BPFT-20110519ACY Minor Modification
Comprehensive Engineering Exhibit
April 2011

W249BS is seeking minor modification of permit BPFT-20110519ACY relocation to a tower identified by ASR 1018332, utilizing a non-directional antenna. at a location 143 meters above ground level, with 250 watts radiated power. This modification is necessary due to an unanticipated issue with the tower proposed in the permit.

The facility will be utilized as a "fill-in" translator for primary station WTKS(AM). The 60 dBu service contour of the proposed facility is within the 2 mV/m contour and of this primary station, as demonstrated in Figure 1. The 60 dBu contour of the facility as proposed overlaps the existing licensed facility, as is required for filing a minor modification application, and is demonstrated in Figure 1.

Attached as Figure 2 is an allocation spacing report wherein it can be seen that the proposed location is within the protected contour of 2nd adjacent facilities WAEV and WGCO.

WAEV has been investigated to determine if this proposal will create prohibited contour overlap, with Figure 3 showing the results of the mini-computer program X-Field, showing that no prohibited contour overlap is predicted near ground level. Figure 5 is an aerial image of the proposed location, demonstrating that no habitable space exists above ground level. Thus this proposal complies with the procedure established in "Living Way".

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The proposed facilities were evaluated in terms of potential radio frequency radiation exposure at ground level in accordance with OET Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radio frequency Radiation."

The proposed antenna system is ERI 100A 2-Bay, half-wave spaced array, located 143 meters above ground. For purposes of this analysis the FM Model program has been set to calculate values for a "Rototiller" antenna element, operated with an effective radiated power of 0.250 Kilowatts in the horizontal and the vertical plane. At 2 meters above the surface, at 273 meters from the base of the tower, this proposal will contribute worst case, 0.09 microwatts per square centimeter, or 0.009 percent of the allowable ANSI limit for controlled exposure, and 0.05 percent of the allowable limit for uncontrolled exposure. This figure is less than 5% of the applicable FCC exposure limit at all locations

extending out from the base of the tower. Section 1.1307(b)(3) excludes applications when the calculated level is predicted to be less than 5% of the applicable exposure limit. It is therefore believed that this proposal is in compliance with OET Bulletin Number 65 as required by the Federal Communications Commission.

Further, the applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The site itself is restricted from public access. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

Figure 1.

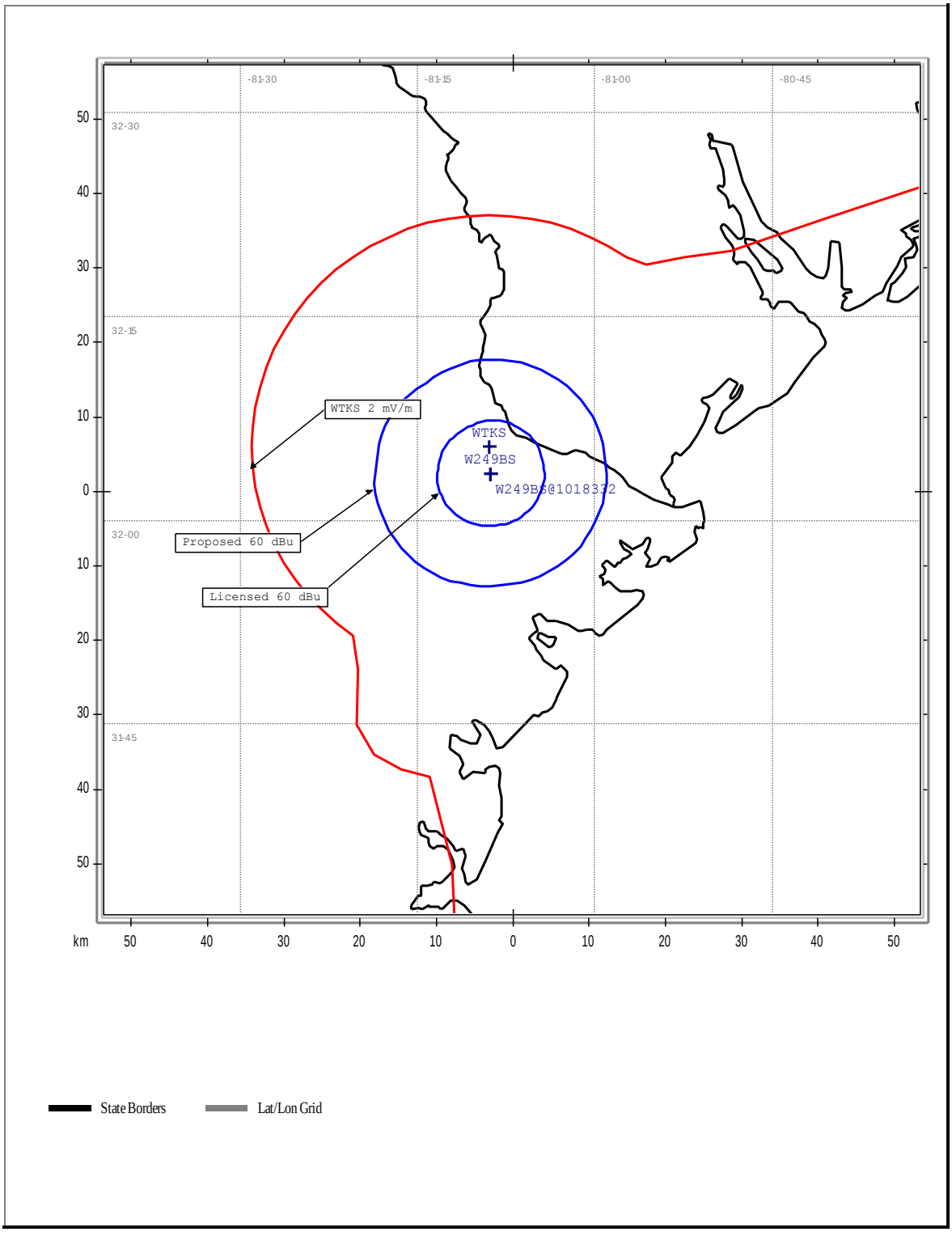
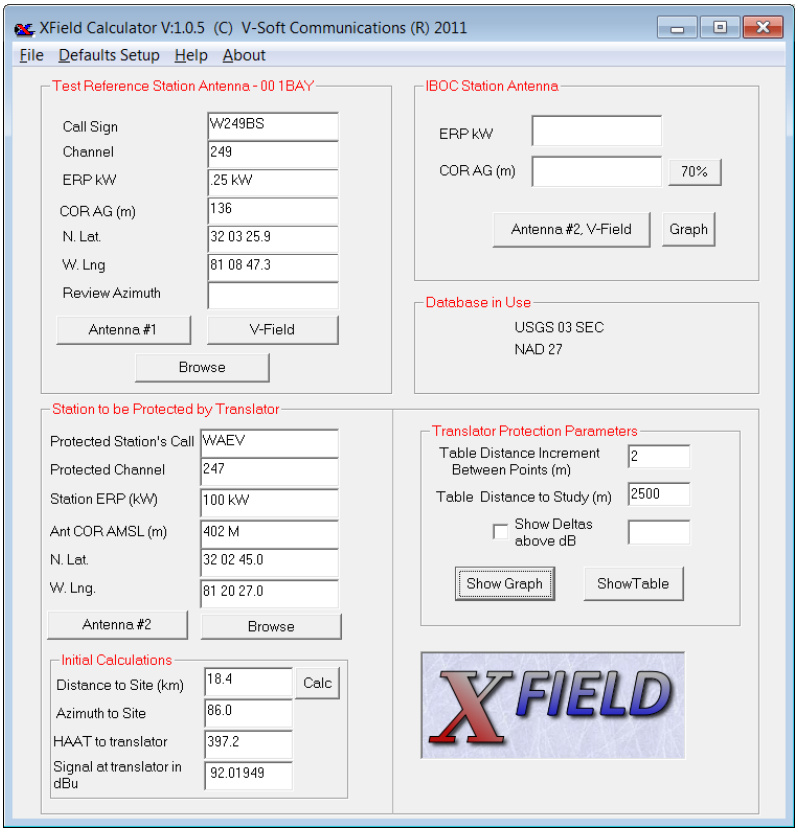

-81-30
-81-15
-81-00
-80-45
32-30
32-15
32-00
31-45
WTKS 2 mV/m
Proposed 60 dBu
Licensed 60 dBu
WTKS
W249BS
W249BS@1018332
km
State Borders
Lat/Lon Grid

Figure 2. Spacing Study

Search of channel 249 (97.7 MHz Class D) at 32-03-25.9 N, 81-08-47.3 W.							
Callsign	**Chanl**	**ERP_w**	**ARN**	**Class**	**Status**	**Dist_km**	**Clr**
WAEV	247	100000	BLH20020604AAW	C0	LIC	18.4	-33.36 dB
W249BS	249	27	BLFT20090323ABI	D	LIC	0.01	-33.66 dB
W249BS	249	250	BPFT20110519ACY	D	CP	2.63	-23.59 dB
WGCO	252	100000	BLH19900104KA	C1	LIC	53.3	-9.02 dB
WTCQ	249	4300	BMLH20020919AAP	A	LIC	122.94	13.96 dB
WWUF	249	6000	BLH20020723AAX	A	LIC	143.02	18.35 dB
WIIZ	250	50000	BLH19960502KB	C2	LIC	119.4	20.38 dB
WTCQ	249	0		A	USE	123.09	20.40 dB

Figure 3. WAEV Living Way Calculations



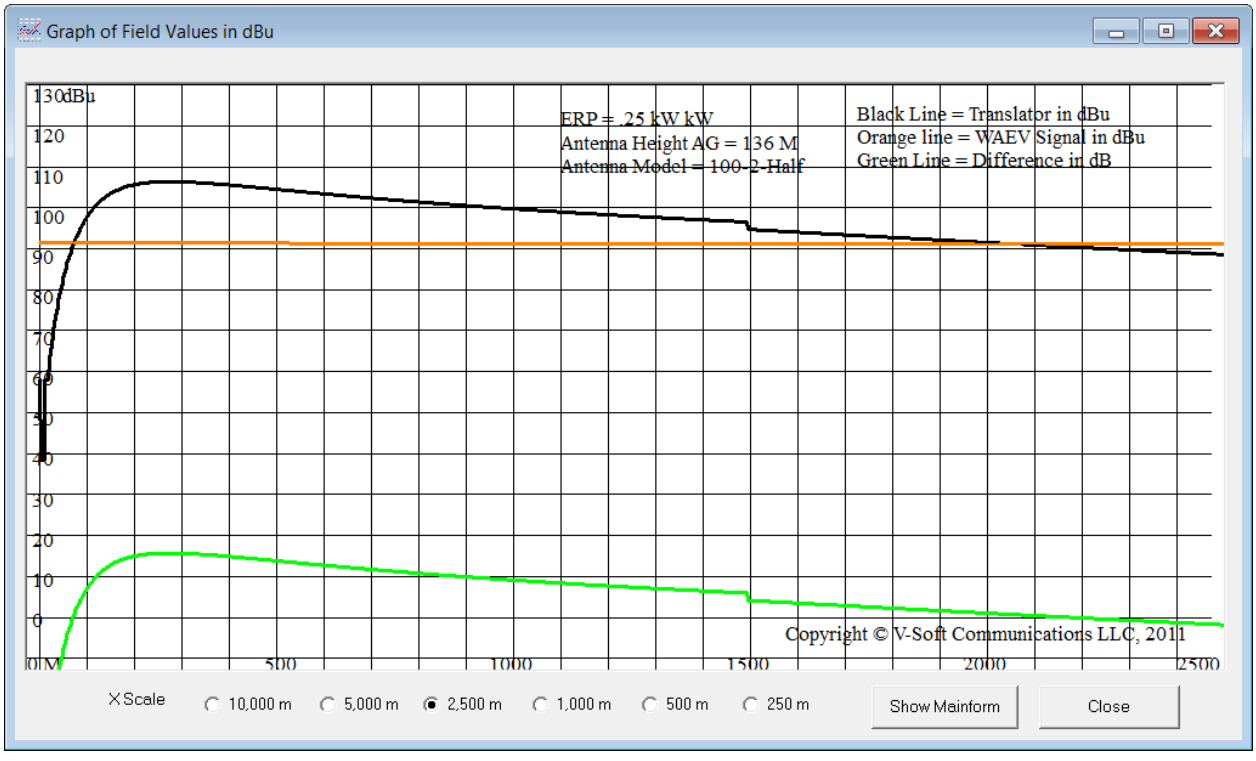
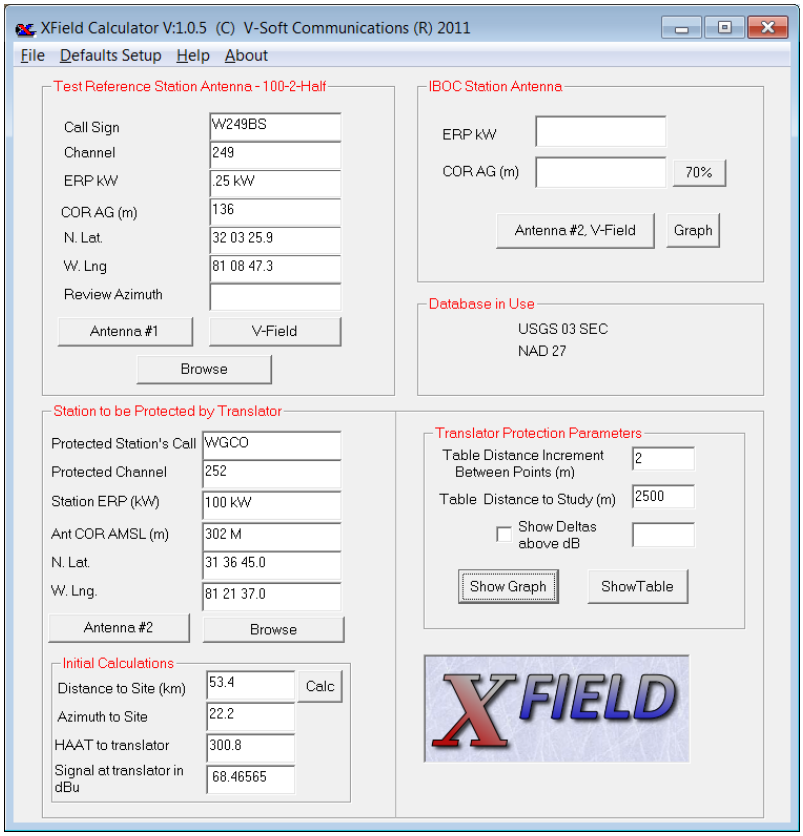


Figure 4. WGCO Living Way Calculations



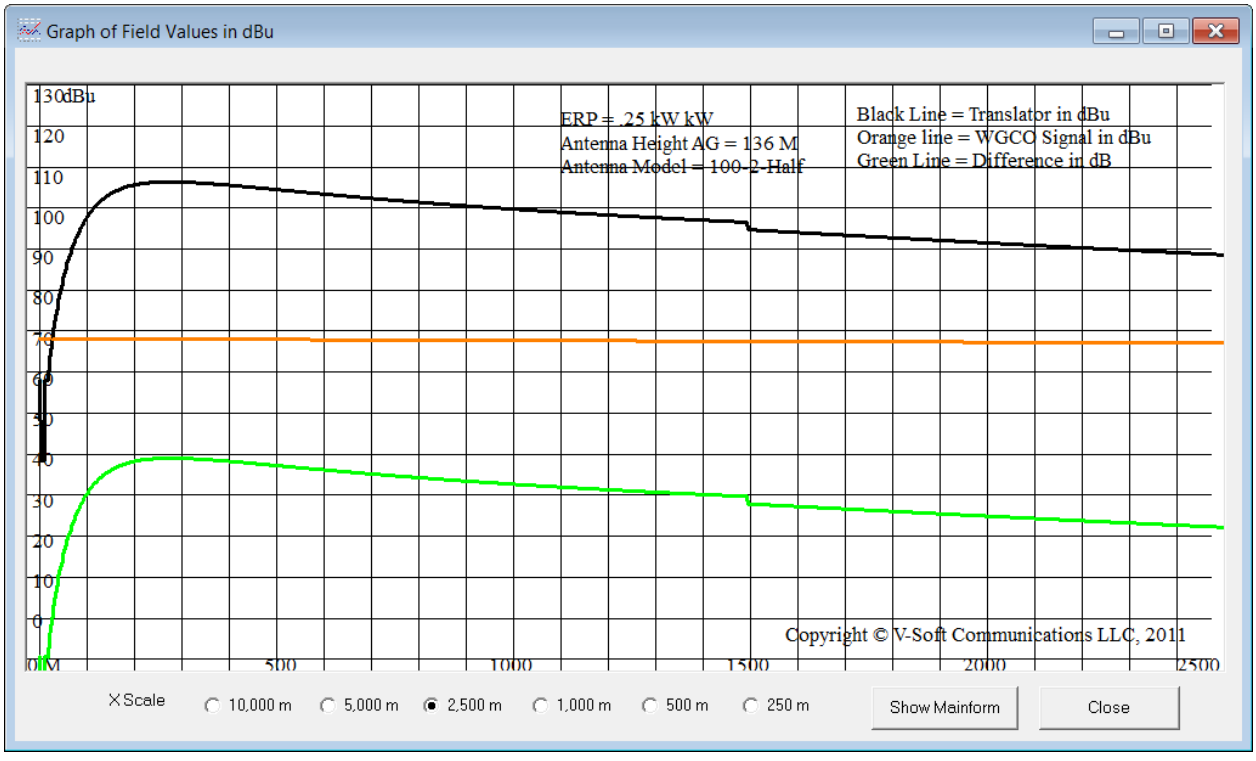


Figure 5. Aerial Image of Transmitter Location