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**FM Translator K247CR
Channel 247D at Albany, OR
To Rebroadcast KTHH(AM) 990 kHz Albany, OR
July 2021**

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 maps demonstrate compliance with the Commission's Rules for protection of FM broadcast stations and FM translators as outlined in §74.1204.

The proposed facility will operate with an ERP of less than 100 watts. Therefore there are no spacing restrictions to stations which are 53 or 54 channels removed from the proposed operation.

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SEARCH PARAMETERS FM Database Date: 20210719 Page 1

Channel: 247A 97.3 MHz

Latitude: 44 38 46.4 (NAD83)

Longitude: 123 16 14.3

Safety Zone: 50 km

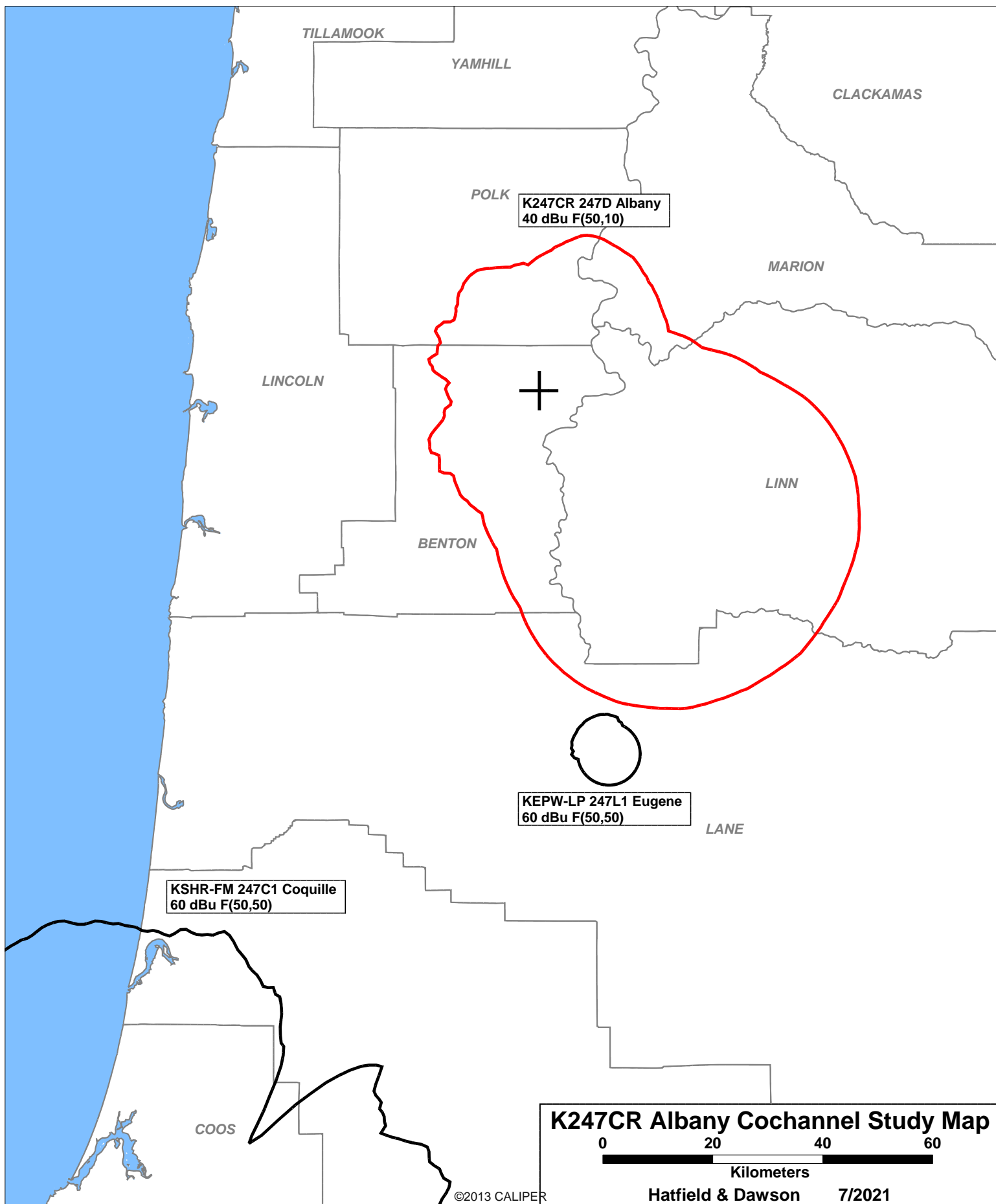
Job Title: K247CH ALBANY

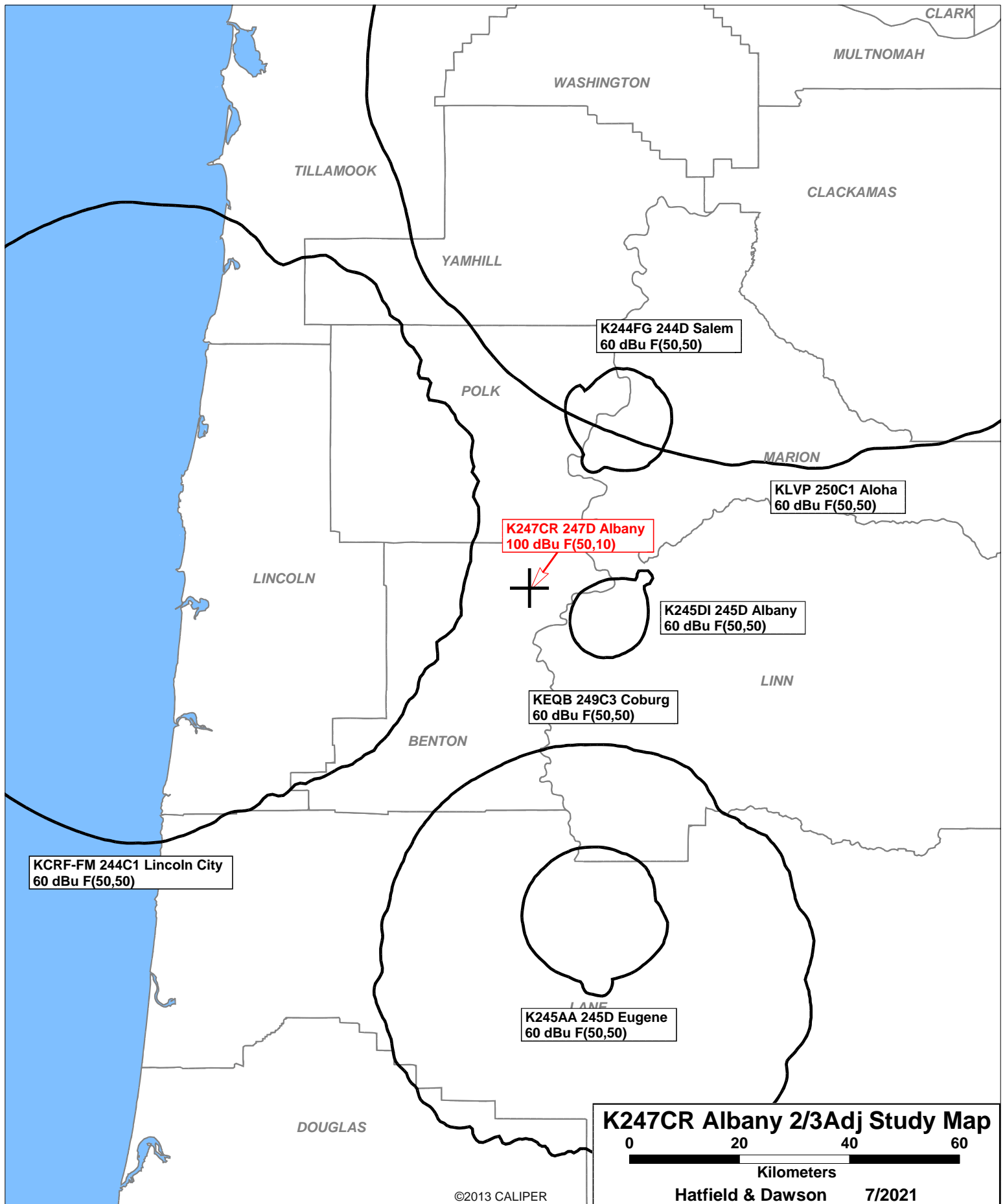
Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
KCRF-FM LIC	LINCOLN CITY OR	BLH-20010827AAA	244C1 96.7	19.500 266.0	44 45 21.4 124 3 1.4	281.5	62.99 -12.01	75 SHORT
K244FG LIC	SALEM OR	BLFT-20160502ABV	244D 96.7	0.130 0.0	DA 44 51 13.4 123 7 24.3	26.7	25.84 0.00	0 TRANS
K245DI CP	ALBANY OR	BNPFT-20181030AA	245D 96.9	0.250 0.0	DA 44 39 15.2 123 1 1.7	87.4	20.13 0.00	0 TRANS
K245AA LIC	EUGENE OR	BLFT-19971003TJ	245D 96.9	0.250 0.0	DA 44 0 10.5 123 6 52.3	170.1	72.56 0.00	0 TRANS
KYCH-FM LIC	PORTLAND OR	BLH-19900821KA	246C 97.1	100.000 386.0	45 29 19.4 122 41 44.3	25.5	104.01 -60.99	165 SHORT
KEPW-LP LIC	EUGENE OR	BLL-20171016ADK	247L1 97.3	0.100 0.0	44 3 9.4 123 6 41.3	169.1	67.17 0.17	67 CLOSE
K247CR LIC	ALBANY OR	0000151312	247D 97.3	0.001 0.0	44 36 50.7 123 5 56.8	104.7	14.07 0.00	0 TRANS
KSHR-FM LIC	COQUILLE OR	BMLH-20141024ABI	247C1 97.3	30.000 261.0	43 14 50.3 124 6 51.3	203.8	169.55 -30.45	200 SHORT
K248BS LIC	NEWBERG OR	BMLFT-20151209AA	248D 97.5	0.065 0.0	45 21 16.4 122 59 26.3	15.5	81.76 0.00	0 TRANS
KSHL LIC	LINCOLN BEACH OR	BLH-20160627AAP	248C2 97.5	7.000 259.0	44 45 23.4 124 2 57.4	281.5 SS	62.92 -43.08	106 SHORT
KNLR LIC	BEND OR	BLH-19850114LW	248C1 97.5	97.000 163.0	44 4 37.4 121 19 53.1	111.6	167.03 34.03	133 CLEAR
K248DD LIC	PORTLAND OR	BLFT-20170601ACR	248D 97.5	0.250 0.0	DA 45 27 11.4 122 32 51.3	32.1	106.24 0.00	0 TRANS

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SEARCH PARAMETERS                                     FM Database Date: 20210719
Channel: 247A      97.3 MHz                               Page    2
Latitude: 44 38 46.4    (NAD83)
Longitude: 123 16 14.3
Safety Zone: 50 km
Job Title: K247CH ALBANY
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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)
KEQB	COBURG		249C3	3.200	44 0 6.4	170.1	72.69	42
LIC	OR	BLH-20160411AAP	97.7	284.0	123 6 51.3	SS	30.69	CLEAR
KLVP	ALOHA		250C1	54.000	45 29 19.4	25.5	104.01	75
LIC	OR	BLED-20150929ACF	97.9	387.0	122 41 44.3		29.01	CLEAR
KHPE	ALBANY		300C	100.000	44 38 45.4	215.4	0.04	29
LIC	OR	BLH-5427	107.9	354.0	123 16 15.3		-28.96	SHORT

===== END OF FM SPACING STUDY FOR CHANNEL 247 =====





Facilities Proposed

The proposed operation will be on Channel 247D (97.3 MHz) with an effective radiated power of 0.099 kilowatts. Operation is proposed with a directional Yagi antenna which will be side-mounted on an existing tower on Vineyard Mountain near Corvallis.

The proposed 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

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.

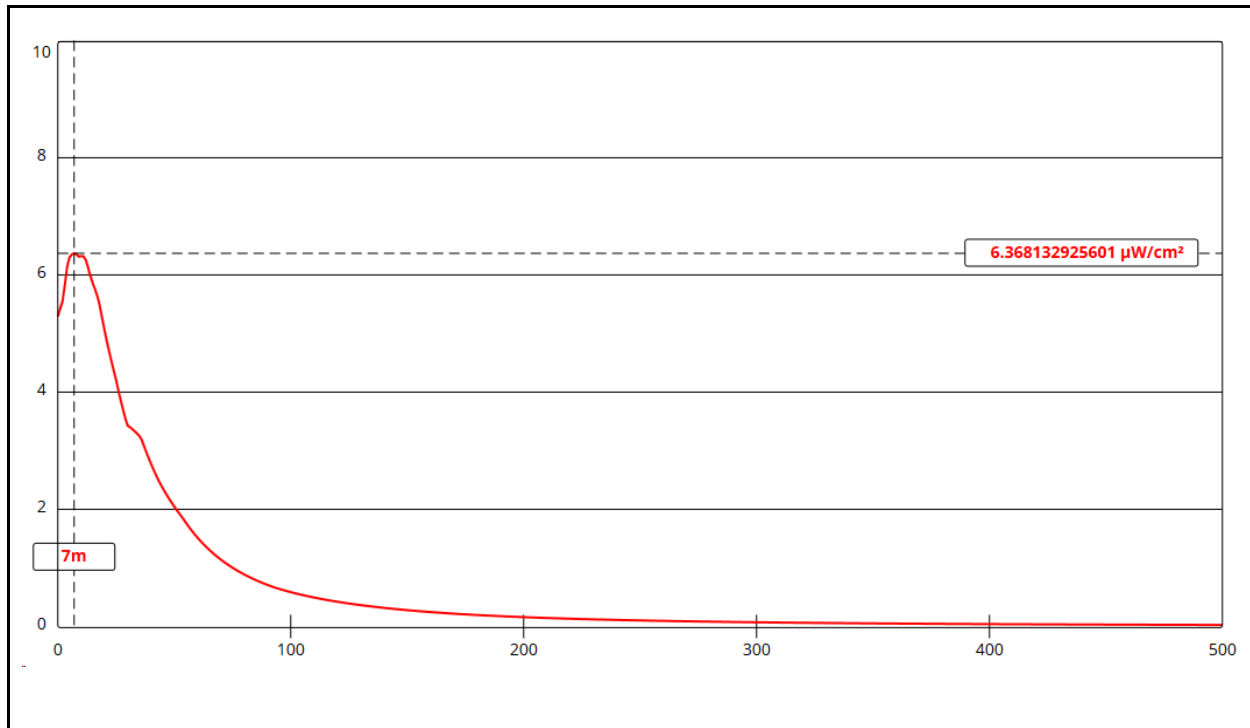
D is the distance in meters from the center of radiation to the calculation point.

Ground level power densities have been calculated for locations extending from the base of the tower to a distance of 500 meters. Values past this point are increasingly negligible.

Calculations of the power density produced by the proposed antenna system assume a Type 1 element pattern, which is the element pattern for the Scala CA5-CP antenna proposed for use. The highest calculated ground level power density occurs at a distance of 7 meter from the base of the antenna support structure. At this point the power density is calculated to be 6.4 $\mu W/cm^2$, which is 3.2% 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 alone is less than 5% of the applicable FCC exposure limit at all locations between 1 and 500 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 applicant's 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.



Ground-Level RF Exposure

OET FMModel

K247CR Albany

Antenna Type: Scala CA5-CP (Type 1)
No. of Elements: 1
Element Spacing: 1 wavelength

Distance: 500 meters
Horizontal ERP: 99 watts
Vertical ERP: 99 watts

Antenna Height: 27 meters AGL

Maximum Calculated Power Density is 6.4 $\mu\text{W}/\text{cm}^2$ at 7 meters from the antenna structure.

