Attachment for:

Form 442 Confirmation Number: EL203673
Form 442 File Number: 0439-EX-CN-2024
Date of Submission: April 17, 2024

Description of radar

The Numerica Spyglass radar configuration is four (4) 90-degree panels for 360-degree coverage. The radar transmits 64 W of peak power, and has a 33% duty cycle, for 21W average power. The antenna gain is 25.6 dBi, which leads to an average ERP of 3.33kW (10kW peak).

Modulating waveform description

The radar waveform is a standard linear frequency modulated (LFM) pulse train with a pulse duration of 16 us pulse and 64 us pulse repetition interval. The pulse bandwidth is 20 MHz.

Intended Method of Operation

High Point Aerotechnologies (HPA) intends to operate the radar at a test site south of Boise, Idaho in either a 90, 180, or 270 degree configuration to avoid interference with Surface Detection Equipment which may be located at the Boise airport and Mountain Home Air Force Base. The radar will be located 15.8 km south of the airport and operated stationary (non-moving). Centerline of radar is 4.3 meters (14 feet) AGL. This puts the radar at 50 km NW of MHAFB.

Terrain Profile

The terrain profile shown in Figure 1 indicates a non-line-of-sight path between BOI and the HPA Test site. The elevation of BOI is approximately 863 m AMSL, the HPA Test Site is approximately 897 m AMSL, with a terrain feature of 971 m AMSL approximately 6.5 km south of BOI.

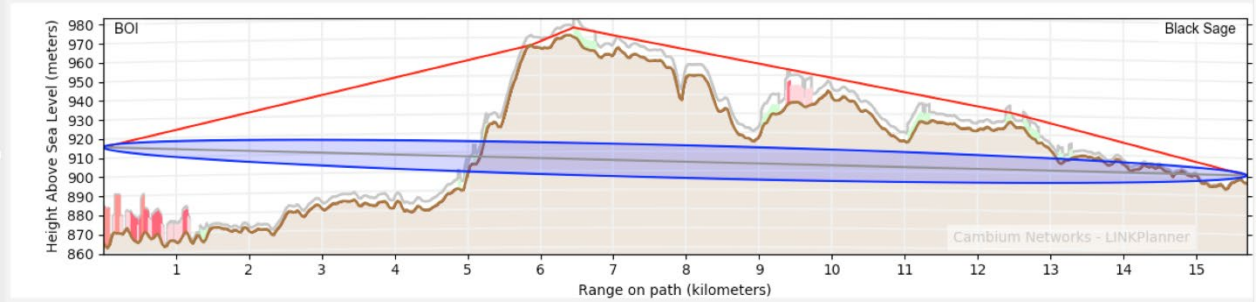

Figure 1 - Terrian Profile BOI to HPA Test Site

The terrain profile shown in Figure 2 indicates a non-line-of-sight path between MHAFB and the HPA Test site. MHAFB is approximately 911 m AMSL, the HPA Test Site is approximately 897 m AMSL, with a terrain feature of 992 m AMSL approximately 29 km NW of MHAFB.

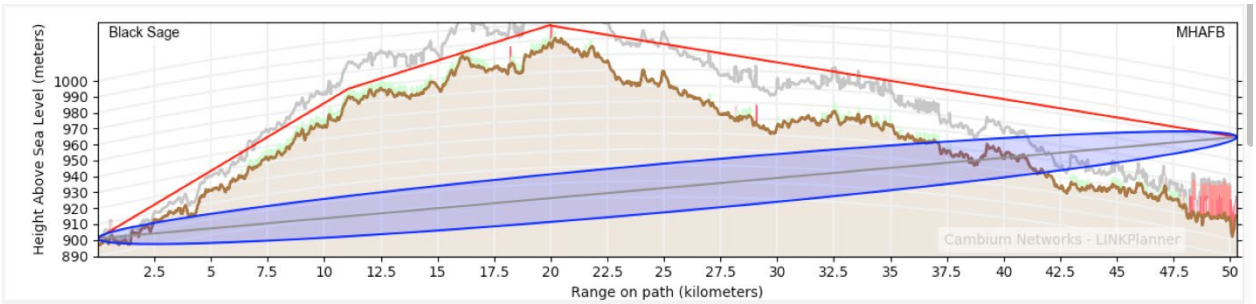

Figure 2 - Terrian Profile MHAFB to HPA Test Site

Figure 3 shows the high points along each path as indicated by yellow triangles.

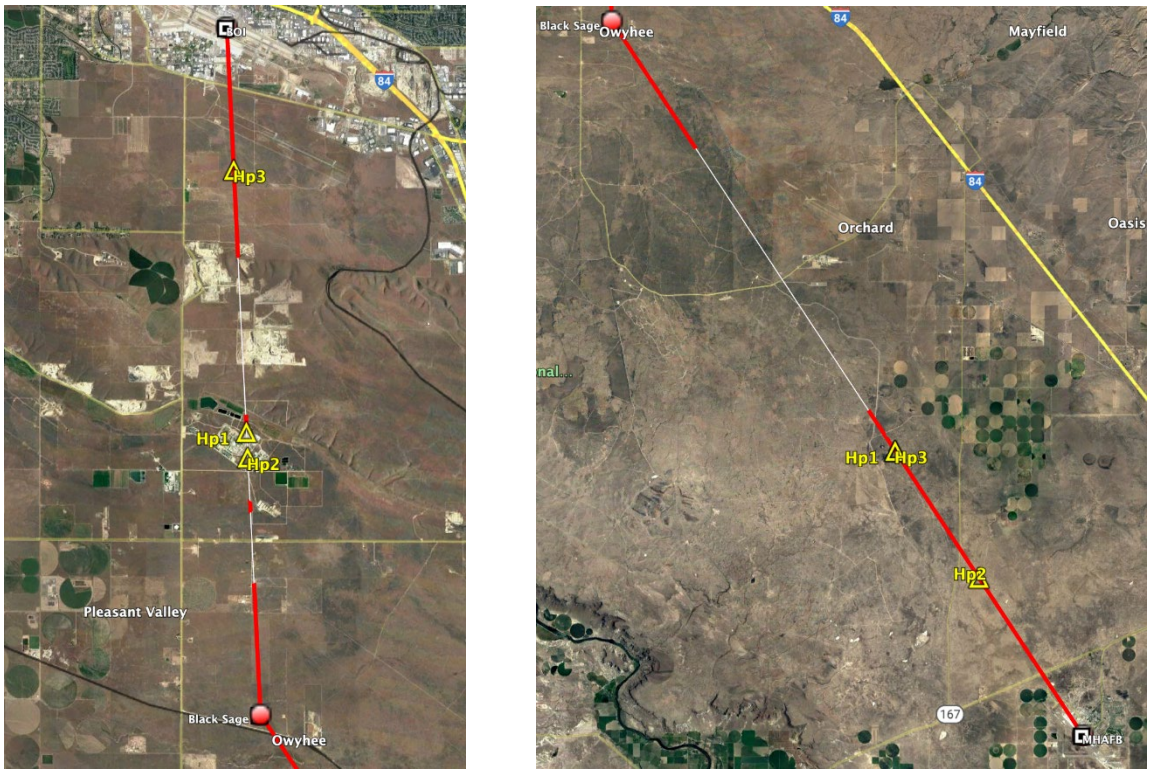

Figure 3 - Views showing high points along paths