

Displacement Application

Educational Media Foundation ("EMF") submits this application in order to change the channel of its licensed translator facility K243CC, Tucson, AZ (BLFT-20170410AEX) from channel 243 to channel 227.

In 2018, KIKO was granted a construction permit to change operation from channel 247 to 243. KIKO subsequently built and licensed its operation on channel 243 which is cochannel to K243CC.

Please see attached Exhibit 1A which shows KIKO's 60dBu protected contour along with the K243CC 40dBu interfering contour. If K243CC were to continue to broadcast on channel 243, it is predicted that it will cause widespread interference to KIKO. In order to eliminate the potential for interference, a move to an alternate frequency is necessary.

EMF submits that it is not technically feasible to operate K243CC on its current channel 243 or the 1st, 2nd, 3rd adjacent channels, or the intermediate frequency channels (see attached Exhibit 1B). In order to continue to provide service to the listeners of K243CC, EMF has chosen channel 227.

The primary station, delivery method and transmit antenna of the existing facility will not be changed. The physical location of the translator remains unchanged although the coordinates and center of radiation above mean sea level are slightly different than the K243CC licensed parameters due to the tower owner updating the ASR coordinates and site elevation. No change in elevation above ground is proposed but due to the change in the site elevation, the height above mean sea level has increased by 9 meters.

Exhibit 1-A
KIKO Protected Service Contour
K243CC Interfering Contour

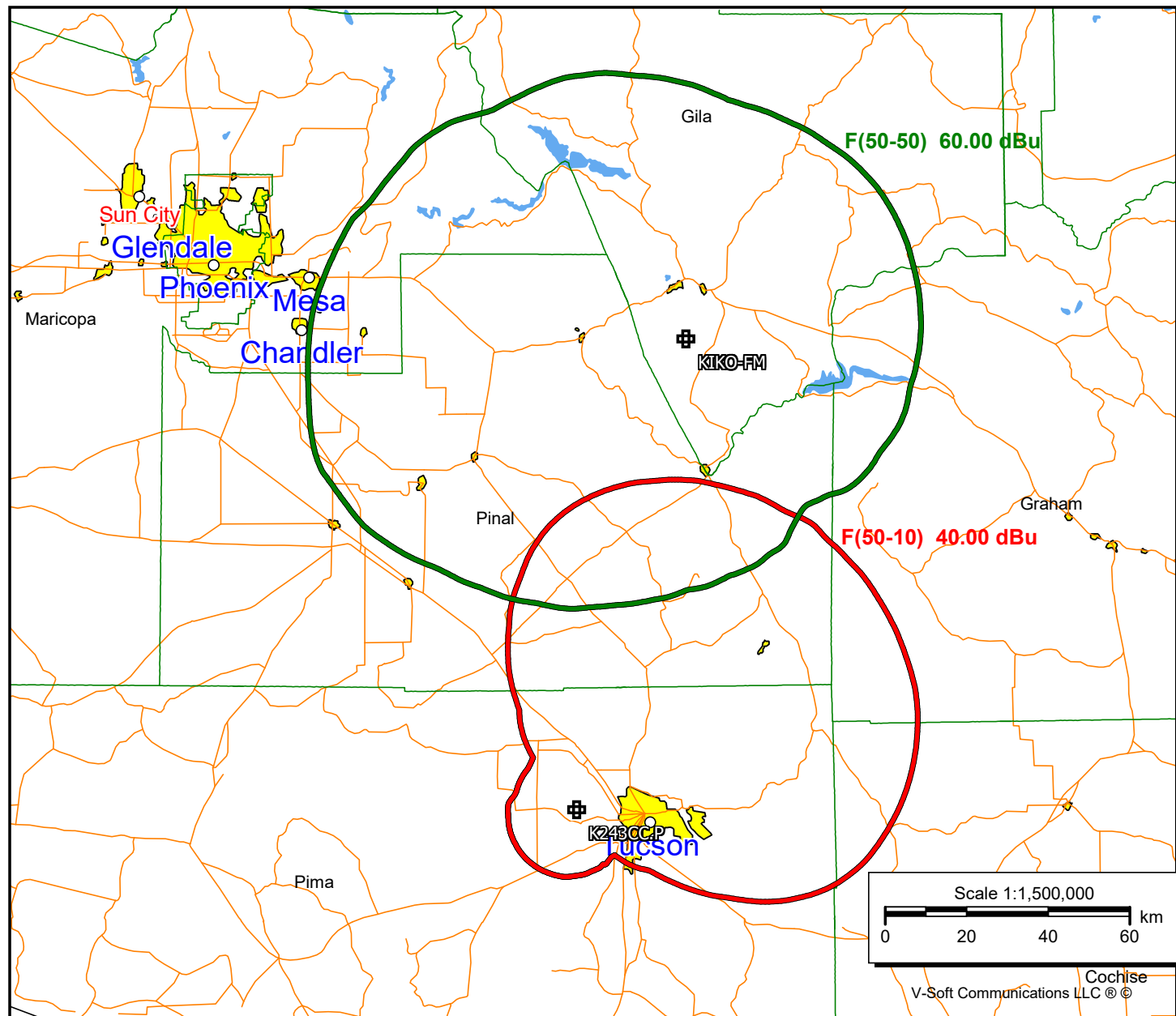
- KIKO-FM (243)
- K243CC.P (243)

KIKO-FM

BLH20181121AAM
Latitude: 33-17-20.20 N
Longitude: 110-49-47.30 W
ERP: 30.00 kW
Channel: 243
Frequency: 96.5 MHz
AMSL Height: 2326.0 m
Elevation: 2302.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

K243CC.P

BLFT20170410AEX
Latitude: 32-14-57.30 N
Longitude: 111-06-59.30 W
ERP: 0.205 kW
Channel: 243
Frequency: 96.5 MHz
AMSL Height: 1339.0 m
Elevation: 1325.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None



Current Channel 243

REFERENCE		CH# 243D - 96.5 MHz, Pwr= 0.205 kW DA, HAAT= 586.8 M, COR= 1348.1 M								DISPLAY DATES	
32 14 56.2 N.		Average Protected F(50-50)= 30.3 km								DATA 10-05-20	
111 07 01.1 W.		Standard Directional								SEARCH 10-09-20	
CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
243D Tucson	K243CC!	LIC D	AZ	54.1 234.1	0.05 BLFT20170410AEX	32 14 57.30 111 06 59.30	0.205		---Reference---		
								1339	Educational Media Foundati		
241C Tucson	KLPX	LIC	AZ	0.0 111.5	0.00 BLH19900503KD	32 14 56.30 111 07 01.40	100.000 595	13.3 1360	90.4 Arizona Lotus Corp.	-37.0*	-91.0*
243C Claypool	KIKO-FM	LIC D	AZ	13.0 193.1	118.70 BLH20181121AAM	33 17 20.20 110 49 47.30	30.000 966	148.0 2326	66.7 ltv.Com, Inc.	-57.1*	-31.5

Channel 226 (first adjacent)

REFERENCE		CH# 226D - 93.1 MHz, Pwr= 0.205 kW DA, HAAT= 586.8 M, COR= 1348.1 M								DISPLAY DATES	
32 14 56.2 N.		Average Protected F(50-50)= 30.3 km								DATA 10-05-20	
111 07 01.1 W.		Standard Directional								SEARCH 10-09-20	
CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
225C Tucson	KMIY	LIC	AZ	0.0 90.0	0.00 BLH19850225KK	32 14 56.20 111 07 01.30	93.000 621	137.4 1386	92.6 Capstar Tx, LLC	-161.1*	-129.2*

Channel 225 (second adjacent)

REFERENCE		CH# 226D - 93.1 MHz, Pwr= 0.205 kW DA, HAAT= 586.8 M, COR= 1348.1 M								DISPLAY DATES	
32 14 56.2 N.		Average Protected F(50-50)= 30.3 km								DATA 10-05-20	
111 07 01.1 W.		Standard Directional								SEARCH 10-09-20	
CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
225C Tucson	KMIY	LIC	AZ	0.0 90.0	0.00 BLH19850225KK	32 14 56.20 111 07 01.30	93.000 621	137.4 1386	92.6 Capstar Tx, LLC	-161.1*	-129.2*

Channel 224 (third adjacent)

REFERENCE		CH# 224D - 92.7 MHz, Pwr= 0.205 kW DA, HAAT= 586.8 M, COR= 1348.1 M								DISPLAY DATES	
32 14 56.2 N.		Average Protected F(50-50)= 30.3 km								DATA 10-05-20	
111 07 01.1 W.		Standard Directional								SEARCH 10-09-20	
CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
225C Tucson	KMIY	LIC	AZ	0.0 90.0	0.00 BLH19850225KK	32 14 56.20 111 07 01.30	93.000 621	137.4 1386	92.6 Capstar Tx, LLC	-161.1*	-129.2*
223D Tucson	K223CI	LIC D	AZ	347.0 167.0	0.03 BLFT20170731ACG	32 14 57.30 111 07 01.40	0.150	4.5 1371	2.4 Radioforsale LLC	-21.8*	-28.6*

Channel 228 (first adjacent)

REFERENCE		CH# 228D - 93.5 MHz, Pwr= 0.205 kW DA, HAAT= 586.8 M, COR= 1348.1 M								DISPLAY DATES	
32 14 56.2 N.		Average Protected F(50-50)= 30.3 km								DATA 10-05-20	
111 07 01.1 W.		Standard Directional								SEARCH 10-09-20	
CH	CALL	TYPE	ANT	AZI.	DIST	LAT.	Pwr (kW)	INT (km)	PRO (km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG.	HAAT (M)	COR (M)	LICENSEE	(Overlap in km)	
229C	KRQQ	LIC		67.3	0.04	32 14 56.80	93.000	137.8	92.9	-167.8*	-140.0*
Tucson		AZ		247.3	BMLH20130610AAM	111 06 59.40	613	1378	Capstar Tx, LLC		

Channel 229 (second adjacent)

REFERENCE		CH# 228D - 93.5 MHz, Pwr= 0.205 kW DA, HAAT= 586.8 M, COR= 1348.1 M								DISPLAY DATES	
32 14 56.2 N.		Average Protected F(50-50)= 30.3 km								DATA 10-05-20	
111 07 01.1 W.		Standard Directional								SEARCH 10-09-20	
CH	CALL	TYPE	ANT	AZI.	DIST	LAT.	Pwr (kW)	INT (km)	PRO (km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG.	HAAT (M)	COR (M)	LICENSEE	(Overlap in km)	
229C	KRQQ	LIC		67.3	0.04	32 14 56.80	93.000	137.8	92.9	-167.8*	-140.0*
Tucson		AZ		247.3	BMLH20130610AAM	111 06 59.40	613	1378	Capstar Tx, LLC		

Channel 230 (third adjacent)

REFERENCE		CH# 228D - 93.5 MHz, Pwr= 0.205 kW DA, HAAT= 586.8 M, COR= 1348.1 M								DISPLAY DATES	
32 14 56.2 N.		Average Protected F(50-50)= 30.3 km								DATA 10-05-20	
111 07 01.1 W.		Standard Directional								SEARCH 10-09-20	
CH	CALL	TYPE	ANT	AZI.	DIST	LAT.	Pwr (kW)	INT (km)	PRO (km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG.	HAAT (M)	COR (M)	LICENSEE	(Overlap in km)	
229C	KRQQ	LIC		67.3	0.04	32 14 56.80	93.000	137.8	92.9	-167.8*	-140.0*
Tucson		AZ		247.3	BMLH20130610AAM	111 06 59.40	613	1378	Capstar Tx, LLC		

Channel 296 (intermod frequency)

REFERENCE		CH# 296D - 107.1 MHz, Pwr= 0.205 kW DA, HAAT= 586.8 M, COR= 1348.1 M								DISPLAY DATES	
32 14 56.2 N.		Average Protected F(50-50)= 30.3 km								DATA 10-05-20	
111 07 01.1 W.		Standard Directional								SEARCH 10-09-20	
CH	CALL	TYPE	ANT	AZI.	DIST	LAT.	Pwr (kW)	INT (km)	PRO (km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG.	HAAT (M)	COR (M)	LICENSEE	(Overlap in km)	
298C	KHYT	LIC		0.0	0.00	32 14 56.20	92.000	13.9	92.8	-37.6*	-93.3*
Tucson		AZ		90.0	BLH199601116K	111 07 01.30	620	1392	Radio License Holding Cbc,		
296D	K296GT	CP		97.6	22.24	32 13 20.30	0.050	31.6	9.4	-32.5*	-72.3*
Tucson		AZ		277.7	0000120105	110 52 57.30		857	Edgewater Broadcasting, In		
296D	K296GT	LIC D		88.1	14.49	32 15 11.20	0.002	5.2	1.7	-16.6*	-70.8*
Mt Lemmon		AZ		268.2	BLFT20170901AAZ	110 57 46.30		736	Edgewater Broadcasting, In		

Channel 297 (intermod frequency)

REFERENCE		CH# 296D - 107.1 MHz, Pwr= 0.205 kW DA, HAAT= 586.8 M, COR= 1348.1 M									
32 14 56.2 N.		Average Protected F(50-50)= 30.3 km								DISPLAY DATES	
111 07 01.1 W.		Standard Directional								DATA 10-05-20	
										SEARCH 10-09-20	
CH	CALL	TYPE	ANT	AZI.	DIST	LAT.	Pwr (kW)	INT (km)	PRO (km)	*IN*	*OUT*
CITY			STATE	<--	FILE #	LNG.	HAAT (M)	COR (M)	LICENSEE	(Overlap in km)	
298C	KHYT	LIC		0.0	0.00	32 14 56.20	92.000	13.9	92.8	-37.6*	-93.3*
Tucson			AZ	90.0	BLH199601116K	111 07 01.30	620	1392	Radio License Holding Cbc,		
296D	K296GT	CP		97.6	22.24	32 13 20.30	0.050	31.6	9.4	-32.5*	-72.3*
Tucson			AZ	277.7	0000120105	110 52 57.30		857	Edgewater Broadcasting, In		
296D	K296GT	LIC D		88.1	14.49	32 15 11.20	0.002	5.2	1.7	-16.6*	-70.8*
Mt Lemmon			AZ	268.2	BLFT20170901AAZ	110 57 46.30		736	Edgewater Broadcasting, In		

Channel Study

REFERENCE		CH# 227D - 93.3 MHz, Pwr= 0.205 kW DA, HAAT= 586.8 M, COR= 1348.1 M								DISPLAY DATES	
32 14 56.2 N.		Average Protected F(50-50)= 30.3 km								DATA 10-05-20	
111 07 01.1 W.		Standard Directional								SEARCH 10-09-20	
CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
229C Tucson	KRQQ	LIC	AZ	67.3 247.3	0.04 BMLH20130610AAM	32 14 56.80 111 06 59.40	93.000 613	13.9 1378	92.9 Capstar Tx, LLC	-44.0*	-93.8*
225C Tucson	KMIY	LIC	AZ	0.0 90.0	0.00 BLH19850225KK	32 14 56.20 111 07 01.30	93.000 621	13.8 1386	92.6 Capstar Tx, LLC	-37.6*	-93.2*
227C Cananea	XHSCAFM	USE	SO	152.1 332.5	149.78	31 03 21.40 110 22 54.27	100.000 600	201.4 2164	92.0	-64.4*	36.9
227C Mesa	KDKB	LIC	AZ	324.0 143.5	149.53 BLH20101116AIX	33 20 01.00 112 03 46.90	100.000 508	190.9 871	87.1 Phoenix FCC License Sub, L	-59.9*	13.5
227C Cananea	XHSCAFM	LIC D	SO	152.1 332.5	149.78	31 03 21.40 110 22 54.30	15.200 1009	180.6 2574	92.0	-43.6*	36.9
281A Tucson	KFLT-FM	LIC	AZ	63.7 243.8	10.28 BMLED20181218AAM	32 17 23.30 111 01 08.30	3.000 100	12.8 903	58.8 Family Life Broadcasting,	9.5R	0.8M

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.											
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.											
Reference station has protected zone issue: Mexico											

Exhibit 3
Fill In Contour KLTU

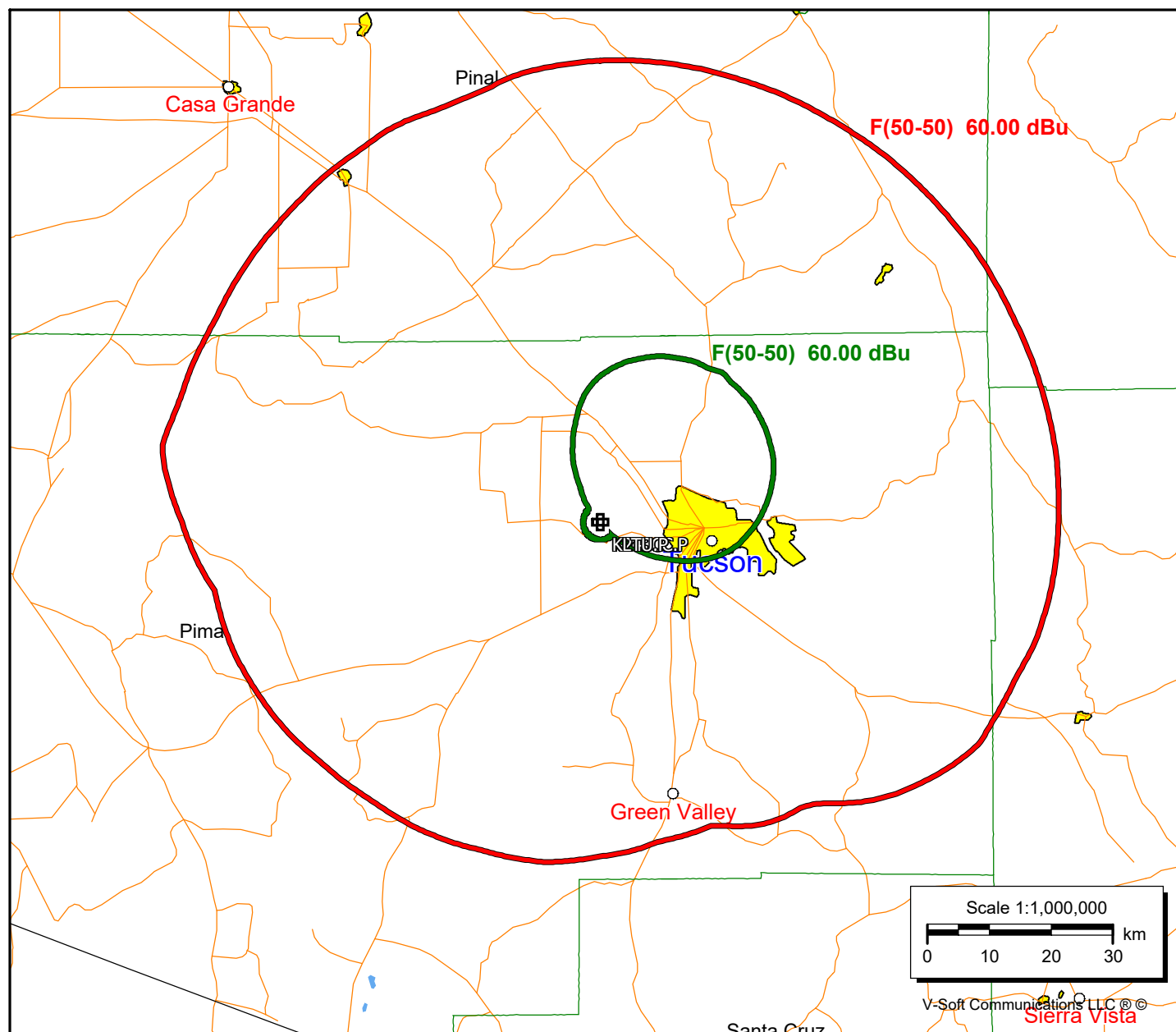
- K243CC.P (243)
- KLTU.P (201)

KLTU.P

BLED20120716ADD
Latitude: 32-14-56.20 N
Longitude: 111-07-01.10 W
ERP: 16.00 kW
Channel: 201
Frequency: 88.1 MHz
AMSL Height: 1372.0 m
Elevation: 1334.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

K243CC.P

BLFT20170410AEX
Latitude: 32-14-57.30 N
Longitude: 111-06-59.30 W
ERP: 0.205 kW
Channel: 243
Frequency: 96.5 MHz
AMSL Height: 1339.0 m
Elevation: 1325.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None



Educational Media Foundation
5700 West Oaks Boulevard
Rocklin, CA 95765

Exhibit 4
Tucson, AZ

Compliance with International Requirements

The proposed FM translator is located within 125 km of the Mexican border and proposing an ERP of no more than 50 watts toward the Mexican border.

Also, the 60 dBu service contour doesn't exceed 8.7 km toward Mexico nor does the interfering 34 dBu contour exceed 32 km (see Exhibit 4 - A).

Therefore, the proposed translator fully complies with the requirement of 47 C.F.R. 74.1235(d-1) of the Commission's rules.

Compliance with International Requirements

Distance to Contour (protected 60 dBu)

N. Lat. = 321456.2 W. Lng. = 1110701.1
HAAT and Distance to Contour,
FCC, FM 2-10 Mi, 51 pts Method - NGDC 30 SEC

Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
-----	-----	-----	-----	-----	-----	-----
132	837.7	501.3	0.0007	-31.76	0.057	4.90
133	839.9	499.1	0.0006	-32.23	0.054	4.68
134	842.7	496.3	0.0005	-32.90	0.050	4.39
135	845.7	493.3	0.0005	-33.44	0.047	4.16
136	848.8	490.2	0.0004	-34.01	0.044	3.93
137	852.3	486.7	0.0003	-34.84	0.040	3.62
138	856.9	482.1	0.0003	-35.52	0.037	3.37
139	862.1	476.9	0.0002	-36.51	0.033	3.03
140	867.8	471.2	0.0002	-37.34	0.030	2.79
141	874.2	464.8	0.0002	-37.34	0.030	2.79
142	879.5	459.5	0.0002	-37.34	0.030	2.78
143	883.8	455.2	0.0002	-37.34	0.030	2.78
144	884.8	454.2	0.0002	-37.34	0.030	2.78
145	882.9	456.1	0.0002	-37.34	0.030	2.78
146	877.7	461.3	0.0002	-37.34	0.030	2.78
147	871.5	467.5	0.0002	-37.34	0.030	2.79
148	864.8	474.2	0.0002	-37.34	0.030	2.79
149	858.7	480.3	0.0002	-37.34	0.030	2.79
150	854.0	485.0	0.0002	-37.34	0.030	2.79
151	850.6	488.4	0.0002	-37.34	0.030	2.80
152	847.8	491.2	0.0002	-37.34	0.030	2.80
153	845.5	493.5	0.0002	-37.34	0.030	2.80
154	844.1	494.9	0.0002	-37.34	0.030	2.80
155	843.5	495.5	0.0002	-37.34	0.030	2.80
156	843.0	496.0	0.0002	-37.34	0.030	2.80
157	842.2	496.8	0.0002	-37.34	0.030	2.80
158	840.9	498.1	0.0002	-37.34	0.030	2.80
159	838.8	500.2	0.0002	-37.34	0.030	2.80
160	836.4	502.6	0.0002	-37.34	0.030	2.80
161	834.6	504.4	0.0002	-37.34	0.030	2.80
162	833.0	506.0	0.0002	-37.34	0.030	2.80
163	830.9	508.1	0.0002	-37.34	0.030	2.80
164	828.6	510.4	0.0002	-37.34	0.030	2.80
165	826.8	512.2	0.0002	-37.34	0.030	2.81

Educational Media Foundation

5700 West Oaks Boulevard
Rocklin, CA 95765

*Exhibit 4-A
Tucson, AZ*

166	825.5	513.5	0.0002	-37.34	0.030	2.81
167	824.2	514.8	0.0002	-37.34	0.030	2.81
168	822.7	516.3	0.0002	-37.34	0.030	2.81
169	821.1	517.9	0.0002	-37.34	0.030	2.81
170	819.4	519.6	0.0002	-37.34	0.030	2.81
171	817.3	521.7	0.0002	-37.34	0.030	2.81
172	814.2	524.8	0.0002	-37.34	0.030	2.81
173	810.5	528.5	0.0002	-37.34	0.030	2.81
174	807.4	531.6	0.0002	-37.34	0.030	2.81
175	805.4	533.6	0.0002	-37.34	0.030	2.81
176	803.6	535.4	0.0002	-37.34	0.030	2.81
177	802.0	537.0	0.0002	-37.34	0.030	2.81
178	800.3	538.7	0.0002	-37.34	0.030	2.81
179	798.7	540.3	0.0002	-37.34	0.030	2.82
180	797.0	542.0	0.0002	-37.34	0.030	2.82
181	794.6	544.4	0.0002	-37.34	0.030	2.82
182	792.0	547.0	0.0002	-37.34	0.030	2.82
183	789.4	549.6	0.0002	-37.34	0.030	2.82
184	786.8	552.2	0.0002	-37.34	0.030	2.82
185	784.2	554.8	0.0002	-37.34	0.030	2.82
186	781.6	557.4	0.0002	-37.34	0.030	2.82
187	779.1	559.9	0.0002	-37.34	0.030	2.82
188	776.8	562.2	0.0002	-37.34	0.030	2.82
189	774.8	564.2	0.0002	-37.34	0.030	2.82
190	773.0	566.0	0.0002	-37.34	0.030	2.82
191	771.5	567.5	0.0002	-37.34	0.030	2.82
192	770.1	568.9	0.0002	-37.34	0.030	2.82
193	768.6	570.4	0.0002	-37.34	0.030	2.83
194	766.9	572.1	0.0002	-37.34	0.030	2.83
195	765.2	573.8	0.0002	-37.34	0.030	2.83
196	763.4	575.6	0.0002	-37.34	0.030	2.83
197	761.5	577.5	0.0002	-37.34	0.030	2.83
198	759.6	579.4	0.0002	-37.34	0.030	2.83
199	757.8	581.2	0.0002	-37.34	0.030	2.83
200	756.2	582.8	0.0002	-37.34	0.030	2.83
201	755.0	584.0	0.0002	-37.34	0.030	2.83
202	753.9	585.1	0.0002	-37.34	0.030	2.83
203	753.0	586.0	0.0002	-37.34	0.030	2.83
204	752.2	586.8	0.0002	-37.34	0.030	2.83
205	751.4	587.6	0.0002	-37.34	0.030	2.83
206	750.7	588.3	0.0002	-37.34	0.030	2.83
207	750.1	588.9	0.0002	-37.34	0.030	2.83
208	749.7	589.3	0.0002	-37.34	0.030	2.83
209	749.4	589.6	0.0002	-37.34	0.030	2.83
210	748.9	590.1	0.0002	-37.34	0.030	2.83

Educational Media Foundation

5700 West Oaks Boulevard
Rocklin, CA 95765

*Exhibit 4-A
Tucson, AZ*

211	748.3	590.7	0.0002	-37.34	0.030	2.83
212	747.4	591.6	0.0002	-37.34	0.030	2.83
213	746.5	592.5	0.0002	-37.34	0.030	2.83
214	745.8	593.2	0.0002	-37.34	0.030	2.83
215	745.2	593.8	0.0002	-37.34	0.030	2.83
216	744.9	594.1	0.0002	-37.34	0.030	2.83
217	744.6	594.4	0.0002	-37.34	0.030	2.83
218	744.4	594.6	0.0002	-37.34	0.030	2.83
219	744.3	594.7	0.0002	-37.34	0.030	2.83
220	744.1	594.9	0.0002	-37.34	0.030	2.83
221	743.8	595.2	0.0002	-37.34	0.030	2.83
222	743.4	595.6	0.0002	-37.34	0.030	2.83
223	742.9	596.1	0.0002	-37.34	0.030	2.83
224	742.4	596.6	0.0002	-37.34	0.030	2.83
225	741.9	597.1	0.0002	-37.34	0.030	2.83
226	741.6	597.4	0.0002	-37.34	0.030	2.83
227	741.4	597.6	0.0002	-37.34	0.030	2.83
228	741.4	597.6	0.0002	-37.34	0.030	2.83
229	741.4	597.6	0.0002	-37.34	0.030	2.83
230	741.3	597.7	0.0002	-37.34	0.030	2.83
231	741.2	597.8	0.0002	-37.34	0.030	2.83
232	740.9	598.1	0.0002	-37.34	0.030	2.83
233	740.6	598.4	0.0002	-37.34	0.030	2.83
234	740.5	598.5	0.0002	-37.34	0.030	2.83
235	740.4	598.6	0.0002	-37.34	0.030	2.83
236	740.5	598.5	0.0002	-37.34	0.030	2.83
237	740.6	598.4	0.0002	-37.34	0.030	2.83
238	740.8	598.2	0.0002	-37.34	0.030	2.83
239	741.1	597.9	0.0002	-37.34	0.030	2.83
240	741.4	597.6	0.0002	-37.34	0.030	2.83
241	741.8	597.2	0.0002	-37.34	0.030	2.83
242	742.2	596.8	0.0002	-37.34	0.030	2.83
243	742.7	596.3	0.0002	-37.34	0.030	2.83
244	743.2	595.8	0.0002	-37.34	0.030	2.83
245	743.6	595.4	0.0002	-37.34	0.030	2.83
246	744.0	595.0	0.0002	-37.34	0.030	2.83
247	744.3	594.7	0.0002	-37.34	0.030	2.83
248	744.5	594.5	0.0002	-37.34	0.030	2.83
249	744.5	594.5	0.0002	-37.34	0.030	2.83
250	744.4	594.6	0.0002	-37.34	0.030	2.83
251	744.2	594.8	0.0002	-37.34	0.030	2.83
252	744.0	595.0	0.0002	-37.34	0.030	2.83
253	743.8	595.2	0.0002	-37.34	0.030	2.83
254	743.8	595.2	0.0002	-37.34	0.030	2.83
255	743.9	595.1	0.0002	-37.34	0.030	2.83

Educational Media Foundation

5700 West Oaks Boulevard
Rocklin, CA 95765

*Exhibit 4-A
Tucson, AZ*

256	744.3	594.7	0.0002	-37.34	0.030	2.83
257	744.9	594.1	0.0002	-37.34	0.030	2.83
258	745.7	593.3	0.0002	-37.34	0.030	2.83
259	746.9	592.1	0.0002	-37.34	0.030	2.83
260	748.1	590.9	0.0002	-37.34	0.030	2.83
261	749.2	589.8	0.0002	-37.34	0.030	2.83
262	750.3	588.7	0.0002	-37.34	0.030	2.83
263	751.4	587.6	0.0002	-37.34	0.030	2.83
264	752.6	586.4	0.0002	-37.34	0.030	2.83
265	754.0	585.0	0.0002	-37.34	0.030	2.83
266	755.5	583.5	0.0002	-37.34	0.030	2.83
267	757.1	581.9	0.0002	-37.34	0.030	2.83
268	758.9	580.1	0.0002	-37.34	0.030	2.83
269	760.7	578.3	0.0002	-37.34	0.030	2.83
270	762.6	576.4	0.0002	-37.34	0.030	2.83
271	764.4	574.6	0.0002	-37.34	0.030	2.83
272	765.9	573.1	0.0002	-37.34	0.030	2.83
273	767.0	572.0	0.0002	-37.34	0.030	2.83
274	768.2	570.8	0.0002	-37.34	0.030	2.83
275	769.3	569.7	0.0002	-37.34	0.030	2.83
276	770.6	568.4	0.0002	-37.34	0.030	2.82
277	772.2	566.8	0.0002	-37.34	0.030	2.82
278	774.3	564.7	0.0002	-37.34	0.030	2.82
279	777.9	561.1	0.0002	-37.34	0.030	2.82

Ave EI= 782.31 M HAAT= 556.69 M AMSL= 1339
Area by numeric integration= 1.12 Sq km.

Educational Media Foundation
5700 West Oaks Boulevard
Rocklin, CA 95765

Exhibit 4-A
Tucson, AZ

Distance to Contour (interfering 34 dBu)

N. Lat. = 321456.2 W. Lng. = 1110701.1
HAAT and Distance to Contour,
FCC, FM 2-10 Mi, 51 pts Method - NGDC 30 SEC

Azi.	AV EL	HAAT	ERP kW	dBk	Field	34-F1
132	837.7	501.3	0.0007	-31.76	0.057	31.86
133	839.9	499.1	0.0006	-32.23	0.054	30.84
134	842.7	496.3	0.0005	-32.90	0.050	29.50
135	845.7	493.3	0.0005	-33.44	0.047	28.48
136	848.8	490.2	0.0004	-34.01	0.044	27.45
137	852.3	486.7	0.0003	-34.84	0.040	26.07
138	856.9	482.1	0.0003	-35.52	0.037	24.95
139	862.1	476.9	0.0002	-36.51	0.033	23.42
140	867.8	471.2	0.0002	-37.34	0.030	22.17
141	874.2	464.8	0.0002	-37.34	0.030	22.02
142	879.5	459.5	0.0002	-37.34	0.030	21.90
143	883.8	455.2	0.0002	-37.34	0.030	21.80
144	884.8	454.2	0.0002	-37.34	0.030	21.78
145	882.9	456.1	0.0002	-37.34	0.030	21.83
146	877.7	461.3	0.0002	-37.34	0.030	21.94
147	871.5	467.5	0.0002	-37.34	0.030	22.09
148	864.8	474.2	0.0002	-37.34	0.030	22.23
149	858.7	480.3	0.0002	-37.34	0.030	22.36
150	854.0	485.0	0.0002	-37.34	0.030	22.46
151	850.6	488.4	0.0002	-37.34	0.030	22.54
152	847.8	491.2	0.0002	-37.34	0.030	22.59
153	845.5	493.5	0.0002	-37.34	0.030	22.64
154	844.1	494.9	0.0002	-37.34	0.030	22.67
155	843.5	495.5	0.0002	-37.34	0.030	22.69
156	843.0	496.0	0.0002	-37.34	0.030	22.70
157	842.2	496.8	0.0002	-37.34	0.030	22.71
158	840.9	498.1	0.0002	-37.34	0.030	22.74
159	838.8	500.2	0.0002	-37.34	0.030	22.79
160	836.4	502.6	0.0002	-37.34	0.030	22.84
161	834.6	504.4	0.0002	-37.34	0.030	22.88
162	833.0	506.0	0.0002	-37.34	0.030	22.91
163	830.9	508.1	0.0002	-37.34	0.030	22.96
164	828.6	510.4	0.0002	-37.34	0.030	23.01
165	826.8	512.2	0.0002	-37.34	0.030	23.04
166	825.5	513.5	0.0002	-37.34	0.030	23.07
167	824.2	514.8	0.0002	-37.34	0.030	23.10

Educational Media Foundation

5700 West Oaks Boulevard
Rocklin, CA 95765

*Exhibit 4-A
Tucson, AZ*

168	822.7	516.3	0.0002	-37.34	0.030	23.13
169	821.1	517.9	0.0002	-37.34	0.030	23.17
170	819.4	519.6	0.0002	-37.34	0.030	23.21
171	817.3	521.7	0.0002	-37.34	0.030	23.26
172	814.2	524.8	0.0002	-37.34	0.030	23.33
173	810.5	528.5	0.0002	-37.34	0.030	23.41
174	807.4	531.6	0.0002	-37.34	0.030	23.49
175	805.4	533.6	0.0002	-37.34	0.030	23.53
176	803.6	535.4	0.0002	-37.34	0.030	23.58
177	802.0	537.0	0.0002	-37.34	0.030	23.62
178	800.3	538.7	0.0002	-37.34	0.030	23.66
179	798.7	540.3	0.0002	-37.34	0.030	23.70
180	797.0	542.0	0.0002	-37.34	0.030	23.74
181	794.6	544.4	0.0002	-37.34	0.030	23.80
182	792.0	547.0	0.0002	-37.34	0.030	23.87
183	789.4	549.6	0.0002	-37.34	0.030	23.93
184	786.8	552.2	0.0002	-37.34	0.030	24.00
185	784.2	554.8	0.0002	-37.34	0.030	24.07
186	781.6	557.4	0.0002	-37.34	0.030	24.14
187	779.1	559.9	0.0002	-37.34	0.030	24.20
188	776.8	562.2	0.0002	-37.34	0.030	24.26
189	774.8	564.2	0.0002	-37.34	0.030	24.31
190	773.0	566.0	0.0002	-37.34	0.030	24.36
191	771.5	567.5	0.0002	-37.34	0.030	24.40
192	770.1	568.9	0.0002	-37.34	0.030	24.44
193	768.6	570.4	0.0002	-37.34	0.030	24.48
194	766.9	572.1	0.0002	-37.34	0.030	24.52
195	765.2	573.8	0.0002	-37.34	0.030	24.57
196	763.4	575.6	0.0002	-37.34	0.030	24.62
197	761.5	577.5	0.0002	-37.34	0.030	24.67
198	759.6	579.4	0.0002	-37.34	0.030	24.72
199	757.8	581.2	0.0002	-37.34	0.030	24.77
200	756.2	582.8	0.0002	-37.34	0.030	24.81
201	755.0	584.0	0.0002	-37.34	0.030	24.85
202	753.9	585.1	0.0002	-37.34	0.030	24.88
203	753.0	586.0	0.0002	-37.34	0.030	24.90
204	752.2	586.8	0.0002	-37.34	0.030	24.92
205	751.4	587.6	0.0002	-37.34	0.030	24.95
206	750.7	588.3	0.0002	-37.34	0.030	24.97
207	750.1	588.9	0.0002	-37.34	0.030	24.98
208	749.7	589.3	0.0002	-37.34	0.030	24.99
209	749.4	589.6	0.0002	-37.34	0.030	25.00
210	748.9	590.1	0.0002	-37.34	0.030	25.01
211	748.3	590.7	0.0002	-37.34	0.030	25.03
212	747.4	591.6	0.0002	-37.34	0.030	25.05

Educational Media Foundation

5700 West Oaks Boulevard
Rocklin, CA 95765

*Exhibit 4-A
Tucson, AZ*

213	746.5	592.5	0.0002	-37.34	0.030	25.08
214	745.8	593.2	0.0002	-37.34	0.030	25.10
215	745.2	593.8	0.0002	-37.34	0.030	25.11
216	744.9	594.1	0.0002	-37.34	0.030	25.12
217	744.6	594.4	0.0002	-37.34	0.030	25.13
218	744.4	594.6	0.0002	-37.34	0.030	25.14
219	744.3	594.7	0.0002	-37.34	0.030	25.14
220	744.1	594.9	0.0002	-37.34	0.030	25.15
221	743.8	595.2	0.0002	-37.34	0.030	25.15
222	743.4	595.6	0.0002	-37.34	0.030	25.17
223	742.9	596.1	0.0002	-37.34	0.030	25.18
224	742.4	596.6	0.0002	-37.34	0.030	25.19
225	741.9	597.1	0.0002	-37.34	0.030	25.20
226	741.6	597.4	0.0002	-37.34	0.030	25.21
227	741.4	597.6	0.0002	-37.34	0.030	25.22
228	741.4	597.6	0.0002	-37.34	0.030	25.22
229	741.4	597.6	0.0002	-37.34	0.030	25.22
230	741.3	597.7	0.0002	-37.34	0.030	25.22
231	741.2	597.8	0.0002	-37.34	0.030	25.22
232	740.9	598.1	0.0002	-37.34	0.030	25.23
233	740.6	598.4	0.0002	-37.34	0.030	25.24
234	740.5	598.5	0.0002	-37.34	0.030	25.24
235	740.4	598.6	0.0002	-37.34	0.030	25.24
236	740.5	598.5	0.0002	-37.34	0.030	25.24
237	740.6	598.4	0.0002	-37.34	0.030	25.24
238	740.8	598.2	0.0002	-37.34	0.030	25.23
239	741.1	597.9	0.0002	-37.34	0.030	25.23
240	741.4	597.6	0.0002	-37.34	0.030	25.22
241	741.8	597.2	0.0002	-37.34	0.030	25.21
242	742.2	596.8	0.0002	-37.34	0.030	25.20
243	742.7	596.3	0.0002	-37.34	0.030	25.18
244	743.2	595.8	0.0002	-37.34	0.030	25.17
245	743.6	595.4	0.0002	-37.34	0.030	25.16
246	744.0	595.0	0.0002	-37.34	0.030	25.15
247	744.3	594.7	0.0002	-37.34	0.030	25.14
248	744.5	594.5	0.0002	-37.34	0.030	25.13
249	744.5	594.5	0.0002	-37.34	0.030	25.13
250	744.4	594.6	0.0002	-37.34	0.030	25.14
251	744.2	594.8	0.0002	-37.34	0.030	25.14
252	744.0	595.0	0.0002	-37.34	0.030	25.15
253	743.8	595.2	0.0002	-37.34	0.030	25.15
254	743.8	595.2	0.0002	-37.34	0.030	25.15
255	743.9	595.1	0.0002	-37.34	0.030	25.15
256	744.3	594.7	0.0002	-37.34	0.030	25.14
257	744.9	594.1	0.0002	-37.34	0.030	25.12

Educational Media Foundation

5700 West Oaks Boulevard
Rocklin, CA 95765

*Exhibit 4-A
Tucson, AZ*

258	745.7	593.3	0.0002	-37.34	0.030	25.10
259	746.9	592.1	0.0002	-37.34	0.030	25.07
260	748.1	590.9	0.0002	-37.34	0.030	25.04
261	749.2	589.8	0.0002	-37.34	0.030	25.00
262	750.3	588.7	0.0002	-37.34	0.030	24.97
263	751.4	587.6	0.0002	-37.34	0.030	24.95
264	752.6	586.4	0.0002	-37.34	0.030	24.91
265	754.0	585.0	0.0002	-37.34	0.030	24.88
266	755.5	583.5	0.0002	-37.34	0.030	24.84
267	757.1	581.9	0.0002	-37.34	0.030	24.79
268	758.9	580.1	0.0002	-37.34	0.030	24.74
269	760.7	578.3	0.0002	-37.34	0.030	24.69
270	762.6	576.4	0.0002	-37.34	0.030	24.64
271	764.4	574.6	0.0002	-37.34	0.030	24.59
272	765.9	573.1	0.0002	-37.34	0.030	24.55
273	767.0	572.0	0.0002	-37.34	0.030	24.52
274	768.2	570.8	0.0002	-37.34	0.030	24.49
275	769.3	569.7	0.0002	-37.34	0.030	24.46
276	770.6	568.4	0.0002	-37.34	0.030	24.43
277	772.2	566.8	0.0002	-37.34	0.030	24.39
278	774.3	564.7	0.0002	-37.34	0.030	24.33
279	777.9	561.1	0.0002	-37.34	0.030	24.23

Ave El= 782.31 M HAAT= 556.69 M AMSL= 1339
Area by numeric integration= 84.45 Sq km.

Educational Media Foundation

5700 W Oaks Blvd
Rocklin, CA 95765

*Exhibit 2-A
Tucson, AZ*

Compliance with C.F.R. 74.1204

The proposed FM Translator operation on channel 227 will be co-located with second adjacent station WMIY, channel 225C, Tucson, AZ, with a vertical separation of 33m. Using the free space calculation and a power of 100kw for KMIY, the resulting signal level at the proposed K243CC antenna is 156.53dbu. 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 K243CC.P (ch 227):	205 watts
The proposed COR for K243CC.P:	14 meters
KMIY F(50/50) contour at proposed site:	156.53dBu
The F(50/10) contour of proposed K243CC.P:	196.53dBu

The predicted distance to the 196.53dbu interfering contour is 0.015 meters. Taking into account the vertical elevation pattern of the Scala CLFM/RX/V single bay antenna and the height above ground of 14M, it has been determined that the interfering contour of 196.53dbu does not reach the ground. As seen in Exhibit 2-A1, the lowest elevation for this interfering contour is 13.995m above ground.

There are no surrounding structures which are tall enough or close enough to enter the 13.995m aperture within the 0.015 meter radius from the base of the tower.

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

EXHIBIT 2 - A1
 74.1204(d) Showing
 K243CC
 Tucson, AZ



ERP (kw): 0.205
 Height of Antenna above Ground (m): 14
 Translator's IX Contour: 196.53
 Antenna Type: Scala CL-V

<u>Depression Angle from Horizon</u>	<u>Antenna Relative Field</u>	<u>ERP (kw) from the Antenna RF</u>	<u>Dist. To IX Contour (m)</u>	<u>Height IX Contour Above Ground (m)</u>
0	1.000	0.2050	0.0150	14.000
5	0.980	0.1969	0.0147	13.999
10	0.950	0.1850	0.0142	13.998
15	0.895	0.1642	0.0134	13.997
20	0.820	0.1378	0.0123	13.996
25	0.735	0.1107	0.0110	13.995
30	0.645	0.0853	0.0097	13.995
35	0.563	0.0649	0.0084	13.995
40	0.470	0.0453	0.0070	13.995
45	0.360	0.0266	0.0054	13.996
50	0.250	0.0128	0.0037	13.997
55	0.155	0.0049	0.0023	13.998
60	0.085	0.0015	0.0013	13.999
65	0.045	0.0004	0.0007	13.999
70	0.020	0.0001	0.0003	14.000
75	0.010	0.0000	0.0001	14.000
80	0.010	0.0000	0.0001	14.000
85	0.010	0.0000	0.0001	14.000
90	0.010	0.0000	0.0001	14.000

Note: Input the ERP, Height of the antenna above Ground, the Calculated Translator IX contour, and the specified Antenna Relative Field Pattern.

Educational Media Foundation

5700 W Oaks Blvd
Rocklin, CA 95765

*Exhibit 2-A
Tucson, AZ*

Compliance with C.F.R. 74.1204

The proposed FM Translator to operate on channel 227 is located within the protected 60dBu contour of second adjacent channel station KRQQ, channel 229C, Tucson, AZ. 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 K243CC(ch 227).P: 205 watts

The proposed COR for W243CC.P: 14 meters

KRQQ F(50/50) contour at proposed site: 152.96dBu

The F(50/10) contour of proposed K243CC.P: 192.96dBu

The predicted distance to the 192.96dbu interfering contour is 0.02 meters. When taking into account the vertical elevation pattern of the Scala CLFM/RX/V single bay antenna and the height above ground of 14m, it has been determined that the interfering contour of 192.96dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 13.99m above ground at a distance of less than 1m from the antenna.

There are no surrounding structures which are tall enough to enter the interfering contour within the 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.

EXHIBIT 2 - A1
74.1204(d) Showing
K243CC
Tucson, AZ



ERP (kw): 0.205
Height of Antenna above Ground (m): 14
Translator's IX Contour: 192.96
Antenna Type: Scala CL-V

<u>Depression Angle from Horizon</u>	<u>Antenna Relative Field</u>	<u>ERP (kw) from the Antenna RF</u>	<u>Dist. To IX Contour (m)</u>	<u>Height IX Contour Above Ground (m)</u>
0	1.000	0.2050	0.0226	14.000
5	0.980	0.1969	0.0221	13.998
10	0.950	0.1850	0.0215	13.996
15	0.895	0.1642	0.0202	13.995
20	0.820	0.1378	0.0185	13.994
25	0.735	0.1107	0.0166	13.993
30	0.645	0.0853	0.0146	13.993
35	0.563	0.0649	0.0127	13.993
40	0.470	0.0453	0.0106	13.993
45	0.360	0.0266	0.0081	13.994
50	0.250	0.0128	0.0056	13.996
55	0.155	0.0049	0.0035	13.997
60	0.085	0.0015	0.0019	13.998
65	0.045	0.0004	0.0010	13.999
70	0.020	0.0001	0.0005	14.000
75	0.010	0.0000	0.0002	14.000
80	0.010	0.0000	0.0002	14.000
85	0.010	0.0000	0.0002	14.000
90	0.010	0.0000	0.0002	14.000

Note: Input the ERP, Height of the antenna above Ground, the Calculated Translator IX contour, and the specified Antenna Relative Field Pattern.

Human exposure to excess levels of radiofrequency radiation

The proposed facility is to be built using a 1-bay vertically polarized 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 5-A, the proposed facility's maximum contribution to RF on the site is $6.193\mu\text{W}/\text{cm}^2$ at a distance of 19 meters from the tower, which is less than 3.1% of the uncontrolled (public) exposure 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.

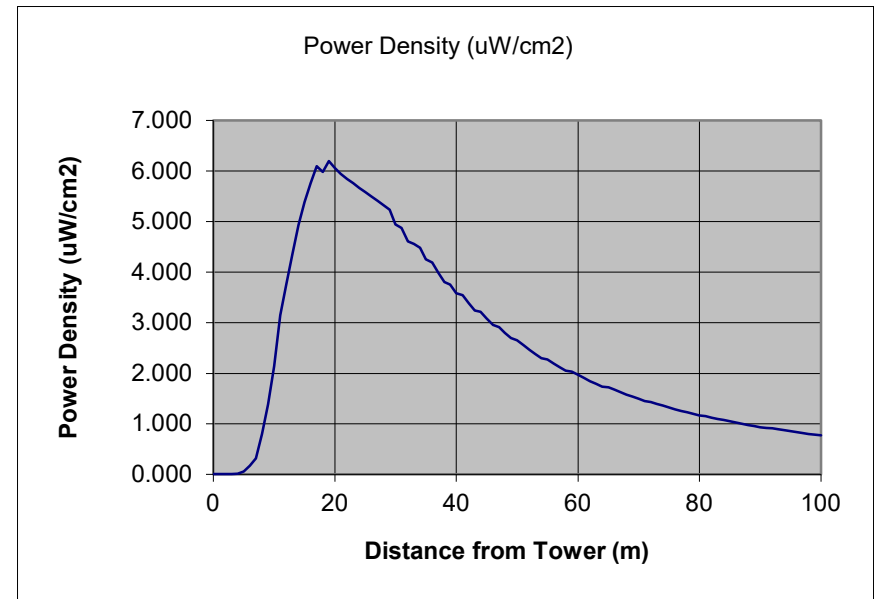
Specific Antenna RF Power Density Calculator

Based on Equation 10 of OET-65

Detailed Report

ERP	0.205 kW	% of OET-65
Height above ground	14.0 meters	3.1% Uncontrolled
Height above head	12.0 meters	0.6% Controlled
Antenna Brand Shively		
Antenna Model 6025/1/slant		

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm ²)
0	90	12.0	0.01	2.5	0.006
1	85	12.0	0.01	2.5	0.006
2	81	12.2	0.01	2.5	0.006
3	76	12.4	0.01	2.5	0.005
4	72	12.6	0.016	4	0.013
5	67	13.0	0.035	8.75	0.061
6	63	13.4	0.06	15	0.167
7	60	13.9	0.085	21.25	0.313
8	56	14.4	0.141	35.25	0.798
9	53	15.0	0.193	48.25	1.382
10	50	15.6	0.25	62.5	2.139
11	47	16.3	0.316	79	3.146
12	45	17.0	0.36	90	3.758
13	43	17.7	0.404	101	4.354
14	41	18.4	0.448	112	4.929
15	39	19.2	0.488	122	5.389
16	37	20.0	0.525	131.25	5.754
17	35	20.8	0.562	140.5	6.091
18	34	21.6	0.579	144.75	5.981
19	32	22.5	0.612	153	6.193
20	31	23.3	0.628	157	6.054
21	30	24.2	0.645	161.25	5.938
22	29	25.1	0.663	165.75	5.845
23	28	25.9	0.681	170.25	5.754
24	27	26.8	0.699	174.75	5.666
25	26	27.7	0.717	179.25	5.582
26	25	28.6	0.735	183.75	5.501



27	24	29.5	0.752	188	5.409
28	23	30.5	0.769	192.25	5.321
29	22	31.4	0.786	196.5	5.237
30	22	32.3	0.786	196.5	4.941
31	21	33.2	0.803	200.75	4.873
32	21	34.2	0.803	200.75	4.610
33	20	35.1	0.82	205	4.554
34	19	36.1	0.835	208.75	4.478
35	19	37.0	0.835	208.75	4.253
36	18	37.9	0.85	212.5	4.189
37	18	38.9	0.85	212.5	3.987
38	18	39.8	0.85	212.5	3.799
39	17	40.8	0.865	216.25	3.752
40	17	41.8	0.865	216.25	3.582
41	16	42.7	0.88	220	3.543
42	16	43.7	0.88	220	3.389
43	16	44.6	0.88	220	3.244
44	15	45.6	0.895	223.75	3.216
45	15	46.6	0.895	223.75	3.084
46	15	47.5	0.895	223.75	2.960
47	14	48.5	0.906	226.5	2.913
48	14	49.5	0.906	226.5	2.800
49	14	50.4	0.906	226.5	2.693
50	13	51.4	0.917	229.25	2.656
51	13	52.4	0.917	229.25	2.558
52	13	53.4	0.917	229.25	2.465
53	13	54.3	0.917	229.25	2.378
54	13	55.3	0.917	229.25	2.295
55	12	56.3	0.928	232	2.269
56	12	57.3	0.928	232	2.192
57	12	58.2	0.928	232	2.119
58	12	59.2	0.928	232	2.050
59	11	60.2	0.939	234.75	2.031
60	11	61.2	0.939	234.75	1.966
61	11	62.2	0.939	234.75	1.905
62	11	63.2	0.939	234.75	1.846
63	11	64.1	0.939	234.75	1.790
64	11	65.1	0.939	234.75	1.736
65	10	66.1	0.95	237.5	1.725

66	10	67.1	0.95	237.5	1.675
67	10	68.1	0.95	237.5	1.627
68	10	69.1	0.95	237.5	1.581
69	10	70.0	0.95	237.5	1.536
70	10	71.0	0.95	237.5	1.494
71	10	72.0	0.95	237.5	1.453
72	9	73.0	0.956	239	1.432
73	9	74.0	0.956	239	1.394
74	9	75.0	0.956	239	1.358
75	9	76.0	0.956	239	1.323
76	9	76.9	0.956	239	1.289
77	9	77.9	0.956	239	1.257
78	9	78.9	0.956	239	1.225
79	9	79.9	0.956	239	1.195
80	9	80.9	0.956	239	1.166
81	8	81.9	0.962	240.5	1.152
82	8	82.9	0.962	240.5	1.125
83	8	83.9	0.962	240.5	1.099
84	8	84.9	0.962	240.5	1.073
85	8	85.8	0.962	240.5	1.049
86	8	86.8	0.962	240.5	1.025
87	8	87.8	0.962	240.5	1.002
88	8	88.8	0.962	240.5	0.980
89	8	89.8	0.962	240.5	0.958
90	8	90.8	0.962	240.5	0.937
91	8	91.8	0.962	240.5	0.917
92	7	92.8	0.968	242	0.909
93	7	93.8	0.968	242	0.890
94	7	94.8	0.968	242	0.871
95	7	95.8	0.968	242	0.853
96	7	96.7	0.968	242	0.836
97	7	97.7	0.968	242	0.819
98	7	98.7	0.968	242	0.803
99	7	99.7	0.968	242	0.787
100	7	100.7	0.968	242	0.771