

Channel Study

REFERENCE CH# 210D - 89.9 MHz, Pwr= 0.06 kW DA, HAAT= 318.0 M, COR= 1950 M DISPLAY DATES
 44 36 08.0 N. Average Protected F(50-50)= 16.2 km DATA 10-08-12
 106 55 52.0 W. Standard Directional SEARCH 10-08-12

CH CITY	CALL	TYPE STATE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
210D Sheridan, Etc.	K210AM	LIC	HN WY	0.0 0.0	0.00 BLFT19840319MR	44 36 08.0 106 55 52.0	0.066 318	77.2 1950	24.5 Montana State University -	-98.5*	-93.8*
*210A Sheridan	KVLZ	LIC	CX WY	0.1 180.1	21.80 BLED20090305AFO	44 47 54.0 106 55 51.0	0.150 -42	20.8 1183	6.2 Educational Media Foundati	-20.3	-58.4
06+T Sheridan	DK06AT	CP	D N WY	278.7 98.6	14.78 BPTVL20100317ABJ	44 37 20.0 107 06 57.0	3.000	2.3 2357	49.0 Lovcom, Inc.	51.3R	-36.5M
207C3 Sheridan	KWCF	LIC	CX WY	74.3 254.3	0.22 BLED20090729AFG	44 36 10.0 106 55 42.0	0.850 292	1.6 1920	9.8 Calvary Chapel Of Twin Fal	-3.8*	-9.6*
213A Buffalo	KBUW	LIC	C WY	149.8 329.9	32.78 BLED19991117ABW	44 20 50.0 106 43 25.0	0.430 -60	1.5 1530	8.2 University Of Wyoming	12.9	19.8
210C2 Colstrip	KYPC	LIC	CX MT	0.9 180.9	137.41 BLED20091104AEO	45 50 17.0 106 54 16.0	3.500 357	100.6 1473	38.7 Montana State University -	14.2	25.9
06 D Broadus	K06AA-D	LI	N MT	53.4 234.6	152.87 BLDTV20101103ACF	45 24 38.0 105 21 28.0	0.088 160	0.5 1078	8.2 Powder River T.v. Board	134.5R	18.4M
06NT Howard	K06JU	LI	DHN MT	358.6 178.5	192.21 BLTTV19800102IA	46 19 50.0 106 59 35.0	0.180 91	9.8 884	7.8 Forsyth T.v. Tax District	134.5R	57.7M
06 D Miles City	K06FE-D	LI	D N MT	22.1 202.9	220.61 BLDTV20090731AAG	46 26 07.8 105 50 49.9	0.100 103	2.3 815	49.0 Mmm License Ii Llc	134.5R	86.1M
06ZT Gillette	K06JM	LI	D N WY	110.9 291.8	105.43 BLTVA20031223ACO	44 15 24.0 105 41 40.0	3.000 150	9.8 1525	7.8 Duhamel Broadcasting Enter	17.6R	87.8M
06NT Ryegate	K06FU	LI	DHN MT	317.0 135.4	261.73 BLTTV3055	46 18 06.0 109 15 14.0	0.001 120	9.8 1229	7.8 Golden Valley T.v. Associa	134.5R	127.2M
06 D Crawford	K06KR-D	LI	D N NE	125.9 308.3	355.96 BLDTV20081125ANV	42 40 13.0 103 24 09.0	0.028 100	0.5 1179	8.2 Nebraska Educational Telec	134.5R	221.5M
06 D White Sulphur Sprin	K06NV-D	LI	D N MT	305.5 122.7	368.99 BLDTV20120618ACA	46 27 44.0 110 51 22.0	0.060 340	2.3 1849	49.0 Meagher County Television	134.5R	234.5M
06 D Chadron	K06JC-D	LI	D N NE	120.9 303.6	372.86 BLDTV20081121AKA	42 48 46.8 103 00 22.0	0.066 155	0.5 1153	8.2 Nebraska Educational Telec	134.5R	238.4M
06 D Wolf Point	K06AV-D	LI	D N MT	13.2 194.1	401.58 BLDTV20120614ACL	48 06 44.0 105 41 42.0	0.019 14	0.5 626	8.2 Wolf Point Tv District	134.5R	267.1M
06 D Townsend	1352968	AP	D N MT	299.0 115.7	405.62 BNPDTV20090825BEB	46 16 38.8 111 33 05.6	0.050 370	0.5 1535	8.2 Townsend Tv District	134.5R	271.1M

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=West Zone,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 protected contour.

***The proposed facility, K210AM, is a class D Grandfathered station as defined in 47 C.F.R. 74.1235(j) and is operating on channel 210. This application does not propose an increase in coverage. Therefore the currently authorized overlap does not change.**

Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 60 dBu contour of third adjacent channel station KWCF, channel 207C3, Sheridan, Wyoming. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for K210AM:	60 watts
The proposed COR for K210AM:	6 meters
KWCF F(50/50) contour at proposed site:	119 dBu
The F(50/10) contour of proposed K210AM	159 dBu

By taking into account the antenna vertical elevation pattern for the SCA CL-FM/H, it has been determined that the predicted interfering contour will not actually reach the ground (see exhibit 13-A1). The maximum distance to the interference contour is 0.6 meters. Please see Exhibit 13-A2 for an aerial photo of the area that shows there are no regularly occupied buildings in the predicted interference area.

Therefore, Montana State University-Billings respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - A1
74.1204(d) Showing
K210AM
SHERIDAN, WY

ERP (kw): 0.06

Height of Antenna above Ground (m): 6

Translator's IX Contour: 159

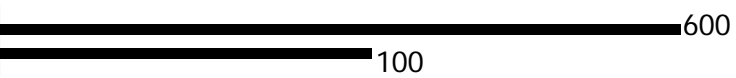
Antenna Type: Scala CL-FM/H

<u>Depression Angle from Horizon</u>	<u>Antenna Relative Field</u>	<u>ERP (kw) from the Antenna RF</u>	<u>Dist. To IX Contour (m)</u>	<u>Height IX Contour Above Ground (m)</u>
0	1.000	0.0600	0.6096	6.000
5	0.994	0.0592	0.6057	5.947
10	0.980	0.0576	0.5975	5.896
15	0.953	0.0544	0.5807	5.850
20	0.917	0.0504	0.5587	5.809
25	0.873	0.0457	0.5319	5.775
30	0.818	0.0401	0.4984	5.751
35	0.756	0.0342	0.4606	5.736
40	0.690	0.0286	0.4207	5.730
45	0.618	0.0229	0.3765	5.734
50	0.544	0.0177	0.3313	5.746
55	0.468	0.0131	0.2850	5.767
60	0.390	0.0091	0.2378	5.794
65	0.300	0.0054	0.1829	5.834
70	0.190	0.0022	0.1158	5.891
75	0.110	0.0007	0.0671	5.935
80	0.050	0.0002	0.0305	5.970
85	0.030	0.0001	0.0183	5.982
90	0.030	0.0001	0.0183	5.982



Google earth

feet
meters



NAD27 Coordinates:

44 36 08 N

106 55 52 W