

W17ET-D MINOR MODIFICATION TO LICENSE FCC FILE #0000213621
CH 17 1 kW DIRECTIONAL RC 346.8 M AMSL SIOUX FALLS, SOUTH DAKOTA
ENGINEERING NARRATIVE AND RF RADIATION ENVIRONMENTAL ANALYSIS
APRIL 2024

Proposed Change in Facilities

W17ET-D is a licensed LPTV DTV facility authorized in file number 0000213621. The proposed facility is believed to qualify as a minor change:

The applicant proposes herein to move to a high natural elevation on farmland. The proposed antenna system has been evaluated in Towair and no FAA filing is required. Please see screen shot below.

DETERMINATION Results	
Structure does not require registration. The structure meets the 6.10-meter (20-foot) Rule criteria.	
Your Specifications	
NAD83 Coordinates	
Latitude	42-53-47.7 north
Longitude	089-39-48.3 west
Measurements (Meters)	
Overall Structure Height (AGL)	9.5
Support Structure Height (AGL)	6.4
Site Elevation (AMSL)	338
Structure Type	
BPOLE - Building with Pole	

The site change and proposed facilities are believed to comply with FCC policy and rules based on the following:

The proposed CH 17 LPTV protected contour and the licensed contour have an area of common overlap as depicted on Figure 1 attached.

The proposed site is located a distance of 41.35 kilometers (25.7 miles) from the licensed site coordinates in compliance with rule section 74.787 (b) (iii).

The proposed antenna system consists of two Kathrein UHF log periodic antennas, model CL-1469, horizontally polarized, with one antenna oriented at 45 degrees and one at 245 degrees without beam tilt to make up a custom composite pattern. The antenna radiation center is 8.8

meters AGL. Formula 10 OF OET Bulletin No. 65, Edition 97-01, has been used to calculate the power density. A circle with a radius of 10.5 meters is the extent of any possible RF radiation that could exceed the 325 microwatt public exposure limit. The calculated power density for a person 6' tall at that radius, when employing the antenna elevation pattern, is 38.9 microwatts compared to the public exposure limit of 325 microwatts.

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.

Access, power and supporting structure are all existing.

Below is a copy of the TVStudy Report for CH 17 based on the facilities described above with the antenna pattern lobes oriented at 45 and 245 degrees true. As can be seen at the conclusion of the report there is no impermissible caused interference. It is believed that the proposed facility provides full protection to other television facilities.

TVStudy Report

Study created: 2024.04.05 14:24:55

Study build station data: LMS TV 2024-04-04

Proposal: W17ET-D D17 LD LIC SIOUX FALLS, SD
 File number: BLANK0000213621
 Facility ID: 182499
 Station data: User record
 Record ID: 1497
 Country: U.S.

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WTVO	D16	DT	LIC	ROCKFORD, IL	BLCDT20021024AAS	78.8 km
No	W16DU-D	D16	LD	LIC	BLOOMINGTON, WI	BLANK0000062263	104.5
No	WYTU-LD	D16	LD	LIC	MILWAUKEE, WI	BLANK0000084618	142.9
No	K17MH-D	D17	LD	LIC	CEDAR FALLS, IA	BLANK0000177243	257.3
Yes	KWQC-TV	D17	DT	LIC	DAVENPORT, IA	BLANK0000097891	164.3
No	KDIT-CD	D17-	DC	LIC	Des Moines, IA	BLANK0000199021	345.5
No	KDIT-LD	D17	LD	LIC	FORT DODGE, IA	BLANK0000176977	369.5
No	WLCF-LD	D17	LD	LIC	DECATUR, IL	BLANK0000121247	334.1
No	W17EH-D	D17	LD	LIC	QUINCY, IL	BLANK0000240011	355.7
No	WEIJ-LD	D17	LD	LIC	FORT WAYNE, IN	BLANK0000177440	419.7
No	WYIN	D17	DT	CP	GARY, IN	BLANK0000210997	253.7
No	WYIN	D17	DT	LIC	GARY, IN	BLEDT20040206AAA	253.7
No	WPBI-LD	D17	LD	LIC	LAFAYETTE, IN	BLANK0000088160	362.5
No	WOTV	D17	DT	LIC	BATTLE CREEK, MI	BLANK0000141782	344.3
No	WMNN-LD	D17	LD	LIC	LAKE CITY, MI	BLANK0000118076	380.6
No	K17MX-D	D17	LD	LIC	FROST, MN	BLANK0000062750	353.8
No	KMWE-LD	D17	LD	LIC	SAINT CLOUD, MN	BLANK0000227877	356.6
No	WEAU	D17	DT	LIC	EAU CLAIRE, WI	BLANK0000120880	222.3

No	WGBD-LD	D17	LD	LIC	GREEN BAY, WI	BLANK0000068358	215.2
No	WBME-CD	D17	DC	LIC	MILWAUKEE, WI	BLANK0000086894	142.9
No	W17DZ-D	D17	LD	LIC	SISTER BAY, WI	BLANK0000086983	331.5
No	KYIN	D18	DT	LIC	MASON CITY, IA	BLEDT20090612AHJ	255.0
No	KRIN	D18	LD	APP	WATERLOO, IA	BDRTEDT20120604AFO	88.7
No	WMEU-CD	D18	DC	LIC	CHICAGO, IL	BLANK0000086889	201.2
No	WMEU-CD	D18	DC	CP	CHICAGO, IL	BLANK0000196962	200.8
No	DWMKB-LP	D18z	LD	APP	Rochelle, IL	BLANK0000054707	107.0
No	WLUK-TV	D18	DT	LIC	GREEN BAY, WI	BLANK0000199689	215.2
No	WMSN-TV	D18	DT	LIC	MADISON, WI	BLANK0000113879	20.6
No	DWMKB-LP	N25z	TX	APP	Rochelle, IL	BLTTL20070813AFM	107.0

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D17
Mask: Full Service
Latitude: 42 53 47.70 N (NAD83)
Longitude: 89 39 48.30 W
Height AMSL: 347.3 m (Adjusted based on actual ground elevation calculation)
HAAT: 0.0 m
Peak ERP: 1.00 kW
Antenna: Kathrein CL-1469 Custom Composite 0.0 deg
Elev Pattnr: Generic

49.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.050 kW	26.7 m	8.9 km
45.0	1.00	49.6	24.0
90.0	0.050	72.3	13.6
135.0	0.002	46.2	5.3
180.0	0.002	49.1	5.5
225.0	0.637	22.7	16.8
270.0	0.514	31.6	16.0
315.0	0.002	16.8	4.3

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 39 m

Distance to Canadian border: 539.8 km

Distance to Mexican border: 1794.1 km

Conditions at FCC monitoring station: Allegan MI
Bearing: 94.8 degrees Distance: 304.3 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 262.0 degrees Distance: 1328.3 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%

---- Below is IX received by proposal BLANK0000213621 ----

Proposal receives 32.06% interference from scenario 1
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 she believes them to be true and correct.



Clarence M. Beverage
for Communications Technologies
Medford, New Jersey
April 5, 2024