

## FIGURE 30 COMPLIANCE WITH RADIOFREQUENCY RADIATION GUIDELINES

The potential for human exposure to non-ionizing radiofrequency radiation at the proposed transmitter site has been evaluated. In addition to the proposed KRGV operation, there are multiple sources of radiation originating from the site. Due to several mutually exclusive situations resulting from LPTV Auction 81, only one radiating LPTV application can be granted for each mutually exclusive group. For purposes of this study, the application resulting in the greater risk of human exposure to radiofrequency radiation due to a higher operating power and lower elevation above ground has been assumed. There are no other known broadcast facilities within 315 meters of the shared transmitter site.

A listing of the FM facilities is as follows. For stations which have both licenses and Construction Permits/Applications pending, only the worst case facility has been considered.

Call	CH	Status	City	S	File Number	ERP	RCAGL	Azimuth	Licensee/Permittee
KXLV	206C2	LIC	AMARILLO TX	BLEP	20010912AAE	13.5 kW	108. m		EDUCATIONAL MEDIA FOUNDATION
KXLV	206C2	APP	AMARILLO TX	BPED	20041227ABY	27.5 kW	108. m		EDUCATIONAL MEDIA FOUNDATION
KRGV	275C1	CP	AMARILLO TX	BPED	20010910AAC	100. kW	74. m		FAMILY LIFE BROADCASTING, INC.
KRGV	276A	LIC	AMARILLO TX	BMLED	19950509KB	3. kW	74. m		FAMILY LIFE BROADCASTING, INC.

The proposed KRGV facility will use a circularly polarized, ERI Rototiller Type antenna mounted approximately 74 meters AGL. The antenna uses eight (8) EPA Type 3 elements. The proposed KXLV facility will use a circularly polarized, Jampro double V antenna mounted approximately 108 meters AGL. The antenna uses six (6) EPA Type 2 elements

A listing of the TV facilities is as follows. For stations which have both licenses and Construction Permits/Applications pending or competing applications, only the worst case facility has been considered.

Call	CH	Status	City	ST	File Number	ERP	RCAGL	Licensee/Permittee
NEW	16-	APP	AMARILLO TX	BNPTTL	20000829AXE	50. kW	137. m	LAUGHLIN GORDON
NEW	17+	APP	AMARILLO TX	BNPTTL	20000830BRP	20. kW	100. m	INSPIRATION TELEVISION
K18HL	18Z	CP	AMARILLO TX	BNPTTL	20000829AGP	10. kW	135. m	PRISM BROAD NET, INC.
K25GI	25-	LIC	AMARILLO TX	BLTT	20020125AAD	11. kW	122. m	NATIONAL MINORITY T.V.
NEW	27+	APP	AMARILLO TX	BNPTTL	20000828APQ	10. kW	56. m	DEAN M. MOSELY
NEW	27+	APP	AMARILLO TX	BNPTTL	20000828AZE	10. kW	56. m	CHARLES C. TOWNSEND, III
KAMT-LP	31+	LIC	AMARILLO TX	BLTTL	20010208AAA	12.7 kW	74.4 m	BORGER BROAD, INC.
K38IP	38+	CP	AMARILLO TX	BNPTTL	20000829AYA	5. kW	132. m	EQUITY BROAD CORPORATION
NEW	39+	APP	AMARILLO TX	BNPTTL	20000828APP	5. kW	56. m	DEAN M. MOSELY
NEW	39+	APP	AMARILLO TX	BNPTTL	20000828AZF	5. kW	56. m	CHARLES C. TOWNSEND, III
NEW	45Z	APP	AMARILLO TX	BNPTTL	20000830BRV	20. kW	100. m	INSPIRATION TELEVISION
NEW	52-	APP	AMARILLO TX	BNPTTL	20000831BNL	150. kW	102. m	PURI FAMILY LIMITED PART
NEW	52Z	APP	AMARILLO TX	BNPTTL	20000829AXT	20. kW	120. m	EQUITY BROAD CORPORATION
K56DF	56	LIC	AMARILLO TX	BLTTL	19880628IF	16.7 kW	125. m	SPECTRUM MEDIA
NEW	61-	APP	AMARILLO TX	BNPTTL	20000830BRQ	20. kW	100. m	INSPIRATION TELEVISION
K69IH	69	CP MOD	AMARILLO TX	BMPTTL	20041209AAX	13.6 kW	120. m	MICHAEL MINTZ
K69IH	69	APP	AMARILLO TX	BMPTTL	20041227ACR	13.6 kW	130. m	MICHAEL MINTZ

For the combined TV contribution, the sum of each applicable facility or a total of 344 kW was considered at the lowest TV antenna COR or 56 meters AGL. For purposes of this study, a worst case scenario was assumed for the combined operation. A maximum permitted aural power of 22% was assumed with a maximum relative field of 0.300. Typical television transmission antennas exhibit a relative field of this value or less within the portion of the vertical plane pattern that would apply to an observer within 315 meters of the base of the supporting structure. The "uncontrolled" limit for the worst case TV channel of Channel 16 was also used to ensure maximum protection.

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 each 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 "FM Model" software published on the FCC's OET web site was used to evaluate each contribution. A similar software package designed for use with TV stations (under the previous OST Bulletin No. 65, October 1985) was used to determine the contribution of the television facilities to the non-ionizing radiofrequency radiation present at this site. Both programs use formulas that were originally published in OST Bulletin No. 65, 1985.

The results of the evaluations for all stations are shown in both graphical and tabular forms at the end of this report. The tabulation lists the portion of the tabular output for each station showing the region of maximum radiofrequency radiation. The locations of maximum predicted power density have been highlight 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 it is necessary to sum the individual contributions as a decimal fraction of the maximum permissible limit. If the resulting sum is less than or equal to unity, the exposure is concluded to be within the guidelines of OET Bulletin No. 65 (Edition 97-01). To simplify the calculations and produce a "worst case" study, the maximum exposure level produced by each station has been selected without regard to the location of that exposure. The following table is based on the "uncontrolled" limits set forth in OET Bulletin No. 65 (Edition 97-01). Full protection of the "uncontrolled" limits insures protection of the "controlled" limits.

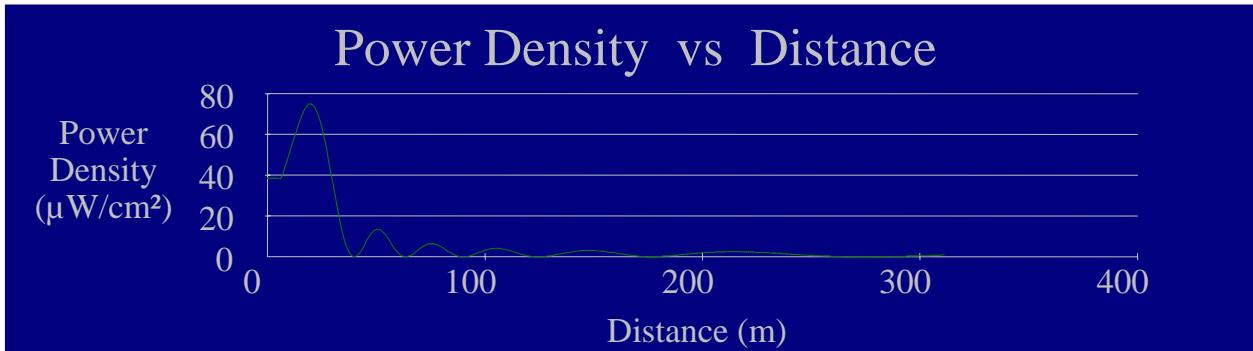
<u>Contributing Station</u>	<u>Maximum Contribution</u>	<u>Uncontrolled Limit</u>	<u>Decimal Fraction of Limit</u>
Proposed KRGN(FM)	75.0806 $\mu\text{W}/\text{cm}^2$	200.00 $\mu\text{W}/\text{cm}^2$	0.3754
KXLV.A(FM)	18.1701 $\mu\text{W}/\text{cm}^2$	200.00 $\mu\text{W}/\text{cm}^2$	0.0909
Combined TV Operation	165.4130 $\mu\text{W}/\text{cm}^2$	323.34 $\mu\text{W}/\text{cm}^2$	0.5116
		<b>Total Decimal Fraction</b>	<b>0.9779</b>

Since the Total Decimal Fraction is less than unity for the worst case “uncontrolled” environment guidelines, the proposed installation will comply with the current FCC guidelines.

In addition to the protection afforded by the proposed antenna heights 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 PROPOSED KRGV(FM) – Amarillo, TX



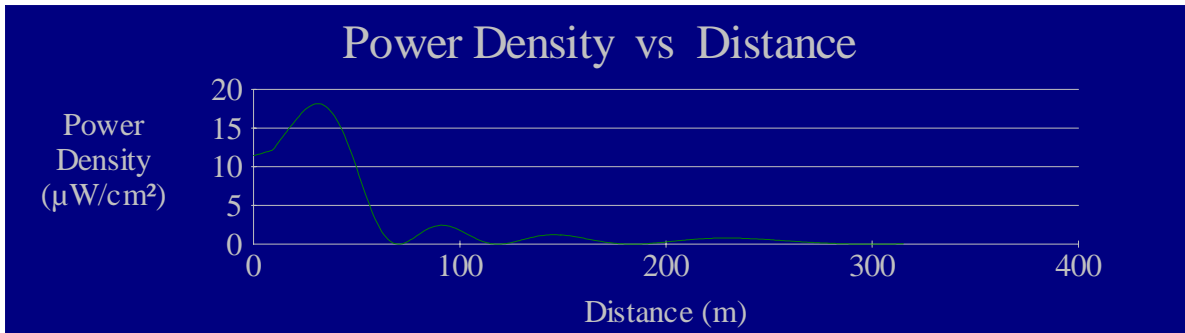
Distance (meters) = 315  
 Horizontal ERP (W) = 100000  
 Antenna Height (m) = 74  
 Number of Elements = 8  
 Y-axis (Linear) = -1

Vertical ERP (W) = 100000  
 Antenna EPA Type = 3  
 Element Spacing = 1  
 X-axis Setup = -1, 315

X(m)	Y(μW/cm <sup>2</sup> )	X(m)	Y(μW/cm <sup>2</sup> )	X(m)	Y(μW/cm <sup>2</sup> )	X(m)	Y(μW/cm <sup>2</sup> )
0	38.6664	26	58.5200	52	13.0943	78	5.85180
1	38.6589	27	53.4607	53	12.2087	79	5.34279
2	38.6354	28	47.9484	54	10.9790	80	4.73432
3	38.5934	29	42.0908	55	9.49889	81	4.06132
4	38.5285	30	36.0566	56	7.87248	82	3.35951
5	38.4348	31	30.0253	57	6.20644	83	2.66346
6	38.3049	32	24.1791	58	4.60252	84	2.00493
7	40.6236	33	18.6936	59	3.15110	85	1.41152
8	44.0424	34	13.7590	60	1.92608	86	.905937
9	47.4795	35	9.48839	61	.980969	87	.504938
10	50.8928	36	5.94332	62	.348308	88	.217859
11	54.2328	37	3.20508	63	.037597	89	.049839
12	57.4434	38	1.31326	64	3.69043E-02	90	2.94314E-04
13	60.6713	39	.263778	65	.315894	91	6.34412E-02
14	64.1385	40	9.67682E-03	66	.829339	92	.229008
15	67.2943	41	.464688	67	1.52126	93	.483080
16	70.0489	42	1.51242	68	2.32938	94	.809011
17	72.3107	43	3.01905	69	3.18950	95	1.18837
18	73.9907	44	4.82688	70	4.03964	96	1.60188
19	75.0056	45	6.77136	71	4.82359	97	2.03026
20	75.0806	46	8.69067	72	5.49375	98	2.45500
21	74.2961	47	10.4361	73	6.00601	99	2.85907
22	72.7064	48	11.8812	74	6.34196	100	3.22741
23	70.3027	49	12.9289	75	6.48953		
24	67.1022	50	13.5160	76	6.44848		
25	63.1499	51	13.5602	77	6.22934		

## PLOT OF TOTAL POWER DENSITY

### KXLV.A(FM) – Amarillo, TX



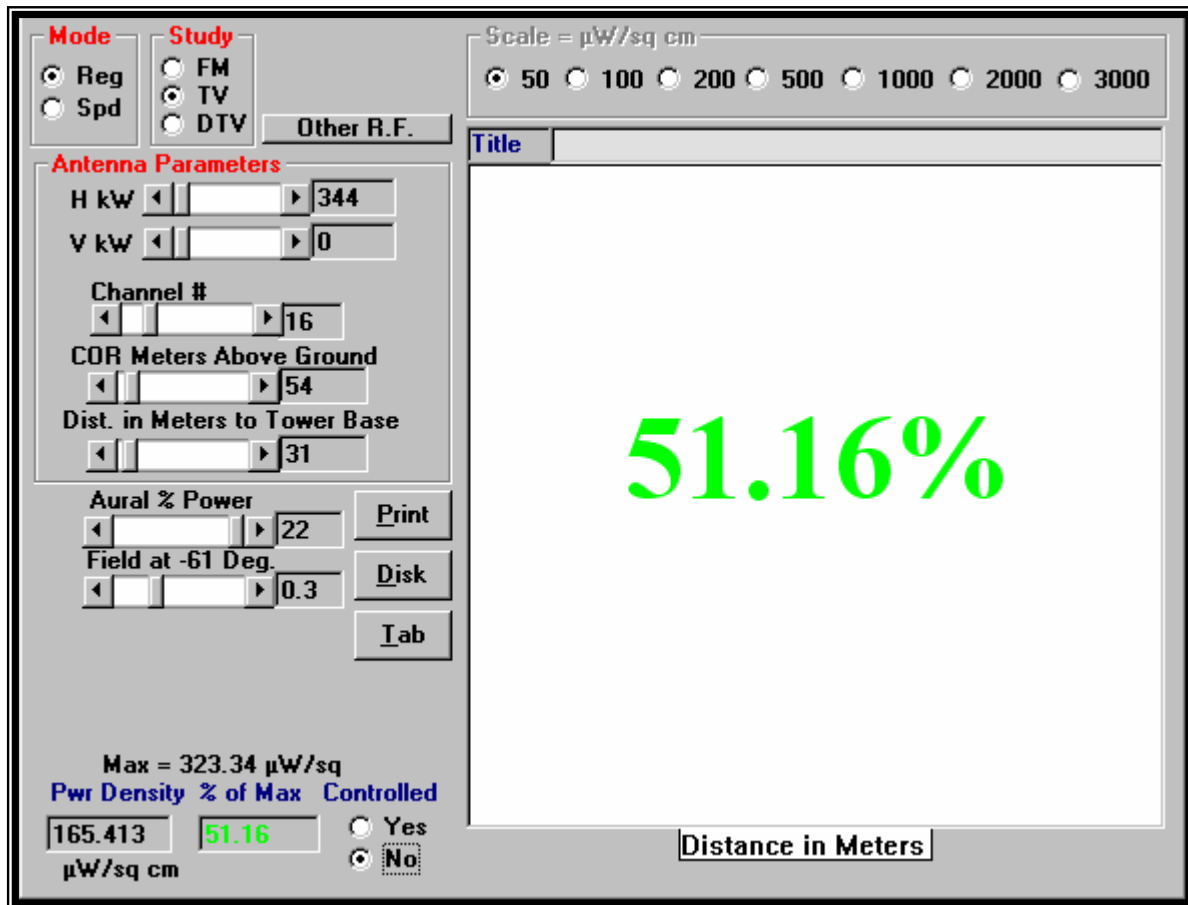
Distance (meters) = 315  
 Horizontal ERP (W) = 27500  
 Antenna Height (m) = 108  
 Number of Elements = 6  
 Y-axis (Linear) = -1

Vertical ERP (W) = 27500  
 Antenna EPA Type = 2  
 Element Spacing = 1  
 X-axis Setup = -1, 315

X(m)	Y(μW/cm <sup>2</sup> )	X(m)	Y(μW/cm <sup>2</sup> )	X(m)	Y(μW/cm <sup>2</sup> )	X(m)	Y(μW/cm <sup>2</sup> )
0	11.4497	26	17.6231	52	8.16773	78	.883515
1	11.5225	27	17.8019	53	7.37638	79	1.06676
2	11.5967	28	17.9422	54	6.60287	80	1.25053
3	11.6722	29	18.0555	55	5.85318	81	1.43070
4	11.7487	30	18.1355	56	5.13297	82	1.60350
5	11.8260	31	18.1701	57	4.44749	83	1.76557
6	11.9036	32	18.1568	58	3.80152	84	1.91396
7	11.9811	33	18.0934	59	3.19928	85	2.04616
8	12.0580	34	17.9781	60	2.64438	86	2.16013
9	12.1337	35	17.8094	61	2.13980	87	2.25429
10	12.4253	36	17.5865	62	1.68974	88	2.32753
11	12.7973	37	17.3088	63	1.29328	89	2.37982
12	13.1666	38	16.9765	64	.950891	90	2.42154
13	13.5317	39	16.6025	65	.662884	91	2.44151
14	13.8910	40	16.1933	66	.428890	92	2.43996
15	14.2427	41	15.7333	67	.247841	93	2.41748
16	14.5849	42	15.2243	68	.118008	94	2.37502
17	14.9157	43	14.6688	69	3.70453E-02	95	2.31383
18	15.2329	44	14.0696	70	2.04086E-03	96	2.23540
19	15.5574	45	13.4306	71	9.58200E-03	97	2.14147
20	15.9179	46	12.7558	72	5.58218E-02	98	2.03394
21	16.2617	47	12.0502	73	.136554	99	1.91489
22	16.5858	48	11.3188	74	.247293	100	1.78644
23	16.8872	49	10.5674	75	.382278		
24	17.1626	50	9.77896	76	.536507		
25	17.4090	51	8.97071	77	.705205		

## PLOT OF TOTAL POWER DENSITY

### Combined TV Operation



The “Dist to COR” value shown on the above graph represents the height of the antenna center of radiation above an observer on the ground who is assumed to be 2 meters in height.