

Comprehensive Technical Statement

In support of

Donald F. Hendron

Application for Minor Change for FM Translator K270AD

101.9 MHz, Channel 270, Facility ID # 30450

Lake Havasu City, AZ

Introduction

Donald F. Hendron proposes a minor change to his K270AT, FCC Facility ID # 30450. Changes to the following parameters are proposed:

- Transmitter location
- Antenna height
- Effective radiated power
- Change to omnidirectional antenna

Data Sources

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

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

Distance Separation Requirements

The only distance separation requirement relates to translators and full-service stations separated by 53 or 54 channels. There is one such conflict. KNLB, facility ID 48504 holds a license for channel 216C3 and a construction permit for channel 216C0. The proposed location is short spaced to each of these records. However the proposed effective radiated power is 99 Watts, and §74.1204(g) provides that translators with effective radiated powers of less than 100 Watts are not subject to IF separation requirements.

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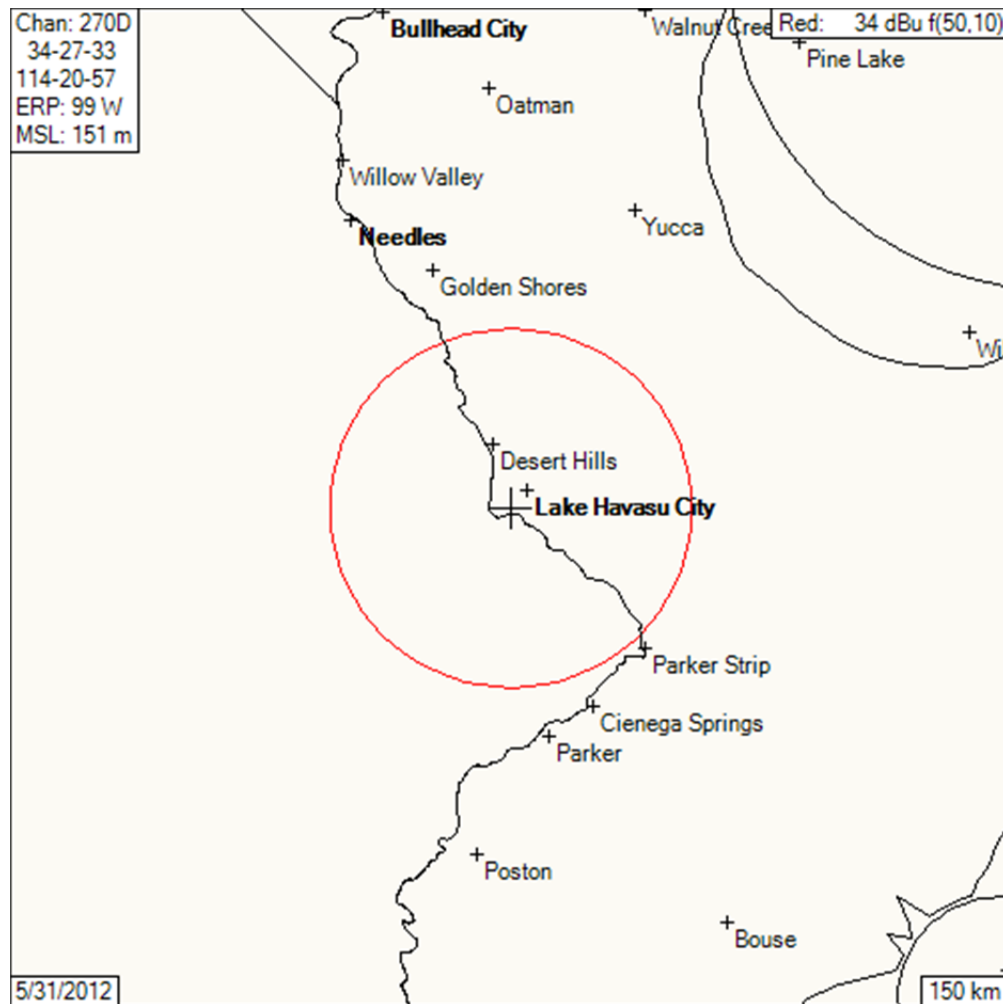
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Interference Study

The following collection of maps and the narrative accompanying each show conclusively that no prohibited overlap will occur between the proposed facility and the conflicts listed in the allocation study.

Map 1 – Co-channel Outbound Interference



There are no nearby co-channel conflicts.

The site is in Zone 2, but near Zone 1A, so the protection of Class B conflicts is assumed, and the interfering contour used is the 34 dBu f(50,10).

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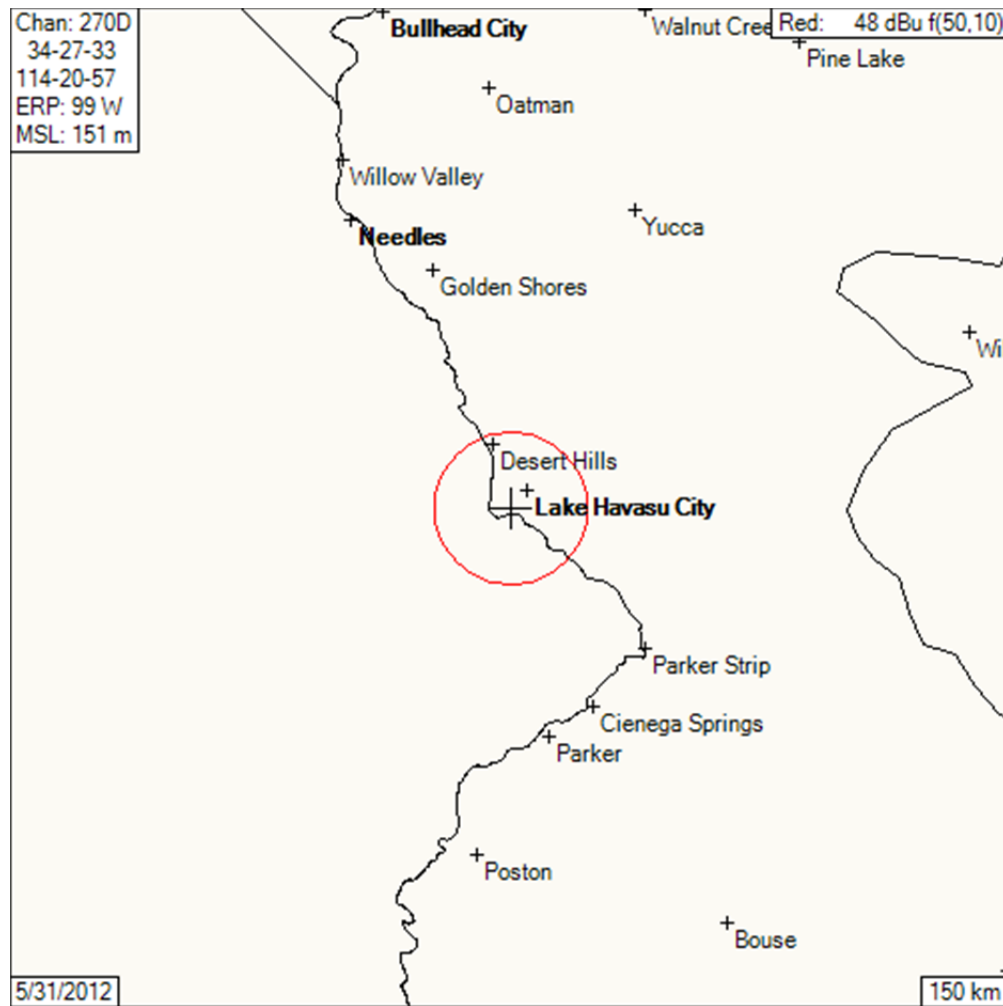
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Map 2 – First Adjacent Outbound Interference



There are no nearby first adjacent channel conflicts

The site is in Zone 2, but near Zone 1A, so the protection of Class B conflicts is assumed, and the interfering contour used is the 48 dBu f(50,10).

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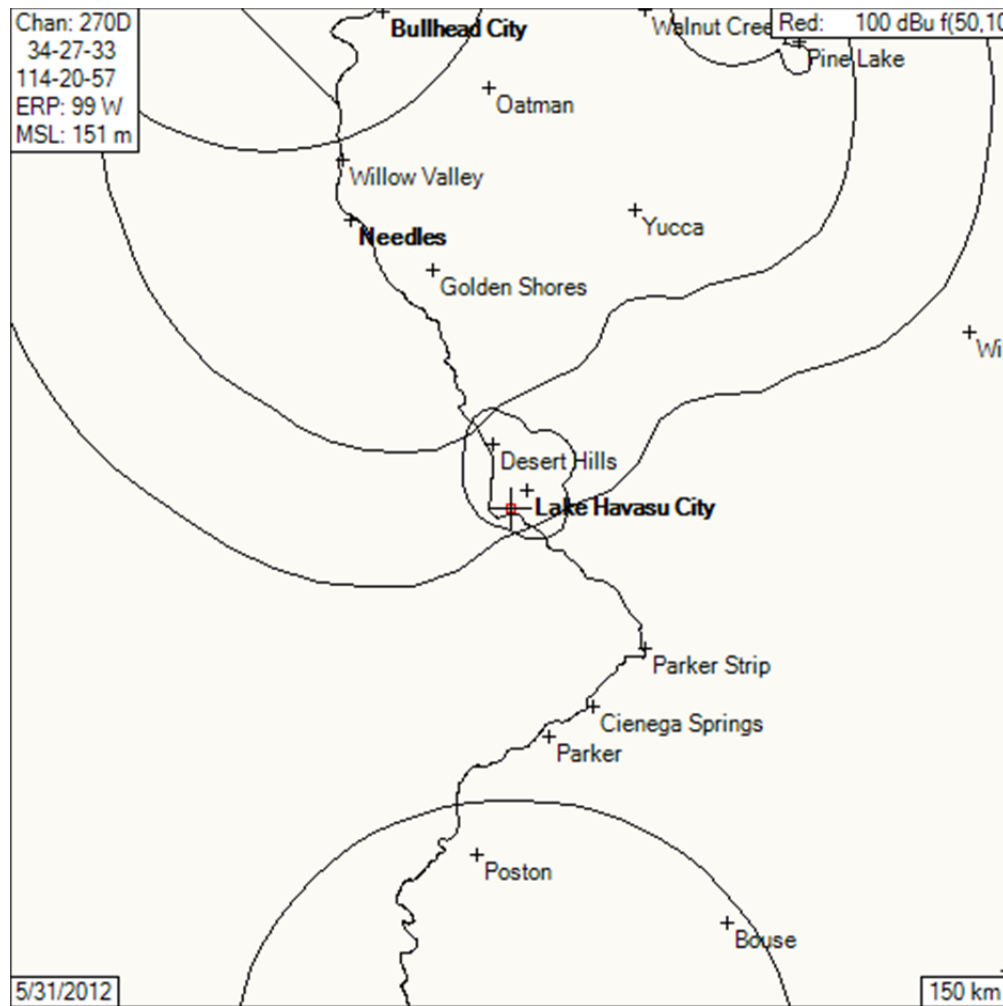
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Map 3 – Second/Third Adjacent Outbound Interference Detail



The proposed site is within the 60 dBu f(50,50) contour of third-adjacent KJJJ in Oatman, AZ, Facility ID # 63410, and the 60 dBu f(50,50) contour of an application for a new second adjacent translator, Facility ID # 148417, file number BNPFT-20030317DWU. It is outside the 60 dBu of the construction permit for KXMK to the north.

Each of these facilities is protected to its 60 dBu f(50,50) contour, and the interfering contour shown on the map is 100 dBu f(50,10).

The detailed interference showing that follows will demonstrate that the proposal is in compliance with the requirements of §74.1204.

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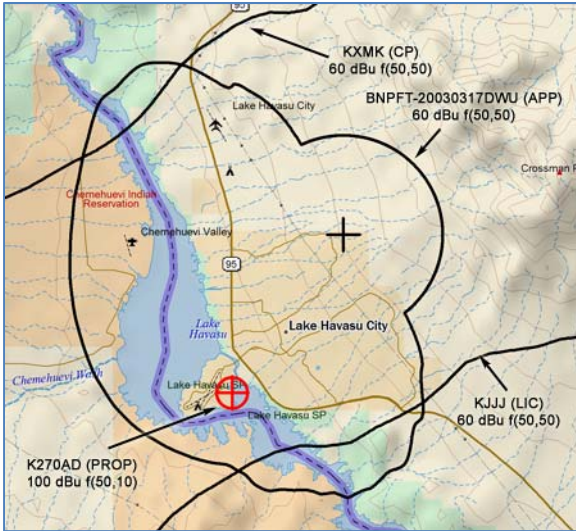
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Detailed Interference Study

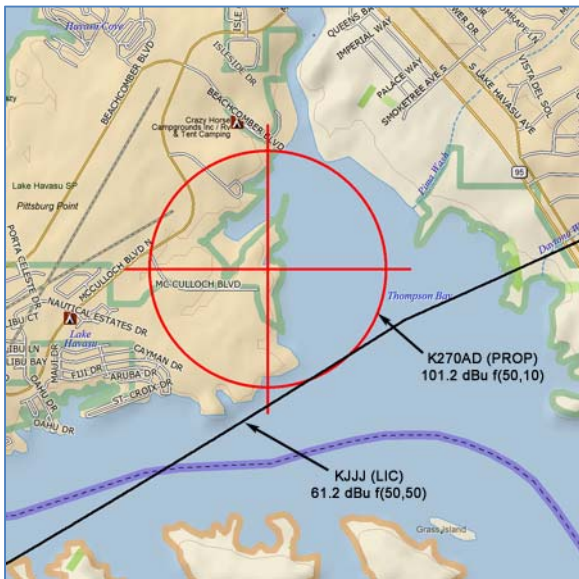


The proposed 100 dBu f(50,10) contour falls within the 60 dBu f(50,50) contours of KJJJ and BNPFT-20030317DWU, and outside the 60 dBu contour of KXMK (CP).

The f(50,50) signal of KJJJ in the vicinity of the proposed site is 61.2 dBu or greater. The interfering f(50,10) signal would be 101.2 dBu.

The f(50,50) signal of BNPFT-20030317DWU in the vicinity of the proposed site is greater than 65 dBu. The f(50,10) interfering signal would be 105 dBu.

Because KJJJ has the weaker signal, the interference area to KJJJ will be larger. The proposed 101.2 dBu f(50,10) signal will completely contain the proposed 105 dBu f(50,10) signal. Therefore, KJJJ is more critical, and satisfying the requirements of §74.1204 with respect to KJJJ will also satisfy the requirements for BNPFT-20030317DWU.



The proposed K270AD 101.2 dBu f(50,10) contour falls within the 61.2 dBu f(50,50) contour of KJJJ. The proposed 101.2 dBu f(50,10) contour represents a conservative outer boundary for the interference area.

The proposed site is in a former airport area. The airport has been relocated and the site is being redeveloped according to a zoning plan that designates the entire area within the proposed 101.2 dBu f(50,10) contour for non-residential use. No residences, interstate or other federal highways are located in this area. The proposal therefore satisfies the requirements of §74.1204(d) with respect to interference to KJJJ.

As noted above, satisfaction of the interference requirements for KJJJ more than satisfies the interference requirements for BNPFT-20030317DWU.

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Form 349 Tech Box Data

Channel	270
Primary Station	Facility ID 164263 KVAL (FM) Cal-Nev-Ari, NV
Delivery Method	Off-air
Coordinates (NAD-27)	34 27 33 N Lat 114 20 57 W Lon
ASR	none, not required
Site Elevation AMSL	141 m
Overall Tower Height AGL	10 m
Radiation Center AGL	10 m
Effective Radiated Power	99 W-H + 99 W-V
Antenna type	Omnidirectional
Manufacturer / Model	SHI 6812B-1

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Channel 6 Interference

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

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 1,616 km. Coordination with Canada is not required.

The distance to the nearest point along the US/Mexico border is 196.4 km from the proposed site. Evaluation with respect to Mexican facilities and proposals is required. The maximum extent of the 34 dBu f(50,10) contour is 26.9 km, and so the contour cannot possibly cross the border. Notification to Mexico may be required, but prior coordination should not be.

Quiet Zone Calculations

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 547 km distant, in Douglas, AZ.

Transmitter Location / Environmental

The antenna will be mounted on a 10' (3m) pole on an existing building in a commercial area. No new construction is proposed.

FMMODEL produces a maximum RF Exposure of $22 \mu\text{W}/\text{cm}^2$ based on the proposed one-bay Shively 6812B antenna mounted 10 m above ground. This is 11% of the limit for casual / uncontrolled exposure. The roof of the building is off-limits to all but trained authorized personnel, and access is controlled with appropriate locks. Appropriate signage will be provided. The applicant agrees to reduce power or go off air temporarily in order to protect workers on the roof.

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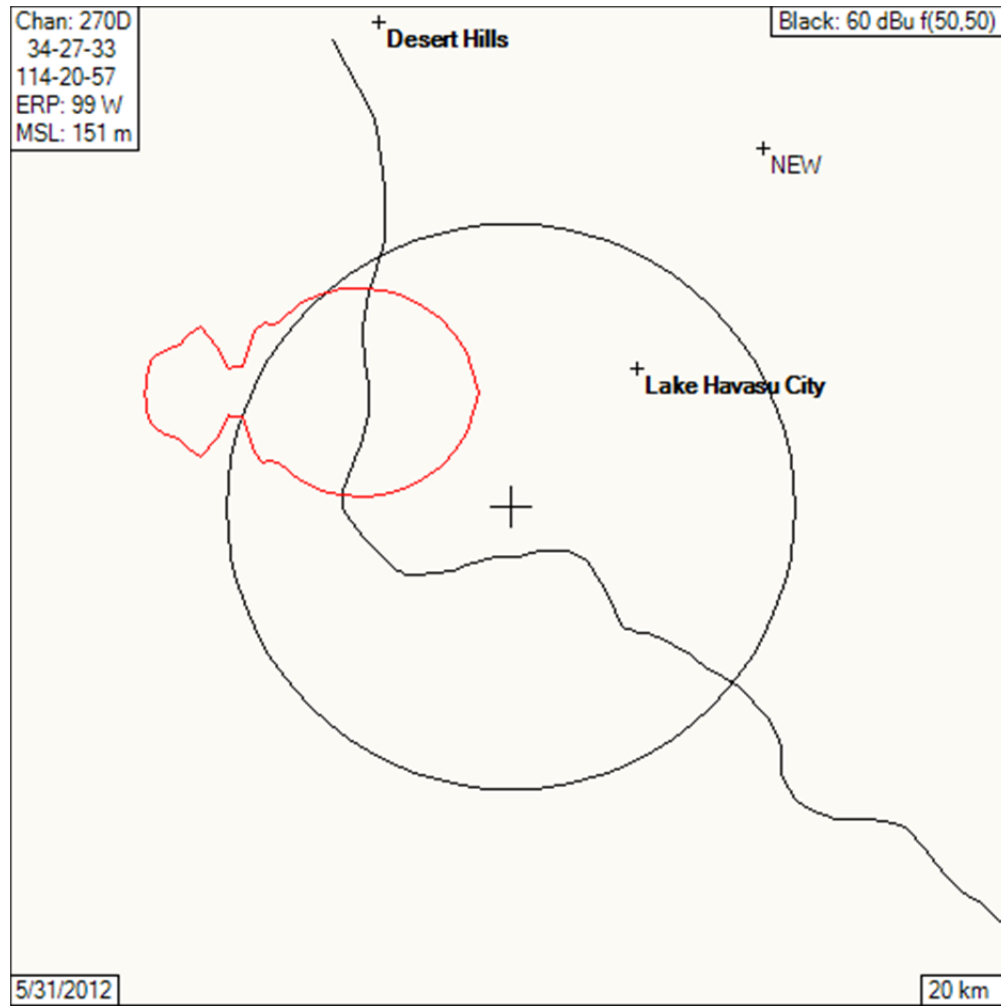
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Minor Change



The proposed 60 dBu f(50,50) contour, shown in black, overlaps the licensed 60 dBu f(50,50) contour, shown in red. No change in frequency is proposed. Therefore, the proposal qualifies as a minor change.

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Non-Fill-In Translator

The primary station is KVAL (FM), Cal-Nev-Ari, NV, Facility ID 164263. The 60 dBu f(50,50) contour of the primary does not contain the 60 dBu f(50,50) contour of the translator. Therefore, the proposal is for non-fill-in service.

The height above average terrain for each of the twelve primary translator radials is negative. Therefore, the maximum power permitted under §74.1235(b) is 250 Watts, regardless of the location. The proposed power is 99 Watts, and so the proposal qualifies.

The applicant is not affiliated with the primary station's licensee and is not receiving financial support from the primary station's licensee, but has obtained rebroadcast consent from the primary station's licensee.

Program delivery will be via off-air reception.

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