

Consolidated Engineering Statement Mars Hill Broadcasting Corp.

Minor Change to W263CE Ogdensburg, NY FacId 150706

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August 26, 2023

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Abstract

This application requests a relocation of the translator by 11.74 km to an existing tower. The power is reduced from 250 Watts to 13 Watts when the HAAT increased from 7 meters to 55.3 meters to comply to the MERP rule. The channel is unchanged. The tower also supports FM facilities WREM, WSLM and WNCQFM, but the proposed facility, being a part 74 facility under 100 Watts ERP is categorically exempt from radiation hazard processing. The facility does not exhibit any prohibited with any US or Canadian facilities and complies the Canadian treaty requirements for translators. The 34 dBu F(50,10) of the proposed facility does not reach into Canadian territory, so no Canadian facilities now or in the future can receive interference on Canadian soil, and the ERP is less than 50 Watts.

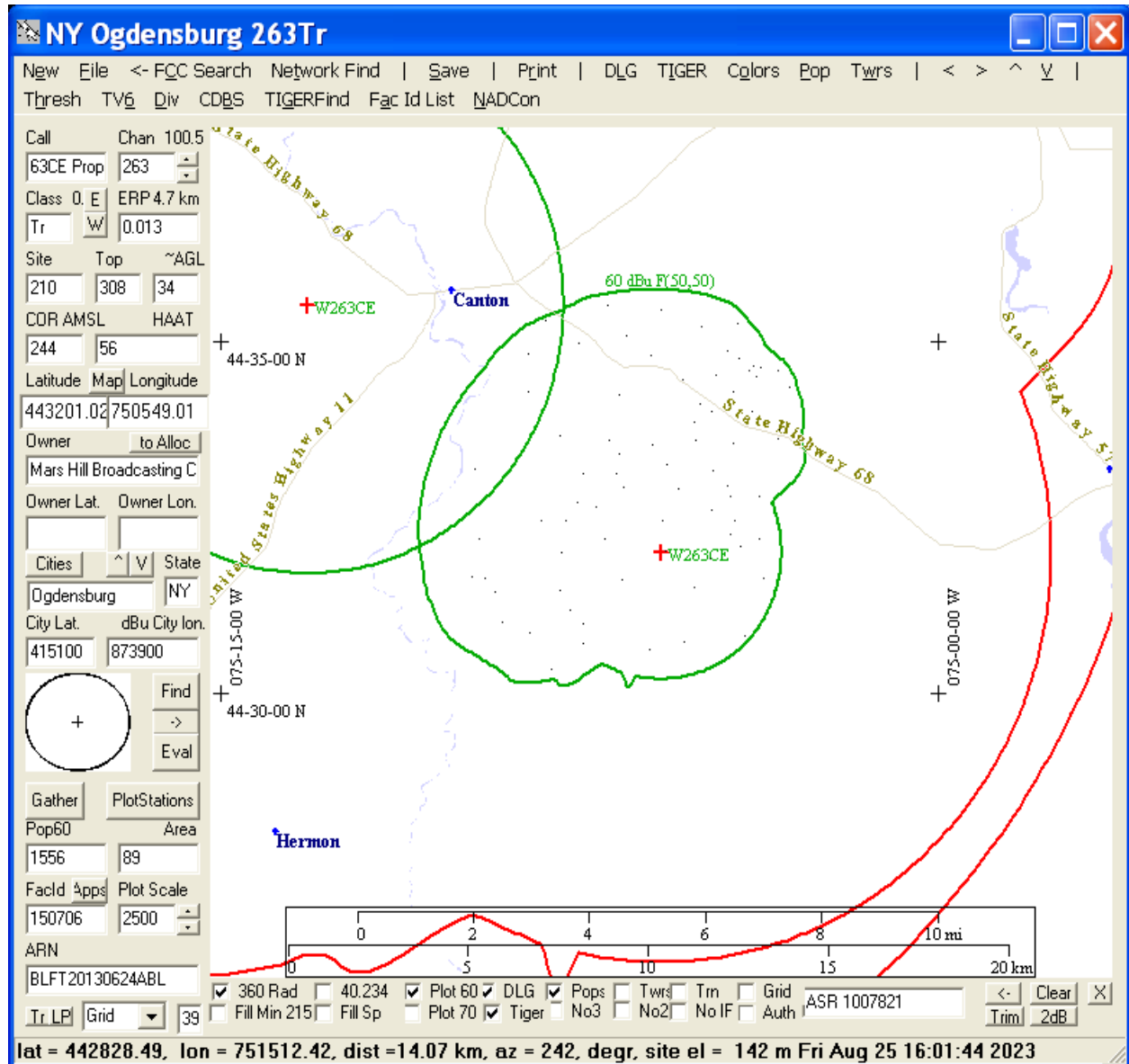
Tower Identification

#: 1
Dist: 0.05
Az: 262
ASR 1007821
NAD27: 443200.78 750550.27
NAD83: 443201.00 750549.00
Site El: 210.3m Height 98.1m Top AMSL 308.4m
Structure Type: TOWER
Location: WATERMAN HILL 8 KM SE OF CANTON NY, Russell, NY
Dates Construction: 04/07/2009 Action: 04/08/2009
FAA Number: 2006-AEA-2645-OE
FAA Circular Number: 70/7460-1K Chapter: 3, 4, 5, 12
Owner: ST LAWRENCE UNIVERSITY DBA = NORTH COUNTRY PUBLIC RADIO
ST LAWRENCE UNIVERSITY
CANTON, NY, 13617
(315)379-5356
rsauter@stlawu.edu

All tower data is taken from this ASR record.

Minor Change Showing:

Clearly the (green) 60 dBu contours of the present and proposed facility overlap making these facilities mutually exclusive. This fact and the lack of a channel change request keeps this in the realm of a minor change.



Contour Protection:

The application does not propose any contour overlap.

FMCommander Contour-to-Contour - HAAT Method= 0

File Print Settings Class Channel ≤ Down ≥ Up Find Views WatchDog Help About

FCC HGC 30 Sec DATA:06-16-23 East Zone

H. Lat. 44 32 01.00 244 m COR Contours are detailed Ogdensburg NY X W263ce.vsf
W. Lng. 75 05 49.00 0.013 kW CH 263.100.5 MHz. D 55.8 m HAAT W263CE 08-25-23

Translator to 3rd

Call	Type	Ch	Location	Azi	Dist	In	Out
W263CE	APP	263D	Ogdensburg	NY	303.8	11.72	---
W263CE	LIC	263D	Ogdensburg	NY	303.8	11.72	---
CJMJ	ALO	262C1	Ottawa	ON	331.5	122.99	6.0 26.1
CJMJ	USE	262C1	Ottawa	ON	331.5	122.99	6.0 26.1
CJMJ	LIC-D	262C1	Ottawa	ON	331.5	122.99	8.0 26.1
R28946	DEL	266C1	Smiths Falls	ON	308.0	99.79	82.8 13.2
CHEQFM	LIC-D	266C1	Smiths Falls	ON	308.0	99.80	86.0 13.2

End of Screen List, Cardinal Radials = 12

Note some of these facilities are exactly duplicated in the LMS database.

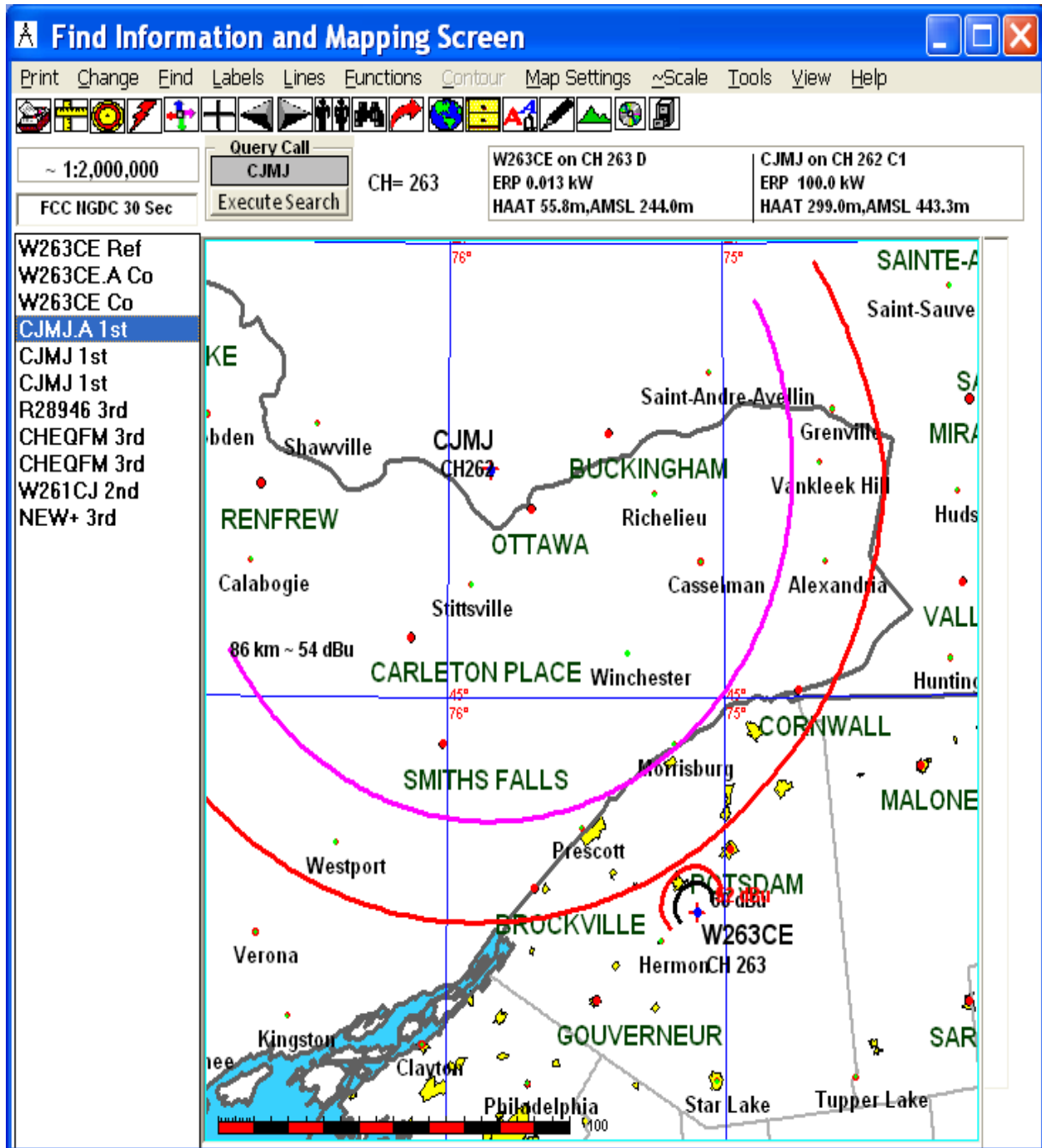
Exhibit 12

Mars Hill Broadcasting Co. In

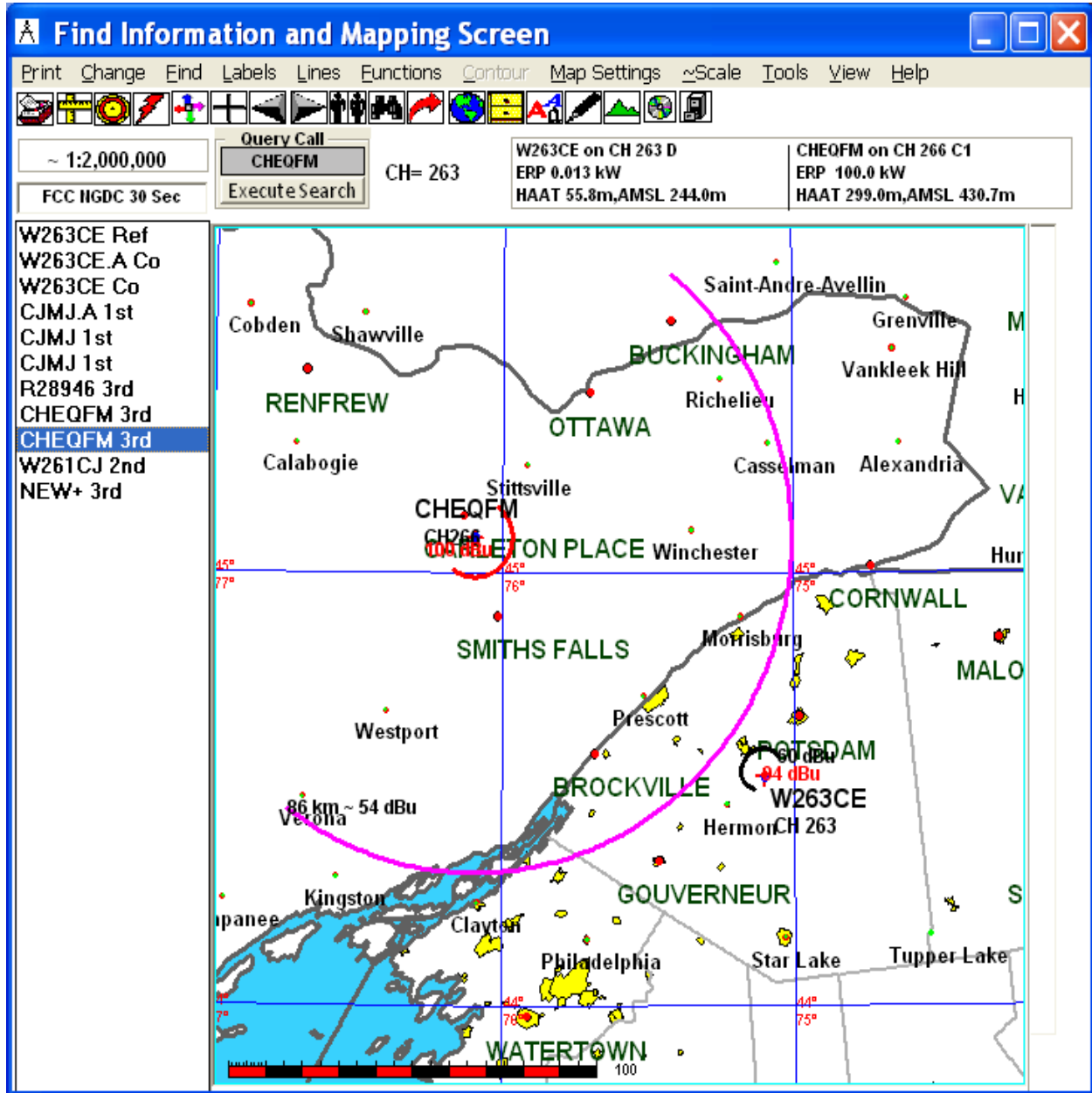
Reference 263Tr ERP 0.013 kW HAAT 56 m COR 244 m AMSL
443201.02 N 100.5 MHz Average protected F(50,50) 4.7 km
750549.01 W Ogdensburg, NY

ChnCl	Call	Stat	Azi	Dist	FacId	Lat	*OUT*	Sig	dBu
	Pwr	COR	HAAT		ARN	Lon	Req.	Margin	
	Owner			City		St			
263Tr	W263CE	LIC	304	11.74	150706	443532.20			This facility
	0.250	130	7	BLFT20130624ABL		751311.70			
	Mars Hill Broadcasti			Ogdensburg		NY			
262C1	CJMJ	LIC	331	123.02	95726	453011.12	20.32		See map
	100.000	433	299			755100.96			
	From CDBS			Ottawa		ON			
262C1	CJMJ+	LIC	331	123.02	95726	453011.12	20.54		See map
	100.000	430	291			755100.96			
				Ottawa		ON			

Proposed vs CJMJ



Prop vs CHEQ



Intermodulation Distortion

Co-located facilities

ID Stations V:2.1.17 (C) V-Soft Communications ...

ID Stations

Search Parameters

N. Latitude

W. Longitude

Distance (km)

Date > yymmdd

Station Type

☒ AM Stations

☒ FM Stations

☒ TV Stations

Include secondaries:

☒ FM Translators

☒ TV Translators

Call	Service	City	State	Chan.	Power	Coordinates	Dist	Bear
AM	-----	None Found	-----					
FM	-----							
WREM	M	Canton	NY	204A	0002.600kW	443201.20N 750548.70W	000.0	090.0
WSLU	M	Canton	NY	208C2	0040.000kW	443201.20N 750548.70W	000.0	090.0
WNCQFM	M	Canton	NY	275C3	0023.500kW	443210.20N 750544.70W	000.3	021.6
TV	-----	None Found	-----					

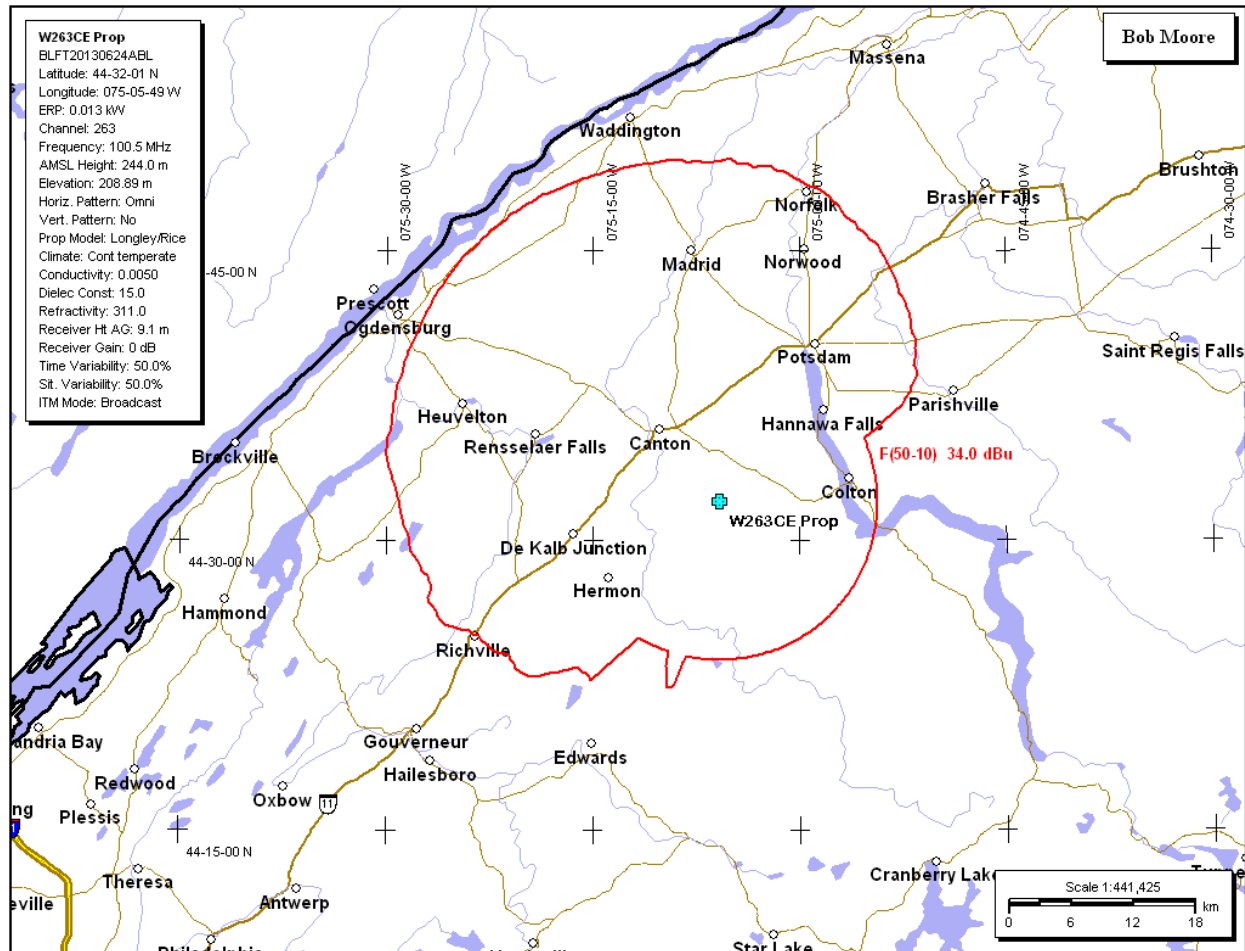
Suitable filtration will be provided for protection of all the above facilities.

Canadian Rules

For FM translators within 320 km of the Canadian border must be less than 50 Watts ERP and, the 34 dbu F(50,10) contour must not go more than 60 km in any direction (74.1235(d)(3)). The table below shows this is satisfied.

Terrain and Contour Data				
NY Ogdensburg W263CE Prop				
ERP 0.013 kW				
N. Lat. 44 32 1				
W. Lon. 75 5 49				
Center of Radiation 244.00 m AMSL				
Azimuth	Avg Elev	Effective	ERP	Distance to
Deg T.	3-16 km	Antenna Ht		Contour (km)
	Meters AMSL	Meters AAT	Kilowatts	34.0 dBu
				F(50,10)
0	121.6	122.4	0.0130	32.5
10	122.5	121.5	0.0130	32.4
20	130.1	113.9	0.0130	31.4
30	148.3	95.7	0.0130	28.6
40	156.1	87.9	0.0130	27.3
50	173.8	70.2	0.0130	24.3
60	190.5	53.5	0.0130	21.4
70	225.2	18.8	0.0130	15.2
80	241.9	2.1	0.0130	15.2
90	255.4	-11.4	0.0130	15.2
100	267.7	-23.7	0.0130	15.2
110	282.7	-38.7	0.0130	15.2
120	291.1	-47.1	0.0130	15.2
130	294.2	-50.2	0.0130	15.2
140	285.5	-41.5	0.0130	15.2
150	274.5	-30.5	0.0130	15.2
160	267.6	-23.6	0.0130	15.2
170	252.7	-8.7	0.0130	15.2
180	242.1	1.9	0.0130	15.2
190	223.9	20.1	0.0130	15.2
200	218.3	25.7	0.0130	15.2
210	211.7	32.3	0.0130	15.9
220	192.4	51.6	0.0130	20.9
230	172.5	71.5	0.0130	24.5
240	161.8	82.2	0.0130	26.3
250	142.9	101.1	0.0130	29.4
260	135.1	108.9	0.0130	30.6
270	132.0	112.0	0.0130	31.1
280	128.5	115.5	0.0130	31.6
290	126.2	117.8	0.0130	31.9
300	124.0	120.0	0.0130	32.2
310	121.4	122.6	0.0130	32.6
320	117.7	126.3	0.0130	33.0
330	116.3	127.7	0.0130	33.2
340	118.6	125.4	0.0130	32.9
350	119.5	124.5	0.0130	32.8

The 34 dBu F(50,10) of the proposed facility does not reach into Canadian territory, so no Canadian facilities now or in the future can receive interference on Canadian soil, and, again, the ERP is less than 50 Watts.



Radiation Hazard

This is a Part 47 facility under 100 Watts ERP, and is categorically excluded from processing for radiation hazard. Thus no radiation hazard mapping is required for this transmitter. (See OET 65, p76 Table 2).

TABLE 2 (cont.)

SERVICE (TITLE 47 CFR RULE PART)	EVALUATION REQUIRED IF:
Experimental, auxiliary, and special broadcast and other program distributional services (part 74)	subparts A, G, L: power > 100 W ERP subpart I: <u>non-building-mounted antennas</u> : height above ground level to lowest point of antenna < 10 m <u>and</u> power > 1640 W EIRP <u>building-mounted antennas</u> : power > 1640 W EIRP

.Here is why this rule is in place – the contribution to the total field is insignificant.

Radiation Hazard Worksheet

NY Ogdensburg 263Tr

From FCC 301/340 Worksheet

COR above ground:
34.0 m

ERP:
V 0.013 kW
H 0.100 kW

Results
0.3% of Controlled Limit
1.8% of Uncontrolled Limit

Protected Zones Report

Provided for convenience of staff

Protected zones report for W263CE on channel 263D 08-25-2023

Lat. 44 32 01.0 Lng. 75 05 49.0, ERP= 0.013 kw, HAAT= 55.8 m

The translator's 34 dBu F(50-10) contour does not touch Canada.

Facility is okay with respect to AM station towers.

Closest AM Facility is WPDM, POTSDAM, NY, L, ND2 at 14.2° at a distance of 12.6 km

Facility is okay with respect to FCC monitoring stations.

Closest FCC Monitoring Station is 250.9 km= Canandaigua, NY

Facility is okay toward West Virginia Quiet Zone. Distance to center = 776.7 km

Facility is okay toward Table Mountain. Distance to Center = 2531.9 km, Azimuth = 269.4

Degrees True

Robert Moore