

Protection to WFON from Interference

The site for the proposed facility is located within the protected contour on a channel which is second-adjacent to WFON, the Affected Station. We predict the Affected Station protected contour at the proposed site is 62.44 dBu F[50,50] as displayed in **Figure 1**. According to established third-adjacent channel contour Undesired-to-Desired (U/D) protection ratios, the contour from the interfering station should be 40 dB higher than the protected contour. Therefore the respective interfering contour for this proposed amendment is 102.44dBu F[50,10], which is 370.7 meters from the proposed radiation center. Displayed in **Figure 2** is the site marking that radius of the potential interference area, indicated by a blue dashed circle.

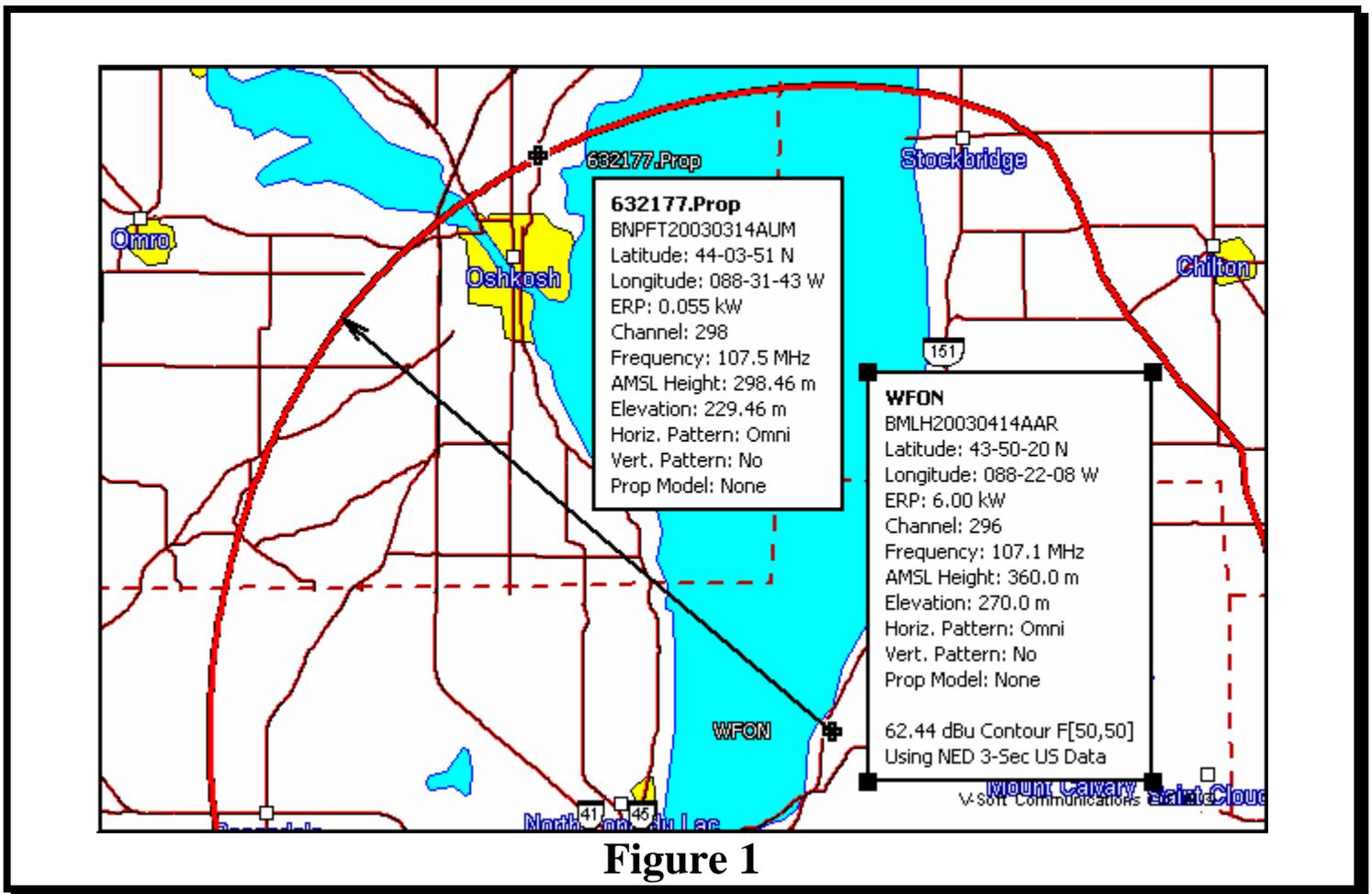




Figure 2

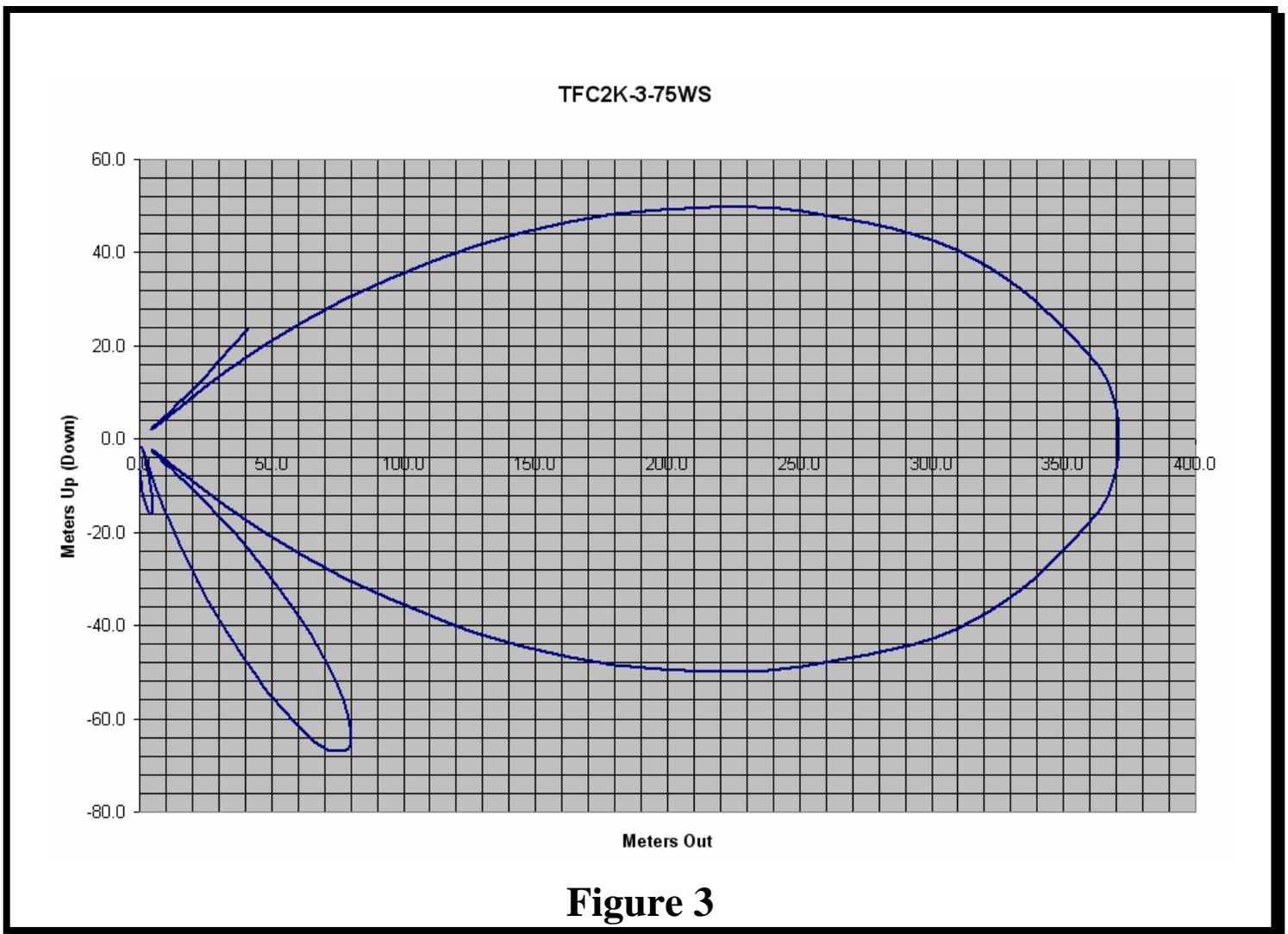
Applicant proposes to use a BEXT antenna model TFC2K-3-75WS, which is a three-bay antenna with $\frac{3}{4}$ wavelength vertical bay spacing. A graphical representation of radiation in the vertical plane is displayed in **Figure 3**.

Field strength at various elevation angles were provided by the antenna manufacturer and displayed **Table 1** at the end of this exhibit. Columns with calculated field dB and the contour distance in meters which were also calculated both in elevation radial form and for plotting in plane coordinates. It can be seen from this data that the actual interference area does not exceed 66.8 meters below the 69.4 m AGL center of radiation. Therefore, the actual interference area does not extend below 2 meters AGL in those areas.

The lowest areas of actual interference are caused by a minor lobe radiating at the 42 degree vertical depression angle. According to **Table 1**, its energy reaches outward 74.1 meters. That radius area is indicated by a green dashed circle in **Figure 2**. It is notable that there are no structures, other than those related to the tower, within that area. Also, County Road A, the

North-South highway on the East side of the green dashed circle, is more than a meter lower than the site reference elevation therefore more than three meters below the interfering signal of the minor lobe.

All areas in Figure 2 between the green dashed circle and the blue dashed circle are outside of the minor-lobe and affected only by signal from the major lobe. The lowest point of radiation from the major lobe according to **Table 1** is 49.9 meters below radiation center (248.2 meters AMSL) at the 12 degree depression angle.



Except for locations North-west of the site, the ground elevation is approximately even with or below the site elevation within the main lobe area. All those area residences, business buildings, and other structures where the public might be located do not exceed seven meters, the height allowed for the occupied space of a typical two-story residence.

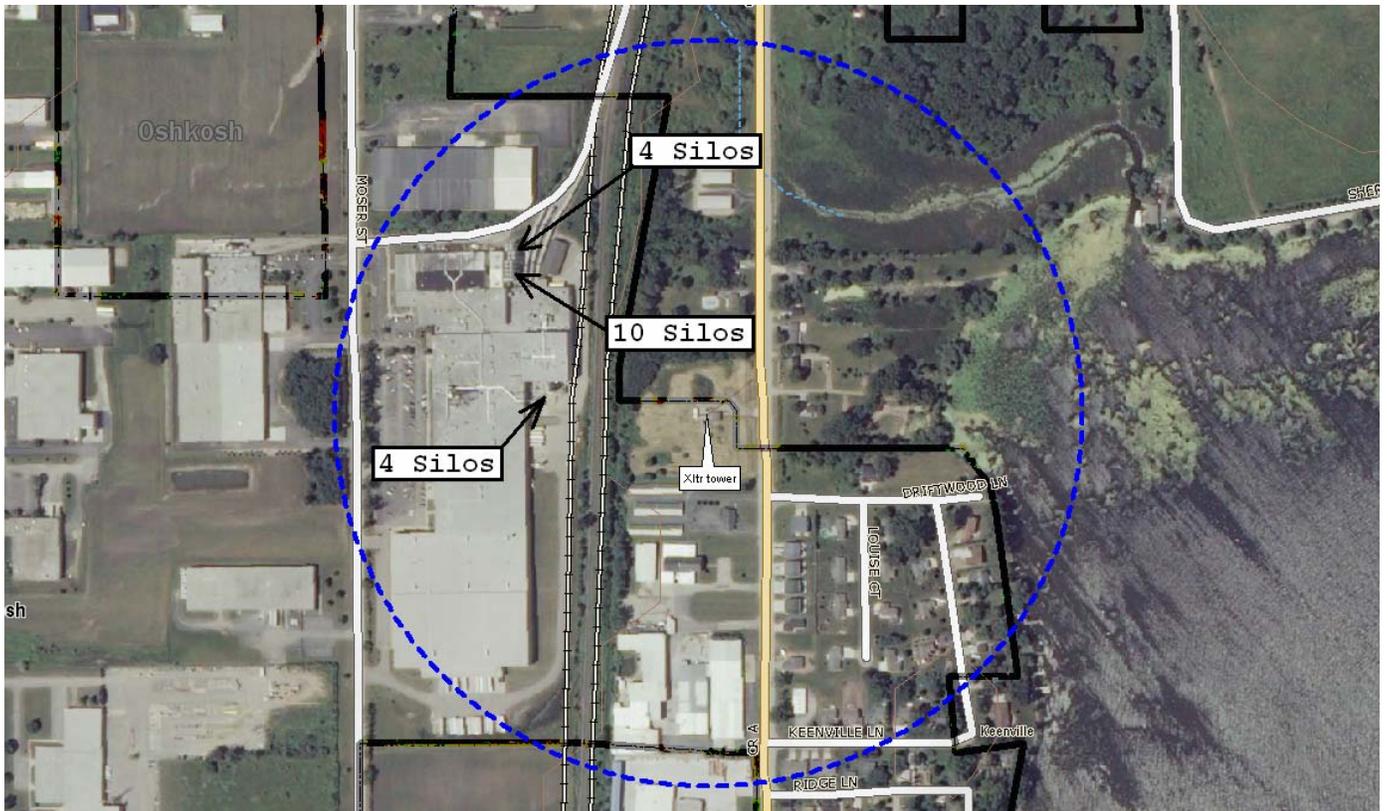


Figure 4

Terrain in the North-west quadrant is 3 meters higher than the site reference elevation. There also is a large manufacturing plant located within that area.

A group of four storage silos and a group of ten storage silos are adjacent to the north end of the complex. Shorter silos are sandwiched between these two groups of silos. They are viewed from street level on the front side facing SW in **Figure 5**. There is also a group of four storage silos near the south portion of the east-wing of the building complex in **Figure 6** as seen from the tower site looking WNW.



Figure 5



Figure 6

The highest portions of the plant complex are the tallest silos, which are approximately 15 meters AGL or 247 meters AMSL. Since the interference main lobe extends above 248.2

meters AMSL, the tallest structures within the potential interference area are not included within the actual interference area. The plant complex has security limiting the public's access. Nevertheless, the area closest to being affected by the actual interfering signal is at the top of the highest factory silo which is not normally occupied by personnel.

There is no residence, no business, no public factory location nor is there any public road within the actual area of interference to the Affected Station, which is actually hovering above locations where the public would be located. Therefore, the interference area is limited to an area where there are no public places.

Request for Waiver

Since this proposal complies with 47CFR74.1204(d) based upon the fact that no actual interference will occur due to no population and no public locations within the areas of interference, we hereby request waiver of 47CFR74.1204(a)(3) for separation between this proposed facility and the Affected Station.

Table I

TFC2K375.DAT	FIELD	FIELD	ELEV	ELEV	102.44DBU	DISTANCE	DISTANCE	ELEVATION
ELEV	STRENGTH	DB	ERP(KW)	DBK	CNTR(M)	OUT(M)	UP(DOWN)	AMSL(M)
ANGLE								
=====	=====	=====	=====	=====	=====	=====	=====	=====
-90	0.012	-38.30	0.0000	-51.40	4.5	0.0	-4.5	293.5
-88	0.014	-36.90	0.0000	-50.00	5.3	0.2	-5.3	292.7
-86	0.020	-33.80	0.0000	-46.90	7.6	0.5	-7.5	290.5
-84	0.027	-31.30	0.0000	-44.40	10.1	1.1	-10.0	288.0
-82	0.033	-29.50	0.0001	-42.60	12.4	1.7	-12.3	285.7
-80	0.039	-28.20	0.0001	-41.30	14.4	2.5	-14.2	283.8
-78	0.043	-27.40	0.0001	-40.50	15.8	3.3	-15.5	282.5
-76	0.045	-27.00	0.0001	-40.10	16.6	4.0	-16.1	281.9
-74	0.045	-26.90	0.0001	-40.00	16.7	4.6	-16.1	281.9
-72	0.044	-27.20	0.0001	-40.30	16.2	5.0	-15.4	282.6
-70	0.039	-28.10	0.0001	-41.20	14.6	5.0	-13.7	284.3
-68	0.033	-29.70	0.0001	-42.80	12.1	4.5	-11.2	286.8
-66	0.023	-32.60	0.0000	-45.70	8.7	3.5	-7.9	290.1
-64	0.011	-39.10	0.0000	-52.20	4.1	1.8	-3.7	294.3
-62	0.005	-46.80	0.0000	-59.90	1.7	0.8	-1.5	296.5
-60	0.024	-32.50	0.0000	-45.60	8.8	4.4	-7.6	290.4
-58	0.047	-26.60	0.0001	-39.70	17.3	9.2	-14.7	283.3
-56	0.072	-22.80	0.0003	-35.90	26.9	15.0	-22.3	275.7

FCC Form 349 - Exhibit No. 12B
Waiver Request 47CFR74.1204

-54	0.102	-19.80	0.0005	-32.90	37.9	22.3	-30.7	267.3
-52	0.133	-17.50	0.0009	-30.60	49.4	30.4	-39.0	259.0
-50	0.166	-15.60	0.0013	-28.70	61.5	39.5	-47.1	250.9
-48	0.200	-14.00	0.0020	-27.10	74.0	49.5	-55.0	243.0
-46	0.229	-12.80	0.0026	-25.90	84.9	59.0	-61.1	236.9
-44	0.254	-11.90	0.0032	-25.00	94.2	67.8	-65.4	232.6
-42	0.269	-11.40	0.0035	-24.50	99.8	74.1	-66.8	231.2
-40	0.279	-11.10	0.0038	-24.20	103.3	79.1	-66.4	231.6
-38	0.275	-11.20	0.0037	-24.30	102.1	80.4	-62.9	235.1
-36	0.257	-11.80	0.0032	-24.90	95.3	77.1	-56.0	242.0
-34	0.226	-12.90	0.0025	-26.00	83.9	69.6	-46.9	251.1
-32	0.184	-14.70	0.0017	-27.80	68.2	57.9	-36.2	261.8
-30	0.127	-17.90	0.0008	-31.00	47.2	40.9	-23.6	274.4
-28	0.062	-24.20	0.0002	-37.30	22.9	20.2	-10.7	287.3
-26	0.013	-37.60	0.0000	-50.70	4.9	4.4	-2.1	295.9
-24	0.094	-20.50	0.0004	-33.60	35.0	32.0	-14.2	283.8
-22	0.180	-14.90	0.0016	-28.00	66.7	61.8	-25.0	273.0
-20	0.269	-11.40	0.0035	-24.50	99.8	93.7	-34.1	263.9
-18	0.363	-8.80	0.0065	-21.90	134.6	128.0	-41.6	256.4
-16	0.457	-6.80	0.0102	-19.90	169.4	162.9	-46.7	251.3
-14	0.550	-5.20	0.0148	-18.30	203.7	197.6	-49.3	248.7
-12	0.646	-3.80	0.0204	-16.90	239.3	234.1	-49.8	248.2
-10	0.733	-2.70	0.0263	-15.80	271.6	267.5	-47.2	250.8
-8	0.822	-1.70	0.0331	-14.80	304.8	301.8	-42.4	255.6
-6	0.891	-1.00	0.0389	-14.10	330.4	328.5	-34.5	263.5
-4	0.944	-0.50	0.0437	-13.60	349.9	349.1	-24.4	273.6
-2	0.989	-0.10	0.0479	-13.20	366.4	366.2	-12.8	285.2
0	1.000	0.00	0.0490	-13.10	370.7	370.7	0.0	298.0
2	0.989	-0.10	0.0479	-13.20	366.4	366.2	12.8	310.8
4	0.944	-0.50	0.0437	-13.60	349.9	349.1	24.4	322.4
6	0.891	-1.00	0.0389	-14.10	330.4	328.5	34.5	332.5
8	0.822	-1.70	0.0331	-14.80	304.8	301.8	42.4	340.4
10	0.733	-2.70	0.0263	-15.80	271.6	267.5	47.2	345.2
12	0.646	-3.80	0.0204	-16.90	239.3	234.1	49.8	347.8
14	0.550	-5.20	0.0148	-18.30	203.7	197.6	49.3	347.3
16	0.457	-6.80	0.0102	-19.90	169.4	162.9	46.7	344.7
18	0.363	-8.80	0.0065	-21.90	134.6	128.0	41.6	339.6
20	0.269	-11.40	0.0035	-24.50	99.8	93.7	34.1	332.1
22	0.180	-14.90	0.0016	-28.00	66.7	61.8	25.0	323.0
24	0.094	-20.50	0.0004	-33.60	35.0	32.0	14.2	312.2
26	0.013	-37.60	0.0000	-50.70	4.9	4.4	2.1	300.1
28	0.062	-24.20	0.0002	-37.30	22.9	20.2	10.7	308.7
30	0.127	-17.90	0.0008	-31.00	47.2	40.9	23.6	321.6

TFC2K375.DAT

MAX: 370.7m -66.8m 231.2m

End of Table I