March 2013
FM Translator K250AE
Longview, Washington Channel 228D
Request for Waiver Due to Displacement

By this application, it is respectfully requested that the Commission waive §74.1233(a)(1) which defines a minor change application by an FM translator station as "changes to first, second or third adjacent channels, or intermediate frequency channels".

The licensed K250AE operation is being displaced by FM station KNRQ-FM, which has been authorized to operate on Channel 250C1 at Aloha (see BPH-20121218ACC). The new KNRQ-FM transmitter site will be located just 77 kilometers from the K250AE transmitter site, and the KNRQ-FM protected 60 dBu contour is overlapped by both the K250AE cochannel and first-adjacent channel interfering contours. Once KNRQ-FM begins operations on Channel 250C1 at Aloha, K250AE will need to be taken silent due to the cochannel interference which would otherwise result.

Study of the adjacent channels (there is no IF channel to the current Ch250) reveals that none of these are available to K250AE, owing to interference conflicts with other stations.

Channel	**Major Conflicts**[1]
247	KYCH 246C Portland (77 km distant) first-adjacent
248	New 248D Ariel (34 km distant) cochannel (prohibited overlap caused and received)
249	KNRQ-FM 250C1 Aloha (77 km distant) first-adjacent
250	KNRQ-FM 250C1 Aloha (77 km distant) cochannel
251	KNRQ-FM 250C1 Aloha (77 km distant) first-adjacent KPPK 252A Rainier (4 km distant) first-adjacent
252	KPPK 252A Rainier (4 km distant) cochannel
253	KPPK 252A Rainier (4 km distant) first-adjacent

Waiver of §74.1233(a)(1) is therefore respectfully requested in order to allow the instant application

[1] Distances listed are relative to the K250AE licensed transmitter site. The proposed transmitter site is only 4 km from the licensed transmitter site, and so all of the conflicts listed are also conflicts from the proposed transmitter site.

to be processed as a minor change application on a non-adjacent channel. Absent a waiver, FM translator K250AE will be displaced by cochannel KNRQ-FM and will not be able to continue operation

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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 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.

FMSTUDY.EXE Copyright 2008, Hatfield & Dawson, LLC Version 1.80

SEARCH PARAMETERS FM Database Date: 130318

Channel: 228A 93.5 MHz

Latitude: 46 10 59

Longitude: 122 57 29

Safety Zone: 50 km

Job Title: K250AE ON CH228

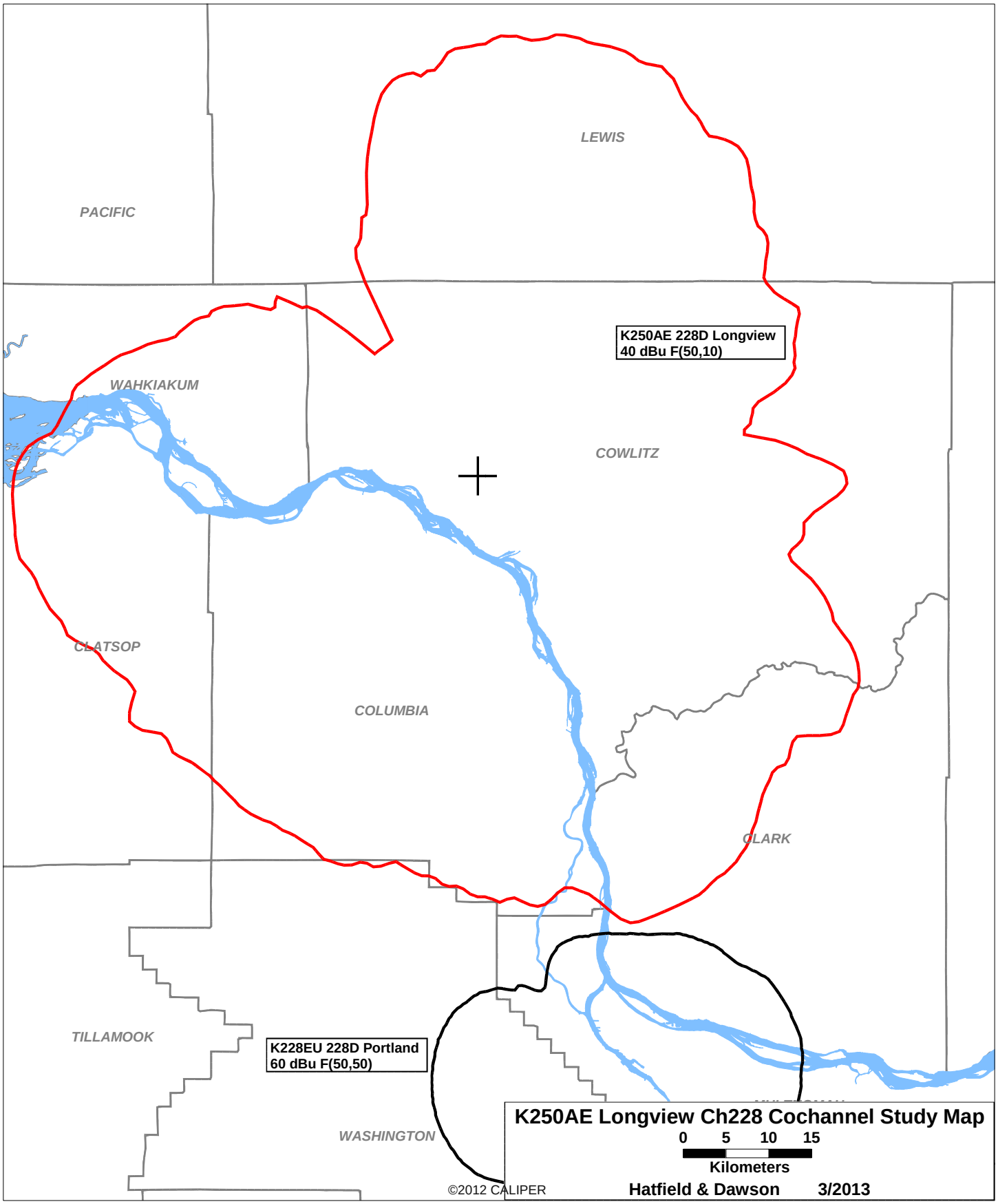
Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)		Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
	CLATSKANIE		225C3	0.000		46-17-44	300.4	24.88	42
VAC	OR	RM-11124	92.9	0.0		123-14-13		-17.12	SHORT
NEW-T	CENTRALIA		225D	0.150		46-43-52	355.3	61.13	0
APP	WA	BNPFT-30310BNC	92.9	0.0		123-01-28		0.00	TRANS
NEW	NAPAVINE		225C3	2.650		46-33-16	349.6	41.98	42
CP	WA	BNPH-10630AHJ	92.9	304.6		123-03-26		-0.02	SHORT
	GLADSTONE		226C3	0.000		45-32-27	156.7	77.66	42
RSV	OR	RM-10668	93.1	0.0		122-33-51		35.66	CLEAR
KRYP	GLADSTONE		226C3	1.600		45-29-20	165.1	79.83	42
LIC	OR	BLH-60208AMG	93.1	387.0		122-41-40		37.83	CLEAR
	GEARHART		227A	0.000		45-57-11	251.6	79.96	72
VAC	OR	RM-11631	93.3	0.0		123-56-14		7.96	CLOSE
KUBEaux	SEATTLE		227C0	22.000		47-32-40	22.8	164.66	0
LIC	WA	BXLH-20416AAH	93.3	368.0		122-06-26		0.00	AUX
KUBE	SEATTLE		227C0	100.000		47-32-40	22.8	164.66	152
LIC	WA	BLH-10206AAA	93.3	387.0		122-06-26		12.66	CLEAR
KUBEaux	SEATTLE		227C0	87.000		47-32-39	22.8	164.61	0
LIC	WA	BLH-831110AF	93.3	375.0		122-06-29		0.00	AUX
K228DT	HAPPY HOLLOW		228D	0.010	DA	45-12-48	210.1	124.33	0
LIC	OR	BLFT-00414ACQ	93.5	833.0		123-45-14		0.00	TRANS
	MANZANITA		228C3	0.000		45-41-05	233.4	92.33	142
DEL	OR	RM-11631	93.5	0.0		123-54-38		-49.67	SHORT
	MANZANITA		228C3	0.000		45-41-05	233.4	92.33	142
VAC	OR	RM-10668	93.5	0.0		123-54-38		-49.67	SHORT
KKJC-LP	MCMINNVILLE		228L1	0.100		45-09-44	187.7	114.47	67
APP	OR	BPL-80219ATZ	93.5	17.9		123-09-09		47.47	CLEAR

SEARCH PARAMETERS FM Database Date: 130318

Channel: 228A 93.5 MHz
Latitude: 46 10 59
Longitude: 122 57 29
Safety Zone: 50 km
Job Title: K250AE ON CH228

Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
K228EU	PORTLAND		228D	0.099 DA	45-31-21	167.3	75.25	0
LIC	OR	BLFT-10118ABC	93.5	506.0	122-44-45		0.00	TRANS
KACI-FM	THE DALLES		228C2	2.300	45-42-44	109.5	152.29	166
LIC	OR	BLH-20823AAZ	93.5	588.0	121-06-49		-13.71	SHORT
KANY	MONTESANO		229C0	32.000 DA	47-18-46	346.1	129.49	152
APP	WA	BPH-21226AAX	93.7	679.0	123-22-15		-22.51	SHORT
KANY	MONTESANO		229C0	33.000 DA	47-18-46	346.1	129.49	152
LIC	WA	BLH-30116AEF	93.7	677.0	123-22-15	SS	-22.51	SHORT
KPDQ-FM	PORTLAND		230C1	52.000	45-29-20	165.1	79.83	75
LIC	OR	BLH-60208AMF	93.9	387.0	122-41-40	SS	4.83	CLOSE
K231AM	WOODLAND		231D	0.120 DA	45-46-35	155.4	49.69	0
LIC	WA	BLFT-20809AAD	94.1	153.0	122-41-30		0.00	TRANS
KMNT	CHEHALIS		282C3	2.350	46-33-18	349.6	42.05	12
LIC	WA	BLH-50720AEZ	104.3	322.0	123-03-27		30.05	CLEAR

==== END OF FM SPACING STUDY FOR CHANNEL 228 ====


LEWIS
PACIFIC
K250AE 228D Longview
40 dBu F(50,10)
WAHKIAKUM
COWLITZ
CLATSOP
COLUMBIA
CLARK
TILLAMOOK
K228EU 228D Portland
60 dBu F(50,50)
WASHINGTON
K250AE Longview Ch228 Cochannel Study Map
0 5 10 15
Kilometers
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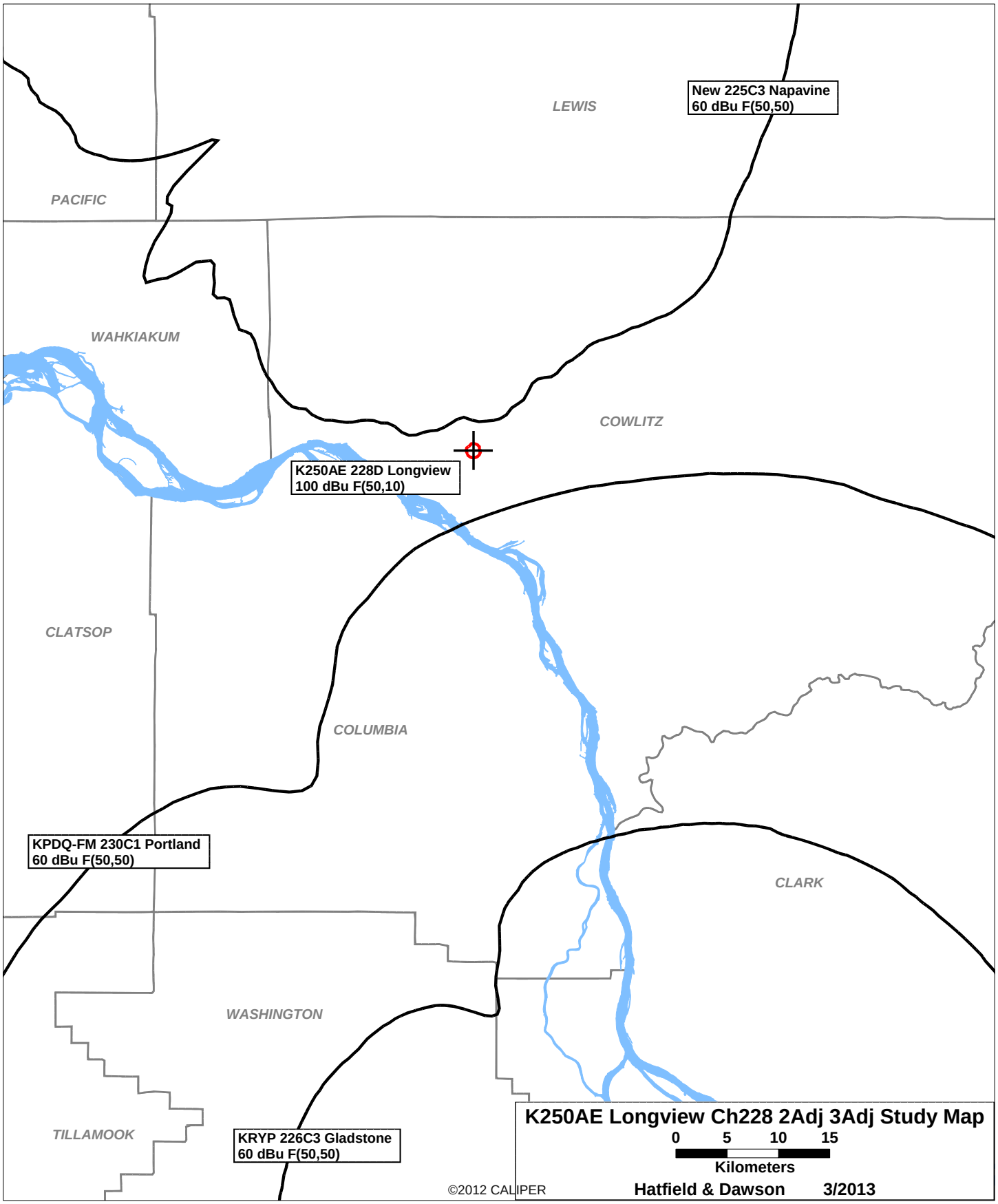
LEWIS
New 225C3 Napavine
60 dBu F(50,50)
PACIFIC
WAHKIAKUM
COWLITZ
K250AE 228D Longview
100 dBu F(50,10)
CLATSOP
COLUMBIA
KPDQ-FM 230C1 Portland
60 dBu F(50,50)
CLARK
WASHINGTON
TILLAMOOK
KRYP 226C3 Gladstone
60 dBu F(50,50)
K250AE Longview Ch228 2Adj 3Adj Study Map
0 5 10 15
Kilometers
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RF Exposure Study

Facilities Proposed
The proposed operation will be on Channel 228 (93.5 MHz) with an effective radiated power of 100 watts. Operation is proposed with a circularly-polarized omnidirectional antenna to be mounted on the existing KBAM(AM) tower located at 996 Lone Oak Road in Longview. The FCC Antenna Structure Registration number for this tower is 1035328.

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.

“Worst case” calculations of the power density levels produced by the proposed translator were made for an elevation of 2 meters above ground level (55 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 2.2 $\mu W/cm^2$, which is less than 5% of 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 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.

AM Station KBAM

The translator antenna will be installed on the tower used by AM station KBAM 1270 kHz. KBAM operates with 5000 watts nondirectional daytime, 83 watts nondirectional nighttime. The tower is 102.3 electrical degrees tall, or 28.4% of the station wavelength. Using Tables 1-4 in OET Bulletin No. 65, the fencing distance requirement for this station is 2 meters from the tower base. The tower is fenced to at least this distance.