

**Exhibit 15**  
**WGGY-FM1 Booster at Honesdale, Pennsylvania**  
**NIER Analysis**

**Facilities Proposed**

The proposed operation is on Channel 267 (101.3 MHz) with a maximum lobe effective radiated power of 0.5 kilowatts (-3.01 dBk). Operation is proposed with a vertically polarized Scala HDCA-5V antenna, oriented at 200E True. The antenna will be mounted on an existing 180 foot tower. 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 other likely sources of non-ionizing radiation. Thus, the ground level NIER values near the base of the proposed structure are believed to be negligible. Precise calculations are made only with regard to the levels from this proposal.

The power density calculations shown below were made using the techniques outlined in the EPA report titled: *An Engineering Assessment of the Potential Impact of Federal Radiation Protection Guidance on the AM, FM, and TV Broadcast Services* (Gailey & Tell, April, 1985).

"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. Equation #1, contained in the Gailey & Tell report and shown below, was used to calculate the ground level power density figures from each antenna at incremental distances from the base of its supporting tower.

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

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

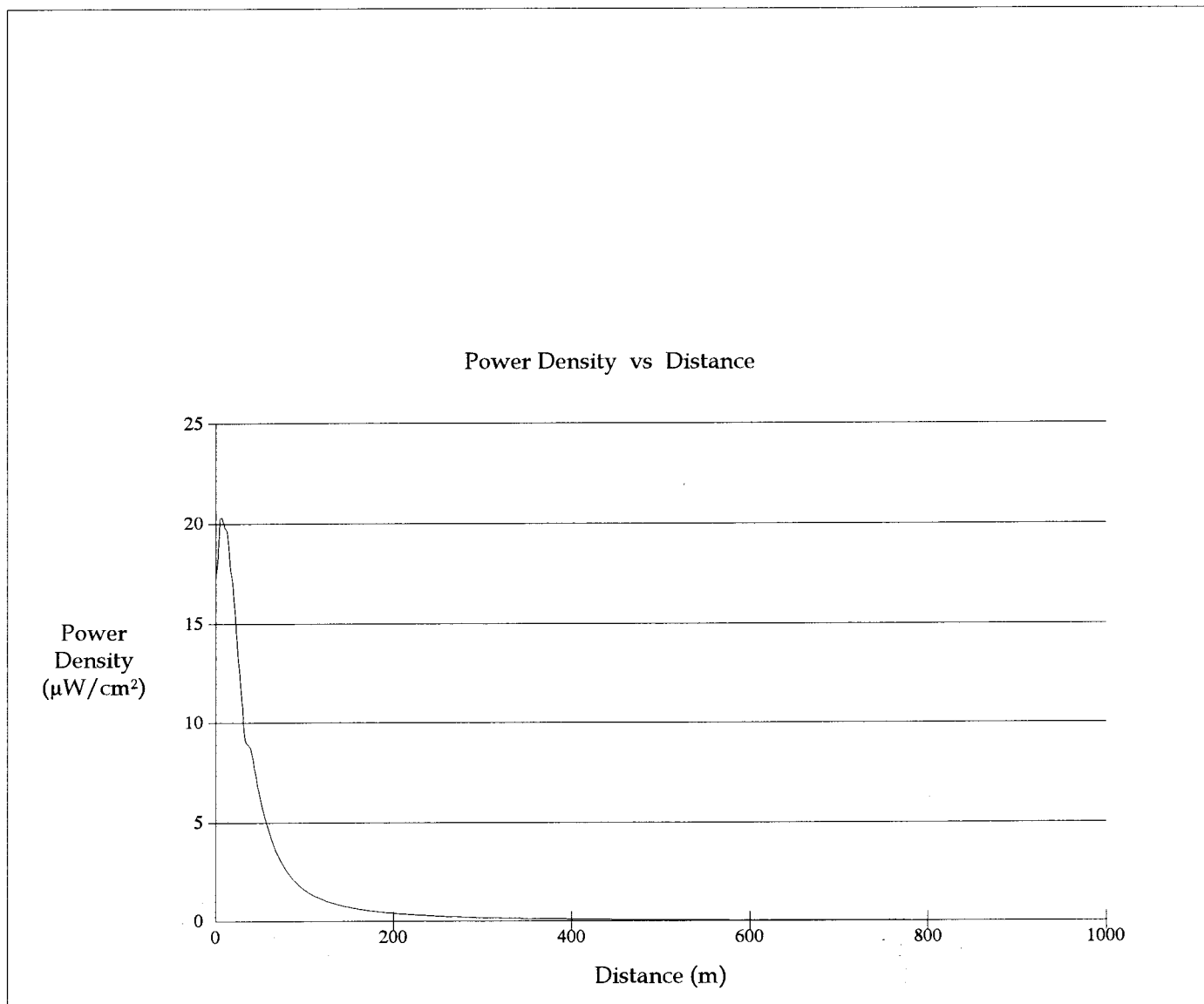
*D* is the distance in meters from the center of radiation to the calculation point.

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 antenna system assume a “worst case” Type 1 ring-stub element pattern. The highest calculated ground level power density occurs at a distance of 6 meters from the base of the antenna support structure. At this point the power density is calculated to be 20.3 FW/cm<sup>2</sup>, 2% of 1000 FW/cm<sup>2</sup> (the FCC standard for controlled environments) and 10% of 200 FW/cm<sup>2</sup> (the FCC standard for uncontrolled environments).

Public access to the site is restricted and the antenna tower is posted with warning signs. Pursuant to OST 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.



Ground-Level NIER Analysis

OET FMModel

**WGGY-FM1 Honesdale**

Antenna Type: "worst case" ring-stub assumed

Number of Elements: 1

Element Spacing: 1.0 wavelength

Distance: 1000 meters

Horizontal ERP: dna

Vertical ERP: 500 Watts

Antenna Height: 30 meters AGL

Maximum Power Density is  $20.3 \mu\text{W}/\text{cm}^2$  at 6 meters from the antenna structure.

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