

July 2016
FM Translator K264CH
Spokane, Washington Channel 264D
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.

It should be noted that the construction permit for New LPFM on Channel 263L1 at Deer Park, Washington, expired on June 30, 2016.

Screenshot from CDBS, accessed July 8, 2016

Application Search Details

File Number:	BMPL-20150113ABK
Call Sign:	NEW
Facility Id:	197084
FRN:	0023129133
Applicant Name:	QUEEN OF PEACE
Frequency:	100.5
Channel:	263
Community of License:	DEER PARK, WA
Application Type:	MINOR MODIFICATION TO A CONSTRUCTION PERMIT
Status:	GRANTED
Status Date:	01/27/2015
Expiration Date:	06/30/2016
Tolling Code:	
Application Service:	FL
Disposed Date:	01/27/2015
Accepted Date:	01/14/2015
Last Public Notice:	01/30/2015
Last Report Number:	48416
Authorization	View Authorization
Engineering Data	View Engineering Data
Legal Actions	View Legal Actions
PN Comment	Public Notice Comment
Correspondence Folder	View Correspondence Folder

The proposed translator transmitter site is located within the 60 dBu protected contour of second-adjacent channel station KEYF-FM 266C Cheney. The proposed site is 0.24 km from the KEYF-FM transmitter site. Given the KEYF-FM antenna's 100 kW ERP, KEYF-FM places a 139.3 dBu

contour at the translator transmitter site per a Free Space calculation. The corresponding interfering contour from the translator is $139.3 + 40 = 179.3$ dBu, which extends just 0.1 meters from the antenna per a Free Space calculation 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 KEYF-FM.

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.

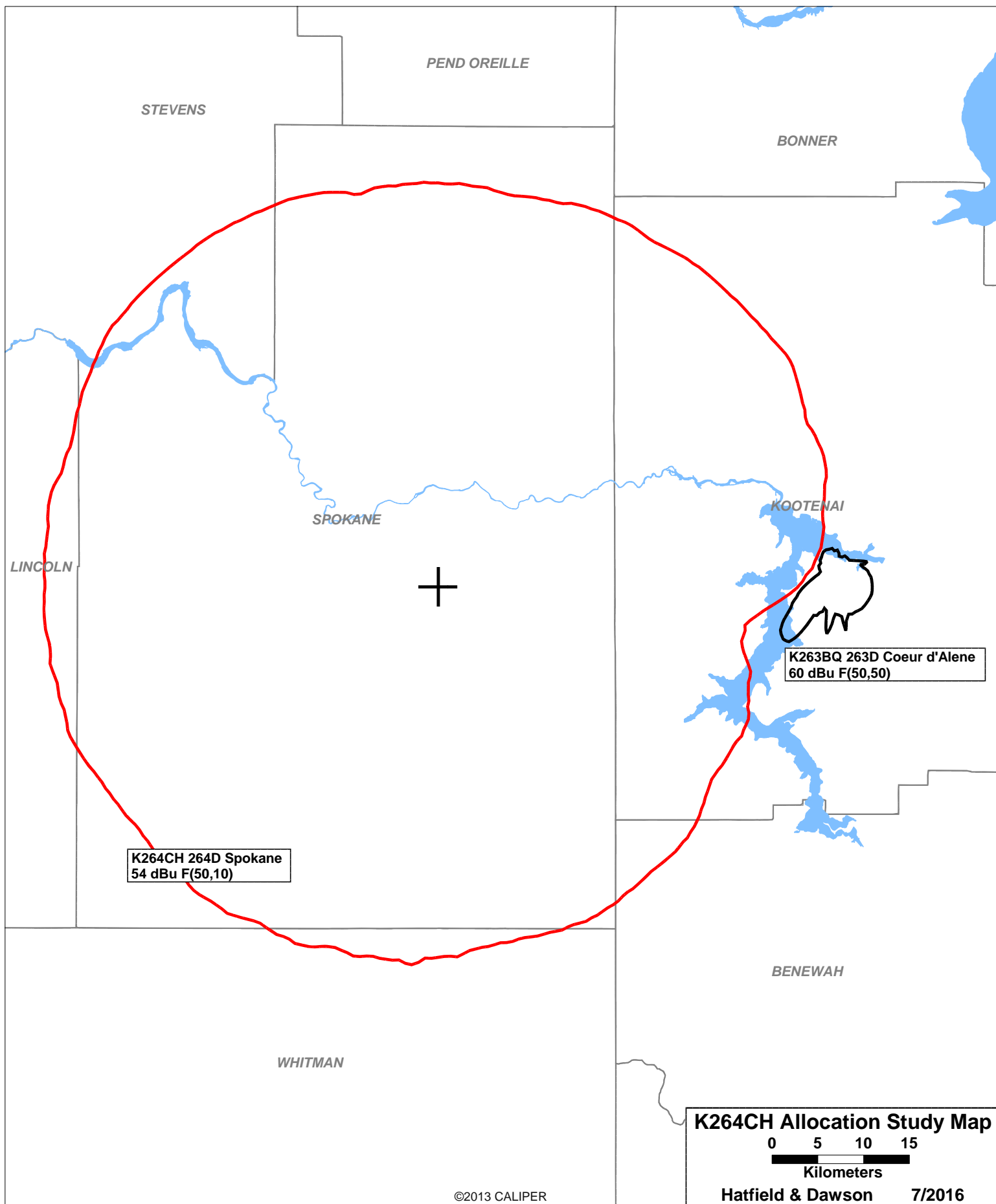
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SEARCH PARAMETERS                               FM Database Date: 160705
Channel: 264A    100.7 MHz                      Page    1
Latitude:  47 35 41
Longitude: 117 17 53
Safety Zone: 50 km
Job Title: K264CH SPOKANE

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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-60503ABF	210C1 89.9	2.800 602.0	48-04-42 116-42-42	38.9	69.42 47.42	22 CLEAR
KVFS-LP LIC	SPOKANE WA	BLL-61219ACL	210L1 89.9	0.100 30.0	47-31-58 117-26-20	237.0	12.64 6.64	6 CLOSE
K262CR CP	COEUR D'ALENE ID	BNPFT-30822AFA	262D 100.3	0.004 588.0	47-43-54 116-43-45	70.1	45.36 0.00	0 TRANS
K262CE CP	DEER PARK WA	BNPFT-30827AFG	262D 100.3	0.005 DA 0.0	47-48-33 117-40-21	310.5	36.86 0.00	0 TRANS
K263BQ CP MOD	COEUR D'ALENE ID	BMPFT-60115ABZ	263D 100.5	0.100 DA 236.0	47-36-59 116-43-15	86.6	43.47 0.00	0 TRANS
KQZB CP	TROY ID	BPH-50724ABP	263C3 100.5	0.850 511.0	46-48-40 116-54-55	161.5 SS	91.82 2.82	89 CLOSE
KQZB LIC	TROY ID	BLH-80522ABE	263C3 100.5	0.900 487.0	46-48-42 116-54-59	161.5 SS	91.73 2.73	89 CLOSE
NEW CP MOD NOTE:	DEER PARK WA CP EXPIRED ON 6/30/2016	BMPL-50113ABK	263L1 100.5	0.100 15.4	47-57-15 117-27-30	343.4	41.73 -14.27	56 SHORT
KWIK-FM LIC	MOSES LAKE WA	BLH-30819ABK	263C2 100.5	50.000 50.0	47-06-09 119-14-24	250.2	156.61 50.61	106 CLEAR
CIGVFM	PENTICTON BC	-	264C 100.7	10.500 756.0	49-42-46 119-36-26	325.1	290.56 43.56	247 CLEAR
KIBG LIC	BIGFORK MT	BLH-41115ADX	264C 100.7	85.000 646.0	47-46-25 114-16-04	83.9	228.39 2.39	226 CLOSE
KHSS LIC	ATHENA OR	BLH-91029AAL	264C2 100.7	6.300 403.0	45-59-23 118-10-31	200.8	190.58 24.58	166 CLEAR
KEIT-LP LIC	COLVILLE WA	BLL-51028ABX	264L1 100.7	0.100 -97.4	48-31-57 117-53-37	337.2	113.33 46.33	67 CLEAR
K264CH LIC	SPOKANE WA	BLFT-60401AYZ	264D 100.7	0.037 662.0	47-35-41 117-17-53	0.0	0.00 0.00	0 TRANS
KEYF-FM LIC	CHENEY WA	BMLH-990219KD	266C 101.1	100.000 490.0	47-35-35 117-17-46	141.8	0.24 -94.76	95 SHORT

===== END OF FM SPACING STUDY FOR CHANNEL 264 =====



July 2016
FM Translator K264CH
Spokane, Washington Channel 264D
RF Exposure Study

Facilities Proposed

The proposed operation will be on Channel 264D (100.7 MHz) with an effective radiated power of 140 watts. Operation is proposed with the existing K264CH antenna, which is mounted on an existing tower on Krell Hill, with FCC Antenna Structure Registration Number 1033992.

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.

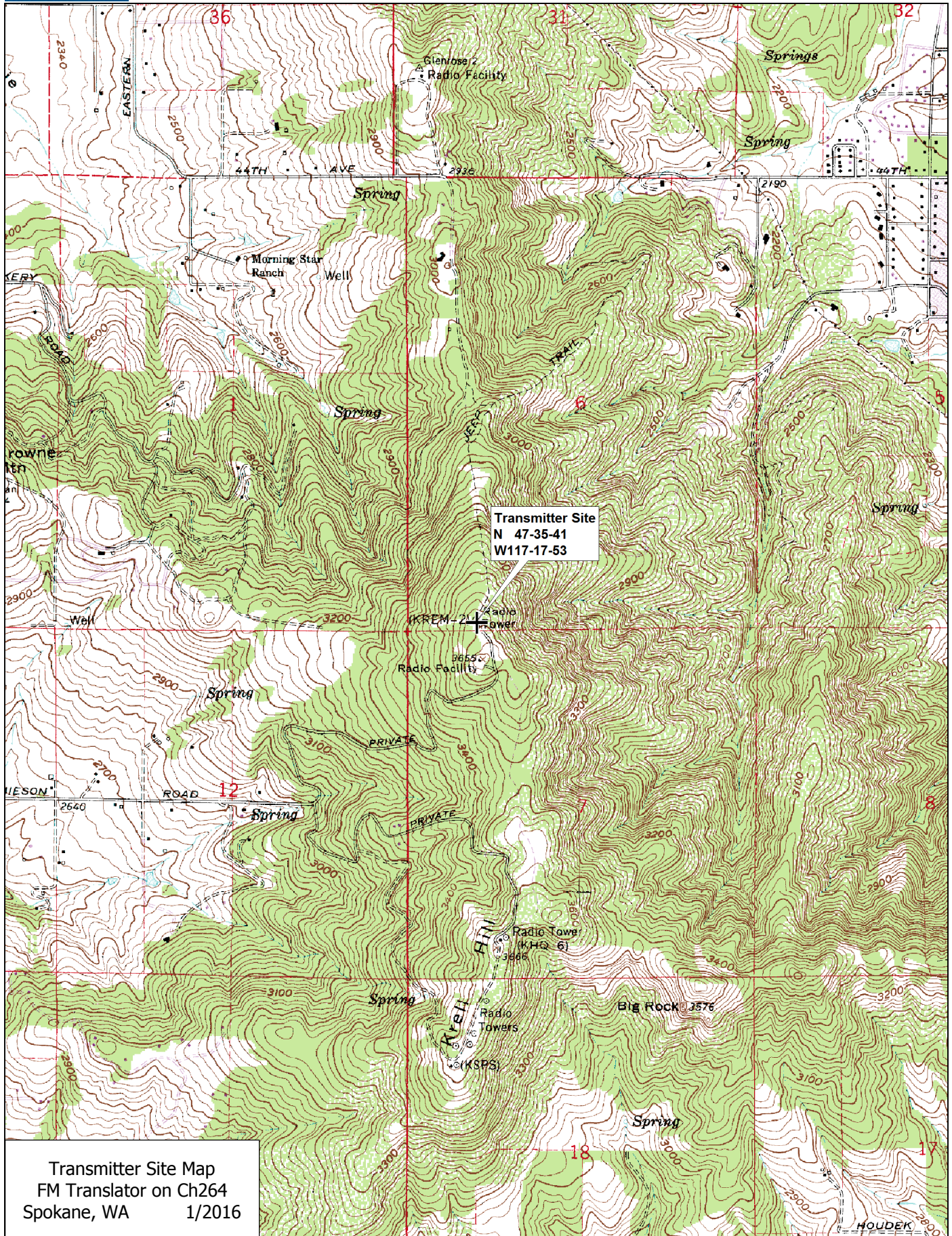
Ground level power densities have been calculated for locations extending from the base of the tower to a distance of 1000 meters. Values past this point are increasingly negligible.

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 (181 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 $0.3 \mu\text{W}/\text{cm}^2$, which is 0.03% of $1000 \mu\text{W}/\text{cm}^2$ (the FCC standard for controlled environments) and 0.14% 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.



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