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ENGINEERING REPORT

Connell, TX, Channel 256D FM Translator Application

ENGINEERING STATEMENT

Juan Alberto Ayala ("Applicant") submits this technical minor amendment for its pending application for a new FM translator station at Connell, TX. The initial Auction 83 Tech Box application file number is BNPFT-20030317HFO. The recent amendment filing requested for this "singleton" application is BNPFT-20130328AAG. BNPFT-20130328AAG is herein amended to remove predicted interference to KNGT, Lake Charles, LA, 258C0—a deficiency that the FCC informally made known to the Applicant on April 1, 2013.

This filing includes a channel displacement from 257 to 256. The displacement from channel 257 to channel 256 is deemed a minor change pursuant to Section 74.1233(a) of the FCC Rules.

LPFM Preclusion Study Results for the herein proposed facility are provided in the separate Exhibit 1 (Section 1, Question 5 of the FCC Form 349, as directed by the FCC).

CHANNEL STUDY

Attached as Figure EE1 is a channel study for the proposed channel 256D facility. All required protections are met by contour non-overlap pursuant to Section 74.1204 (or by Section 73.207 separation requirements for channel above 220, when applicable), with the exception of protection to KNGT, Lake Charles, LA, 258C0 and KTJM, Port Arthur, TX, 253C. Both KNGT and KTJM are protected, as discussed below.

CONTOUR OVERLAP SHOWING

The service and interference contour distances that are listed on Figure EE1 use the worst-case (greatest) distance along any bearing for each facility, and also considers each protected station as omni-directional. No contour overlap using this worst-case test means no possible contour overlap when applying Section 73.313 methodology.

Figure EE2, attached, shows non-overlap between the 60 dBu F50,50 service contour of K255BB, Mauriceville, TX, 255D from the 54 dBu F50,10 interference contour of the proposed channel 256D facility. All contours were determined pursuant to Section 73.313 of the FCC Rules using a USGS 3 arc-second terrain database at one-degree radial intervals.

PROTECTION TO KNGT

KNGT, Lake Charles, LA, 258C0, is second adjacent-channel to the proposed channel 256D facility and is located only 45.9 kilometers (at 57 degrees True bearing) from the proposed transmitter site. The 60 dBu F50,50 service contour extends well beyond the proposed transmitter site. Using the well-established *Living Way Ministries* Methodology, no actual interference to any population is predicted to exist to KNGT.

The F50,50 signal strength from KNGT at the proposed 256D transmitter site is 73.8 dBu (the “desired” signal). The second/third adjacent-channel protection of Section 74.1204 is an undesired-to-desired (“U/D”) dB signal strength ratio of 40:1. Therefore, predicted interference to KNGT from the proposed 256D facility is a signal of greater than or equal to 113.8 dBu.

Figure EE3 is the vertical plane relative field pattern for the proposed antenna. By adjusting for the vertical plane downward relative field values of the proposed antenna, it is herein demonstrated that the 113.8 dBu interfering signal (using a free space field determination) does not exist at any point a ground level. (Actually, the study is made to 2 meters above ground level to account for a person’s height.)

Attached as Figure EE4 is a tabulation of various points (at 2 meters above ground level) from the proposed translator tower base. (Column B is the different distances from the tower base to each studied point.) The actual distance from the antenna to each point is listed in Column C, the hypotenuse of the vertical height (Column A) and the horizontal distance (Column B). Because the calculated distance to the free space interfering signal (Column J) is less than the hypotenuse distance (Column C) for each studied point, the interfering signal does not reach any studied point. (In other words, the interfering signal does not make it to 2 meters above ground level to any point.) Therefore, pursuant to Section 74.1204(d) of the FCC Rules, KNGT is adequately protected by the proposed facility.

PROTECTION TO KTJM

KTJM, Port Arthur, TX, 253C, is third adjacent-channel to the proposed channel 256D facility and is located only 55.2 kilometers (at 264 degrees True bearing) from the proposed transmitter site. The 60 dBu F50,50 service contour extends well beyond the proposed transmitter site. Using the well-established *Living Way Ministries* Methodology, no actual interference to any population is predicted to exist to KTJM.

The F50,50 signal strength from KTJM at the proposed 256D transmitter site is 75.3 dBu (the “desired” signal). The second/third adjacent-channel protection of Section 74.1204 is an undesired-to-desired (“U/D”) dB signal strength ratio of 40:1. Therefore, predicted interference to KNGT from the proposed 256D facility is a signal of greater than or equal to 115.3 dBu.

Figure EE3 is the vertical plane relative field pattern for the proposed antenna. By adjusting for the vertical plane downward relative field values of the proposed antenna, it is herein demonstrated that the 115.3 dBu interfering signal (using a free space field determination) does not exist at any point a ground level. (Actually, the study is made to 2 meters above ground level to account for a person’s height.)

Attached as Figure EE5 is a tabulation of various points (at 2 meters above ground level) from the proposed translator tower base. (Column B is the different distances from the tower base to each studied point.) The actual distance from the antenna to each point is listed in Column C, the hypotenuse of the vertical height (Column A) and the horizontal distance (Column B). Because the calculated distance to the free space interfering signal (Column J) is less than the hypotenuse distance (Column C) for each studied point, the interfering signal does not reach any studied point. (In other words, the interfering signal does not make it to 2 meters above ground level to any point.) Therefore, pursuant to Section 74.1204(d) of the FCC Rules, KNGT is adequately protected by the proposed facility.

The above study results of Figures EE4 and EE5 assume uniform terrain elevation near the proposed tower. Because the clearance shown (Column C minus Column J values) is at least 10 meters for all rows, this assumption is acceptable for showing non-interference—no actual elevation within 200 meters of the proposed translator tower is at an elevation that is more than 2 meters above that of the tower base elevation.

SECTION 74.1204 CHANNEL STUDY**PROJECT: CONNELL,TX, 256D FROM PROPOSED SITE****STUDY COORDINATES: N 30-03-58.0; W 93-58-37.0(N D-M-S; W D-M-S)**

Call Docket	Channel FacilityID	Class Service	Frequency ERP	Status DA?	City HAAT	State RCAMSL	Country RCAGL	File Number
Latitude	Longitude			ASRN	Dist (km)	Dist(mi)	Azimuth	
KTJM	253 C	FM	98.5 MHz	LIC	PORT ARTHUR TX US			BLH-20071113AGU
-	20489		100. kW		596. m	611.4 m	594.6 m	
N 30	1	1.00 W	94 32 47.00	1247890	55.19 km	34.29 mi	264.45°	
LIBERMAN BROADCASTING OF HOUSTON LICENSE LLC								
NOTE: A SHOWING BASED ON THE LIVING WAY MINISTRIES METHODOLOGY TO THIS STATION IS INCLUDED WITH THIS APPLICATION THAT DEMONSTRATES PROTECTION TO THIS FACILITY.								

K255BB	255 D	FX	98.9 MHz	LIC	MAURICEVILLE TX US			BLFT-20121119AOH
-	148556		0.05 kW		0. m	121. m	116. m	
N 30	9	28.00 W	93 48 8.00	1226721	19.67 km	12.22 mi	58.72°	
EDUCATIONAL MEDIA FOUNDATION								
Protected Contour Dist: 9.5 km Prop 256D Interf Contour Dist: 12.9 km								
Result: -2.7 km SHORT (WORST-CAST STUDY)								
NOTE: SEE CONTOUR OVERLAP STUDY SHOWING PROTECTION WITH PROPOSED DIRECTIONAL FACILITY								

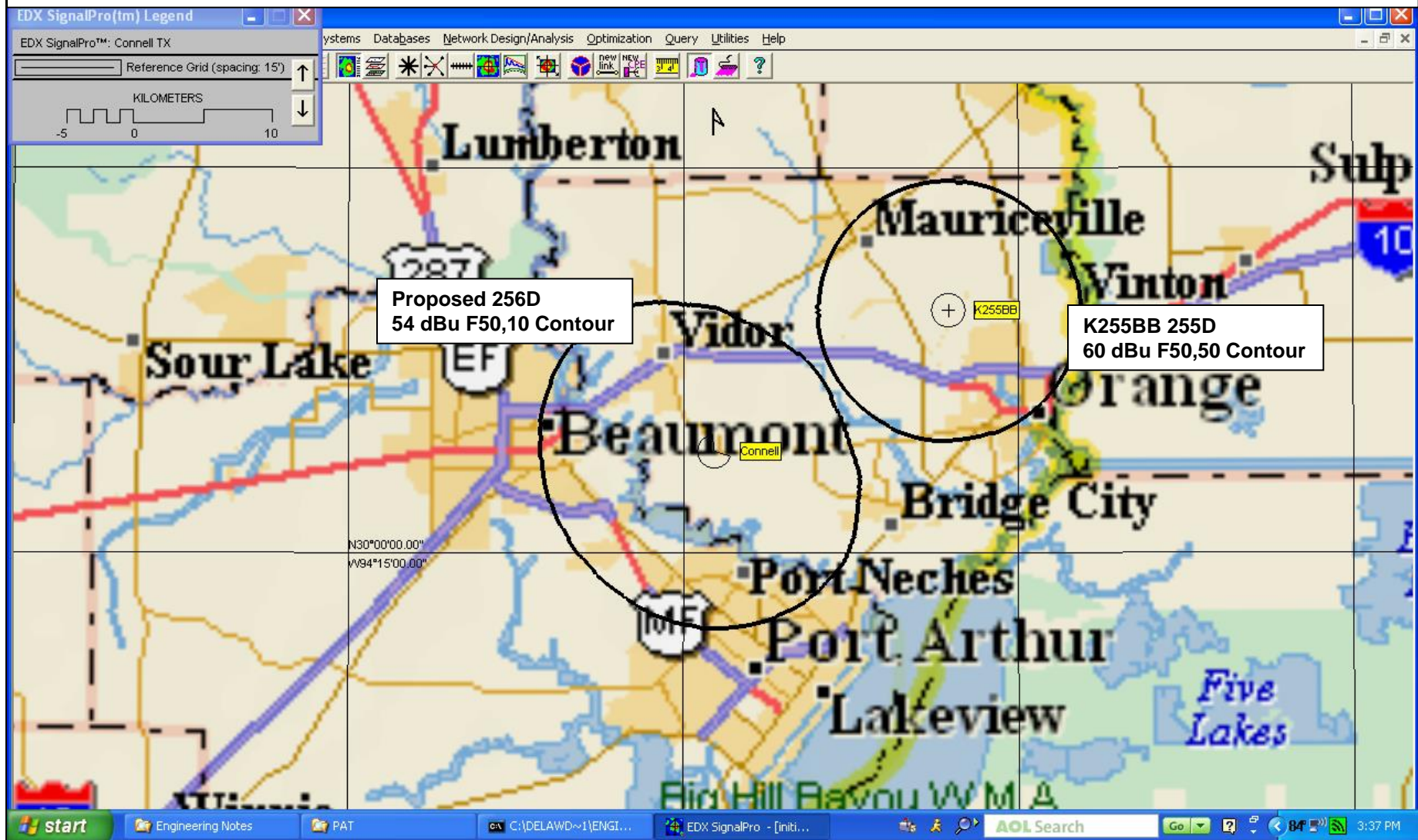
NEW	257 D	FX	99.3 MHz	APP	CONNELL TX US			BNPFT-20030317HFO
-	156386		0.25 kW		77.6 m	79. m	75. m	
N 30	3	58.00 W	93 58 37.00	1047095	0.00 km	0.00 mi	0.00°	
JUAN ALBERTO AYALA								
NOTE: THIS IS THE AUCTION 83 APPLICATION OF THIS PROPOSAL.								

NEW	257 D	FX	99.3 MHz	APP	CONNELL TX US			BNPFT-20130328AAG
-	156386		0.25 kW		0. m	79. m	75. m	
N 30	3	58.00 W	93 58 37.00	1047095	0.00 km	0.00 mi	0.00°	
JUAN ALBERTO AYALA								
NOTE: THIS IS THE AUCTION 83 APPLICATION THAT IS BEING AMENDED BY THIS APPLICATION								

KNGT	258 C0	FM	99.5 MHz	LIC	LAKE CHARLES LA US			BLH-20100923AGD
-	53643		100. kW		357. m	362.7 m	353.6 m	
N 30	17	26.00 W	93 34 35.00	1020684	45.91 km	28.52 mi	56.95°	
TOWNSQUARE MEDIA LAKE CHARLES LICENSE, LLC								
NOTE: A SHOWING BASED ON THE LIVING WAY MINISTRIES METHODOLOGY TO THIS STATION IS INCLUDED WITH THIS APPLICATION THAT DEMONSTRATES PROTECTION TO THIS FACILITY.								

Study Complete

FIGURE EE2
CONNELL, TX 256D Contour Non-Overlap Showing to K255BB



Shively Labs®

Antenna Mfr.: Shively Labs

Date: 12/30/2004

Antenna Type: 6014, 6015, 6510, 6513, 6600, 68xx 2-Bay, full-wave-spaced

Frequency: 98.1

6014, 6015, 68xx Gain (Max) 0.99 -0.04 dB

6510, 6513, 6600 Gain (Max) 1.98 2.96 dB

FIGURE EE3 (Page 1 of 2)

- Standard 2-Bay Full-Wave (includes New 6020 Model)

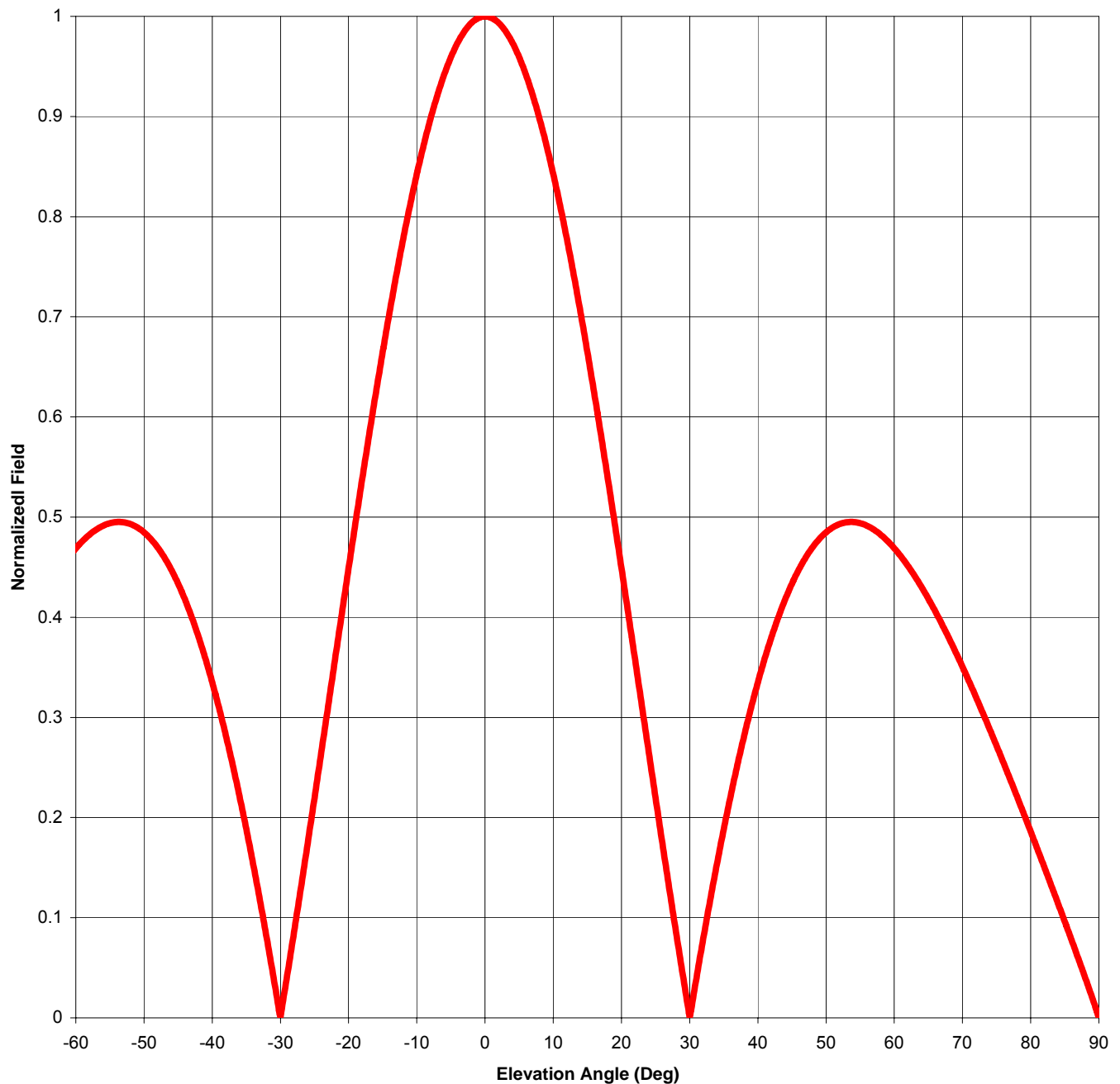


FIGURE EE3 (Page 2 of 2)

Elevation Pattern Tabulation, Sidemount 2-Bay Antennas, Full-Wave-Spaced

Includes Models 6014, 6015, 66xx series except 6602B, 65xx series, 68xx series except 6812B & 6832.

Relative Field at 0° Depression = 1.000

Degrees	Rel. Field	Degrees	Rel. Field	Degrees	Rel. Field	Degrees	Rel. Field	Degrees	Rel. Field
1	0.998	19	0.494	37	0.253	55	0.494	73	0.304
2	0.993	20	0.449	38	0.282	56	0.491	74	0.288
3	0.985	21	0.403	39	0.309	57	0.488	75	0.272
4	0.974	22	0.357	40	0.335	58	0.482	76	0.255
5	0.959	23	0.311	41	0.359	59	0.476	77	0.238
6	0.942	24	0.265	42	0.380	60	0.469	78	0.221
7	0.921	25	0.220	43	0.400	61	0.461	79	0.204
8	0.898	26	0.174	44	0.418	62	0.451	80	0.186
9	0.871	27	0.130	45	0.434	63	0.441	81	0.168
10	0.843	28	0.086	46	0.448	64	0.430	82	0.151
11	0.811	29	0.043	47	0.460	65	0.418	83	0.133
12	0.778	30	0.001	48	0.470	66	0.406	84	0.114
13	0.742	31	0.040	49	0.478	67	0.393	85	0.096
14	0.704	32	0.079	50	0.485	68	0.379	86	0.078
15	0.665	33	0.117	51	0.490	69	0.365	87	0.059
16	0.624	34	0.154	52	0.493	70	0.351	88	0.040
17	0.582	35	0.188	53	0.495	71	0.335	89	0.021
18	0.538	36	0.221	54	0.495	72	0.320	90	0.000

FIGURE EE4 - STUDY PROTECTING **KNGT 258C0**

FREE SPACE FIELD STRENGTH AT A DISTANCE STUDY RESULTS

PROJECT: CONNELL, TX, 256D

8-Apr-13

Point	Column A Vertical Distance From Antenna Bottom (meters)	Column B Horizontal Distance From Tower Base (meters)	Column C Hypotenuse Distance From Antenna Bottom (meters)	Column D Downward Angle From Antenna Bottom (degrees)	Column E Max ERP (watts)	Column F Max ERP (dBmW)	Column G Pattern Relative Field at Down- ward Angle	Column H Free Space Inter- ferring Signal (dBu)	Column I Adjusted ERP in Down- ward Angle (dBmW)	Column J OUTPUT Distance (meters)
1	72	0.1	72.0	89.9	100	50.00	0.021	113.8	16.44	3.0
2	72	10	72.7	82.1	100	50.00	0.151	113.8	33.58	21.7
3	72	20	74.7	74.5	100	50.00	0.288	113.8	39.19	41.4
4	72	30	78.0	67.4	100	50.00	0.393	113.8	41.89	56.5
5	72	40	82.4	60.9	100	50.00	0.469	113.8	43.42	67.4
6	72	50	87.7	55.2	100	50.00	0.494	113.8	43.87	71.0
7	72	60	93.7	50.2	100	50.00	0.485	113.8	43.71	69.7
8	72	70	100.4	45.8	100	50.00	0.434	113.8	42.75	62.4
9	72	80	107.6	42.0	100	50.00	0.380	113.8	41.60	54.6
10	72	90	115.3	38.7	100	50.00	0.282	113.8	39.00	40.5
11	72	100	123.2	35.8	100	50.00	0.188	113.8	35.48	27.0
12	72	120	139.9	31.0	100	50.00	0.040	113.8	22.04	5.7
13	72	140	157.4	27.2	100	50.00	0.130	113.8	32.28	18.7
14	72	150	166.4	25.6	100	50.00	1.000	113.8	50.00	143.7

NOTE: Study point at 2 meters above ground level.

Worst-case relative field of 1.000 used for last examined point.

RESULTS: COLUMN J DISTANCES ARE LESS THAN COLUMN D DISTANCES IN ALL INSTANCES; THEREFORE, INTERFERRING SIGNAL DOES NOT EXIST AT ANY LOCATION (TWO METERS OR LESS ABOVE GROUND LEVEL)

FIGURE EE5 - STUDY PROTECTING **KTJM 253C**

FREE SPACE FIELD STRENGTH AT A DISTANCE STUDY RESULTS

PROJECT: CONNELL, TX, 256D

8-Apr-13

Point	Column A Vertical Distance From Antenna Bottom (meters)	Column B Horizontal Distance From Tower Base (meters)	Column C Hypotenuse Distance From Antenna Bottom (meters)	Column D Downward Angle From Antenna Bottom (degrees)	Column E Max ERP (watts)	Column F Max ERP (dBmW)	Column G Pattern Relative Field at Down- ward Angle	Column H Free Space Inter- ferring Signal (dBu)	Column I Adjusted ERP in Down- ward Angle (dBmW)	Column J OUTPUT Distance (meters)
1	72	0.1	72.0	89.9	100	50.00	0.021	115.3	16.44	2.5
2	72	10	72.7	82.1	100	50.00	0.151	115.3	33.58	18.3
3	72	20	74.7	74.5	100	50.00	0.288	115.3	39.19	34.8
4	72	30	78.0	67.4	100	50.00	0.393	115.3	41.89	47.5
5	72	40	82.4	60.9	100	50.00	0.469	115.3	43.42	56.7
6	72	50	87.7	55.2	100	50.00	0.494	115.3	43.87	59.7
7	72	60	93.7	50.2	100	50.00	0.485	115.3	43.71	58.6
8	72	70	100.4	45.8	100	50.00	0.434	115.3	42.75	52.5
9	72	80	107.6	42.0	100	50.00	0.380	115.3	41.60	45.9
10	72	90	115.3	38.7	100	50.00	0.282	115.3	39.00	34.1
11	72	100	123.2	35.8	100	50.00	0.188	115.3	35.48	22.7
12	72	120	139.9	31.0	100	50.00	0.040	115.3	22.04	4.8
13	72	140	157.4	27.2	100	50.00	0.130	115.3	32.28	15.7
14	72	150	166.4	25.6	100	50.00	1.000	115.3	50.00	120.9

NOTE: Study point at 2 meters above ground level.

Worst-case relative field of 1.000 used for last examined point.

RESULTS: COLUMN J DISTANCES ARE LESS THAN COLUMN D DISTANCES IN ALL INSTANCES; THEREFORE, INTERFERRING SIGNAL DOES NOT EXIST AT ANY LOCATION (TWO METERS OR LESS ABOVE GROUND LEVEL)