

November 2008
KTWS(FM) Channel 253C1 Bend, OR
NIER Analysis

Facilities Proposed

The proposed operation will be on Channel 253C1 (98.5 MHz) with an effective radiated power of 50 kilowatts. Operation is proposed with the existing 6-element circularly-polarized omni-directional antenna. The antenna (shared with KLRR 269C2 Redmond) is side-mounted on a uniform cross-section guyed tower located atop Awbrey Butte.

The FCC Antenna Structure Registration Number for the tower is 1244492.

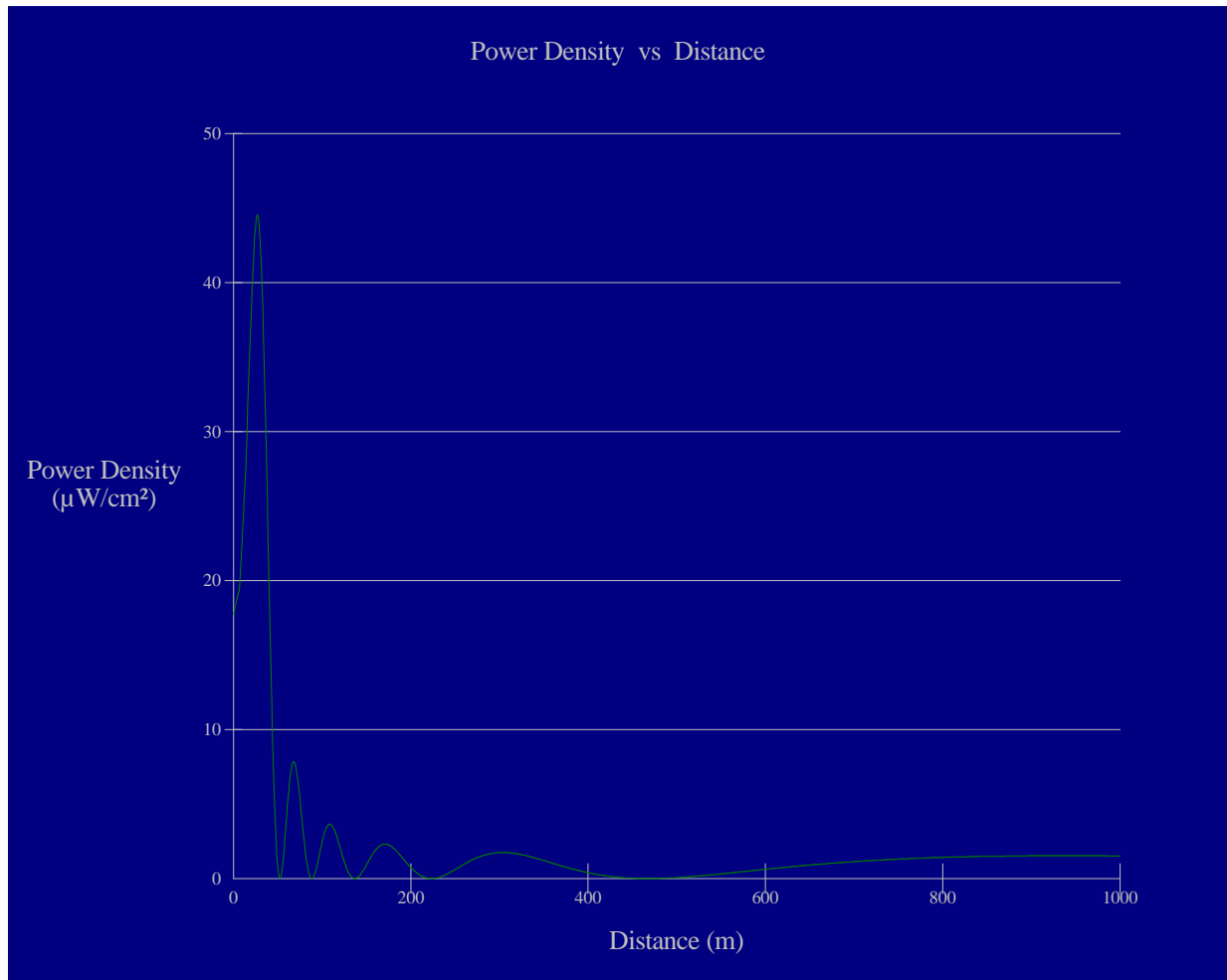
NIER Calculations

Awbrey Butte is a multi-user broadcast site hosting a number of FM and TV broadcast stations operating from several towers separated by as much as 200 meters. Furthermore, a fence with a locked gate surrounds the perimeter of the property encompassing the tower sites to prevent casual access to areas where the general public exposure standard may be exceeded.

Calculations of the power density produced by the proposed KTWS antenna system assume the appropriate element pattern for the Dielectric DCR-M6-CHP antenna to be used by that station. The highest calculated ground level power density occurs at a distance of 27 meters from the base of the antenna support structure. At this point the power density is calculated to be $44.6 \mu\text{W}/\text{cm}^2$. The nearest point on the fenceline is approximately 36 meters from the tower. Therefore, at all locations within the fenceline, these calculations show that the maximum calculated power density produced at two meters above ground level by the proposed operation of KTWS is no more than 4.5% (i.e. less than 5%) of $1000 \mu\text{W}/\text{cm}^2$ (the FCC standard for controlled environments).

If required by the Commission, radiofrequency electromagnetic field measurements will be conducted at Awbrey Butte when construction of this facility is completed. Such measurements would be used to identify any specific locations where the operation of KTWS causes ground-level radiation levels to exceed the applicable FCC standard, so that remediation efforts (such as additional fencing and/or signage) can be undertaken, if necessary.

The tower site is fenced 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.



Ground-Level NIER

OET FMModel

KTWS 253C1 Bend

Antenna Type: Dielectric DCR-M6-CHP
No. of Elements: 6
Element Spacing: 1.0 wavelength

Distance: 1000 meters
Horizontal ERP: 50 kW
Vertical ERP: 50 kW

Antenna Height: 81 meters AGL

Maximum calculated power density is 44.6 : W/cm² at 27 meters from the antenna structure.