1991). The guidelines establish maximum permissible exposure (MPE) levels for both occupational or “controlled” environments, as well as for “uncontrolled” environments that apply in cases that could affect the general public. The FCC Office of Engineering and Technology’s technical bulletin No. 65, titled "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields" (DA 04-319, February 6, 2004), provides assistance in the determination of whether FCC-regulated transmitting facilities, operations or devices comply with guideline limits for human exposure to radio frequency electromagnetic fields as adopted by the Commission in 1996. Bulletin No. 65 provides the technical data required to evaluate compliance with the FCC’s policies and guidelines.

The FCC’s Maximum Permitted Exposure (MPE) level established for “uncontrolled” environments is 0.2 milliwatts per centimeter squared (mW/cm^2) when applied to broadcast facilities operating between 30 MHz and 300 MHz. For broadcast facilities operating between 300 MHZ and 1500 MHz, primarily UHF TV stations, the MPE is derived from the formula, (frequency (MHz)/1500). The MPE level that is established for occupational, or “controlled” environments is 1.0 milliwatts per centimeter squared (mW/cm^2) for operations between 30 MHz and 300 MHz. For broadcast stations operating between 300 MHz and 1500 MHz, the MPE is derived from the formula, (frequency (MHz)/300).

The predicted emissions of WTVD operating on channel 11 must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WTVD, which will operate on television channel 11 (198-204 MHz), the MPE is 0.200 milliwatts per centimeter squared (mW/cm^2) in an "uncontrolled" environment and 1.000 mW/cm^2 in a "controlled" environment. The WTVD facility operates with a maximum ERP of 45 kW using a circularly polarized omnidirectional transmitting antenna with a centerline height of 598.9 meters above ground level (AGL). Considering the proposed antenna's vertical plane relative field factor of 0.30 the WTVD facility is predicted to produce a power density at two meters above ground level of 0.00075 mW/cm^2, which is 0.38% of the FCC guideline value for an "uncontrolled" environment, and 0.076% of the FCC's guideline value for "controlled" environments. (See Appendix A)

There are no other full-service nor low-power DTV stations, nor any FM radio stations that are authorized to be located at the site, or within the relevant proximity of 315 meters. Therefore, the total percentage of the ANSI value predicted for WTVD's site consists only of WTVD's individual contribution.

OCCUPATIONAL SAFETY

The applicant is committed to the protection of station personnel and/or tower contractors working on the tower support structure, or in the vicinity of the new WTVD antenna, by reducing power and/or ceasing operation during times of maintenance of the transmission systems, when necessary, to ensure the proper protection of persons who might be required to perform their assigned tasks in this "controlled" environment.

SUMMARY

It is submitted that the instant application for modification of license for WTVD to specify its replacement of its licensed omnidirectional antenna with a new circularly polarized omnidirectional antenna, as described herein, complies with the Rules, Regulations, and Policies of the Federal Communications Commission. This statement, FCC Form 302-DTV, and the attached exhibits were prepared by me, or under my direct supervision, and are believed to be true and correct to the best of my knowledge and belief.

DATED: August 3, 2012

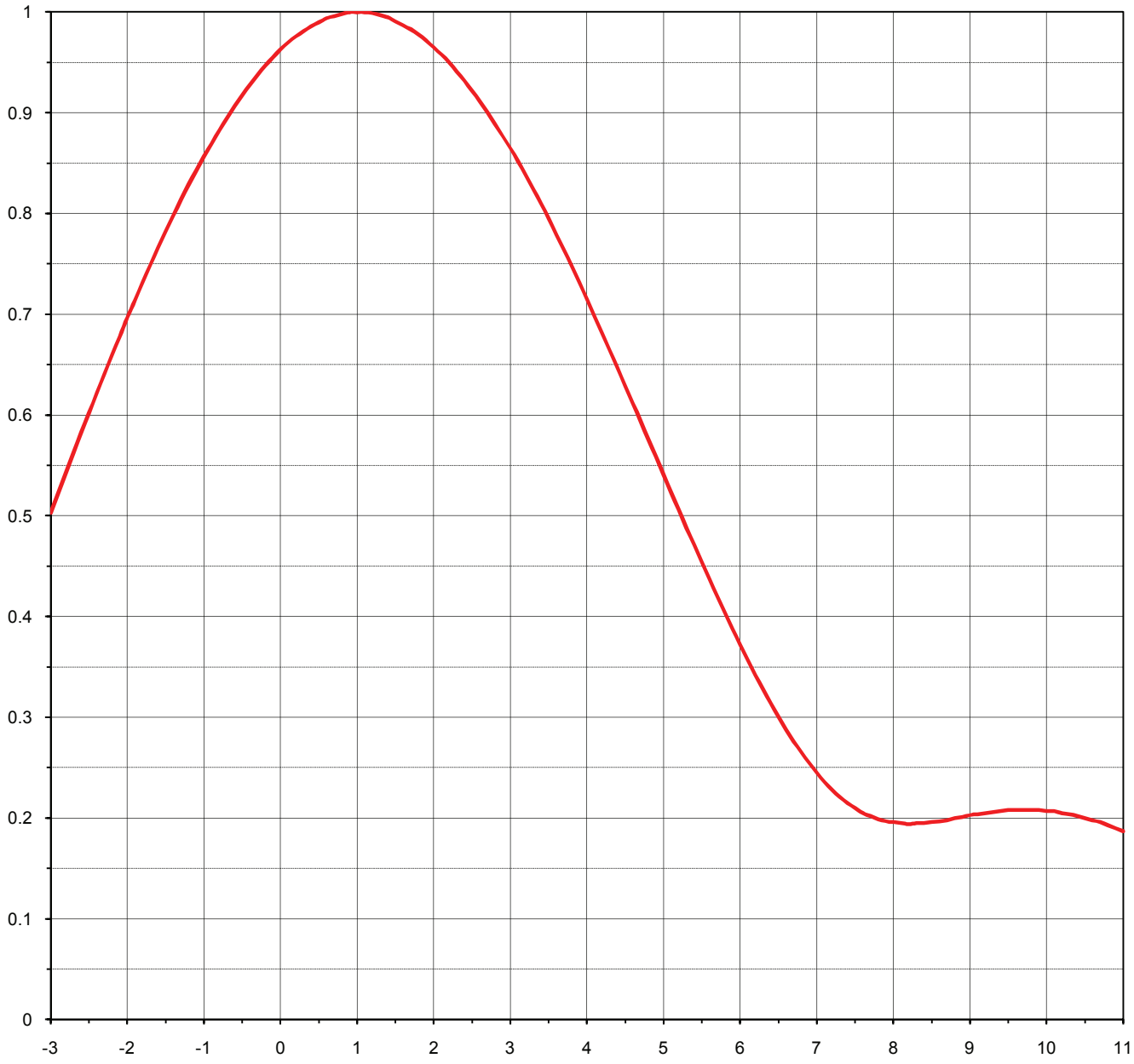
Dielectric

Proposal Number	**C-04298**		**Exhibit 1**
Date	**29-Jul-10**		
Call Letters	**WTVD**	Channel	**11**
Location	**Durham, NC**		
Customer			
Antenna Type	**THV-9A11/CP-R**		

ELEVATION PATTERN

RMS Directivity at Main Lobe	**9.00**	**(9.54 dB)**	
RMS Directivity at Horizontal	**8.30**	**(9.19 dB)**	
Calculated / Measured	**Calculated**		

Beam Tilt	**1.00 deg**
Frequency	**201.00 MHz**
Drawing #	**09V090100**



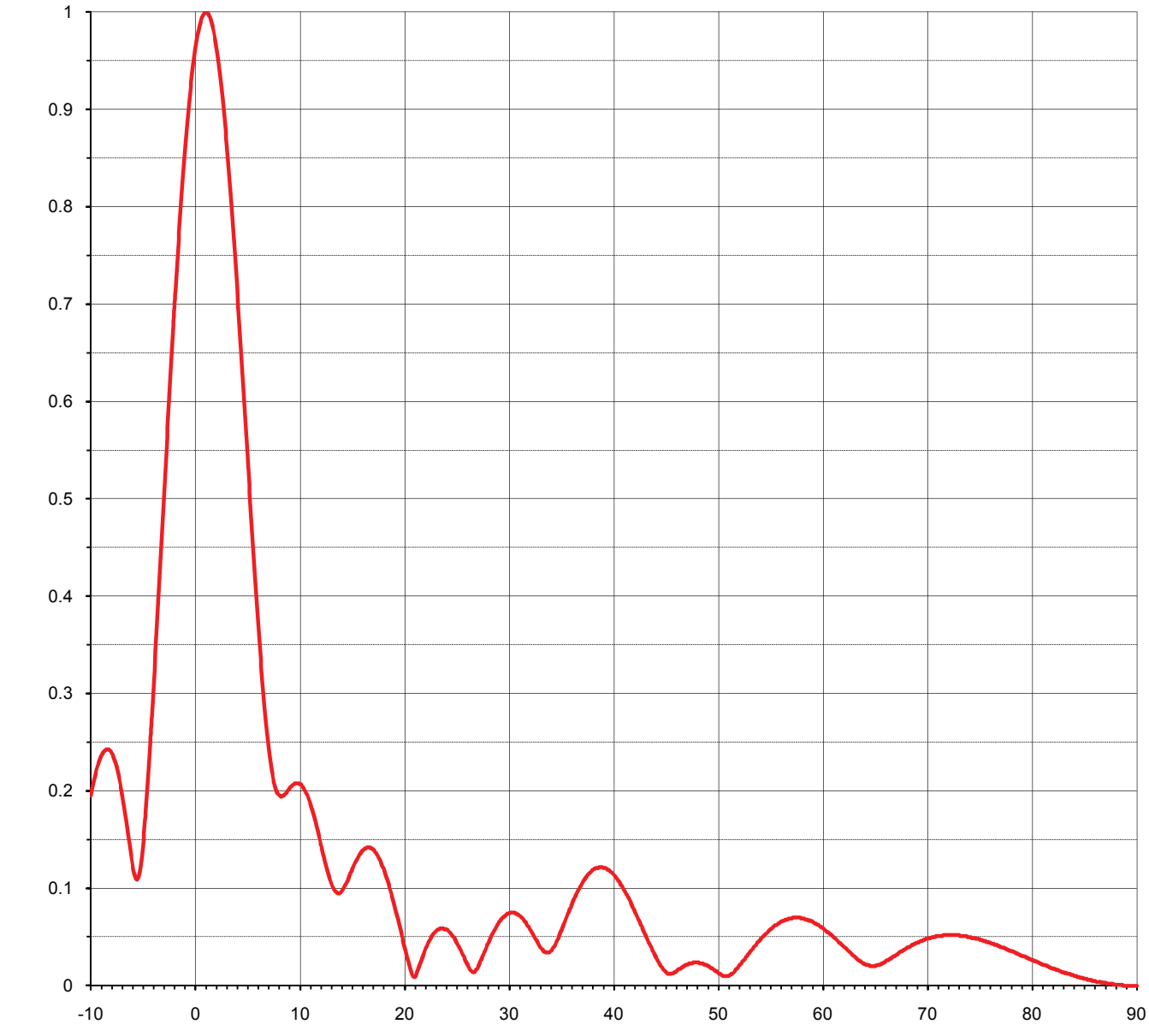
Degrees Below Horizontal

Dielectric

Proposal Number	**C-04298**		**Exhibit 2**
Date	**29-Jul-10**		
Call Letters	**WTVD**	Channel	**11**
Location	**Durham, NC**		
Customer			
Antenna Type	**THV-9A11/CP-R**		

ELEVATION PATTERN

RMS Directivity at Main Lobe	**9.00**	**(9.54 dB)**	Beam Tilt	**1.00 deg**
RMS Directivity at Horizontal	**8.30**	**(9.19 dB)**	Frequency	**201.00 MHz**
Calculated / Measured	**Calculated**		Drawing #	**09V090100-90**



Dielectric

Proposal Number	**C-04298**	**Exhibit 3**	
Date	**29-Jul-10**		
Call Letters	**WTVD**	Channel	**11**
Location	**Durham, NC**		
Customer			
Antenna Type	**THV-9A11/CP-R**		

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **09V090100-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.195	2.4	0.932	10.6	0.200	30.5	0.075	51.0	0.010	71.5	0.052
-9.5	0.220	2.6	0.912	10.8	0.196	31.0	0.073	51.5	0.013	72.0	0.052
-9.0	0.236	2.8	0.889	11.0	0.190	31.5	0.067	52.0	0.019	72.5	0.052
-8.5	0.243	3.0	0.865	11.5	0.172	32.0	0.060	52.5	0.026	73.0	0.052
-8.0	0.239	3.2	0.838	12.0	0.150	32.5	0.050	53.0	0.033	73.5	0.051
-7.5	0.224	3.4	0.810	12.5	0.127	33.0	0.041	53.5	0.040	74.0	0.050
-7.0	0.197	3.6	0.779	13.0	0.108	33.5	0.035	54.0	0.046	74.5	0.049
-6.5	0.161	3.8	0.748	13.5	0.097	34.0	0.035	54.5	0.052	75.0	0.047
-6.0	0.124	4.0	0.715	14.0	0.096	34.5	0.042	55.0	0.057	75.5	0.046
-5.5	0.110	4.2	0.681	14.5	0.105	35.0	0.055	55.5	0.062	76.0	0.044
-5.0	0.145	4.4	0.647	15.0	0.117	35.5	0.068	56.0	0.065	76.5	0.042
-4.5	0.216	4.6	0.612	15.5	0.129	36.0	0.081	56.5	0.068	77.0	0.040
-4.0	0.306	4.8	0.576	16.0	0.138	36.5	0.094	57.0	0.069	77.5	0.038
-3.5	0.403	5.0	0.541	16.5	0.142	37.0	0.104	57.5	0.070	78.0	0.036
-3.0	0.503	5.2	0.506	17.0	0.141	37.5	0.112	58.0	0.069	78.5	0.033
-2.8	0.543	5.4	0.471	17.5	0.134	38.0	0.118	58.5	0.068	79.0	0.031
-2.6	0.583	5.6	0.437	18.0	0.122	38.5	0.121	59.0	0.066	79.5	0.029
-2.4	0.622	5.8	0.404	18.5	0.107	39.0	0.122	59.5	0.063	80.0	0.026
-2.2	0.660	6.0	0.372	19.0	0.088	39.5	0.119	60.0	0.060	80.5	0.024
-2.0	0.697	6.2	0.342	19.5	0.067	40.0	0.115	60.5	0.055	81.0	0.022
-1.8	0.732	6.4	0.314	20.0	0.044	40.5	0.108	61.0	0.051	81.5	0.020
-1.6	0.766	6.6	0.288	20.5	0.023	41.0	0.100	61.5	0.046	82.0	0.018
-1.4	0.798	6.8	0.265	21.0	0.009	41.5	0.090	62.0	0.041	82.5	0.016
-1.2	0.829	7.0	0.245	21.5	0.020	42.0	0.079	62.5	0.036	83.0	0.014
-1.0	0.857	7.2	0.228	22.0	0.035	42.5	0.067	63.0	0.031	83.5	0.012
-0.8	0.883	7.4	0.215	22.5	0.047	43.0	0.055	63.5	0.026	84.0	0.010
-0.6	0.907	7.6	0.205	23.0	0.055	43.5	0.043	64.0	0.023	84.5	0.009
-0.4	0.928	7.8	0.199	23.5	0.059	44.0	0.032	64.5	0.020	85.0	0.007
-0.2	0.947	8.0	0.196	24.0	0.058	44.5	0.022	65.0	0.020	85.5	0.006
0.0	0.963	8.2	0.194	24.5	0.054	45.0	0.015	65.5	0.022	86.0	0.005
0.2	0.976	8.4	0.195	25.0	0.046	45.5	0.012	66.0	0.025	86.5	0.004
0.4	0.986	8.6	0.197	25.5	0.036	46.0	0.014	66.5	0.028	87.0	0.003
0.6	0.994	8.8	0.200	26.0	0.024	46.5	0.018	67.0	0.032	87.5	0.002
0.8	0.998	9.0	0.203	26.5	0.015	47.0	0.021	67.5	0.035	88.0	0.001
1.0	1.000	9.2	0.205	27.0	0.017	47.5	0.023	68.0	0.039	88.5	0.001
1.2	0.999	9.4	0.207	27.5	0.029	48.0	0.024	68.5	0.042	89.0	0.000
1.4	0.995	9.6	0.208	28.0	0.042	48.5	0.023	69.0	0.044	89.5	0.000
1.6	0.987	9.8	0.208	28.5	0.053	49.0	0.021	69.5	0.046	90.0	0.000
1.8	0.978	10.0	0.208	29.0	0.063	49.5	0.018	70.0	0.048		
2.0	0.965	10.2	0.207	29.5	0.070	50.0	0.014	70.5	0.050		
2.2	0.950	10.4	0.204	30.0	0.074	50.5	0.010	71.0	0.051		

APPENDIX A

SUMMARY OF RADIOFREQUENCY
RADIATION STUDY
WTVD, DURHAM, NORTH CAROLINA
CHANNEL 11, 45 kW ERP, 615 m HAAT
AUGUST, 2012

CALL	SERVICE	CHANNEL	FREQUENCY	POLARIZATION	ANTENNA HEIGHT ** mAGL	ERP (kW)	VERT. RELATIVE FIELD FACTOR	PREDICTED POWER DENSITY (mW/cm^2)	FCC UNCONTROLLED LIMIT (mW/cm^2)	PERCENT OF UNCONTROLLED LIMIT
WTVD	DT	11	201	H & V	598.9	45.000	0.300	0.00075	0.200	0.38%

TOTAL PERCENTAGE OF ANSI VALUE= 0.38%

*** The antenna heights indicated above are 2 meters less than the actual antenna heights*
so that the predicted power densities consider the 2 meter human height allowance.
This evaluation includes facilities collocated at the site, and facilities located within 315 meters.