

Navigation Pod Radiation Hazard Report

Per CFR 47, section 1.1307.b(1), Table 1, all applications for experimental operations with an ERP greater than 100 watts require evaluation for compliance with human exposure limits defined in section 1.1310, and if exceeded require submission of an Environmental Assessment as defined in section 1.1311.

The below calculations define the minimum safe working distance for both Occupational and General Public, which are based on the maximum permissible exposure limits of 5 mW/cm² and 1 mW/cm² respectively.

The NAVPOD antenna is a dish with a 5 degree vertical beam width and a 360 degree horizontal beam width. The antenna will be operated in a controlled area, and will be directed towards the target. Only authorized occupational workers will be allowed access to the area of operation. In addition the transmitter will be secured prior to conducting maintenance, and the area will be monitored during the operation to ensure that personnel are clear of any radiation hazard area.

Transmitter Peak Power (Watts):	40000
Maximum Antenna Gain (dBi):	27.9
Duty Cycle (%):	.1
Transmitter Power (dBm):	76.0206
EIRP (dBm):	103.9206
Non-dimensional Antenna Gain:	616.595
Transmitter Avg Power (Watts):	40
EIRP Watts:	24663800.0745
Avg EIRP Watts:	24663.8001

Minimum Safe Distance

	Occupational	General Public
Meters:	6.2653	14.0096
Feet:	20.5551	45.9626

