

ENGINEERING STATEMENT  
DIGITAL DISPLACEMENT TRANSLATOR APPLICATION  
ON BEHALF OF  
MAINE PUBLIC BROADCASTING CORPORATION  
**W04AY, ST. FRANCIS, MAINE**  
CHANNEL 5 97 W DA ERP 458 METERS RCAMSL

MAY 2010

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                 )

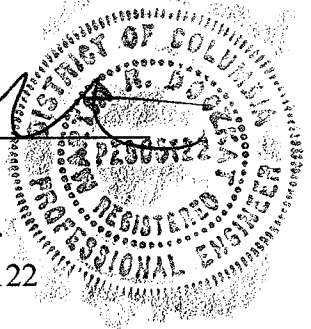
Martin R. Doczkat being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer of the Pennsylvania State University, a Registered Professional Engineer in the District of Columbia, and is a staff engineer at Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;

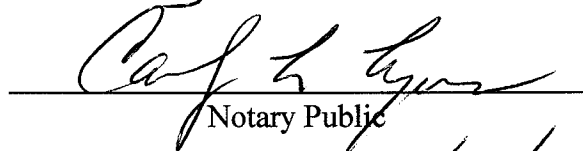
That the attached engineering report was prepared by him or under his supervision and direction and

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.

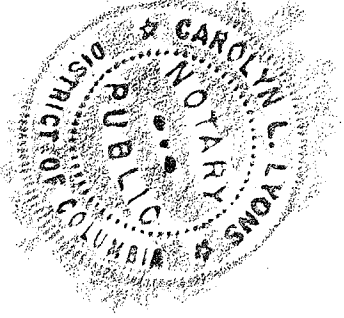
  
\_\_\_\_\_  
Martin R. Doczkat  
District of Columbia  
Professional Engineer  
Registration No. PE905122



Subscribed and sworn to before me this 10<sup>th</sup> day of May, 2010.

  
\_\_\_\_\_  
Notary Public

My Commission Expires: 2/28/2013



This engineering statement has been prepared on behalf of Maine Public Broadcasting Corporation (“MPBC”), licensee of television translator station W04AY, St. Francis, Maine. W04AY is licensed to operate on Channel 4 with a directional effective radiated power (“ERP”) of 0.002 kW at a radiation center above mean sea level (“RCAMSL”) of 458 meters.

W04AY cannot convert to digital operation on its currently licensed channel, commonly referred to as “flash-cut”, due to numerous co-channel Canadian television stations within 280 kilometers of its licensed site, according to Section 73.3572(a)(4)(iv)(A)(2) of the FCC Rules. These co-channel Canadian stations are:

• NB-PT-885	Digital Allotment	Channel 4	Campbelltown, NB	233 km away
• CBAT-TV-4	Operating Analog	Channel 4	Campbelltown, NB	233 km away
• CIMA-PT-1	Digital Allotment	Channel 4	Edmunston, NB	48 km away
• CIMA-TV-1	Operating Analog	Channel 4	Edmunston, NB	48 km away
• NB-PT-934	Digital Allotment	Channel 4	Saint John, NB	276 km away
• CBAT-TV	Operating Analog	Channel 4	Saint John, NB	276 km away
• CFTF-PT-4	Digital Allotment	Channel 4	Forestville, QC	183 km away
• CFTF-TV-4	Operating Analog	Channel 4	Forestville, QC	183 km away
• QC-PT-1885	Digital Allotment	Channel 4	Jonquière, QC	217 km away
• CFRS-TV	Operating Analog	Channel 4	Jonquière, QC	217 km away

• QC-PT-1997	Digital Allotment	Channel 4	Québec, QC	188 km away
• CFCM-TV	Operating Analog	Channel 4	Québec, QC	188 km away

Accordingly, this statement supports the licensee's request to operate digitally on Channel 5 with a directional ERP of 97 watts at a RCAMSL of 458 meters.

There is no change in transmitter site. The NAD-27 geographic coordinates of the existing site are as follows:

North Latitude: 47° 10' 08"

West Longitude: 68° 51' 47"

The existing tower is less than 200 feet and TOWAIR indicates that the structure does not require registration. There are no airports within 8 kilometers (5 miles) of the existing site.

#### Allocation

The proposed operation is in accordance with Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b), and 73.1030 of the FCC Rules. The requirements of these sections regarding Channel 5 operation of W04AY are met through demonstration of Longley-Rice prediction methodology where applicable, attached as Table I. The proposed digital low-power television station will not cause any objectionable interference to any existing or proposed full-service DTV stations or LPTV/TV translators. Additionally, the proposed operation includes plans for installing a filter that will meet the simple emission mask with attenuation of at least 85 dB in the L5 (1164-1215 MHz), L2 (1215-1240 MHz) and L1 (1559-1610 MHz) bands in order to comply

with Section 74.794(b) of the FCC Rules. The proposed operation is approximately 2 kilometers from the Canadian border.

#### Interference Analysis

A study of predicted interference caused by the proposed W04AY digital television translator operation has been performed using the Longley-Rice program for which the source data has been posted by the Commission on its website at [http://www.fcc.gov/oet/dtv/dtv\\_apps.html](http://www.fcc.gov/oet/dtv/dtv_apps.html). The FCC's FORTRAN-77 code was modified only to the extent necessary (primarily input/output handling) for the program to run on a Microsoft Windows XP platform. Comparison of service/interference areas and population indicates this model closely matches the FCC's digital low-power TV/translator evaluation program. Best efforts have been made to use data and calculation identical to the FCC's program with the simple emission mask. The model employs the Longley-Rice propagation methodology and evaluates in grid cells of approximately 1 sq. km. Using 3-second terrain data sampled approximately every 1.0 km at one-degree azimuth intervals with 2000 census centroids, all studies are based upon data in the current CDBS database update of the FCC's engineering database. This Longley-Rice study was performed with the proposed W04AY digital television translator facilities and all relevant stations listed in the FCC database as of April 29, 2010.

#### Transmitting Equipment

The following equipment will be used for the proposed operation.

Transmitter:	Type-Accepted
Out-of-Channel Emission Mask:	Simple

Antenna: Kathrein, CL-46 Log-Periodic (x4)

Power Data

Transmitter output power	0.04 kW	-13.98 dBk
Transmission line efficiency/loss 16 meters (52.5 ft) of LDF450 1/2", 50 ohm line	93%	0.32 dB
Input power to the antenna	0.037 kW	-14.3 dBk
Antenna power gain	2.6	4.2 dB
Effective Radiated Power	0.097 kW	-10.1 dBk

The W04AY operation proposes a composite antenna system that will be side-mounted on the existing tower at 15.24 meters above ground. The overall tower height above ground level will remain unchanged at 18.3 meters.

Elevation Data  
(unchanged)

Overall height above ground of the existing antenna structure (including beacon)	18.3 meters 60 feet
Center of radiation of Channel 5 antenna above ground	15.24 meters 50 feet
Elevation of site above mean sea level	442.7 meters 1452.6 feet
Center of radiation of Channel 5 antenna above mean sea level	458 meters 1502.6 feet
Overall height above mean sea level of the existing antenna structure (including beacon)	461 meters 1512.6 feet

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

FCC Rule, Section 1.1307

The proposed Channel 5, 0.097 kW directional operation will utilize a Kathrein-Scala CL-46 composite antenna system (or equivalent) described above with a center of radiation above ground of 15.24 meters. The proposed Channel 5 operation of W04AY will create a radiofrequency field level of less than  $10 \mu\text{W}/\text{cm}^2$  at the base of the tower. This level is less than 5% of the  $200 \mu\text{W}/\text{cm}^2$  Maximum Permissible Exposure (“MPE”) level for the general population and 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 or near 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 applicant 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 located on a tower which was built prior to the adoption of WT Docket No. 03-128 and is grandfathered and has 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 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.



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TABLE I  
LONGLEY-RICE INTERFERENCE ANALYSIS  
FOR THE PROPOSED OPERATION OF  
W04AY, ST. FRANCIS, MAINE  
CHANNEL 5 0.097 KW DA ERP 458 METERS HAAT  
MAY 2010

<u>Channel</u>	<u>Call</u>	<u>City/State</u>	<u>Dist(km)</u>	<u>Status</u>	<u>FCC File No.</u>	<u>Result</u>
5	NEW	BANGOR ME	262.9	APP	BNPDVL-20090916ADG	No interference
5	CBAFT1	FREDERICTON NB	294	LIC	NULL-304692NULL	No interference
5	CBAFT-1	FREDERICTON NB	294	OP	CANADA-716	No interference
5	NB-PT-90	FREDERICTON NB	294	AL	CANADA-1362543NULL	No interference
5	VACANT	FREDERICTON NB	294	LIC	BPFS-20081125AMR	No interference
5	CKCW-PT-	ST EDWARD PE	358.5	AL	CANADA-1363115NULL	0.00%
5	CKCWTV2	ST EDWARD PE	358.4	LIC	NULL-304700NULL	0.00%
5	CKCW-TV-	ST EDWARD PE	358.4	LIC	BPFS-20081209AAW	0.00%
5	CKCW-TV-	ST EDWARD PE	358.5	OP	CANADA-3082	0.00%
5	CKRTTV4	CABANO QC	50.7	LIC	NULL-302548NULL	No interference
5	CHAU-PT	CARLETON QC	232	AL	CANADA-1363288NULL	No interference
5	CHAUTV	CARLETON QC	232	LIC	NULL-304701NULL	No interference
5	CHAU-TV	CARLETON QC	232	LIC	BPFS-20081209ACZ	No interference
5	CHAU-TV	CARLETON QC	232	OP	CANADA-2197	No interference
5	QC-PT-18	FORESTVILLE QC	182.6	AL	CANADA-1363425NULL	0.00%
5	VACANT	FORESTVILLE QC	182.6	LIC	BPFS-20081210ABM	No interference
5	CFERTV2	GASPE NORD QC	368.4	LIC	NULL-304702NULL	No interference
5	VACANT	QU BEC QC	187.1	LIC	BPFS-20081211ADO	No interference
5	CKMITV	QUEBEC QC	187.1	LIC	NULL-304703NULL	No interference
5	CBVE-TV	QUTBEC QC	187.1	OP	CANADA-658	No interference
5	QC-PT-19	QUTBEC QC	187.1	AL	CANADA-1361343NULL	No interference
5	VACANT	RIVI RE-AU-RENARD QC	386.7	LIC	BPFS-20081216AAR	No interference
5	QC-PT-20	RIVIFRE-AU-RENARD QC	386.7	AL	CANADA-1361465NULL	No interference
5	CFER-TV-	SEPT- LES QC	368.4	LIC	BPFS-20081216AHT	No interference
5	CFER-PT-	SEPT-ILES QC	368.4	AL	CANADA-1361604NULL	No interference
5	CFER-TV-	SEPT-ILES QC	368.4	OP	CANADA-2170	No interference
6	CBAT-PT-	BON ACCORD NB	112.4	AL	CANADA-1362522NULL	No interference
6	CBAT-TV-	BON ACCORD NB	112.4	LIC	BPFS-20081125AIS	No interference
6	CBAT-TV-	BON ACCORD NB	112.4	AU	CANADA-5872	0.03%
6	CHSJTV1	BON ACCORD NB	112.4	LIC	NULL-304877NULL	0.03%

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CHANNEL 5 0.097 KW DA ERP 458 METERS HAAT  
MAY 2010

<u>Channel</u>	<u>Call</u>	<u>City/State</u>	<u>Dist(km)</u>	<u>Status</u>	<u>FCC File No.</u>	<u>Result</u>
6	CBVT-6	BEARN-FABRE QC	178.3	LIC	BPFS-20081209ACJ	No interference
6	CBVT6	BEAUCEVILLE QC	178.3	LIC	NULL-304888NULL	0.00%
6	CBVT-6	BEAUCEVILLE QC	178.3	OP	CANADA-4269	No interference
6	CBVT-PT-	BEAUCEVILLE QC	178.3	AL	CANADA-1363256NULL	No interference
6	CJPM-PT	CHICOUTIMI QC	215.6	AL	CANADA-1363400NULL	No interference
6	CJPMTV	CHICOUTIMI QC	215.6	LIC	NULL-304887NULL	0.00%
6	CJPM-TV	CHICOUTIMI QC	215.6	LIC	BPFS-20081209ADN	No interference
6	CJPM-TV	CHICOUTIMI QC	215.6	OP	CANADA-634	No interference
6	CBGAT	MATANE QC	216.1	APP	BPFS-20081210ADR	0.00%
6	CBGAT	MATANE QC	216.1	LIC	NULL-304889NULL	0.00%
6	CBGAT	MATANE QC	216.1	OP	CANADA-1828	0.00%
6	CBGAT-PT	MATANE QC	216.1	AL	CANADA-1361180NULL	0.00%

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

CANADA

UNITED STATES

43 dBu

W04AY-LD SITE

Square Lake

EXHIBIT E-1  
PROTECTED COVERAGE CONTOUR  
FOR THE PROPOSED DIGITAL OPERATION OF  
**W04AY, ST. FRANCIS, MAINE**  
CHANNEL 5 0.097 kW DA ERP 458 METERS RCAMSL  
MAY 2010

0 5 10 15  
Kilometers

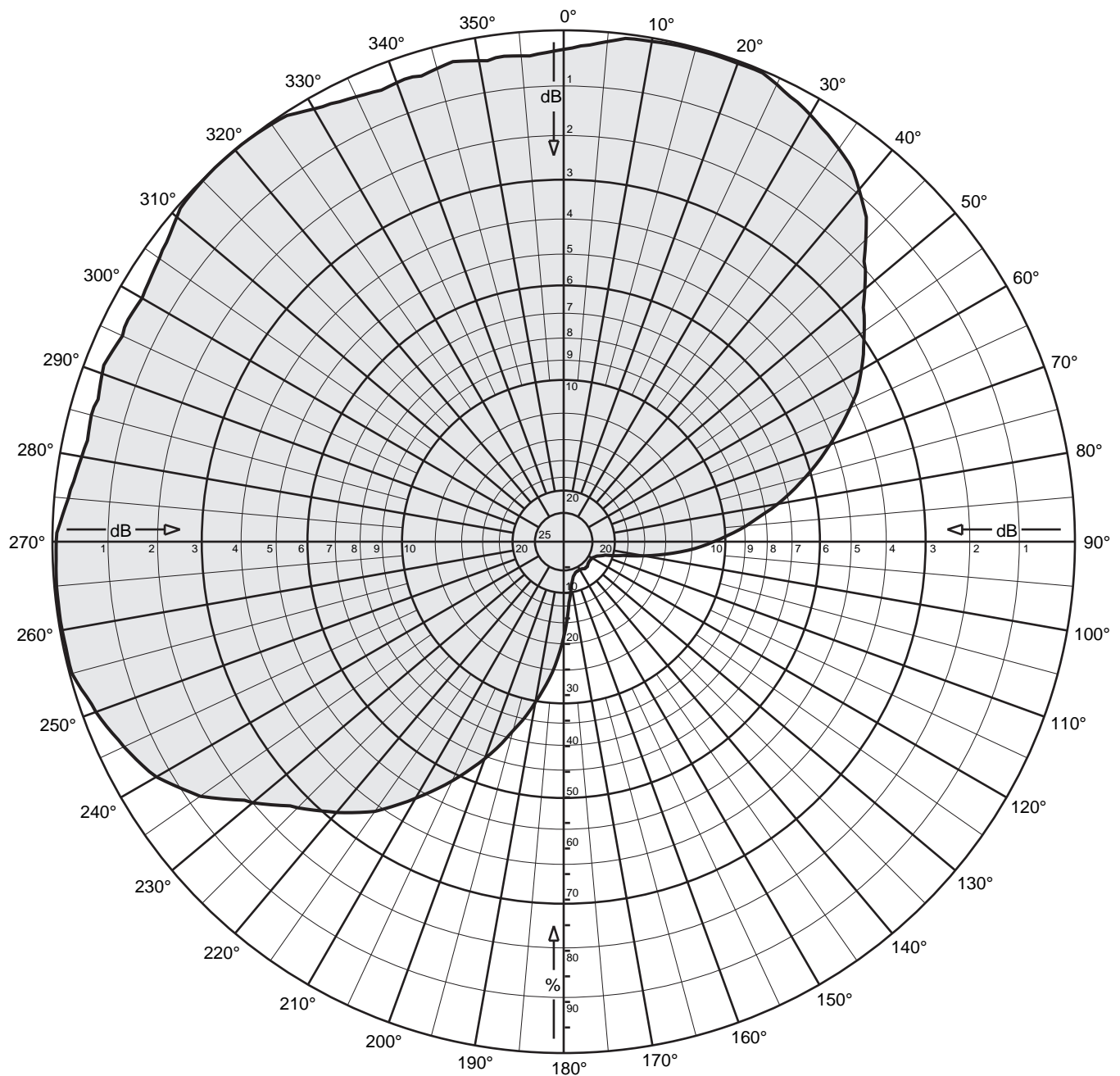
CREATED WITH MAPTITUDE® GIS FOR WINDOWS FROM CALIPER CORPORATION

COHEN, DIPPELL AND EVERIST, P.C.

EXHIBIT E-2

ANTENNA MANUFACTURER DATA

W04AY, ST. FRANCIS, MAINE



Four CL-46 Log-periodic Antennas  
Oriented at 43, 235, 291 & 347 deg

CH: 05

Gain: 4.2 dBd (x 2.6)

Horizontal Polarization

Vertical Stacked

Horizontal Plane Pattern

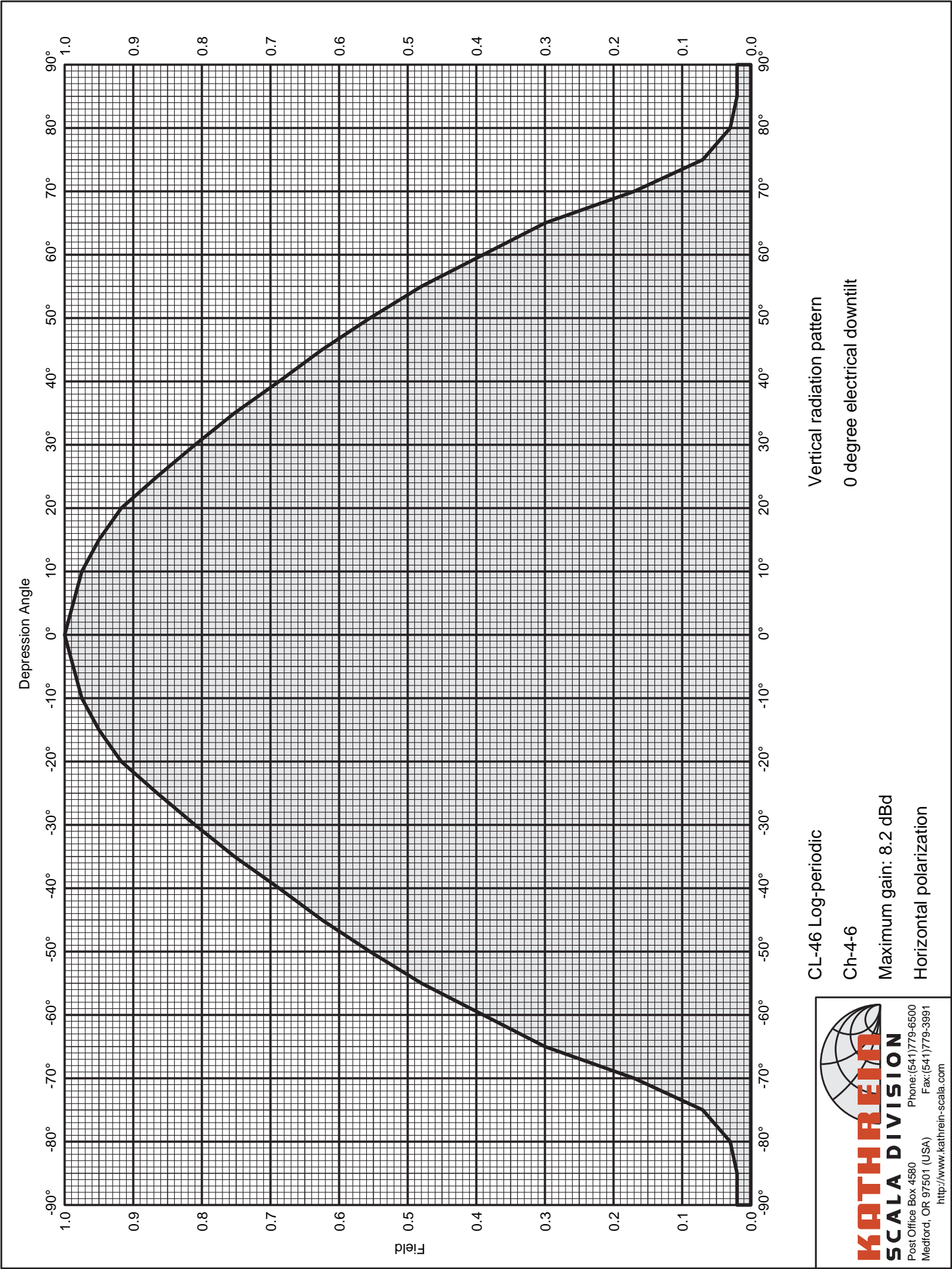
W04AY



Four CL-46 Log-periodic Antennas  
 Oriented at 43, 235, 291 & 347 deg  
 CH: 05  
 Gain: 4.2 dBd (x 2.6)

Horizontal Polarization  
 Vertical Stacked  
 Horizontal Plane Pattern  
 W04AY

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	0.963	-0.33	3.87	2.44	180	0.187	-14.57	-10.37	0.09
5	0.982	-0.16	4.04	2.54	185	0.257	-11.80	-7.60	0.17
10	0.993	-0.06	4.14	2.60	190	0.319	-9.93	-5.73	0.27
15	0.996	-0.04	4.16	2.61	195	0.383	-8.34	-4.14	0.39
20	0.995	-0.04	4.16	2.61	200	0.452	-6.91	-2.71	0.54
25	0.987	-0.12	4.08	2.56	205	0.516	-5.74	-1.54	0.70
30	0.964	-0.32	3.88	2.45	210	0.579	-4.74	-0.54	0.88
35	0.938	-0.55	3.65	2.32	215	0.644	-3.82	0.38	1.09
40	0.899	-0.93	3.27	2.13	220	0.691	-3.21	0.99	1.26
45	0.836	-1.56	2.64	1.84	225	0.736	-2.66	1.54	1.42
50	0.769	-2.28	1.92	1.56	230	0.794	-2.00	2.20	1.66
55	0.718	-2.88	1.32	1.35	235	0.868	-1.23	2.97	1.98
60	0.672	-3.45	0.75	1.19	240	0.920	-0.72	3.48	2.23
65	0.618	-4.18	0.02	1.00	245	0.949	-0.45	3.75	2.37
70	0.554	-5.13	-0.93	0.81	250	0.974	-0.23	3.97	2.49
75	0.490	-6.19	-1.99	0.63	255	0.996	-0.04	4.16	2.61
80	0.425	-7.43	-3.23	0.48	260	0.996	-0.03	4.17	2.61
85	0.359	-8.90	-4.70	0.34	265	0.996	-0.04	4.16	2.61
90	0.294	-10.65	-6.45	0.23	270	0.993	-0.06	4.14	2.59
95	0.229	-12.81	-8.61	0.14	275	0.973	-0.24	3.96	2.49
100	0.159	-15.95	-11.75	0.07	280	0.957	-0.38	3.82	2.41
105	0.106	-19.49	-15.29	0.03	285	0.956	-0.39	3.81	2.41
110	0.080	-21.93	-17.73	0.02	290	0.961	-0.35	3.85	2.43
115	0.069	-23.25	-19.05	0.01	295	0.952	-0.43	3.77	2.39
120	0.064	-23.84	-19.64	0.01	300	0.952	-0.43	3.77	2.39
125	0.063	-23.99	-19.79	0.01	305	0.966	-0.30	3.90	2.45
130	0.064	-23.94	-19.74	0.01	310	0.988	-0.11	4.09	2.57
135	0.066	-23.56	-19.36	0.01	315	0.999	-0.01	4.19	2.62
140	0.066	-23.56	-19.36	0.01	320	1.000	-0.00	4.20	2.63
145	0.065	-23.75	-19.55	0.01	325	0.996	-0.03	4.17	2.61
150	0.064	-23.94	-19.74	0.01	330	0.977	-0.20	4.00	2.51
155	0.064	-23.89	-19.69	0.01	335	0.960	-0.35	3.85	2.42
160	0.066	-23.65	-19.45	0.01	340	0.955	-0.40	3.80	2.40
165	0.072	-22.90	-18.70	0.01	345	0.958	-0.37	3.83	2.41
170	0.085	-21.41	-17.21	0.02	350	0.955	-0.40	3.80	2.40
175	0.119	-18.46	-14.26	0.04	355	0.954	-0.41	3.79	2.39



Vertical radiation pattern  
0 degree electrical downtilt

CL-46 Log-periodic  
Ch-4-6  
Maximum gain: 8.2 dBd  
Horizontal polarization



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CL-46 Log-periodic  
Ch-4-6

Maximum gain: 8.2 dBd  
Horizontal polarization

Vertical radiation pattern  
0 degree electrical downtilt

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
-90	0.020	-33.98	-25.78	0.00	-45	0.625	-4.08	4.12	2.58
-89	0.020	-33.98	-25.78	0.00	-44	0.638	-3.91	4.29	2.69
-88	0.020	-33.98	-25.78	0.00	-43	0.650	-3.74	4.46	2.79
-87	0.020	-33.98	-25.78	0.00	-42	0.663	-3.58	4.62	2.90
-86	0.020	-33.98	-25.78	0.00	-41	0.675	-3.41	4.79	3.01
-85	0.020	-33.98	-25.78	0.00	-40	0.688	-3.25	4.95	3.12
-84	0.022	-33.15	-24.95	0.00	-39	0.701	-3.09	5.11	3.24
-83	0.024	-32.40	-24.20	0.00	-38	0.714	-2.93	5.27	3.36
-82	0.026	-31.70	-23.50	0.00	-37	0.726	-2.78	5.42	3.49
-81	0.028	-31.06	-22.86	0.01	-36	0.739	-2.62	5.58	3.61
-80	0.030	-30.46	-22.26	0.01	-35	0.752	-2.47	5.73	3.74
-79	0.038	-28.40	-20.20	0.01	-34	0.764	-2.34	5.86	3.86
-78	0.046	-26.74	-18.54	0.01	-33	0.775	-2.21	5.99	3.97
-77	0.054	-25.35	-17.15	0.02	-32	0.787	-2.08	6.12	4.09
-76	0.062	-24.15	-15.95	0.03	-31	0.799	-1.95	6.25	4.21
-75	0.070	-23.10	-14.90	0.03	-30	0.810	-1.83	6.37	4.33
-74	0.090	-20.92	-12.72	0.05	-29	0.821	-1.71	6.49	4.45
-73	0.110	-19.17	-10.97	0.08	-28	0.832	-1.60	6.60	4.57
-72	0.130	-17.72	-9.52	0.11	-27	0.843	-1.48	6.72	4.70
-71	0.150	-16.48	-8.28	0.15	-26	0.854	-1.37	6.83	4.82
-70	0.170	-15.39	-7.19	0.19	-25	0.865	-1.26	6.94	4.94
-69	0.196	-14.15	-5.95	0.25	-24	0.875	-1.15	7.05	5.06
-68	0.222	-13.07	-4.87	0.33	-23	0.886	-1.05	7.15	5.19
-67	0.248	-12.11	-3.91	0.41	-22	0.896	-0.95	7.25	5.31
-66	0.274	-11.24	-3.04	0.50	-21	0.907	-0.85	7.35	5.44
-65	0.300	-10.46	-2.26	0.59	-20	0.918	-0.75	7.45	5.56
-64	0.318	-9.95	-1.75	0.67	-19	0.924	-0.69	7.51	5.64
-63	0.336	-9.47	-1.27	0.75	-18	0.931	-0.63	7.57	5.72
-62	0.354	-9.02	-0.82	0.83	-17	0.937	-0.57	7.63	5.80
-61	0.372	-8.59	-0.39	0.91	-16	0.944	-0.51	7.69	5.88
-60	0.390	-8.18	0.02	1.00	-15	0.950	-0.45	7.75	5.96
-59	0.408	-7.79	0.41	1.10	-14	0.955	-0.40	7.80	6.03
-58	0.426	-7.41	0.79	1.20	-13	0.960	-0.35	7.85	6.09
-57	0.444	-7.05	1.15	1.30	-12	0.965	-0.31	7.89	6.15
-56	0.462	-6.71	1.49	1.41	-11	0.970	-0.26	7.94	6.22
-55	0.480	-6.38	1.82	1.52	-10	0.975	-0.22	7.98	6.28
-54	0.495	-6.11	2.09	1.62	-9	0.978	-0.20	8.00	6.31
-53	0.510	-5.85	2.35	1.72	-8	0.980	-0.18	8.02	6.35
-52	0.525	-5.60	2.60	1.82	-7	0.983	-0.15	8.05	6.38
-51	0.540	-5.35	2.85	1.93	-6	0.985	-0.13	8.07	6.41
-50	0.555	-5.11	3.09	2.04	-5	0.988	-0.11	8.09	6.44
-49	0.569	-4.90	3.30	2.14	-4	0.990	-0.09	8.11	6.48
-48	0.583	-4.69	3.51	2.25	-3	0.993	-0.07	8.13	6.51
-47	0.597	-4.48	3.72	2.35	-2	0.995	-0.04	8.16	6.54
-46	0.611	-4.28	3.92	2.47	-1	0.998	-0.02	8.18	6.57
					0	1.000	0.00	8.20	6.61





CL-46 Log-periodic  
Ch-4-6

Maximum gain: 8.2 dBd  
Horizontal polarization

Vertical radiation pattern  
0 degree electrical downtilt

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	8.20	6.61	45	0.625	-4.08	4.12	2.58
1	0.998	-0.02	8.18	6.57	46	0.611	-4.28	3.92	2.47
2	0.995	-0.04	8.16	6.54	47	0.597	-4.48	3.72	2.35
3	0.993	-0.07	8.13	6.51	48	0.583	-4.69	3.51	2.25
4	0.990	-0.09	8.11	6.48	49	0.569	-4.90	3.30	2.14
5	0.988	-0.11	8.09	6.44	50	0.555	-5.11	3.09	2.04
6	0.985	-0.13	8.07	6.41	51	0.540	-5.35	2.85	1.93
7	0.983	-0.15	8.05	6.38	52	0.525	-5.60	2.60	1.82
8	0.980	-0.18	8.02	6.35	53	0.510	-5.85	2.35	1.72
9	0.978	-0.20	8.00	6.31	54	0.495	-6.11	2.09	1.62
10	0.975	-0.22	7.98	6.28	55	0.480	-6.38	1.82	1.52
11	0.970	-0.26	7.94	6.22	56	0.462	-6.71	1.49	1.41
12	0.965	-0.31	7.89	6.15	57	0.444	-7.05	1.15	1.30
13	0.960	-0.35	7.85	6.09	58	0.426	-7.41	0.79	1.20
14	0.955	-0.40	7.80	6.03	59	0.408	-7.79	0.41	1.10
15	0.950	-0.45	7.75	5.96	60	0.390	-8.18	0.02	1.00
16	0.944	-0.51	7.69	5.88	61	0.372	-8.59	-0.39	0.91
17	0.937	-0.57	7.63	5.80	62	0.354	-9.02	-0.82	0.83
18	0.931	-0.63	7.57	5.72	63	0.336	-9.47	-1.27	0.75
19	0.924	-0.69	7.51	5.64	64	0.318	-9.95	-1.75	0.67
20	0.918	-0.75	7.45	5.56	65	0.300	-10.46	-2.26	0.59
21	0.907	-0.85	7.35	5.44	66	0.274	-11.24	-3.04	0.50
22	0.896	-0.95	7.25	5.31	67	0.248	-12.11	-3.91	0.41
23	0.886	-1.05	7.15	5.19	68	0.222	-13.07	-4.87	0.33
24	0.875	-1.15	7.05	5.06	69	0.196	-14.15	-5.95	0.25
25	0.865	-1.26	6.94	4.94	70	0.170	-15.39	-7.19	0.19
26	0.854	-1.37	6.83	4.82	71	0.150	-16.48	-8.28	0.15
27	0.843	-1.48	6.72	4.70	72	0.130	-17.72	-9.52	0.11
28	0.832	-1.60	6.60	4.57	73	0.110	-19.17	-10.97	0.08
29	0.821	-1.71	6.49	4.45	74	0.090	-20.92	-12.72	0.05
30	0.810	-1.83	6.37	4.33	75	0.070	-23.10	-14.90	0.03
31	0.799	-1.95	6.25	4.21	76	0.062	-24.15	-15.95	0.03
32	0.787	-2.08	6.12	4.09	77	0.054	-25.35	-17.15	0.02
33	0.775	-2.21	5.99	3.97	78	0.046	-26.74	-18.54	0.01
34	0.764	-2.34	5.86	3.86	79	0.038	-28.40	-20.20	0.01
35	0.752	-2.47	5.73	3.74	80	0.030	-30.46	-22.26	0.01
36	0.739	-2.62	5.58	3.61	81	0.028	-31.06	-22.86	0.01
37	0.726	-2.78	5.42	3.49	82	0.026	-31.70	-23.50	0.00
38	0.714	-2.93	5.27	3.36	83	0.024	-32.40	-24.20	0.00
39	0.701	-3.09	5.11	3.24	84	0.022	-33.15	-24.95	0.00
40	0.688	-3.25	4.95	3.12	85	0.020	-33.98	-25.78	0.00
41	0.675	-3.41	4.79	3.01	86	0.020	-33.98	-25.78	0.00
42	0.663	-3.58	4.62	2.90	87	0.020	-33.98	-25.78	0.00
43	0.650	-3.74	4.46	2.79	88	0.020	-33.98	-25.78	0.00
44	0.638	-3.91	4.29	2.69	89	0.020	-33.98	-25.78	0.00
					90	0.020	-33.98	-25.78	0.00

### Section III - Engineering (Digital)

#### 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: \_\_\_\_\_
2. Translator Input Channel No. \_\_\_\_\_
3. Station proposed to be rebroadcast:

Call Sign	City	State	Channel
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4. Antenna Location Coordinates: (NAD 27)

\_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " ☐ N ☐ S Latitude  
\_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " ☐ E ☐ W Longitude

5. Antenna Structure Registration Number: \_\_\_\_\_

☐

Not applicable

See Explanation  
in Exhibit No.

☐

FAA Notification Filed with FAA

6. Antenna Location Site Elevation Above Mean Sea Level: \_\_\_\_\_ meters
7. Overall Tower Height Above Ground Level: \_\_\_\_\_ meters
8. Height of Radiation Center Above Ground Level: \_\_\_\_\_ meters
9. Maximum Effective Radiated Power (ERP): \_\_\_\_\_ kW
10. Transmitter Output Power: \_\_\_\_\_ kW
11. a. Transmitting Antenna: ☐ Nondirectional ☐ Directional ☐ Directional composite

Manufacturer	Model
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- b. Electrical Beam Tilt: \_\_\_\_\_ degrees ☐ Not applicable

c. Directional Antenna Relative Field Values:

Rotation: \_\_\_\_\_ ° ☐ No rotation ☐ N/A (Nondirectional)

Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value
0		60		120		180		240		300	
10		70		130		190		250		310	
20		80		140		200		260		320	
30		90		150		210		270		330	
40		100		160		220		280		340	
50		110		170		230		290		350	
Additional Azimuths											

**NOTE:** In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.

12. **Out-of-Channel Emission Mask:** Simple ☐ Stringent ☐

**CERTIFICATION**

13. **Interference.** The proposed facility complies with all of the following applicable rule sections. 47 C.F.R. Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030. ☐ Yes ☐ No 

See Explanation in Exhibit No.

14. **Environmental Protection Act.** The proposed facility is excluded from environmental processing under 47 C.F.R. Section 1.1306 (*i.e.*, the facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine RF compliance. An **Exhibit is required.** ☐ Yes ☐ No 

See Explanation in Exhibit No.

Exhibit No.

By checking "Yes" above, 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 radiofrequency electromagnetic exposure in excess of FCC guidelines.

15. **Channels 52-59.** If the proposed channel is within channels 52-59, the applicant certifies compliance with the following requirements, as applicable:

☐ The applicant is applying for a digital companion channel for which no suitable channel from channel 2-51 is available.

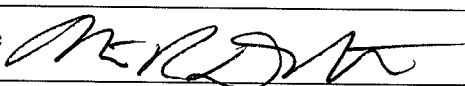
☐ Pursuant to Section 74.786(d), the applicant has notified, within 30 days of filing this application, all commercial wireless licensees of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees.

**PREPARER'S CERTIFICATION ON PAGE 8 MUST BE COMPLETED AND SIGNED.**

16. **Channels 60-69.** If the proposed channel is within channels 60-69, the applicant certifies compliance with the following requirements, as applicable:

- ☐ Pursuant to Section 74.786(e), the applicant has notified, within 30 days of filing this application, all commercial wireless licensees of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees,
- ☐ Pursuant to Section 74.786(e), the applicant proposing operation on channel 63, 64, 68 and 69 ("public safety channels") has secured a coordinated spectrum use agreement(s) with 700 MHz public safety regional planning committee(s) and state frequency administrator(s) of the region(s) and state(s) within which the antenna site of the digital LPTV or TV translator station is proposed to locate, and those adjoining regions and states with boundaries within 75 miles of the proposed station location.
- ☐ Pursuant to Section 74.786(e), an applicant for a channel adjacent to channel 63, 64, 68 or 69 has notified, within 30 days of filing this application, the 700 MHz public safety regional planning committee(s) and state administrator(s) of the region and state containing the proposed digital LPTV or TV translator antenna site and regions and states whose geographic boundaries lie within 50 miles of the proposed LPTV or TV translator antenna site.

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 Martin R. Doczkat		Relationship to Applicant (e.g., Consulting Engineer) Consulting Engineer	
Signature 		Date May 10, 2010	
Mailing Address Cohen, Dippell and Everist, P.C., 1300 L Street, NW, Suite 1100			
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).