

Anderson Associates

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WSPL(AM) FCC FACILITY # 63535 STREATOR, IL

STA APPLICATION

Need for STA:

After a co-owned FM tower collapsed, the licensee employed a tower company to inspect the WSPL(AM) towers. They reported that they were unsafe and should be immediately dismantled. The towers have been dismantled except for a 40 foot section of the south tower which was retained for temporary operation. This engineering STA is requested for a period of six months while the towers are either replaced or the facility is moved to a new site.

STA facilities requested:

Site -N 41-09-28 W 88-50-12 (NAD 27)

Tower - 13.1 meter tower (12.2 meters radiator/ 18.3° and 215.58 mV/m/km/kW)

Day power - 0.11 kW

Night power - 0.035 kW (secondary status)

Exhibit E3 demonstrates that the WSPL-STA 0.5 mV/m is contained within the licensed WSPL(AM) Day 0.5 mV/m. A night-time allocation study is included as E4 demonstrating that the 35 Watt night STA facility clears all protected facilities.

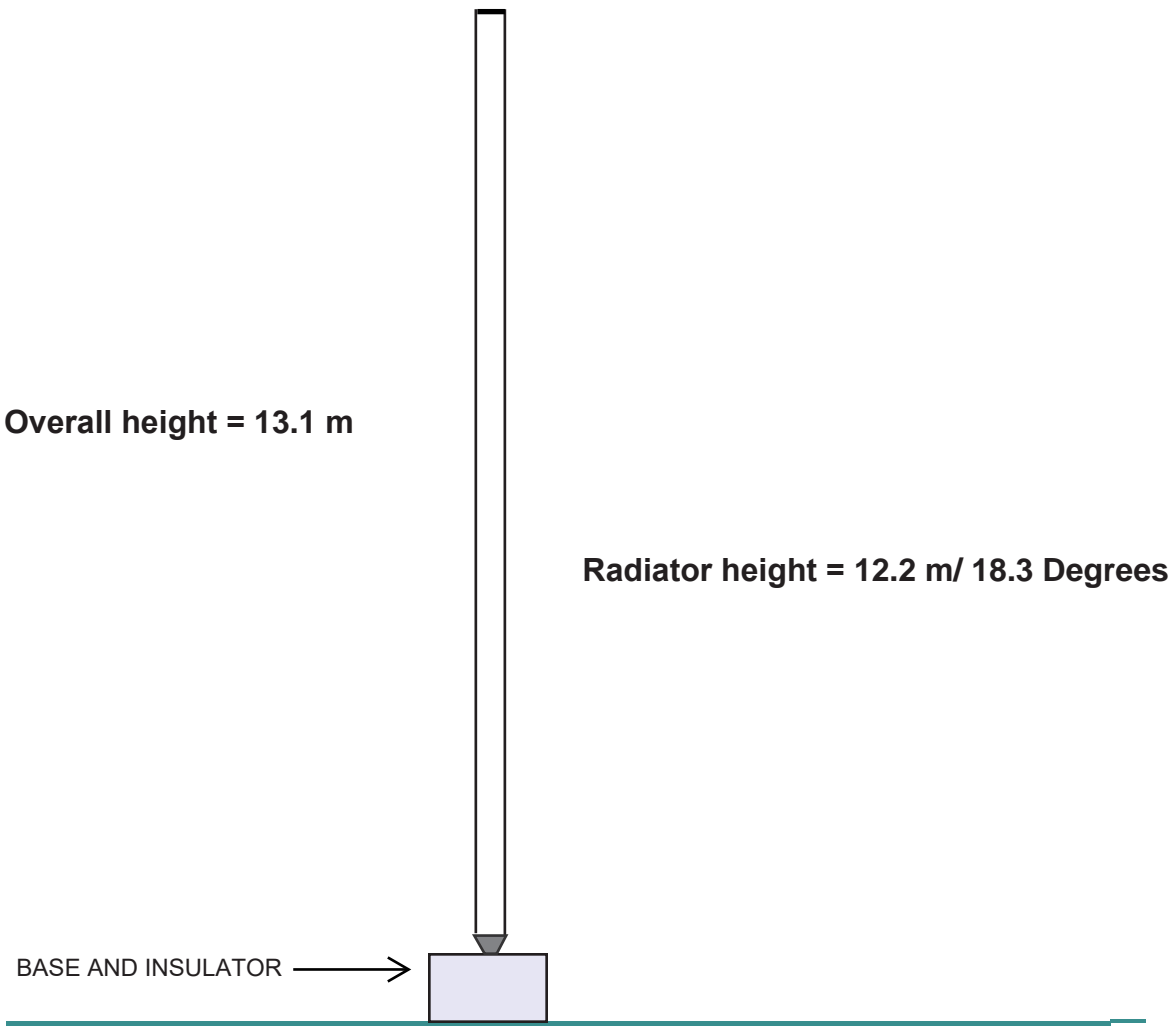
Exhibits:

- E1 Vertical sketch
- E2 FCC Figure 8
- E3 Day 0.5 mV/m contours
- E4 Night study
- E5 Towerair
- E6 Topographic map



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E1 VERTICAL SKETCH



WSPL(AM) STA

Existing two tower 90 degree ground system is the full equivalent of a single 120 radial 90 degree system.

FIGURE 8 calculates the Inverse Distance Field for AM broadcast stations with frequencies between 530 and 1700 kHz. This calculator is a computer version of Figure 8 of Section 73.190 of the FCC Rules.

The Inverse Distance Fields calculated here are in mV/m at 1 kilometer.

[Ground system correction factors](#) may be incorporated into the following results.

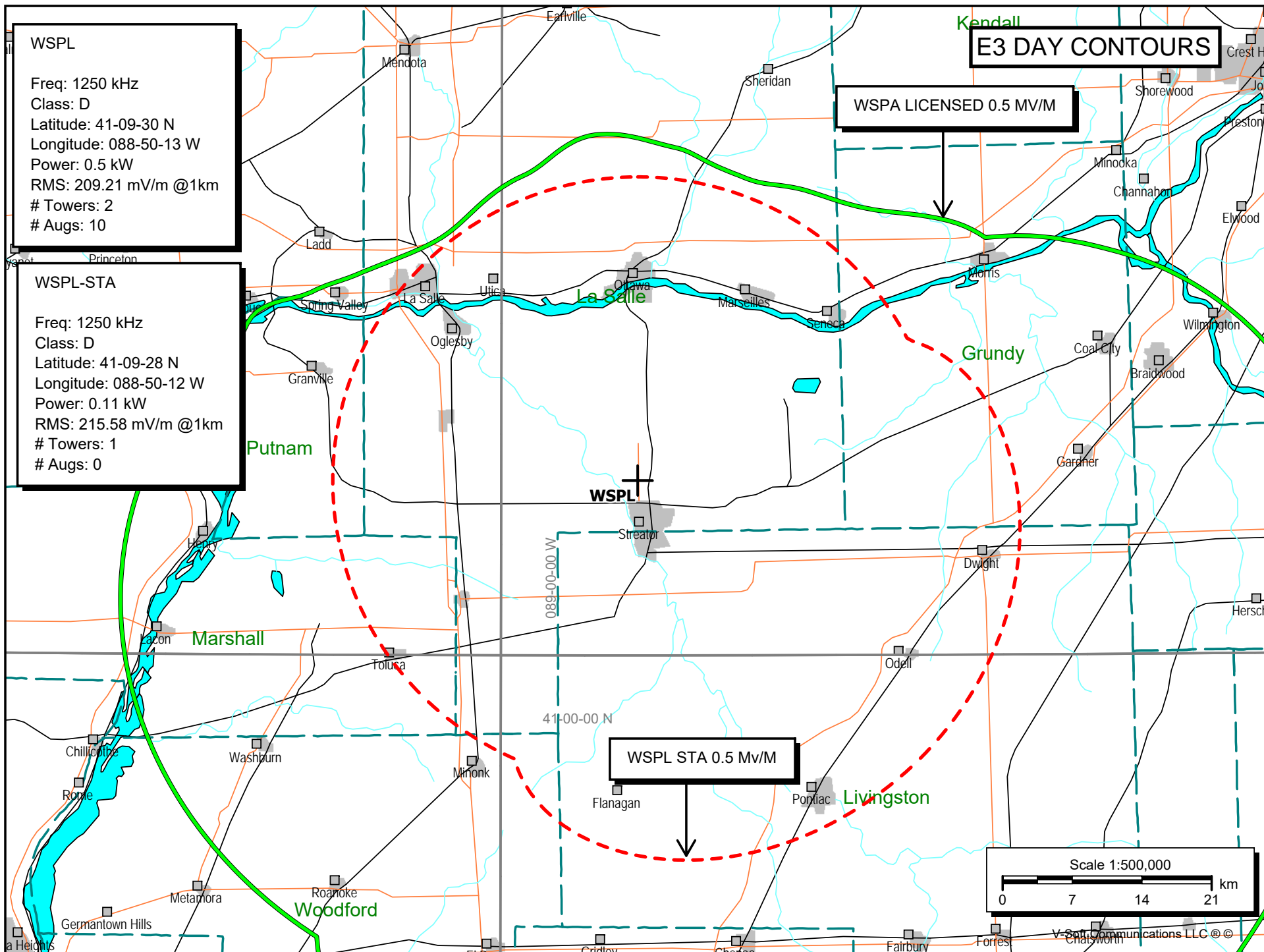
Input Parameters

Frequency:	1250 kHz
Number of Ground Radials:	120
Correction for number of radials:	0.0000 mV/m @ 1 kilometer
Average Length of Ground Radials:	60.000 meters 196.850 feet 90.062 degrees 0.2502 wavelengths
Correction factor for length:	0.0000 mV/m @ 1 kilometer
One Wavelength at 1250 kHz is:	239.834 meters 786.857 feet
Tower Height:	12.200 meters 40.026 feet 18.31 degrees 0.0509 wavelengths

Predicted Field Strength from Figure 8, Section 73.190

(Metric units)

	Theoretical Field	Corrected Field	
At 1.00 kW:	215.580	215.580	mV/m @ 1 KM
At 0.110 kW:	71.500	71.500	mV/m @ 1 KM



E4 Night Allocation Protection Report

Call: WSPL

Freq: 1250 kHz

STREATOR, IL, US

Hours: N

Lat: 41-09-28 N

Lng: 088-50-12 W

Power: 0.035 kW

Theo RMS: 215.58 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	18.3	0	0	0.0	0.0	0.0	0.0

Call Letters	Ct	St	City	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
WSSP	US	WI	MILWAUKEE	276.83	1.962	35.43	33.31	2.13
50% = 6.764, 25% = 7.847; WPGP=5.98 KCFI=3.15 WNDE=2.66 KYYS=2.19 WJMK=1.99								
KCFI	US	IA	CEDAR FALLS	175.68	2.232	63.53	37.30	26.23
50% = 7.303, 25% = 8.929; WSSP=4.43 KYYS=4.30 KBRF=3.90 KZOI=3.57 WPGP=2.78 WGL=2.43								
WGL	US	IN	FORT WAYNE	196.92	3.246	82.41	36.70	45.71
50% = 9.515, 25% = 11.195; WPGP=9.51 WSSP=3.75 WSPL=3.25 WDVA=3.19								
WPGP	US	PA	PITTSBURGH	59.12	1.108	93.70	39.82	53.88
50% = 2.68, 25% = 4.23; WDNE=1.38 WRTA=1.35 WJEJ=1.33 WHIZ=1.29 YVML-A=1.22 WGL=1.21 WVTs=1.20 WDVA=1.17 WTON=1.17 WSPL=1.11 WJTN=1.10 WHNZ=1.05								
KYYS	US	KS	KANSAS CITY	104.79	1.998	95.33	39.10	56.23
50% = 3.811, 25% = 5.194; WSPL=2.00 KFOG=1.96 WPGP=1.90 WSDZ=1.75 KZOI=1.68 KCFI=1.52 WTMA=1.49 KBRF=1.35 KIKZ=1.29 KSGF=1.27								
KFOG	US	AR	LITTLE ROCK	61.90	2.103	169.88	39.85	130.04
50% = 5.952, 25% = 8.413; KSGF=4.09 WGL=3.29 KYYS=2.80 WSDZ=2.69 KZDC=2.66 WTMA=2.58 KDEI=2.26 WPGP=2.19 WSSP=2.11								
KBRF	US	MN	FERGUS FALLS	47.30	1.641	173.46	39.91	133.55
50% = 5.98, 25% = 6.564; WSSP=5.98 KCFI=2.05 WPGP=1.77								

E5 TOWAIR Determination Results

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.

Your Specifications

NAD83 Coordinates

Latitude	41-09-28.2 north
Longitude	088-50-11.8 west

Measurements (Meters)

Overall Structure Height (AGL)	13.1
Support Structure Height (AGL)	0
Site Elevation (AMSL)	189.5

Structure Type

GTOWER - Guyed Structure Used for Communication Purposes

