

RF COMPLIANCE

Calvary Chapel of Grangeville, Inc

Minor Modification of CP

KKAG Channel 202

July 2010

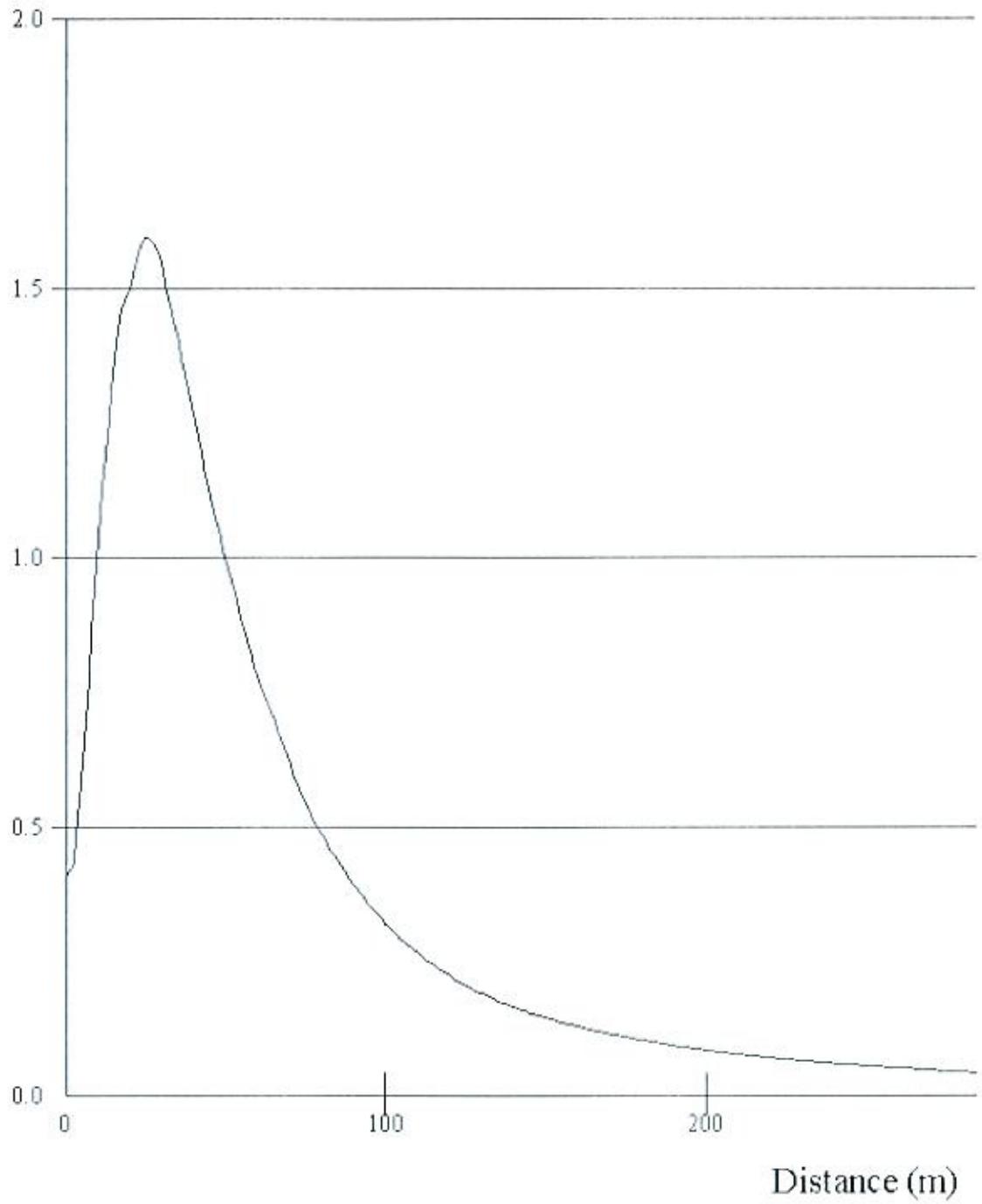
The Proposed will operate on FM Channel 202A with a maximum effected radiated power of .05kW Horizontal & Vertical, located at 26 meters AGL. The transmit antenna will be a SWR FMEC, or similar, single bay antenna. The other RF sources located on and near the tower are listed below.

Appendix C of OST Bulletin No. 65 (second edition) specifies the maximum radiation in the 30 MHz to 300 MHz region should be limited to 1000 $\mu\text{w}/\text{cm}^2$ for occupational/controlled exposure and 200 $\mu\text{w}/\text{cm}^2$ for general population/uncontrolled exposure. The instant application was evaluated with a modified version of the Commission's own FMMODEL program, acquired from the FCC Office of Engineering and Technology Internet site. The pattern data was taken from the same FMMODEL.

	Emissions	Percent Occupational	Percent General
Prop .05kW	1.6 $\mu\text{W}/\text{cm}^2$ @25m	.16 %	.80%
KKRH 1.9kW	81.28 $\mu\text{W}/\text{cm}^2$ @10m	8.128 %	40.64 %
KORT .36 kW	12.14 $\mu\text{W}/\text{cm}^2$ @21m	1.214 %	6.07 %
K204EP&K217DR .02kW	1.207 $\mu\text{W}/\text{cm}^2$ @5m	.1207 %	0.604%
K210ED .1kW	2.6 $\mu\text{W}/\text{cm}^2$ @11m	.26 %	1.3%
Total		9.88%	49.414 %

This site is RF Compliant. All appropriate steps to insure that workers, who climb this tower will not be exposed to levels of non ionizing radiation, will be taken. These steps include RF Warning Signs in the appropriate places if necessary and a reduction in power or cessation of operation, as appropriate, when work becomes necessary on the tower in the area where the power density levels are in excess of the permitted level for controlled exposure.

Power Density
($\mu\text{W}/\text{cm}^2$)

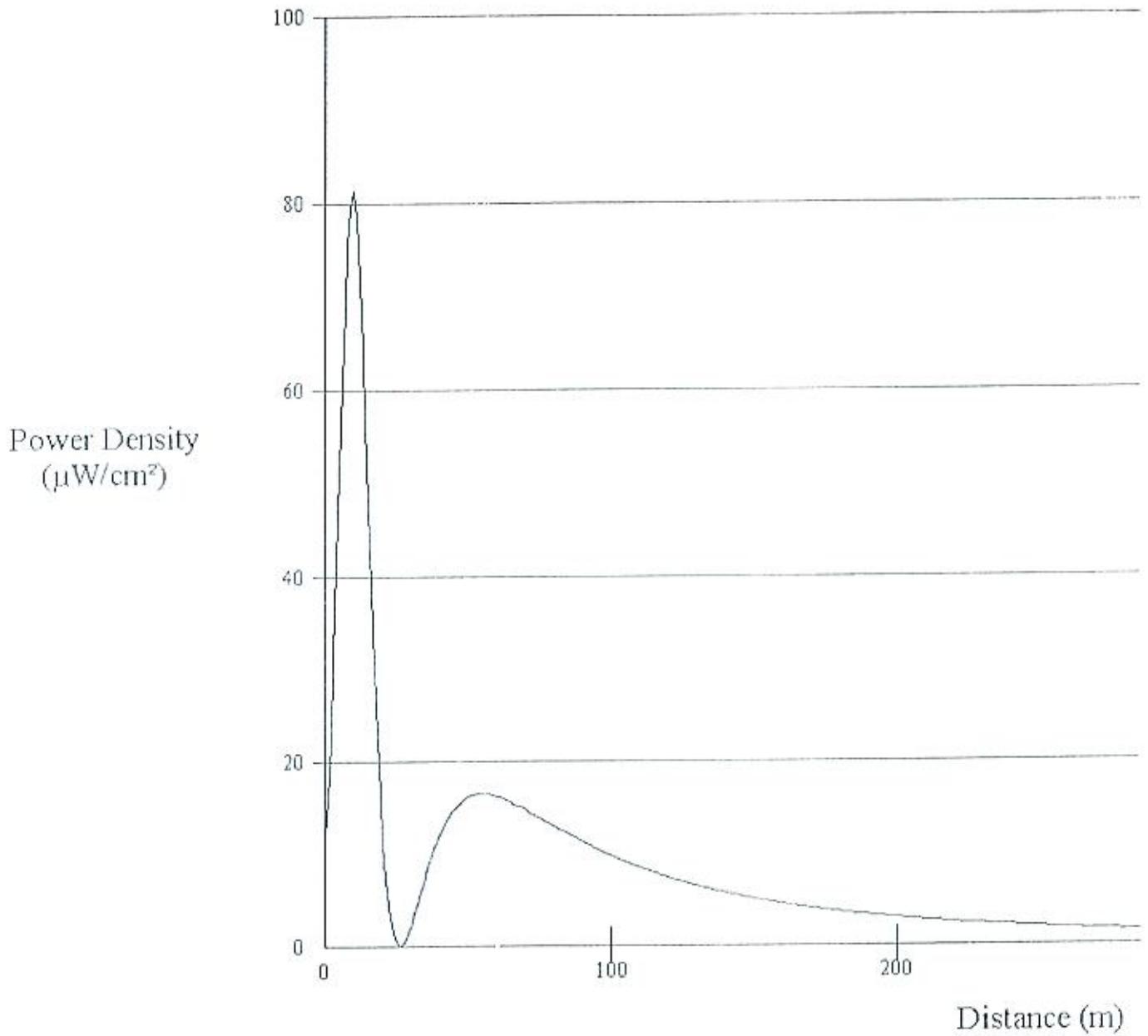


Office of Engineering and Technology

Distance (m):	<input type="text" value="500"/>	Antenna Type:	<input (epa)"="" double="" type="text" v"="" value="Jampro "/>
Horizontal ERP (W):	<input type="text" value="50"/>	Number of Elements:	<input type="text" value="1"/>
Vertical ERP (W):	<input type="text" value="50"/>	Element Spacing:	<input type="text" value="1"/>
Antenna Height (m):	<input type="text" value="26"/>		

PROP
1.6 $\mu\text{W}/\text{cm}^2$ @25m
.16% Occupational.80 % General

Power Density vs Distance



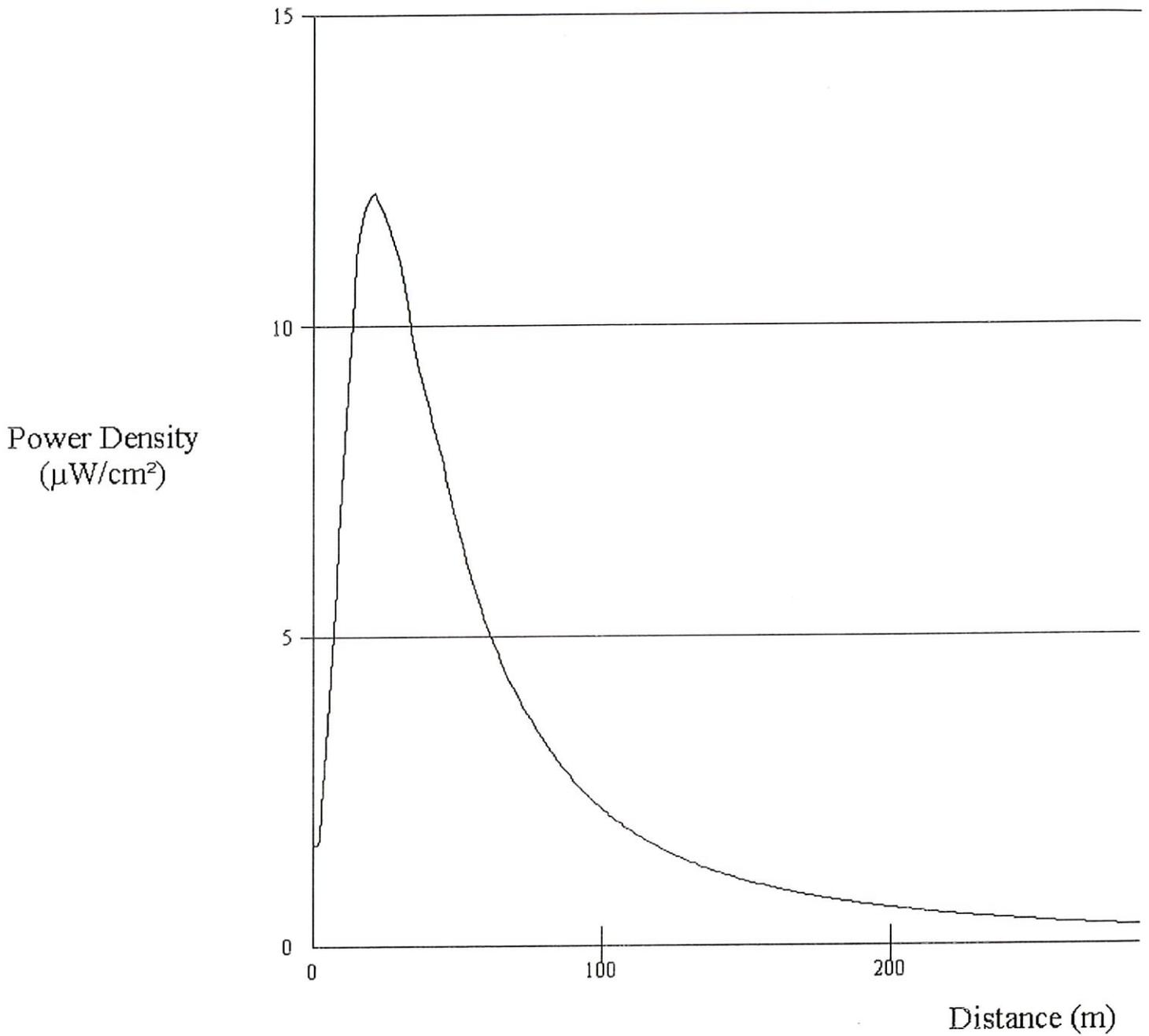
Office of Engineering and Technology

Distance (m):	<input type="text" value="500"/>	Antenna Type:	<input type="text" value="PSI Model FMR and FHR 'Power-Tiller'"/>
Horizontal ERP (W):	<input type="text" value="1900"/>	Number of Elements:	<input type="text" value="2"/>
Vertical ERP (W):	<input type="text" value="1900"/>	Element Spacing:	<input type="text" value="1"/>
Antenna Height (m):	<input type="text" value="17"/>		

KKRH

81.28µW/cm2 @10 meters AGL
8.128%Occupational /40.64% General

Power Density vs Distance

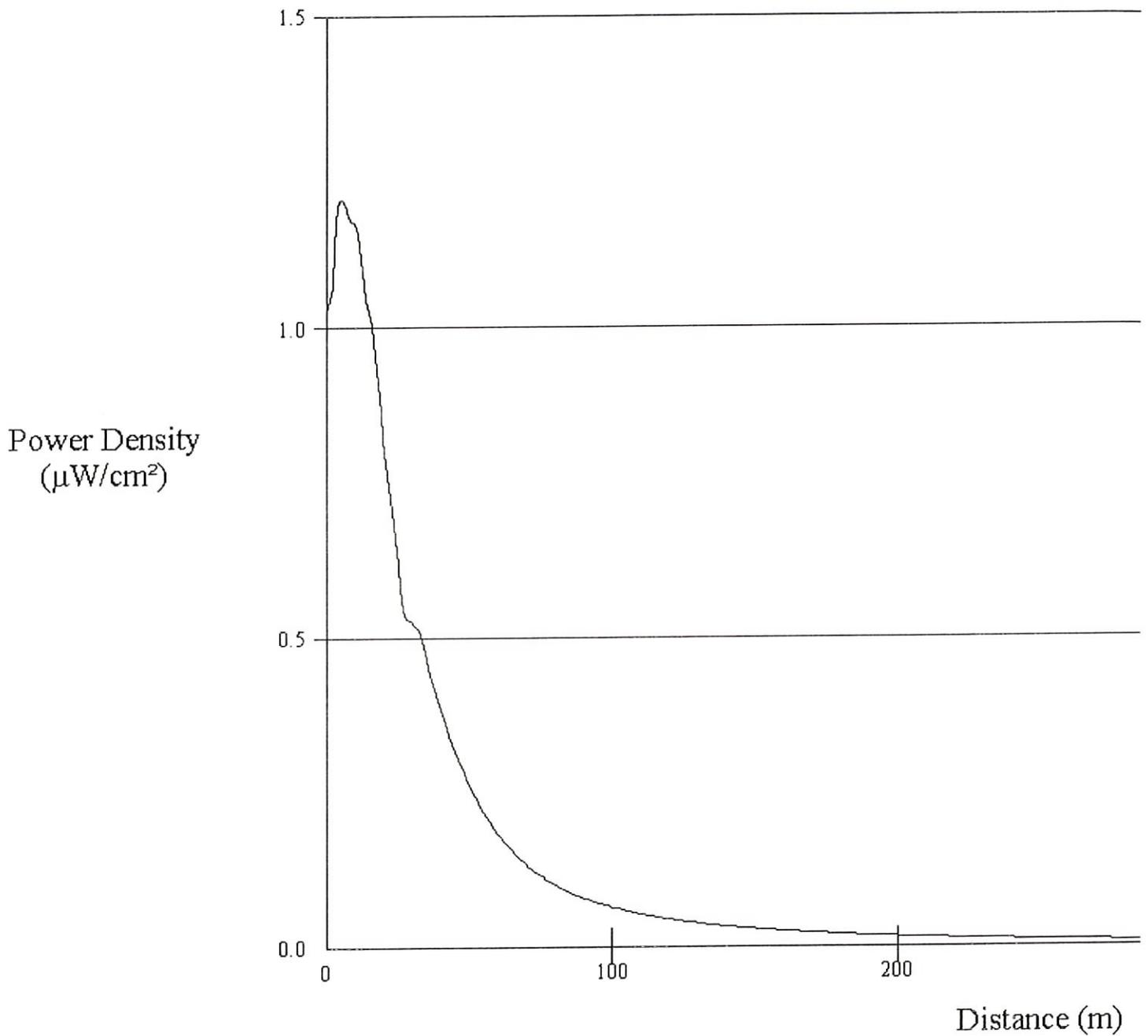


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Distance (m):	<input type="text" value="500"/>	Antenna Type:	<input type="text" value="ERI or JAMPRO JBCP 'Rototiller' (EPA)"/>
Horizontal ERP (W):	<input type="text" value="360"/>	Number of Elements:	<input type="text" value="1"/>
Vertical ERP (W):	<input type="text" value="360"/>	Element Spacing:	<input type="text" value="1"/>
Antenna Height (m):	<input type="text" value="23"/>		

KORT-FM Grangeville, ID
 $12.14 \mu\text{W}/\text{cm}^2$ @21 meters AGL
1.214%Occupational /6.07% General

Power Density vs Distance

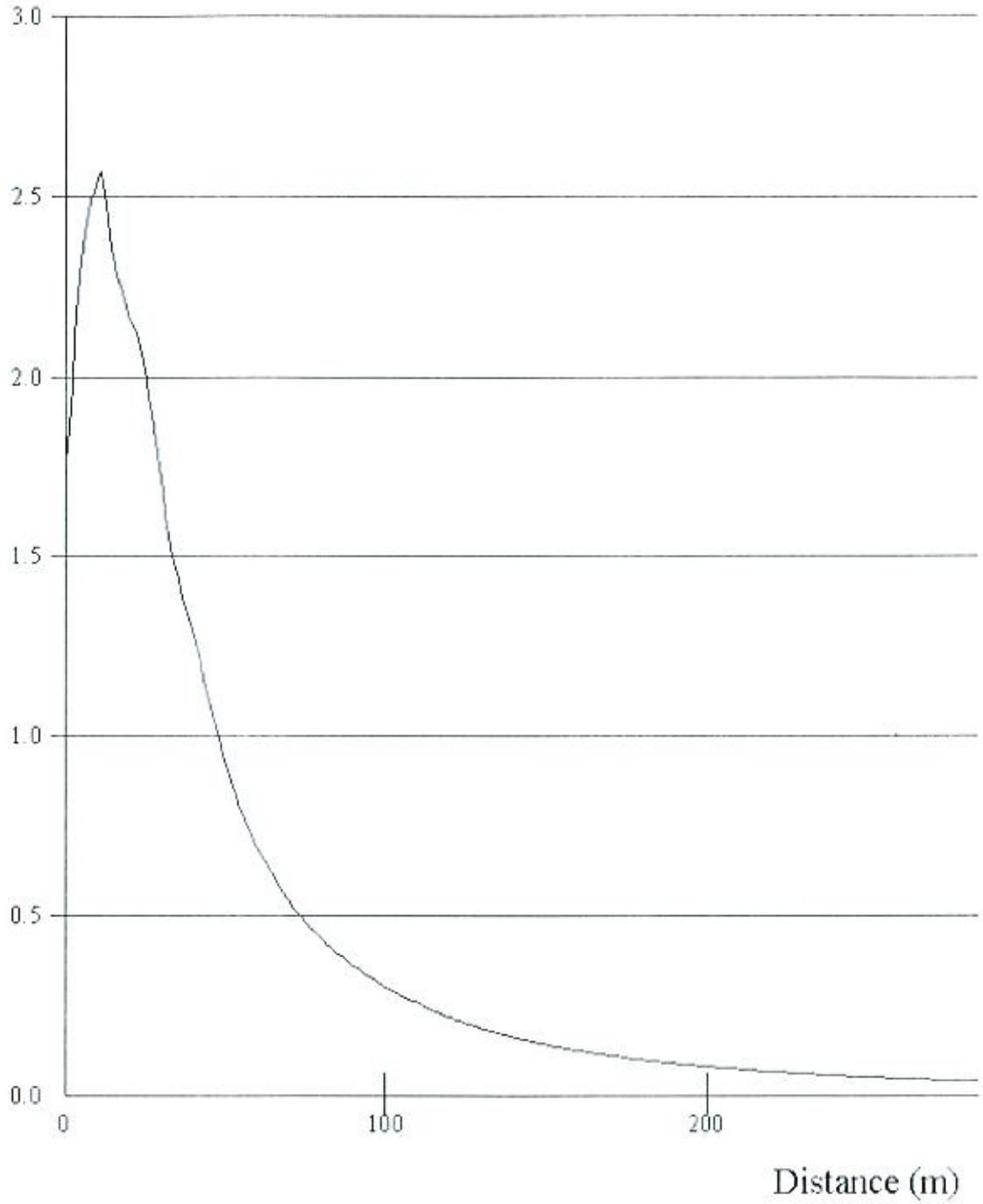


Office of Engineering and Technology

Distance (m):	<input type="text" value="500"/>	Antenna Type:	<input type="text" value="Phelps-Dodge 'Ring Stub' or Dipole (EP)"/>
Horizontal ERP (W):	<input type="text" value="0"/>	Number of Elements:	<input type="text" value="1"/>
Vertical ERP (W):	<input type="text" value="20"/>	Element Spacing:	<input type="text" value="1"/>
Antenna Height (m):	<input type="text" value="25"/>		

K204EP & K217DR Grangeville, ID
Dual Combined Antenna Used
1.207 $\mu\text{W}/\text{cm}^2$ @ 5 meters AGL
.1207%Occupational /0.604% General

Power Density
($\mu\text{W}/\text{cm}^2$)



Office of Engineering and Technology

Distance (m):	<input type="text" value="500"/>	Antenna Type:	<input type="text" value="Phelps-Dodge 'Ring Stub' or Dipole (EP)"/>
Horizontal ERP (W):	<input type="text" value="100"/>	Number of Elements:	<input type="text" value="1"/>
Vertical ERP (W):	<input type="text" value="0"/>	Element Spacing:	<input type="text" value="1"/>
Antenna Height (m):	<input type="text" value="21"/>		

K210ED
2.6 $\mu\text{W}/\text{cm}^2$ @11m
.26 % Occupational 1.3 % General