

COMPLIANCE WITH RADIOFREQUENCY RADIATION GUIDELINES

The revised RF Compliance Study for this WLAB, Fort Wayne, IN Form 302 filing has been evaluated for human exposure to non-ionizing radiofrequency radiation at the transmitter site. The site will house multiple transmitters. The potential for human exposure to non-ionizing radiofrequency radiation at the proposed transmitter site has been evaluated with regards to §1.1307(b)(3) concerning the five percent (5%) contribution rule for multiple transmitter sites.

The WLAB facility will operate on 88.3 MHz with a maximum effective radiated power (ERP) of 3.2 kW circular polarization. The facility will operate with a two element antenna mounted 183 meters above ground level (AGL). For purposes of this study, worst case EPA Type 1 elements were assumed.

This site has been evaluated for compliance with the FCC guidelines concerning human exposure to radiofrequency radiation. The standards employed are detailed in OET Bulletin No. 65 (Edition 97-01).

Software packages were used to determine the individual contribution of the station. FM radiofrequency radiation levels were predicted using both the array pattern, the calculations of which are based on the number of bays in the antenna and wavelength spacing between the bays, and the element pattern. The element pattern is determined by using measured element data prepared by the EPA and published in "An Engineering Assessment of the Potential Impact of Federal Radiation Protection Guidance on the AM, FM and TV Services," by Paul C. Gailey and Richard Tell - April 1985, U.S. Environmental Protection Agency, Las Vegas, NV. The programs use formulas that were originally published in OST Bulletin No. 65, 1985.

The result of the evaluations for the station is shown in both graphical and tabular forms at the end of this report. The tabulation lists the portion of the tabular output for the station showing the region of maximum radiofrequency radiation. The locations of maximum predicted power density have been highlighted using ***bold italic*** type. The FM graphical display has been scaled to show the best definition of the data curve.

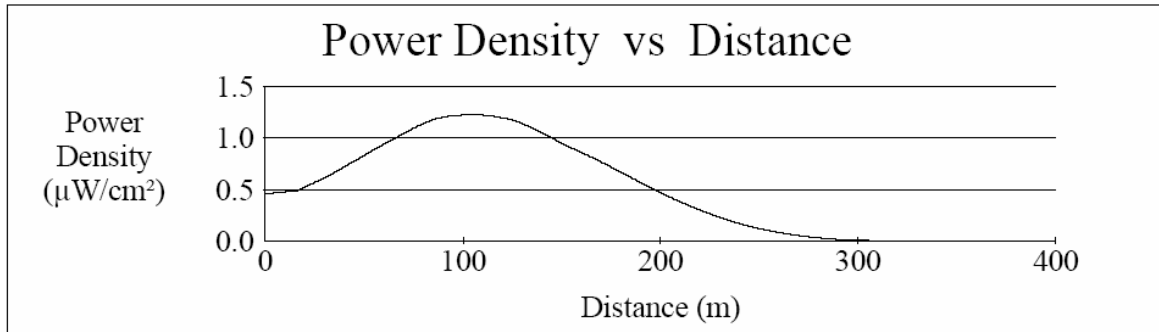
To evaluate the total exposure to non-ionizing radio-frequency radiation with regards to the five percent contribution exclusion rule, it is necessary to express the individual contribution as a decimal fraction of the maximum permissible limit. If the resulting contribution is less than or equal to 5.0%, the exposure is concluded to be within the guidelines of OET Bulletin No. 65 (Edition 97-01) and §1.1307(b)(3). The maximum predicted exposure of 1.2240 $\mu\text{W}/\text{cm}^2$ will occur at 102 to 103 meters from the base of the tower. This level represents 0.6% of the 200 $\mu\text{W}/\text{cm}^2$ limit for the more restrictive uncontrolled environment where members of the general public may be exposed to radiofrequency radiation. Protection of the more restrictive uncontrolled limit implies protection of the controlled limit.

Since the maximum contribution of 0.6% for the uncontrolled environments is less than the 5.0% as set for by §1.1307(b)(3), the WLAB facility is in compliance with FCC guidelines. §1.1307(b)(3) states that facilities contributing less than five percent of the exposure limit at locations with multiple transmitters are categorically excluded from responsibility for taking any corrective action in the areas where its contribution is less than five percent. Since this instant application meets the five percent exclusion test at all ground level areas, the impact of the proposed facility may be considered independently from other facilities operating at or nearby this site. It is believed the impact of the proposed operation should not be considered to be a factor at ground level as defined under §1.1307(b)(3).

In addition to the protection afforded by the proposed antenna height above ground, the facility is properly marked with signs, and entry to the facility is restricted by means of fencing with locked doors and/or gates. Any other means that may be required to protect employees and the general public will be employed.

In the event work is required in proximity to the antenna(s) such that the person or persons working in the area will be potentially exposed to fields in excess of the current guidelines, an agreement signed by all broadcast parties at the site will be in effect for the offending transmitter(s) to reduce power, or cease operation during the critical period.

PLOT OF TOTAL POWER DENSITY
WLAB – Fort Wayne, IN
Using a 2-Bay EPA Type 2 Antenna Mounted 183 meters AGL



Distance (meters) = 315
Horizontal ERP (W) = 3200
Antenna Height (m) = 183
Number of Elements = 2
Y-axis (Linear) = -1

Vertical ERP (W) = 3200
Antenna EPA Type = 2
Element Spacing = 1
X-axis Setup = -1, 315

X(m)	Y(μW/cm²)	X(m)	Y(μW/cm²)	X(m)	Y(μW/cm²)	X(m)	Y(μW/cm²)	X(m)	Y(μW/cm²)	X(m)	Y(μW/cm²)
0	.45694	34	.65413	68	1.0235	102	1.2240	136	1.0874	170	.76561
1	.45864	35	.66504	69	1.0341	103	1.2240	137	1.0780	171	.75600
2	.46035	36	.67598	70	1.0446	104	1.2237	138	1.0686	172	.74635
3	.46209	37	.68694	71	1.0550	105	1.2236	139	1.0590	173	.73667
4	.46384	38	.69792	72	1.0653	106	1.2238	140	1.0493	174	.72695
5	.46561	39	.70892	73	1.0754	107	1.2237	141	1.0395	175	.71722
6	.46740	40	.71992	74	1.0854	108	1.2233	142	1.0296	176	.70745
7	.46921	41	.73092	75	1.0952	109	1.2226	143	1.0196	177	.69768
8	.47103	42	.74191	76	1.1049	110	1.2217	144	1.0096	178	.68789
9	.47287	43	.75289	77	1.1144	111	1.2205	145	.99942	179	.67809
10	.47473	44	.76385	78	1.1237	112	1.2190	146	.98915	180	.66828
11	.47660	45	.77479	79	1.1328	113	1.2172	147	.97880	181	.65848
12	.47848	46	.78569	80	1.1417	114	1.2152	148	.96837	182	.64799
13	.48037	47	.79655	81	1.1504	115	1.2129	149	.95788	183	.63754
14	.48228	48	.80737	82	1.1589	116	1.2104	150	.94732	184	.62713
15	.48419	49	.81844	83	1.1672	117	1.2075	151	.93670	185	.61677
16	.48727	50	.82980	84	1.1752	118	1.2044	152	.92636	186	.60645
17	.49622	51	.84112	85	1.1814	119	1.2011	153	.91829	187	.59618
18	.50521	52	.85240	86	1.1861	120	1.1975	154	.91009	188	.58596
19	.51422	53	.86363	87	1.1905	121	1.1937	155	.90177	189	.57580
20	.52326	54	.87481	88	1.1947	122	1.1896	156	.89333	190	.56569
21	.53232	55	.88593	89	1.1986	123	1.1852	157	.88478	191	.55565
22	.54139	56	.89698	90	1.2022	124	1.1806	158	.87612	192	.54566
23	.55048	57	.90794	91	1.2056	125	1.1758	159	.86736	193	.53575
24	.55958	58	.91882	92	1.2087	126	1.1707	160	.85850	194	.52589
25	.56868	59	.92961	93	1.2115	127	1.1648	161	.84954	195	.51611
26	.57779	60	.94030	94	1.2140	128	1.1568	162	.84050	196	.50640
27	.58690	61	.95087	95	1.2163	129	1.1487	163	.83138	197	.49676
28	.59600	62	.96133	96	1.2182	130	1.1404	164	.82218	198	.48720
29	.60510	63	.97167	97	1.2199	131	1.1319	165	.81290	199	.47772
30	.61418	64	.98187	98	1.2213	132	1.1233	166	.80356	200	.46831
31	.62324	65	.99193	99	1.2224	133	1.1145	167	.79415		
32	.63243	66	1.0019	100	1.2232	134	1.1056	168	.78469		
33	.64326	67	1.0128	101	1.2238	135	1.0966	169	.77517		