

ENGINEERING STATEMENT
REGARDING POTENTIAL FOR INTERFERENCE
TRANSLATOR MX GROUP 88
BNPFT-20170728ABP - MOUNDSVILLE, WEST VIRGINIA
BNPFT-20170728ABR - WHEELING, WEST VIRGINIA
November 2017

This Technical Statement supports the applications by RCK1 Group LLC for FM translators as specified in BNPFT-20170728ABP (“Moundsville”), Channel 249, 97.7 MHz, Moundsville, West Virginia and BNPFT-20170728ABR (“Wheeling”), Channel 251, 98.1 MHz, Wheeling, West Virginia. As shown in the attached Exhibits 1 and 2, the proposals are second adjacent channel proposals and are within the predicted 60 dBu contour of each facility. Due to the relationship between the proposed facilities, a 40 db ratio of the protected and interfering contours applies. It is noted both proposals will utilize a NICOM BKG-77-2HW, two bay half wavelength spaced antenna.

Moundsville vs Wheeling

The 60 dBu contour of the proposed new FM translator at Wheeling, West Virginia contour at the Moundsville, West Virginia proposed antenna site is in excess of 66 dBu (50/50). The corresponding interfering contour for Moundsville is 106 dBu (50/10). As shown in the tabulation of desired to undesired contours (Exhibit 3), the interfering contour (106 dBu, FCC 50/10) of Moundsville will not reach ground level. Since the Moundsville antenna will be mounted at 85 meters (279 feet) above ground and there are no structures of comparable height in the vicinity of the proposed Moundsville antenna, this contour never reaches any potentially occupied space. As such, Wheeling will not receive interference from the proposed translator.

Wheeling vs Moundsville

The 60 dBu contour of the proposed new FM translator at Moundsville, West Virginia at the Wheeling, West Virginia proposed antenna site is in excess of 69 dBu (50/50). The corresponding interfering contour for Moundsville is 109 dBu (50/10). As shown in the tabulation of desired to undesired contours (Exhibit 4), the interfering contour (109 dBu, FCC 50/10) of Moundsville will not reach ground level. Since the Wheeling antenna will be mounted at 55.0 meters (180 feet) above ground and there are no structures of comparable height in the vicinity of the proposed Wheeling antenna, this contour never reaches any potentially occupied space. As such, Moundsville will not receive interference from the proposed translator.

Based on the foregoing, it is believed that both the proposed BNPFT-20170728ABR and BNPFT-20170728ABP are in compliance with §74.1204(d) of the Commission's rules. If a waiver of the rule is needed to address these issues, one is respectfully requested.

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EXHIBIT #1

Rck 1 Group Llc

REFERENCE CH# 249D - 97.7 MHz, Pwr= 0.05 kW, HAAT= 0.0 M, COR= 481 M DISPLAY DATES
 40 03 15.1 N. Average Protected F(50-50)= 4.7 km DATA 11-07-17
 80 45 34.3 W. Omni-directional SEARCH 11-08-17

CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
247B Wheeling	WKWK-FM	LIC	CN WV	46.0 226.0	6.84 BLH19801203AF	40 05 49.0 80 42 06.0	50.000 128	5.9 456	64.6 Capstar Tx, Llc	-10.3*	-58.8*
249D Moundsville	1761061!	APP	C WV	0.0 0.0	0.00 BNPFT20170728ABP	40 03 15.1 80 45 34.3	0.050	35.8 481	10.7 Rck 1 Group Llc	-46.5	-46.5
249A Byesville	WILE-FM	LIC	CX OH	269.0 88.5	75.52 BLH20150617AAR	40 02 22.0 81 38 48.0	1.500 142	73.9 427	24.5 Avc Communications, Inc.	-8.9	15.9
251D Wheeling	1761059	APP	C WV	50.4 230.5	6.30 BNPFT20170728ABR	40 05 25.0 80 42 08.7	0.043	0.5 433	9.1 Rck 1 Group Llc	-5.2*	-3.3*
250B Fairmont	WKKW	LIC	CN WV	139.7 320.1	92.52 BLH19930902KB	39 25 04.0 80 03 44.0	29.000 195	82.5 590	69.1 West Virginia Radio Corpor	-0.7	1.0

Terrain database is FCC 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= East Zone, Co to 3rd adjacent. All separation margins (if shown) include rounding. Call signs with exclamation marks need not be protected. 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.

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EXHIBIT #2

REFERENCE CH# 251D - 98.1 MHz, Pwr= 0.043 kW, HAAT= 0.0 M, COR= 433 M DISPLAY DATES
40 05 25.0 N. Average Protected F(50-50)= 4.5 km DATA 11-07-17
80 42 08.7 W. Omni-directional SEARCH 11-08-17

CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
254B Wheeling	WOVK	LIC	DCN WV	262.0 81.9	5.94 BLH7660	40 04 58.0 80 46 18.0	50.000 119	7.6 576	75.0 Capstar Tx, Llc	-10.7*	-70.0*
251D Wheeling	1761059!	APP	C WV	0.0 0.0	0.00 BNPFT20170728ABR	40 05 25.0 80 42 08.7	0.043	36.7 433	11.1 Rck 1 Group Llc	-47.8	-47.8
249D Moundsville	1761061	APP	C WV	230.5 50.4	6.30 BNPFT20170728ABP	40 03 15.1 80 45 34.3	0.050	0.5 481	11.0 Rck 1 Group Llc	-3.3*	-5.2*
251B Munroe Falls	WKDD	LIC	ZCX OH	331.0 150.4	141.47 BLH20100831AAP	41 12 00.0 81 31 23.0	50.000 138	133.7 445	60.7 Citicasters Licenses, Inc.	-2.2	36.7
250B Fairmont	WKKW	LIC	CN WV	143.6 324.0	92.65 BLH19930902KB	39 25 04.0 80 03 44.0	29.000 195	82.1 590	68.4 West Virginia Radio Corpor	-0.4	0.1

Terrain database is FCC 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= East Zone, Co to 3rd adjacent.
All separation margins (if shown) include rounding. Call signs with exclamation marks need not be protected.
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.
Reference station has protected zone issue: AM tower

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EXHIBIT #3

BNPFT-20170728ABP, Moundsville, WV, Showing Protection to BNPFT-20170728ABR
74.1204(d) Study - Using FCC 30 SEC Terrain Database
Translator or LPFM Maximum Licensed ERP = 0.05
Translator or LPFM Antenna Height AG = 85 Meters
1761061 Antenna Model = NICOM BKG-77-2HW

Protected Station's Contour = 66 dBu
Translator's or LPFM's full Interference contour 106

Review Azimuth = 0 Degrees True
Relative Field on the horizon at Review Azimuth = 1.000
Translator/LPFM ERP on the horizon at Review Azimuth = 0.05 kW
Distance between stations = 6.3 km
Protected Station = BNPFT-20170728ABR, .043 kW, 433 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.0500	248.5908	248.5908	085.000
05.00	0.988	1.0	0.0488	245.6077	244.6731	063.594
10.00	0.952	1.0	0.0453	236.6584	233.0630	043.905
15.00	0.881	1.0	0.0388	219.0085	211.5459	028.316
20.00	0.791	1.0	0.0313	196.6353	184.7767	017.747
25.00	0.686	1.0	0.0235	170.5333	154.5556	012.930
30.00	0.577	1.0	0.0166	143.4369	124.2200	013.282
35.00	0.463	1.0	0.0107	115.0975	094.2824	018.983
40.00	0.354	1.0	0.0063	088.0011	067.4128	028.434
45.00	0.256	1.0	0.0033	063.6392	044.9997	040.000
50.00	0.174	1.0	0.0015	043.2548	027.8036	051.865
55.00	0.11	1.0	0.0006	027.3450	015.6844	062.600
60.00	0.061	1.0	0.0002	015.1640	007.5820	071.868
65.00	0.028	1.0	0.0000	006.9605	002.9417	078.692
70.00	0.007	1.0	0.0000	001.7401	000.5952	083.365
75.00	0.004	1.0	0.0000	000.9944	000.2574	084.040
80.00	0.008	1.0	0.0000	001.9887	000.3453	083.041
85.00	0.008	1.0	0.0000	001.9887	000.1733	083.019
90.00	0.005	1.0	0.0000	001.1187	000.0000	083.881

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EXHIBIT #4

BNPFT-20170728ABR Wheeling, WV, Showing Protection to BNPFT-20170728ABP
74.1204(d) Study - Using FCC 30 SEC Terrain Database
Translator or LPPM Maximum Licensed ERP = 0.043
Translator or LPPM Antenna Height AG = 55 Meters
1761059 Antenna Model = NICOM BKG-77-2HW

Protected Station's Contour = 69 dBu
Translator's or LPPM's full Interference contour 109

Review Azimuth = 0 Degrees True
Relative Field on the horizon at Review Azimuth = 1.000
Translator/LPPM ERP on the horizon at Review Azimuth = 0.043 kW
Distance between stations = 6.3 km
Protected Station = BNPFT-20170728ABP, .05 kW, 481 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.0430	163.2053	163.2053	055.000
05.00	0.988	1.0	0.0420	161.2468	160.6332	040.946
10.00	0.952	1.0	0.0390	155.3714	153.0110	028.020
15.00	0.881	1.0	0.0334	143.7839	138.8845	017.786
20.00	0.791	1.0	0.0269	129.0954	121.3100	010.847
25.00	0.686	1.0	0.0202	111.9588	101.4692	007.684
30.00	0.577	1.0	0.0143	094.1695	081.5531	007.915
35.00	0.463	1.0	0.0092	075.5640	061.8984	011.658
40.00	0.354	1.0	0.0054	057.7747	044.2580	017.863
45.00	0.256	1.0	0.0028	041.7806	029.5433	025.457
50.00	0.174	1.0	0.0013	028.3977	018.2537	033.246
55.00	0.11	1.0	0.0005	017.9526	010.2972	040.294
60.00	0.061	1.0	0.0002	009.9555	004.9778	046.378
65.00	0.028	1.0	0.0000	004.5697	001.9313	050.858
70.00	0.007	1.0	0.0000	001.1424	000.3907	053.926
75.00	0.004	1.0	0.0000	000.6528	000.1690	054.369
80.00	0.008	1.0	0.0000	001.3056	000.2267	053.714
85.00	0.008	1.0	0.0000	001.3056	000.1138	053.699
90.00	0.005	1.0	0.0000	000.7344	000.0000	054.266