



**STATEMENT OF JOHN E. HIDLE, P.E.
IN SUPPORT OF A REQUEST FOR A
SPECIAL TEMPORARY AUTHORIZATION (STA)
TO CONTINUE OPERATION ON AN INTERIM BASIS
USING THE MAIN ANTENNA WITH AN INTERIM TRANSMITTER
WKEF - DAYTON, OHIO
DTV - CH. 34 - 112.5 kW - 351 m HAAT**

Prepared for: WKEF LICENSEE L.P.

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, No. 7418, and in New York State, No. 63418.

GENERAL

This office has been authorized by WKEF LICENSEE L.P., licensee of WKEF, facility ID number 73155, licensed to Dayton, Ohio, to prepare this statement and associated exhibits in support of a request for STA to operate using its new main antenna. WKEF has made the transition to its post transition channel 34 using an interim facility authorized by STA, file number 0000086535. WKEF herein requests authorization to continue its interim operation using its main antenna. Once the main transmitter is installed and operational WKEF will be ready to license and commence operation on its final post transition broadcast facility.

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BLANKETING AND INTERMODULATION INTERFERENCE

Other broadcast and non-broadcast facilities are either co-located with, or located within 10 km of the proposed WKEF site. The applicant does recognize its responsibility to remedy complaints of interference that might result from this proposal in accordance with applicable Rules.

RADIO FREQUENCY IMPACT, SAFETY & STATEMENT OF COMPLIANCE

The licensee of WKEF is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WKEF antenna and will reduce power or cease operation, when necessary, to ensure protection to personnel.

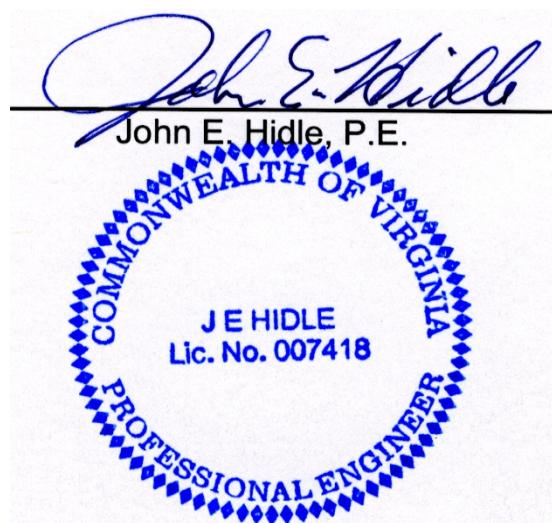
As shown in Appendix A the proposed WKEF channel 34 post-transition interim STA facility proposed herein will operate with a maximum ERP of 112.5 kW from an elliptically polarized directional transmitting antenna with a centerline height of 343 meters above ground level (AGL). Considering the elevation pattern submitted elsewhere in this application, the vertical plane relative field factor is less than 0.100 at all depression angles greater than 7 degrees. The proposed WKEF STA facility is predicted to produce a worst-case power density at two meters above ground level, at 346.3 meters from the tower base, of 0.100 $\mu\text{W}/\text{cm}^2$, which is 0.03% of the FCC guideline value of 395.33 $\mu\text{W}/\text{cm}^2$ for an "uncontrolled" environment, and 0.006% of the FCC's guideline value for "controlled" environments. Therefore, pursuant to Section 1.1307(b)(3) of the FCC Rules, because the proposed facility would not exceed 5% of the uncontrolled and controlled exposure limits, the proposal's power density contribution is considered insignificant.

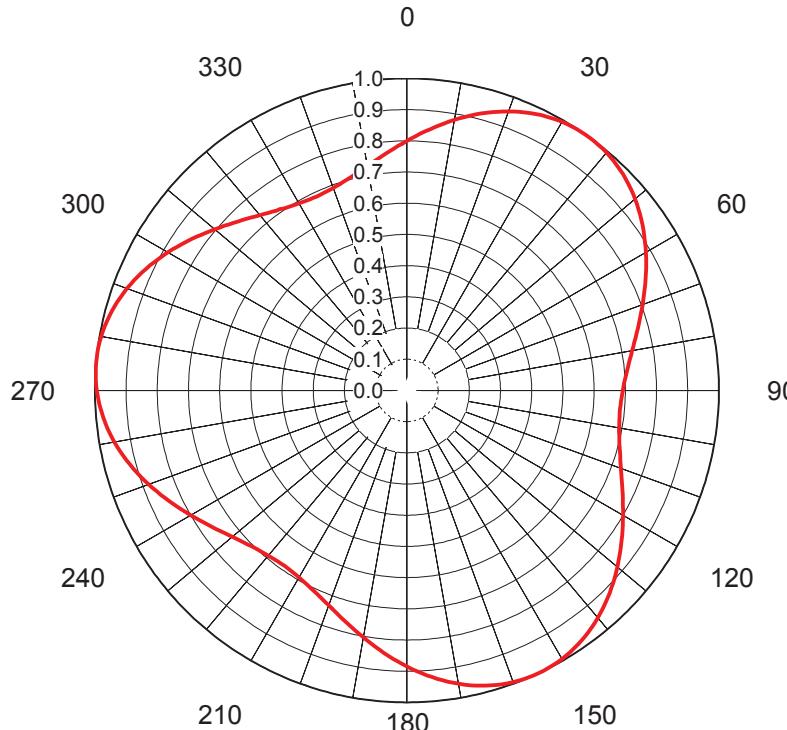
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SUMMARY

It is submitted that the instant request for STA for continued interim operation on its post transition channel 34 using its new main antenna while continuing to use its interim transmitter with an interim STA ERP of 112.5 kW, as described herein, does comply with the Rules, Regulations and relevant Policies of the Federal Communications Commission. This statement, FCC Form 2100, its technical sections, 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: February 12, 2020



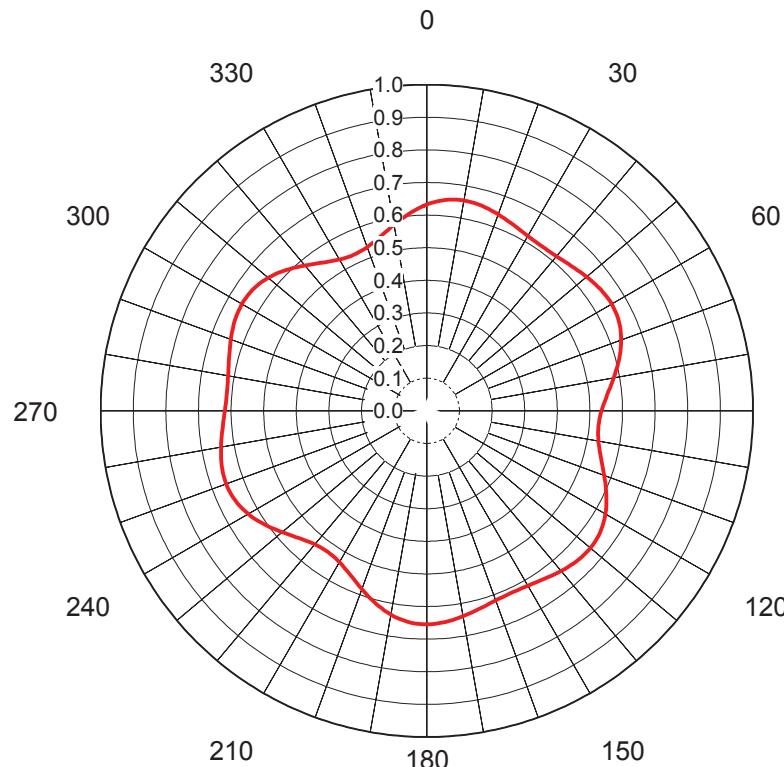


AZIMUTH PATTERN Horizontal Polarization

Proposal No.	C-70007
Date	10-Mar-17
Call Letters	WKEF
Channel	34
Frequency	593 MHz
Antenna Type	TFU-24GTH/VP-R 6T140
Gain	1.38 (1.41dB)
	Calculated

Deg	Value																		
0	0.800	36	1.000	72	0.788	108	0.720	144	0.973	180	0.885	216	0.686	252	0.896	288	0.966	324	0.712
1	0.808	37	0.999	73	0.781	109	0.725	145	0.978	181	0.877	217	0.687	253	0.904	289	0.960	325	0.710
2	0.816	38	0.998	74	0.773	110	0.730	146	0.982	182	0.869	218	0.688	254	0.912	290	0.955	326	0.704
3	0.824	39	0.997	75	0.766	111	0.736	147	0.985	183	0.861	219	0.689	255	0.919	291	0.949	327	0.700
4	0.832	40	0.995	76	0.759	112	0.742	148	0.989	184	0.852	220	0.691	256	0.926	292	0.943	328	0.697
5	0.840	41	0.993	77	0.752	113	0.749	149	0.992	185	0.844	221	0.693	257	0.933	293	0.936	329	0.694
6	0.848	42	0.990	78	0.746	114	0.756	150	0.994	186	0.836	222	0.696	258	0.939	294	0.929	330	0.692
7	0.857	43	0.987	79	0.739	115	0.762	151	0.996	187	0.828	223	0.699	259	0.946	295	0.922	331	0.690
8	0.865	44	0.984	80	0.733	116	0.770	152	0.998	188	0.820	224	0.702	260	0.952	296	0.915	332	0.688
9	0.873	45	0.980	81	0.728	117	0.777	153	0.999	189	0.812	225	0.706	261	0.958	297	0.908	333	0.687
10	0.881	46	0.975	82	0.722	118	0.784	154	1.000	190	0.804	226	0.710	262	0.963	298	0.900	334	0.686
11	0.889	47	0.971	83	0.717	119	0.792	155	1.000	191	0.796	227	0.715	263	0.968	299	0.893	335	0.686
12	0.896	48	0.966	84	0.712	120	0.800	156	1.000	192	0.788	228	0.720	264	0.973	300	0.885	336	0.686
13	0.904	49	0.960	85	0.708	121	0.808	157	0.999	193	0.781	229	0.725	265	0.978	301	0.877	337	0.687
14	0.912	50	0.955	86	0.704	122	0.816	158	0.998	194	0.773	230	0.730	266	0.982	302	0.869	338	0.688
15	0.919	51	0.949	87	0.700	123	0.824	159	0.997	195	0.766	231	0.736	267	0.985	303	0.861	339	0.689
16	0.926	52	0.943	88	0.697	124	0.832	160	0.995	196	0.759	232	0.742	268	0.989	304	0.852	340	0.691
17	0.933	53	0.936	89	0.694	125	0.840	161	0.993	197	0.752	233	0.749	269	0.992	305	0.844	341	0.693
18	0.939	54	0.929	90	0.692	126	0.848	162	0.990	198	0.746	234	0.756	270	0.994	306	0.836	342	0.696
19	0.946	55	0.922	91	0.690	127	0.857	163	0.987	199	0.739	235	0.762	271	0.996	307	0.828	343	0.699
20	0.952	56	0.915	92	0.688	128	0.865	164	0.984	200	0.733	236	0.770	272	0.998	308	0.820	344	0.702
21	0.958	57	0.908	93	0.687	129	0.873	165	0.980	201	0.728	237	0.777	273	0.999	309	0.812	345	0.706
22	0.963	58	0.900	94	0.686	130	0.881	166	0.975	202	0.722	238	0.784	274	1.000	310	0.804	346	0.710
23	0.968	59	0.893	95	0.686	131	0.889	167	0.971	203	0.717	239	0.792	275	1.000	311	0.796	347	0.715
24	0.973	60	0.885	96	0.686	132	0.896	168	0.966	204	0.712	240	0.800	276	1.000	312	0.788	348	0.720
25	0.978	61	0.877	97	0.687	133	0.904	169	0.960	205	0.708	241	0.808	277	0.999	313	0.781	349	0.725
26	0.982	62	0.869	98	0.688	134	0.912	170	0.955	206	0.704	242	0.816	278	0.998	314	0.773	350	0.730
27	0.985	63	0.861	99	0.689	135	0.919	171	0.949	207	0.700	243	0.824	279	0.997	315	0.766	351	0.736
28	0.989	64	0.852	100	0.691	136	0.926	172	0.943	208	0.697	244	0.832	280	0.995	316	0.759	352	0.742
29	0.992	65	0.844	101	0.693	137	0.933	173	0.936	209	0.694	245	0.840	281	0.993	317	0.752	353	0.749
30	0.994	66	0.836	102	0.696	138	0.939	174	0.929	210	0.692	246	0.848	282	0.990	318	0.746	354	0.756
31	0.996	67	0.828	103	0.699	139	0.946	175	0.922	211	0.690	247	0.857	283	0.987	319	0.739	355	0.762
32	0.998	68	0.820	104	0.702	140	0.952	176	0.915	212	0.688	248	0.865	284	0.984	320	0.733	356	0.770
33	0.999	69	0.812	105	0.706	141	0.958	177	0.908	213	0.687	249	0.873	285	0.980	321	0.728	357	0.777
34	1.000	70	0.804	106	0.710	142	0.963	178	0.900	214	0.686	250	0.881	286	0.975	322	0.722	358	0.784
35	1.000	71	0.796	107	0.715	143	0.968	179	0.893	215	0.686	251	0.889	287	0.971	323	0.717	359	0.792

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AZIMUTH PATTERN Vertical Polarization

Proposal No.	C-70007
Date	10-Mar-17
Call Letters	WKEF
Channel	34
Frequency	593 MHz
Antenna Type	TFU-24GTH/VP-R 6T140
Gain	1.15 (0.59dB)
	Calculated

Deg	Value																
0	0.632	36	0.616	72	0.626	108	0.568	144	0.631	180	0.655	216	0.529	252	0.654	288	0.635
1	0.636	37	0.616	73	0.621	109	0.573	145	0.629	181	0.655	217	0.529	253	0.653	289	0.637
2	0.640	38	0.616	74	0.616	110	0.579	146	0.626	182	0.654	218	0.530	254	0.652	290	0.639
3	0.643	39	0.617	75	0.610	111	0.585	147	0.624	183	0.653	219	0.532	255	0.651	291	0.642
4	0.646	40	0.619	76	0.605	112	0.590	148	0.622	184	0.652	220	0.534	256	0.649	292	0.644
5	0.649	41	0.620	77	0.599	113	0.596	149	0.621	185	0.650	221	0.537	257	0.647	293	0.646
6	0.651	42	0.622	78	0.593	114	0.602	150	0.619	186	0.648	222	0.540	258	0.645	294	0.648
7	0.652	43	0.623	79	0.588	115	0.607	151	0.618	187	0.645	223	0.544	259	0.643	295	0.650
8	0.654	44	0.625	80	0.582	116	0.613	152	0.617	188	0.642	224	0.548	260	0.641	296	0.652
9	0.654	45	0.627	81	0.576	117	0.618	153	0.616	189	0.638	225	0.553	261	0.638	297	0.653
10	0.655	46	0.630	82	0.571	118	0.623	154	0.616	190	0.634	226	0.557	262	0.636	298	0.654
11	0.655	47	0.632	83	0.565	119	0.628	155	0.615	191	0.630	227	0.563	263	0.633	299	0.654
12	0.654	48	0.635	84	0.560	120	0.632	156	0.616	192	0.626	228	0.568	264	0.631	300	0.655
13	0.653	49	0.637	85	0.555	121	0.636	157	0.616	193	0.621	229	0.573	265	0.629	301	0.655
14	0.652	50	0.639	86	0.550	122	0.640	158	0.616	194	0.616	230	0.579	266	0.626	302	0.654
15	0.651	51	0.642	87	0.546	123	0.643	159	0.617	195	0.610	231	0.585	267	0.624	303	0.653
16	0.649	52	0.644	88	0.542	124	0.646	160	0.619	196	0.605	232	0.590	268	0.622	304	0.652
17	0.647	53	0.646	89	0.539	125	0.649	161	0.620	197	0.599	233	0.596	269	0.621	305	0.650
18	0.645	54	0.648	90	0.536	126	0.651	162	0.622	198	0.593	234	0.602	270	0.619	306	0.648
19	0.643	55	0.650	91	0.533	127	0.652	163	0.623	199	0.588	235	0.607	271	0.618	307	0.645
20	0.641	56	0.652	92	0.531	128	0.654	164	0.625	200	0.582	236	0.613	272	0.617	308	0.642
21	0.638	57	0.653	93	0.530	129	0.654	165	0.627	201	0.576	237	0.618	273	0.616	309	0.638
22	0.636	58	0.654	94	0.529	130	0.655	166	0.630	202	0.571	238	0.623	274	0.616	310	0.634
23	0.633	59	0.654	95	0.528	131	0.655	167	0.632	203	0.565	239	0.628	275	0.615	311	0.630
24	0.631	60	0.655	96	0.529	132	0.654	168	0.635	204	0.560	240	0.632	276	0.616	312	0.626
25	0.629	61	0.655	97	0.529	133	0.653	169	0.637	205	0.555	241	0.636	277	0.616	313	0.621
26	0.626	62	0.654	98	0.530	134	0.652	170	0.639	206	0.550	242	0.640	278	0.616	314	0.616
27	0.624	63	0.653	99	0.532	135	0.651	171	0.642	207	0.546	243	0.643	279	0.617	315	0.610
28	0.622	64	0.652	100	0.534	136	0.649	172	0.644	208	0.542	244	0.646	280	0.619	316	0.605
29	0.621	65	0.650	101	0.537	137	0.647	173	0.646	209	0.539	245	0.649	281	0.620	317	0.599
30	0.619	66	0.648	102	0.540	138	0.645	174	0.648	210	0.536	246	0.651	282	0.622	318	0.593
31	0.618	67	0.645	103	0.544	139	0.643	175	0.650	211	0.533	247	0.652	283	0.623	319	0.588
32	0.617	68	0.642	104	0.548	140	0.641	176	0.652	212	0.531	248	0.654	284	0.625	320	0.582
33	0.616	69	0.638	105	0.553	141	0.638	177	0.653	213	0.530	249	0.654	285	0.627	321	0.576
34	0.616	70	0.634	106	0.557	142	0.636	178	0.654	214	0.529	250	0.655	286	0.630	322	0.571
35	0.615	71	0.630	107	0.562	143	0.633	179	0.654	215	0.528	251	0.655	287	0.632	323	0.565
																	0.628

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ELEVATION PATTERN

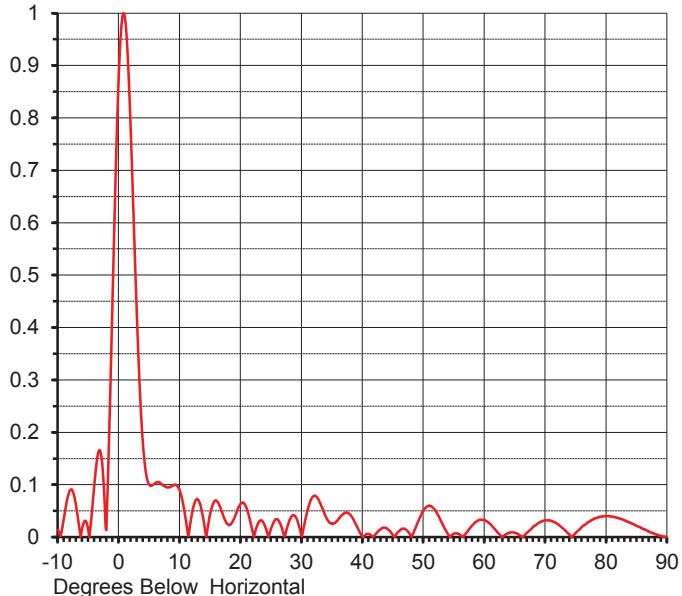
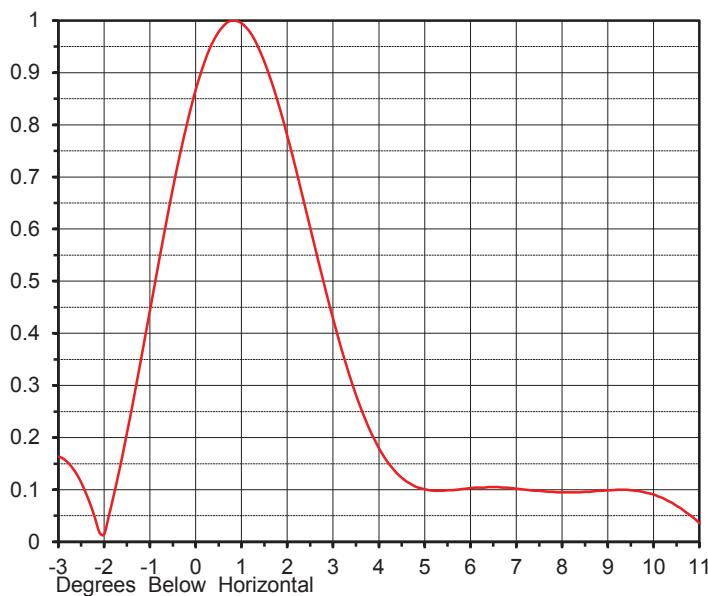
Proposal No. C-70007
 Date 10-Mar-17
 Call Letters WKEF
 Channel 34
 Frequency 593 MHz
 Antenna Type TFU-24GTH/VP-R 6T140

RMS Directivity at Main Lobe
 RMS Directivity at Horizontal

21.5 (13.32 dB)
16.2 (12.10 dB)

Calculated

Beam Tilt 0.75 deg
 Drawing Number 24G215075



Angle	Field								
-10.0	0.014	10.0	0.087	30.0	0.002	50.0	0.051	70.0	0.032
-9.0	0.040	11.0	0.029	31.0	0.054	51.0	0.060	71.0	0.031
-8.0	0.090	12.0	0.047	32.0	0.079	52.0	0.049	72.0	0.025
-7.0	0.055	13.0	0.071	33.0	0.065	53.0	0.027	73.0	0.015
-6.0	0.020	14.0	0.022	34.0	0.037	54.0	0.005	74.0	0.003
-5.0	0.009	15.0	0.047	35.0	0.025	55.0	0.007	75.0	0.009
-4.0	0.108	16.0	0.069	36.0	0.034	56.0	0.004	76.0	0.020
-3.0	0.160	17.0	0.044	37.0	0.046	57.0	0.008	77.0	0.029
-2.0	0.048	18.0	0.023	38.0	0.042	58.0	0.023	78.0	0.035
-1.0	0.491	19.0	0.039	39.0	0.021	59.0	0.032	79.0	0.039
0.0	0.896	20.0	0.064	40.0	0.000	60.0	0.032	80.0	0.040
1.0	0.987	21.0	0.053	41.0	0.006	61.0	0.024	81.0	0.039
2.0	0.746	22.0	0.006	42.0	0.004	62.0	0.011	82.0	0.036
3.0	0.396	23.0	0.030	43.0	0.016	63.0	0.001	83.0	0.032
4.0	0.165	24.0	0.019	44.0	0.016	64.0	0.008	84.0	0.027
5.0	0.099	25.0	0.018	45.0	0.003	65.0	0.008	85.0	0.021
6.0	0.104	26.0	0.034	46.0	0.012	66.0	0.001	86.0	0.016
7.0	0.101	27.0	0.006	47.0	0.015	67.0	0.009	87.0	0.010
8.0	0.095	28.0	0.033	48.0	0.001	68.0	0.020	88.0	0.006
9.0	0.099	29.0	0.038	49.0	0.028	69.0	0.028	89.0	0.002
									90.0 0.000

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RADIO FREQUENCY IMPACT, SAFETY & STATEMENT OF COMPLIANCE

The licensee of WKEF is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WKEF antenna and will reduce power or cease operation, when necessary, to ensure protection to personnel.

As shown in Appendix A the proposed WKEF channel 34 interim facility will operate with a maximum ERP of 112.5 kW from an elliptically polarized directional transmitting antenna with a centerline height of 343 meters above ground level (AGL). Considering the elevation pattern submitted elsewhere in this application, the vertical plane relative field factor is less than 0.100 at all depression angles greater than 7 degrees. The WKEF proposed STA interim facility is predicted to produce a worst-case power density at two meters above ground level, at 346.3 meters from the tower base, of $0.100 \mu\text{W}/\text{cm}^2$, which is 0.03% of the FCC guideline value of $395.33 \mu\text{W}/\text{cm}^2$ for an "uncontrolled" environment, and 0.006% of the FCC's guideline value for "controlled" environments. Therefore, pursuant to Section 1.1307(b)(3) of the FCC Rules, because the proposed facility would not exceed 5% of the uncontrolled and controlled exposure limits, the proposal's power density contribution is considered insignificant. (See Appendix A)

Further, the applicant will continue to cooperate and coordinate with other any other site users and reduce power or cease operation during times of service or maintenance of the transmission systems as necessary to avoid potentially harmful exposure to personnel. In light of the above, the proposed facility should be categorically excluded from RF environmental processing under Section 1.1307(b) of the Commission's Rules.

WKEF**Channel 34 - Dayton, Ohio****ERP = 112580.00 WATTS****APPENDIX A****Maximum ERP 112.58 kW**

Polarization ----- 2
 Antenna Height Above Ground - 343
 FCC Uncontrolled RFR Limit --- 395.33

Circular
meters
 $\mu\text{W}/\text{cm}^2$

1125.3 feet

Maximum Computed Power Density 0.100 $\mu\text{W}/\text{cm}^2$
 0.03% of limit

Angle Below Horizontal (degrees)	<Point X>		Vertical Pattern (REL. FIELD)	WKEF ERP (kW)	WKEF Calculated Power Density $\mu\text{W}/\text{cm}^2$	Percent Limit	Limit Exceeded?
1			0.987	109.6719			
5	3897.6	3912.5	0.099	1.1034	0.005	0.00%	No
10	1933.9	1963.7	0.087	0.8521	0.015	0.00%	No
15	1272.6	1317.5	0.047	0.2487	0.010	0.00%	No
20	936.9	997.0	0.064	0.4611	0.031	0.01%	No
25	731.3	806.9	0.018	0.0365	0.004	0.00%	No
30	590.6	682.0	0.002	0.0005	0.000	0.00%	No
35	487.0	594.5	0.025	0.0704	0.013	0.00%	No
40	406.4	530.5	0.000	0.0000	0.000	0.00%	No
45	341.0	482.2	0.003	0.0010	0.000	0.00%	No
50	286.1	445.1	0.051	0.2928	0.099	0.02%	No
55	238.8	416.3	0.007	0.0055	0.002	0.00%	No
60	196.9	393.8	0.032	0.1153	0.050	0.01%	No
65	159.0	376.3	0.008	0.0072	0.003	0.00%	No
70	124.1	362.9	0.032	0.1153	0.058	0.01%	No
75	91.4	353.0	0.009	0.0091	0.005	0.00%	No
80	60.1	346.3	0.040	0.1801	0.100	0.03%	No
85	29.8	342.3	0.021	0.0496	0.028	0.01%	No
90	0.0	341.0	0.000	0.0000	0.000	0.00%	No

