

January 2016
FM Translator K264BX
Coeur d'Alene, Idaho Channel 263D
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 attached allocation study map demonstrates compliance with the Commission's Rules for protection of FM broadcast stations and FM translators as outlined in §74.1204.

The proposed translator transmitter site is located within the 60 dBu protected contour of third-adjacent channel station KXLY-FM on Channel 260C at Spokane. The proposed site is 44.92 km from the KXLY-FM transmitter site at a bearing of 139 degrees True. Given the KXLY-FM antenna's 694 meter HAAT and 37 kW ERP along this radial, KXLY-FM places a 77.0 dBu contour at the translator transmitter site. The corresponding interfering contour from the translator is $77.0 + 40 = 117.0$ dBu. The attached map of the proposed transmitter site depicts the 117.0 dBu contour from the proposed facility, which extends at most 99 meters from the antenna per a Free Space calculation. There is no population within this contour. Therefore, the proposed facility is believed to satisfy the requirements of §74.1204(d) with respect to KXLY-FM.

The proposed translator transmitter site is located within the 60 dBu protected contour of third-adjacent channel station KEYF-FM on Channel 266C at Cheney. The proposed site is 43.34 km from the KEYF-FM transmitter site at a bearing of 87 degrees True. Given the KEYF-FM antenna's 444 meter HAAT and 100 kW ERP along this radial, KEYF-FM places a 77.1 dBu contour at the translator transmitter site. The corresponding interfering contour from the translator is $77.1 + 40 = 117.1$ dBu. The attached map of the proposed transmitter site depicts the 117.1 dBu contour from the proposed facility, which extends at most 98 meters from the antenna per a Free Space calculation. There is no population within this contour. Therefore, the proposed facility is believed to satisfy the requirements of §74.1204(d) with respect to KEYF-FM.

<p>It should be noted that simultaneous with the instant application, an application is being filed to modify the construction permit for FM translator K262AG Spokane, to operate on Channel 264 with a modified antenna pattern and ERP. QueenB Radio is the licensee of K262AG and is the proposed assignee of K264BX. The two applications are being filed in a cooperative effort. The attached allocation study map demonstrates the required contour protection to the K262AG application facility.</p>
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The attached 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.

SEARCH PARAMETERS

FM Database Date: 160111

Channel: 263A 100.5 MHz
 Latitude: 47 36 59
 Longitude: 116 43 15
 Safety Zone: 50 km
 Job Title: CDA 263

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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)
KYMS LIC	RATHDRUM ID	BLED-80319ABI	210C1 89.9	11.000 595.0	48-05-38 116-33-12	13.2	54.55 32.55	22 CLEAR
KYMS CP	RATHDRUM ID	BPED-40912ABD	210C1 89.9	2.800 602.0	48-04-42 116-42-42	0.8	51.37 29.37	22 CLEAR
KVFS-LP LIC	SPOKANE WA	BLL-61219ACL	210L1 89.9	0.100 30.0	47-31-58 117-26-20	260.5	54.82 0.00	0 LPFM
KXLY-FM LIC	SPOKANE WA	BMLH-971023KH	260C 99.9	37.000 914.0	47-55-18 117-06-48	319.3	44.92 -50.08	95 SHORT
CBRMFM BC	CRESTON -	-	262B 100.3	0.057 602.0	49-09-56 116-40-39	1.0	172.29 35.29	137 CLEAR
K262CR CP	COEUR D'ALENE ID	BNPFT-30822AFA	262D 100.3	0.004 588.0	47-43-54 116-43-45	357.2	12.83 0.00	0 TRANS
K262CE CP	DEER PARK WA	BNPFT-30827AFG	262D 100.3	0.005 0.0	47-48-33 117-40-21	287.1	74.56 0.00	0 TRANS
K262AG LIC	SPOKANE, ETC. WA	BLFT-980323TD	262D 100.3	0.003 267.0	47-37-43 117-18-48	272.0	44.56 0.00	0 TRANS
KQZB CP	TROY ID	BPH-50724ABP	263C3 100.5	0.850 511.0	46-48-40 116-54-55	189.4 SS	90.73 -51.27	142 SHORT
KQZB LIC	TROY ID	BLH-80522ABE	263C3 100.5	0.900 487.0	46-48-42 116-54-59	189.4 SS	90.68 -51.32	142 SHORT
NEW CP MOD	DEER PARK WA	BMPL-50113ABK	263L1 100.5	0.100 15.4	47-57-15 117-27-30	304.6	66.82 0.00	0 LPFM
KWIQ-FM LIC	MOSES LAKE WA	BLH-30819ABK	263C2 100.5	50.000 50.0	47-06-09 119-14-24	254.2	198.71 32.71	166 CLEAR
K264BX CP	COEUR D ALENE ID	BNPFT-30808ABJ	264D 100.7	0.010 236.0	47-36-59 116-43-15	0.0	0.00 0.00	0 TRANS
KIBG LIC	BIGFORK MT	BLH-41115ADX	264C 100.7	85.000 646.0	47-46-25 114-16-04	83.7	184.97 19.97	165 CLEAR
K262AG CP	SPOKANE, ETC. WA	BPFT-50723ABZ	264D 100.7	0.080 535.0	47-34-34 117-17-58	264.3	43.75 0.00	0 TRANS
KEYF-FM LIC	CHENEY WA	BMLH-990219KD	266C 101.1	100.000 490.0	47-35-35 117-17-46	266.8	43.34 -51.66	95 SHORT

===== END OF FM SPACING STUDY FOR CHANNEL 263 =====

STEVENS

PEND OREILLE

BONNER

K262AG 264D Spokane
60 dBu F(50,50)
54 dBu F(50,10)

K262CR 262D Coeur d'Alene
60 dBu F(50,50)

K262AG 262D Spokane, etc.
60 dBu F(50,50) License

SPOKANE

KOOTENAI

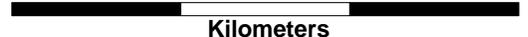
K264BX 263D Coeur d'Alene
60 dBu F(50,50)
54 dBu F(50,10)

BENEWAH

WHITMAN

Coeur d'Alene 263D Allocation Study Map

0 10 20 30



Kilometers

Hatfield & Dawson

1/2016



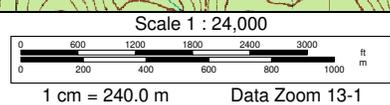
Red circle indicates maximum extent of the interference area to KXLY-FM and KEYF-FM (omni assumed for convenience). This area is unpopulated.

Transmitter Site Map
 FM Translator on Ch263
 Coeur d'Alene, ID 1/2016

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January 2016
FM Translator K264BX
Coeur d'Alene, Idaho Channel 263D
RF Exposure Study

Facilities Proposed

The proposed operation will be on Channel 263D (100.5 MHz) with a maximum lobe effective radiated power of 100 watts. Operation is proposed with an antenna to be mounted on an existing tower with FCC Antenna Structure Registration Number 1056883.

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 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.

Ground level power densities have been calculated for locations extending from the base of the tower to a distance of 1000 meters. Values past this point are increasingly negligible.

Calculations of the power density produced by the proposed antenna system have been made assuming that the antenna will radiate 100% power straight down to a point 2 meters above ground

at the base of the tower (61 meters below the antenna). Under this worst-case assumption, the highest calculated ground level power density from the translator occurs at the base of the antenna support structure. At this point the power density is calculated to be $0.9 \mu\text{W}/\text{cm}^2$, which is 0.1% of $1000 \mu\text{W}/\text{cm}^2$ (the FCC standard for controlled environments) and 0.4% 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 the translator 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 radiation in excess of FCC guidelines.