Exhibits

in support of a

Minor Modification

to

FM Translator Construction Permit

BNPFT-20171221AFB

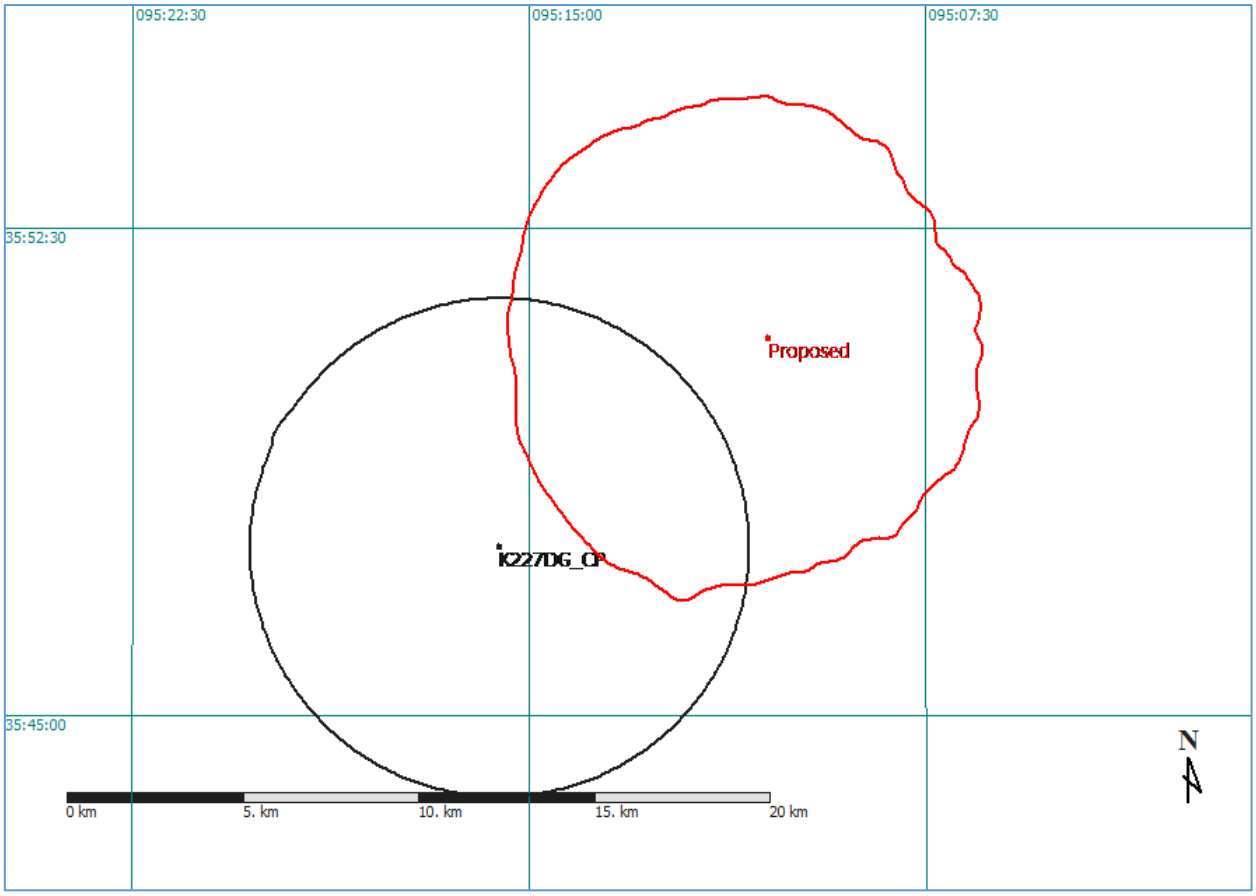
K227DG (Muskogee, OK)

June 12, 2020

MINOR MODIFICATION ANALYSIS
K227DG
MUSKOGEE, OK

The instant application proposes a new transmitter site, antenna, and effective radiated power for the facility authorized in Construction Permit BNPFT-20171221AFB.

The following study demonstrates that the 60 dBu contour (red) of the proposed facility overlaps the 60 dBu contour (black) of the facility authorized in the existing construction permit.

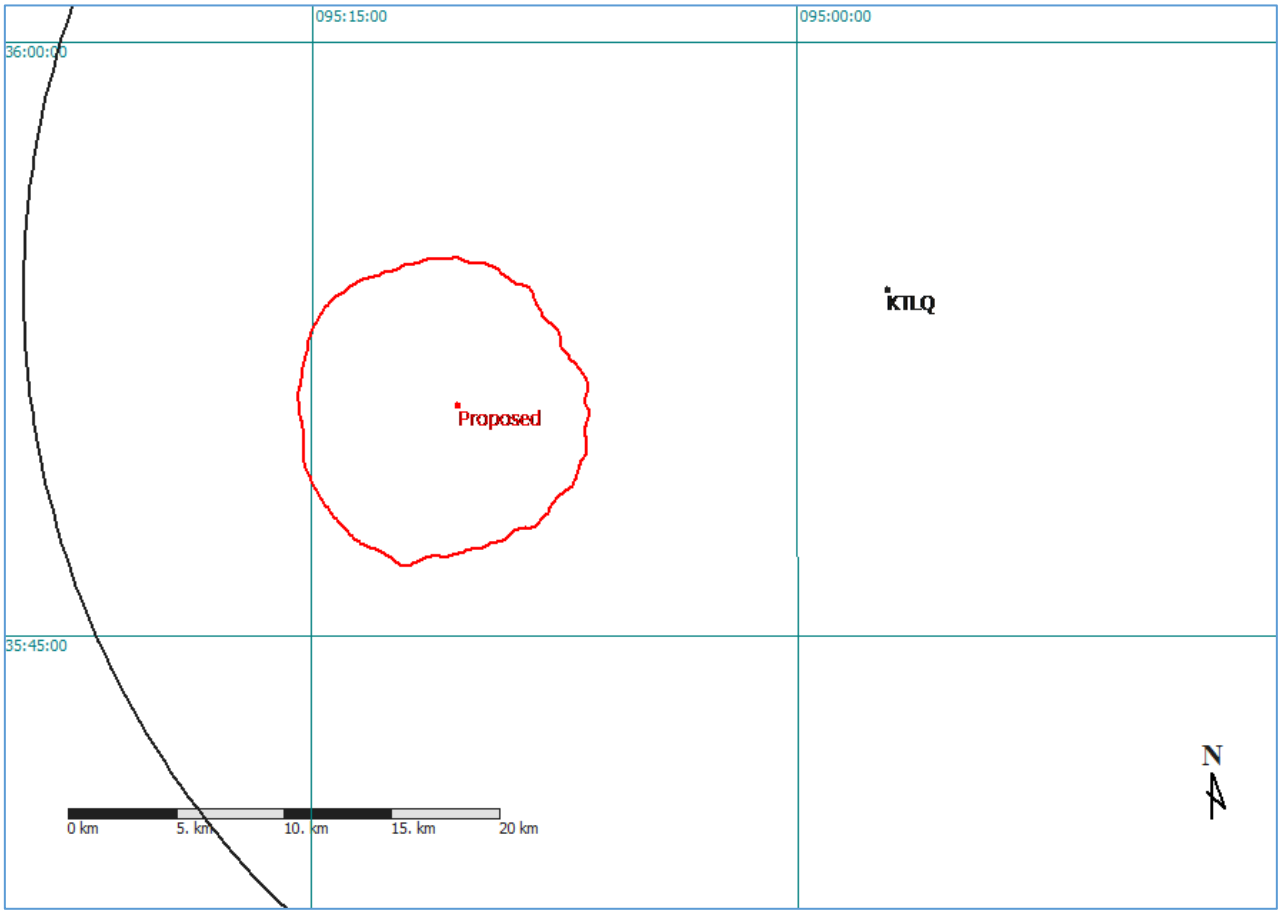


Consequentially, the proposed modification the construction permit is considered a minor change and may be requested at this time.

AM FILL-IN ANALYSIS
K227DG
MUSKOGEE, OK

The Applicant proposes to utilize KTLQ, Tahlequah (FID # 16567) as the primary station for the FM translator proposed in the instant application.

The following study demonstrates that the 60 dBu contour (red) of the proposed FM translator is contained entirely within a 25-mile radius (black) centered at the transmitter site of KTLQ.



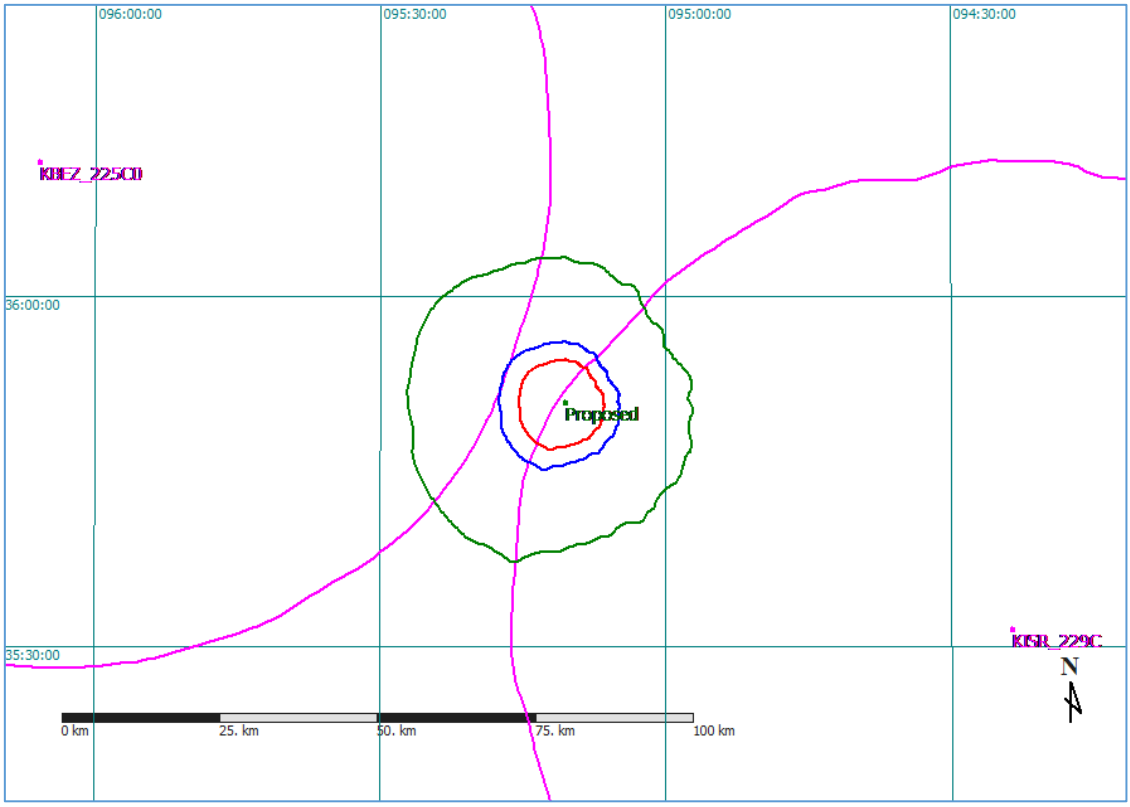
INTERFERENCE AND OVERLAP REQUIREMENTS
K227DG
MUSKOGEE, OK

The proposed facility will not create prohibited overlap to any other licensed facility or pending application other than to second-adjacent KISR, Fort Smith (FID # 63336). As more fully discussed below, processing pursuant to 47 C.F.R. § 74.1204(d) is appropriate here.

KISR, Fort Smith (FID #63336)

The study below illustrates that the proposed facility will not create prohibited overlap to any other licensed full-power facility or pending application other than to second adjacent KISR, Fort Smith (FID # 63336).

The green contours represent co-channel interfering (40 dBu) to co-channel protected (60 dBu) contours. Blue contours represent first-adjacent channel interfering (54 dBu) to first-adjacent protected (60 dBu) contours. Magenta contours represent second and third-adjacent channel interfering (100 dBu) to second and third-adjacent protected (60 dBu) contours. Red contours represent co-channel protected (60 dBu) to co-channel interfering (40 dBu) contours.



In the instant case, the facilities of KISR are on a second adjacent channel to the proposed translator. Out of an abundance of caution, a worse-case signal strength of only 60 dBu for KISR is assumed for the following analysis. Therefore, the 100 dBu is the lowest value predicted to cause interference to KISR.

The proposed facility will broadcast with an effective radiated power of 15 watts from an antenna mounted 53 meters above ground level. The area of predicted interference without accounting for the elevation pattern of the antenna is 272 meters. That area is indicated in the aerial image below.

The Applicant has visited the site and certifies that none of the structures within the area indicated in the image exceed 10 meters in height.

The facility proposed herein will utilize a four-bay Jampro JLCP-4 antenna that employs half-wave spacing. The elevation pattern for the antenna accompanies the instant application.

The table on the following page depicts the predicted signal strength from the proposed translator at ground level and at receiving antenna locations up to 10 meters above ground level.

The 10 meter “artificial plane” is higher than any structure within the potential free-space zone of interference.

As can be determined by the columns colored green, at no location from ground level to 10 meters above the ground does the predicted signal of the proposed translator exceed 100 dBu.

The Applicant respectfully submits that since a lack of population exists in the area of actual interference, the processing pursuant to 47 C.F.R § 74.1204(d) is appropriate for the instant application.

Proposed Antenna:	Jampro JLCP-4 HW
Proposed Power:	0.015 kW
Antenna Height AGL:	53 meters
Interference Contour:	100 dBu
Artificial Rcv Antenna Height:	10 meters

Depression Angle Below Horizon	Antenna Relative Field	ERP in kW	ERP in dBk	Distance from Ant. to Interf Contour	Distance from Ant. to Artificial Plane	Field Streng in dBu @ Artificial Plane	Distance from Ant. to Ground Level	Field Strength in dBu @ Ground Level
0°	1.000	0.015	-18.24	271.67 m	infinite		infinite	
-1°	0.998	0.015	-18.26	271.13 m	2463.84 m	80.83 dBu	3036.83 m	79.02 dBu
-2°	0.992	0.015	-18.31	269.50 m	1232.11 m	86.80 dBu	1518.65 m	84.98 dBu
-3°	0.981	0.014	-18.41	266.51 m	821.61 m	90.22 dBu	1012.69 m	88.40 dBu
-4°	0.966	0.014	-18.54	262.44 m	616.43 m	92.58 dBu	759.79 m	90.77 dBu
-5°	0.948	0.013	-18.70	257.55 m	493.37 m	94.35 dBu	608.11 m	92.54 dBu
-6°	0.925	0.013	-18.92	251.30 m	411.37 m	95.72 dBu	507.04 m	93.90 dBu
-7°	0.900	0.012	-19.15	244.51 m	352.84 m	96.81 dBu	434.89 m	95.00 dBu
-8°	0.870	0.011	-19.45	236.36 m	308.97 m	97.67 dBu	380.82 m	95.86 dBu
-9°	0.838	0.011	-19.77	227.66 m	274.88 m	98.36 dBu	338.80 m	96.55 dBu
-10°	0.803	0.010	-20.14	218.15 m	247.63 m	98.90 dBu	305.21 m	97.08 dBu
-11°	0.765	0.009	-20.57	207.83 m	225.36 m	99.30 dBu	277.76 m	97.48 dBu
-12°	0.722	0.008	-21.07	196.15 m	206.82 m	99.54 dBu	254.92 m	97.72 dBu
-13°	0.685	0.007	-21.53	186.10 m	191.15 m	99.77 dBu	235.61 m	97.95 dBu
-14°	0.639	0.006	-22.13	173.60 m	177.74 m	99.80 dBu	219.08 m	97.98 dBu
-15°	0.593	0.005	-22.78	161.10 m	166.14 m	99.73 dBu	204.78 m	97.92 dBu
-16°	0.553	0.005	-23.38	150.23 m	156.00 m	99.67 dBu	192.28 m	97.86 dBu
-17°	0.506	0.004	-24.16	137.47 m	147.07 m	99.41 dBu	181.28 m	97.60 dBu
-18°	0.464	0.003	-24.91	126.06 m	139.15 m	99.14 dBu	171.51 m	97.33 dBu
-19°	0.418	0.003	-25.82	113.56 m	132.08 m	98.69 dBu	162.79 m	96.87 dBu
-20°	0.372	0.002	-26.83	101.06 m	125.72 m	98.10 dBu	154.96 m	96.29 dBu
-21°	0.328	0.002	-27.92	89.11 m	119.99 m	97.42 dBu	147.89 m	95.60 dBu
-22°	0.287	0.001	-29.08	77.97 m	114.79 m	96.64 dBu	141.48 m	94.82 dBu
-23°	0.245	0.001	-30.46	66.56 m	110.05 m	95.63 dBu	135.64 m	93.82 dBu
-24°	0.204	0.001	-32.05	55.42 m	105.72 m	94.39 dBu	130.31 m	92.57 dBu
-25°	0.167	0.000	-33.78	45.37 m	101.75 m	92.98 dBu	125.41 m	91.17 dBu
-26°	0.129	0.000	-36.03	35.05 m	98.09 m	91.06 dBu	120.90 m	89.24 dBu
-27°	0.094	0.000	-38.78	25.54 m	94.72 m	88.62 dBu	116.74 m	86.80 dBu
-28°	0.061	0.000	-42.53	16.57 m	91.59 m	85.15 dBu	112.89 m	83.33 dBu
-29°	0.029	0.000	-48.99	7.88 m	88.69 m	78.97 dBu	109.32 m	77.15 dBu
-30°	0.001	0.000	-78.24	0.27 m	86.00 m	49.99 dBu	106.00 m	48.17 dBu
-31°	0.027	0.000	-49.61	7.34 m	83.49 m	78.88 dBu	102.91 m	77.06 dBu
-32°	0.051	0.000	-44.09	13.86 m	81.14 m	84.65 dBu	100.02 m	82.83 dBu
-33°	0.073	0.000	-40.97	19.83 m	78.95 m	88.00 dBu	97.31 m	86.18 dBu
-34°	0.093	0.000	-38.87	25.27 m	76.90 m	90.33 dBu	94.78 m	88.52 dBu
-35°	0.110	0.000	-37.41	29.88 m	74.97 m	92.01 dBu	92.40 m	90.20 dBu
-36°	0.125	0.000	-36.30	33.96 m	73.16 m	93.33 dBu	90.17 m	91.52 dBu
-37°	0.138	0.000	-35.44	37.49 m	71.45 m	94.40 dBu	88.07 m	92.58 dBu
-38°	0.147	0.000	-34.89	39.94 m	69.84 m	95.14 dBu	86.09 m	93.33 dBu
-39°	0.156	0.000	-34.38	42.38 m	68.33 m	95.85 dBu	84.22 m	94.04 dBu
-40°	0.164	0.000	-33.94	44.55 m	66.90 m	96.47 dBu	82.45 m	94.65 dBu
-41°	0.170	0.000	-33.63	46.18 m	65.54 m	96.96 dBu	80.79 m	95.14 dBu
-42°	0.174	0.000	-33.43	47.27 m	64.26 m	97.33 dBu	79.21 m	95.52 dBu
-43°	0.174	0.000	-33.43	47.27 m	63.05 m	97.50 dBu	77.71 m	95.68 dBu
-44°	0.175	0.000	-33.38	47.54 m	61.90 m	97.71 dBu	76.30 m	95.89 dBu
-45°	0.175	0.000	-33.38	47.54 m	60.81 m	97.86 dBu	74.95 m	96.05 dBu
-46°	0.174	0.000	-33.43	47.27 m	59.78 m	97.96 dBu	73.68 m	96.15 dBu
-47°	0.171	0.000	-33.58	46.46 m	58.80 m	97.95 dBu	72.47 m	96.14 dBu
-48°	0.168	0.000	-33.73	45.64 m	57.86 m	97.94 dBu	71.32 m	96.12 dBu
-49°	0.164	0.000	-33.94	44.55 m	56.98 m	97.86 dBu	70.23 m	96.05 dBu
-50°	0.160	0.000	-34.16	43.47 m	56.13 m	97.78 dBu	69.19 m	95.96 dBu
-51°	0.152	0.000	-34.60	41.29 m	55.33 m	97.46 dBu	68.20 m	95.64 dBu
-52°	0.147	0.000	-34.89	39.94 m	54.57 m	97.29 dBu	67.26 m	95.47 dBu
-53°	0.138	0.000	-35.44	37.49 m	53.84 m	96.86 dBu	66.36 m	95.04 dBu
-54°	0.132	0.000	-35.83	35.86 m	53.15 m	96.58 dBu	65.51 m	94.77 dBu
-55°	0.123	0.000	-36.44	33.42 m	52.49 m	96.08 dBu	64.70 m	94.26 dBu
-56°	0.116	0.000	-36.95	31.51 m	51.87 m	95.67 dBu	63.93 m	93.86 dBu
-57°	0.107	0.000	-37.65	29.07 m	51.27 m	95.07 dBu	63.20 m	93.25 dBu
-58°	0.101	0.000	-38.15	27.44 m	50.70 m	94.67 dBu	62.50 m	92.85 dBu
-59°	0.092	0.000	-38.96	24.99 m	50.17 m	93.95 dBu	61.83 m	92.13 dBu
-60°	0.086	0.000	-39.55	23.36 m	49.65 m	93.45 dBu	61.20 m	91.64 dBu
-61°	0.078	0.000	-40.40	21.19 m	49.16 m	92.69 dBu	60.60 m	90.87 dBu
-62°	0.072	0.000	-41.09	19.56 m	48.70 m	92.08 dBu	60.03 m	90.26 dBu
-63°	0.066	0.000	-41.85	17.93 m	48.26 m	91.40 dBu	59.48 m	89.58 dBu
-64°	0.060	0.000	-42.68	16.30 m	47.84 m	90.65 dBu	58.97 m	88.83 dBu
-65°	0.053	0.000	-43.75	14.40 m	47.45 m	89.64 dBu	58.48 m	87.83 dBu
-66°	0.048	0.000	-44.61	13.04 m	47.07 m	88.85 dBu	58.02 m	87.03 dBu
-67°	0.043	0.000	-45.57	11.68 m	46.71 m	87.96 dBu	57.58 m	86.15 dBu
-68°	0.038	0.000	-46.64	10.32 m	46.38 m	86.95 dBu	57.16 m	85.13 dBu
-69°	0.034	0.000	-47.61	9.24 m	46.06 m	86.04 dBu	56.77 m	84.23 dBu
-70°	0.030	0.000	-48.70	8.15 m	45.76 m	85.01 dBu	56.40 m	83.20 dBu
-71°	0.025	0.000	-50.28	6.79 m	45.48 m	83.48 dBu	56.05 m	81.67 dBu
-72°	0.022	0.000	-51.39	5.98 m	45.21 m	82.42 dBu	55.73 m	80.61 dBu
-73°	0.018	0.000	-53.13	4.89 m	44.96 m	80.73 dBu	55.42 m	78.91 dBu
-74°	0.016	0.000	-54.16	4.35 m	44.73 m	79.75 dBu	55.14 m	77.93 dBu
-75°	0.013	0.000	-55.96	3.53 m	44.52 m	77.99 dBu	54.87 m	76.17 dBu
-76°	0.011	0.000	-57.41	2.99 m	44.32 m	76.58 dBu	54.62 m	74.76 dBu
-77°	0.009	0.000	-59.15	2.45 m	44.13 m	74.87 dBu	54.39 m	73.05 dBu
-78°	0.007	0.000	-61.34	1.90 m	43.96 m	72.72 dBu	54.18 m	70.91 dBu
-79°	0.005	0.000	-64.26	1.36 m	43.80 m	69.83 dBu	53.99 m	68.01 dBu
-80°	0.004	0.000	-66.20	1.09 m	43.66 m	67.92 dBu	53.82 m	66.10 dBu
-81°	0.003	0.000	-68.70	0.82 m	43.54 m	65.45 dBu	53.66 m	63.63 dBu
-82°	0.002	0.000	-72.22	0.54 m	43.42 m	61.95 dBu	53.52 m	60.13 dBu
-83°	0.002	0.000	-72.22	0.54 m	43.32 m	61.97 dBu	53.40 m	60.15 dBu
-84°	0.001	0.000	-78.24	0.27 m	43.24 m	55.96 dBu	53.29 m	54.15 dBu
-85°	0.001	0.000	-78.24	0.27 m	43.16 m	55.98 dBu	53.20 m	54.16 dBu
-86°	0.001	0.000	-78.24	0.27 m	43.11 m	55.99 dBu	53.13 m	54.17 dBu
-87°	0.001	0.000	-78.24	0.27 m	43.06 m	56.00 dBu	53.07 m	54.18 dBu
-88°	0.001	0.000	-78.24	0.27 m	43.03 m	56.01 dBu	53.03 m	54.19 dBu
-89°	0.001	0.000	-78.24	0.27 m	43.01 m	56.01 dBu	53.01 m	54.19 dBu
-90°	0.001	0.000	-78.24	0.27 m	43.00 m	56.01 dBu	53.00 m	54.20 dBu

RF EXPOSURE ANALYSIS
K227DG
MUSKOGEE, OK

The proposed facility was evaluated in terms of potential radio frequency radiation exposure at ground level in accordance with OET Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radio frequency Radiation."

The proposed facility will operate on an existing tower with a radiation centerline at 53 meters above ground level (AGL) and an ERP of 15 watts with circular polarization. The Applicant intends to use a four-bay Jampro JLCP-4 antenna. The antenna will employ half-wave spacing.

The proposed facility is exempt from submitting an RF exposure analysis since it proposes an effective radiated power less than 100 watts.

Furthermore, signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The site itself is restricted from public access by a substantial fence and locked gate. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.