KXBK-LD MINOR CHANGE APPLICATION FOR CH 15 LPTV DTV
3 kW MAX DA BISMARCK, NORTH DAKOTA
ENGINEERING NARRATIVE AND RF RADIATION ENVIRONMENTAL ANALYSIS
MAY 2023

The facilities proposed herein are the licensed site and antenna system with an increase in ERP from the currently licensed value of 0.85 kW to 3 kW.

The licensed antenna system consists of an ATC, ATC-BCSE4M-U1, broadband cavity slot antenna with 0.5 degrees of electrical beam tilt with its radiation center 38.1 meters above the ground. The maximum relative field, across the 15 to 90 degree elevation pattern span, is 0.3. Utilizing formula 10 OF OET Bulletin No. 65, Edition 97-01, a value F of 0.3 has been used to calculate the power density 2 meters above ground. The maximum power density is 9.22 uw/cm squared calculated for an ERP of 3,000 watts H. polarization and 1,000 watts V. polarization. This value is 2.9% of the Public Exposure MPE per section 1.1310. Based on this analysis it is believed that the proposed facility is in compliance with OET-65 Guidelines.

The applicant will reduce power or cease transmission as required to meet FCC OET-65 Guidelines.

The support mast exists along with the building, access road and power.

Below is a copy of the TVStudy Report for CH 15 based on the facilities described above with the antenna orientation of 0 degrees true. As can be seen from the conclusion of the report there is no impermissible ISIX, or co-channel received interference above 2%. It is believed that the proposed facility provides full protection to other television facilities.

TVStudy Report

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Study created: 2023.05.17 16:06:29

Study build station data: LMS TV 2023-05-14

    Proposal: KXBK-LD D15 LD LIC BISMARCK, ND
 File number: BLANK0000157540
 Facility ID: 185742
Station data: User record
   Record ID: 1251
     Country: U.S.

Search options:
Non-U.S. records included


Stations potentially affected by proposal:
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IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	KMCY	D14	DT	LIC	MINOT, ND	BLCDT20090203ADC	145.8 km
No	KXMD-TV	D14	DT	LIC	WILLISTON, ND	BLCDT20090715AHY	276.7
No	K15KR-D	D15	LD	LIC	POPLAR, MT	BLANK0000067791	373.6
No	K15MR-D	D15	LD	LIC	FARGO, ND	BLANK0000164640	307.6
No	KGFE	D15	DT	LIC	GRAND FORKS, ND	BLEDT20090619ADI	340.3
No	KSRE	D15	DT	LIC	MINOT, ND	BLANK0000069151	145.7
No	K15MY-D	D15	LD	LIC	CAPUTA, SD	BLANK0000179251	360.1
No	DDK31KU-D	D15	LD	APP	RAPID CITY, SD	BLANK0000053755	349.2

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

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    Channel: D15
       Mask: Full Service
   Latitude:  46 48 20.40 N (NAD83)
  Longitude: 100 47  6.30 W
Height AMSL: 550.1 m
       HAAT: 0.0 m
   Peak ERP: 3.00 kW
    Antenna: ATC-ATC-BCSE4M-U1 (ID 1008258) 0.0 deg
Elev Pattrn: Generic
  Elec Tilt: 0.50
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48.8 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	3.00 kW	-17.5 m	24.2 km
45.0	2.39	-12.0	23.2
90.0	1.34	32.7	21.1
135.0	1.14	23.7	19.7
180.0	1.37	47.3	25.2
225.0	1.14	11.6	19.7
270.0	1.34	18.7	20.5
315.0	2.39	37.2	25.1

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 18 m

Proposal 23.83 dBu contour does not cross Canadian border
Distance to Canadian border: 243.8 km

Distance to Mexican border: 1740.0 km

Conditions at FCC monitoring station: Grand Island NE
Bearing: 163.1 degrees Distance: 680.5 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 207.4 degrees Distance: 821.3 km

No land mobile station failures found

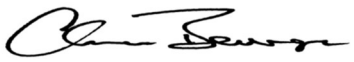
Proposal is not within the Offshore Radio Service protected area

Study cell size: 1.00 km
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

No IX check failures found.

The foregoing was prepared on behalf of Roseland Broadcasting, Inc. by Clarence M. Beverage of Communications Technologies, Medford, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. The statements herein are true and correct of his own knowledge, except such statements made on information and belief, and as to these statements he believes them to be true and correct.



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