October 2007
New FM Channel 202C3
NIER Analysis

Facilities Proposed

The proposed operation will be on Channel 202C3 (88.3 MHz) with an effective radiated power of 0.4 kilowatts. Operation is proposed with a 1-element vertically-polarized omni-directional antenna. The antenna will be side-mounted on an existing tower located atop Brundage Mountain.

The antenna support structure 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

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.

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

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.

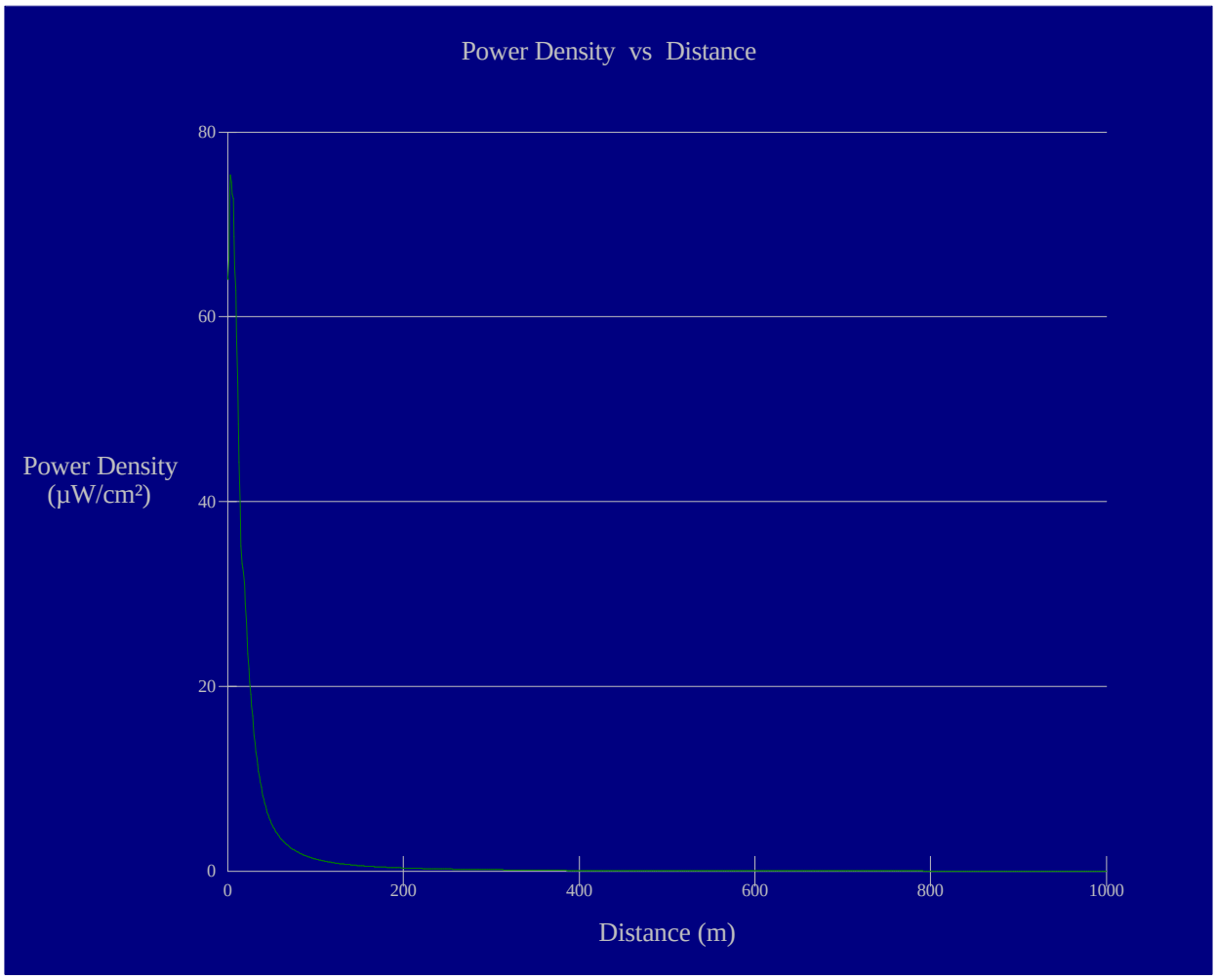
Calculations of the power density produced by the proposed New 202C3 antenna system assume a Type 1 element pattern, which is the appropriate element pattern for a vertically-polarized dipole antenna. The highest calculated ground level power density occurs at a distance of 3 meters from the base of the antenna support structure. At this point the power density is calculated to be 75.4 μW/cm².

Calculations of the power density produced by the co-located KDZY(FM) antenna system assume a Type 1 element pattern, which is the appropriate element pattern for the horizontally-polarized Jampro JMHP-1R ring antenna used by that station. The highest calculated ground level power density occurs at a distance of 5 meters from the base of the antenna support structure. At this point the power density is calculated to be 57.1 μW/cm².

Nearby FM translator K233BJ operates with an ERP of less than 100 Watts and is therefore excluded from this study.

These calculations show that the maximum calculated power density produced at two meters above ground level by the proposed operation of New 202C3 and the present operation of KDZY (were their maxima to coincide, which they do not) is 132.5 $\mu W/cm^2$, which is 13.3% of 1000 $\mu W/cm^2$ (the FCC standard for controlled environments) and 66.3% of 200 $\mu W/cm^2$ (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.



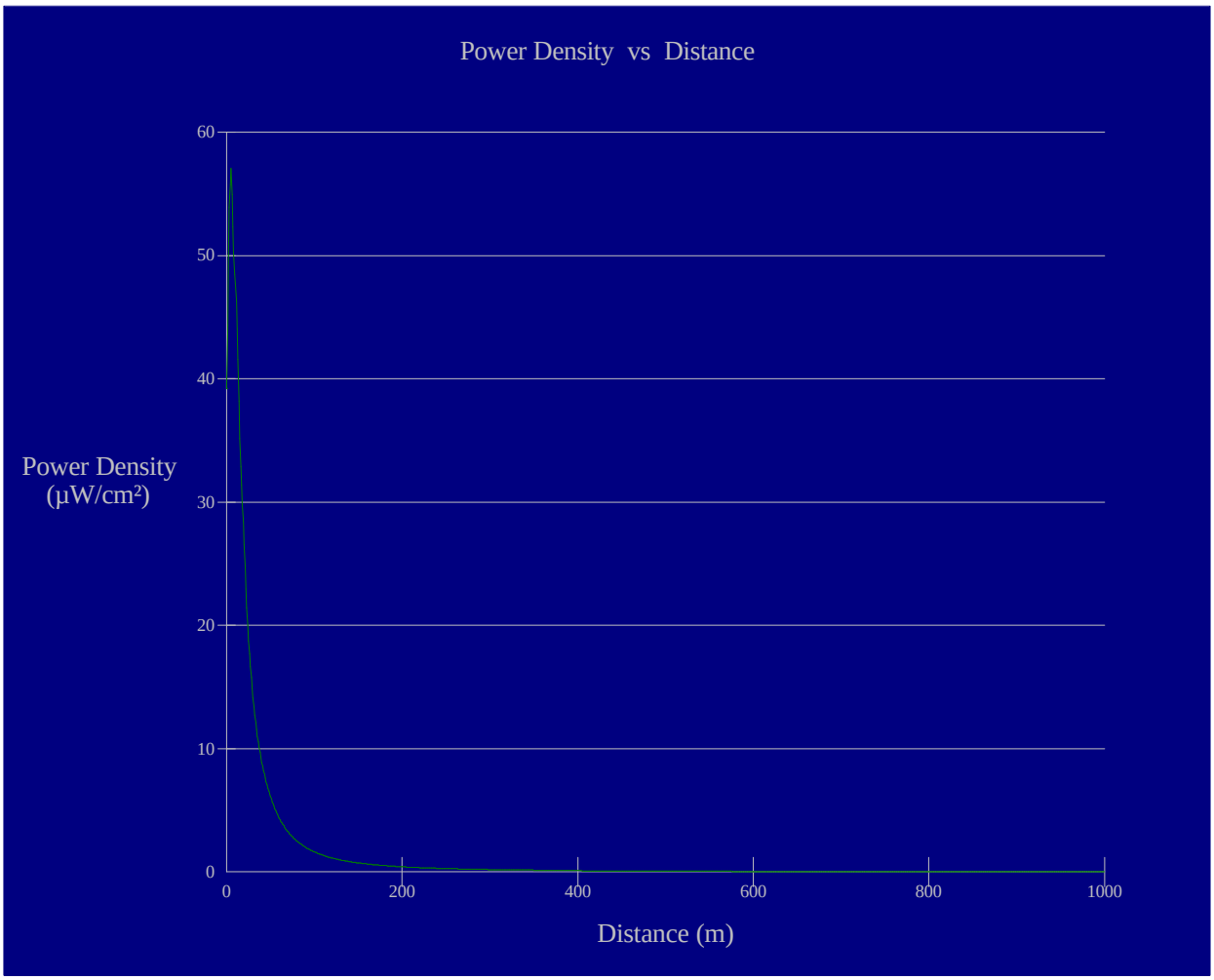
Ground-Level NIER **OET FMModel**

Brundage Mtn 202C3
Antenna Type: dipole
No. of Elements: 1
Element Spacing: dna

Distance: 1000 meters
Horizontal ERP: 0 kW
Vertical ERP: 0.4 kW

Antenna Height: 15 meters AGL

Maximum Power Density is 75.4 :W/cm^2 at 3 meters from the antenna structure.



Ground-Level NIER **OET FMModel**

KDZY 252C3 McCall

Antenna Type:	Jampro JMHP-1R ring
No. of Elements:	1
Element Spacing:	dna
Distance:	1000 meters
Horizontal ERP:	0.5 kW
Vertical ERP:	0 kW
Antenna Height:	11 meters AGL

Maximum Power Density is 57.1 : W/cm^2 at 5 meters from the antenna structure.