JOB 112031 VER 2

COMMUNITY OF LICENSE Salem, OR

CONSOLIDATED

ENGINEERING EXHIBIT

FCC Form 349 - Section III-A - Engineering

BROWN BROADCAST SERVICES
INCORPORATED
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ENGINEERING STATEMENT
MINOR CHANGE OF FM TRANSLATOR K264AA
The KBOO Foundation

SUMMARY

The KBOO Foundation ("KBOO") hereby seeks a minor change of licensed translator K264AA, to move to a site at Bald Hill, near Salem, Oregon. All operating parameters, except frequency, are changed by this proposal.

STATION IS SILENT - MUST MOVE

This translator provided extended service in the Corvallis, OR area, for NCE station KBOO, Portland OR, for over 20 years. However, due to a series of upgrades to co-channel full-power station KPPT-FM, Depoe Bay, OR, the translator was increasingly compromised by incoming interference. The translator also caused interference to fringe reception of KPPT-FM. Fortunately, KBOO was granted a "replacement translator" - K282BH, Philomath (Corvallis), OR, which commenced regular operation on July 9, 2013.

On June 7, 2013, K264AA experienced equipment failure, and went off the air. A Silent STA was subsequently filed on July 9, 2013.[1]

Due to the success of the "replacement translator" K282BH, and the interference potential of K264AA, KBOO has decided not to resume operation of K264AA in Corvallis. Instead, KBOO proposes to move it 40.8km north to Bald Hill, to serve the Salem, OR area. This will provide much needed service to this community. Due to intervening terrain and distance, K264AA will not receive nor create any interference to KPPT-FM from this site.

[1]Ref. # BLSTA-20130709ABP

MATTOON WAIVER REQUEST

A "Mattoon Waiver" of §74.1223(a) is hereby requested. This proposal qualifies for the waiver, in that:

1. KBOO has no history of filing "serial" minor modification applications.
2. The existing and proposed sites are mutually-exclusive with each other. A large portion of the proposed 60dBu protected contour overlaps with the licensed 40dBu interfering contour, and vice-versa. See **Exhibit 13c**.
3. This proposal does not implicate the concerns raised by the Commission in the Third Further Notice in the LPFM docket.[2] Specifically, this proposal will not preclude any protected LPFM channel points. See **Exhibit 1** for details.

KBOO believes that the Mattoon Waiver is fully justified in this case, and consistent with past precedents. This proposal will eliminate all conflicts between the translator and KPPT-FM, while providing improved reception to over 70 thousand residents. KBOO has obtained reasonable assurance from the tower owner, and is prepared to promptly construct the facility and resume operations.

[2]*Creation of a Low Power Radio Service*, Third Further Notice of Proposed Rulemaking, FCC 11-105, 2011 WL 2722585 (rel. Jul. 12, 2011) ("*Third Further Notice*").

EXHIBIT 13
OVERLAP REQUIREMENTS

INTERFERENCE PROTECTION

This proposal moves the translator to a site 41 kilometers NNE of the current licensed site. As shown by attached Exhibits 13a & b, this proposal meets all contour protection requirements of §74.1204(a).

Protected stations considered:

ID	City	St	Chan	CL	Stat	Prefix	ARN	FID	Dist	Min	Clr	Notes
Co-channel												
K264AA	CORVALLIS, ETC.	OR	264	DX	LIC	BLFT	20090918ACY	65756	40.8			Current License
KQRZ-LP	HILLSBORO	OR	264	L1	LIC	BLL	20130711ACH	134266	55.9			
KPPT-FM	DEPOE BAY	OR	264	C2	LIC	BLH	20030926AQJ	642	75.8			
2nd & 3rd Adjacent Channel												
KXL-FM	PORTLAND	OR	266	C	LIC	BLH	20100503ACD	26932	66.4			2nd Adj. Protection by Ratio Method
KKRZ	PORTLAND	OR	262	C	LIC	BLH	20011214AAE	11280	66.6			2nd Adj. Protection by Ratio Method
I. F. Channel												
KAJC	SALEM	OR	211	A	LIC	BLED	20050124AHZ	91565	27.1	10	17.1	Clear

As shown by **Exhibit 13a** there are no co-channel contour-overlap issues.

With a proposed ERP of under 100 watts, there are no I.F. spacing requirements.

CONTOUR PROTECTION TO 2nd AND 3rd - ADJACENT STATIONS

Contour protection to 2nd adjacent stations KXL-FM, Portland, OR and KKRZ, Portland, OR is provided using the ratio method. The F(50/50) contour of KXL-FM is 68.5dBu at the proposed translator site. For KKRZ, the contour is 67.4dBu.

KKRZ was selected as the worst case of the two. Using the appropriate U/D ratio of 40dB, the worst-case corresponding interfering contour of the proposed translator is therefore 107.4dBu. **Exhibit 13b** shows the area encompassed by this contour. This area is completely unpopulated and very remote, with no populated areas or major roads within this contour. Therefore, no interference would be caused to any station in populated areas.

Exhibit 13a - Co-channel Contour Protection

Brown Broadcast Services, Inc.
Job: K264AA move 09302013db.fmj
Master Database: 2013_Sep_30.fmd
Lat: N44:59:50 Lon: W123:09:11 NAD-27
Scale: 1:750000
Channel: 264 Class: DX

PROPOSED
Interfering: 40dBu F(50,10)
AFFECTED
Protected: 60dBu F(50,50)

rfInvestigator Version 3.7.8
by rfSoftware, Inc.
Date: 10/11/2013 5:49:12 PM

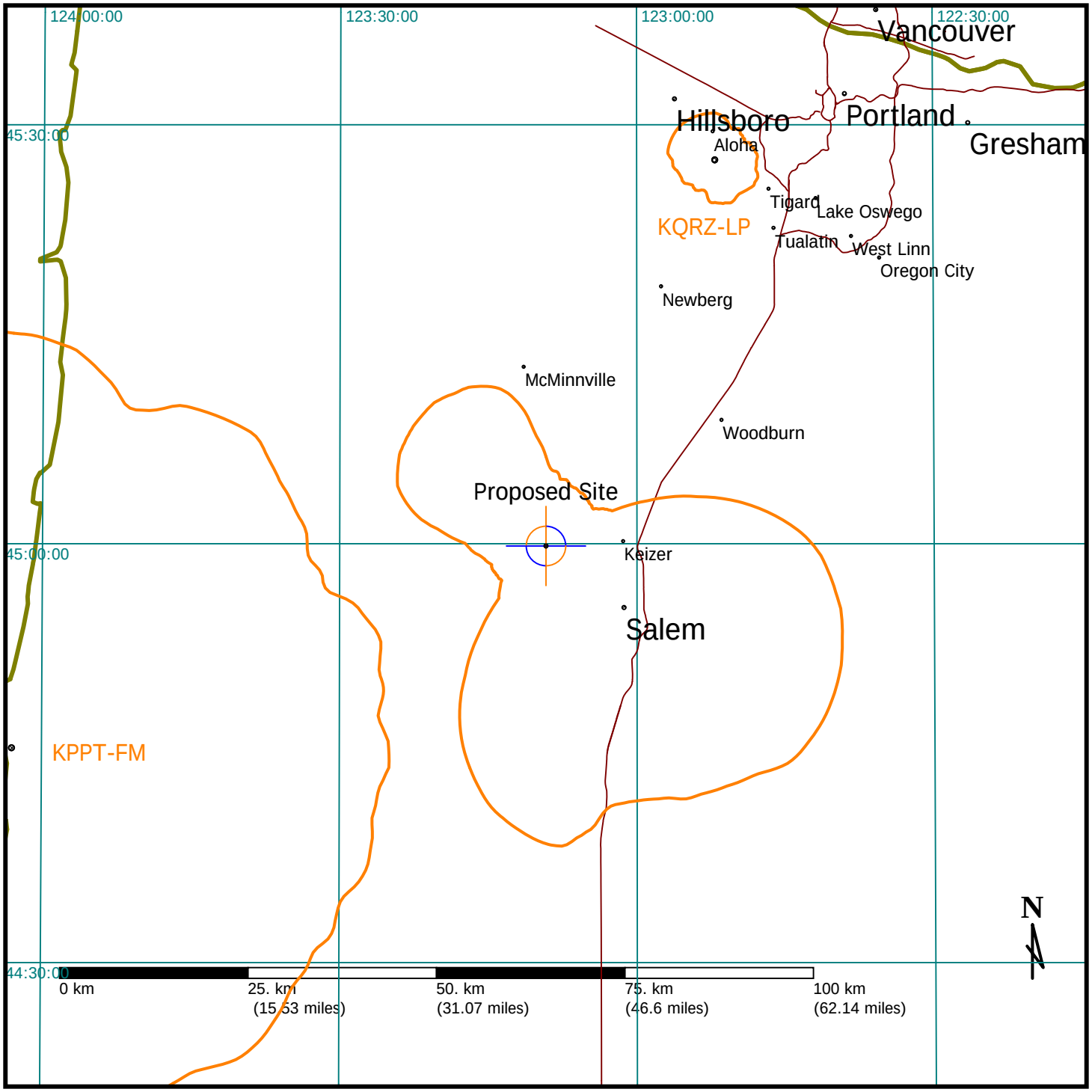
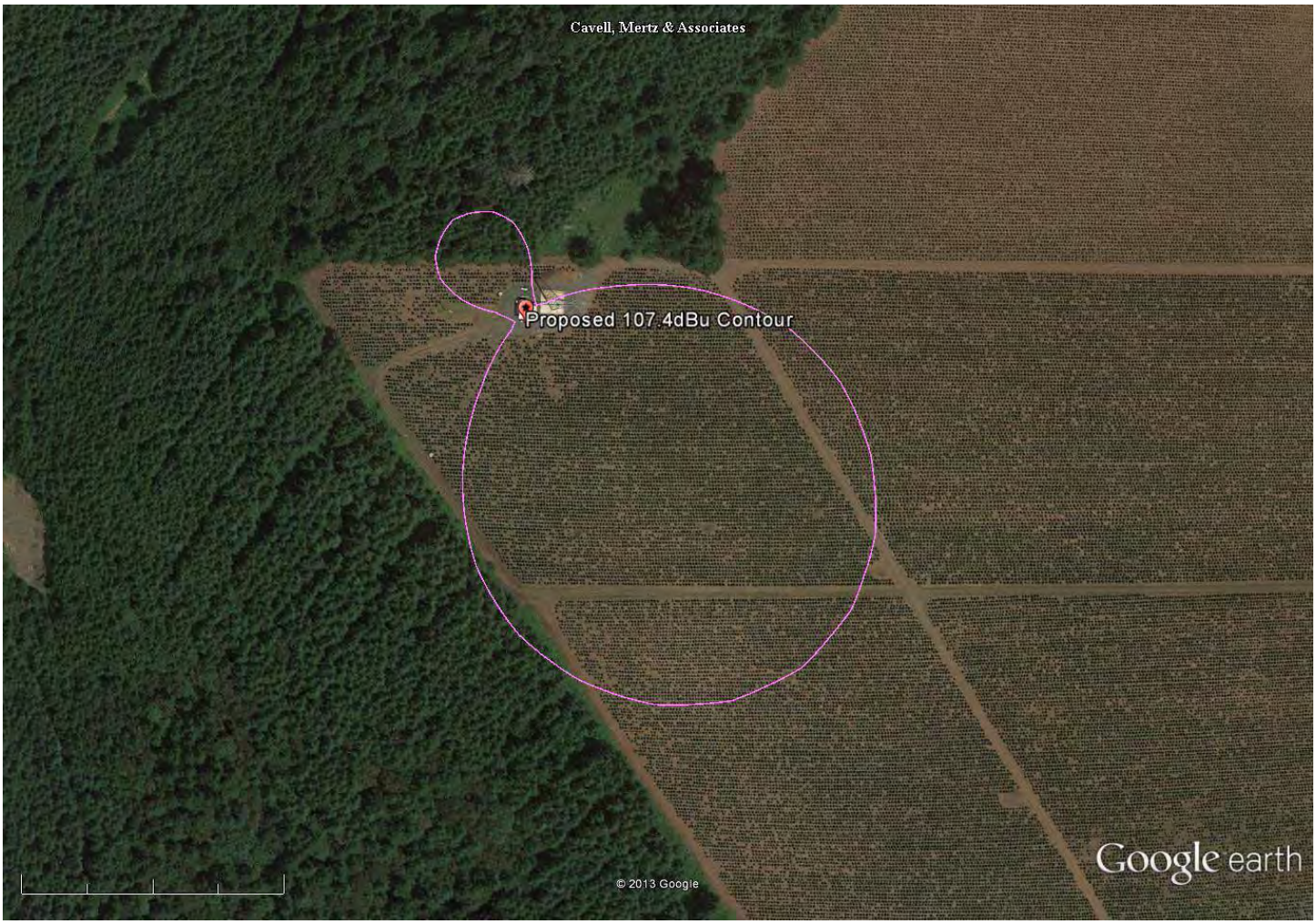


EXHIBIT 13b

Populated Areas Near Proposed Site



Google earth

feet 1000
meters 300

There are no populated areas or major roads within the 107.4dBu contour of this proposed translator.

Exhibit 13c - Licensed vs. Proposed Contours

Brown Broadcast Services, Inc.
Job: K264AA move 09302013db.fmj
Master Database: 2013_Sep_30.fmd
Lat: N44:59:50 Lon: W123:09:11 NAD-27
Scale: 1:625000
Channel: 264 Class: DX

PROPOSED
Protected: 60dBu F(50,50)
Interfering: 40dBu F(50,10)
LICENSED
Protected: 60dBu F(50,50)
Interfering: 40dBu F(50,10)

rfInvestigator Version 3.7.8
by rfSoftware, Inc.
Date: 10/11/2013 4:42:14 PM

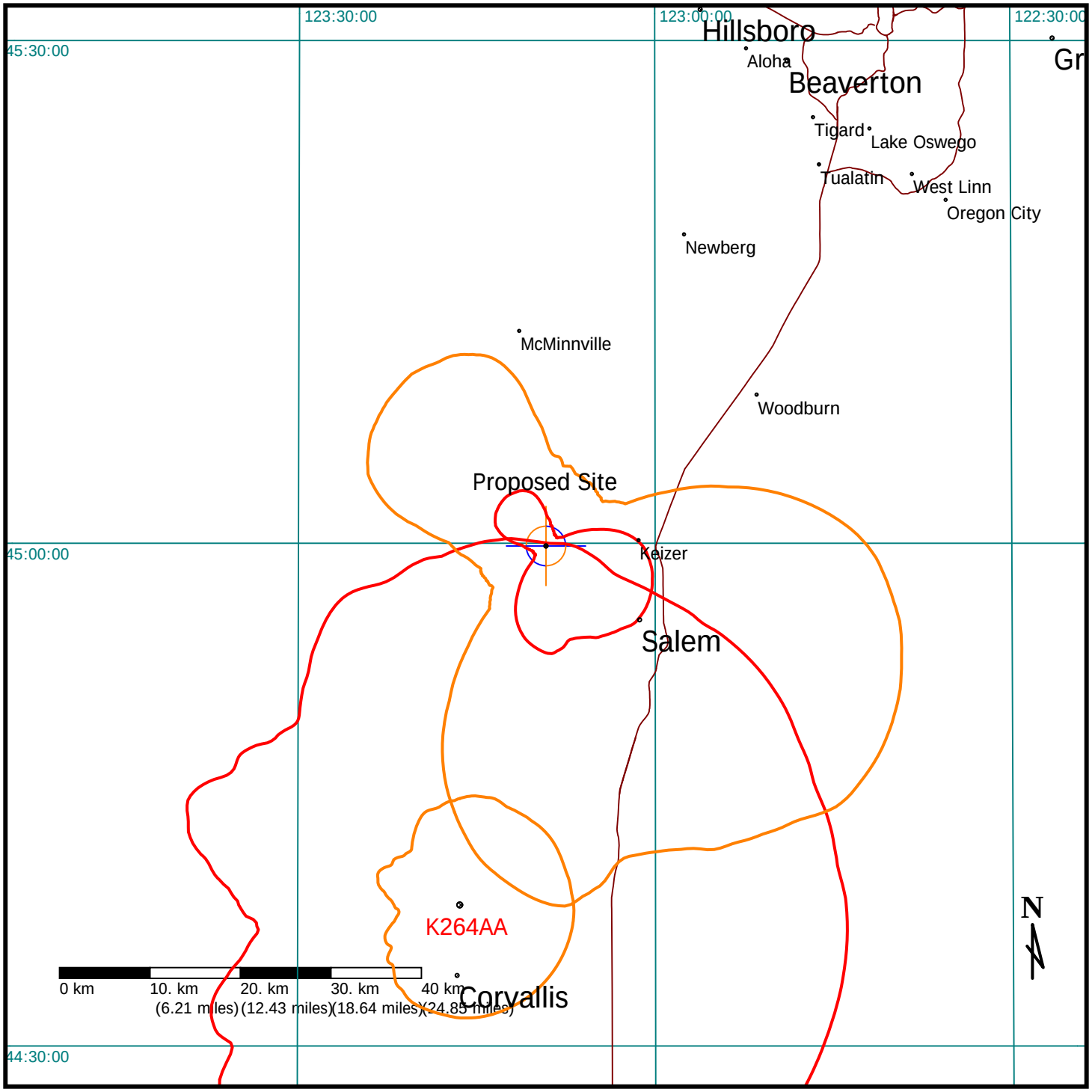


EXHIBIT 17

ENVIRONMENTAL PROTECTION ACT / NEIR ANALYSIS

The applicant proposes mounting a Scala CA2-FM/CP, circularly-polarized antenna on a 61 meter tower. The proposed center of radiation is 29m AGL. Calculations were made using FM Model for Windows, version 2.10, with the Phelps-Dodge "Ring Stub" or Dipole setting as a worst case. This setting indicated a worst case peak exposure of 1.0μW/cm^2, at 26.8 meters from the tower. This represents 0.5% of the Maximum Permissible Exposure (MPE) of 200μW/cm^2 for uncontrolled environments. 47 CFR §1.1307(b)(3) exempts applicants from preparing an Environmental Assessment when the predicted exposure levels would be less than 5% of the FCC limits.

The applicant will ensure that public access to the tower is restricted by fencing, anti-climb devices, or other appropriate measures. The site will be posted with appropriate RF exposure warning signs. If tower climbing by authorized personnel becomes necessary, transmitter power will be reduced or operation will cease, as necessary, so as to not exceed the RF exposure limits.