

EXHIBIT 12 – TECHNICAL NARRATIVE

APPLICATION TO MOVE K273DH CP TO A NEW LOCATION

RCA BROADCASTING, LLC

**K273DH
102.5 MHZ
BNPFT – 20180316AAV
FAC ID 201074
MARSHALL, TEXAS**

**AM FILL-IN TRANSLATOR
RE-BROADCAST KZEY AM 1410**

EXHIBIT 12

TECHNICAL NARRATIVE

This minor change application to modify a current Construction Permit is submitted on behalf of Applicant RCA BROADCASTING, LLC. This application proposes to move applicant's CP from its current location to a new location on the tower (ASRN 1051379) of KCUL FM Facility ID 18263.

Applicant will continue to broadcast AM station KZEY. The new location is within 25 miles of the KZEY AM site as shown in Exhibit 10.

This application is in compliance with FCC rules and protects full power stations, construction permits, and applications.

Applicant will utilize a composite directional antenna, NICOM BKY3/P – 1 DA(SLANT 45) or one similar.

In support of this application, the following exhibits are submitted:

Exhibit 10 – AM Fill-in compliance

Exhibit 12 – This narrative

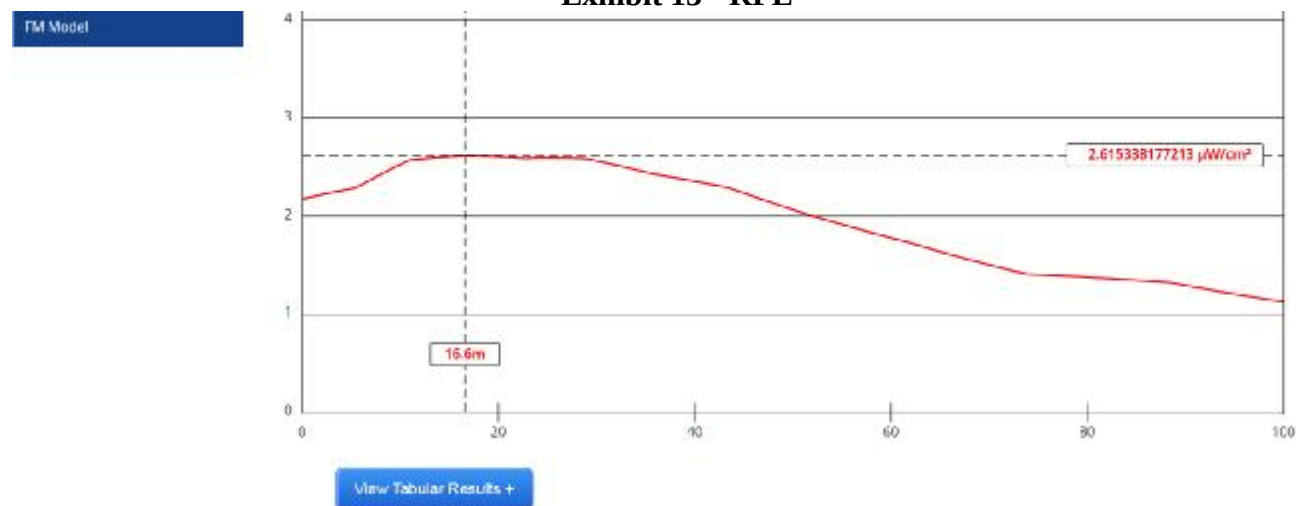
Exhibit 12 – Translator 60 db contour overlap

Exhibit 12 – Aerial photo of new site

Exhibit 13 – Overlap Requirements

Exhibit 13 – FMModel RFE.

Exhibit 13 - RFE

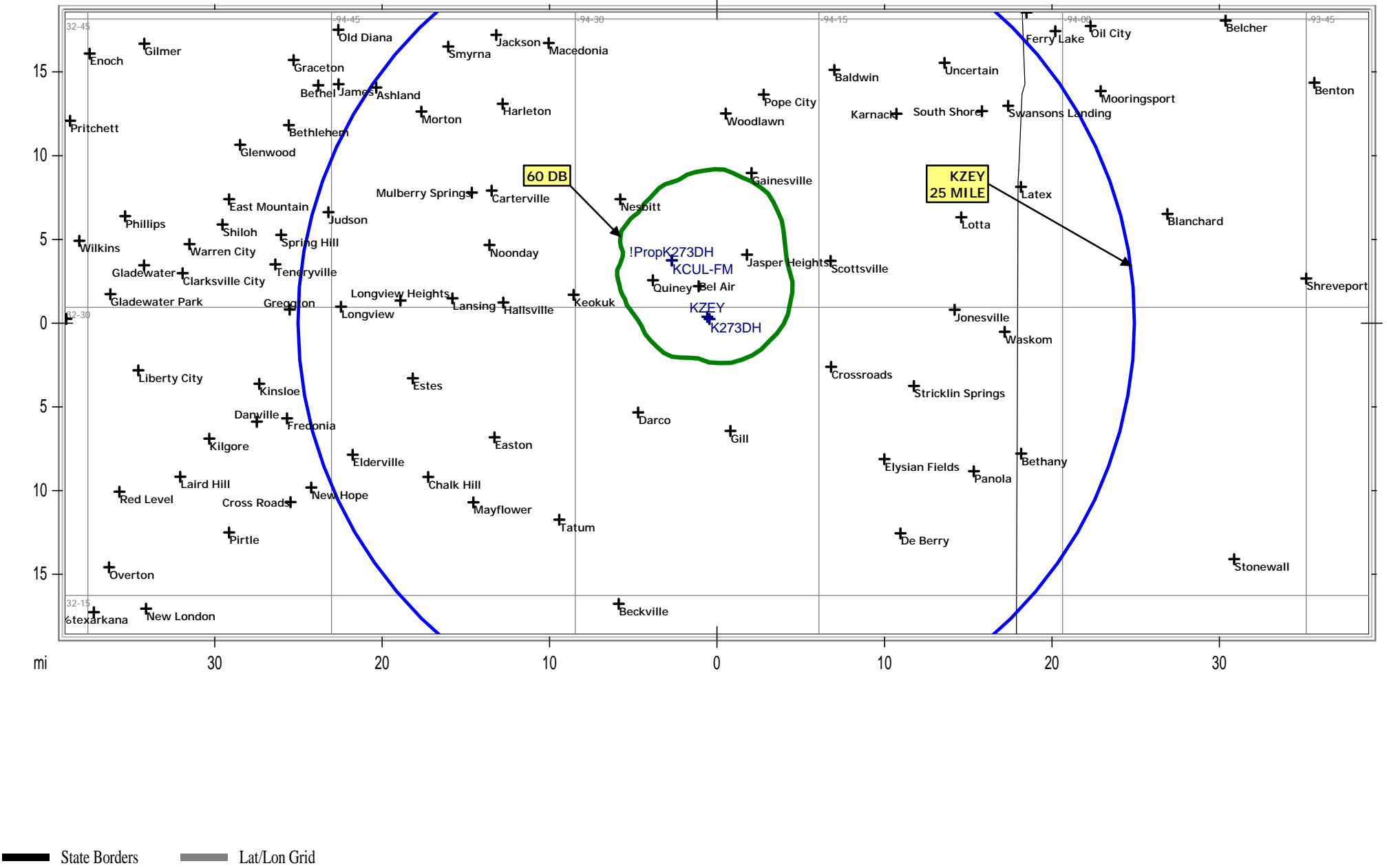


Channel Selection	Channel 273 (102.5 MHz)		
Antenna Type +	EPA Type 1: Ring and Stub or "Other"		
Height (m)	64	Distance (m)	100
ERP-H (W)	250	ERP-V (W)	250
Num of Elements	1	Element Spacing (λ)	1



$S = 2.6 \mu\text{W}/\text{cm}^2$ which is 1.3 % of the $200 \mu\text{W}/\text{cm}^2$ maximum allowable for uncontrolled public access. This is less than 5 %, therefore no further study required. The antenna proposed for this application is not listed as a type that FMMODEL is designed to analyze therefore, EPA Type 1 Ring and Stub antenna was used for the RFE analysis.

Applicant will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radio frequency electromagnetic fields in excess of FCC guidelines. Applicant will place appropriate signage at the site.



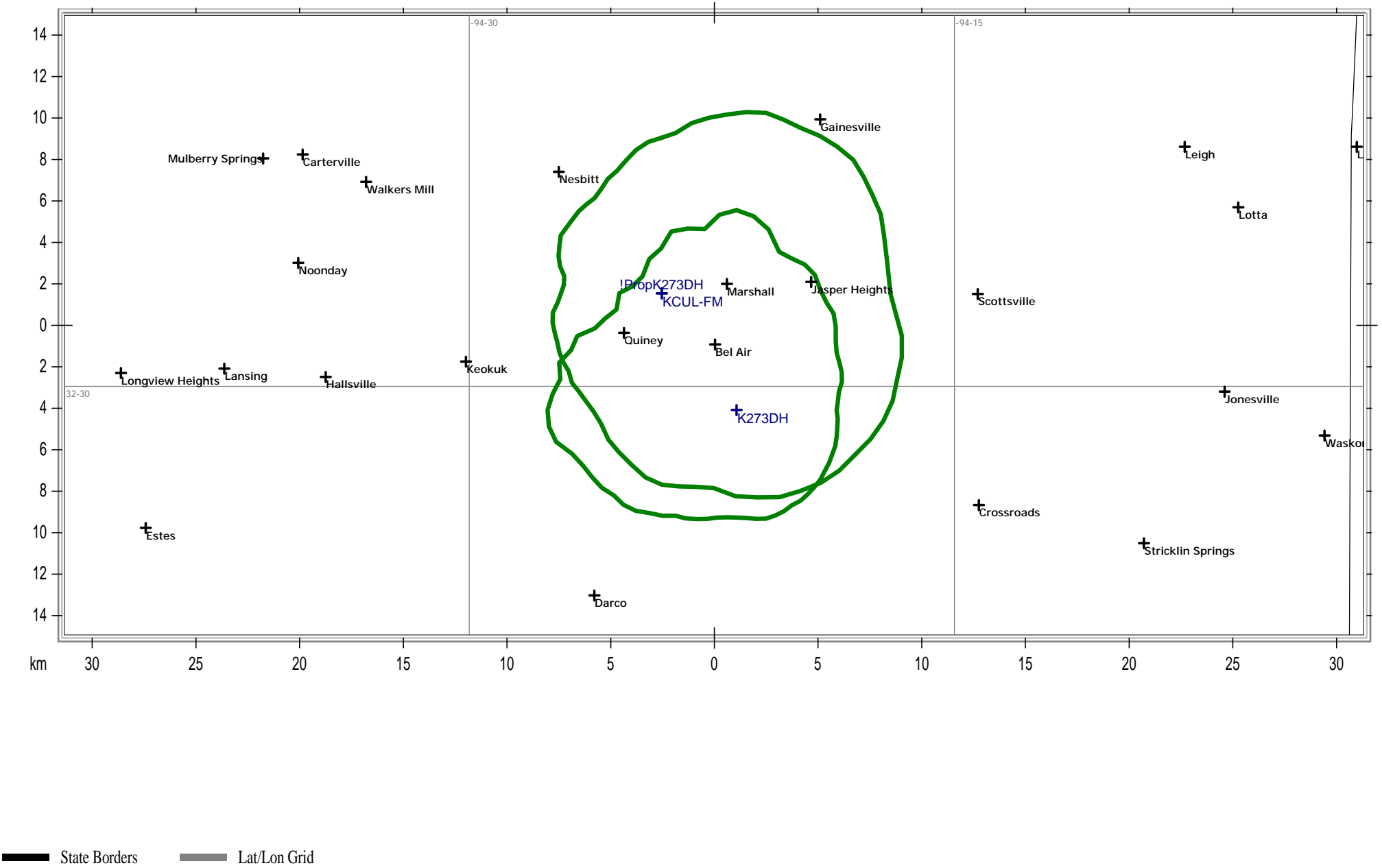


Exhibit 12

Aerial Photo of Site - K273DH

Legend

KCUL-FM

KCUL-FM

W Houston St

Google Earth

© 2018 Google

N

100 m



**EXHIBIT 13
OVERLAP REQUIREMENTS
K273CH**

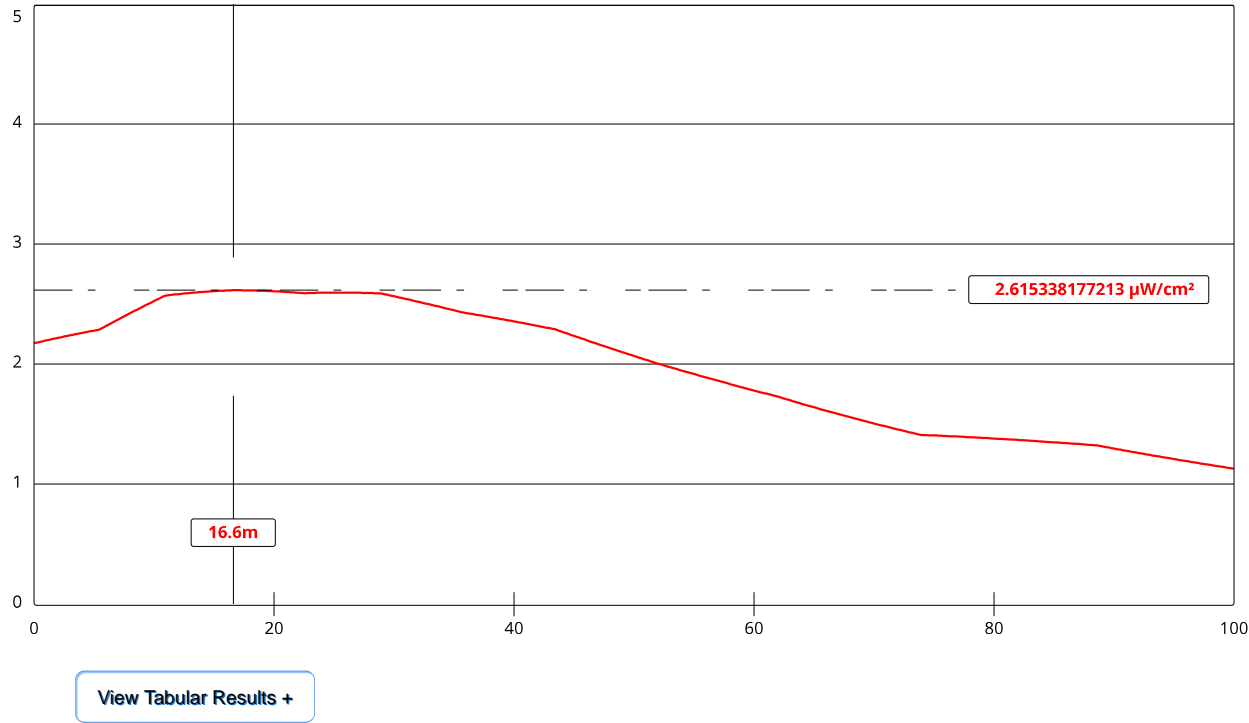
Callsign	State	City	Freq	Channel	ERP_w	Class	Status	Distance_km	Sep	Clr
K273DH	TX	MARSHALL	102.5	273	250	D	CP	6.7	0	-45.20 dB
K273DI	TX	CARTHAGE	102.5	273	250	D	CP	43.44	0	1.57 dB
KVMA-FM	LA	SHREVEPORT	102.9	275	42000	C2	LIC	59.95	0	3.06 dB
KDKS-FM	LA	BLANCHARD	102.1	271	20000	C3	LIC	47.45	0	5.11 dB
KKYR-FM	TX	TEXARKANA	102.5	273	100000	C1	LIC	102.95	0	5.13 dB
KMPA	TX	PITTSBURG	103.1	276	10000	C2	LIC	65.36	0	10.86 dB
KBLZ	TX	WINONA	102.7	274	9300	C3	LIC	69.02	0	10.84 dB
KLJT	TX	JACKSONVILLE	102.3	272	50000	C2	LIC	103.51	0	17.30 dB
KHCJ	TX	JEFFERSON	91.9	220	3200	A	LIC	33.55	10	23.5
K270AW	TX	LONGVIEW	101.9	270	45	D	LIC	31.99	0	31.21 dB
KTXJ-FM	TX	JASPER	102.7	274	46000	C2	LIC	169.35	0	32.41 dB
KSML-FM	TX	HUNTINGTON	101.9	270	15000	C2	LIC	136.1	0	32.51 dB
K273DA	TX	TERRELL	102.5	273	190	D	LIC	179.59	0	34.43 dB
KWXM	LA	SIMSBORO	102.3	272	3000	A	LIC	136.62	0	34.19 dB
KBUS	TX	PARIS	101.9	270	50000	C2	LIC	163.97	0	35.74 dB
K273BJ	TX	DALLAS	102.5	273	250	D	LIC	220.17	0	36.15 dB
KRER-LP	TX	EMORY	102.5	273	28	LP100	LIC	131.85	24	36.04 dB
KMVX	LA	MONROE	101.9	270	97000	C	LIC	222.59	0	36.92 dB
KCXB-LP	LA	WEST MONROE	102.5	273	100	LP100	LIC	210.83	24	37.20 dB
KDGE	TX	FORT WORTH-DALLAS	102.1	271	98480	C	LIC	241.15	0	38.76 dB
KDMX	TX	DALLAS	102.9	275	98450	C	LIC	241.15	0	38.76 dB
KWLA	LA	ANACOCO	103.1	276	25000	C3	LIC	162	0	39.04 dB
931217MC	LA	HOMER	102.3	272	0	A	USE	138.11	0	39.49 dB
KSWH-LP	AR	ARKADELPHIA	102.5	273	100	LP100	LIC	215.89	24	38.57 dB
KDGE	TX	FORT WORTH-DALLAS	102.1	271	98480	C	LIC	241.15	0	38.76 dB
KDMX	TX	DALLAS	102.9	275	98450	C	LIC	241.15	0	38.76 dB
KWLA	LA	ANACOCO	103.1	276	25000	C3	LIC	162	0	39.05 dB
	LA	HOMER	102.3	272	0	A	USE	138.11	0	39.27 dB



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FM Model

The FM Model calculator determines the potential exposure from radiofrequency (RF) electromagnetic fields produced by FM broadcast station antennas at ground level. The FM Model software was originally developed by the FCC in 1997 as a standalone executable program and this improved version provides more precise predictions and runs via a JavaScript enabled web browser. The FM Model is originally based on measured data [published in 1985 by the EPA \(http://nepis.epa.gov/Exe/ZyNET.exe/2000ED2W.TXT?ZyActionD=ZyDocument&Client=EPA&Index=1981+Thru+1985&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A\zyfiles\Index%20Data\81thru85\Txt\00000003\2000ED2W.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h|-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=p|f&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL\)](http://nepis.epa.gov/Exe/ZyNET.exe/2000ED2W.TXT?ZyActionD=ZyDocument&Client=EPA&Index=1981+Thru+1985&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A\zyfiles\Index%20Data\81thru85\Txt\00000003\2000ED2W.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h|-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=p|f&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL). [▼ Show More....](#)



Channel Selection	Channel 273 (102.5 MHz)		
Antenna Type +	EPA Type 1: Ring-and-Spoke or "Other"		
Height (m)	<input type="text" value="64"/>	Distance (m)	<input type="text" value="100"/>
ERP-H (W)	<input type="text" value="250"/>	ERP-V (W)	<input type="text" value="250"/>
Num of Elements	<input type="text" value="1"/>	Element Spacing (λ)	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>	<input type="button" value="Apply"/>	

Bureau/Office:
[Engineering & Technology \(https://www.fcc.gov/engineering-technology\)](https://www.fcc.gov/engineering-technology)

Updated:
Friday, June 8, 2018