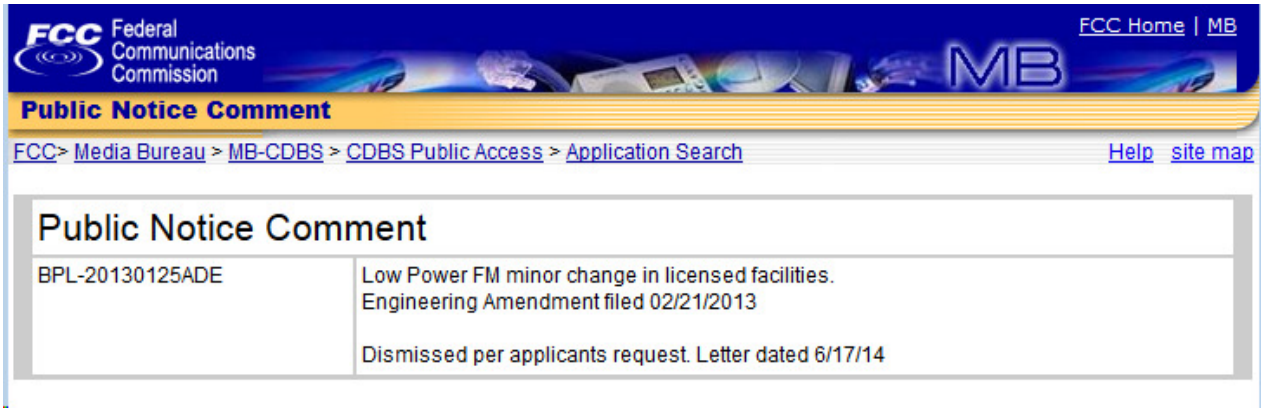
June 2014
FM Translator K237FE
Bend, Oregon Channel 234D
Allocation Study

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.

KXIX 231C2 Sunriver
The proposed translator transmitter site is located within the 60 dBu protected contour of third-adjacent channel station KXIX 231C2 Sunriver. The proposed site is 16.4 km from the KXIX transmitter site at a bearing of 78 degrees True. Given the KXIX antenna's 546 meter HAAT and 18.5 kW ERP along this radial, KXIX places an 89.3 dBu contour at the translator transmitter site. The corresponding interfering contour from the translator is 89.3 + 40 = 129.3 dBu. The aerial photograph on the following page depicts the 129.3 dBu contour from the proposed facility, which extends at most 38 meters as calculated using the Free Space equation. There is no population within this contour, which encompasses only area within the transmitter site perimeter fence. Therefore, the proposed facility is believed to satisfy the requirements of §74.1204(d) with respect to KXIX.

KZSO-LP 235L1 Sisters
The spacing study indicates a first-adjacent channel construction permit BPL-20130125ADE for KZSO-LP at Sisters, just 29.8 km from the proposed translator operation. The grant of that permit, however, has been rescinded, and CDBS includes a notation that BPL-20130125ADE has been "Dismissed per applicant's request. Letter dated 6/17/2014."


FCC Federal Communications Commission
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Public Notice Comment
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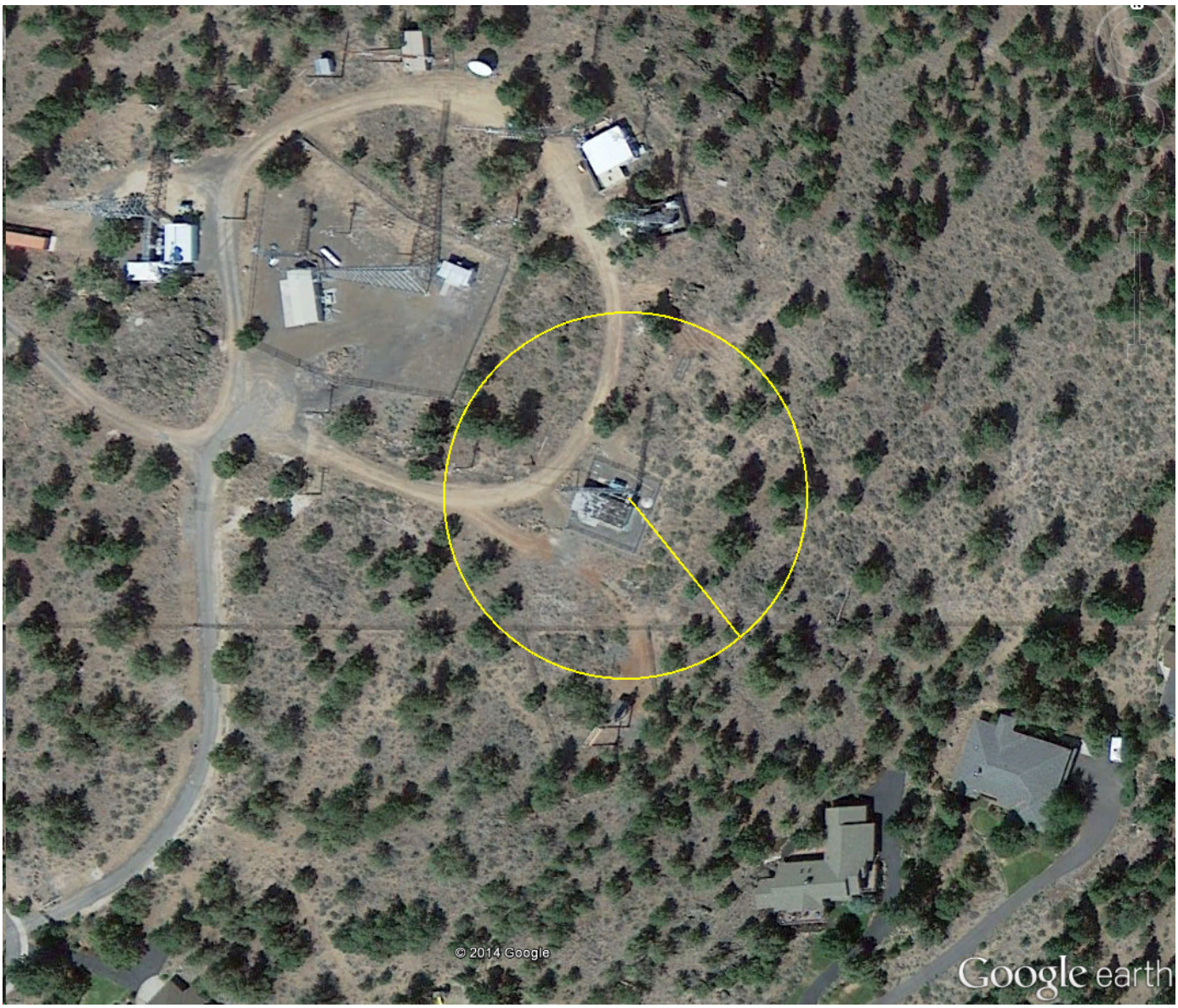
Public Notice Comment

BPL-20130125ADE	Low Power FM minor change in licensed facilities. Engineering Amendment filed 02/21/2013 Dismissed per applicants request. Letter dated 6/17/14

Indeed, the applicant's 6/17/2014 letter expressly requested "that the permit be cancelled". Therefore it is not believed necessary to provide contour protection to BPL-20130125ADE.

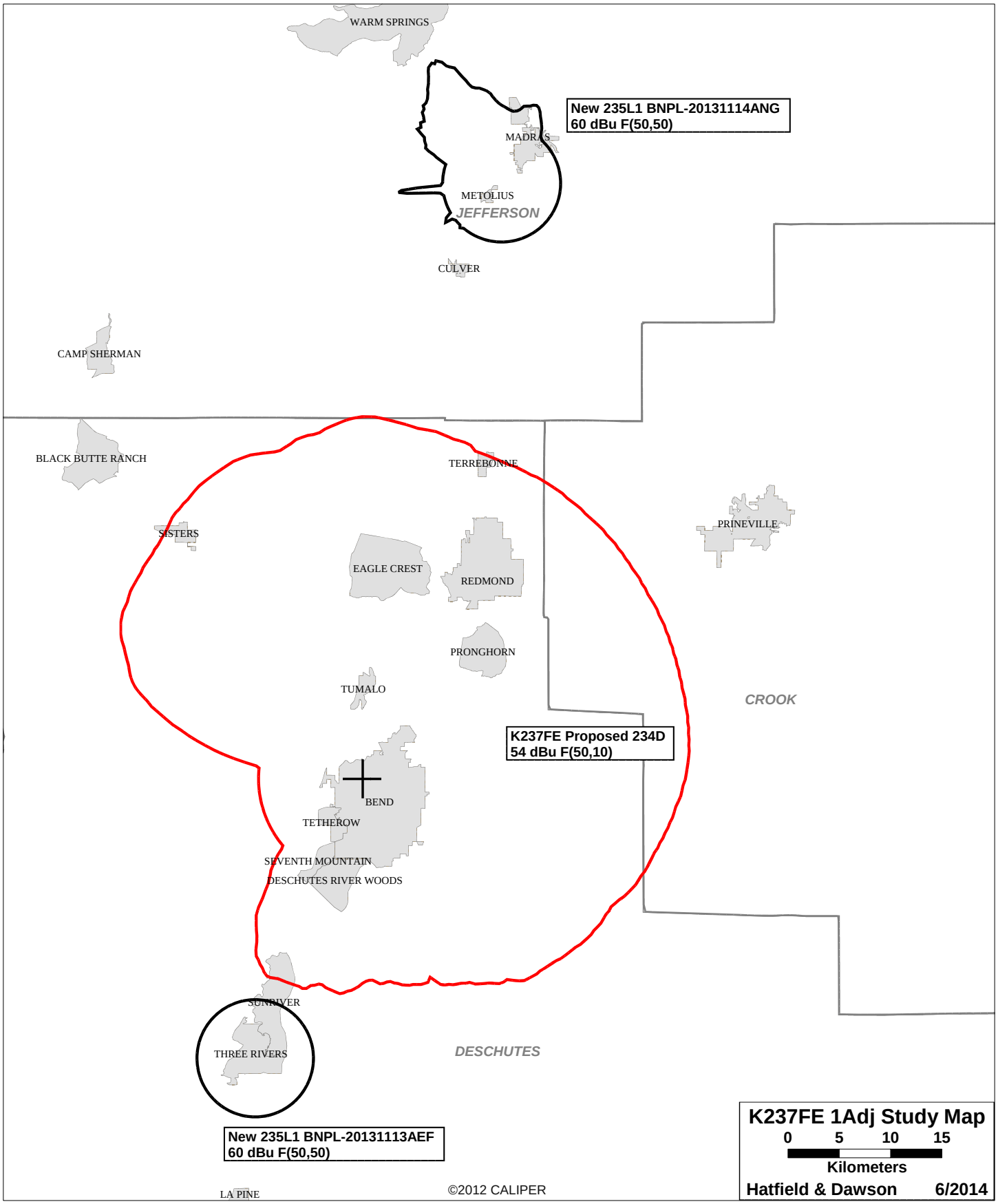


129.3 dBu Free Space interference contour overlaid on recent aerial photography. This area is unpopulated.

SEARCH PARAMETERS FM Database Date: 140623
Channel: 234A 94.7 MHz
Latitude: 44 4 38
Longitude: 121 19 49
Safety Zone: 50 km
Job Title: BEND 234

Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)		Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
	SUNRIVER		231C2	0.000		44-02-49	258.2	16.40	55
RSV	OR	RM-inv-07	94.1	0.0		121-31-50		-38.60	SHORT
KXIX	SUNRIVER		231C2	18.500		44-02-49	258.2	16.40	55
LIC	OR	BLH-00713AMH	94.1	248.0		121-31-50		-38.60	SHORT
KJDY-FM	CANYON CITY		233C0	45.000		44-17-50	81.6	185.08	152
LIC	OR	BMLH-21216ABC	94.5	416.0		119-02-09		33.08	CLEAR
KMGE	EUGENE		233C1	49.000		44-00-04	267.2	143.11	133
LIC	OR	BLH-970925KE	94.5	396.0		123-06-45		10.11	CLEAR
KMGEaux	EUGENE		233C1	6.000		44-00-04	267.2	143.11	0
LIC	OR	BXLH-20217ABQ	94.5	295.0		123-06-45		0.00	AUX
K237FE	BEND		234D	0.250	DA	44-04-38	0.0	0.00	0
CP	OR	BPFT-20927AKN	94.7	298.0		121-19-49		0.00	TRANS
KNRK	CAMAS		234C2	6.300	DA	45-29-20	326.0	190.44	166
LIC	WA	BLH-30326AIC	94.7	403.0		122-41-40	SS	24.44	CLEAR
KNRKaux	CAMAS		234C2	1.200		45-29-20	326.0	190.44	0
LIC	WA	BXLH-11205AGQ	94.7	320.0		122-41-40		0.00	AUX
KNRKaux	CAMAS		234C2	6.000	DA	45-27-08	328.3	180.60	0
LIC	WA	BXMLH-41207AAU	94.7	259.0		122-32-47		0.00	AUX
NEW	BEND		235L1	0.100		43-49-58	201.1	29.11	56
APP	OR	BNPL-31113AEF	94.9	-50.0		121-27-39		-26.89	SHORT
NEW	MADRAS		235L1	0.100		44-35-53	13.1	59.45	56
APP	OR	BNPL-31114ANG	94.9	29.7		121-09-36		3.45	CLOSE
KZSO-LP	SISTERS		235L1	0.100		44-17-37	323.9	29.80	56
CP	OR	BPL-30125ADE	94.9	-87.0		121-33-02		-26.20	SHORT
NOTE: GRANT RESCINDED AND DISMISSED PER LICENSEE REQUEST									
K237FE	PRINEVILLE		237D	0.099	DA	44-26-17	36.7	50.15	0
LIC	OR	BLFT-20904ABY	95.3	813.0		120-57-11		0.00	TRANS
K287AK	PRINEVILLE		287D	0.010		44-26-16	36.6	50.05	10
LIC	OR	BLFT-70131AJK	105.3	815.0		120-57-17		40.04	CLEAR

==== END OF FM SPACING STUDY FOR CHANNEL 234 ====


WARM SPRINGS
New 235L1 BNPL-20131114ANG
60 dBu F(50,50)
MADRAS
METOLIUS
JEFFERSON
CULVER
CAMP SHERMAN
BLACK BUTTE RANCH
TERREBONNE
PRINEVILLE
SISTERS
EAGLE CREST
REDMOND
PRONGHORN
TUMALO
CROOK
K237FE Proposed 234D
54 dBu F(50,10)
BEND
TETHEROW
SEVENTH MOUNTAIN
DESCHUTES RIVER WOODS
SUNRIVER
THREE RIVERS
DESCHUTES
New 235L1 BNPL-20131113AEF
60 dBu F(50,50)
LA PINE
©2012 CALIPER
K237FE 1Adj Study Map
0 5 10 15
Kilometers
Hatfield & Dawson 6/2014

June 2014
FM Translator K237FE
Bend, Oregon Channel 234D
RF Exposure Study

Facilities Proposed

The proposed operation will be on Channel 234D (94.7 MHz) with a maximum lobe effective radiated power of 250 watts. Operation is proposed with an antenna to be mounted on an existing tower on Awbrey Butte.

The antenna support structure does not exceed 60.96 meters (200 feet) above ground and does not require notification to the Federal Aviation Administration. Therefore, this structure does not require an Antenna Structure Registration Number.

RF Exposure Calculations

OET Bulletin 65 *Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields* (Edition 97-01) states in pertinent 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 K237FE 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.

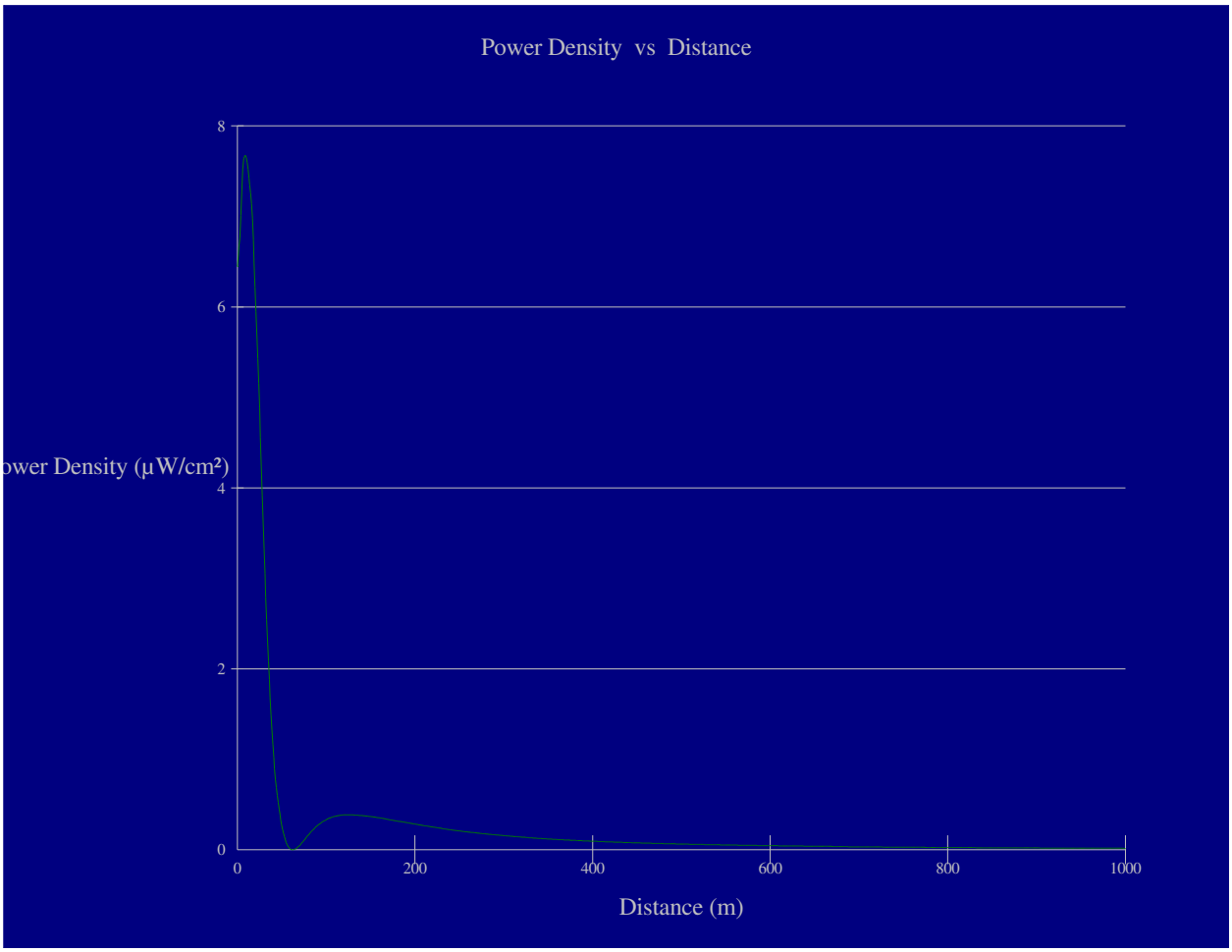
D is the distance in meters from the center of radiation to the calculation point.

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.

Since the Commission's FMModel software program does not include an element model for the SWR FMEC-2 antenna to be used, "worst case" calculations of the power density produced by the K237FE antenna system have been made using the "ring stub" element pattern. Under this "worst case" assumption, the highest calculated ground level power density from K237FE occurs at a distance of 9 meters from the base of the antenna support structure. At this point the power density is calculated to be 7.7 $\mu W/cm^2$, which is 0.8% of 1000 $\mu W/cm^2$ (the FCC standard for controlled environments) and 3.9% of 200 $\mu W/cm^2$ (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 K237FE 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 non-ionizing radiation 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.



Ground-Level RF Exposure **OET FMModel**

K237FE Ch234 Bend

Antenna Type:	SWR FMEC-2(“ring stub” element model assumed)
No. of Elements:	2
Element Spacing:	1.0 wavelength
Distance:	1000 meters
Horizontal ERP:	0.250 kW
Vertical ERP:	0.250 kW
Antenna Height:	38 meters AGL

Maximum Calculated Power Density is 7.7 µW/cm^2 at 9 meters from the antenna structure.