

Northern Plains

Aberdeen, SD

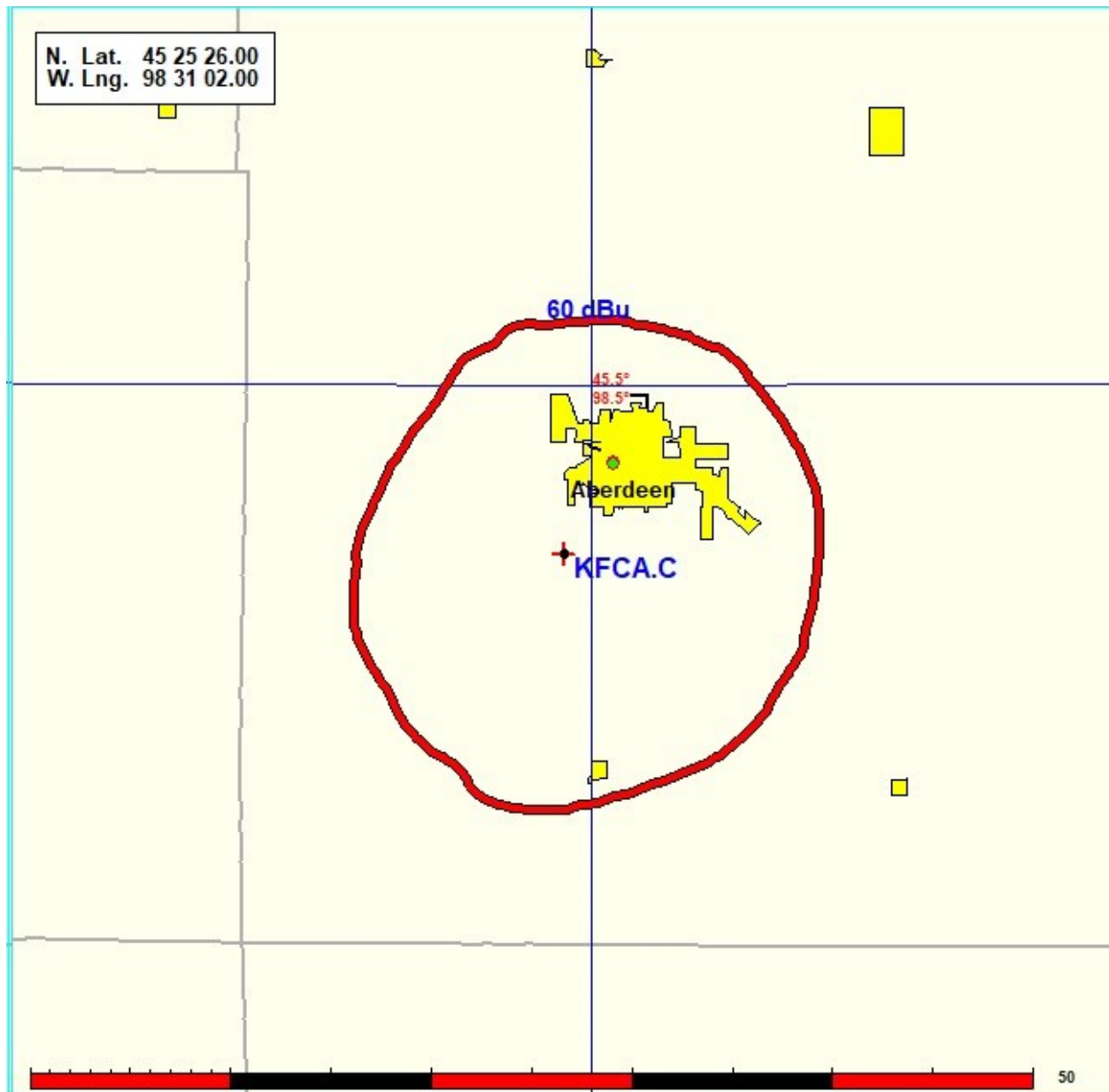
Technical Certifications – Construction Permit Minor Modification

As shown below, the proposed facility meets the applicable engineering standards and assignment requirements of 47 CFR §73.203, §73.207, §73.213, §73.215, §73.509, and §73.515.

CP Mod for 800W Northern Plains Baptist Church											
REFERENCE		CH#	201A	-	88.1 MHz,	Pwr= 0.8 kw,	HAAT= 46.6 M,	COR= 448 M	DISPLAY DATES		
45 25 26.00 N.		Average Protected F(50-50)= 11.87 km							DATA 07-21-22		
98 31 02.00 W.		Omni-directional							SEARCH 07-21-22		
CH	CALL	TYPE	ANT	AZI	DIST	LAT	PWR(kw)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG	HAAT(M)	COR(M)	LICENSEE	(Overlap	in km)
201A	KFCA	CP	_CN	0.0	0.00	45 25 26.00	6.000		---	Reference---	
Aberdeen		SD		0.0	0000167731	98 31 02.00	85	488	Northern Plains Baptist Ch		
201D	K201HB	LIC	_VN	326.3	4.26	45 27 20.90	0.250	34.5	10.3	-40.7*	-42.4*
Aberdeen		SD		146.3	BLFT20110624AAJ	98 32 51.30	51	458	CSN International		

Terrain database is NGDC 30 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
 In & Out distances between contours are shown at closest points. Reference zone= - Zone 2, Co to 3rd adjacent.
 All separation margins (if shown) include rounding. Call signs with strikeout need not be protected.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
 "*"affixed to 'IN' or 'OUT' values = site inside restricted contour.
 Reference station has protected zone issue: AM tower

The map below demonstrates community coverage requirements for the city of license, fulfilling the requirement of 47 CFR §73.515, NCE FM transmitter location.



Environmental Effect

The proposed facility is excluded from environmental processing under 47 CFR §1.1306 (i.e., the facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments).

The proposed site is not in an officially designated wilderness area, wildlife preserve, flood plain, or near a site that is either listed or eligible for listing in the National Register of Historic Places. The proposed construction will not adversely affect any listed or proposed threatened or endangered species or their critical habitats, or any sites significant to Native American Religious practice, and will not involve any significant change in surface features. The applicant does not propose to light the antenna support structure with high intensity white lighting.

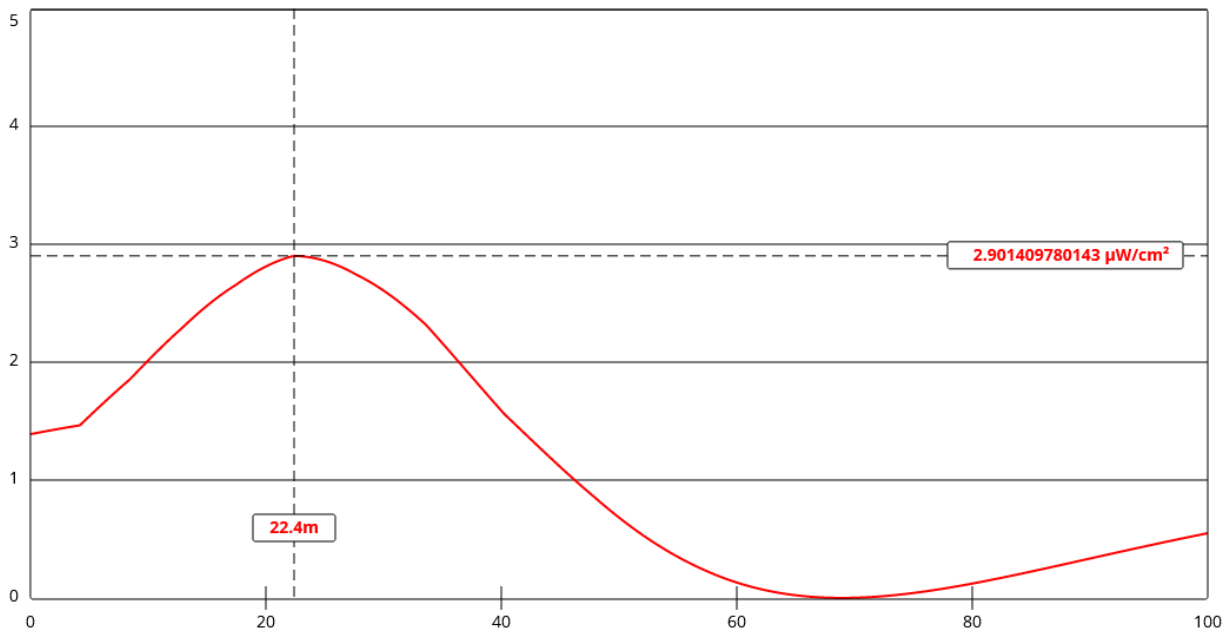
The proposed facility is located on an existing tower, which has fencing with a locked gate preventing public access. The applicant proposes a 2 bay 7/8-wave spaced circularly polarized antenna. Also located on the tower is K271CN (Facility ID 142013), K233BN (Facility ID 146394), K296FW (Facility ID 141966), and KSDN-FM (Facility ID 25118).

Shown below is the output of the Commission's FM Model program, with a maximum calculated exposure of $2.90 \mu\text{W}/\text{cm}^2$, well below the maximum permissible exposure for the general public, or 1.45% of the limit of $200 \mu\text{W}/\text{cm}^2$. Adding together all broadcast facilities yields a total exposure that is still below the limit at 75%, with the proposed facility making a small contribution to total exposure.

The applicant is cognizant of its responsibility to protect those workers whose duties require that they be in the vicinity of the antenna from exposure to radio frequency fields in excess of those outlined above. To that end, signage will be attached to the base of the antenna support structure warning all workers of the potential for harmful exposure and directing them to contact the responsible person at the broadcast station. That person will ascertain whether the worker will be in areas where there is an exposure hazard, and if so, arrange to shut down the transmitter(s). The permittee/licensee will also coordinate with other users of the site to reduce power or cease operation in order to protect persons having access to the site, tower or antenna from radiofrequency radiation in excess of Commission guidelines.

For these reasons, the applicant believes that a Commission grant of this application would not have a significant environmental impact.

FM Model for Proposed Facility:



[View Tabular Results +](#)

Channel Selection	Channel 201 (88.1 MHz) ▾		
Antenna Type +	EPA Type 2: Opposed V Dipole ▾		
Height (m)	<input type="text" value="50"/>	Distance (m)	<input type="text" value="100"/>
ERP-H (W)	<input type="text" value="800"/>	ERP-V (W)	<input type="text" value="800"/>
Num of Elements	<input type="text" value="2"/>	λ	<input type="text" value="0.875"/>
Num of Points	<input type="text" value="500"/>	Apply	

Call	Facility ID	ERP (kW)	COR (m)	Power Density	General Population Limit	Pct	Occupational Limit	Pct
K271CN	142013	0.25	79	1.7	200.0	0.8	1000.0	0.2
K233BN	146394	0.25	50	4.4	200.0	2.2	1000.0	0.4
K296FW	141966	0.25	80	1.7	200.0	0.8	1000.0	0.2
KSDN-FM	25118	70	140	138.9	200.0	69.5	1000.0	13.9
Proposed		10	120	2.9	200.0	1.5	1000.0	0.3
						74.8		15.0