ENGINEERING STATEMENT
RE DTV BROADCAST ENGINEERING DATA
APPLICATION FOR
MINOR MODIFICATION OF LICENSE
ON BEHALF OF
VIDEOINDIANA, INC.
WTHR-DT, INDIANAPOLIS, INDIANA
CHANNEL 13 42.1 KW MAX DA ERP (H&V)
299 METERS HAAT
MARCH 2011

COHEN, DIPPELL AND EVERIST, P.C.
CONSULTING ENGINEERS
RADIO AND TELEVISION
WASHINGTON, D.C.

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington)
) ss
District of Columbia)

Ross J. Heide, being duly sworn upon his oath, deposes and states that:

He is a graduate of the Massachusetts Institute of Technology in Operations Research and Management Science, a Registered Professional Engineer in the District of Columbia, and employed by Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1420 N Street, N.W., Suite One, Washington, D.C. 20005;

That the attached engineering report was prepared by him or under his supervision and direction and

That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.

Ross J. Heide
District of Columbia
Professional Engineer
Registration No. PE900748

Subscribed and sworn to before me this 28th day of March, 2011.

Notary Public

My Commission Expires: 2/28/2013

Introduction

This engineering statement has been prepared on behalf of VideoIndiana, Inc. ("VideoIndiana"), licensee of WTHR, Indianapolis, Indiana, in support of its request to modify its pending license in order to maximize its DTV facilities. Pursuant to the pending license [FCC File No. BLCDT-20100812ABY], VideoIndiana is operating facilities on DTV Channel 13 with a maximum ERP of 30 kW (H&V) and an antenna height above average terrain ("HAAT") of 299 meters (981.0 feet). VideoIndiana hereby proposes to use the same built-out facilities, but increase the ERP from 30 kW to 42.1 kW, utilizing the directionality of the existing nominally omnidirectional antenna.

Proposed Parameters

The WTHR-DT Channel 13 DTV antenna is top-mounted on an existing tower. The existing tower has a total overall structure height above ground of 316.8 meters (1039.4 feet). The existing transmitter is located at Ditch Rd, at West 96th Street, Indianapolis, Indiana.

There are no proposed changes to WTHR's antenna or the overall height of its existing tower, and therefore, an FAA aeronautical study is not required. The FCC antenna structure registration number of the existing tower is 1024109. Exhibit E-1 is a vertical sketch of the existing tower and top-mounted transmitting antenna.

The geographic coordinates of the proposed site are as follows:

North Latitude: 39° 55' 43"

West Longitude: 86° 10' 55"

NAD-27

Equipment Data

Antenna:	RCA, Type TCL-16A13 (or equivalent) Circular Polarized Antenna 0.9° electrical Beam Tilt Antenna information per Section 73.625 of the FCC Rules is provided in Exhibit E-2.
Transmission Line:	292.6 meters (960 ft) of Dielectric, Type 8863-62A, 6-1/8", 50 ohm or equivalent, attenuation 0.076 dB/100 ft

Power Data

Transmitter Output	5.66 kW	7.53 dBk
Transmission Line Efficiency/Loss	84.5%	0.73 dB
Input Power to the Antenna	4.78 kW	6.80 dBk
Antenna Gain	8.8 ratio	9.44 dB
Effective Radiated Power	42.1 kW (H&V)	16.24 dBk

Elevation Data

Elevation of site above mean sea level	251.1 meters 823.8 feet
Overall height above ground of existing antenna structure (including appurtenances)	316.8 meters 1039.4 feet
Center of radiation of Channel 13 antenna above ground	299.9 meters 983.9 feet
Overall height above mean sea level of existing tower (including beacon)	567.9 meters 1863.2 feet
Center of radiation of Channel 13 antenna above mean sea level	551 meters 1807.7 feet
Antenna height above average terrain	299 meters

Note: Slight height differences may result due to conversion to metric.

Waiver Request

The proposed power exceeds the maximum allowed for Zone I DTV stations specified in Section 73.622(f)(7) of the Commission's Rules. A waiver of this rule is hereby requested as the proposed facilities meet established interference criteria with acceptance agreements. Grant of this waiver request is in the public interest and consistent with the Commission's policy to improve reception for high VHF DTV stations.

International Coordination

The existing WTHR site is 338 km from the Canadian border, and therefore, within the 400 km coordination zone. No interference is predicted to any Canadian station. The nearest Canadian co-channel station is over 600 km distant: CKCO-TV, Kitchener, Ontario. The nearest Canadian adjacent channel is over 440 km distant, Channel 12, Chatham, Ontario. The predicted DTV-to-DTV-22 dBu F(50,10) co-channel interfering contour does not come within 80 km of the Canadian border. All other F(50,10) interfering contours are higher field strength values and also do not reach the Canadian border.

Interference Analysis

A study of predicted interference (Table I) caused by the proposed WTHR-DT post-transition has been performed using a version of the Longley-Rice program as described in OET Bulletin No. 69 (February 6, 2004) and the Public Notice, "Additional Application Processing Guidelines for Digital Television (DTV)" (August 1998). The FCC's FORTRAN-77 code was modified only to the extent necessary (primarily input/output handling) for the program to run on

a Windows XP platform. Comparison of service/interference areas and populations indicates that this model closely matches the FCC's evaluation program. Best efforts have been made to use data and calculations identical to the FCC's program. Any slight differences are attributable to compiler, operating system and/or processor characteristics. The effect of any variance in calculated population values versus the FCC's program is minimized when differencing a given model's results, such as calculating new interference as total interference less baseline interference. Any variance effect is further reduced when using ratios of calculated population values such as measuring the incremental population affected as a percent of the total population served. The model employs the Longley-Rice propagation methodology and evaluates in grid cells of approximately 4 km^2 using 3-second terrain data sampled approximately every 1.0 km at one degree azimuth intervals with 2000 census centroids.

WSYX has changed its post-transition channel from 13 to 48. For this reason, interference to WSYX-DT, Channel 13, Columbus, Ohio has been ignored for this analysis. Also, this analysis excludes masking interference from WSYX to other stations potentially affected by WTHR's proposed power increase. WKYT-TV, Lexington, Kentucky similarly changed its post-transition channel from 13 to 36. WKYT has also been excluded from the interference analysis as described above.

The proposed facilities are predicted to cause 1.24% (0.74% impermissible) interference to WBKO, Ch. 13, CP, Bowling Green, KY [BMPCDT-20110218ABM]. A copy of the agreement accepting this interference is attached to the electronically filed application.

The results of the analysis predict that the proposed directional operation of WTHR will not cause any new interference above the 0.5% threshold criteria to other potentially affected authorized stations.

Additional Broadcast Facilities

There are no AM stations located within 3.2 km and no FM stations within 0.5 km of the existing tower site. The following table lists the authorized and potential TV and DTV facilities located within 0.5 km of the transmitting site according to CDBS.

Call	Status	Service	Ch	ERP kW	RCAMSL Meters	RCAGL Meters	Distance km
WTHR	Prop	DTV	13	42.1	551.0	299.9	0.0
WTHR	STA	DTV	46	1000	521.7	270.7	0.0
WIPX-LP	CP	LD	34	15	488.8	237.7	0.0
WALV-CA	Lic	CA	50	14.9	505.0	253.9	0.0

Coverage

The average elevation data for 3.2 to 16.1 km along each radial has been determined from the NGDC 3-second computerized terrain database. The F(50,90) DTV coverage contours have been computed from reference to the propagation data for Channels 7-13, as published by the FCC in Figure 10 and Figure 10a, Section 73.699 of the FCC Rules and Regulations. Utilizing the formula in Section 73.625(b)(2) of the Rules for the effective heights, it is found that the depression angle, A_h, varies from 0.458 to 0.494 degrees.

Table II includes the distances to the F(50,90) 43 and 36 dBu coverage contours, the average elevation 3.2 to 16.1 km, and the antenna effective heights for each radial spaced 10 degrees in azimuth. Exhibit E-3 provides a map of the computed coverage contours.

FCC Rule, Section 1.1307

The proposed operation based upon the current OET Bulletin No. 65, Edition No. 97-01, dated August 1997 and Supplement A meets the provisions of the FCC radio frequency field ("RFF") guidelines, and thus, complies with Section 1.1307 of the FCC Rules. Provisions will be made to reduce power or to terminate the transmitter emissions, as appropriate, when it is necessary for authorized personnel to be on the tower.

The following equations from OET Bulletin No. 65 have been used to calculate the predicted post-transition radiofrequency fields at 2 meters above ground at the base of the tower:

Television Broadcast Stations
$S = [(33.4)(F^2)(0.4 * ERP_V + ERP_A)]/R^2$

Digital Television Broadcast Stations
$S = [(33.4)(F^2)(ERP^2)]/R^2$

S = Power Density in Microwatts/sq. cm ($\mu W/cm^2$)
F = Relative Field Factor in the downward direction of interest (-60° to -90° elevation)
ERP_V = Total Peak Visual ERP in Watts
ERP_A = Total Aural ERP in Watts
ERP = Power in Watts
R = Distance from 2 meters above ground to center of radiation in meters

Station	Statuts	ERP (kW)	Frequency (MHz)	Ch	RCAGL (m)	Relative Field	S ($\mu W/cm^2$)	RFF (%)
WIPX-LP	CP	15	590-596	34	237.7	0.2	0.36	0.08
WALV-CA	Lic	14.9	686-672	50	253.9	0.3	0.35	0.08
WTHR-DT	**Proposed**	42.1 (H&V)	210-216	13	299.9	0.084	0.22	0.11
WTHR-DT	STA	1000	662-668	46	270.7	0.1	4.63	1.05
							Total	**1.32%**

For the proposed operation, WTHR-DT will use the existing top-mounted RCA, Type TCL-16A13 antenna (or equivalent). The manufacturer's elevation pattern for this antenna indicates a maximum relative downward field of less than 0.084 towards the ground (45° to 90° below the horizontal) in the vicinity of the tower. Using this relative field factor and the procedures prescribed in OET Bulletin 65, the maximum RFF resulting from the proposed operation is less than 0.22 $\mu W/cm^2$. This is less than 0.11% of the 200 $\mu W/cm^2$ maximum human exposure to RFF recommended by the current FCC guidelines for the general population.

The total contribution by authorized and expected broadcast facilities at 2 meters above ground level is less than 1.3% of the current FCC guidelines for maximum permissible exposure ("MPE") for the general population/uncontrolled environment.

Authorized personnel and rigging contractors will be alerted to the potential zone of high field levels on the tower, and if necessary, the station will operate with reduced power or terminate

the operation of the transmitter as appropriate when it is necessary for authorized personnel or contractors to perform work on the tower. Workers and the general public, therefore, will not be subjected to RFF levels in excess of the current FCC guidelines.

Environmental Assessment

An environmental assessment ("EA") is categorically excluded under Section 1.1306 of the FCC Rules and Regulations as the tower was constructed prior to the requirements specified in WT Docket No. 03-128 and the licensee indicates:

(a)(1) The existing tower is not located in an officially designated wilderness area.

(a)(2) The existing tower is not located in an officially designated wildlife preserve.

(a)(3) The proposed facilities will not affect any listed threatened or endangered species or habitats.

(a)(3)(ii) The proposed facilities will not jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats.

(a)(4) The proposed facilities are located on a tower which was built prior to the adoption of WT Docket No. 03-128 and therefore grandfathered, and have not affected any known districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture.

(a)(5) The existing tower is not located near any known Indian religious sites.

(a)(6) The existing tower is not located in a flood plain.

(a)(7) The installation of the DTV facilities on an existing guyed tower will not involve a significant change in surface features of the ground in the vicinity of the tower.

(a)(8) It is not proposed to equip the tower with high intensity white lights unless required by the FAA.

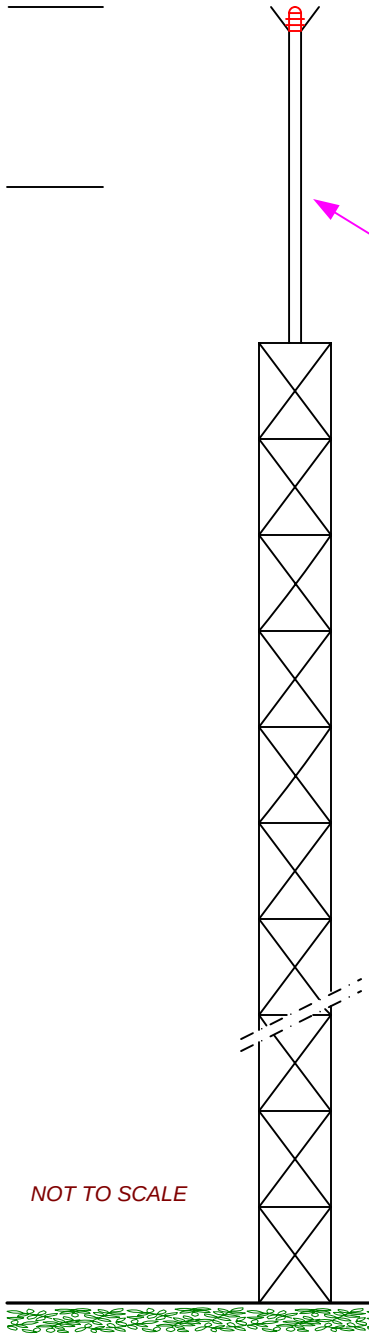
(b) Workers and the general public will not be subjected to RFF levels in excess of the current FCC guidelines contained in OET Bulletin No. 65, Edition 97-01, dated August 1997 and Supplement A.

ABOVE MEAN SEA LEVEL | **ABOVE GROUND**

567.9 METERS (1862.7') —— —— (1039.1') 316.8 METERS

C/R 551.0 METERS (1807.3') —— —— **(979.7') 298.7 METERS C/R**

EXISTING CHANNEL 13
WTHR-DT ANTENNA



TOWER REGISTRATION
No. 1024109

NOT TO SCALE

251.1 METERS (823.6') —— —— (0') 0.0 METERS

EXHIBIT E-1
VERTICAL SKETCH
FOR THE PROPOSED OPERATION OF
WTHR-DT, INDIANAPOLIS, INDIANA
MARCH 2011

COHEN, DIPPELL AND EVERIST, P.C. Consulting Engineers Washington, D.C.

COHEN, DIPPELL AND EVERIST, P.C.

TABLE I
LONGLEY-RICE INTERFERENCE
FOR THE OPERATION FOR
WTHR-DT, INDIANAPOLIS, INDIANA
CHANNEL 13 42.1 KW ERP MAX DA (H&V) 299 METERS HAAT
MARCH 2011

Channel	Call	City/State	Dist(km)	Status	FCC File No.	Result
12	WINM	ANGOLA IN	205.6	APP	BPCDT-20090817ACR	No interference
12	WINM	ANGOLA IN	205.6	LIC	BLCDT-20021025AAN	No interference
12	WKRC-TV	CINCINNATI OH	170	LIC	BLCDT-20090622AFI	No interference
13	WREX	ROCKFORD IL	367.2	APP	BPCDT-20091030AGT	0.17%
13	WREX	ROCKFORD IL	367.2	CP MO	BMPCDT-20080619ADW	0.34%
13	WCFN	SPRINGFIELD IL	284.7	CP MO	BMPCDT-20080619AJM	0.48%
13	WBKO	BOWLING GREEN KY	319.2	CP	BPCDT-20110218ABM	1.24%
13	WBKO	BOWLING GREEN KY	319.2	Archived	BMPCDT-20080611AAQ	0.82%
13	WBXV-CA	LOUISVILLE KY	176.2	LIC	BLTVA-20050202ABW	No interference
13	WZZM	GRAND RAPIDS MI	376.5	CP	BPCDT-20091204ACT	0.00%
13	WTVG	TOLEDO OH	303.8	APP	BMPCDT-20110111AAI	0.03%
13	WTVG	TOLEDO OH	303.8	CP MO	BMPCDT-20090507AAD	0.03%
13	WOWK-TV	HUNTINGTON WV	376.9	CP	BMPCDT-20080620AJA	0.00%

TABLE II
COMPUTED COVERAGE DATA
FOR THE PROPOSED DTV OPERATION OF
WTHR, INDIANAPOLIS, INDIANA
CHANNEL 13 42.1 KW ERP 299 METERS HAAT
MARCH 2011

Radial Bearing (N ° E, T)	Average* Elevation 3.2 to 16.1 km meters	Effective Height meters	Depression Angle degrees	ERP At Radio Horizon kW	Distance to Contour F(50,90) 43 dBu City Grade km	36 dBu Noise-Limited km
0	277.5	273.5	0.458	34.7	88.3	100.8
10	276.8	274.2	0.459	35.7	88.5	101.1
20	274.4	276.6	0.461	37.7	89.1	101.6
30	265.0	286.0	0.468	40.3	89.9	102.6
40	260.3	290.7	0.472	42.2	90.5	103.2
50	256.1	294.9	0.476	42.7	90.8	103.5
60	251.9	299.1	0.479	42.2	90.9	103.7
70	245.2	305.8	0.484	40.3	91.0	103.9
80	242.2	308.8	0.487	37.7	90.7	103.5
90	241.9	309.1	0.487	35.7	90.3	103.1
100	242.4	308.6	0.487	34.7	90.1	102.8
110	246.0	305.0	0.484	35.7	90.0	102.8
120	245.2	305.8	0.484	37.7	90.5	103.3
130	246.5	304.5	0.483	40.3	90.9	103.8
140	244.8	306.2	0.485	42.2	91.4	104.3
150	243.6	307.4	0.486	42.7	91.6	104.5
160	241.4	309.6	0.487	42.2	91.7	104.6
170	238.6	312.4	0.490	40.3	91.5	104.4
180	233.6	317.4	0.493	37.7	91.4	104.3
190	232.3	318.7	0.495	35.7	91.0	103.9
200	233.0	318.0	0.494	34.7	90.8	103.6
210	237.2	313.8	0.491	35.7	90.7	103.5
220	238.7	312.3	0.490	37.7	91.0	103.8
230	245.3	305.7	0.484	40.3	91.0	103.9
240	253.6	297.4	0.478	42.2	90.8	103.6
250	257.1	293.9	0.475	42.7	90.7	103.5
260	259.9	291.1	0.473	42.2	90.5	103.2
270	262.7	288.3	0.470	40.3	90.0	102.7

TABLE II
COMPUTED COVERAGE DATA
FOR THE PROPOSED DTV OPERATION OF
WTHR, INDIANAPOLIS, INDIANA
CHANNEL 13 42.1 KW ERP 299 METERS HAAT
MARCH 2011

Radial Bearing (N ° E, T)	Average* Elevation 3.2 to 16.1 km meters	Effective Height meters	Depression Angle degrees	ERP At Radio Horizon kW	Distance to Contour F(50,90) 43 dBu City Grade km	36 dBu Noise-Limited km
280	268.9	282.1	0.465	37.7	89.3	101.8
290	271.7	279.3	0.463	35.7	88.7	101.3
300	274.3	276.7	0.461	34.7	88.4	100.9
310	275.7	275.3	0.460	35.7	88.6	101.1
320	276.8	274.2	0.459	37.7	89.0	101.5
330	275.8	275.2	0.460	40.3	89.5	102.1
340	272.2	278.8	0.462	42.2	90.0	102.6
350	272.1	278.9	0.463	42.7	90.1	102.7
320	274.7	276.3	0.460	47.129	90.8	103.4
330	276.2	274.8	0.459	45.066	90.4	103.0
340	277.9	273.1	0.458	42.148	89.8	102.4
350	277.9	273.1	0.458	39.848	89.4	101.9

* Based on data from FCC 3-second database

DTV Channel 13 (210-216 MHz)
Average Elevation 3.2 to 16.1 km 257.2 meters AMSL
Center of Radiation 551 meters AMSL
Antenna Height Above Average Terrain 299 meters
Effective Radiated Power 42.1 kW (16.24 dBk) Max.

North Latitude: 39° 55' 43"
West Longitude: 86° 10' 55"

(NAD-27)

COHEN, DIPPELL AND EVERIST, P.C.

EXHIBIT E-2

ANTENNA MANUFACTURER DATA

WTHR-DT, INDIANAPOLIS, INDIANA

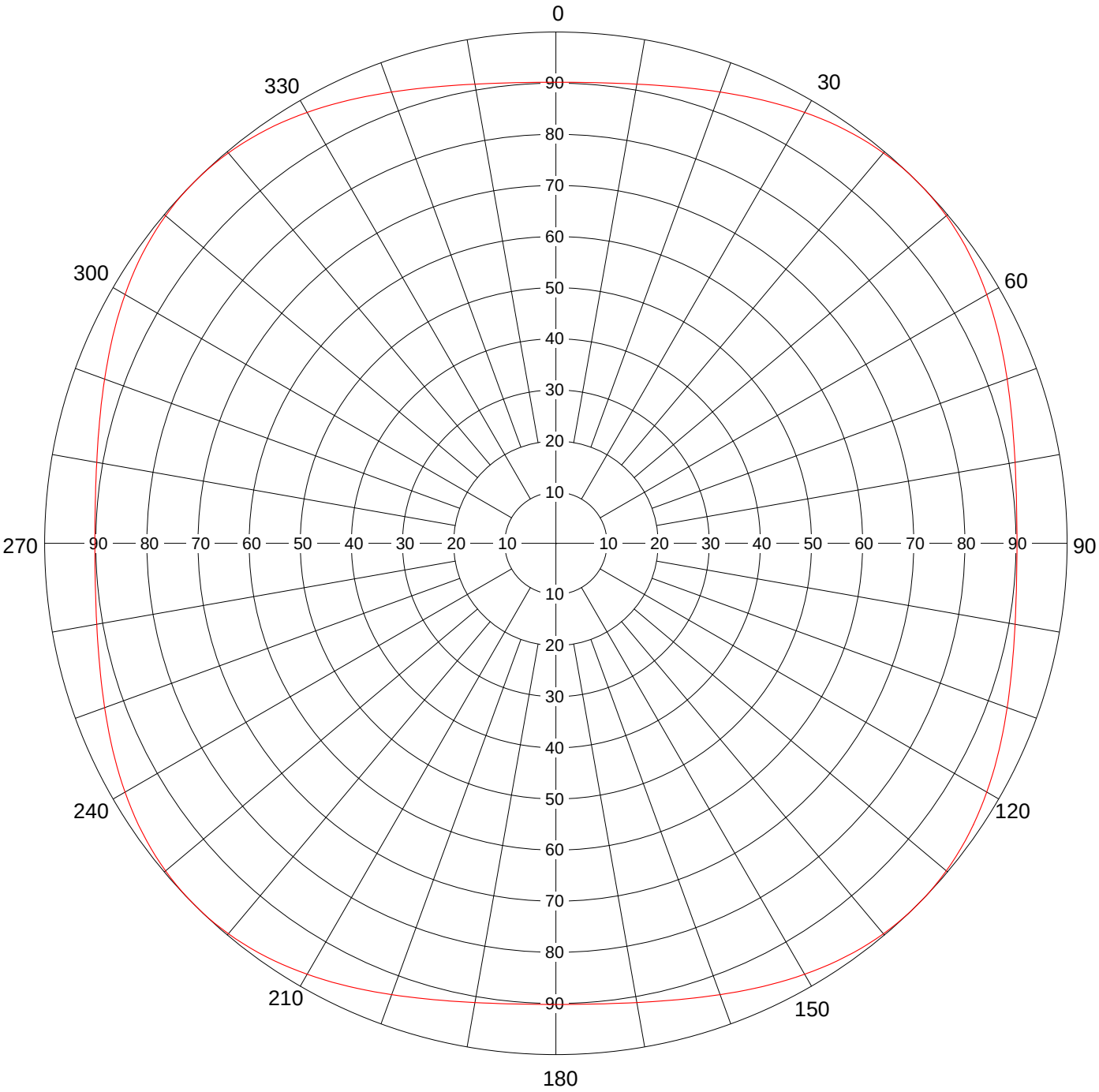
Exhibit No.
E-2

Dielectric

Date	**18 Jan 2011**		
Call Letters	**WTHR**	Channel	**13**
Location	**Indianapolis, IN**		
Customer	**WTHR**		
Antenna Type	**TCL-16A**		

AZIMUTH PATTERN

Gain	**1.10 (0.41 dB)**	Frequency	**213 MHz**
Calculated / Measured	**Calculated**	Drawing #	**TCL-O-HP**



Remarks:

Exhibit No.
E-2

Dielectric

Date	**18 Jan 2011**		
Call Letters	**WTHR**	Channel	**13**
Location	**Indianapolis, IN**		
Customer	**WTHR**		
Antenna Type	**TCL-16A**		

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # **TCL-O-HP**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.902	45	1.000	90	0.902	135	1.000	180	0.902	225	1.000	270	0.902	315	1.000
1	0.902	46	1.000	91	0.902	136	1.000	181	0.902	226	1.000	271	0.902	316	1.000
2	0.902	47	0.999	92	0.902	137	0.999	182	0.902	227	0.999	272	0.902	317	0.999
3	0.903	48	0.999	93	0.903	138	0.999	183	0.903	228	0.999	273	0.903	318	0.999
4	0.903	49	0.998	94	0.903	139	0.998	184	0.903	229	0.998	274	0.903	319	0.998
5	0.904	50	0.997	95	0.904	140	0.997	185	0.904	230	0.997	275	0.904	320	0.997
6	0.906	51	0.995	96	0.906	141	0.995	186	0.906	231	0.995	276	0.906	321	0.995
7	0.907	52	0.994	97	0.907	142	0.994	187	0.907	232	0.994	277	0.907	322	0.994
8	0.908	53	0.992	98	0.908	143	0.992	188	0.908	233	0.992	278	0.908	323	0.992
9	0.910	54	0.990	99	0.910	144	0.990	189	0.910	234	0.990	279	0.910	324	0.990
10	0.912	55	0.987	100	0.912	145	0.987	190	0.912	235	0.987	280	0.912	325	0.987
11	0.914	56	0.985	101	0.914	146	0.985	191	0.914	236	0.985	281	0.914	326	0.985
12	0.916	57	0.982	102	0.916	147	0.982	192	0.916	237	0.982	282	0.916	327	0.982
13	0.919	58	0.979	103	0.919	148	0.979	193	0.919	238	0.979	283	0.919	328	0.979
14	0.921	59	0.976	104	0.921	149	0.976	194	0.921	239	0.976	284	0.921	329	0.976
15	0.924	60	0.973	105	0.924	150	0.973	195	0.924	240	0.973	285	0.924	330	0.973
16	0.927	61	0.970	106	0.927	151	0.970	196	0.927	241	0.970	286	0.927	331	0.970
17	0.930	62	0.967	107	0.930	152	0.967	197	0.930	242	0.967	287	0.930	332	0.967
18	0.933	63	0.963	108	0.933	153	0.963	198	0.933	243	0.963	288	0.933	333	0.963
19	0.936	64	0.960	109	0.936	154	0.960	199	0.936	244	0.960	289	0.936	334	0.960
20	0.939	65	0.956	110	0.939	155	0.956	200	0.939	245	0.956	290	0.939	335	0.956
21	0.943	66	0.953	111	0.943	156	0.953	201	0.943	246	0.953	291	0.943	336	0.953
22	0.946	67	0.950	112	0.946	157	0.950	202	0.946	247	0.950	292	0.946	337	0.950
23	0.950	68	0.946	113	0.950	158	0.946	203	0.950	248	0.946	293	0.950	338	0.946
24	0.953	69	0.943	114	0.953	159	0.943	204	0.953	249	0.943	294	0.953	339	0.943
25	0.956	70	0.939	115	0.956	160	0.939	205	0.956	250	0.939	295	0.956	340	0.939
26	0.960	71	0.936	116	0.960	161	0.936	206	0.960	251	0.936	296	0.960	341	0.936
27	0.963	72	0.933	117	0.963	162	0.933	207	0.963	252	0.933	297	0.963	342	0.933
28	0.967	73	0.930	118	0.967	163	0.930	208	0.967	253	0.930	298	0.967	343	0.930
29	0.970	74	0.927	119	0.970	164	0.927	209	0.970	254	0.927	299	0.970	344	0.927
30	0.973	75	0.924	120	0.973	165	0.924	210	0.973	255	0.924	300	0.973	345	0.924
31	0.976	76	0.921	121	0.976	166	0.921	211	0.976	256	0.921	301	0.976	346	0.921
32	0.979	77	0.919	122	0.979	167	0.919	212	0.979	257	0.919	302	0.979	347	0.919
33	0.982	78	0.916	123	0.982	168	0.916	213	0.982	258	0.916	303	0.982	348	0.916
34	0.985	79	0.914	124	0.985	169	0.914	214	0.985	259	0.914	304	0.985	349	0.914
35	0.987	80	0.912	125	0.987	170	0.912	215	0.987	260	0.912	305	0.987	350	0.912
36	0.990	81	0.910	126	0.990	171	0.910	216	0.990	261	0.910	306	0.990	351	0.910
37	0.992	82	0.908	127	0.992	172	0.908	217	0.992	262	0.908	307	0.992	352	0.908
38	0.994	83	0.907	128	0.994	173	0.907	218	0.994	263	0.907	308	0.994	353	0.907
39	0.995	84	0.906	129	0.995	174	0.906	219	0.995	264	0.906	309	0.995	354	0.906
40	0.997	85	0.904	130	0.997	175	0.904	220	0.997	265	0.904	310	0.997	355	0.904
41	0.998	86	0.903	131	0.998	176	0.903	221	0.998	266	0.903	311	0.998	356	0.903
42	0.999	87	0.903	132	0.999	177	0.903	222	0.999	267	0.903	312	0.999	357	0.903
43	0.999	88	0.902	133	0.999	178	0.902	223	0.999	268	0.902	313	0.999	358	0.902
44	1.000	89	0.902	134	1.000	179	0.902	224	1.000	269	0.902	314	1.000	359	0.902

Remarks:

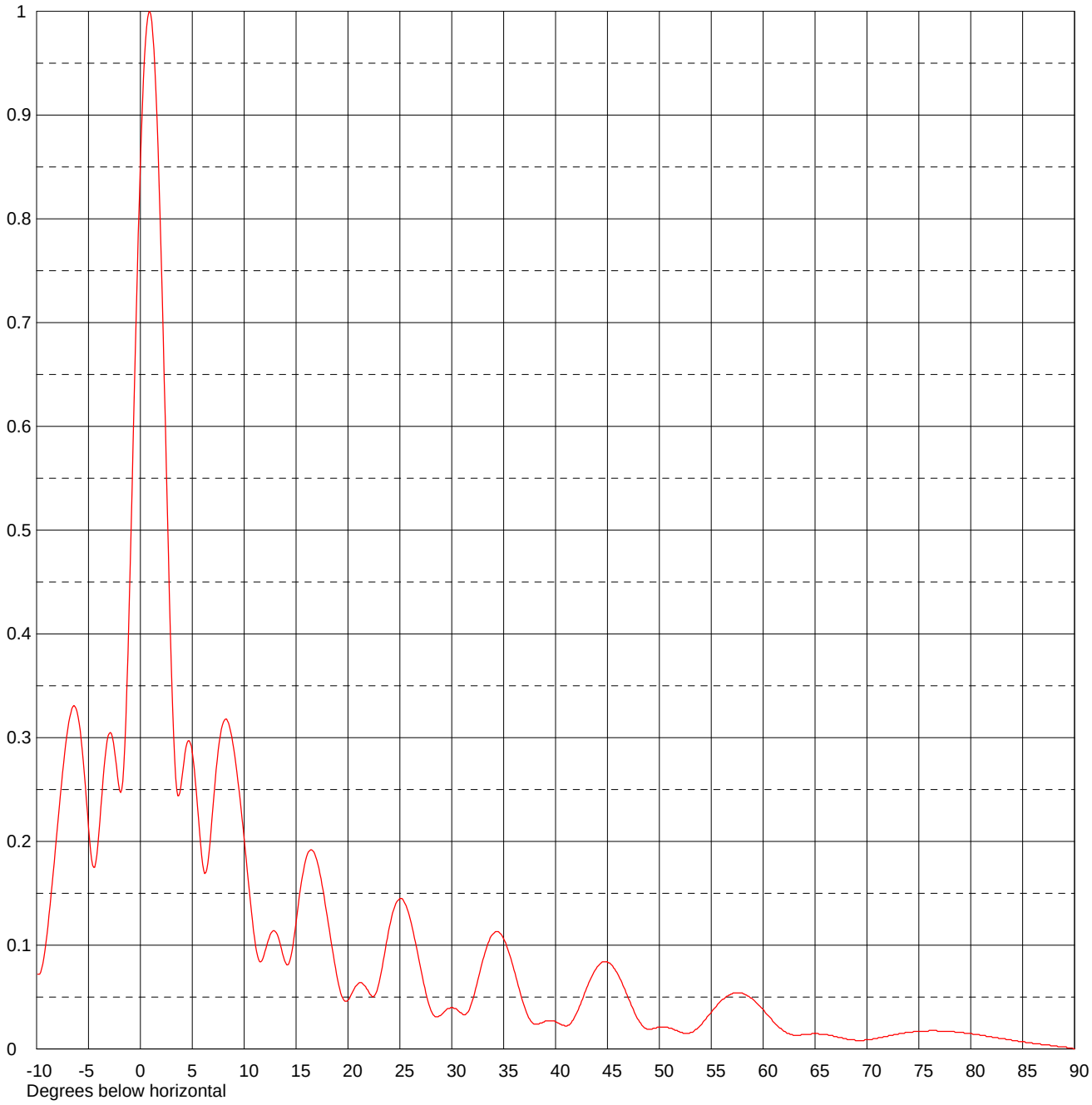
Exhibit No.
E-2

Dielectric

Date	**29 Dec 2010**		
Call Letters	**WTHR**	Channel	**13**
Location	**Indianapolis, IN**		
Customer	**VideoIndiana**		
Antenna Type	**TCL-16A**		

ELEVATION PATTERN

RMS Gain at Main Lobe	**8.0 (9.03 dB)**	Beam Tilt	**0.90 Degrees**
RMS Gain at Horizontal	**5.8 (7.63 dB)**	Frequency	**213.00 MHz**
Calculated / Measured	**Calculated**	Drawing #	**03T080090-90**



Remarks:

Exhibit No.
E-2

Dielectric

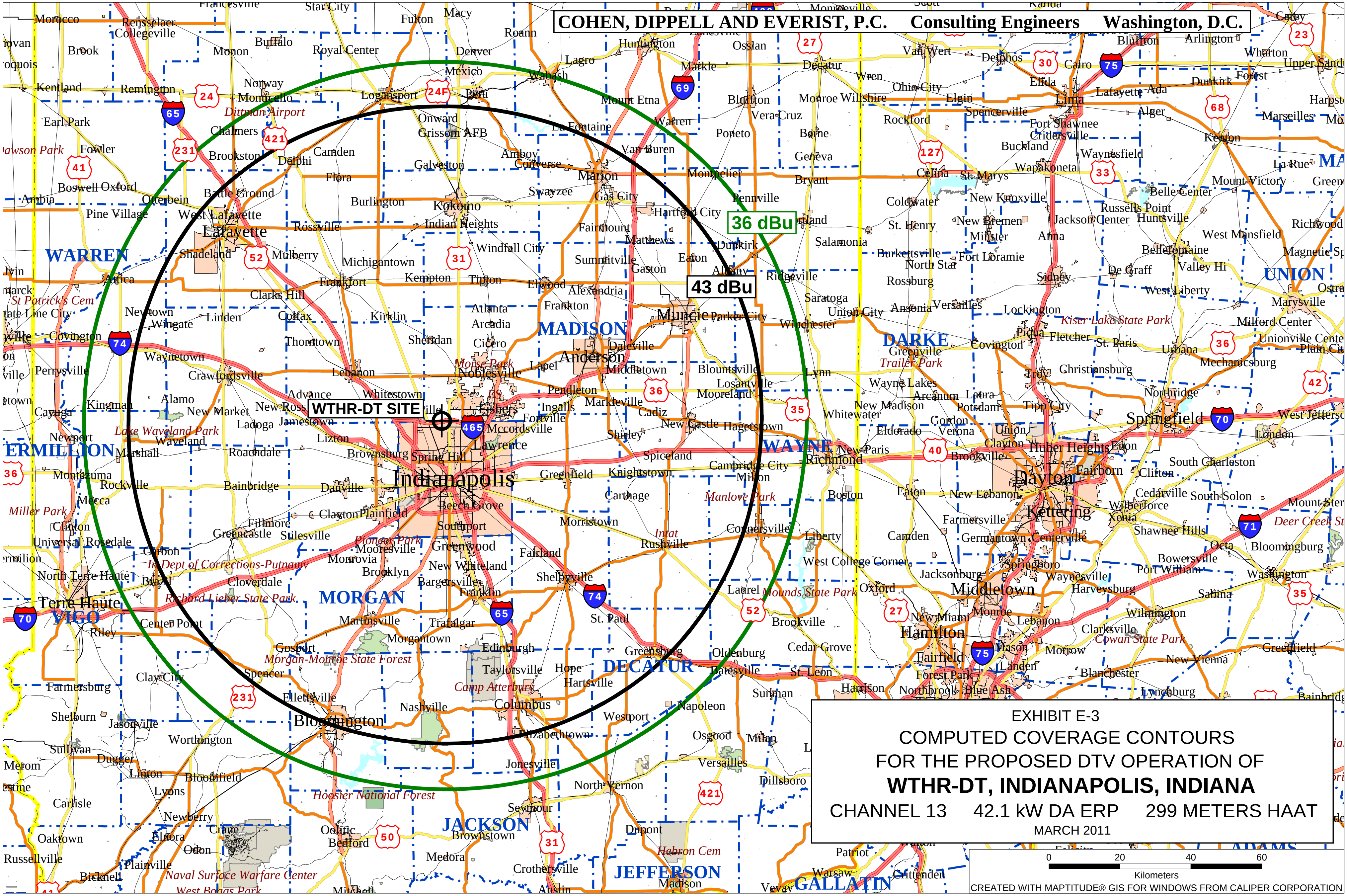
Date	**29 Dec 2010**		
Call Letters	**WTHR**	Channel	**13**
Location	**Indianapolis, IN**		
Customer	**VideoIndiana**		
Antenna Type	**TCL-16A**		

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing # **03T080090-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.074	2.4	0.603	10.6	0.142	30.5	0.038	51.0	0.020	71.5	0.011
-9.5	0.078	2.6	0.518	10.8	0.123	31.0	0.034	51.5	0.018	72.0	0.012
-9.0	0.110	2.8	0.436	11.0	0.107	31.5	0.035	52.0	0.016	72.5	0.013
-8.5	0.159	3.0	0.362	11.5	0.084	32.0	0.047	52.5	0.015	73.0	0.014
-8.0	0.213	3.2	0.302	12.0	0.094	32.5	0.066	53.0	0.016	73.5	0.015
-7.5	0.266	3.4	0.262	12.5	0.110	33.0	0.086	53.5	0.019	74.0	0.016
-7.0	0.308	3.6	0.244	13.0	0.113	33.5	0.102	54.0	0.023	74.5	0.017
-6.5	0.330	3.8	0.247	13.5	0.100	34.0	0.111	54.5	0.029	75.0	0.017
-6.0	0.320	4.0	0.261	14.0	0.083	34.5	0.113	55.0	0.035	75.5	0.017
-5.5	0.277	4.2	0.277	14.5	0.089	35.0	0.106	55.5	0.041	76.0	0.018
-5.0	0.214	4.4	0.291	15.0	0.122	35.5	0.093	56.0	0.047	76.5	0.018
-4.5	0.175	4.6	0.297	15.5	0.160	36.0	0.076	56.5	0.051	77.0	0.017
-4.0	0.208	4.8	0.295	16.0	0.185	36.5	0.058	57.0	0.053	77.5	0.017
-3.5	0.271	5.0	0.286	16.5	0.192	37.0	0.041	57.5	0.054	78.0	0.017
-3.0	0.304	5.2	0.269	17.0	0.182	37.5	0.029	58.0	0.054	78.5	0.016
-2.8	0.304	5.4	0.247	17.5	0.158	38.0	0.024	58.5	0.051	79.0	0.016
-2.6	0.295	5.6	0.222	18.0	0.128	38.5	0.025	59.0	0.048	79.5	0.015
-2.4	0.280	5.8	0.197	18.5	0.096	39.0	0.027	59.5	0.043	80.0	0.015
-2.2	0.263	6.0	0.178	19.0	0.067	39.5	0.027	60.0	0.038	80.5	0.014
-2.0	0.249	6.2	0.169	19.5	0.049	40.0	0.026	60.5	0.032	81.0	0.013
-1.8	0.250	6.4	0.173	20.0	0.047	40.5	0.024	61.0	0.026	81.5	0.012
-1.6	0.272	6.6	0.188	20.5	0.056	41.0	0.022	61.5	0.021	82.0	0.012
-1.4	0.317	6.8	0.209	21.0	0.063	41.5	0.025	62.0	0.017	82.5	0.011
-1.2	0.381	7.0	0.234	21.5	0.062	42.0	0.034	62.5	0.015	83.0	0.010
-1.0	0.458	7.2	0.258	22.0	0.055	42.5	0.046	63.0	0.013	83.5	0.009
-0.8	0.541	7.4	0.279	22.5	0.051	43.0	0.059	63.5	0.013	84.0	0.008
-0.6	0.626	7.6	0.296	23.0	0.064	43.5	0.070	64.0	0.014	84.5	0.008
-0.4	0.709	7.8	0.308	23.5	0.090	44.0	0.079	64.5	0.014	85.0	0.007
-0.2	0.786	8.0	0.315	24.0	0.118	44.5	0.084	65.0	0.015	85.5	0.006
0.0	0.854	8.2	0.318	24.5	0.137	45.0	0.084	65.5	0.014	86.0	0.005
0.2	0.911	8.4	0.316	25.0	0.145	45.5	0.080	66.0	0.014	86.5	0.005
0.4	0.956	8.6	0.310	25.5	0.140	46.0	0.072	66.5	0.013	87.0	0.004
0.6	0.985	8.8	0.301	26.0	0.125	46.5	0.061	67.0	0.012	87.5	0.004
0.8	0.999	9.0	0.289	26.5	0.103	47.0	0.049	67.5	0.011	88.0	0.003
1.0	0.997	9.2	0.274	27.0	0.078	47.5	0.038	68.0	0.010	88.5	0.002
1.2	0.978	9.4	0.258	27.5	0.054	48.0	0.028	68.5	0.009	89.0	0.002
1.4	0.945	9.6	0.241	28.0	0.037	48.5	0.021	69.0	0.008	89.5	0.001
1.6	0.897	9.8	0.222	28.5	0.031	49.0	0.019	69.5	0.008	90.0	0.000
1.8	0.836	10.0	0.202	29.0	0.033	49.5	0.020	70.0	0.009		
2.0	0.765	10.2	0.182	29.5	0.038	50.0	0.021	70.5	0.009		
2.2	0.686	10.4	0.162	30.0	0.040	50.5	0.021	71.0	0.010		

Remarks:


COHEN, DIPPELL AND EVERIST, P.C. Consulting Engineers Washington, D.C.
36 dBu
43 dBu
WTHR-DT SITE
Indianapolis
EXHIBIT E-3
COMPUTED COVERAGE CONTOURS
FOR THE PROPOSED DTV OPERATION OF
WTHR-DT, INDIANAPOLIS, INDIANA
CHANNEL 13 42.1 kW DA ERP 299 METERS HAAT
MARCH 2011
0 20 40 60
Kilometers
CREATED WITH MAPTITUDE® GIS FOR WINDOWS FROM CALIPER CORPORATION

SECTION III - D - DTV Engineering

Complete Questions 1-5, and provide all data and information for the proposed facility, as requested in Technical Specifications, Items 1-13.

Pre-Transition Certification Checklist: An application concerning a pre-transition channel must complete questions 1(a)-(c), and 2-5. A correct answer of "Yes" to all of the questions will ensure an expeditious grant of a construction permit application to modify pre-transition facilities. However, if the proposed facility is located within the Canadian or Mexican borders, coordination of the proposal under the appropriate treaties may be required prior to grant of the application. An answer of "No" will require additional evaluation of the applicable information in this form before a construction permit can be granted.

Post-Transition Expedited Processing. An application concerning a post-transition channel must complete questions 1(a), (d)-(e), and 2-5. A station applying for a construction permit to build its post-transition channel will receive expedited processing if its application (1) does not seek to expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622(i) ("new DTV Table Appendix B"); (2) specifies facilities that match or closely approximate those defined in the new DTV Table Appendix B facilities; and (3) is filed on or before March 17, 2008 (45 days of the Report and Order in the Third DTV Periodic Review proceeding, MB Docket No. 07-91).

1. The proposed DTV facility complies with 47 C.F.R. Section 73.622 in the following respects:

   (a) It will operate on the DTV channel for this station as established in 47 C.F.R. Section 73.622. [X] Yes [ ] No

   (b) It will operate a pre-transition facility from a transmitting antenna located within 5.0 km (3.1 miles) of the DTV reference site for this station as established in 47 C.F.R. Section 73.622. [ ] Yes [ ] No

   (c) It will operate a pre-transition facility with an effective radiated power (ERP) and antenna height above average terrain (HAAT) that do not exceed the DTV reference ERP and HAAT for this station as established in 47 C.F.R. Section 73.622. [ ] Yes [ ] No

   (d) It will operate at post-transition facilities that do not expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622(i) ("new DTV Table Appendix B"). [ ] Yes [X] No [ ] N/A

   (e) It will operate at post-transition facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the new DTV Table Appendix B. [X] Yes [ ] No [ ] N/A

2. The proposed facility will not have a significant environmental impact, including exposure of workers or the general public to levels of RIF radiation exceeding the applicable health and safety guidelines, and therefore will not come within 47 C.F.R. Section 1.1307. [X] Yes [ ] No

   Applicant must **submit the Exhibit** called for in Item 13.

3. Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community. [X] Yes [ ] No

4. The requirements of 47 C.F.R. Section 73.1030 regarding notification to radio astronomy installations, radio receiving installations and FCC monitoring stations have either been satisfied or are not applicable. [X] Yes [ ] No

5. The antenna structure to be used by this facility has been registered by the Commission and will not require reregistration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely effect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7. [X] Yes [ ] No

SECTION III - D DTV Engineering

TECHNICAL SPECIFICATIONS Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

TECH BOX

1. Channel Number: DTV 13 Analog TV, if any _____

2. Zone: [X] I [ ] II [ ] III

3. Antenna Location Coordinates: (NAD 27)

39 ° 55 ' 43 " [X] N [ ] S Latitude
86 ° 10 ' 55 " [ ] E [X] W Longitude

4. Antenna Structure Registration Number: 1024109

[ ] Not applicable [ ] FAA Notification Filed with FAA

5. Antenna Location Site Elevation Above Mean Sea Level: 251.1 meters

6. Overall Tower Height Above Ground Level: 316.8 meters

7. Height of Radiation Center Above Ground Level: 299.9 meters

8. Height of Radiation Center Above Average Terrain: 299 meters

9. Maximum Effective Radiated Power (average power): 42.1 kW

10. Antenna Specifications:

a. Manufacturer: RCA | Model: TCL-16A13

b. Electrical Beam Tilt: 0.9 degrees [ ] Not Applicable

c. Mechanical Beam Tilt: _____ degrees toward azimuth _____ degrees True [X] Not Applicable

Attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). Exhibit No. E-2

d. Polorization: [ ] Horizontal [X] Circular [ ] Elliptical

TECH BOX

e. Directional Antenna Relative Field Values: ☐ Not applicable (Nondirectional)

Rotation: _____ ° ☒ No rotation

Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value
0	0.902	60	0.972	120	0.972	180	0.902	240	0.972	300	0.972
10	0.914	70	0.940	130	0.994	190	0.914	250	0.940	310	0.994
20	0.940	80	0.914	140	0.944	200	0.940	260	0.914	320	0.994
30	0.972	90	0.902	150	0.972	210	0.972	270	0.902	330	0.972
40	0.994	100	0.914	160	0.940	220	0.994	280	0.914	340	0.940
50	0.994	110	0.940	170	0.914	230	0.994	290	0.940	350	0.914
Additional Azimuths		45	1.000	135	1.000	225	1.000	315	1.000		

If a directional antenna is proposed, the requirements of 47 C.F.R. Section 73.625(c) must be satisfied. **Exhibit required.**

Exhibit No. E-2

11. Does the proposed facility satisfy the pre-transition interference protection provisions of 47 C.F.R. Section 73.623(a) (Applicable only if **Certification Checklist** Items 1(a), (b), or (c) are answered "No.") and/or the post-transition interference protection provisions of 47 C.F.R. Section 73.616? ☒ Yes ☐ No

If "No," attach as an Exhibit justification therefore, including a summary of any related previously granted waivers.

Exhibit No.

12. If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefore. (Applicable only if **Certification Checklist** Item 3 is answered "No.")

Exhibit No.

13. **Environmental Protection Act. Submit in an Exhibit** the following:

Exhibit No. E

a. If **Certification Checklist Item** 2 is answered "Yes," a brief explanation of why an Environmental Assessment is not required. Also describe in the Exhibit the steps that will be taken to limit RF radiation exposure to the public and to persons authorized access to the tower site.

By checking "Yes" to **Certification Checklist** Item 2, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radio frequency electromagnetic exposure in excess of FCC guidelines.

If **Certification Checklist** Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R. Section 1.1311.

10. **Auction Authorization.** If the application is being submitted to obtain a construction permit for which the applicant was the winning bidder in an auction, then the applicant certifies, pursuant to 47 C.F.R. Section 73.5005(a), that it has attached an exhibit containing the information required by 47 C.F.R. Sections 1.2107(d), 1.2110(i), 1.2112(a) and 1.2112(b), if applicable.

☐ Y WTHR-DT 42.1 KW

Exhibit No.

An exhibit is required unless this question is inapplicable.

11. **Anti-Drug Abuse Act Certification.** Applicant certifies that neither applicant nor any party to the application is subject to denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862.

☐ Yes ☐ No

12. **Equal Employment Opportunity (EEO).** If the applicant proposes to employ five or more full-time employees, applicant certifies that it is filing simultaneously with this application a Model EEO Program Report on FCC Form 396-A.

☐ Yes ☐ No ☐ N/A

13. **Petition for Rulemaking/Counterproposal to Add New FM Channel to FM Table of Allotments.** If the application is being submitted concurrently with a Petition for Rulemaking or Counterproposal to Amend the I'M Table of Allotments (47 C.F.R. Section 73.202) to add a new FM channel allotment, petitioner/counter-proponent certifies that, if the FM channel allotment requested is allotted, petitioner/counter- proponent will apply to participate in the auction of the channel allotment requested and specified in this application.

☐ Yes ☐ No ☐ N/A

I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in 'good faith. I acknowledge that all certifications and attached Exhibits are considered material representations. I hereby waive any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and request an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

Typed or Printed Name of Person Signing	Typed or Printed Title of Person Signing
Signature	Date

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

SECTION III PREPARER'S CERTIFICATION

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name	Relationship to Applicant (e.g., Consulting Engineer)	
Ross J. Heide	Consulting Engineer	
Signature Ross J Heide	Date March 28, 2011	
Mailing Address Cohen, Dippell and Everist, PC, 1420 N Street NW, Suite One		
City Washington	State or Country (if foreign address) DC	ZIP Code 20005
Telephone Number (include area code) 202-898-0111	E-Mail Address (if available) cde@attglobal.net	

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18. SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).