

TECHNICAL EXHIBIT

APPLICATION FOR A CONSTRUCTION PERMIT
FOR NON-RESERVED CHANNEL
TRANSLATOR STATION
K244EA

DEADWOOD, SD
CH 245D 200 WATTS 7 M

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INTRODUCTION

This technical exhibit has been prepared on behalf of Phasor Physics, Inc., in support of an application requesting a modification of the construction permit for FM Translator Station K244EA, Deadwood, SD.

This proposal would not be subject to environmental processing in accordance with Section 1.1306. It is believed that this proposal conforms to all applicable rules and regulations of the FCC.

Proposed Station Data

Output Frequency: 96.9 MHz.

Input Frequency: 100.3 MHz.

Output Channel: 245

ERP: 200 watts

Class: D

Proposed Antenna Location

The geographic coordinates (NAD 27) of the proposed site are as follows:

North Latitude: 44-22-29 N

West Longitude: 103-43-54 W

Transmitting Antenna

ANTENNA: Scala CL-FM, single bay, horizontal.

Interference

Overlap with the pertinent contours of the proposed station and any first, second, third adjacent and IF channel stations, is shown in Table 1 and the interfering contours are displayed in Figure 1.

Unattended Operation

The proposed station will comply with all rules and requirements regarding unattended operation.

Multiple Translators

The applicant certifies that it does not have any interest in an FM translator that serves substantially the same area and that rebroadcasts the same signal as the proposed translator.

Environmental Considerations

The station will operate with an effective radiated power of 200 watts from a single-bay, directional antenna.

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The worst-case, predicted power density for the proposed station at two meters above ground level is estimated to be $113 \mu\text{W}/\text{cm}^2$, which will occur at a horizontal distance of 5.2 meters from the base of the tower. Since the permitted power density for general population exposure (GPE) in the FM band is $200 \mu\text{W}/\text{cm}^2$, the proposed station is in compliance.

Access to the transmitting site is restricted and appropriately marked with warning signs. When it becomes necessary for workers to approach the tower, appropriate measures, such as reduction

or shut down of power if necessary, shall be taken to ensure that the human exposure to radio-frequency radiation will not exceed the FCC guidelines.

Callsign	State	City	Freq	Channel	ERP_w	Class	Status	Distance_km	Sep	Clr
KPSD-FM	SD	FAITH	97.1	246	100000	C	LIC	138.7	0	14.99 dB
KAML-FM	WY	GILLETTE	97.3	247	100000	C0	LIC	128.69	0	19.32 dB
KFND-LP	SD	RAPID CITY	97.1	246	100	LP100	LIC	53.39	13	26.99 dB
K258AJ	SD	RAPID CITY	97.5	248	180	D	CP	53.24	0	27.85 dB
KQWY	WY	LUSK	96.3	242	100000	C	CP	202.35	0	31.98 dB
K244EE	WY	NEWCASTLE	96.7	244	75	D	LIC	71.78	0	33.34 dB
KQSK	NE	CHADRON	97.5	248	100000	C1	LIC	199.85	0	34.08 dB
K242BK	SD	RAPID CITY	96.3	242	250	D	LIC	51.33	0	35.78 dB

TABLE 1: Pertinent first, second, third adjacent, and IF channel stations spaced with proposed station.

Site: PROPOSED
Coordinates: 44-22-29.0 N, 103-43-54.0 W
Freq: 96.90000 MHz
ERP: 199.97 W

Bearing	ERP W	HAAT	Lat	Lon
0	0.02	149	44.38369	-103.731667
30	25.92	147	44.444377	-103.675326
60	160.18	108	44.428529	-103.600982
90	160.18	-8	44.374694	-103.651699
120	25.92	-160	44.356811	-103.688297
150	0.02	-276	44.366956	-103.725395
180	0.02	-370	44.365755	-103.731667
210	0.17	-342	44.363084	-103.741065
240	0.32	-378	44.367327	-103.74958
270	0.32	-260	44.37472	-103.752354
300	0.17	-137	44.38144	-103.74795
330	0.02	54	44.382488	-103.73794

TABLE 2: HAAT and ERP for proposed station.