

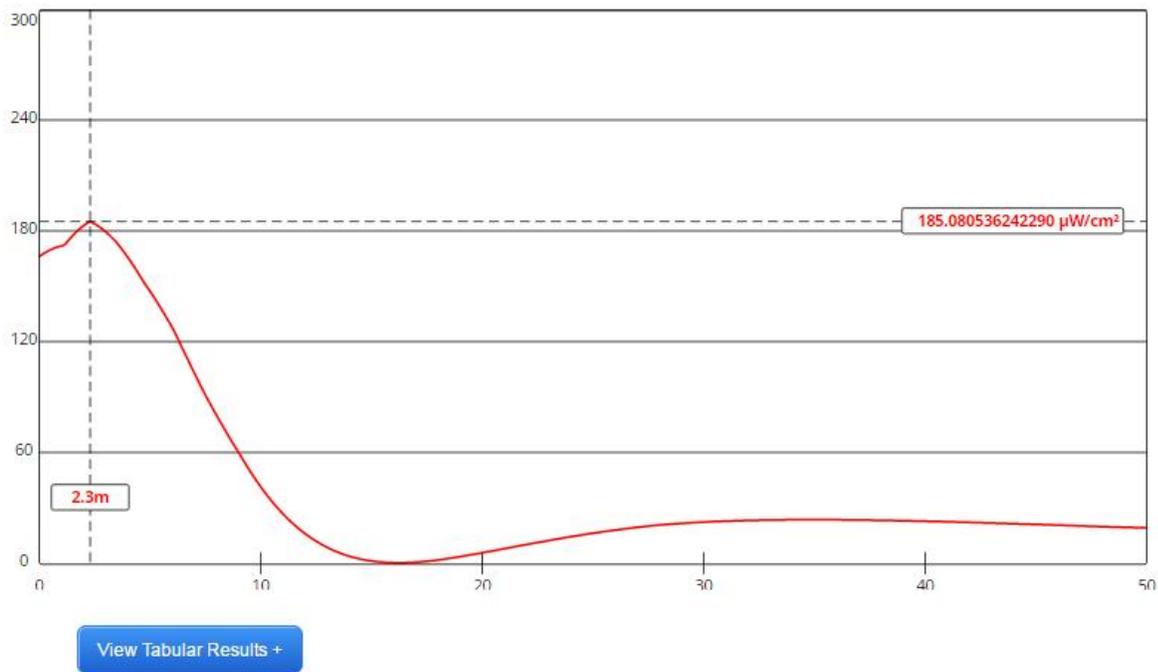
KZNP

BPED-20120924AAY

FCC Radio Frequency Electromagnetic Field Exposure Guideline Compliance Report

May 30, 2016

The FCC Radio Frequency Electromagnetic Field Exposure Guidelines, as outlined in FCC O.E.T. Bulletin No. 65 require that human exposure to radio frequency radiation in public areas be restricted to 200 microwatts per square centimeter. As shown from Figure 1, utilizing the FCC's online FM Model calculation tool, with parameters of a 2 section "Worst Case Antenna" (EPA Type 1), element spacing of 0.8 wavelength, and an ERP of 1.25 kW Horizontal and Vertical; a maximum RF field at 2 meters above the ground level is predicted to be 185 microwatts per square centimeter at 2.3 meters from the tower. This is 92.5% of the FCC guideline for general public access areas.



Channel Selection	Channel 214 (90.7 MHz)		
Antenna Type +	EPA Type 1: Ring-and-Stub or "Other"		
Height (m)	15	Distance (m)	50
ERP-H (W)	1250	ERP-V (W)	1250
Num of Elements	2	Element Spacing (λ)	0.8
Num of Points	500	Apply	

Figure 1.—FM Model Graph

Further, an RF survey was conducted of the site utilizing a Narda 8718B Electromagnetic Survey Meter with associated A8722D FCC curve shaped response probe. The meter output registers as percentage of the Occupational exposure limit of 1000 microwatts per square centimeter, therefore, the data presented was divided by 20% to reflect the public exposure limit of ratio related to the occupational limit of 200/1000.

The survey method involved measuring locations where the public might be present as well as traversing the site observing meter indications for areas of high radio frequency electromagnetic field. At measurement locations indicated in Figure 2, a spacially averaged measurement from approximately 2 meters above ground level to about .2 meters about the ground with a sweeping motion of approximately 3 seconds was utilized as outlined in the Narda meter user's manual. The data from the measurements is tabulated in Table 1.

Run Ref. Number: 02

Date: 05/27/16 Start Time: 19:18

Model 8718 S/N: 7133

Probe: A8722DS/N: 09006

Freq: N/A Cor. Factor: 1.00 Logging Rate: N/A

Avg Mode: Spatial Avg. & Max.

Ref#	Field Strength (% Occupational Limit)		Field Strength (% Public Limit)	
	Average	Maximum	Average	Maximum
1	0.04	0.15	0.20	0.75
2	0.46	0.66	2.30	3.30
3	10.15	12.15	50.75	60.75
4	12.69	15.39	63.45	76.95
5	10.65	14.40	53.25	72.00
6	3.23	4.22	16.15	21.10
7	1.73	2.38	8.65	11.90
8	0.15	0.45	0.75	2.25
9	3.38	5.51	16.90	27.55
10	0.00	0.00	0.00	0.00
11	0.23	0.30	1.15	1.50
12	1.06	1.43	5.30	7.15

Table 1.—Narda 8718B Electromagnetic Survey Meter Data

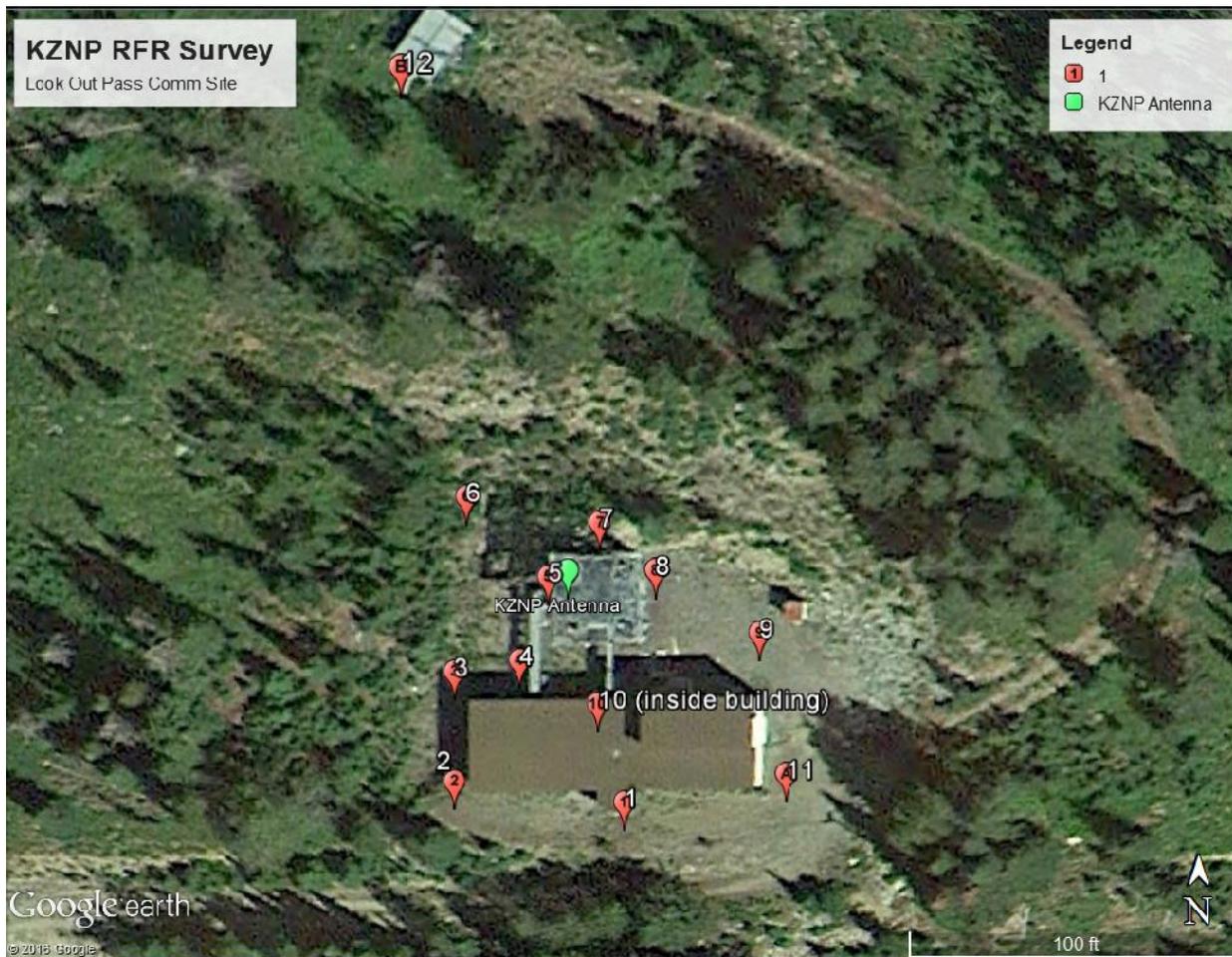


Figure 2.—RF Electromagnetic Field Survey Measurement locations.

Conclusion: The site, while being 4 miles behind a locked gate, is on National Forest land and could be accessed infrequently by the general public, meets FCC guidelines for human exposure to radio frequency electromagnetic fields. Signs are posted at the site to warn workers of potential hazards above ground level on the tower.