

**Exhibit 24**  
**KWWS Minor Modification**  
**Environmental Statement**  
**Washington State University**

The proposed site is not in an officially designated wilderness area, wildlife preserve, flood plain, or near a site that is either listed or eligible for listing in the National Register of Historic Places. The proposed construction will not adversely affect any listed or proposed threatened or endangered species or their critical habitats, or any sites significant to Native American Religious practice, and will not involve any significant change in surface features. The applicant does not propose to light the antenna support structure with high intensity white lighting.

The proposed facility is located at an existing broadcast transmission site located beyond a locked gate that prevents public access to the site in a rural area. There are no nearby residential or office sites that have occupants.

Included RF sources are located on three towers at this site. Co-located with KWWS is K33EJ (Class A TV). K33EJ also has an authorized construction permit for a conversion to DTV, so both the current and permitted facilities are analyzed here. KXRX(FM) is located on a tower 30 meters from the KWWS tower, while KKSR(FM) and KORX (Class A TV) are located on a tower 60 meters from the KWWS tower. There are no other included RF sources within 500 meters of the site.

All these facilities are tabulated in Table 24-1. Calculations of worst-case exposure for all FM facilities were made using the Commission's *FM Model for Windows* software. Output of the program for the proposed modification for KWWS is shown in Figure 24-1. For television facilities, calculations were performed using *Equation 2, Section 3, Supplement A to OET Bulletin 65*. Analog power levels were set using worst-case aural carrier levels, while digital power levels were set to the average authorized power. Field factors were set to 0.10 as outlined *Section 3* of the supplement. All calculations were made for power density 2 meters above ground level (AGL).

Added together, the worst case ground level RF exposure does exceed the limit for general population but is approximately one-half the limit for occupational exposure. Also, the sources of radiation are on three separate towers, so their maxima do not coincide. In addition, calculations for the television stations assume that the maximum relative field level is radiated straight down.

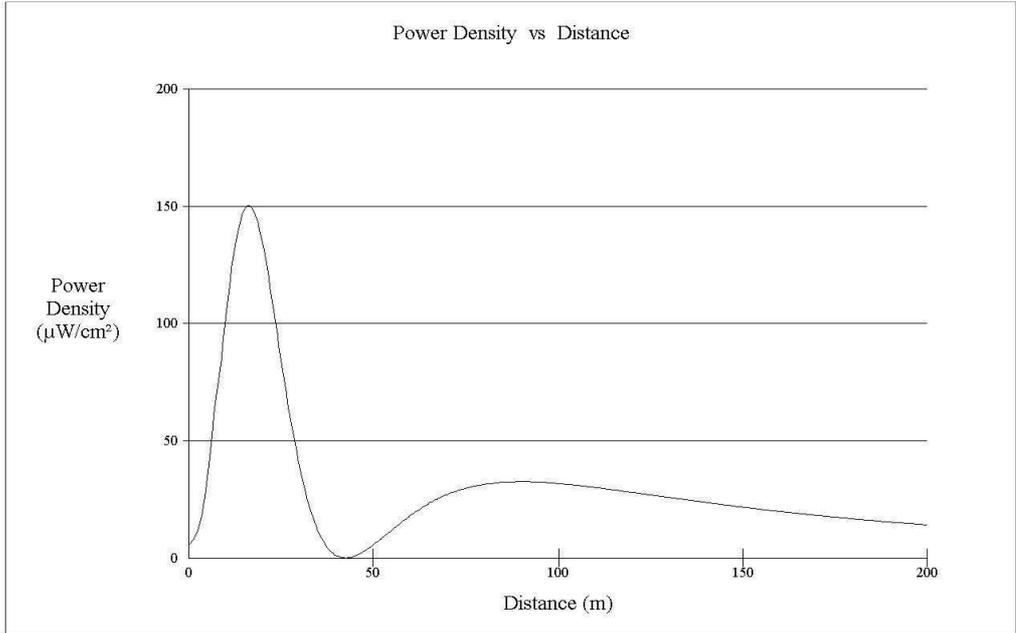
Therefore, it is expected that the actual exposure levels at the site comply with MPE requirements in the frequency ranges in use at this site for occupational exposure at or near ground levels<sup>1</sup>. Nevertheless, post-construction measurements will be performed if so required by the Commission.

The applicant is cognizant of its responsibility to protect those workers whose duties require that they be in the vicinity of the antenna from exposure to radio frequency fields in excess of those outlined above. To that end, signage will be attached to the base of the antenna support structure warning all workers of the potential for harmful exposure and directing them to contact the responsible person at the proposed broadcast station. That person will ascertain whether the worker will be in areas where there is an exposure hazard, and if so, arrange to shut down the transmitter. It will be assumed that an exposure hazard exists on the antenna support structure at elevations above 10 meters AGL. This elevation was determined by subtracting the worst case minimum required distance as calculated above from the elevation, AGL, of the antenna's lowest element, using *Equation 10* of *OET Bulletin 65* with a relative field factor of 0.5, which is the worst-case field of the antenna specified outside the main lobe, then adding a margin of safety. The permittee/licensee will also coordinate with other users of the site to reduce power or cease operation in order to protect persons having access to the site, tower or antenna from radiofrequency radiation in excess of Commission guidelines.

For these reasons, the applicant believes that a Commission grant of this application would not have a significant environmental impact.

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<sup>1</sup> This site has been measured in the past for compliance with respect to RF radiation limits in connection with various filings with the Commission. Specifically, facilities and applications are: KXRX-FM, FCC 302-FM, BXMLH - 20041222EFV, 21 Dec 2004; KXRX-FM, FCC 302-FM, BLH - 20030908ACK, 8 Sept 2003; and KKSJ-FM, FCC 303-S, BRH - 20051003BSS, 30 Sept 2005. In every case, with substantially the same RF environment, the site has complied with requirements for both occupational and general public exposure limits



Office of Engineering and Technology

Distance (m):  Antenna Type:

Horizontal ERP (W):  Number of Elements:

Vertical ERP (W):  Element Spacing:

Antenna Height (m):

Figure 24-1 KWWS Power Density vs. Distance

**Table 24-1**  
**KWWS, Minor Modification**  
**Power Density Calculations**

Call Sign	Channel	Frequency	Average or Peak ERP (kW)	Antenna	Relative Field	Height AGL (m)	Max Exposure (μW/cm)	Occupational Limit (μW/cm)	% of Limit	General Public Limit (μW/cm)	% of Limit
KWWS(FM)	209C1	89.7 MHz	10.3	SHI 6810-2DA	(FM Model)	26.5	150.2	1000.0	15.0	200.0	75.1
K33EJ(CA)-Licensed	33	584-590 MHz	28.6	JAM ODDK33EJ	0.10	19	16.5	1956.7	0.8	391.3	4.2
K33EJ(DC)-CP	33	584-590 MHz	15	JAM JA/LS-AF-16	0.10	19	17.3	1956.7	0.9	391.3	4.4
KORX(CA)	16	482-488 MHz	84.8	COE CO-18U/8	0.10	15	83.8	1616.7	5.2	323.3	25.9
KXRX(FM)	246C0	97.1 MHz	100	ERI SHPX-10AC-HW	(FM Model)	29	35.9	1000.0	3.6	200.0	18.0
KKSR	239C	95.7 MHz	100	ERI SHPX-10	(FM Model)	45	185.9	1000.0	18.6	200.0	93.0

Notes:

1. KWWS and K33EJ share the same tower
2. KORX and KKSR are on the same tower 60 m from the KWWS tower
3. KXRX is on a tower located 30 m from the KWWS tower