

**April 2013**  
**FM Translator K242CC**  
**Austin, TX Channel 242D**  
**Allocation Study**

The attached spacing study shows the spacing between the proposed translator site and the location of cochannel and adjacent channel stations and proposals. This study was made with the Commission's Class A spacing requirements, and individual situations were examined to determine the lack of prohibited contour overlap per the requirements of §74.1204 of the Rules. The spacing study demonstrates compliance with §73.207 of the Commission's Rules regarding spacing restrictions to stations which are 53 or 54 channels removed from the proposed operation.

The attached allocation study maps demonstrate compliance with the Commission's Rules for protection of FM broadcast stations and FM translators as outlined in §74.1204. Protection of certain other stations is discussed in detail below.

**KHFI-FM 244C1 Georgetown**

The proposed translator transmitter site is located within the 60 dBu protected contour of second-adjacent channel station KHFI-FM 244C1 Georgetown. The proposed site is 0.16 km from the KHFI-FM transmitter site at a bearing of 55 degrees True. Given the KHFI-FM antenna's 288 meter HAAT and 100 kW ERP along this radial, KHFI-FM places a 142.9 dBu contour at the translator transmitter site. The corresponding interfering contour from the translator is  $142.9 + 40 = 182.9$  dBu. Based on a Free Space calculation, the 182.9 dBu contour from the proposed facility extends just 0.1 meters from the antenna and does not reach ground level. There is no population within this contour. Therefore, the proposed facility is believed to satisfy the requirements of §74.1204(d) with respect to KHFI-FM.

**KAJZ 242A Llano**

While the proposed 40 dBu F(50,10) interfering contour would overlap the currently-licensed 60 dBu protected contour of KAJZ on Channel 242A at Llano, KAJZ was recently granted a construction permit to operation on Channel 293A (see BMPH-20110825ABP). Grant of that construction permit constituted a modification of the KAJZ license, and KAJZ is obligated to implement the channel change.

On April 8 2013, a license application was filed to cover the KAJZ construction permit, indicating that the station is now operating on its new channel under automatic program test authority.

Therefore, it is not believed necessary for the instant application to provide contour protection to the licensed KAJZ facility on Channel 242A.

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## SEARCH PARAMETERS

Channel: 242A 96.3 MHz  
 Latitude: 30 19 23  
 Longitude: 97 47 58  
 Safety Zone: 50 km  
 Job Title: K242CC AUSTIN

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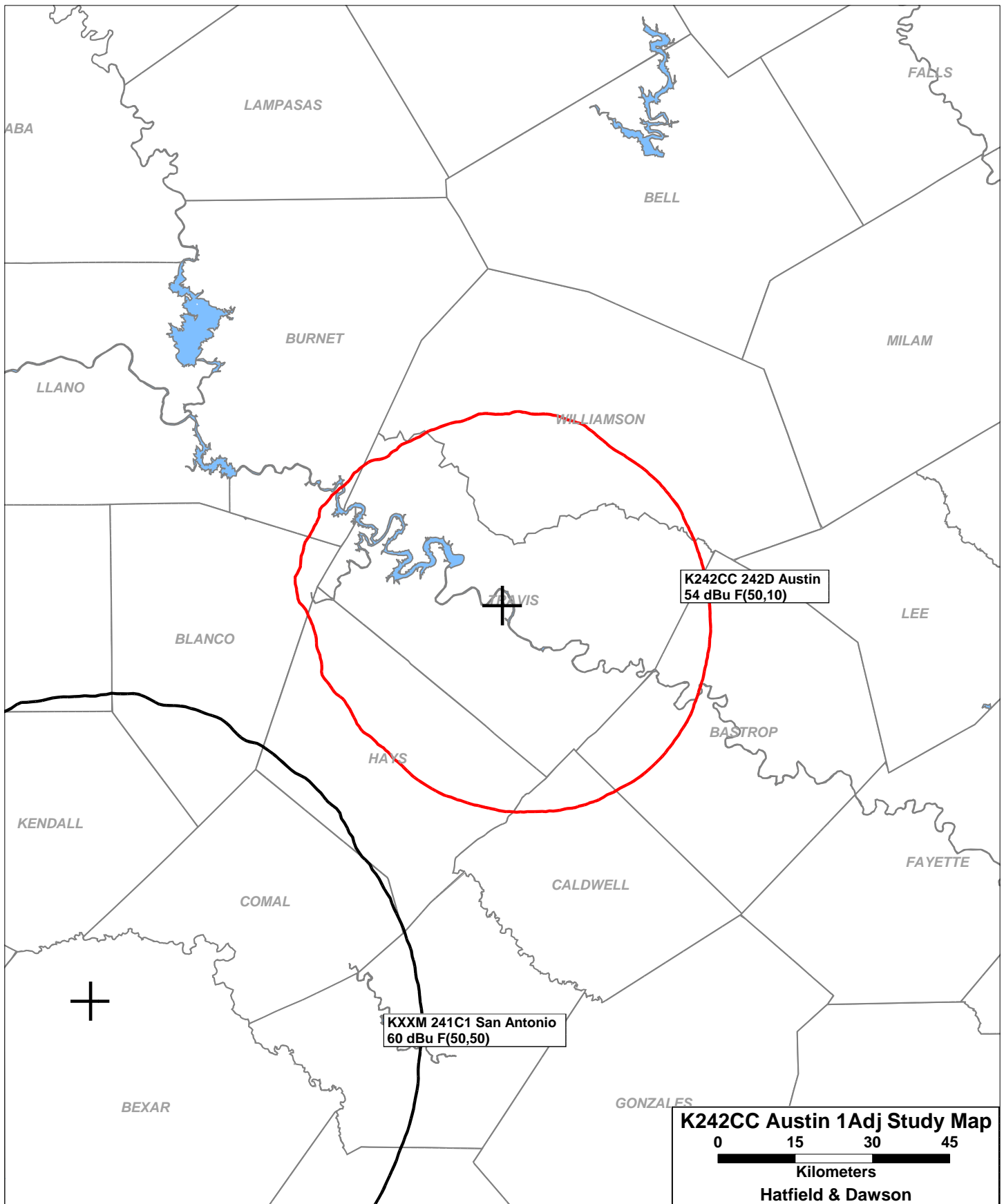
Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
VAC	BURNET TX -		240A 95.9	0.000 0.0	30-51-05 098-17-35	321.3	75.31 44.31	31 CLEAR
NEW APP	BURNET TX BNPED-00226ACK		240A 95.9	1.750 182.0	30-52-24 098-13-58	326.0 SS	73.81 42.81	31 CLEAR
NEW APP	BURNET TX BNPED-00226AII		240A 95.9	6.000 100.0	30-50-58 098-17-21	321.4	74.91 43.91	31 CLEAR
VAC	GIDDINGS TX RM-9847		240A 95.9	0.000 0.0	30-15-33 097-01-33	95.3	74.76 43.76	31 CLEAR
NEW APP	GIDDINGS TX BNPB-20530AAD		240A 95.9	6.000 100.0	30-14-45 097-01-48	96.4	74.52 43.52	31 CLEAR
NEW APP	GIDDINGS TX BSFH-20103AEI		240A 95.9	0.000 0.0	30-15-33 097-01-33	95.3	74.76 43.76	31 CLEAR
K241BO LIC	BELTON TX BLFT-81217ABQ		241D 96.1	0.065 167.0	31-02-18 097-28-27	21.3	85.20 0.00	0 TRANS
KAGGaux LIC	MADISONVILLE TX BXLH-81027ABA		241C2 96.1	0.450 40.0	30-39-09 096-20-17	75.0	144.99 0.00	0 AUX
KAGGaux LIC	MADISONVILLE TX BXLH-91028AAZ		241C2 96.1	1.000 37.5	30-39-09 096-20-17	75.0	144.99 0.00	0 AUX
KXXM LIC	SAN ANTONIO TX BLH-00510AVZ		241C1 96.1	100.000 182.0	29-38-01 098-37-54	226.5	110.87 -22.13	133 SHORT
KXXMaux LIC	SAN ANTONIO TX BXLH-80925AEW		241C1 96.1	1.000 155.0	29-38-00 098-37-50	226.4	110.81 0.00	0 AUX
KXXMaux LIC	SAN ANTONIO TX BXLH-00305AAX		241C1 96.1	1.000 155.0	29-38-01 098-37-54	226.5	110.87 0.00	0 AUX
K242CC LIC	AUSTIN TX BLFT-10302AAY		242D 96.3	0.100 222.0	30-19-24 097-48-06	278.2	0.22 0.00	0 TRANS
KSCS LIC	FORT WORTH TX BMLH-00826AFU		242C 96.3	100.000 491.0	32-35-15 096-57-59	17.2	263.26 37.26	226 CLEAR

SEARCH PARAMETERS

Channel: 242A 96.3 MHz Page 2  
 Latitude: 30 19 23  
 Longitude: 97 47 58  
 Safety Zone: 50 km  
 Job Title: K242CC AUSTIN

Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
KJHV-LP LIC	KILLEEN TX	BLL-50204AAI	242L1 96.3	0.049 42.0	31-07-24 097-41-30	6.6	89.32 22.32	67 CLEAR
ADD	LLANO TX	RM-11642	242C3 96.3	0.000 0.0	30-55-34 098-43-24	307.4	110.98 -31.02	142 SHORT
KGGB LIC	YORKTOWN TX	BLH-90206AAL	242A 96.3	6.000 100.0	29-02-43 097-24-23	164.9 SS	146.65 31.65	115 CLEAR
KSYY LIC	INGRAM TX	BLH-70725AAT	243C3 96.5	8.400 131.0	30-07-04 099-11-40	260.7 SS	136.22 47.22	89 CLEAR
ADD	LAGO VISTA TX	RM-11374	243C2 96.5	0.000 0.0	30-27-18 097-53-03	331.0	16.74 -89.26	106 SHORT
DEL	GEORGETOWN TX	RM-11374	244C1 96.7	0.000 0.0	30-38-47 097-41-14	16.6	37.43 -37.57	75 SHORT
KHFI-FM LIC	GEORGETOWN TX	BLH-891227KB	244C1 96.7	100.000 290.0	30-19-20 097-48-03	235.2	0.16 -74.84	75 SHORT
KHFiaux LIC	GEORGETOWN TX	BXLH-80214AHD	244C1 96.7	14.000 158.0	30-19-20 097-48-03	235.2	0.16 0.00	0 AUX
KLZT LIC	BASTROP TX	BMLH-80527ABP	296C2 107.1	49.000 152.0	30-07-18 097-34-45	136.6	30.79 15.79	15 CLEAR

===== END OF FM SPACING STUDY FOR CHANNEL 242 =====



**April 2013**  
**FM Translator K242CC**  
**Austin, TX Channel 242D**  
**RF Exposure Study**

**Facilities Proposed**

The proposed operation will be on Channel 242D (96.3 MHz) with an effective radiated power of 250 watts. Operation is proposed from an existing master antenna which is mounted on the existing tower with FCC Antenna Structure Registration Number 1013180.

**RF Exposure Calculations**

OET Bulletin 65 Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields (Edition 97-01) states in part that:

When performing an evaluation for compliance with the FCC's RF guidelines all significant contributors to the ambient RF environment should be considered. . . For purposes of such consideration, significance can be taken to mean any transmitter producing more than 5% of the applicable exposure limit (in terms of power density or the square of the electric or magnetic field strength) at accessible locations.

As will be demonstrated below, the proposed operation of K242CC will produce less than 5% of the applicable exposure limit for both controlled and uncontrolled environments. Thus, the proposed facility is categorically excluded from the requirement of further study. Therefore, pursuant to §1.1307(b)(3) of the Commission's Rules no calculations are required for the other FM and TV facilities in the vicinity, and precise calculations are made only with regard to the levels from this proposal.

The power density calculations shown below were made using the techniques outlined in OET Bulletin No. 65. "Ground level" calculations in this report have been made at a reference height of 2 meters above ground to provide a worst-case estimate of exposure for persons standing on the ground in the vicinity of the tower. The equation shown below was used to calculate the ground level power density figures from each antenna.

$$S(\mu W / cm^2) = \frac{33.40981 \times AdjERP(Watts)}{D^2}$$

Where: *AdjERP(Watts)* is the maximum lobe effective radiated power times the element pattern factor times the array pattern factor.

*D* is the distance in meters from the center of radiation to the calculation point.

Worst-case calculations of the power density produced by the K242CC antenna system have been made assuming that the antenna will radiate 100% straight down to a point 2 meters above ground level (362 meters below the antenna). Under this worst-case assumption, the highest calculated ground level power density from K242CC occurs at the base of the antenna support structure. At

this point the power density is calculated to be  $0.1 \mu\text{W}/\text{cm}^2$ , which is 0.01% of  $1000 \mu\text{W}/\text{cm}^2$  (the FCC standard for controlled environments) and 0.05% of  $200 \mu\text{W}/\text{cm}^2$  (the FCC standard for uncontrolled environments).

These calculations show that the maximum calculated power density produced at two meters above ground level by the proposed operation of K242CC alone is less than 5% of the applicable FCC exposure limit at all locations between 1 and 1000 meters from the base of the antenna support structure. Section 1.1307(b)(3) of the Commission's Rules excludes applications for new facilities or modifications to existing facilities from the requirement of preparing an environmental assessment when the calculated emissions from the applicants proposed facility are predicted to be less than 5% of the applicable FCC exposure limit. Therefore, the proposed facility is in compliance with Section 1.1301 *et seq* and no further analysis of RF exposure at this site is required in this application.

The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency exposure in excess of FCC guidelines.