

**New FM Translator
Montesano, Washington Channel 226D
NIER Study
July 2003**

Facilities Proposed

The proposed operation will be on Channel 226D (93.1 MHz) with an effective radiated power of 0.25 kilowatts. Operation is proposed with an antenna to be mounted on the existing tower used by KSWW-FM. This tower 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.

NIER Calculations

Study of the area within 1000 meters of the proposed site reveals no likely sources of non-ionizing radiation other than KSWW-FM and the proposed translator.

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.

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

Where: *AdjERP(Watts)* is the maximum lobe effective radiated power times the element pattern factor times the array pattern factor.

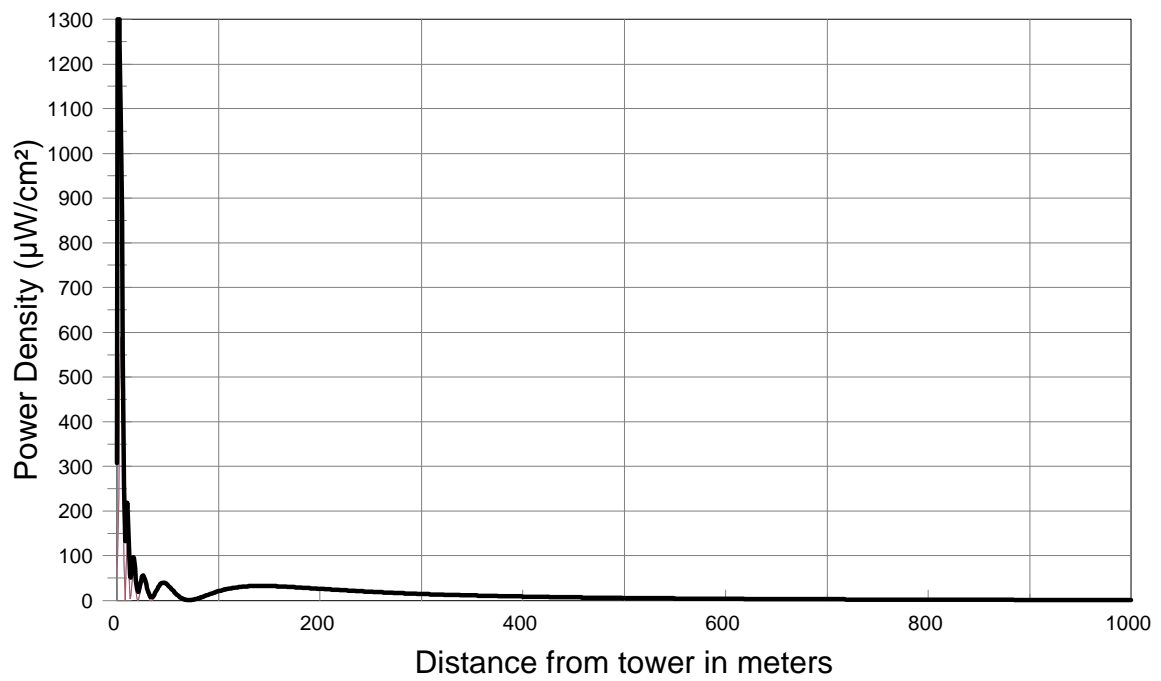
D is the distance in meters from the center of radiation to the calculation point.

Calculations of the power density produced by the proposed translator antenna system assume a Type 6 element pattern, which is the element pattern for the 1-bay Shively antenna proposed for use. The highest calculated ground level power density occurs at a distance of 1 meter from the base of the antenna support structure. At this point the power density is calculated to be 1628.7 FW/cm².

Calculations of the power density produced by the KSWW antenna system assume a Type 6 element pattern, which is the element pattern for the 6-bay Shively antenna used by that station. The highest calculated ground level power density occurs at a distance of 4 meters from the base of the antenna support structure. At this point the power density is calculated to be 589.8 FW/cm².

Since KSWW and the proposed translator will be located on the same tower structure, their contributions have been summed at for every meter distant from the tower, out to 1000 meters. The results are shown on the attached graph. The FCC general public standard of 200 FW/cm² is met at all locations beyond 10 meters from the tower. The applicant certifies that the tower site

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— KSWW-FM

— Translator

— KSWW-FM + Translator

is fenced out to a distance of at least 10 meters from the tower.

The FCC occupational standard of 1000 FW/cm² is met at all locations beyond 4 meters from the tower. The applicant certifies that it will post appropriate RFR warning signs at a distance of 5 meters from the tower warning station personnel not to advance any closer to the tower unless the translator has been powered down to no more than 50 Watts ERP or turned off. (At 50 Watts ERP, the sum of the translator's maximum contribution and KSWW's maximum contribution is less than 1000 FW/cm².)

This transmitter site is fenced and is considered to be a controlled environment. The only user of this site is Jodesha Broadcasting, which is both the licensee of KSWW and the applicant for the proposed Montesano translator.

Public access to the site is restricted and the antenna tower is posted with warning signs. Pursuant to OET Bulletin No. 65, all station personnel and contractors are required to follow appropriate safety procedures before any work is commenced on the antenna tower, including reduction in power or discontinuance of operation before any maintenance work is undertaken.

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.