

**December 2012
K239AL Channel 239D
Coos Bay, OR
Allocation Study**

The instant application is being filed solely to correct the transmitter site coordinates for K239AL to match the Antenna Structure Registration for this tower. No physical modification of the translator is proposed other than a 1-second correction in the latitude and a 4-second correction in the longitude.

The attached spacing study shows the spacing between the proposed fill-in 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 maps demonstrate compliance with the Commission's Rules for protection of FM broadcast stations and FM translators as outlined in §74.1204.

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: 121211

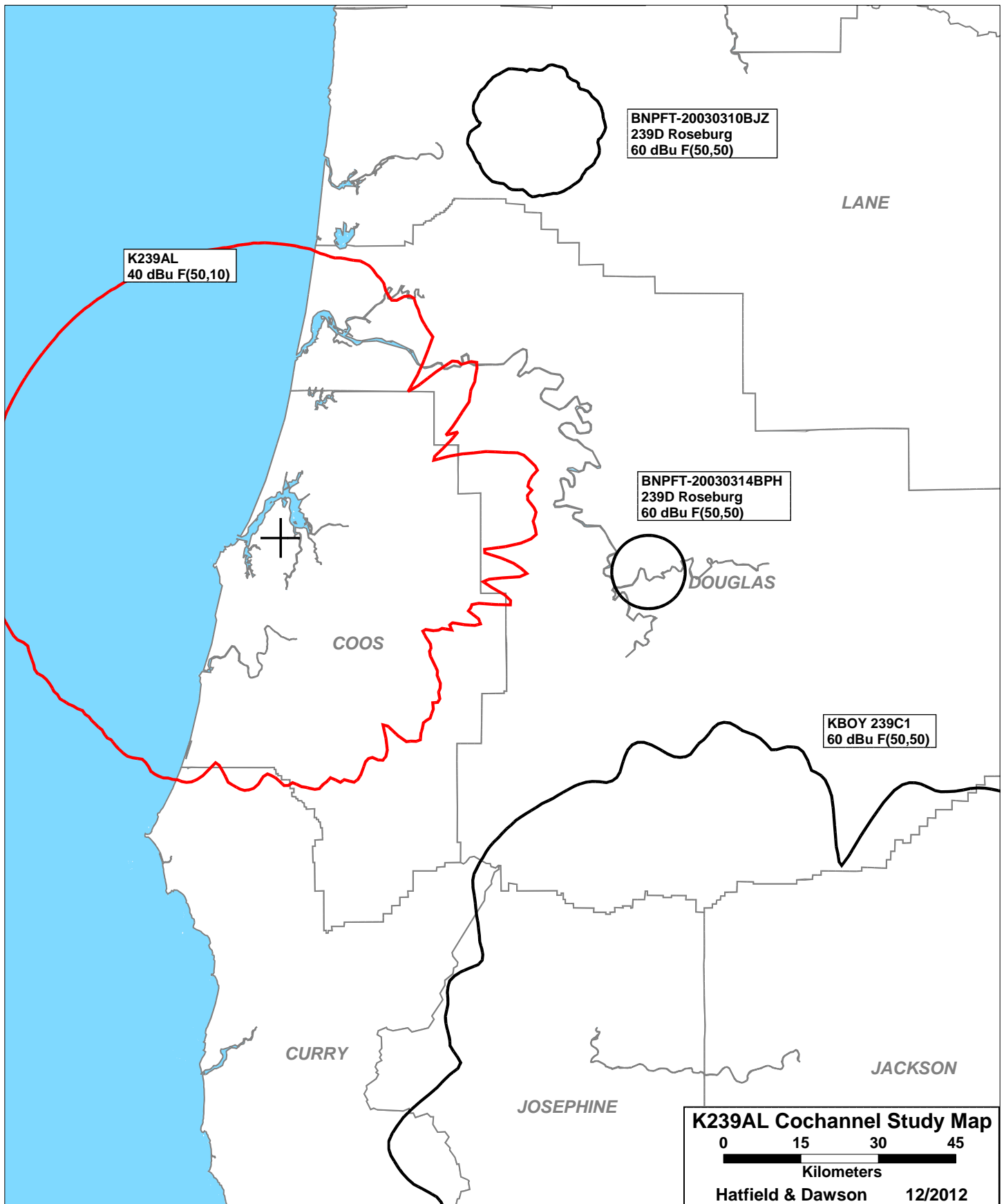
Channel: 239A 95.7 MHz
 Latitude: 43 21 16
 Longitude: 124 14 30
 Safety Zone: 50 km
 Job Title: K239AL COOS BAY

Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
NEW-T APP	ELKTON/DAYS CREEK OR BNPFT-30317HHO	237D 95.3	0.013 521.0	43-24-18 123-28-28	84.6	62.43 0.00	0 TRANS	
K237EC LIC	FLORENCE, ETC. OR BLFT-50901ADA	237D 95.3	0.025 DA 242.0	43-57-26 124-04-26	11.3	68.33 0.00	0 TRANS	
K238AL LIC	REEDSPORT OR BLFT-70322ADX	238D 95.5	0.075 192.0	43-40-40 124-06-36	16.4	37.47 0.00	0 TRANS	
K239AL LIC	COOS BAY OR BLFT-41208AAX	239D 95.7	0.250 199.0	43-21-15 124-14-34	251.0	0.10 0.00	0 TRANS	
NEW-T APP	EUGENE OR BNPFT-30311AUI	239D 95.7	0.080 44.0	44-03-10 123-06-37	49.1	119.74 0.00	0 TRANS	
NEW-T APP	FLYNN OR BNPFT-30317MFR	239D 95.7	0.075 180.0	44-33-56 123-20-02	28.0	153.03 0.00	0 TRANS	
NEW-T APP	GOSHEN OR BNPFT-30317BVQ	239D 95.7	0.023 320.0	44-00-08 123-06-50	51.2	115.98 0.00	0 TRANS	
KBOY-FM LIC	MEDFORD OR BLH-51128AOF	239C1 95.7	60.000 299.0	42-27-11 123-03-21	135.7	139.31 -60.69	200 SHORT	
KBOYaux LIC	MEDFORD OR BXLH-00415ABU	239C1 95.7	2.300 288.0	42-27-11 123-03-21	135.7	139.31 0.00	0 AUX	
NEW-T APP	NEWPORT OR BNPFT-30317DZX	239D 95.7	0.099 152.0	44-38-12 124-01-36	6.8	143.51 0.00	0 TRANS	
KLTW-FM LIC	PRINEVILLE OR BLH-20810ABB	239C1 95.7	100.000 DA 182.0	44-04-40 121-19-49	70.0 SS	248.01 48.01	200 CLEAR	
NEW-T APP	ROSEBURG OR BNPFT-30314BPH	239D 95.7	0.250 26.0	43-17-42 123-21-43	95.0	71.66 0.00	0 TRANS	
K252DL APP	WALTON OR BMJPFT-30310BJZ	239D 95.7	0.010 580.0	44-04-00 123-37-42	31.7	93.30 0.00	0 TRANS	
NEW-T APP	ROSEBURG OR BNPFT-30317IPL	240D 95.9	0.034 274.0	43-12-08 123-22-54	103.4	71.83 0.00	0 TRANS	

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SEARCH PARAMETERS                               FM Database Date: 121211
Channel: 239A      95.7 MHz                      Page    2
Latitude:  43 21 16
Longitude: 124 14 30
Safety Zone:  50 km
Job Title: K239AL COOS BAY
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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)
KZEL-FM	EUGENE		241C	0.000	43-54-19	57.5	115.65	95
RSV	OR -		96.1	0.0	123-01-33		20.65	CLEAR
KZEL-FM	EUGENE		241C0	100.000	44-00-04	51.2	115.99	86
LIC	OR BMLH-20808ABF		96.1	333.0	123-06-45		29.99	CLEAR
KZEL-FM	EUGENE		241C	100.000	44-00-04	51.2	115.95	95
APP	OR BPH-20612ACD		96.1	451.9	123-06-47	SS	20.95	CLEAR
	POWERS		293C2	0.000	42-53-01	165.2	54.10	15
VAC	OR RM-11088		106.5	0.0	124-04-19		39.10	CLEAR

===== END OF FM SPACING STUDY FOR CHANNEL 239 =====



K239AL
40 dBu F(50,10)

BNPFT-20030310BJZ
239D Roseburg
60 dBu F(50,50)

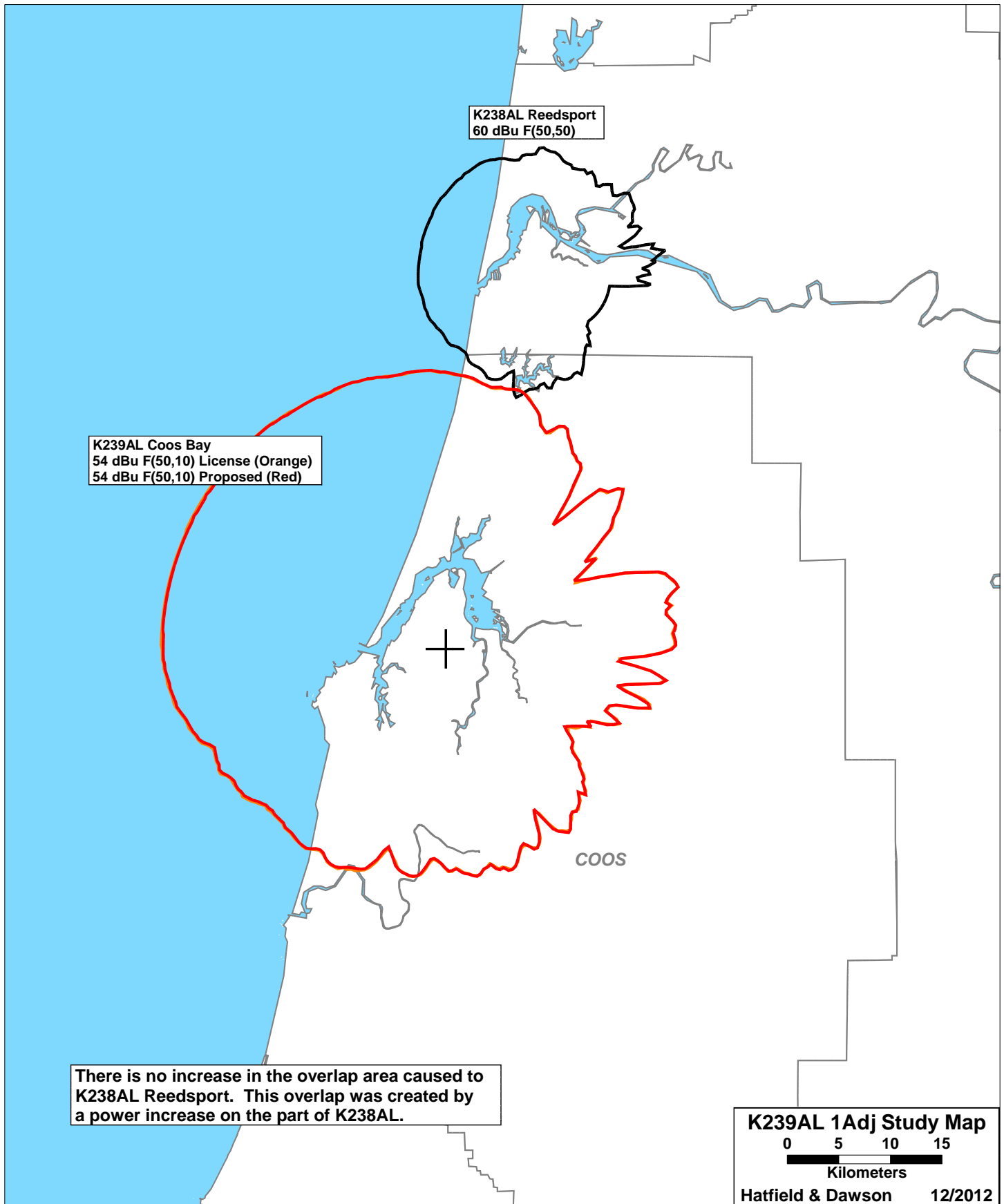
BNPFT-20030314BPH
239D Roseburg
60 dBu F(50,50)

KBOY 239C1
60 dBu F(50,50)

K239AL Cochannel Study Map

0 15 30 45
Kilometers

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There is no increase in the overlap area caused to K238AL Reedsport. This overlap was created by a power increase on the part of K238AL.

December 2012
K239AL Channel 239D
Coos Bay, OR
RF Exposure Study

Facilities Proposed

The proposed operation will be on Channel 239D (95.7 MHz) with an effective radiated power of 250 watts. Operation is proposed with the existing antenna mounted on an existing tower on Blossom Hill, with FCC Antenna Structure Registration Number 1027927.

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 K239AL 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.

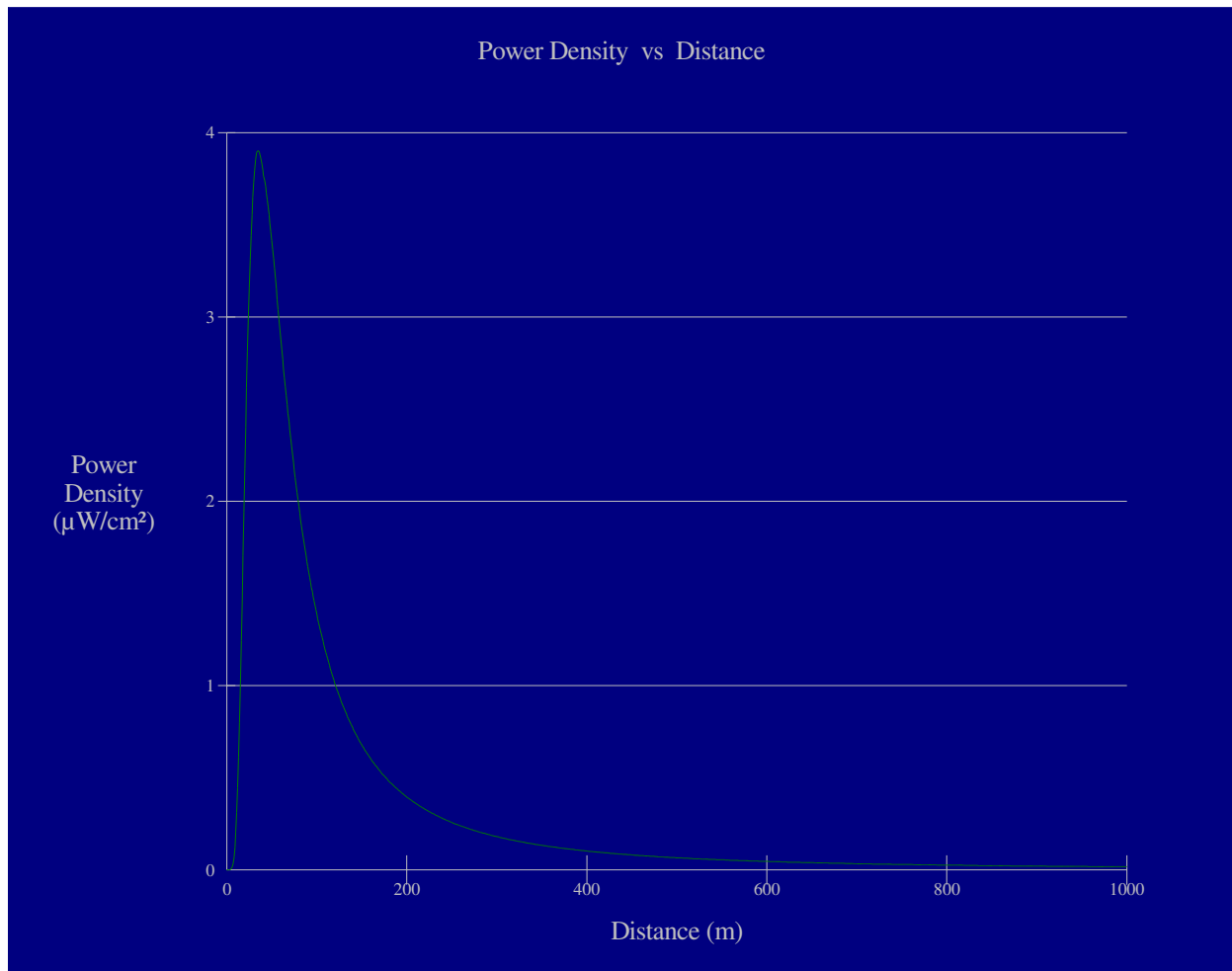
Calculations of the power density produced by the K239AL antenna system have been made using

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the appropriate element model for the Shively 6812B-2-SS antenna used by K239AL. The highest calculated ground level power density from K239AL occurs at a distance of 35 meters from the base of the antenna support structure. At this point the power density is calculated to be $3.9 \mu\text{W}/\text{cm}^2$, which is 0.4% of $1000 \mu\text{W}/\text{cm}^2$ (the FCC standard for controlled environments) and 2.0% 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 K239AL 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.



Ground-Level RF Exposure

OET FMModel

K239AL Coos Bay

Antenna Type: Shively 6812B-2-SS

No. of Elements: 2

Element Spacing: 0.5 wavelength

Distance: 1000 meters

Horizontal ERP: 250 W

Vertical ERP: 250 W

Antenna Height: 21 meters AGL

Maximum Calculated Power Density is $3.9 \mu\text{W}/\text{cm}^2$ at 35 meters from the antenna structure.

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