

ENGINEERING STATEMENT IN SUPPORT OF AN
APPLICATION TO MODIFY BPCDT-19991029AHM
KDMD-DT, FI 25221, CHANNEL 32, ANCHORAGE, AK

Introduction

In 1999 Ketchikan TV, LLC obtained a channel 32 construction permit on the then most available tower. As the result of an engineering review of the construction permit it was determined, based on interference considerations that it would be far preferable to be colocated with KDMD analog which is on adjacent channel 33. As it is now possible to rent space at the same site this application proposes a change in location to accomplish colocation. The requested antenna pattern and ERP result in coverage that does not extend beyond the coverage of either the Appendix B parameters or the construction permit.

The assigned parameters in Appendix B of the Seventh Report and Order in the Digital Proceeding¹ are significantly at variance with the construction permit. However, it has been possible to craft a technically sound application which specifies the same site as KDMD analog, will not require an application freeze waiver and will have a predicted population nearly as great as a station built with the Appendix B parameters. The population will be 5.9% less than the construction permit population but more population can be served from this site and as discussed in more detail below it is anticipated that a post-freeze modification will be requested that will close the population gap.

Environmental Assesment

The station will operate using an existing tower and building. There will be no construction and no associated environmental impact from site changes.

The non-ionizing radiation attributable to this station at head height above ground level calculated in accordance with OET Bulletin 65 is less than 0.5% of the allowable public limit. This is one tenth of the 5% exclusion limit and non-ionizing radiation not a matter of environmental concern in connection with this application..

Required Coverage of the Principal Community

The problem of defining the community of Anchorage Alaska is well known to the Commission. The parameters of the application provide coverage over the Borough of Anchorage populated area virtually duplicated the coverage of KDMD analog within the Borough limits. An exhibit illustrating the the "Principal Community" 48 dB μ contour is included as part of this Engineering Statement.

¹Seventh Report and Order, MB Doc 87-268, Appendix B

Covered Population

The predicted covered population for the three configurations are in Table I²

TABLE I

	Population	Per Cent Lost by Application from Base
Application	285,545	
Base Construction Permit	304,513	5.9%
Base Appendix B	288,379	0.6%

The antenna pattern was deliberately chosen with little output to the rear (north) direction in order to keep the protected contour inside corresponding contours of the construction permit and Appendix B. Several communities to the north of the site are not included in the application population count. However, these communities can be served from the chosen site. It is anticipated that an application will be filed to modify the antenna pattern to provide coverage to these communities after the "Freeze" is lifted. The application population will then approach that of the construction permit. The specified antenna is an array of panels and more panels can easily be added to provide more northward signal.

Allocation Considerations

For digital into digital interference it is necessary to consider cochannel and adjacent channel interference only.³ Appendix B includes no other digital assignments on channel 33 (cochannel) and none on channels 32 and 34 (adjacent channels).

There is one Class A station in Alaska on channel 34. It is K34EJ-CA, Fairbanks, AK. It is at a distance of 401.6 km and thus beyond the OET Bulletin 69 adjacent channel culling distance of 100 km and need not be considered in detail.

There are no allocation matters that need to be of concern in connection with this application.

²Population figures calculated with the V-Soft Probe III program using the OET Bulletin 69 Longley-Rice Terrain Dependent algorithm and the Year 2000 census.

³OET Bulletin 69, February 06, 2004, Tables 5A and 5C

Protected Installations

There are no protected "Radio Astronomy" installations listed in § 73.1030 in Alaska. Also in Alaska there are no protected FCC Field Offices as listed in §0.121.

Construction Schedule

Ketchikan TV, LLC has placed an order for the equipment required to implement the station requested in this application with instructions to deliver the equipment as soon as the modified construction permit is issued. Arrangements for the use of the site are complete and access the site is reasonably available even in the winter. There are no obstacles to completing the construction rapidly once the authorization is available.

Consultant's Declaration

This "Engineering Statement" is based on information supplied by the applicant, the antenna manufacturer, and from the FCC's CDBS database and "Tower Registration Database." Population calculations were made using the V-Soft Probe III program which is based on OET Bulletin 69, the 3 arc second terrain database and the year 2000 census. The results and statements presented herein are true and correct to the best of my knowledge and belief.

Respectfully submitted:



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