

**June 2008**  
**FM Translator K250AE**  
**Longview, Washington Channel 250D**  
**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 second-adjacent channel station KPPK 252A Rainier. The proposed site is 3.98 km from the KPPK transmitter site at a bearing of 199 degrees True. Given the KPPK antenna's 209 meter HAAT and 1.6 kW ERP along this radial, KPPK places a 93.3 dBu contour at the translator transmitter site. The corresponding interfering contour from the translator is  $93.3 + 40 = 133.3$  dBu. The 133.3 dBu free space contour from the proposed 250 Watt translator facility extends just 24 meters from the antenna and does not reach ground level. Therefore, no population will be affected by interference and the proposed facility is believed to satisfy the requirements of §74.1204(d) with respect to KPPK.

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: 080612

Channel: 250A 97.9 MHz Page 1

Latitude: 46 8 57

Longitude: 122 58 29

Safety Zone: 32 km

Job Title: K250AE LONGVIEW

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	PORTLAND OR	BNPFT-030310BFC	248D 97.5	0.010 220.0	45-36-31 122-51-20	171.2	60.79	0
							0.00	TRANS
NEW-T APP	ARIEL WA	BNPFT-030317KLO	248D 97.5	0.010 805.0	45-59-37 122-35-42	120.4	34.09	0
							0.00	TRANS
NEW-T APP	BRUSH PRAIRIE WA	BNPFT-030317KHD	248D 97.5	0.250 88.0	45-39-06 122-36-01	152.2	62.47	0
							0.00	TRANS
NEW-T APP	VANCOUVER WA	BNPFT-030317IJS	248D 97.5	0.250 52.0	45-38-20 122-36-19	153.1	63.55	0
							0.00	TRANS
K249DK LIC	NEWBERG OR	BLFT-980617TH	249D 97.7	0.013 431.0	45-21-17 122-59-23	180.8	88.31	0
							0.00	TRANS
RSV	OAKVILLE WA	RM-9369	249C1 97.7	0.000 0.0	46-57-14 123-29-21	336.5	97.77	133
							-35.23	SHORT
KFMYaux CP	OAKVILLE WA	BXPH-050815AAS	249C 97.7	3.400 83.0	47-00-57 122-54-59	2.6	96.44	0
							0.00	AUX
KFMY LIC	OAKVILLE WA	BLH-080514AGI	249C 97.7	63.000 728.0	47-18-46 123-22-15	347.0	132.85	165
						SS	-32.15	SHORT
KFMY-FM1 LIC	OLYMPIA WA	BLFTB-011109AAG	249D 97.7	3.700 0.0	47-00-58 122-54-57	2.7	96.48	0
							0.00	BOOST
KFMYaux LIC	RAYMOND WA	BXLH-050406ACE	249C1 97.7	0.500 673.0	46-58-31 123-08-16	352.3	92.68	0
							0.00	AUX
KFMY LIC	RAYMOND WA	BLH-011101ACQ	249C1 97.7	44.000 403.0	46-54-05 123-25-07	338.1	90.29	133
						SS	-42.71	SHORT
DEL	EUGENE OR	RM-11279	250C 97.9	0.000 0.0	44-00-08 123-06-50	182.7	238.85	226
							12.85	CLEAR
KNRQ-FM LIC	EUGENE OR	BLH-910528KF	250C 97.9	100.000 308.0	44-00-08 123-06-50	182.7	238.85	226
							12.85	CLEAR

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SEARCH PARAMETERS FM Database Date: 080612

Channel: 250A 97.9 MHz Page 2

Latitude: 46 8 57

Longitude: 122 58 29

Safety Zone: 32 km

Job Title: K250AE LONGVIEW

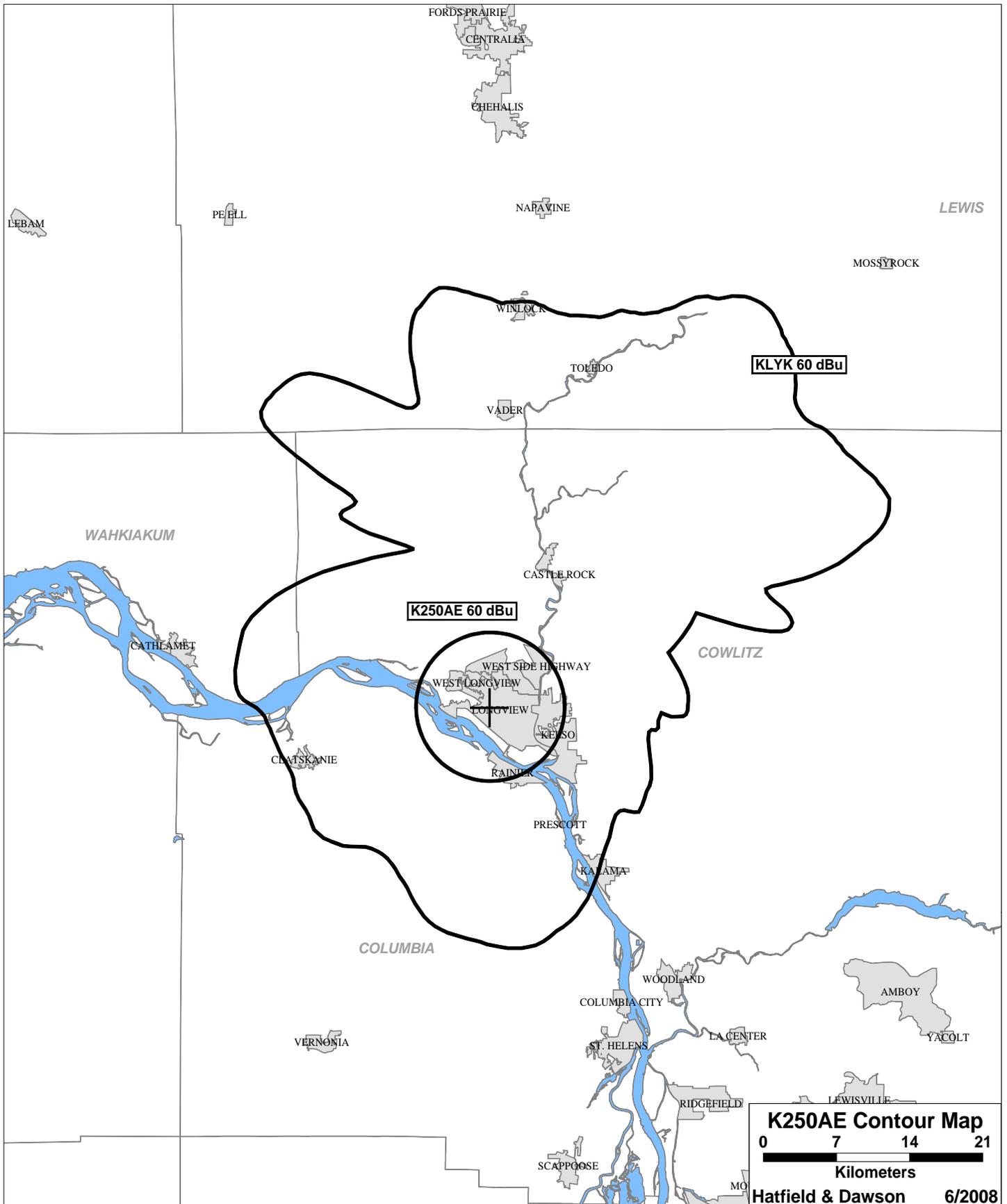
Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
KRRC LIC	PORTLAND OR	BLED-031022AAU	250D 97.9	0.008 4.0	45-28-51 122-37-50	160.1	78.95 0.00	0 CLS=D
NEW-T APP	SILVERTON OR	BNPFT-030317AQY	250D 97.9	0.250 DA 366.0	45-00-00 122-41-37	170.2	129.59 0.00	0 TRANS
KNRQ-FM CP	TUALATIN OR	BPH-070119AFH	250A 97.9	0.260 470.0	45-31-21 122-44-45	165.6 SS	71.89 -43.11	115 SHORT
KNRQ-FM APP	TUALATIN OR	BMPH-080331ACU	250C2 97.9	3.700 470.0	45-31-21 122-44-45	165.6 SS	71.89 -94.11	166 SHORT
KNRQ-FM RSV	TUALATIN OR	-	250C2 97.9	0.000 0.0	45-30-57 122-43-52	164.9	72.89 -93.11	166 SHORT
ADD	TUALATIN OR	RM-11279	250C2 97.9	0.000 0.0	45-29-20 122-41-40	163.4	76.55 -89.45	166 SHORT
NEW-T APP	CAMAS WA	BPFT-971027TH	250D 97.9	0.011 488.0	45-40-35 122-22-39	138.5	70.06 0.00	0 TRANS
K250AE LIC	LONGVIEW WA	BLFT-981005TF	250D 97.9	0.050 -38.0	46-08-06 122-56-06	117.2	3.45 0.00	0 TRANS
K250AE CP	LONGVIEW WA	BPFT-030424ABJ	250D 97.9	0.250 25.0	46-08-57 122-58-29	0.0	0.00 0.00	0 TRANS
NEW-T APP	ST HELENS WA	BNPFT-030317EAK	250D 97.9	0.250 45.0	45-51-22 122-49-16	159.9	34.68 0.00	0 TRANS
NEW-T APP	WOODLAND WA	BNPFT-030317LRI	250D 97.9	0.250 8.0	45-54-22 122-45-32	148.3	31.77 0.00	0 TRANS
NEW-T APP	BEAVERTON OR	BNPFT-030317AHR	251D 98.1	0.010 710.0	45-31-21 122-44-45	165.6	71.89 0.00	0 TRANS
KCYS LIC	SEASIDE OR	BLH-000225AAK	251A 98.1	6.000 100.0	45-57-08 123-56-14	253.9	77.64 5.64	72 CLOSE

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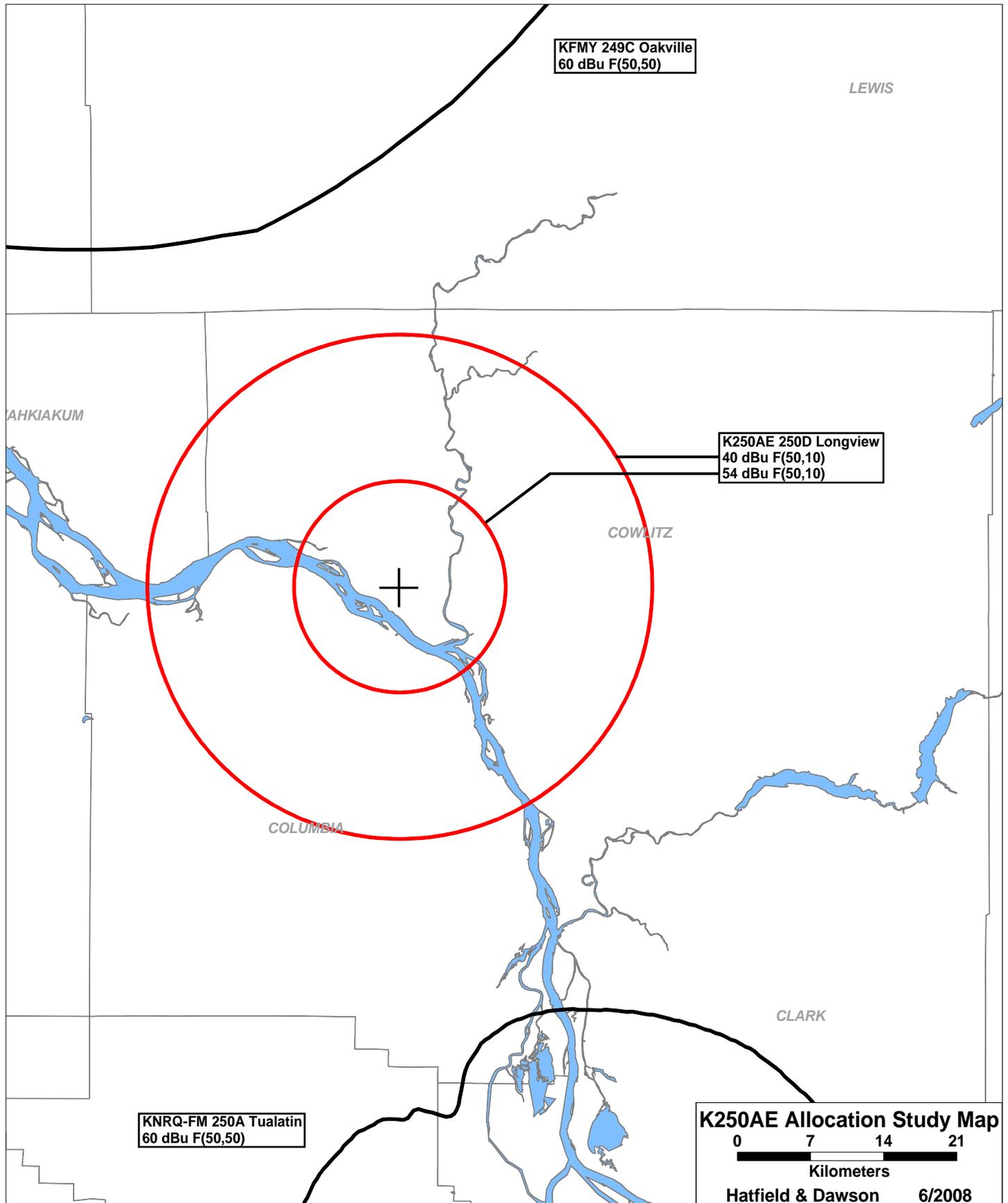
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SEARCH PARAMETERS                               FM Database Date: 080612
Channel: 250A      97.9 MHz                      Page 3
Latitude: 46 8 57
Longitude: 122 58 29
Safety Zone: 32 km
Job Title: K250AE LONGVIEW
    
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Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
KINGaux LIC	SEATTLE WA	BXLH-020829ABH	251C 98.1	50.000 388.0	47-32-35 122-06-25	22.7	168.50	0
							0.00	AUX
KING-FM CP	SEATTLE WA	BPH-051207ADW	251C 98.1	68.000 707.0	47-30-14 121-58-29	26.4	168.83	165
							3.83	CLOSE
KING-FM LIC	SEATTLE WA	BLH-921130KC	251C 98.1	58.000 714.0	47-30-14 121-58-29	26.4	168.83	165
						SS	3.83	CLOSE
KPPK LIC	RAINIER OR	BLH-060802AFY	252A 98.3	1.600 195.0	46-10-59 122-57-29	18.8	3.98	31
							-27.02	SHORT
NEW-T APP	CHEHALIS WA	BNPFT-030314BKK	253D 98.5	0.016 394.0	46-33-17 123-03-27	352.0	45.53	0
							0.00	TRANS

44444 END OF FM SPACING STUDY FOR CHANNEL 250 44444



**K250AE Contour Map**  
 0 7 14 21  
 Kilometers  
 Hatfield & Dawson 6/2008



**June 2008**  
**FM Translator K250AE**  
**Longview, Washington Channel 250D**  
**NIER Study**

**Facilities Proposed**

The proposed operation will be on Channel 250D (97.9 MHz) with an effective radiated power of 250 Watts. Operation is proposed with a circularly-polarized omnidirectional antenna to be mounted on the existing KEDO(AM) tower located at 24<sup>th</sup> and Olive Way in Longview. The FCC Antenna Structure Registration number for this tower is 1035302.

**NIER Calculations**

Study of the area within 1000 meters of the proposed site reveals no other likely sources of non-ionizing radiation. Thus, the ground level NIER values near the base of the proposed structure are believed to be negligible. 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.

$$S(\text{mW} / \text{cm}^2) = \frac{33.40981 \times \text{AdjERP}(\text{Watts})}{D^2}$$

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.

"Worst case" calculations of the power density levels produced by the proposed translator were made for an elevation of 2 meters above ground level (64 meters below the antenna radiation center), assuming that the antenna radiates 100% power straight down. Under this worst-case assumption, the highest calculated power density from the proposed antenna alone occurs at the base of the antenna support structure. At this point the power density is calculated to be 4.1  $\mu\text{W}/\text{cm}^2$ , which is less than 5% of the FCC standard for uncontrolled environments.

The translator antenna will be installed on the tower used by AM station KEDO. KEDO operates with 1000 Watts nondirectional fulltime. The tower is 123.5 electrical degrees tall, or 34% of the station wavelength. Using Tables 1-4 in OET Bulletin No. 65, the fencing distance requirement for this station is 1 meter from the tower base. The tower is fenced to at least this distance.