



Application for Minor Change
Translator W244CW Murfreesboro TN
FCC Facility ID 121772

TECHNICAL EXHIBITS

This technical exhibit is prepared on behalf of *Venture Tower, LLC*, Licensee of Translator W244CW Murfreesboro TN. This instant application requests a non-adjacent channel change of operating frequency from the authorized tower location, height effective radiated power and a slight reorientation of the authorized directional FM antenna and with the current authorized effective radiated power.

NON ADJACENT CHANNEL REQUEST

With the grant of BLFT-20130524BCH, AM station WMGC has enjoyed cross-service operation on 96.7 for the past 9 years. This station was one of the first AM stations in the entire region to utilize a cross-service FM translator and has a large and loyal listening audience for their local programming.

Unfortunately, that situation changed dramatically with the encroachment of translator W244EK, another cross-service signal for AM station WQSE White Bluff TN authorized in June of 2019 by BLFT-20190604AAB. That facility was a "250 mile waiver" move-in signal authorized under the AM Revitalization Act which was originally constructed in 2017 on Channel 292; but utilized the "footnote 22" loop hole to obtain a non-adjacent channel modification nearly 2 years into its licensed operation without any showing of interference being received. The W244EK facility is located only 27.8km away from the licensed W244CW facility, and both utilize a directional antenna, the design of each is used to show compliance with FCC contour protections between co-channel translators.

Interference complaints by a translator licensee against the encroachment of another co-channel translator are specifically addressed in Paragraph 36 of FCC 19-40, the R&O whereby Part 74 rules were amended to remediate

translator interference and permit non-adjacent translator channel moves. Therefore this licensee requests consideration of the encroaching co-channel translator W244EK upon W244CW as an existing "station" under the procedures outlined in FCC 19-40 and plots the W244CW 45dBu contour on the attached map as its listening audience.

The Attached showing demonstrates that the W244EK interfering contour encompasses a large percentage of the W244CW 45dBu contour and actual WMGC listener complaints bear this reality. There is no evidence that W244CW causes any interference to the protected area of W244EK, and this licensee assumes W244EK is operating as authorized with the proper antenna and effective radiated power.

Therefore this licensee is requesting an alternate operating channel which is uniquely available to them at the W244CW site, in order to mitigate the interference which is caused by the co-channel translator facility. This waiver request is in line with previously permitted non-adjacent channel requests, when made because of the encroachment of another signal into the licensed coverage area of an existing facility.

CONTOUR OVERLAP REQUIREMENTS

The attached maps of contours and channel study depict the proposed allocation situation with respect to all pertinent co-channel and adjacent channel facilities. All facilities have been depicted utilizing either the maximum ERP or directional pattern data as on file with the commission. AAT data for the proposed facility was derived from the FCC's 30 second database, *ComStudy*.

As seen on the attached maps of contours, channel 253-d is operable at the proposed location with the following facility notes:

- In compliance with 47 CFR 74.1204(g) the proposed facility operates at an effective radiated power which is over 100 watts, therefore protection to intermediate frequency facilities has been calculated and meets all mileage separation requirements.

– The proposed location is within the protected 60dbu (50,50) contour of second-adjacent station WWTN (FM) channel 259-C0 located 20.7 km away. Therefore, an interference analysis has been conducted based on the u/d ratio of +40 db at the proposed site. The signal of WWTN (FM) at the proposed location is 89.4 dBu (50,50) making the relevant interfering contour of the proposed facility 129.4 dBu (50,10). The free space distance to this contour in a worse-case scenario utilizing a single dipole antenna is 37.6 meters. The antenna height is 102 meters AGL, making the interfering contour incapable of reaching the ground or any area where the public can be present at any time.

Based on this showing, a waiver of Section 74.1204 is requested in accordance with *Living Way ministries*, Inc. (FCC 08-242) on the basis of zero population in the area of interference.

It should be noted that should any actual real world interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 c.f.r. 74.1203.

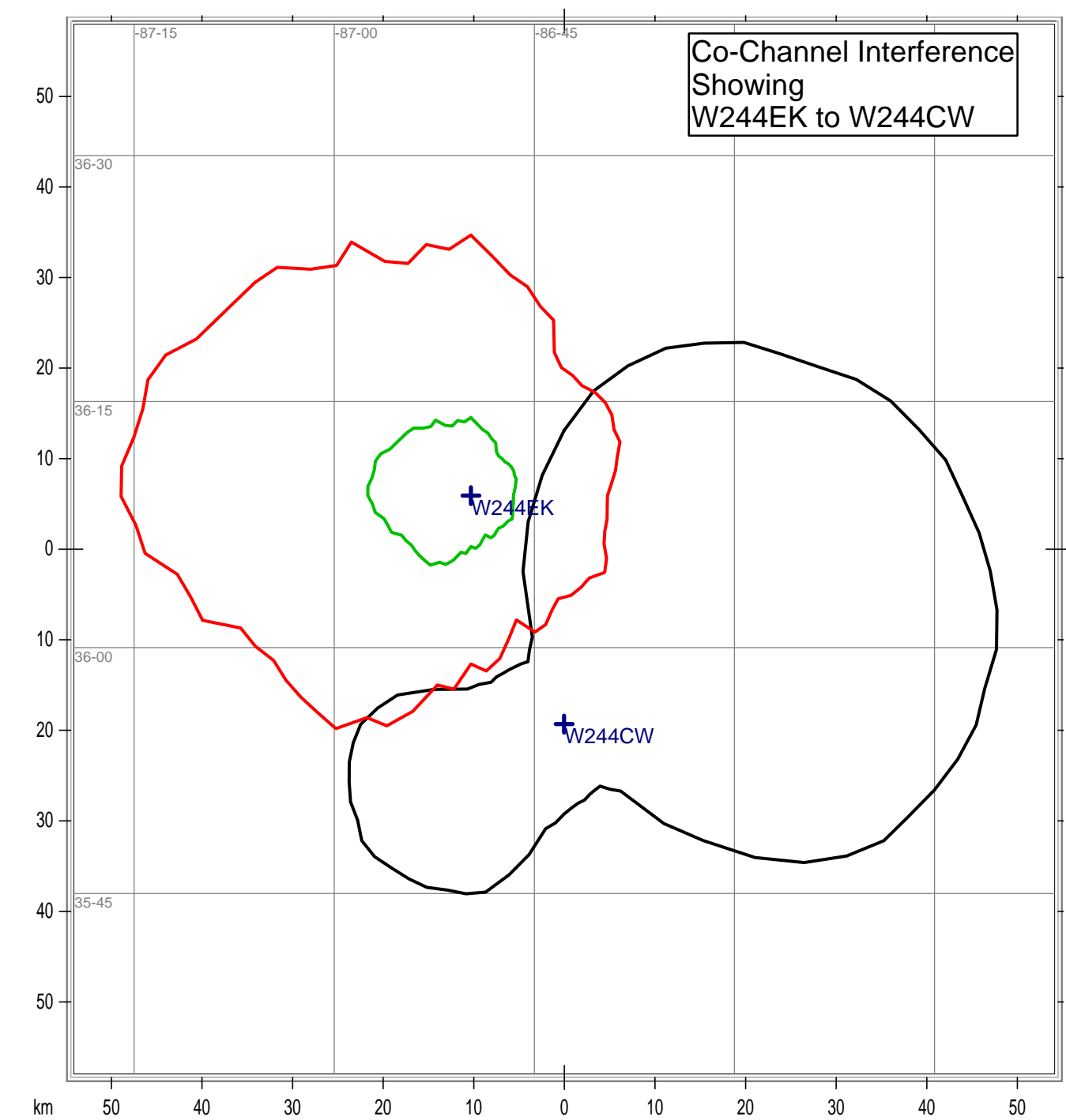
Respectfully,

A handwritten signature in black ink, appearing to read "Jim Turvaille". The signature is stylized with a large, looping "J" and a cursive "Turvaille".

Jim Turvaille, Owner
Turbo Tech Services
Certified Radio Engineer – Consultant

Attachments:

Co-Channel Interference Showing
Channel Study Data
Map of Contours



ComStudy 2.2
Search of channel 257
(99.3 MHz Class D)
at
35-55-20.2 N, 86-42-46.0 W.

CALL	CITY	ST	CHN	CL	DIST	SEP	BRNG	CLEARANCE
WWTN	HENDERSONVILLE	TN	259	C0	20.68	0.00	124.2	-29.63 dB
Adjacent Channel Wavier Requested in Narrative								
WAYM	SPRING HILL	TN	204	C2	17.45	15.00	322.8	2.4 km
W256CG	DICKSON	TN	257	D	64.56	0.00	310.3	2.97 dB
WVLE	SCOTTSVILLE	KY	257	A	102.80	0.00	27.7	4.06 dB
W257BX	COLUMBIA	TN	257	D	45.18	0.00	221.6	6.45 dB
W254CK	NASHVILLE	TN	254	D	39.10	0.00	349.0	7.47 dB
WSRR-LP	MURFREESBORO	TN	257	LP100	31.65	24.00	101.6	12.99 dB
WANT	LEBANON	TN	255	A	51.06	0.00	51.6	13.22 dB
WAHR	HUNTSVILLE	AL	256	C0	124.89	0.00	177.0	15.83 dB
W256CG	DICKSON	TN	256	D	64.56	0.00	310.3	16.97 dB
W254DW	SHELBYVILLE	TN	254	D	42.31	0.00	142.3	20.66 dB
W256CI	CLARKSVILLE	TN	256	D	88.11	0.00	321.6	21.59 dB
W258AD	CLARKSVILLE	TN	258	D	93.43	0.00	316.8	25.48 dB
WHOP-FM	HOPKINSVILLE	KY	254	C1	134.38	0.00	326.5	25.31 dB
W258DS	HOHENWALD	TN	258	D	87.33	0.00	239.6	26.35 dB
W255DK	COLUMBIA	TN	255	D	45.18	0.00	221.6	26.38 dB
W257AZ	LOOKOUT MOUNTAIN	TN	257	D	160.30	0.00	128.9	27.87 dB
W258AU	HUNTSVILLE	AL	258	D	132.54	0.00	172.9	30.58 dB
WKMO	LEBANON JUNCTION	KY	257	A	217.52	0.00	21.3	30.77 dB
WWKN	MORGANTOWN	KY	256	A	144.81	0.00	0.5	33.03 dB
W257EB	VALLEY HEAD	AL	257	D	181.34	0.00	146.5	33.24 dB
WKDQ	HENDERSON	KY	258	C0	229.72	0.00	341.6	34.03 dB
WHSX	EDMONTON	KY	256	A	160.58	0.00	39.8	35.88 dB
W257CT	GADSDEN	AL	257	D	226.36	0.00	163.2	36.39 dB
W260DH	FORT CAMPBELL	KY	260	D	88.11	0.00	321.6	37.42 dB
W255AP	DICKSON	TN	255	D	61.40	0.00	290.6	37.72 dB

