

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of TRINITY BROADCASTING OF TEXAS, INC., licensee of full-power digital television station WHLV-DT, Channel 51 in Cocoa, Florida, in support of its request for Special Temporary Authority to use an interim facility for its operation on Channel 51 (pre-repack) while the new repack antenna on Channel 32 is installed on the same tower. No change in transmitter site location is proposed herein.

It is proposed to utilize a Dielectric directional, broadband, elliptically-polarized antenna at the 419-meter level of the existing 512.7-meter tower on which the licensed pre-repack Channel 51 antenna (and post-repack antenna, authorized under CP LMS-0000034686) is located. The proposed effective radiated power for the interim facility is 535 kW in the horizontal plane. Exhibit B is a map upon which the predicted service contours are plotted. As shown, the community of Cocoa, Florida, is completely encompassed by the proposed STA facility's 48 dBu city-grade service contour. In Exhibit C, we have plotted the service contours of the main licensed WHLV-DT facility (authorized in BLC DT-20090615ADQ) and that from the proposed STA interim operation. As shown, the service contour of the STA facility is completely contained within that licensed to WHLV-DT on Channel 51.

Elevation and azimuth pattern information for the proposed antenna are provided in Exhibit D. Since the STA facility proposed herein has a service contour contained completely within that licensed to WHLV-DT, no interference study is included herein. A power density calculation appears as Exhibit E.

EXHIBIT A

Since no change in the overall height or location of the existing tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the Federal Communications Commission issued Antenna Structure Registration Number 1212124 to this tower.

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read 'K. T. Fisher', is centered on the page.

KEVIN T. FISHER

October 4, 2019

Smith and Fisher, LLC

CONTOUR POPULATION
2015 U.S. CENSUS DATA
48 DBU : 3,575,806 (1,569,883 HH)
N/L : 3,421,026 (1,484,305 HH)

Proposed STA
N/L Contour

Proposed STA
48 dBu Contour

EXHIBIT B
PREDICTED SERVICE CONTOURS
PROPOSED WHLV-DT INTERIM STA
CHANNEL 51 - COCOA, FLORIDA

Scale 1:1,000,000

0 8 16 24 mi

Smith and Fisher, LLC

Licensed WHLV-DT
N/L Contour

Proposed STA
N/L Contour

EXHIBIT C
CONTOUR COMPARISON
PROPOSED WHLV-DT INTERIM STA
CHANNEL 51 - COCOA, FLORIDA

Scale 1:1,200,000

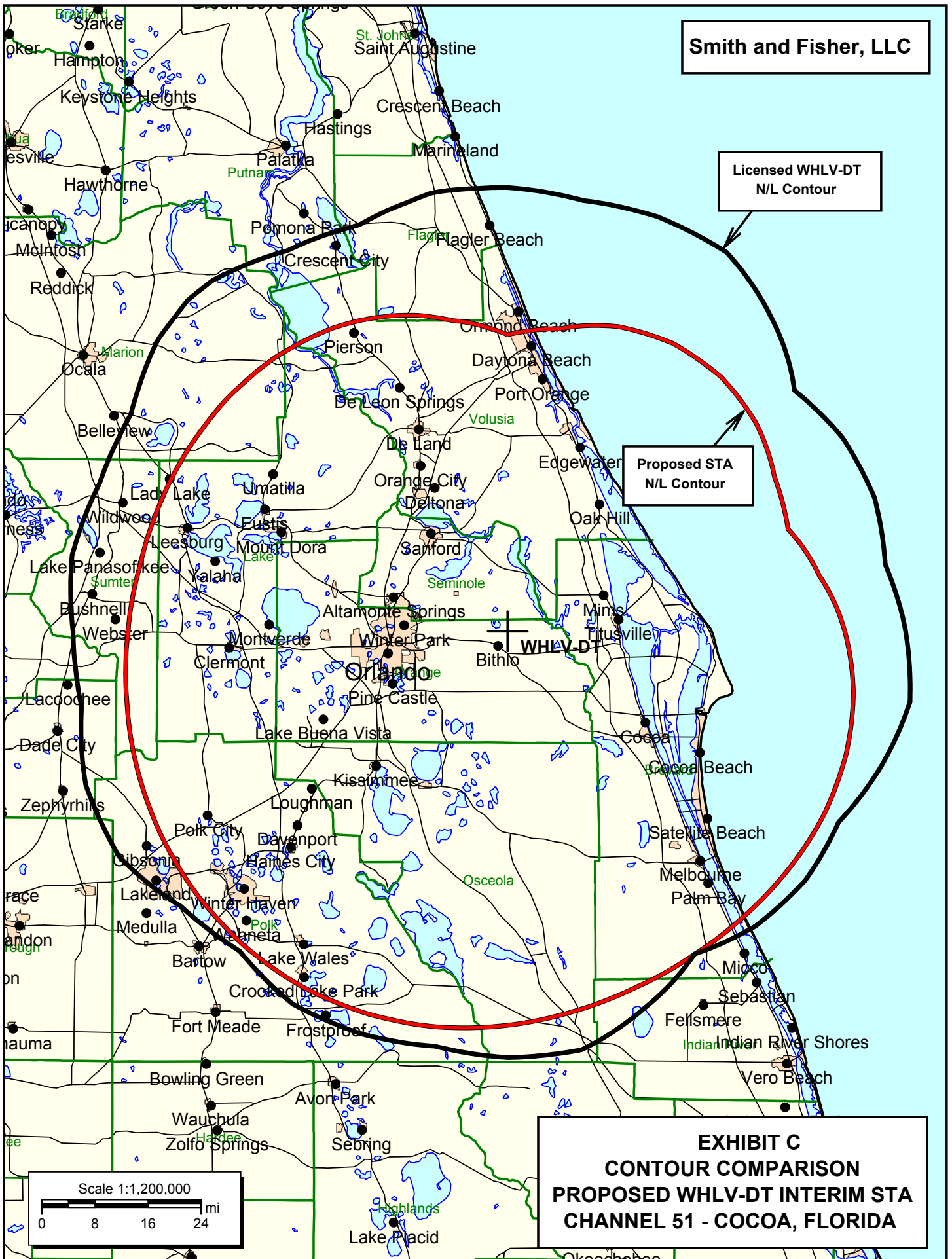
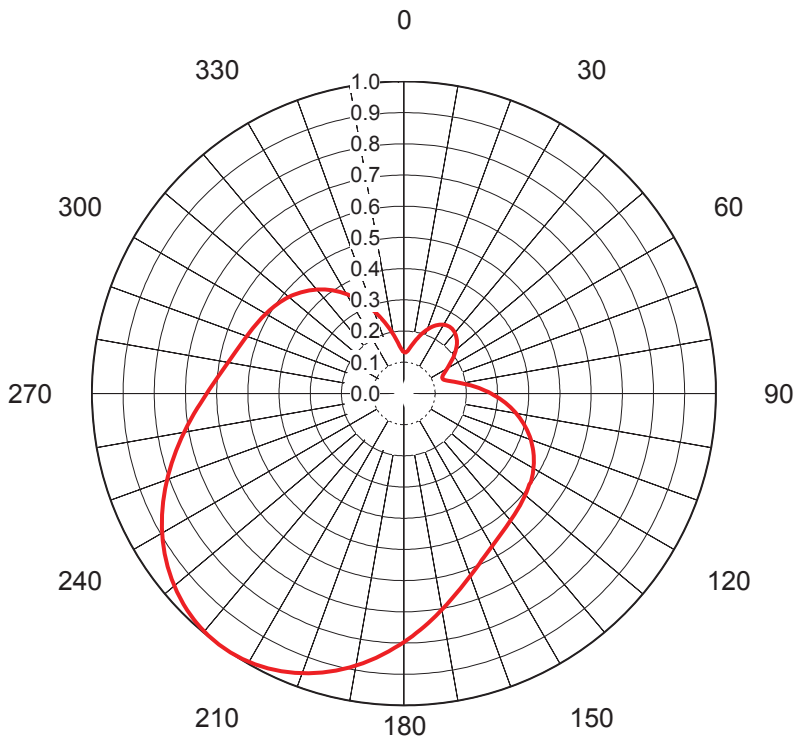


EXHIBIT D

AZIMUTH PATTERN Horizontal Polarization

In Free Space

Proposal No. **C-71020-7**
Date **17-Dec-18**
Call Letters **WHLV**
Channel **51**
Frequency **695 MHz**
Antenna Type **TFU-24WB/VP-R S230**
Gain **3.04 (4.82dB)**
Calculated



Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.133	36	0.259	72	0.138	108	0.421	144	0.543	180	0.797	216	1.000	252	0.789	288	0.542
1	0.131	37	0.258	73	0.142	109	0.427	145	0.546	181	0.807	217	0.999	253	0.780	289	0.539
2	0.131	38	0.257	74	0.147	110	0.433	146	0.550	182	0.816	218	0.998	254	0.770	290	0.536
3	0.132	39	0.256	75	0.153	111	0.438	147	0.553	183	0.825	219	0.997	255	0.761	291	0.533
4	0.134	40	0.254	76	0.159	112	0.444	148	0.557	184	0.834	220	0.996	256	0.752	292	0.531
5	0.137	41	0.252	77	0.166	113	0.449	149	0.561	185	0.843	221	0.994	257	0.742	293	0.528
6	0.141	42	0.250	78	0.173	114	0.454	150	0.566	186	0.852	222	0.991	258	0.733	294	0.526
7	0.145	43	0.247	79	0.181	115	0.459	151	0.570	187	0.861	223	0.989	259	0.724	295	0.523
8	0.149	44	0.243	80	0.189	116	0.463	152	0.575	188	0.869	224	0.986	260	0.715	296	0.521
9	0.155	45	0.240	81	0.197	117	0.468	153	0.580	189	0.877	225	0.982	261	0.706	297	0.518
10	0.160	46	0.236	82	0.206	118	0.472	154	0.585	190	0.886	226	0.978	262	0.697	298	0.516
11	0.166	47	0.232	83	0.215	119	0.476	155	0.591	191	0.894	227	0.974	263	0.688	299	0.513
12	0.172	48	0.227	84	0.224	120	0.480	156	0.596	192	0.901	228	0.970	264	0.680	300	0.511
13	0.178	49	0.223	85	0.233	121	0.483	157	0.602	193	0.909	229	0.965	265	0.671	301	0.508
14	0.184	50	0.218	86	0.242	122	0.487	158	0.609	194	0.916	230	0.960	266	0.663	302	0.506
15	0.190	51	0.212	87	0.252	123	0.490	159	0.615	195	0.923	231	0.955	267	0.655	303	0.503
16	0.196	52	0.207	88	0.261	124	0.493	160	0.622	196	0.930	232	0.949	268	0.647	304	0.500
17	0.202	53	0.201	89	0.270	125	0.496	161	0.629	197	0.937	233	0.943	269	0.639	305	0.497
18	0.207	54	0.196	90	0.279	126	0.496	162	0.637	198	0.943	234	0.937	270	0.632	306	0.494
19	0.213	55	0.190	91	0.288	127	0.499	163	0.644	199	0.949	235	0.931	271	0.625	307	0.491
20	0.218	56	0.184	92	0.298	128	0.502	164	0.652	200	0.954	236	0.924	272	0.618	308	0.488
21	0.223	57	0.178	93	0.306	129	0.505	165	0.660	201	0.960	237	0.917	273	0.612	309	0.484
22	0.228	58	0.172	94	0.315	130	0.507	166	0.669	202	0.965	238	0.910	274	0.605	310	0.481
23	0.232	59	0.166	95	0.324	131	0.510	167	0.677	203	0.970	239	0.902	275	0.599	311	0.477
24	0.236	60	0.161	96	0.332	132	0.512	168	0.686	204	0.974	240	0.894	276	0.593	312	0.473
25	0.240	61	0.155	97	0.341	133	0.515	169	0.695	205	0.978	241	0.887	277	0.588	313	0.469
26	0.244	62	0.150	98	0.349	134	0.517	170	0.704	206	0.982	242	0.878	278	0.582	314	0.465
27	0.247	63	0.146	99	0.357	135	0.519	171	0.713	207	0.985	243	0.870	279	0.577	315	0.460
28	0.250	64	0.141	100	0.365	136	0.522	172	0.722	208	0.988	244	0.862	280	0.572	316	0.456
29	0.252	65	0.138	101	0.373	137	0.524	173	0.731	209	0.991	245	0.853	281	0.568	317	0.451
30	0.254	66	0.135	102	0.380	138	0.527	174	0.740	210	0.993	246	0.844	282	0.564	318	0.446
31	0.256	67	0.134	103	0.387	139	0.529	175	0.750	211	0.995	247	0.835	283	0.559	319	0.440
32	0.257	68	0.133	104	0.395	140	0.532	176	0.759	212	0.997	248	0.826	284	0.556	320	0.435
33	0.258	69	0.133	105	0.401	141	0.534	177	0.769	213	0.998	249	0.817	285	0.552	321	0.429
34	0.259	70	0.134	106	0.408	142	0.537	178	0.778	214	0.999	250	0.808	286	0.548	322	0.423
35	0.259	71	0.135	107	0.415	143	0.540	179	0.788	215	1.000	251	0.798	287	0.545	323	0.417

This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.

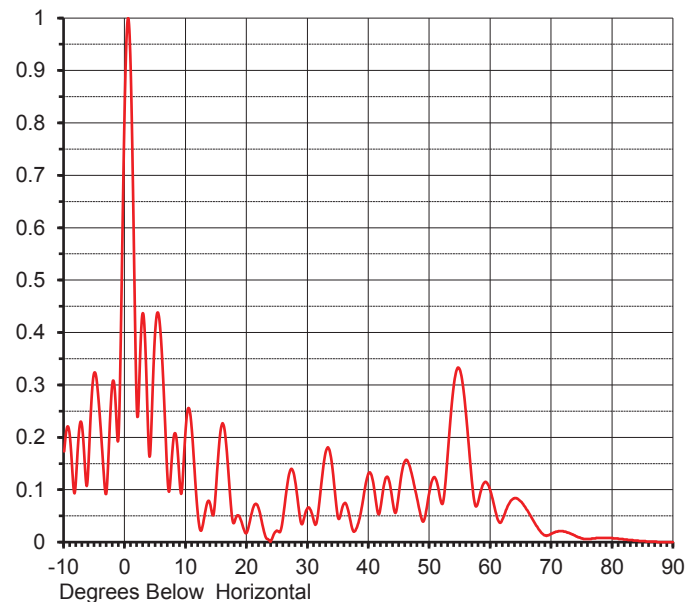
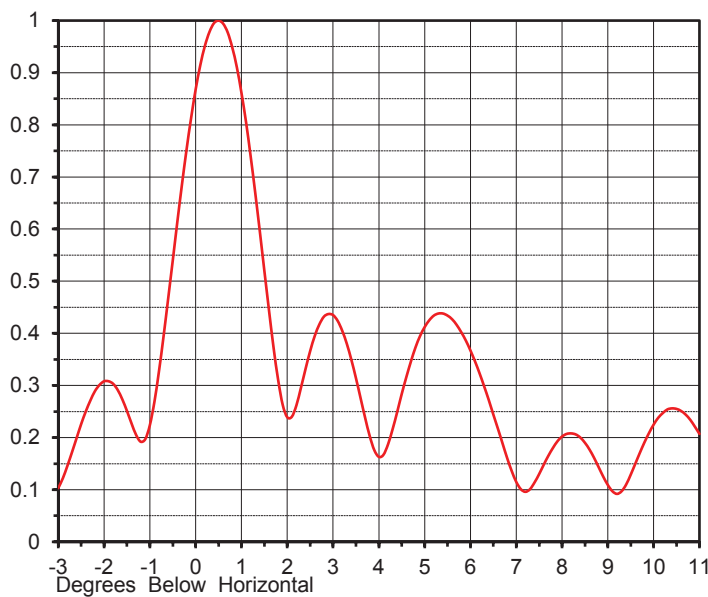
EXHIBIT D

ELEVATION PATTERN

Proposal No. **C-71020-7**
 Date **17-Dec-18**
 Call Letters **WHLV**
 Channel **51**
 Frequency **695 MHz**
 Antenna Type **TFU-24WB/VP-R S230**

RMS Directivity at Main Lobe **17.3 (12.38 dB)**
 RMS Directivity at Horizontal **13.0 (11.14 dB)**
Calculated

Beam Tilt **0.50 deg**
 Pattern Number **24W173050**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.173	10.0	0.225	30.0	0.066	50.0	0.099	70.0	0.016
-9.0	0.194	11.0	0.207	31.0	0.039	51.0	0.120	71.0	0.020
-8.0	0.132	12.0	0.046	32.0	0.089	52.0	0.073	72.0	0.020
-7.0	0.214	13.0	0.048	33.0	0.175	53.0	0.176	73.0	0.017
-6.0	0.152	14.0	0.071	34.0	0.144	54.0	0.304	74.0	0.011
-5.0	0.324	15.0	0.117	35.0	0.045	55.0	0.327	75.0	0.007
-4.0	0.216	16.0	0.227	36.0	0.074	56.0	0.238	76.0	0.006
-3.0	0.103	17.0	0.126	37.0	0.040	57.0	0.107	77.0	0.007
-2.0	0.308	18.0	0.040	38.0	0.027	58.0	0.079	78.0	0.008
-1.0	0.224	19.0	0.042	39.0	0.077	59.0	0.114	79.0	0.008
0.0	0.868	20.0	0.019	40.0	0.132	60.0	0.096	80.0	0.008
1.0	0.861	21.0	0.065	41.0	0.092	61.0	0.049	81.0	0.006
2.0	0.239	22.0	0.061	42.0	0.072	62.0	0.045	82.0	0.005
3.0	0.435	23.0	0.012	43.0	0.125	63.0	0.073	83.0	0.004
4.0	0.163	24.0	0.004	44.0	0.071	64.0	0.084	84.0	0.003
5.0	0.412	25.0	0.021	45.0	0.099	65.0	0.077	85.0	0.002
6.0	0.367	26.0	0.054	46.0	0.156	66.0	0.061	86.0	0.001
7.0	0.115	27.0	0.133	47.0	0.132	67.0	0.041	87.0	0.001
8.0	0.202	28.0	0.110	48.0	0.079	68.0	0.023	88.0	0.000
9.0	0.109	29.0	0.034	49.0	0.040	69.0	0.013	89.0	0.000
								90.0	0.000

This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.

POWER DENSITY CALCULATION

PROPOSED WHLV-DT STA REQUEST FOR INTERIM FACILITY
CHANNEL 51 – COCOA, FLORIDA

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Cocoa facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 535 kW (H, V), an antenna radiation center 419.1 meters above ground, and the specific elevation pattern of the proposed Dielectric antenna, maximum power density two meters above ground of 0.015 mW/cm^2 is calculated to occur 292 meters southwest of the base of the tower. Since this is only 3.2 percent of the 0.46 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 51 (692-698 MHz), a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.