

Technical Certifications

This exhibit for the minor modification of K236BM construction permit demonstrates compliance with all engineering standards and requirements specified in the applicable FCC rules and regulations. This application proposes a change in location with site information listed below.

	Construction Permit	Minor Mod
Channel / Class	236D	236D
ASRN	1011438	1304131
Geographical Coordinates	36 07 44.8 115 11 28.4	36 00 34.4 115 00 23.0
Tower AGL	101.1 m	77.1 m
Site AMSL	656.8 m	991.2 m
COR AGL	98 m	30 m
COR AMSL	754.8 m	1021.2 m
HAAT	68.6 m	330.5 m
ERP	0.25 kW (H&V, non-DA)	0.25 kW (V-DA)

GLOBE terrain data

Channel Study

REFERENCE CH# 236D - 95.1 MHz, Pwr= 0.25 kW DA, HAAT= 330.5 M, COR= 1021.2 MDISPLAY DATES
 36 00 34.4 N. Average Protected F(50-50)= 23.6 km DATA 07-28-23
 115 00 23.0 W. Standard Directional SEARCH 07-28-23

CH CITY	CALL	TYPE STATE	ANT	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
238C Henderson	KWNR	LIC NV	CN	203.7 23.7	0.11 BLH19890629KB	36 00 30.90 115 00 24.90	100.000 354	12.8 1044	88.1 Ihm Licenses, LLC	-14.3*	-88.0*
236D Spring Valley	K236BM!	CP NV	CN	308.7 128.6	21.27 0000212948	36 07 44.80 115 11 28.40	0.250	755	---Reference--- Educational Media Foundati		
236D Spring Valley	K236BM!	LIC NV	CN	308.7 128.6	21.26 BLFT20190412ABL	36 07 44.90 115 11 28.00	0.075	755	---Reference--- Educational Media Foundati		
234D Las Vegas	K234BS	LIC NV	DVN	308.0 127.9	21.85 0000216717	36 07 49.70 115 11 53.10	0.250 -8	0.2 687	4.4 Educational Media Foundati	-4.5*	15.2
236A Pahrump	KNYE	LIC NV	CN	283.0 102.4	94.85 BLH20011120AAE	36 11 51.80 116 02 11.00	6.000 -28	68.3 840	15.8 Pahrump Radio, Inc.	3.1	11.3
234D Las Vegas	K234BS	APP NV	DVN	206.0 25.9	7.88 0000218259	35 56 44.90 115 02 41.00	0.250 -8	0.5 1328	3.1 Educational Media Foundati	4.4	3.1
233C Moapa	KXLI	LIC NV	HN	48.4 229.0	105.39 BLH20080229AAT	36 38 06.90 114 07 20.80	93.000 637	16.6 1755	102.3 Radio Activo Broadcasting	72.9	3.1
235D Dolan Springs	K235CJ/DK	APP AZ	DVN	97.1 277.2	12.84 BLFT20141106ADU	35 59 42.90 114 51 52.90	0.250	6.3 1099	3.6 Legacy Preservation Founda	3.8	4.6
233C Moapa	KXLI	RSV-A NV		48.4 229.0	105.39	36 38 06.91 114 07 20.88	100.000 600	16.5 1684	100.8 From CDBS	73.1	4.6
233D Sunrise Manor	KXLI-FM1	LIC NV	CN	10.9 191.0	35.53 BMLFTB20110404AER	36 19 23.90 114 55 52.00	0.340 59	1.3 826	16.9 Radio Activo Broadcasting	11.1	16.2
289C Dolan Springs	KOAS	LIC AZ	HN	107.1 287.5	64.73 BLH20111104AKT	35 50 11.80 114 19 16.90	100.000 543	0.1 1536	2.1 Beasley Media Group Licens	28.5R	36.2M

Terrain database is GLOBE 30 Sec, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM
 In & Out distances between contours are shown at closest points. Reference Zone= West Zone, Co to 3rd adjacent.
 All separation margins (if shown) include rounding. Call signs with exclamation marks need not be protected.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
 "*"affixed to 'IN' or 'OUT' values = site inside restricted contour.
 « = Station meets FCC minimum distance spacing for its class.

Educational Media Foundation

5700 W Oaks Blvd
Rocklin, CA 95765

*Exhibit 1-A
Las Vegas, NV*

Compliance with C.F.R. 74.1204

The proposed FM Translator to operate on channel 236D is located within the protected 60dBu contour of second adjacent station KWNR, channel 238C, Henderson, NV.

According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for K236BM: 250 watts

The proposed COR AGL for K236BM: 30 meters

KWNR F(50/50) contour at proposed site: 145.5dBu

The F(50/10) contour of proposed K236BM: 195.5dbu

The predicted distance to the 195.5dbu interfering contour is 0.1 meters. Since the proposed transmit antenna will be mounted 30 meters above ground level, the interference will not reach the ground level.

There are no surrounding structures which are tall enough to enter the interfering contour within the 0.1m distance from the antenna.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.



Date: July 28th 2023

To Whom It May Concern,

The K236BM proposed directional antenna will be mounted 28 ft above the KAER-AUX Mesquite NV antenna system, FIN 93355.

Shively Labs recommends the placement of the proposed 1/2" coaxial flex cable that will be used for the K236BM Translator, Spring Valley, NV, 95.1 MHz, Facility ID No 93213, to be located on ASRN 1304131, must be attached to the cable ladder. It has been noted the cable ladder is located on an opposite leg of the tower as is the Shively 6025-2/1-DA-Special KAER-Aux antenna system.

If the 1/2" coaxial flex cable is installed per the note above, we have concluded that it will not have any adverse effect on the directional antenna pattern of KAER-AUX, 89.3 MHz, Mesquite, NV, FIN 93355.

Please do not hesitate to contact us with any questions or concerns.

Respectfully,

Stephen Wilde
President / CEO
American Amplifier Technologies, LLC
Shively Labs
C: 530-574-3474

Human exposure to excess levels of radiofrequency radiation

The proposed facility is to be built using a 1-bay vertically polarized Scala CL-FMV antenna.

According to OET 65, "Applicants and licensees should be able to calculate, based on considerations of frequency, power and antenna characteristics the distance from their transmitter where their signal produces an RF field equal to, or greater than, the 5% threshold limit. The applicant or licensee then shares responsibility for compliance in any accessible area or areas within this 5% "contour" where the appropriate limits are found to be exceeded."

As can be seen in Exhibit 4-A, the proposed facility's maximum contribution to RF on the site is $1.15\mu\text{W}/\text{cm}^2$ at a distance of 44 meters from the tower, which is less than 0.6% of the uncontrolled (public) exposure limit and less than 0.1% of the controlled limit.

Therefore, because the proposed facility will not cause an RF field that is equal to or greater than 5% of the $200\mu\text{W}/\text{cm}^2$ limit for uncontrolled exposure at any point, the proposed facility complies with the requirements of OET 65.

EMF will fully cooperate with other site users to temporarily reduce power or cease broadcasting, as necessary, to protect workers and others having access to the site from excessive levels of RF Radiation.

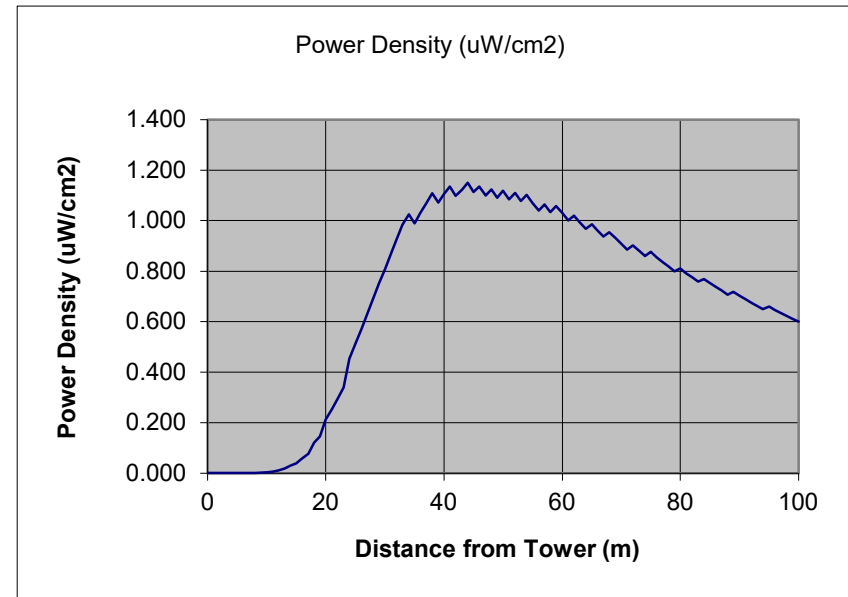
Specific Antenna RF Power Density Calculator

Based on Equation 10 of OET-65

Detailed Report

ERP 0.25 kW % of OET-65
Height above ground 30.0 meters 0.6% Uncontrolled
Height above head 28.0 meters 0.1% Controlled
Antenna Brand Scala
Antenna Model CL-FMV

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm ²)
0	90	28.0	0.01	2.5	0.001
1	88	28.0	0.01	2.5	0.001
2	86	28.1	0.01	2.5	0.001
3	84	28.2	0.01	2.5	0.001
4	82	28.3	0.01	2.5	0.001
5	80	28.4	0.01	2.5	0.001
6	78	28.6	0.01	2.5	0.001
7	76	28.9	0.01	2.5	0.001
8	74	29.1	0.012	3	0.001
9	72	29.4	0.016	4	0.002
10	70	29.7	0.02	5	0.004
11	69	30.1	0.025	6.25	0.006
12	67	30.5	0.035	8.75	0.011
13	65	30.9	0.045	11.25	0.018
14	63	31.3	0.06	15	0.031
15	62	31.8	0.069	17.25	0.039
16	60	32.2	0.085	21.25	0.058
17	59	32.8	0.099	24.75	0.076
18	57	33.3	0.127	31.75	0.122
19	56	33.8	0.141	35.25	0.145
20	54	34.4	0.174	43.5	0.214
21	53	35.0	0.193	48.25	0.254
22	52	35.6	0.212	53	0.296
23	51	36.2	0.231	57.75	0.339
24	49	36.9	0.272	68	0.454
25	48	37.5	0.294	73.5	0.512
26	47	38.2	0.316	79	0.571



27	46	38.9	0.338	84.5	0.630
28	45	39.6	0.36	90	0.690
29	44	40.3	0.382	95.5	0.750
30	43	41.0	0.404	101	0.809
31	42	41.8	0.426	106.5	0.868
32	41	42.5	0.448	112	0.927
33	40	43.3	0.47	117.5	0.985
34	39	44.0	0.488	122	1.025
35	39	44.8	0.488	122	0.990
36	38	45.6	0.507	126.75	1.032
37	37	46.4	0.525	131.25	1.069
38	36	47.2	0.544	136	1.109
39	36	48.0	0.544	136	1.072
40	35	48.8	0.562	140.5	1.106
41	34	49.6	0.579	144.75	1.136
42	34	50.5	0.579	144.75	1.099
43	33	51.3	0.595	148.75	1.123
44	32	52.2	0.612	153	1.150
45	32	53.0	0.612	153	1.113
46	31	53.9	0.628	157	1.136
47	31	54.7	0.628	157	1.100
48	30	55.6	0.645	161.25	1.125
49	30	56.4	0.645	161.25	1.091
50	29	57.3	0.663	165.75	1.118
51	29	58.2	0.663	165.75	1.084
52	28	59.1	0.681	170.25	1.110
53	28	59.9	0.681	170.25	1.078
54	27	60.8	0.699	174.75	1.103
55	27	61.7	0.699	174.75	1.071
56	27	62.6	0.699	174.75	1.041
57	26	63.5	0.717	179.25	1.064
58	26	64.4	0.717	179.25	1.035
59	25	65.3	0.735	183.75	1.058
60	25	66.2	0.735	183.75	1.029
61	25	67.1	0.735	183.75	1.001
62	24	68.0	0.752	188	1.020
63	24	68.9	0.752	188	0.993
64	24	69.9	0.752	188	0.968
65	23	70.8	0.769	192.25	0.986

66	23	71.7	0.769	192.25	0.961
67	23	72.6	0.769	192.25	0.936
68	22	73.5	0.786	196.5	0.954
69	22	74.5	0.786	196.5	0.930
70	22	75.4	0.786	196.5	0.908
71	22	76.3	0.786	196.5	0.886
72	21	77.3	0.803	200.75	0.902
73	21	78.2	0.803	200.75	0.881
74	21	79.1	0.803	200.75	0.860
75	20	80.1	0.82	205	0.876
76	20	81.0	0.82	205	0.856
77	20	81.9	0.82	205	0.836
78	20	82.9	0.82	205	0.817
79	20	83.8	0.82	205	0.799
80	19	84.8	0.835	208.75	0.810
81	19	85.7	0.835	208.75	0.793
82	19	86.6	0.835	208.75	0.775
83	19	87.6	0.835	208.75	0.759
84	18	88.5	0.85	212.5	0.769
85	18	89.5	0.85	212.5	0.753
86	18	90.4	0.85	212.5	0.738
87	18	91.4	0.85	212.5	0.722
88	18	92.3	0.85	212.5	0.707
89	17	93.3	0.865	216.25	0.718
90	17	94.3	0.865	216.25	0.703
91	17	95.2	0.865	216.25	0.689
92	17	96.2	0.865	216.25	0.676
93	17	97.1	0.865	216.25	0.662
94	17	98.1	0.865	216.25	0.649
95	16	99.0	0.88	220	0.659
96	16	100.0	0.88	220	0.647
97	16	101.0	0.88	220	0.634
98	16	101.9	0.88	220	0.622
99	16	102.9	0.88	220	0.611
100	16	103.8	0.88	220	0.600