Facilities Proposed

The proposed operation will be on Channel 286A (105.1 MHz) with an effective radiated power of 0.15 kilowatts. Operation is proposed with an antenna to be mounted on an existing tower.

The proposed antenna support structure will 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

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.

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.

The exact model of antenna to be used has not yet been selected. Therefore, calculations of the power density produced by the proposed antenna system assume a "worst case" Type 1 element pattern. Under this worst-case assumption, the highest calculated ground level power density occurs at a distance of 2 meters from the base of the antenna support structure. At this point the power density is calculated to be 123.0 µW/cm², which is 12.3% of 1000 µW/cm² (the FCC

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standard for controlled environments) and 61.5% of 200 µW/cm^2 (the FCC standard for uncontrolled environments).

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.

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Power Density vs Distance
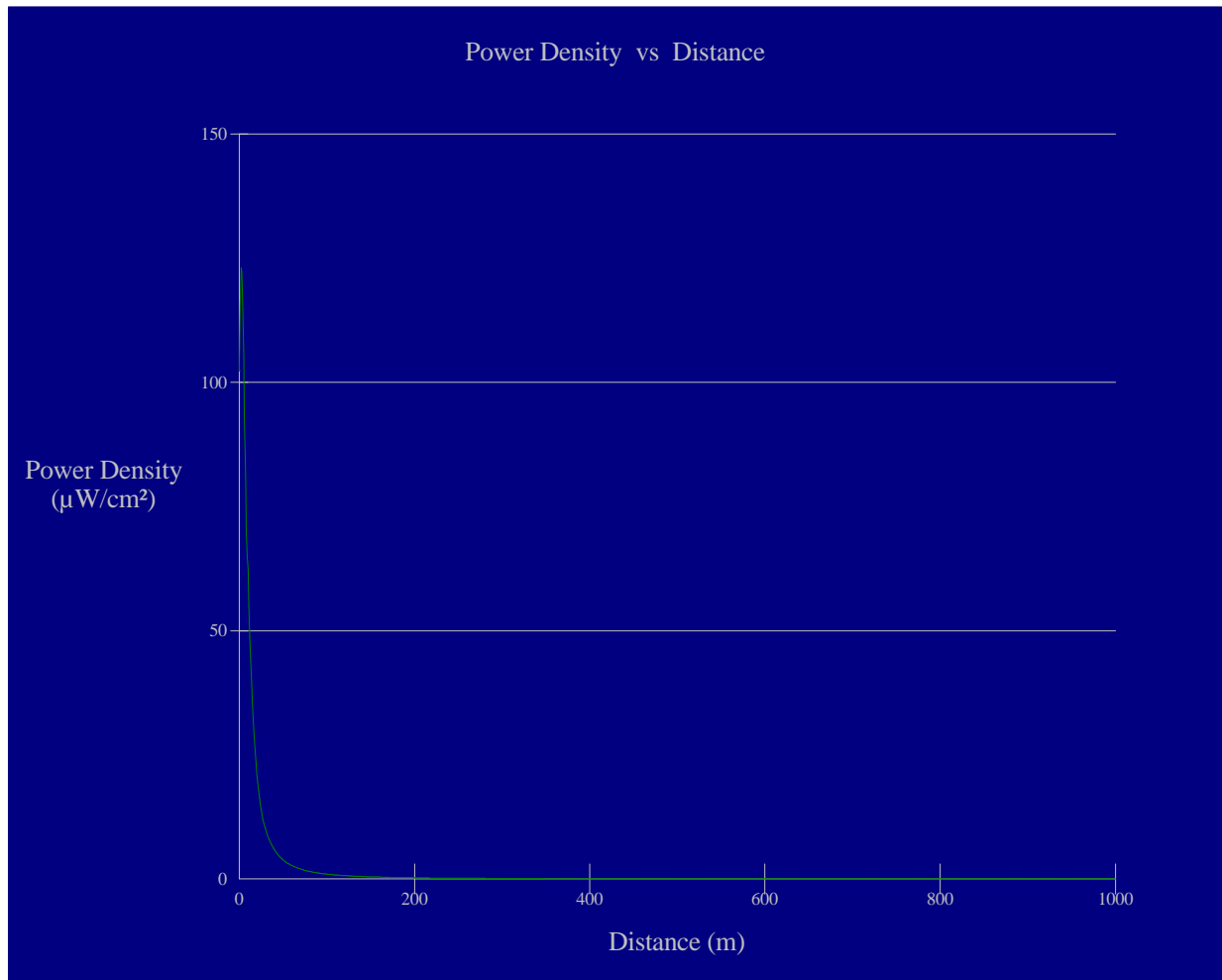
Ground-Level NIER   **OET FMModel**

KJXN 286A South Park

Antenna Type: worst-case "ring stub" assumed
No. of Elements: 1
Element Spacing: 1.0 wavelength

Distance: 1000 meters
Horizontal ERP: 0.15 kW
Vertical ERP: 0.15 kW

Antenna Height: 9 meters AGL

Maximum Power Density is 123.0 : W/cm^2 at 2 meters from the antenna structure.

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