

TECHNICAL STATEMENT
KVAM(FM) CHEYENNE, WYOMING, CH. 201A
MINOR CHANGE APPLICATION
CEDAR COVE BROADCASTING, INC.
MAY 2023

This Technical Statement is in support of a minor change application for KVAM(FM) Cheyenne, Wyoming, facility ID 86624.

KVAM seeks to relocate to an existing 30.5 meter tower site located at N41°-02'-19.2", W104°-47'-03.2", NAD 83. It proposes to operate with circular polarization using a Nicom BKG-4L, four bay with 0.5 spacing between the bays. The antenna will be mounted 21.1 meters above ground and 1930 meters Height Above Mean Sea Level and 74 meters Height Above Average Terrain. KVAM proposes to operate with 2.2 KW (2,200 watts) Effective Radiated Power.

Figure 1 is a detailed channel interference study conducted for the proposed operation. There will not be any prohibited overlap with any other pertinent Co or Adjacent channel stations, with exception of third adjacent channel KDNR(FM) South Greeley, Wyoming, facility ID 84104 on channel 204A.

KDNR(FM) was authorized under BPED-20160202ABM which requested a waiver of interference utilizing the "WCPE Waiver", docket 91-104, in regards to KVAM (former call sign KAIX). Figure 2 was taken from the KDNR minor change application documenting the proposed interference. Figure 3 is a copy of the current license for KDNR, BLED-20170926AFN, showing condition 3 which documents the contour overlap with KVAM (formerly KAIX). Figure 4 shows the currently licensed KVAM predicted 100 dBμ contour which covers 4,196 persons. Figure 5 shows the proposed 100 dBμ contour for KVAM. It will

also only cover 130 persons, or a decrease in population coverage, hence any interference to KDNR should be reduced.

Figure 6 is a present and proposed 60 dB μ contour map for KVAM.

Figure 7 is a detailed interference contour overlap study with KVOD(FM) Lakewood, Colorado, facility ID 83535, operating on channel 201C3.

It was determined that the proposed operation of KVAM(FM) at the proposed transmitter site will meet all of the required Commission rules for a Non-Commercial FM broadcast station.

FIGURE 1 - DETAILED CHANNEL INTERFERENCE STUDY

KVAM(FM) CHEYENNE, WY CH. 201A

REFERENCE CH# 201A - 88.1 MHz, Pwr= 2.2 kW, HAAT= 73.5 M, COR= 1930 M
 41 02 19.20 N. Average Protected F(50-50)= 19.32 km
 104 47 03.20 W. Omni-directional

DISPLAY DATES
 DATA 05-30-23
 SEARCH 05-30-23

CH CITY	CALL	TYPE STATE	ANT AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
201A Cheyenne	KVAM	LIC _CN WY	21.1 201.2	14.40 0000188802	41 09 34.50 104 43 19.80	3.500 64	1898	---Reference---		
204A South Greeley	KDNR *	LIC DCN WY	288.9 108.7	21.39 BLED20170926AFN	41 06 02.00 105 01 31.00	2.500 127	2.7 2153	31.4 Western Inspirational Broa	6.4	-11.6*
201C3 Lakewood	KVOD	LIC _CN CO	194.9 14.6	149.99 BLED20180405ABR	39 43 58.00 105 14 10.00	4.400 238	126.8 2275	51.1 Public Broadcasting Of Col	0.2	26.3
202A Fort Collins	KVXO	LIC _CN CO	224.4 44.1	65.53 BLED20140731AQY	40 36 59.90 105 19 37.90	0.140 374	46.5 2545	27.4 Public Broadcasting Of Col	0.8	8.1
201A Laramie	KJAR	CP _CN WY	279.6 99.1	65.10 0000167334	41 07 59.40 105 32 55.80	0.960 11	35.2 2364	10.1 Cedar Cove Broadcasting, I	17.6	7.9
201A Kimball	KAVA	CP _CN NE	75.4 256.2	96.97 0000167330	41 15 08.00 103 39 51.00	0.850 -3	33.7 1468	9.8 Cedar Cove Broadcasting, I	40.5	16.1
201C3 Wheatland	KKWY	LIC _HN WY	350.6 170.4	110.09 0000204134	42 00 58.40 105 00 09.90	6.200 42	69.1 1526	15.9 Cedar Cove Broadcasting, I	20.8	28.0
203A Laramie	KUWY	LIC _CN WY	298.5 118.0	63.86 BLED20080303AJB	41 18 35.90 105 27 18.90	0.135 298	0.8 2703	17.7 University Of Wyoming	48.5	44.2
254A Laramie	KRQU«	LIC NCN WY	298.6 118.1	63.80 BLH20120723ADO	41 18 38.90 105 27 13.90	0.110 327	0.0 2730	0.0 Appaloosa Broadcasting Com	9.5R	54.3M
204A Red Feather Lakes	KRDF	CP _CN CO	255.5 74.9	74.79 0000166710	40 52 03.00 105 38 36.00	0.005 246	0.2 2928	10.7 Ridgeline Radio, Inc.	57.7	62.5
203C2 Boulder	KGNU-FM	CP DCN CO	185.4 5.4	104.79 0000157412	40 05 57.00 104 54 03.20	6.500 339	2.2 1860	35.2 Boulder Community Broadcas	78.5	64.4
202A Scottsbluff	KLJV	LIC _CN NE	41.4 222.0	119.32 BMLE20080523AEY	41 50 20.90 103 49 54.80	0.390 238	28.0 1532	18.4 Educational Media Foundati	70.4	68.5
203A Boulder	KGNU-FM	LIC DCN CO	195.2 15.0	120.34 BLED20100528ADY	39 59 32.90 105 09 17.90	4.000 65	3.0 1732	31.8 Boulder Community Broadcas	93.8	84.7
202A Brush	768440	APP _CN CO	131.4 312.2	130.08 0000166836	40 15 34.90 103 38 07.80	3.000 -1	19.5 1335	13.2 Brush School District Re-2	88.9	85.9
202C3 Winter Park	KFFR	LIC DHN CO	217.0 36.4	142.94 0000161226	40 00 28.00 105 47 40.00	10.000 -171	21.3 2754	14.5 Fraser Valley Community Me	101.4	97.7
204C1 Scottsbluff	KSCF	CP DCN NE	56.2 237.1	146.35 0000166024	41 45 40.00 103 19 14.00	60.000 38	3.8 1221	36.3 Mybridge, DbA As Mybridge	119.9	107.8
254C1 Sidney	KSID-FM«	LIC _CN NE	82.6 263.7	134.33 BLH20180629AAT	41 10 57.90 103 11 46.70	100.000 117	0.0 1461	0.0 Flood Communications West,	21.5R	112.8M

Terrain database is GLOBE 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= - ZN2, Co to 3rd adjacent.

All separation margins (if shown) include rounding.

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.

« = Station meets FCC minimum distance spacing for its class.

*Existing interference from KDNR(FM) presently exists to the licensed operation of KVAM(FM). The proposed relocation of KVAM(FM) will actually reduced interference from KAIX(FM). See the Technical Statement for more details.

KDNR(FM) South Greeley, WY requests a waiver of 73.509 for this minor modification for KDNR(FM) to RECEIVE interference from KAIX(FM), Cheyenne, WY.

WIBI is seeking a grant of this minor modification of its license and a waiver as this proposal is engineered so as to **NOT CAUSE** interference to any existing station, known application or allocation. As has been demonstrated, the proposed service area would receive interference from 3rd adjacent station KAIX(FM). This proposal will not cause interference to KAIX(FM), as the 100 dBu F(50,10) interfering contour of KDNR(FM) will not overlap the KAIX(FM) 60 dBu F(50,50) protected contour (see **FIGURE 9**).

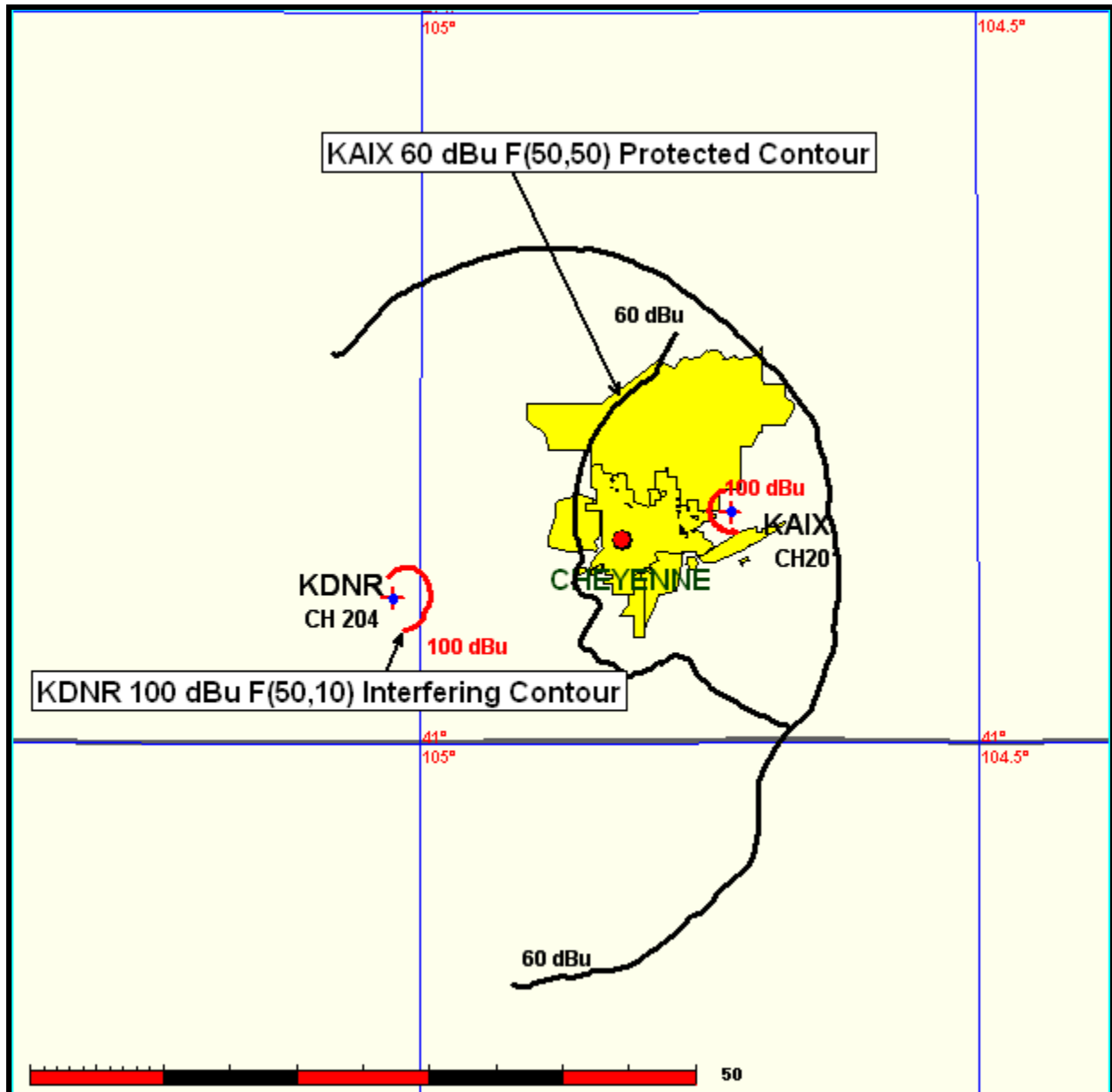


Figure 9

As shown above (**Figure 9**), this proposal will not cause interference to KAIX(FM). However, as noted above, KDNR's protected 60 dBu F(50,50) contour would receive prohibited overlap from KAIX(FM). The area of overlap would be approximately 9.70 km² with a population of 1,626 persons.

The current 60 dBu F(50,50) contour of KDNR(FM) contains 1,043 km² and the grant of this minor change will allow KDNR(FM) to increase its overall coverage area to 2,005.4 km², **an increase of 92.3%** in area served.

Currently KDNR(FM) provides service to 68,058 persons (2010 Census), and this proposal would allow the station to reach 83,186 persons (2010 Census) (adjusted for population in the overlap area (84,812 – 1,626)), **an increase of 22.23 %**.

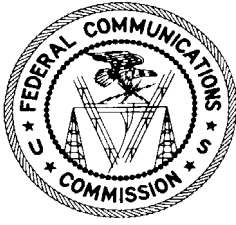
This waiver request is similar to the request made by the licensee of WCPE(FM) in *Educational Information Corporation*,⁶ FCC Red 2207 (1991). WCPE(FM) requested a waiver in its application to permit de minimus overlap “received” and in the same proceeding WCCE(FM) requested a waiver in its applications to permit de minimus overlap “caused”. Please note that WIBI is not requesting waiver relative to overlap “caused”, **ONLY** overlap “received”. More recently the Commission granted this type of a waiver to *Educational Media Foundation* in its minor change application of KYLV, Oklahoma City, OK BPED-20040210AAQ, to *CSN International* in its minor change applications of KJCH Coos Bay, OR BPED-20050603AAC and *Hi-Line Radio Fellowship* in its minor change application of KBLW, Billings, MT BPED-20120924AAW.

Because the Commission has recognized the importance of affording noncommercial educational stations the flexibility to expand and meet the growing demand for service, WIBI believes that its instant request for KDNR, South Greeley, WY fully satisfies the criteria established by the Commission for a waiver of Section 73.509 of the rules as it pertains to overlap received. Clearly, this benefit heavily outweighs the potential for interference in an area that would be a maximum of only around **0.48%** of KDNR’s proposed service area.. Accordingly the Applicant respectfully submits that its requested waiver of Section 73.509(a) of the Commission’s rules is justified in this instance.

NIER Compliance

The proposed facility is located on a currently registered tower at a multiple transmitter site. There will be no change in the CORAGL. A study was made to ascertain whether these facilities will meet the requirement of 47 CFR 1.1307(B) and the exposure guidelines set out in the FCC Office of Engineering Technology Bulletin 65, edition 97-01 (OET-65), and to determine whether the instant application might be subject to environmental processing or require the preparation of an environmental assessment.

The proposed facility will operate with 2500 watts horizontal and 2500 watts vertical polarization, using a two (2) bay ERI rototiller type antenna, with one (1) wavelength spacing, at 70.3 meters AGL.



United States of America
FEDERAL COMMUNICATIONS COMMISSION
FM BROADCAST STATION LICENSE

Authorizing Official:

Official Mailing Address:

WESTERN INSPIRATIONAL BROADCASTERS, INC.
6363 HIGHWAY 50 EAST
CARSON CITY NV 89701

Rodolfo F. Bonacci
Assistant Chief
Audio Division
Media Bureau

Grant Date: October 06, 2017

Facility Id: 84104

Call Sign: KDNR

This license expires 3:00 a.m.
local time, October 01, 2021.

License File Number: BLED-20170926AFN

This license covers permit no.: BPED-20160202ABM

Subject to the provisions of the Communications Act of 1934, subsequent acts and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions set forth in this license, the licensee is hereby authorized to use and operate the radio transmitting apparatus herein described.

This license is issued on the licensee's representation that the statements contained in licensee's application are true and that the undertakings therein contained so far as they are consistent herewith, will be carried out in good faith. The licensee shall, during the term of this license, render such broadcasting service as will serve the public interest, convenience, or necessity to the full extent of the privileges herein conferred.

This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequency designated in the license beyond the term hereof, nor in any other manner than authorized herein. Neither the license nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This license is subject to the right of use or control by the Government of the United States conferred by Section 606 of the Communications Act of 1934.

Callsign: KDNR

License No.: BLED-20170926AFN

Name of Licensee: WESTERN INSPIRATIONAL BROADCASTERS, INC.

Station Location: WY-SOUTH GREELEY

Frequency (MHz): 88.7

Channel: 204

Class: A

Hours of Operation: Unlimited

Transmitter: Type Accepted. See Sections 73.1660, 73.1665 and 73.1670 of the Commission's Rules.

Transmitter output power: 1.95 kW

Antenna type: Directional

Description: ERI LP-2E-DA, two sections

Antenna Coordinates: North Latitude: 41 deg 06 min 02 sec

West Longitude: 105 deg 01 min 29 sec

	Horizontally Polarized Antenna	Vertically Polarized Antenna
Effective radiated power in the Horizontal Plane (kW):	2.50	2.50
Height of radiation center above ground (Meters):	70	70
Height of radiation center above mean sea level (Meters):	2153	2153
Height of radiation center above average terrain (Meters):	127	127

Antenna structure registration number: 1009309

Overall height of antenna structure above ground (including obstruction lighting if any) see the registration for this antenna structure.

Special operating conditions or restrictions:

- 1 The relative field strength of neither the measured horizontally nor vertically polarized radiation component shall exceed at any azimuth the value indicated on the composite radiation pattern authorized by construction permit BPED-20160202ABM.

A relative field strength of 1.0 on the composite radiation pattern herein authorized corresponds to the following effective radiated power:

2.50 kilowatts.

Principal minima and their associated field strength limits:

240 degrees True: 2.00 kilowatts

320 degrees True: 0.44 kilowatts.

Special operating conditions or restrictions:

- 2 Waiver of 47 CFR Section 73.1125 was previously granted to allow operation of this facility as a satellite operation of the following station:

KNIS(FM), Facility ID No. 71818, Carson City, Nevada, Western Inspirational Broadcasters, Inc.
- 3 Further modifications of Station KAIX(FM), Facility ID No. 86624, will not be construed as a "per se" modification of KDNR(FM)'s facility. (See Educational Information Corporation, 6 FCC Rcd 2207 (1991)).
- 4 Grant of this license application is conditioned on the continuous operation of the licensed facility for the twelve-month period following grant. The failure of the facility to so operate will result in the rescission of this grant, dismissal of the license application and the forfeiture of the associated construction permit pursuant to 47 C.F.R. § 73.3598(e) unless the licensee rebuts the presumption that the authorized facilities were temporarily constructed.
- 5 The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

*** END OF AUTHORIZATION ***

FIGURE 4 - PREDICTED 100 DBU CONTOUR AS LICENSED
KVAM(FM) CHEYENNE, WY CH. 201A

Coverage Study - GLOBE 30 Sec
05-30-2023

KVAM CH201 A , 3.5 kW, 64.0m HAAT, 1898.0m COR AMSL
Interference Contour = 100 dBu. Population = 4,196

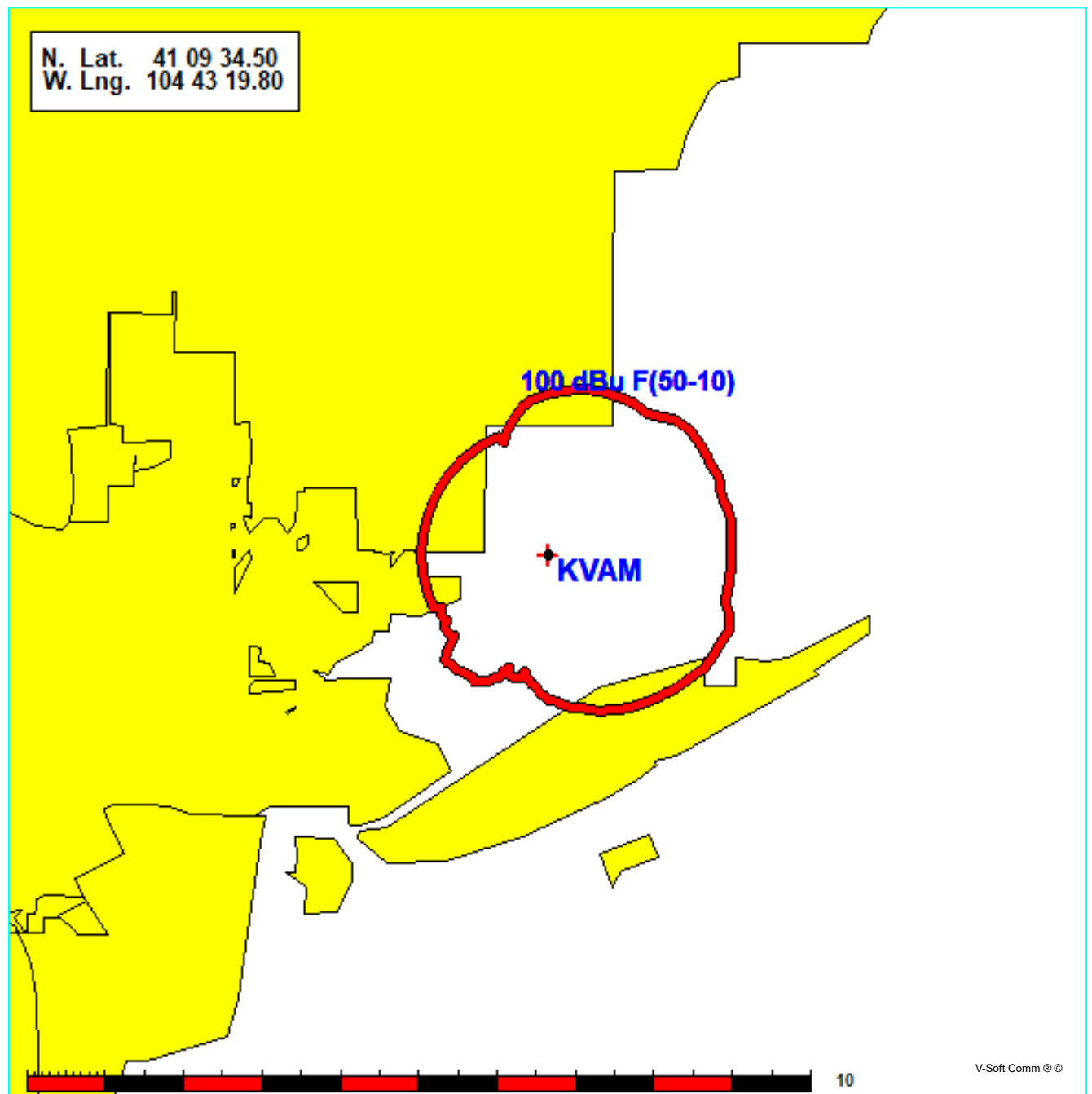


FIGURE 5 - PROPOSED 100 DBU INTEFERENCE CONTOUR
KVAM(FM) CHEYENNE, WY CH. 201A

Coverage Study - GLOBE 30 Sec
05-30-2023

KVAM CH201 A , 2.2 kW, 73.5m HAAT, 1930.0m COR AMSL
Service Contour = 100 dBu. Population = 130

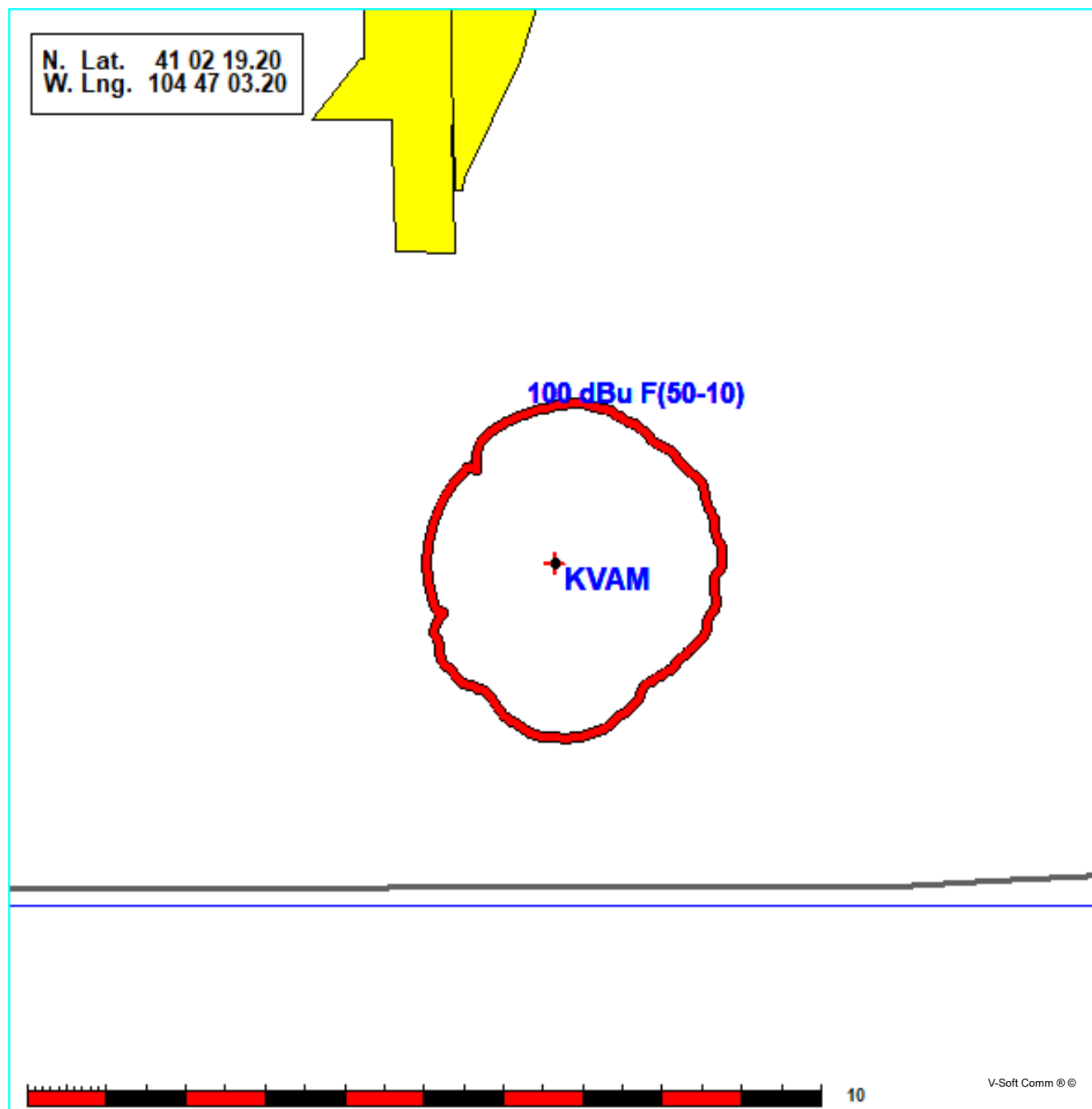


FIGURE 6 - PRESENT AND PROPOSED 60 DBU CONTOURS
KVAM(FM) CHEYENNE, WY CH. 201A

Coverage Study - GLOBE 30 Sec
05-30-2023

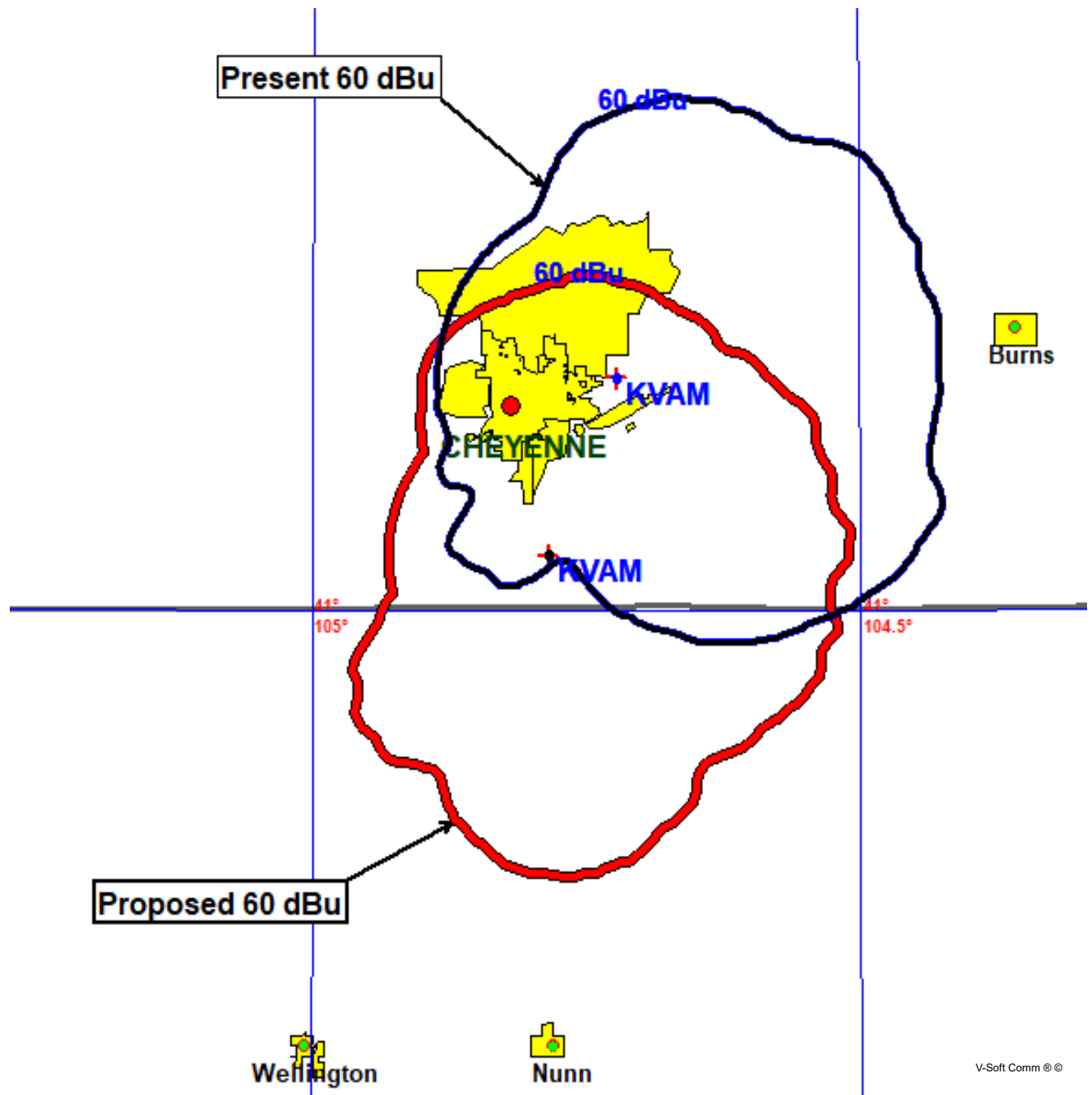


FIGURE 7 - DETAILED INTERFERENCE STUDY WITH KVOD(FM)
KVAM(FM) CHEYENNE, WY CH. 201A

FMCommander Single Allocation Study - 05-30-2023 - GLOBE 30 Sec
KVAM's Overlaps (In= 0.21 km, Out= 26.28 km)

KVAM CH 201 A

Lat= 41 02 19.20, Lng= 104 47 03.20

2.2 kW 73.5 m HAAT, 1930 m COR

Prot.= 60 dBu, Intef.= 40 dBu

KVOD CH 201 C3 BLED20180405ABR

Lat= 39 43 58.00, Lng= 105 14 10.00

4.4 kW 238 m HAAT, 2275 m COR

Prot.= 60 dBu, Intef.= 40 dBu

