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B. W. St. Clair

**Engineering Statement In
Support of a "Replacement
Digital Translator" Associated
With KNPB-DT, Reno, NV**

Introduction

KNPB and KNPB-DT are located on the edge of the Reno metropolitan area. The digital station on UHF channel 15 fails to reach certain areas west of the Sierra Nevada mountains, particularly the Truckee and South Tahoe areas.

Discussion

Plots are attached showing the "Longley-Rice Terrain Dependent" coverage of the analog channel 05 signal and the digital channel 15, signal. A comparison of the two plots illustrates the loss of digital coverage.

It is proposed to install a new translator in accordance with the pending "Replacement Digital Translator" rules.

The plot of the 51 dbu protected contour of the proposed translator illustrates that the translator signal is confined within the "analog service area" as defined in the NPRM¹.

This application specifies the same channel as the primary station. However the terrain separation between the two stations is substantial and little or no interference in any populated area is expected. As the primary station will own the translator suitable adjustments will be made if the interference exceeds expectations.

Conclusion

The requested translator complies with the special requirement with regard to location and signal reach contained in the NPRM.

Engineer's Statement

This application is based on parameters supplied by the engineering staff of KNPB, the FCC CDBS database and the digitized 3 second terrain database. The statements herein are true and correct to the best of my knowledge and belief.

Respectfully submitted,

B. W. St. Clair
Engineering Consultant
January 29, 2009

¹ Notice of Proposed Rulemaking MB Docket No. 08-253, Para. 5 and footnote 5. Footnote 5 refers to Para 27 of the Report and Order in MB Docket NO. 05-312 which specifies a radius of 128 km for channel 05 in Zone II.

KNPB
 BLET20030924AES
 Latitude: 39-35-02 N
 Longitude: 119-47-55 W
 ERP: 4.61 kW
 Channel: 05Z
 Frequency: 79.0 MHz
 AMSL Height: 1704.0 m
 Elevation: 1654.5 m

KNPB ANALOG, CHANNEL 05
 Reno, NV
 Longley-Rice Terrain Dependent Coverage
 Calculated In Accordance With OET Bul. 69

Radius specified in ¶ 27 of Report and Order
 Authorizing Digital Transmission Systems,
 MB Docket No. 05-312, Channel 05, Zone 2
 R = 128 km

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Scale 1:1,800,000
 0 20 40 60 km

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KNPB-D
 BLEDT20031023AAU
 Latitude: 39-35-02 N
 Longitude: 119-47-55 W
 ERP: 32.30 kW
 Channel: 15
 Frequency: 479.0 MHz
 AMSL Height: 1708.8 m
 Elevation: 1655.0 m
 Horiz. Pattern: Directional
 Vert. Pattern: Yes
 Elec Tilt: 1.0
 Prop Model: Longley/Rice
 Climate: Cont temperate
 Conductivity: 0.0050
 Dielec Const: 15.0
 Refractivity: 311.0
 Receiver Ht AG: 10.0 m
 Receiver Gain: 0 dB
 Time Variability: 90.0%
 Sit. Variability: 50.0%
 ITM Mode: Broadcast

KNPB-DT Digital, Channel 15, Reno, NV
 Longley-Rice Terrain Dependent Coverage
 Calculated In Accordance with OET Bul. 69

38.8 dBu Regulatory Contour

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REPLACEMENT DIGITAL TRANSLATOR
Fill-in for KNBP-DT, Channel 15 Reno, NV

Replacement Digital Translator

51 dBμ Protected Contour

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