

Channel Study

REFERENCE CH# 210D - 89.9 MHz, Pwr= 0.013 kW, HAAT= 283.7 M, COR= 1781.0 M DISPLAY DATES
 42 52 26.0 N. Average Protected F(50-50)= 10.5 km DATA 05-26-16
 112 30 47.0 W. Omni-directional SEARCH 05-26-16

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*
210D Pocatello	K210DT!	LIC ID	C	164.5 344.5	7.78 BLFT20150617AAN	42 48 23.0 112 29 15.0	0.010	54.4 2224	14.9 Educational Media Foundati	-49.9	-17.9
212C3 Pocatello	KZJB	LIC ID	VX	196.4 16.3	1.28 BLED20050727ACZ	42 51 46.0 112 31 03.0	0.910 314	2.0 1842	38.7 Watersprings Ministries	-5.4*<	-37.6*<
210C0 Twin Falls	KAWZ	LIC ID	VX	264.7 83.5	156.36 BLED20060403ANA	42 43 47.0 114 24 52.0	100.000 302	167.6 1475	68.5 Calvary Chapel Of Twin Fal	-23.8*<	44.9
208C0 Rigby	KLRI	LIC ID	VX	350.2 170.1	70.72 BLED20050729DTE	43 30 04.0 112 39 44.0	78.000 466	11.8 2033	84.7 Educational Media Foundati	46.0	-14.2*<
211D Idaho Falls	K211BD	LIC ID	C	29.6 209.9	81.95 BLFT20100414AAM	43 30 50.0 112 00 42.0	0.099 58	15.5 1530	10.8 Watersprings Ministries	53.9	52.4
213D Soda Springs	K213BB	LIC ID	DHN	111.5 292.1	73.13 BLFT19891023TE	42 37 48.0 111 41 00.0	0.111 326	0.6 2146	20.0 Utah State University Of A	61.8	52.9
210A Afton	KBYA	LIC WY	CX	101.7 282.7	127.44 BLED20111006ACE	42 37 58.0 110 59 28.0	0.680 80	59.0 2276	18.5 Brigham Young University -	59.6	79.3
213A Idaho Falls	KAIO	LIC ID	VX	34.1 214.6	90.21 BMLD20150826ABB	43 32 37.0 111 53 07.0	0.500 161	1.6 1708	25.0 Educational Media Foundati	76.3	64.9

 Terrain database is FCC NGDC 30 Sec, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM
 Contour distances are on direct line to and from reference station. Reference Zone= West Zone, Co to 3rd adjacent.
 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.
 < = Contour Overlap

Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 60dBu contour of second adjacent channel station KZJB, channel 212C3, Pocatello, ID. 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 K210DT.P:	13 watts
The proposed COR for K210DT.P:	6 meters
KZJB F(50/50) contour at proposed site:	104.3dBu
The F(50/10) contour of proposed K210DT.P:	144.3dBu

The predicted distance to the 144.3dbu interfering contour is 1.54 meters. Exhibit 13-A1 demonstrates the distances to the interfering contour by taking into account the vertical elevation pattern of the Nicom BKG77 single bay antenna. It has been determined that the interfering contour of 144.3dbu does extend far enough to hit the ground.

As can be seen in Exhibit 13–A2, there are no regularly occupied structures at the base of the tower and there are no structures within the interfering contour.

Therefore, EMF 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
K210DT
Pocatello, ID

ERP (kw): 0.013
Height of Antenna above Ground (m): 6
Translator's IX Contour: 144.3
Antenna Type: Nicom BKG77/1

<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	0.0130	1.5416	6.000
5	0.999	0.0130	1.5401	5.866
10	0.982	0.0125	1.5139	5.737
15	0.954	0.0118	1.4707	5.619
20	0.918	0.0110	1.4152	5.516
25	0.872	0.0099	1.3443	5.432
30	0.818	0.0087	1.2603	5.370
35	0.758	0.0075	1.1685	5.330
40	0.691	0.0062	1.0652	5.315
45	0.616	0.0049	0.9496	5.329
50	0.538	0.0038	0.8294	5.365
55	0.465	0.0028	0.7168	5.413
60	0.391	0.0020	0.6028	5.478
65	0.313	0.0013	0.4825	5.563
70	0.239	0.0007	0.3684	5.654
75	0.176	0.0004	0.2713	5.738
80	0.129	0.0002	0.1989	5.804
85	0.103	0.0001	0.1588	5.842
90	0.104	0.0001	0.1603	5.840

Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 60dBu contour of second adjacent channel station KLRI, channel 208C0, Rigby, ID. 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 K210DT.P:	13 watts
The proposed COR for K210DT.P:	6 meters
KLRI F(50/50) contour at proposed site:	65.7dBu
The F(50/10) contour of proposed K210DT.P:	105.7dBu

The predicted distance to the 105.7dbu interfering contour is 131.2 meters. Exhibit 13-A1 demonstrates the distances to the interfering contour by taking into account the vertical elevation pattern of the Nicom BKG77 single bay antenna.

As seen in attachment 13-A2, the red marker demonstrates the interfering distance of 131.2 meters.

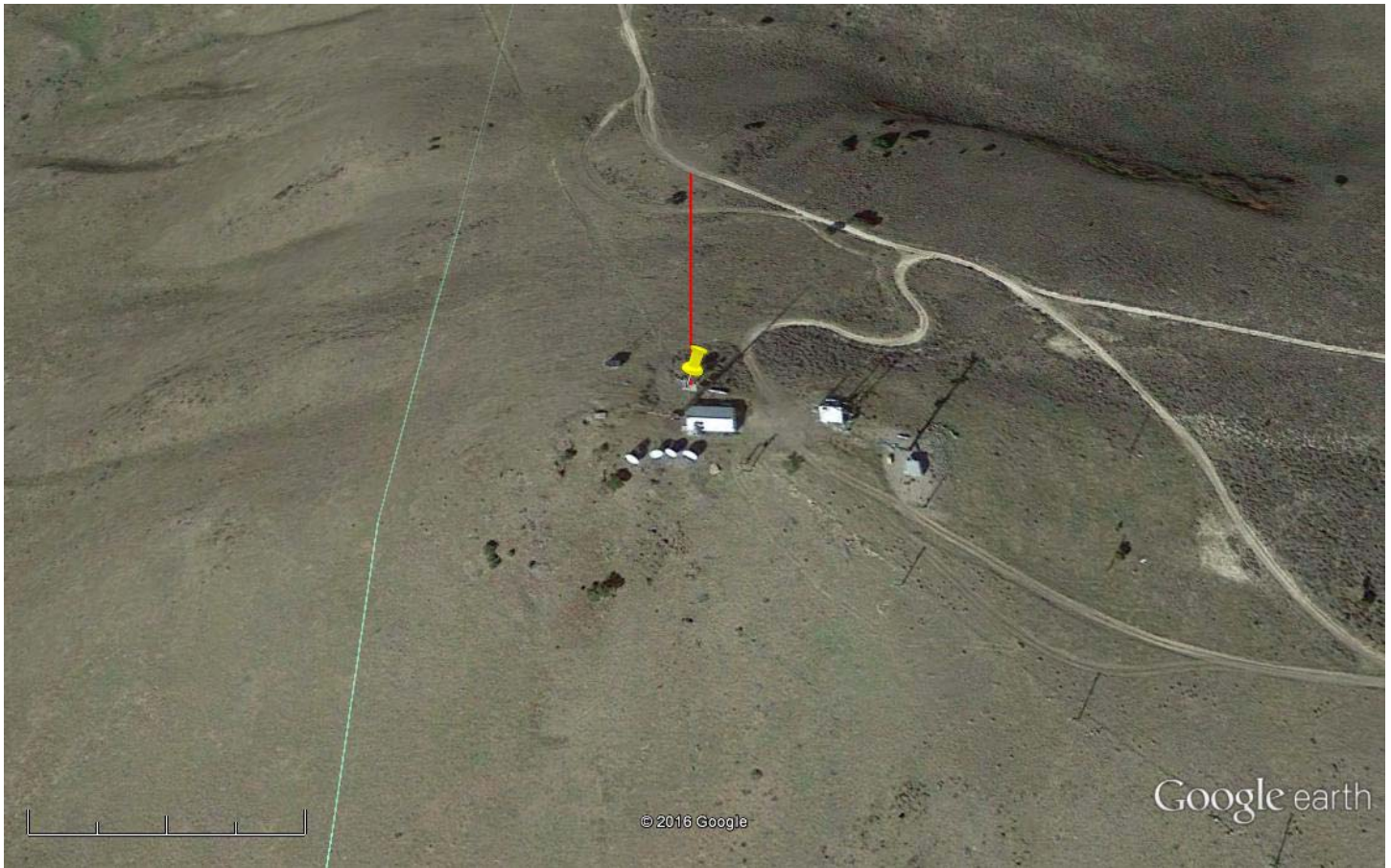
As can be seen in Exhibit 13–A2, there are no regularly occupied structures at the base of the tower and there are no structures within the interfering contour.

Therefore, EMF 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
K210DT
Pocatello, ID

ERP (kw): 0.013
Height of Antenna above Ground (m): 6
Translator's IX Contour: 105.7
Antenna Type: Nicom BKG77/1

<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	0.0130	131.2114	6.000
5	0.999	0.0130	131.0802	-5.424
10	0.982	0.0125	128.8496	-16.375
15	0.954	0.0118	125.1757	-26.398
20	0.918	0.0110	120.4521	-35.197
25	0.872	0.0099	114.4164	-42.354
30	0.818	0.0087	107.2653	-47.633
35	0.758	0.0075	99.4583	-51.047
40	0.691	0.0062	90.6671	-52.280
45	0.616	0.0049	80.8262	-51.153
50	0.538	0.0038	70.5918	-48.076
55	0.465	0.0028	61.0133	-43.979
60	0.391	0.0020	51.3037	-38.430
65	0.313	0.0013	41.0692	-31.221
70	0.239	0.0007	31.3595	-23.468
75	0.176	0.0004	23.0932	-16.306
80	0.129	0.0002	16.9263	-10.669
85	0.103	0.0001	13.5148	-7.463
90	0.104	0.0001	13.6460	-7.646



Google earth

feet | 500
meters | 100



Yellow Pin Marker

NAD 27

42 52' 26.0" N 112 30' 47.0" W

Red Line Marker: 131m at zero degrees true north