

TECHNICAL EXHIBIT  
APPLICATION FOR MODIFICATION OF  
CONSTRUCTION PERMIT  
(FCC FILE NO. BPTTL-20010116AFF)  
CLASS A STATION KGMM-LP  
FACILITY ID 17830  
SAN ANTONIO, TEXAS  
CH 44 48.54 KW (MAX-DA)

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of an application for modification of the construction permit for Class A station KGMM-LP at San Antonio, Texas (Facility ID: 17830; File No. BPTTL-20010116AFF). Specifically, this application proposes to change the directional antenna system to a Moyano model M-82-8H/CI, 4 panel, directional antenna system to be oriented at 319 degrees true. No other changes are proposed including no change in transmitter site, antenna radiation center height above mean sea level (434 m), effective radiated power (48.54 kW), or community of license (San Antonio). As detailed below, this application is considered a "minor change" in facilities pursuant to Section 73.3572.

The proposal would not be subject to environmental processing in accordance with Section 1.1306. It is proposed to side-mount the directional antenna on an existing tower structure (antenna structure registration number: 1054166). It is believed that the instant application conforms with all other applicable rules and regulations of the Federal Communications Commission.

Minor Change Application

Figure 1 depicts the authorized and herein proposed 74 dBu contours for KGMM-LP. As indicated, the proposed 74 dBu contour encompasses the majority of the authorized 74 dBu contour. Therefore, the proposed modification is considered a "minor" change in facilities pursuant to Section 73.3572.

Analog TV Broadcast Analog Protection

A study has been conducted using the provisions of Section 74.705 which indicates that the proposed KGMM-LP operation will not create prohibited interference to other existing, authorized or proposed TV broadcast analog (NTSC) full-power stations with the exception of the licensed operation of KABB on channel 29 at San Antonio, TX (BLCT-19880210KF). Therefore, waiver of Section 74.705 is requested with respect to KABB. Justification for the waiver request is provided below.

Station KABB operates on a -15 picture image taboo channel to the proposed KGMM-LP operation. Based on the provisions of the OET-69 Bulletin as permitted by FCC rules [Section 74.705(e)], it is believed that KGMM-LP's proposed operation complies with the FCC's interference criteria towards KABB. Specifically, calculations have been made using the procedures outlined in the FCC's OET-69 Bulletin and a 2 square kilometer grid. The results of the OET Bulletin No. 69 calculations are tabulated on Figure 2 and, as indicated, the proposal is not predicted to cause any interference to KABB.<sup>1</sup>

DTV Station and DTV Table of Allotments Protection

Calculations based on OET Bulletin No. 69 indicate that the proposed KGMM-LP operation on channel 44 complies with the FCC's 0.5% interference threshold criteria to all allotted, proposed or actual DTV operating facilities on channels 43, 44, and 45. Figure 2 provides the output of study based on OET-69 Bulletin.

---

<sup>1</sup> The du Treil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 2 km was employed. An Alpha based processor computer system was employed. The results have been found to be in very close agreement with the results of the FCC implementation of OET Bulletin 69.

LPTV/TV Translator, Class A and Digital Class A Protection

A study has been conducted which indicates that the KGMM-LP proposal will not create prohibited interference to other existing, authorized or proposed LPTV, TV Translator, Class A and digital Class A stations with the exceptions of an application for channel 44 at Big Wells, TX (BNPTTL-20000831CCL) and an application on channel 44 at Ingram, TX (BNPTTL-20000831CCK). However, based on the provisions of OET-69 Bulletin as permitted by FCC rules [Section 74.707(e)] it is believed that KGMM-LP's proposed operation complies with the FCC's interference criteria towards these applications. Specifically, calculations have been made using the procedures outlined in the FCC's OET-69 Bulletin and a 2 square kilometer grid. The results of the OET Bulletin No. 69 calculations are tabulated on Figure 2 and, as indicated, the KGMM-LP proposal is not predicted to cause any interference to either application.

Land Mobile Station Protection

The proposed KGMM-LP operation does not cause interference to land mobile radio stations (LMRS).

Environmental Considerations

The proposed KGMM-LP television facilities were evaluated in terms of potential radiofrequency radiation exposure at ground level in accordance with OST Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation". The calculated power density at the base of the tower was calculated using the appropriate equation on Page 13 of the Bulletin. Using a worse case vertical relative field value of 1.0, a maximum visual effective radiated power of 48.54 kilowatts and 10 percent aural power, the calculated power density at 2 meters above ground level at the base of the tower is 0.011 milliwatts per square centimeter ( $\text{mW}/\text{cm}^2$ ), or 2.52 percent of the Commission's recommended limit applicable to general population/uncontrolled exposure areas ( $0.44 \text{ mW}/\text{cm}^2$  for TV channel 44). Therefore, based on the responsibility threshold of 5%, the KGMM-LP proposal will comply with the new RF emission rules.

Access to the transmitting site will be restricted and appropriately marked with warning signs. Furthermore, as this is a multi-user site, an agreement will be in effect in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down.

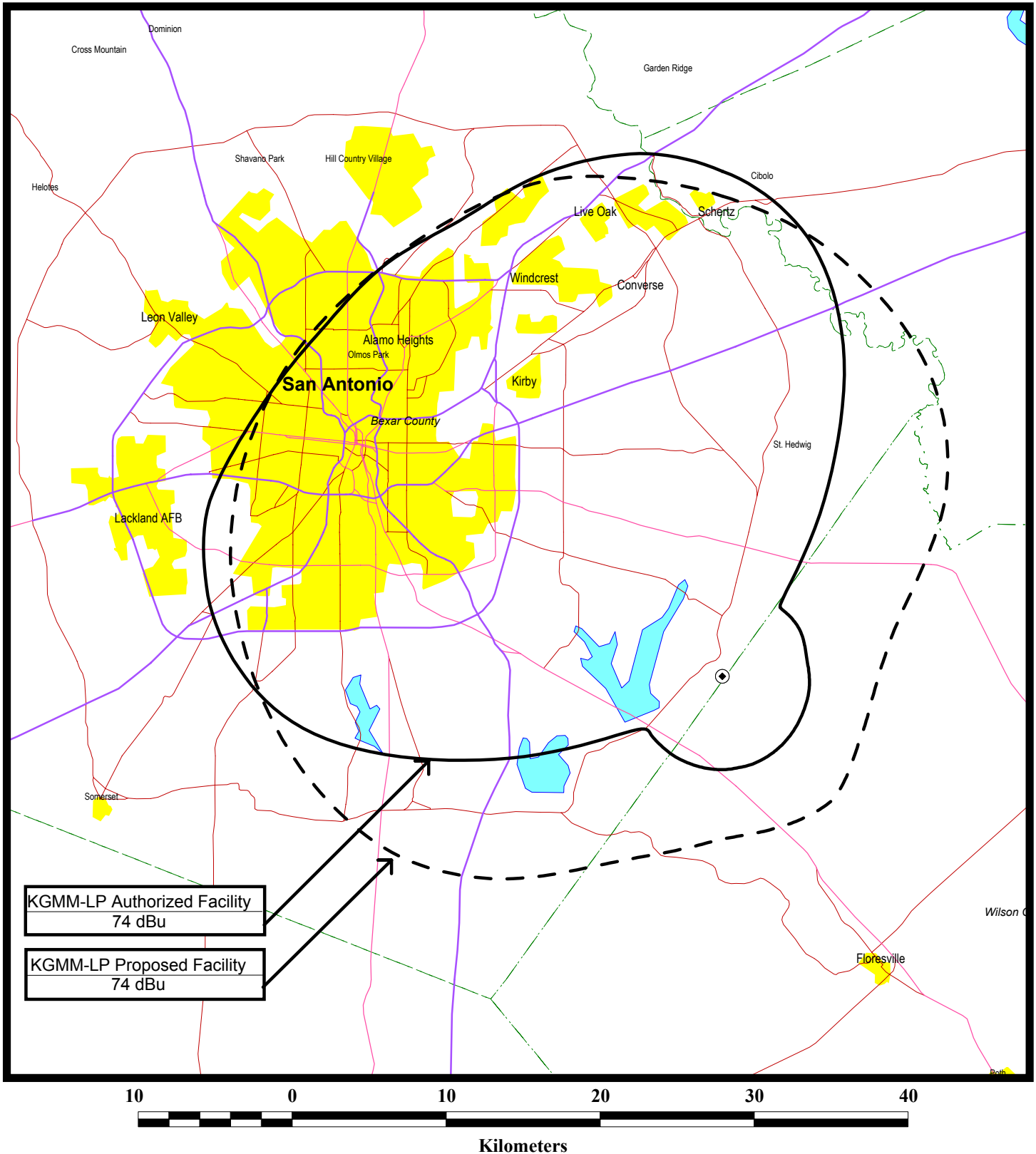
In addition, it appears that the existing tower is otherwise excluded from environmental processing as it complies with all the criteria for such exclusion in Section 1.1306.

W. Jeffrey Reynolds

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Avenue  
Sarasota, Florida 34237  
(941)329-60000  
JEFF@DLR.COM

May 6, 2003

Figure 1



## PREDICTED 74 DBU CONTOURS

STATION KGMM-LP  
SAN ANTONIO, TEXAS  
CH 44 48.54 KW (MAX-DA)

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

OET-69 DTV, FULL-SERVICE NTSC AND LPTV INTERFERENCE CAUSED STUDY

CELL SIZE : 2.00

Using offset in determining thresholds

\*\*\*\*\*

KABB 29-17-27 098-16-12 29(+) 5000.000 kw 604 m DA 50.0 % 63.2 dBu  
SAN ANTONIO TX 23364 1497 FCC NTSC BL: 1506919 FCC IX POP%: 0.1  
LIC BLCT19880210KF

0.92	0.89	0.85	0.81	0.77	0.70	0.63	0.53	0.42	0.33	0.28	0.31
0.37	0.42	0.43	0.42	0.37	0.31	0.28	0.33	0.42	0.53	0.63	0.70
0.77	0.81	0.85	0.89	0.92	0.95	0.98	0.99	1.00	0.99	0.98	0.95

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	24170.71	1506919
not affected by terrain losses	23479.44	1497708

\*\*\*\*\*

KGMM-LP 29-17-39 098-15-30 44(+) 48.540 kw 434.4 m DA 10.0 % 74.5  
SAN ANTONIO TX

PROPOSED

1.00	0.99	0.95	0.87	0.77	0.67	0.56	0.46	0.35	0.26	0.18	0.13
0.10	0.09	0.08	0.08	0.08	0.09	0.09	0.09	0.08	0.08	0.08	0.09
0.10	0.13	0.18	0.26	0.35	0.46	0.56	0.67	0.77	0.87	0.95	0.99

Ref Az: 319.0

Using DEFAULT vertical antenna pattern

D/U Baseline: -9.00

Interference	Area	Pop
	0	0

\*\*\*\*\*

NEW2 28-44-53 099-31-05 44(+) 49.000 kw 361 m 50.0 % 74.5 dBu  
BIG WELLS TX  
APP BNPTTL20000831CCL

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	2420.171	2488
not affected by terrain losses	2420.171	2488

\*\*\*\*\*

KGMM-LP 29-17-39 098-15-30 44(+) 48.540 kw 434.4 m DA 10.0 % 74.5  
SAN ANTONIO TX

PROPOSED

1.00	0.99	0.95	0.87	0.77	0.67	0.56	0.46	0.35	0.26	0.18	0.13
0.10	0.09	0.08	0.08	0.08	0.09	0.09	0.09	0.08	0.08	0.08	0.09
0.10	0.13	0.18	0.26	0.35	0.46	0.56	0.67	0.77	0.87	0.95	0.99

Ref Az: 319.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 45.00

Interference	Area	Pop
	4.02	0( 0.0)

\*\*\*\*\*

NEW 30-10-32 099-30-29 44(+) 49.000 kw 832 m 50.0 % 74.5 dBu

INGRAM TX

APP BNPTTL20000831CCK

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	2515.067	5768
not affected by terrain losses	2442.749	5499

\*\*\*\*\*

KGMM-LP 29-17-39 098-15-30 44(+) 48.540 kw 434.4 m DA 10.0 % 74.5

SAN ANTONIO TX

PROPOSED

1.00	0.99	0.95	0.87	0.77	0.67	0.56	0.46	0.35	0.26	0.18	0.13
0.10	0.09	0.08	0.08	0.08	0.09	0.09	0.09	0.08	0.08	0.08	0.09
0.10	0.13	0.18	0.26	0.35	0.46	0.56	0.67	0.77	0.87	0.95	0.99

Ref Az: 319.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 45.00

	Area	Pop
Interference	12.05	0( 0.0)

\*\*\*\*\*

DKEYET 30-19-10 097-48-06 43(0) 82.700 kw 615 m DA 90.0 % 41.4 dBu

AUSTIN TX 17588 911 DTVSERVICE: 911000 NTSCSERVICE: 878000

DTVALT DTV ALLOTMENT

0.33	0.41	0.51	0.56	0.52	0.41	0.33	0.29	0.36	0.52	0.72	0.92
1.00	0.93	0.73	0.53	0.39	0.31	0.33	0.41	0.52	0.55	0.51	0.41
0.33	0.31	0.38	0.51	0.76	0.88	0.96	0.89	0.76	0.56	0.38	0.31

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	18185.62	916318
not affected by terrain losses	17844.61	912577

\*\*\*\*\*

KGMM-LP 29-17-39 098-15-30 44(+) 48.540 kw 434.4 m DA 10.0 % 74.5

SAN ANTONIO TX

PROPOSED

1.00	0.99	0.95	0.87	0.77	0.67	0.56	0.46	0.35	0.26	0.18	0.13
0.10	0.09	0.08	0.08	0.08	0.09	0.09	0.09	0.08	0.08	0.08	0.09
0.10	0.13	0.18	0.26	0.35	0.46	0.56	0.67	0.77	0.87	0.95	0.99

Ref Az: 319.0

Using DEFAULT vertical antenna pattern

D/U Baseline: -49.00

	Area	Pop
Interference	0	0

\*\*\*\*\*

KEYE-2 30-19-18 097-48-11 43(N) 1000.000 kw 616 m DA 90.0 % 41.4 dBu

AUSTIN TX 17588 911 DTVSERVICE: 911000 NTSCSERVICE: 878000

APP BMPCDT20020528AAE

0.75	0.69	0.66	0.67	0.72	0.79	0.83	0.81	0.75	0.76	0.84	0.95
1.00	0.96	0.86	0.78	0.78	0.86	0.93	0.97	0.98	0.98	0.95	0.89
0.81	0.77	0.82	0.93	1.00	0.98	0.89	0.79	0.75	0.78	0.83	0.81

( 22.0 0.66)(121.0 1.00)(122.0 1.00)(282.0 1.00)(283.0 1.00)

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	32387.28	1354934
not affected by terrain losses	31644.91	1339162

\*\*\*\*\*

KGMM-LP 29-17-39 098-15-30 44(+) 48.540 kw 434.4 m DA 10.0 % 74.5

SAN ANTONIO TX

PROPOSED

1.00	0.99	0.95	0.87	0.77	0.67	0.56	0.46	0.35	0.26	0.18	0.13
0.10	0.09	0.08	0.08	0.08	0.09	0.09	0.09	0.08	0.08	0.08	0.09
0.10	0.13	0.18	0.26	0.35	0.46	0.56	0.67	0.77	0.87	0.95	0.99

Ref Az: 319.0

Using DEFAULT vertical antenna pattern

D/U Baseline: -49.00

	Area	Pop
Interference	0	0

\*\*\*\*\*

KEYE-T 30-19-07 097-48-04 43(N) 82.700 kw 611 m DA 90.0 % 41.4 dBu

AUSTIN TX 17588 911 DTVSERVICE: 911000 NTSCSERVICE: 878000

CP BPCDT19991101ABZ

0.41	0.47	0.53	0.56	0.55	0.50	0.43	0.41	0.49	0.65	0.81	0.94
1.00	0.97	0.87	0.72	0.55	0.43	0.41	0.47	0.53	0.56	0.55	0.50
0.43	0.41	0.49	0.65	0.81	0.94	1.00	0.97	0.87	0.72	0.55	0.43

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	19069.49	925013
not affected by terrain losses	18724.45	920717

\*\*\*\*\*

KGMM-LP 29-17-39 098-15-30 44(+) 48.540 kw 434.4 m DA 10.0 % 74.5

SAN ANTONIO TX

PROPOSED

1.00	0.99	0.95	0.87	0.77	0.67	0.56	0.46	0.35	0.26	0.18	0.13
0.10	0.09	0.08	0.08	0.08	0.09	0.09	0.09	0.08	0.08	0.08	0.09
0.10	0.13	0.18	0.26	0.35	0.46	0.56	0.67	0.77	0.87	0.95	0.99

Ref Az: 319.0

Using DEFAULT vertical antenna pattern

D/U Baseline: -49.00

	Area	Pop
Interference	0	0

\*\*\*\*\*

KZJL 29-33-44 095-30-35 44(N) 1000.000 kw 597.4 m 90.0 % 41.5 dBu

HOUSTON TX 20486 3695 DTVSERVICE: 3695000 NTSCSERVICE: 3695000

CP MOD BMPCDT20021107AAB

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	44007.40	3899447
not affected by terrain losses	43943.59	3899134

\*\*\*\*\*

KGMM-LP 29-17-39 098-15-30 44(+) 48.540 kw 434.4 m DA 10.0 % 74.5

SAN ANTONIO TX

PROPOSED

1.00	0.99	0.95	0.87	0.77	0.67	0.56	0.46	0.35	0.26	0.18	0.13
0.10	0.09	0.08	0.08	0.08	0.09	0.09	0.09	0.08	0.08	0.08	0.09
0.10	0.13	0.18	0.26	0.35	0.46	0.56	0.67	0.77	0.87	0.95	0.99



Ref Az: 319.0  
Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

Interference	Area 0	Pop 0
--------------	-----------	----------

\*\*\*\*\*

DKZJL 29-33-25 095-30-04 44(0) 122.200 kw 445 m DA 90.0 % 41.5 dBu  
HOUSTON TX 20486 3695 DTVSERVICE: 3695000 NTSCSERVICE: 3695000  
DTVALT DTV ALLOTMENT

0.85	0.90	0.95	0.98	1.00	1.00	0.98	0.95	0.90	0.85	0.80	0.76
0.72	0.67	0.61	0.52	0.41	0.29	0.21	0.18	0.21	0.27	0.31	0.30
0.27	0.21	0.18	0.21	0.29	0.41	0.51	0.60	0.67	0.72	0.76	0.80

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	20490.18	3694788
not affected by terrain losses	20490.18	3694788

\*\*\*\*\*

KGMM-LP 29-17-39 098-15-30 44(+) 48.540 kw 434.4 m DA 10.0 % 74.5  
SAN ANTONIO TX

PROPOSED

1.00	0.99	0.95	0.87	0.77	0.67	0.56	0.46	0.35	0.26	0.18	0.13
0.10	0.09	0.08	0.08	0.08	0.09	0.09	0.09	0.08	0.08	0.08	0.09
0.10	0.13	0.18	0.26	0.35	0.46	0.56	0.67	0.77	0.87	0.95	0.99

Ref Az: 319.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

Interference	Area 0	Pop 0
--------------	-----------	----------

### Summary of Calculations

Facility	Channel	Type	Baseline	Permissible	IX	%Base
KABB, SAN ANTONIO, TX	29	TV	1506919	0.5	0	0.00
NEW2, BIG WELLS, TX	44	TV	2488	0.5	0	0.00
NEW, INGRAM, TX	44	TV	5768	0.5	0	0.00
DKEYET, AUSTIN, TX	43	DTV	911000	0.5	0	0.00
KEYE-2, AUSTIN, TX	43	DTV	911000	0.5	0	0.00
KEYE-T, AUSTIN, TX	43	DTV	911000	0.5	0	0.00
KZJL, HOUSTON, TX	44	DTV	3695000	0.5	0	0.00
DKZJL, HOUSTON, TX	44	DTV	3695000	0.5	0	0.00