

### Channel Study

REFERENCE CH# 275D - 102.9 MHz, Pwr= 0.099 kW, HAAT= 452.6 M, COR= 540 M DISPLAY DATES  
 45 31 21.0 N. Average Protected F(50-50)= 21.9 km DATA 10-01-13  
 122 44 45.0 W. Omni-directional SEARCH 10-17-13

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	*OUT* in km)
277C Beaverton	KKCW	LIC	C OR	0.0 0.0	0.00 BLH20011214AAF	45 31 21.0 122 44 45.0	100.000 470	12.5 561	86.2 Citicasters	-34.8* Licenses, Inc.	-86.9*
274D Gresham	K274AR	APP	DV OR	0.0 0.0	0.00 BPFT20130417AAJ	45 31 21.0 122 44 45.0	0.250	34.0 540	22.1 Educational Media Foundati	-56.3* Licenses, Inc.	-56.5*
275C Centralia	KYNW	LIC	CX WA	349.6 169.3	164.30 BLH20050126ABD	46 58 31.0 123 08 16.0	70.000 668	194.7 867	91.0 Citicasters	-52.5* Licenses, Inc.	2.5
274D Gresham	K274AR	LIC	C OR	0.0 0.0	0.00 BLFT20050315AEC	45 31 21.0 122 44 45.0	0.010 453	18.7 540	12.3 Educational Media Foundati	-41.1* Licenses, Inc.	-46.6*
272D Portland	K272EL	LIC	DC OR	0.0 0.0	0.00 BLFT20110922ABI	45 31 21.0 122 44 45.0	0.099	0.7 510	21.6 Way Media , Inc	-23.0* Licenses, Inc.	-22.3*
278D Hazel Dell	DK278BU	LIC	C WA	59.0 239.3	33.37 BMLFT20130430AAY	45 40 35.0 122 22 39.0	0.004	0.1 562	9.4 Educational Media Foundati	10.5 Licenses, Inc.	23.3
278D Hazel Dell	K224CP	USR		59.0 239.3	33.37	45 40 35.0 122 22 39.0	0.002	0.1 562	7.3	10.5	25.4
278D Hazel Dell	DK278BU	CP	C WA	59.0 239.3	33.37 BPFT20130328ARG	45 40 35.0 122 22 39.0	0.002	0.1 562	7.3 Educational Media Foundati	10.5 Licenses, Inc.	25.4
275L1 Stayton	KPIK-LP	LIC		181.7 1.7	93.34 BLL20021231AAA	44 41 00.0 122 46 54.0	0.002 216			52.0 Santiam Community Radio Co	17.1
274C1 Newport	KYTE	LIC	CY OR	230.6 49.7	133.06 BLH19921028KA	44 45 22.0 124 02 57.0	66.000 269	92.5 351	62.8 Yaquina Bay Communications	19.0	37.3
275D Oak Grove	K275AI	LIC	C OR	77.6 258.5	96.27 BMLFT20130215ABK	45 42 06.0 121 32 05.0	0.067 -180	16.5 190	5.1 Bicoastal Media Licenses I	57.4	19.8
275C1 Redmond	KSJJ	LIC	CX OR	149.3 330.1	190.01 BMLH20060419AAH	44 02 49.0 121 31 50.0	100.000 270	139.5 1845	42.5 Gcc Bend, Llc	28.8	78.3
273D Ariel	K273AI	LIC	C WA	357.7 177.7	54.95 BLFT20070702DIT	46 00 59.0 122 46 28.0	0.006 429	0.2 640	10.9 Calvary Chapel Of Twin Fal	32.4	43.3
273D Elwood	K273AJ	LIC	V OR	140.6 320.9	56.18 BLFT20030703ABN	45 07 52.0 122 17 28.0	0.010 628	0.2 1331	16.4 Calvary Chapel Of Twin Fal	34.7	39.1

Terrain database is 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.  
 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.

**Compliance with C.F.R. 74.1204**

The proposed FM Translator is located within the protected 60 dBu contour of second adjacent channel station KKCW, channel 277C, Beaverton, OR. The predicted F(50,50) field strength of KKCW at the proposed translator site is 160.2 dBu. Therefore, the respective predicted interfering contour generated by the proposed FM Translator is 200.2 dBu. This interfering contour extends less than one meter from the proposed transmit antenna, and the area of overlap does not reach the ground because the antenna will be mounted 198 meters above ground (see Exhibit 13 - A1).

To confirm the absence of population within the interference aperture, Educational Media Foundation ("EMF") has examined the attached Google Earth map (see Exhibit 13 - A2), which indicates there are no regularly occupied structures at the base of the tower which could be tall enough to enter the interference aperture.

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  
K274AR  
GRESHAM, OR

ERP (kw): 0.099  
Height of Antenna above Ground (m): 198  
Translator's IX Contour: 200.2  
Antenna Type: SWR FMEC/1

<b>Depression Angle from Horizon</b>	<b>Antenna Relative Field</b>	<b>ERP (kw) from the Antenna RF</b>	<b>Dist. To IX Contour (m)</b>	<b>Height IX Contour Above Ground (m)</b>
0	1.000	0.0990	0.0068	198.000
5	0.997	0.0984	0.0068	197.999
10	0.986	0.0962	0.0067	197.999
15	0.969	0.0930	0.0066	197.998
20	0.946	0.0886	0.0065	197.998
25	0.916	0.0831	0.0062	197.997
30	0.879	0.0765	0.0060	197.997
35	0.837	0.0694	0.0057	197.997
40	0.789	0.0616	0.0054	197.997
45	0.736	0.0536	0.0050	197.996
50	0.679	0.0456	0.0046	197.996
55	0.616	0.0376	0.0042	197.997
60	0.550	0.0299	0.0038	197.997
65	0.480	0.0228	0.0033	197.997
70	0.408	0.0165	0.0028	197.997
75	0.333	0.0110	0.0023	197.998
80	0.256	0.0065	0.0017	197.998
85	0.178	0.0031	0.0012	197.999
90	0.100	0.0010	0.0007	197.999

Cavell, Mertz & Associates



Google earth

feet 300  
meters 100



NAD27 COORDIANATES

45 31 21 N

122 44 45 W

**Compliance with C.F.R. 74.1204**

The proposed FM Translator is located within the protected 60 dBu contour of second adjacent channel station K272EL, channel 272D, Portland, OR. The predicted F(50,50) field strength of K272EL at the proposed translator site is 127.3 dBu. Therefore, the respective predicted interfering contour generated by the proposed FM Translator is 167.3 dBu. This interfering contour extends less than one meter from the proposed transmit antenna, and the area of overlap does not reach the ground because the antenna will be mounted 198 meters above ground (see Exhibit 13 - B1).

To confirm the absence of population within the interference aperture, Educational Media Foundation ("EMF") has examined the attached Google Earth map (see Exhibit 13 - A2), which indicates there are no regularly occupied structures at the base of the tower which could be tall enough to enter the interference aperture.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - B1  
74.1204(d) Showing  
K274AR  
GRESHAM, OR

ERP (kw): 0.099  
Height of Antenna above Ground (m): 198  
Translator's IX Contour: 167.3  
Antenna Type: SWR FMEC/1

<b>Depression Angle from Horizon</b>	<b>Antenna Relative Field</b>	<b>ERP (kw) from the Antenna RF</b>	<b>Dist. To IX Contour (m)</b>	<b>Height IX Contour Above Ground (m)</b>
0	1.000	0.0990	0.3012	198.000
5	0.997	0.0984	0.3003	197.974
10	0.986	0.0962	0.2970	197.948
15	0.969	0.0930	0.2918	197.924
20	0.946	0.0886	0.2849	197.903
25	0.916	0.0831	0.2759	197.883
30	0.879	0.0765	0.2647	197.868
35	0.837	0.0694	0.2521	197.855
40	0.789	0.0616	0.2376	197.847
45	0.736	0.0536	0.2217	197.843
50	0.679	0.0456	0.2045	197.843
55	0.616	0.0376	0.1855	197.848
60	0.550	0.0299	0.1656	197.857
65	0.480	0.0228	0.1446	197.869
70	0.408	0.0165	0.1229	197.885
75	0.333	0.0110	0.1003	197.903
80	0.256	0.0065	0.0771	197.924
85	0.178	0.0031	0.0536	197.947
90	0.100	0.0010	0.0301	197.970