

Exhibit 12

Non-Interference Compliance

Channel: 233

Reference to: FCC File Number: BLFT-20081203AFF (W233AY Bristol, NH)

Facility id 146333) This Application proposes a site modification to Andover, NH.

Description of Exhibit 12 Contents

This exhibit will show that the proposed facility complies with contour overlap interference protection provisions in 47 CFR 74.1204

Specifically we will show compliance with 47 CFR 74.1204 (d), which states:

“an application otherwise precluded by the section will be accepted if it can be demonstrated that no actual interference will occur due to interfering terrain, lack of population, or such other factors as may be applicable.”

Page 3, Exhibit 12(a), is a table showing the second and third adjacent channel stations which the instant application must protect, and the actual field strengths of those stations at the proposed translator site. The field strengths were determined with ComStudy 2.2.

The applicant certifies that should any actual interference occur, operation of the translator will be suspended in accordance with 47 CFR 74.1203.

Page 4, Exhibit 12(b), displays the F(50/50) 60 dbu of the proposed channel 233 modified transmitter site, overlapping the F(50/50) 60 dbu of the original W233AY Licensed Facilities, thus compliance with CFR, 74.1233(a) (2).

Please note that the Primary Station is (WCKJ-FM, Ch. 213, St. Johnsbury, VT.)

Page 5, Exhibit 12 (c), is a Table showing the distance to the F (50,50) 60 dbu contour of the Proposed 94.5 Translator, prepared using ComStudy 2.2. *(Also note the HAAT column of this Exhibit for reference.)

Page 6, Exhibit 12(d), is a Topographical map of the area around the proposed channel 233 translator site, and a distance calculation to the nearest residence. There are no inhabitants, and no major highways near the site.

Since the proposed channel 233 translator is about 172.5 kilometers from the Canadian Border, the applicant certifies that the 50/10, 34 dbu contour does not extend beyond the U.S. Canadian Border, and does not extend beyond 60 kilometers in any direction, in compliance with CFR 47, Sec. 74.1235 (d)3, which states that “the distance to the 34 dbu interfering contour may not exceed 60 kilometers in any direction”, and hence is in compliance with 47 CFR 74.1204(h). (see page 7, Exhibit 12(e), and page 4, Exhibit 12(b))

Explanation of ComStudy Frequency Finder Results:

The Interference analysis for the instant application was performed using data taken directly from the FCC's FM database, which looks for prohibited overlap with contours of adjacent stations, and prohibited proximity to stations 53 or 54 channels from the proposed translator station (IF) using 3 arc second terrain data and the FCC's contour algorithms. See results of analysis in Table on Page 8, Exhibit 12(f). (ComStudy uses the FCC's FM Database, thus the results included the proposed translator. This line was deleted from the Table to save confusion)

The proposed channel 233 Translator can operate with an effective radiated power of 10-watts at 4-meters AGL. According to 47 CFR, 74.1204(a), the desired to undesired ratio between 2nd/3rd adjacent stations is 40 dbu, making the proposed translator's interfering contour 102 dbu F(50/10) See Contour Study, page 9, Exhibit 12(g). Based on the FCC's "Free Space" equation, the F(50/10) 102 dbu interfering contour extends 176 meters. (see page 10, Exhibit 12(h) FCC Propagation Curves Calculation.) The nearest Residence is 274 meters distant, thus the proposed ch. 236 Translator has adequate cylindrical clearance.

The instant application takes into account USGS quadrangles and relevant aerial photography in stating that no inhabited structures exist inside the area of the interfering contour. Thus, in accordance with 47 CFR 74.1204(d), and the clarification provided by the FCC in the decision Re: Living Way Ministries (FCC 02-244), there is a lack of population within the proposed area of interference, and therefore this application is in full compliance with 47 CFR 74.1204.)

The proposed facility is excluded from environmental processing under 47. C.F.R. Section 1.1306 (i.e., the facility will not have a significant environmental impact and complies with the maximum permissible radio frequency electromagnetic exposure limits for controlled and uncontrolled environments). (See page 11, Exhibit 12(i), RF-Worksheet)

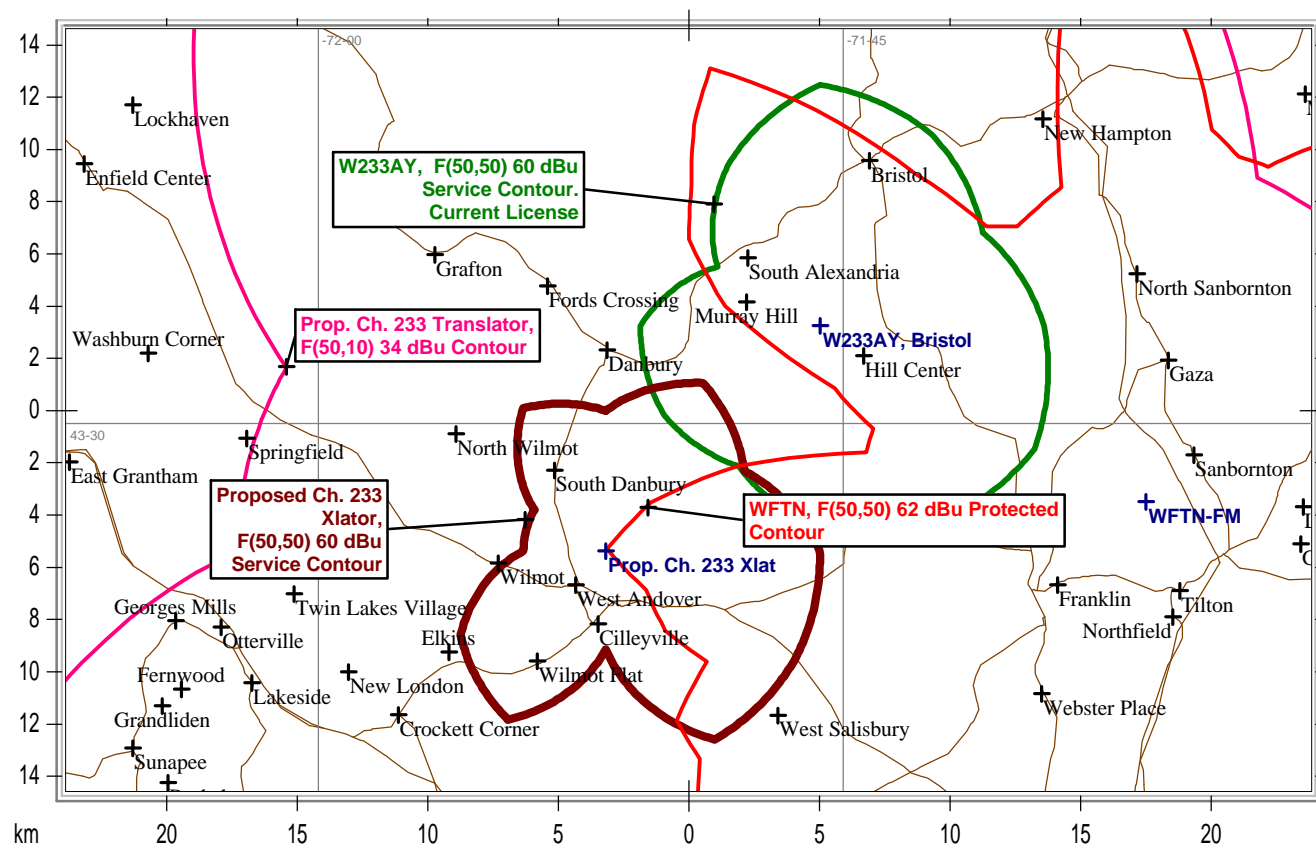
Table of 2nd & 3rd Adjacent Protected Stations
Signal Strength at Proposed Translator Transmitter site

<u>Call Sign</u>	<u>State</u>	<u>City</u>	<u>Freq.</u>	<u>Channel</u>	<u>ERP-Watts</u>	<u>Class</u>	<u>Status</u>	<u>Distance, Km</u>	<u>Signal Strength at Prop. Site</u>
WFTN	NH	FRANKLIN	94.1	231	6,000	a	LIC.	20.93	62.0 DbU
Minimum F(50/50) Protected Contour of Adjacent Station within Proposed Translator's standard F(50/10) Interfering Contour:									62

*Note: The F(50/50) signal strength of all relevant 2nd and 3rd adjacent stations have been examined, and are listed in the above table. The last column shows the station's signal level at the proposed translator's tower site, as determined by ComStudy 2.2. The minimum F(50/50) contour within the proposed translator's standard F(50/10) contour was used to calculate the proposed translator's interfering contour, assuring minimum undesired-to-desired ratio of 40 db for all relevant adjacent stations, as required in 47 CFR, 74.1204(a).

Thus, the proposed channel 233 calculated F(50/10) interfering contour will be 102.0 dbu.

*Note: 60 dBu Contour of Prop. Intersects 60 dBu of Original License



Prop. Ch. 233 Translator, Andover, NH
Distance to 60 dBu Contour

10 Watts ERP @ 4 Meters AGL

Site: Prop. Ch. 233 Xlat
Coordinates: 43-27-21.0 N, 71-51-47.0 W
Freq: 94.50000 MHz
ERP: 10.00 W

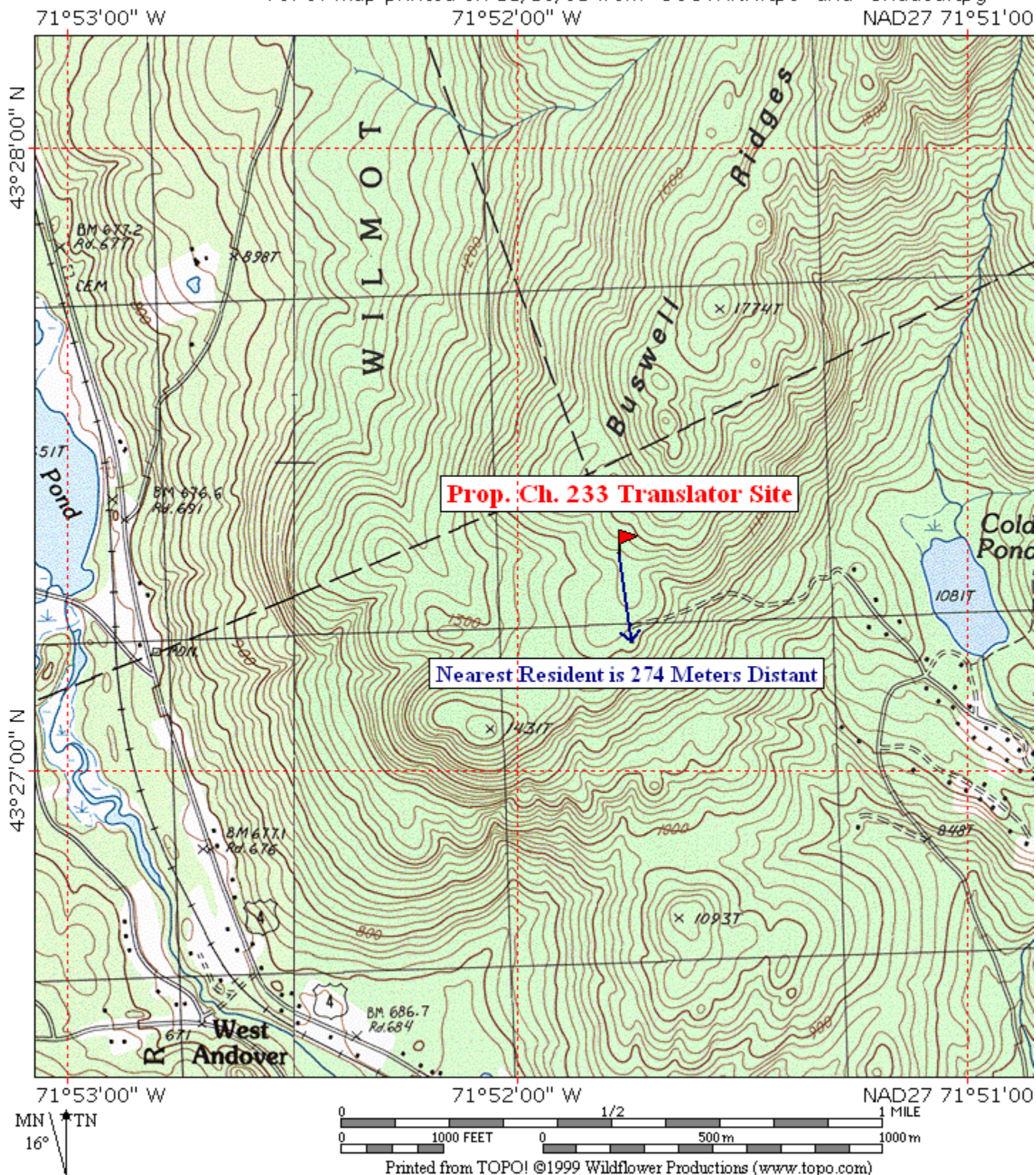
Bearing	ERP W	HAAT	DH	Distance	Lat	Lon
0	10	86	320	5.41	43.50453	-71.8631
30	10	166	310	5.48	43.50514	-71.8619
60	10	111	200	5.55	43.50574	-71.8607
90	10	201	170	5.62	43.50632	-71.8594
120	10	208	130	5.69	43.5069	-71.8581
150	10	208	80	5.76	43.50744	-71.8568
180	10	43	220	5.83	43.50797	-71.8555
210	10	167	350	5.9	43.5085	-71.8541
240	10	122	170	5.97	43.50899	-71.8528
270	10	28	340	6.04	43.50946	-71.8513
300	10	7	400	6.11	43.50992	-71.8499
330	10	118	250	6.18	43.51036	-71.8484

Proposed Ch. 233 Translator site:
43-27-21 N, 71-51-47.0 W

Page 6.
Exhibit 12 (d)

TOPO! map printed on 11/16/08 from "SOUTHNH.tpo" and "Untitled.tpg"

NAD27 71°51'00"



Prop. Ch. 233 Translator, Andover, NH
Distance to 34 dBu Contour

10 Watts ERP @ 4 Meters AGL

Site: Prop. Ch. 233 Xlat
Coordinates: 43-27-21.0 N, 71-51-47.0 W
Freq: 94.50000 MHz
ERP: 10.00 W

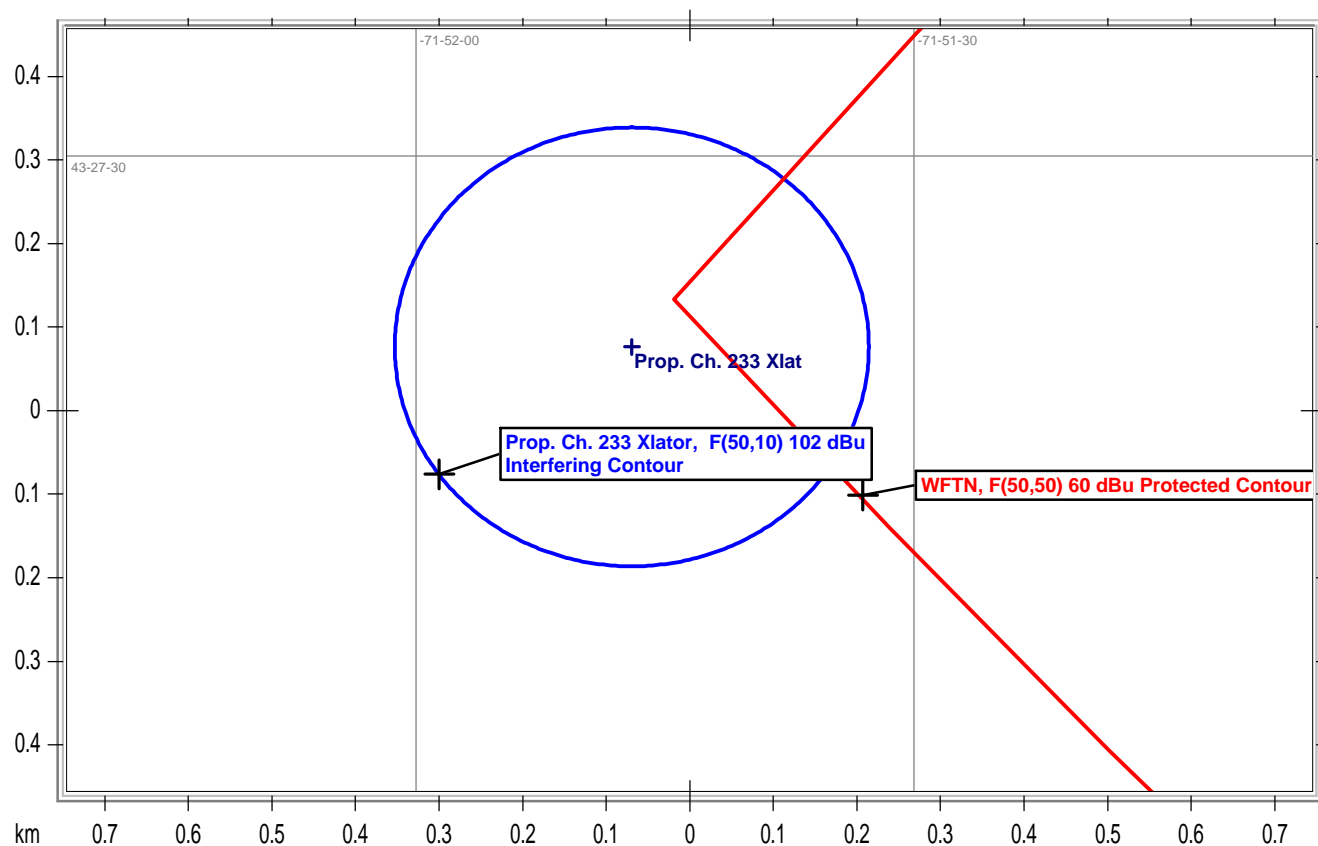
Bearing	ERP W	HAAT	DH	Distance	Lat	Lon
0	10	86	320	25.27	43.683113	-71.8631
30	10	166	310	25.61	43.686118	-71.8575
60	10	111	200	25.95	43.689051	-71.8518
90	10	201	170	26.28	43.691918	-71.8459
120	10	208	130	26.62	43.694697	-71.84
150	10	208	80	26.96	43.697406	-71.8338
180	10	43	220	27.3	43.700022	-71.8276
210	10	167	350	27.64	43.702561	-71.8212
240	10	122	170	27.98	43.705002	-71.8146
270	10	28	340	28.31	43.707353	-71.8079
300	10	7	400	28.65	43.709619	-71.8011
330	10	118	250	28.99	43.711779	-71.7942

**Ch. 233 Frequency Separation Study
Andover, New Hampshire**

**43-27-21 N, 71-51-47 W
10 Watts at 4 Meters AGL**

Callsign	State	City	Freq	Channel	ERP_w	Class	Status	Distance_	Sep	Clr
	NH	MT. WASHINGTON	94.9	235	0	C	USE	101.05		0 29.35 dB
NEW	NH	BERLIN	94.5	233	10	D	APP	128.81		0 31.92 dB
W231BR	NH	MANCHESTER	94.1	231	100	D	LIC	60.45		0 37.52 dB
W232AJ	NH	GREENVILLE, ETC.	94.3	232	5	D	LIC	66.46		0 24.19 dB
W232AP	VT	WHITE RIVER JUNCTION	94.3	232	10	D	LIC	41.31		0 33.79 dB
W232BN	VT	WARREN	94.3	232	170	D	CP	108.77		0 35.71 dB
W233AR	VT	BRATTLEBORO	94.5	233	10	D	LIC	91.78		0 24.41 dB
W233BE	ME	RICHMOND CENTER	94.5	233	250	D	LIC	172.1		0 31.38 dB
WCNH-LP	NH	CONCORD	94.7	234	100	LP100	LIC	36.18	13	14.81 dB
WCYI	ME	LEWISTON	93.9	230	27500	B	LIC	166.7		0 31.22 dB
WCYY	ME	BIDDEFORD	94.3	232	11500	B1	LIC	118.38		0 26.59 dB
WFTN-FM	NH	FRANKLIN	94.1	231	0	A	USE	20.93		0 15.07 dB
WFTN-FM	NH	FRANKLIN	94.1	231	6000	A	LIC	20.93		0 -2.30 dB
WHJY	RI	PROVIDENCE	94.1	231	50000	B	LIC	185.33		0 33.10 dB
WHOM	NH	MOUNT WASHINGTON	94.9	235	20500	C	LIC	100.99		0 4.02 dB
WHOM	NH	MOUNT WASHINGTON	94.9	235	20500	C	LIC	100.97		0 4.00 dB
WHOM	NH	MOUNT WASHINGTON	94.9	235	48000	C	LIC	100.98		0 0.36 dB
WJEN	VT	RUTLAND	94.5	233	0	A	USE	93.3		0 32.01 dB
WJEN	VT	RUTLAND	94.5	233	3000	A	LIC	95.66		0 29.96 dB
WJMN	MA	BOSTON	94.5	233	0	B	USE	137.83		0 30.93 dB
WJMN	MA	BOSTON	94.5	233	9200	B	LIC	137.83		0 12.71 dB
WMAS-FM	MA	SPRINGFIELD	94.7	234	50000	B	LIC	161.7		0 29.13 dB
WMXR	VT	WOODSTOCK	93.9	230	670	A	LIC	51.59		0 13.30 dB
WRSI	MA	TURNERS FALLS	93.9	230	2500	A	LIC	118.48		0 37.83 dB
WVTQ	VT	SUNDERLAND	95.1	236	96	A	LIC	106.72		0 32.76 dB

Study shows Prop. Ch. 233 Translator, F(50,10) 102 dBu Interfering Contour



txtFooterText

State Borders Highways Lat/Lon Grid

**Audio Division**

(202)-418-2700

FM and TV Propagations Curves Calculations[FCC](#) > [MB](#) > [Audio Division](#) > [FM and TV Curves Calculations](#)[FCC site map](#)**Results -- FM and TV Propagation Curves Calculations**

Free Space equation used, not curves

Results of Calculation**Distance to Contour = 0.176 km**[Back to Numeric Entries](#)[Back to Initial Selections](#)**For input data from Pages 1 and 2:**

ERP entered = 0.010 kW

HAAT entered = 106.60 meters

Field Strength entered = 102.000 dBu

Find the Distance to the Contour, Given a Field Strength

F(50,10) curves for interfering contours

FM and NTSC analog TV Channels 2 through 6

[Back to Numeric Entries](#)[Back to Initial Selections](#)Comments on this program may be referred to [Dale Bickel](#)

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RF Worksheet #1 – FM (including translators & boosters)

PLEASE COPY BEFORE USING. THE DETERMINATION OF COMPLIANCE MAY INVOLVE REPEATED CALCULATIONS. IF LOCATED ON A MULTIPLE FM USER TOWER, PLEASE COMPLETE RF WORKSHEET 1A BEFORE PROCEEDING.

EFFECTIVE RADIATION CENTER HEIGHT

Enter proposed "height of radiation center above ground" OR as listed in Line 1 4 m (1)
of Worksheet 1A.

Is antenna supporting structure located on the roof of a building? (check one)

☐ Yes ☒ No (2)

If Line 2 is "Yes" enter the building height measured at the base of the antenna supporting structure in Line 3

If Line 2 is "No" enter "0" in Line 3..... -0- m (3)

Subtract Line (3) from Line (1)..... 4 m (4)

Subtract the value 2.0 from Line (4)..... 2 m (5)

TOTAL EFFECTIVE RADIATED POWER

(If "beam tilt" is utilized, list maximum values)

List Effective Radiated Power in the Horizontal Plane..... .01 kW (6)

List Effective Radiated Power in the Vertical Plane..... .01 kW (7)

Add Lines (6) and (7) OR list value from Line 2 in Worksheet 1A..... .02 kW (8)

PERCENTAGE OF FCC RF LIMIT(S) FOR MAXIMUM PERMISSIBLE EXPOSURE

Multiply Line (8) by 33.41 0.668 (9)

Multiply the value listed in Line (5) by itself..... 4.0 (10)

Divide Line (9) by Line (10) 0.167 (11)

Multiply Line (11) by (100) 16.70 (12)

DETERMINATION OF COMPLIANCE WITH CONTROLLED/OCCUPATIONAL LIMIT

Does Line (12) exceed 100%..... ☐ Yes ☒ No (13)

IF YOU ANSWERED "YES" IN LINE (13), THE WORKSHEETS MAY NOT BE USED IN THIS CASE.*

IF YOU ANSWERED "NO" IN LINE (13), THEN THE SITE SHOULD COMPLY WITH THE FCC'S CONTROLLED/OCCUPATIONAL RF EXPOSURE LIMITS FOR GROUND LEVEL EXPOSURE

***In this case, you may need to prepare an Environmental Assessment. See Instructions for Section III-C FCC Form 301.**

DETERMINATION OF COMPLIANCE WITH THE UNCONTROLLED/GENERAL POPULATION LIMIT

Does Line (12) exceed 20%..... ☐ Yes ☒ No (14)