

Comprehensive Technical Statement

Real Presence Radio, Licensee

Minor Modification to Licensed FM Translator

K233BR, FCC Facility ID # 146399, Brookings, SD

Introduction

The following changes are proposed:

- Transmitter location
- Effective radiated power
- Antenna height and model
- Change from V-only polarization to H+V

Data Sources

Distances were calculated using the FCC method defined in 73.208 of the Commission's Rules.

All contours shown in this report were generated using antenna center above mean sea level, NAD-27 coordinates, and the FCC online HAAT calculator, set to use 30-second terrain data.

Dates shown on the maps represent the last change date in the CDBS downloads in use at the time this statement was prepared.

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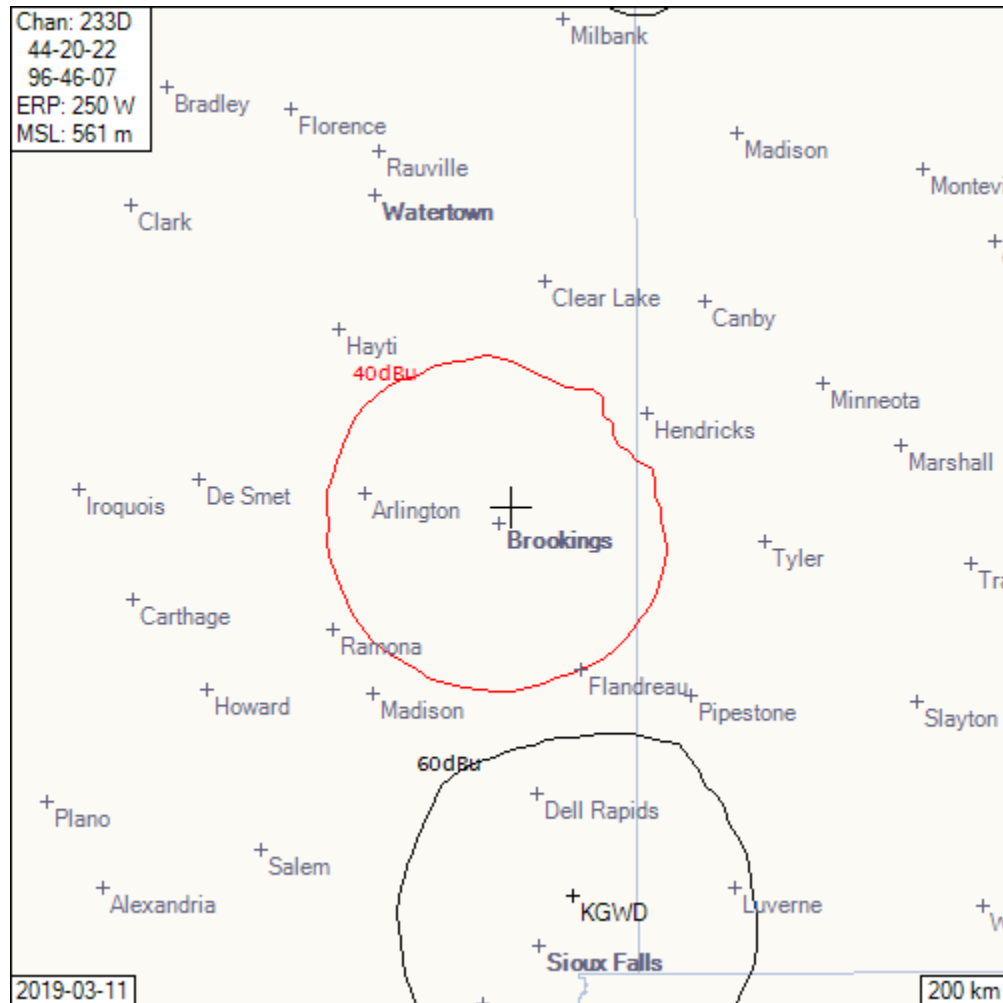
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Detailed Interference Study

The following collection of maps and the narrative accompanying each show that no prohibited overlap will occur between the proposed facility and any potentially conflicting facility or proposal. Interfering f(50,10) contours are shown as red polygons, and protected f(50,50) contours are shown as black polygons.

Map 1 – Co-channel Outbound Interference



There is no overlap of the interfering contour with the protected contour of any co-channel station or proposal.

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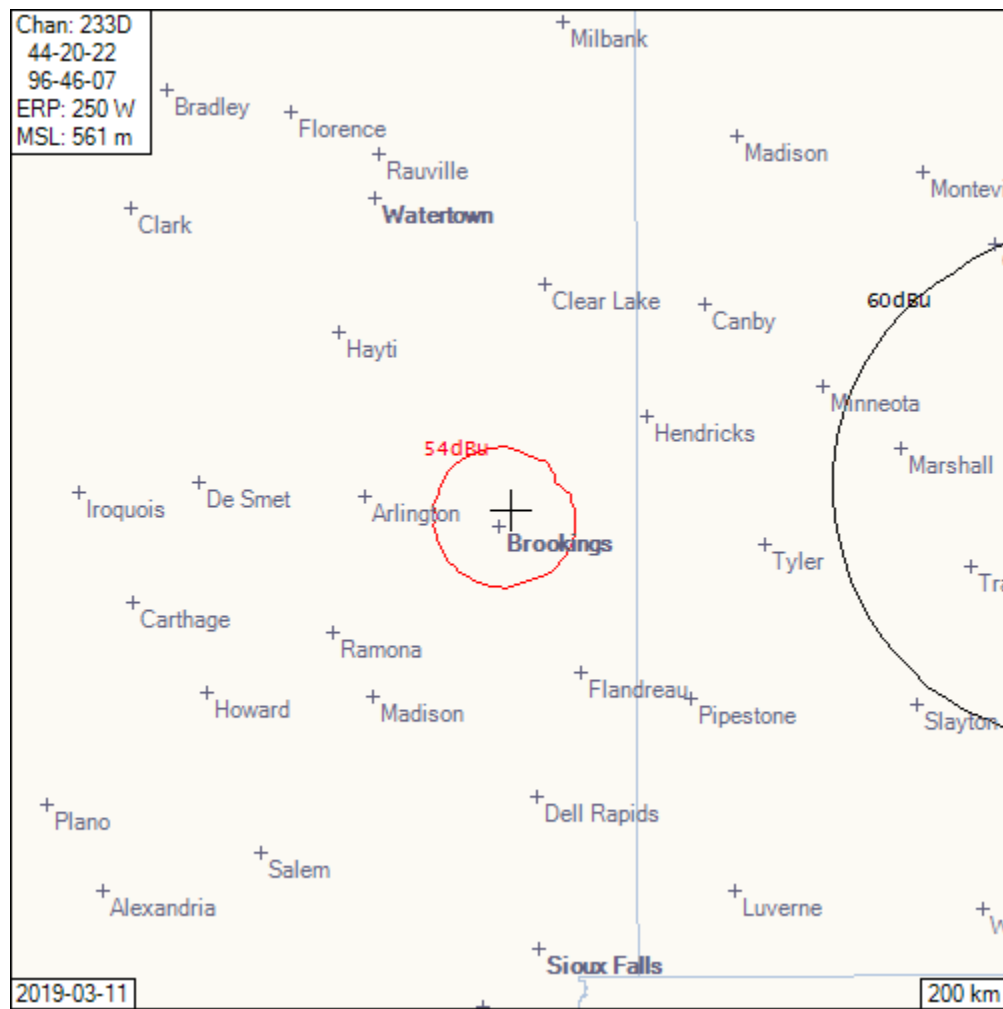
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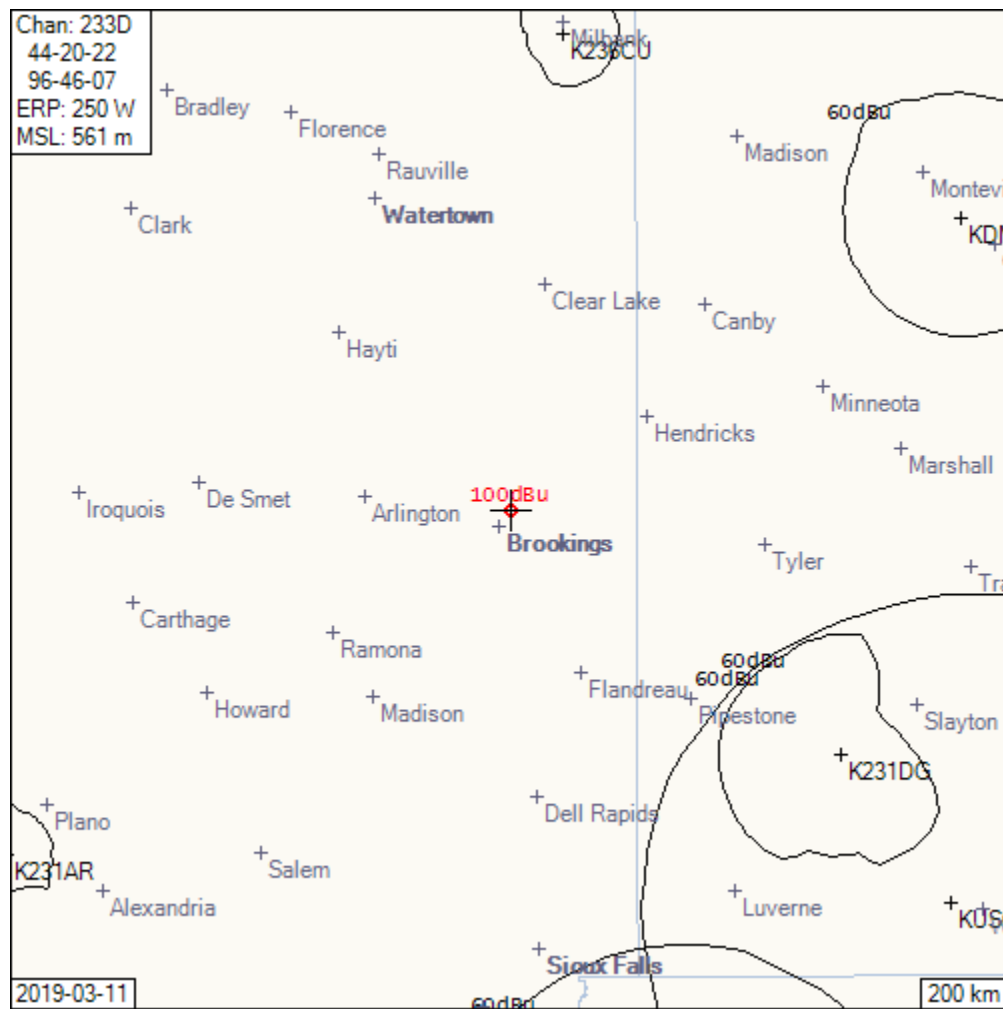
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Map 2 – First Adjacent Outbound Interference



There is no overlap of the interfering contour with the protected contour of any first-adjacent station or proposal.

Map 3 – Second/Third Adjacent Outbound Interference Detail



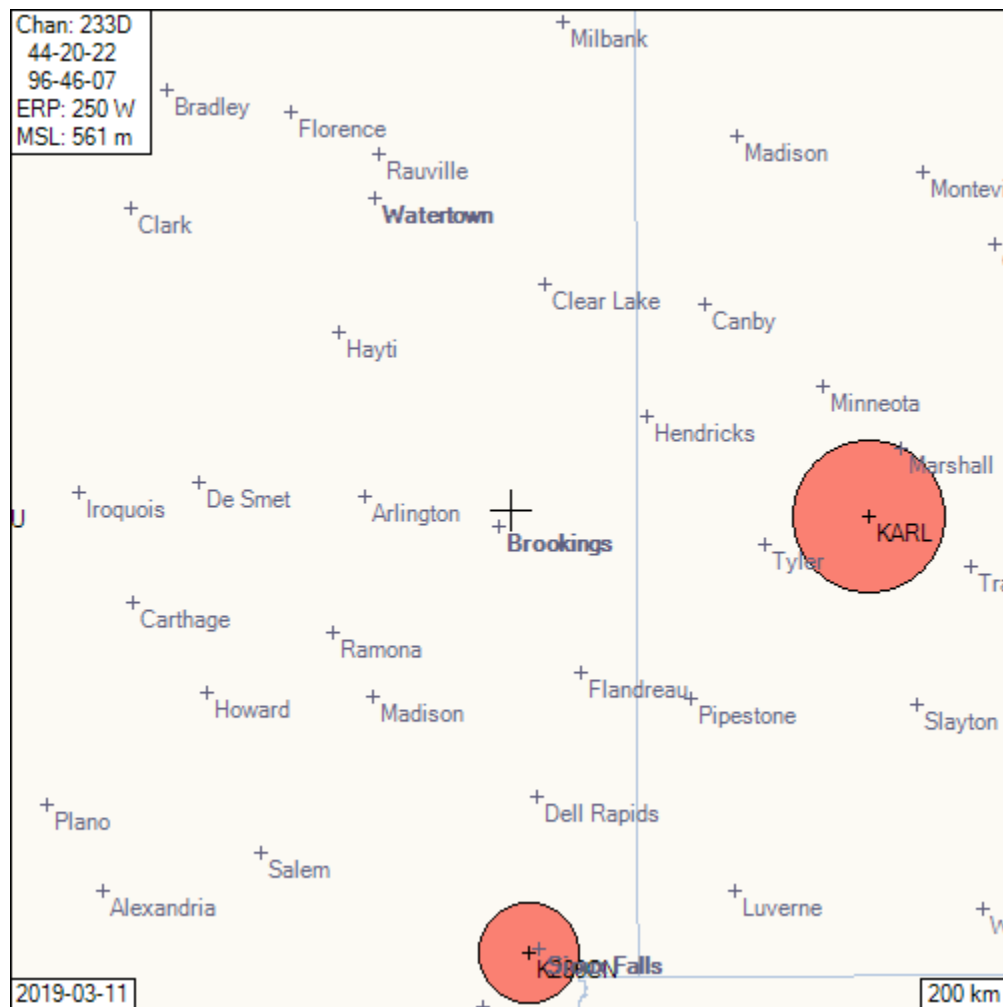
There is no overlap of the interfering contour with the protected contour of any 2nd or 3rd adjacent station or proposal.

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Map 3 - IF Separation requirements



At the proposed 250 W ERP, the proposal is treated as Class A. There are no nearby IF-separated stations or proposals.

Channel 6 Interference

The proposed facility is not on a channel that is implicated in channel 6 interference.

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International

The FM Agreements with Canada and Mexico require evaluation and potential coordination of any proposal within 320 km of the border.

The distance to the nearest point along the US/Canada border is 514 km. Coordination with Canada is not required.

The distance to the nearest point along the US/Mexico border is 1,631 km. Coordination with Mexico is not required.

Quiet Zones

The proposed site is outside the National Radio Quiet Zone (National Radio Astronomy Observatory Notification Area) in West Virginia.

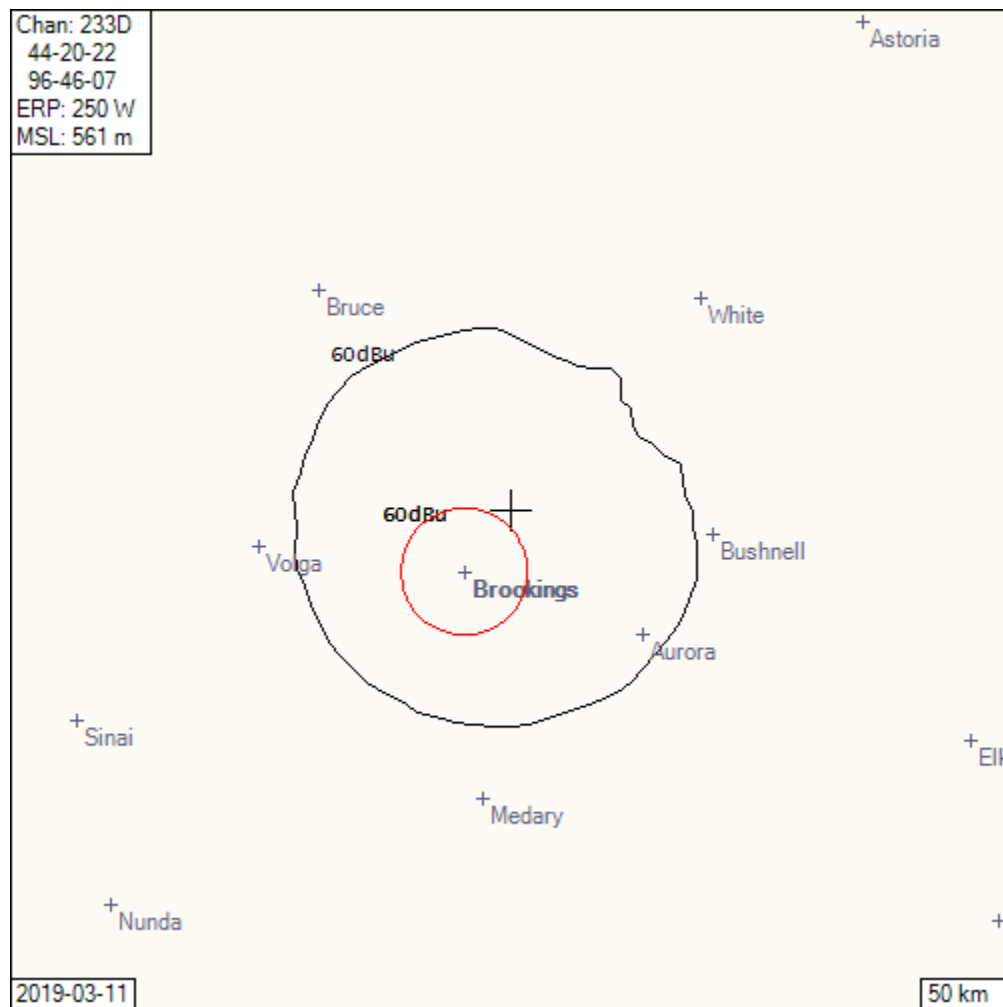
The proposed site is outside the Arecibo Observatory notification area in Puerto Rico.

The proposed site is not within a 100 km extension of the Table Mountain Radio Receiving Zone in Colorado.

Protected Monitoring Stations

The nearest Protected Monitoring Station is 403 km distant, in Grand Island, NE. This is well beyond any potential 80 dBu contour.

Minor Change



The licensed 60 dBu f(50,50) contour is shown as a red polygon. The proposed 60 dBu f(50,50) contour is shown as a black polygon. The contours share common area.

No change in frequency is proposed.

Therefore, the proposal is for a minor change.

Non-Fill-In Translator

The proposed primary station is KGWD, Sioux Falls, SD, FCC Facility ID # 60487. There is no overlap of the 60 dBu f(50,50) contours of the translator and KGWD. Therefore, the proposal is for non-fill-in status.

The location is west of the Mississippi River and in Zone 2. The maximum HAAT on any radial is less than 107 m. Therefore, the maximum ERP permitted under §74.1235 is the proposed 250 W.

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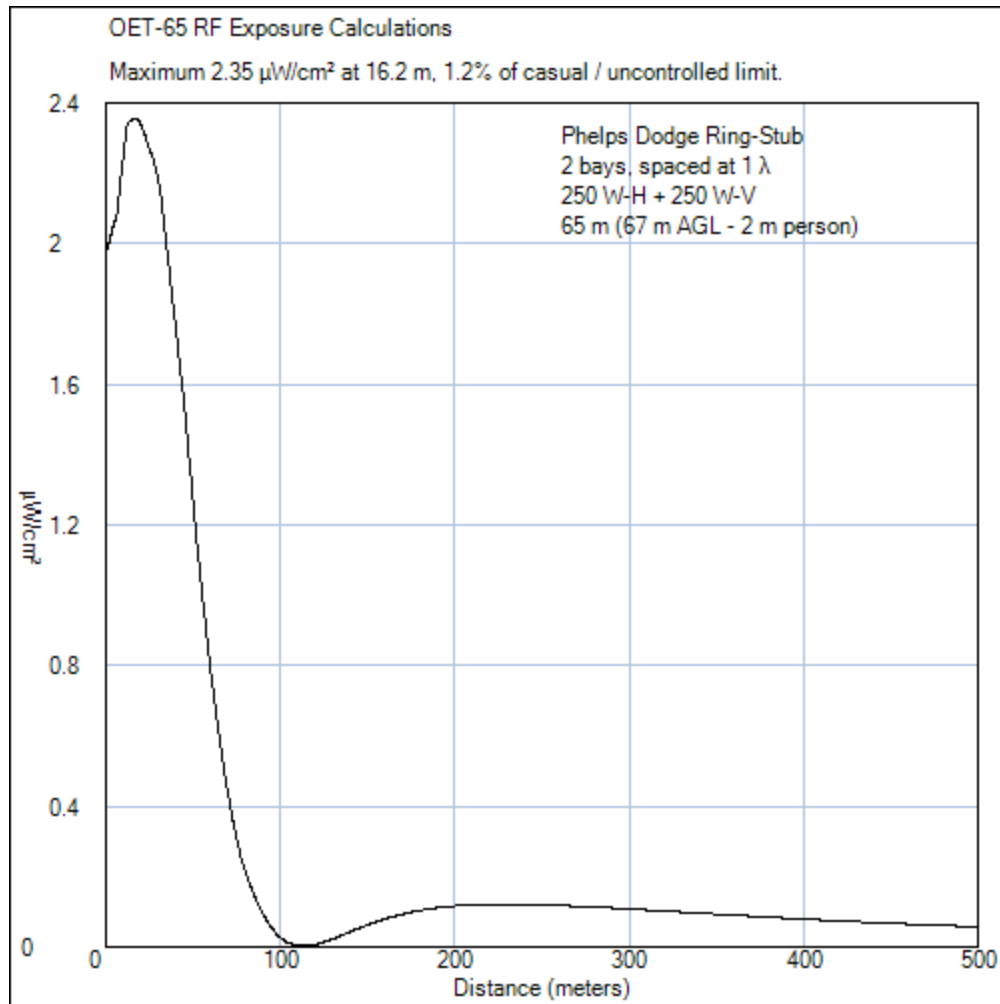
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Environmental

The proposed site is an existing tower, ASR # 1042108. No construction, excavation, or increase to the height of the tower is proposed.

The proposed effective radiated power is 250 W-H + 250 W-V. The 2-bay antenna will be mounted 67 m above ground level. Assuming the worst-case OET Type 1 antenna model, the OET-65 algorithm returns a maximum exposure of less than 2% of the limit for casual / uncontrolled exposure:



Appropriate access controls and safety signage are provided. The applicant agrees to coordinate with other users of the site to reduce power or shut down in order to protect workers at the site.

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Form 349 Tech Box Data

Channel	233
Primary Station	
Facility ID #	60487
Call Sign	KGWD
City, State	Sioux Falls, SD
Delivery Method	Off-air
Coordinates (NAD-27)	44 20 22 N Lat 96 46 07 W Lon
Coordinates (NAD-83)	44 20 22.0 N Lat 96 48 08.0 W Lon
ASR	1042108
Site Elevation AMSL	494 m
Overall Tower Height AGL	107 m
Radiation Center AGL	67 m
Effective Radiated Power	250 W-H + 250 W-V
Antenna type	Non-Directional
Manufacturer / Model	SWR FM1-2

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