

CANYON LAKE BROADCASTING
EXHIBIT 11 TECHNICAL STATEMENT
KHJS

Escuela Radial JS is seeking to modify the CP of KHJS -LP, BNPL - 20131107APH, Facility ID 194842.

This application complies with the requirements of the US/Mexico Treaty.

Applicant is proposing to locate the antenna on a new tower with location coordinates of:

(NAD27)
 29 – 32 – 16 N,
 98 – 29 – 29 W.

Elevation is 262 meters.

Tower ASRN 1048424.

Tower has an overall height of 24.6 meters.

RCAGL 21 meters.

The only changes is location, antenna height above ground level, HAAT and site elevation. The same antenna that was specified in the application for the CP will be utilized in this application.

Exhibit 11 – This Technical Statement including spacing study and other supporting exhibits.

EXHIBIT 11
Channel Study

| Callsign | State | City | Freq | Channel | ERP_w | Class | Status | Distance_km | Sep | Clr |
|----------|-------|-------------|------|---------|-------|-------|--------|-------------|-----|-------|
| KISS-FM | TX | SAN ANTONIO | 99.5 | 258 | 97700 | C0 | LIC | 36.58 | 84 | -47.4 |
| KISS-FM | TX | SAN ANTONIO | 99.5 | 258 | 0 | C0 | USE | 36.58 | 84 | -47.4 |
| NEW | TX | SAN ANTONIO | 98.9 | 255 | 8.4 | LP100 | APP | 14.27 | 14 | 0.3 |
| KLMO-FM | TX | DILLEY | 98.9 | 255 | 92000 | C1 | LIC | 101.11 | 100 | 1.1 |
| NEW | TX | HARPER | 99.1 | 256 | 23000 | C3 | CP | 86.08 | 78 | 8.1 |
| | TX | HARPER | 99.1 | 256 | 0 | C3 | USE | 101.73 | 78 | 23.7 |
| KLMO-FM1 | TX | DEVINE | 98.9 | 255 | 2 | D | CP | 39.62 | 13 | 26.6 |
| KUTX | TX | LEANDER | 98.9 | 255 | 29000 | C2 | LIC | 113.68 | 80 | 33.7 |
| KUTX | TX | LEANDER | 98.9 | 255 | 25000 | C2 | LIC | 113.68 | 80 | 33.7 |
| K256BX | TX | LUCKENBACH | 99.1 | 256 | 62 | D | LIC | 68.31 | 32 | 36.3 |

Second Channel Adjacent Wavier Request

KHJS's new proposed location is approximately 195 meters @ 327 degrees from the current CP of KHJS. See attached aerial photo of both sites.

The LPFM station's F(50,10) contour to KISS is 120.7 dbu. There are no roadways or buildings inside this contour. KHJS will continue to utilize a Shively 6812 , 2 bay antenna, however due to a lower RCAGL, the 120.7 dbu contour will be 0.8 meters above ground at a point that is 9.4 meters from the tower. As shown in the table below, this contour does not reach the ground. Therefore, this application is in compliance with 73.807(e)(1) Second adjacent channel wavier.

CANYON LAKE BROADCASTING

| Angle of Depression | Antenna REL (mv) | ERP watts | Distance to interfering Contour from antenna (m) | Horizl Distance of F(50,10) from tower (m) | Vert Distance | CLEARANCE |
|---------------------|------------------|-------------|--|--|---------------|------------|
| 0 | 1 | 100.0 | 65 | 65.0 | 0.0 | 21.0 |
| 5 | 0.969 | 93.9 | 63 | 62.7 | 5.5 | 15.5 |
| 10 | 0.881 | 77.6 | 58 | 57.4 | 10.1 | 10.9 |
| 15 | 0.745 | 55.5 | 49 | 47.7 | 12.8 | 8.2 |
| 20 | 0.576 | 33.2 | 38 | 36.1 | 13.1 | 7.9 |
| 25 | 0.389 | 15.1 | 25 | 22.9 | 10.7 | 10.3 |
| 30 | 0.203 | 4.1 | 13 | 11.4 | 6.6 | 14.4 |
| 35 | 0.032 | 0.1 | 2 | 1.7 | 1.2 | 19.8 |
| 40 | 0.112 | 1.3 | 7 | 5.6 | 4.7 | 16.3 |
| 45 | 0.224 | 5.0 | 15 | 10.3 | 10.3 | 10.7 |
| 50 | 0.299 | 8.9 | 20 | 13.1 | 15.7 | 5.3 |
| 55 | 0.339 | 11.5 | 22 | 12.6 | 18.1 | 2.9 |
| 60 | 0.347 | 12.0 | 23 | 11.3 | 19.5 | 1.5 |
| 65 | 0.328 | 10.8 | 22 | 9.4 | 20.2 | 0.8 |
| 70 | 0.288 | 8.3 | 19 | 6.4 | 17.6 | 3.4 |
| 75 | 0.231 | 5.3 | 15 | 3.9 | 14.5 | 6.5 |
| 80 | 0.162 | 2.6 | 11 | 1.8 | 10.4 | 10.6 |
| 85 | 0.085 | 0.7 | 5 | 0.4 | 4.5 | 16.5 |
| 90 | 0 | 0.0 | 0 | 0.0 | 0.0 | 21.0 |

Exhibit 14 – EPA / RFE.

$$S = \frac{33.4 (F^2) ERP}{R^2}$$

where: S = power density in $\mu\text{W}/\text{cm}^2$
 F = relative field factor (relative numeric gain)
 ERP = power in watts
 R = distance in meters

From the pattern tabulation table, the greatest relative field value below the main beam occurs at 60 degrees.

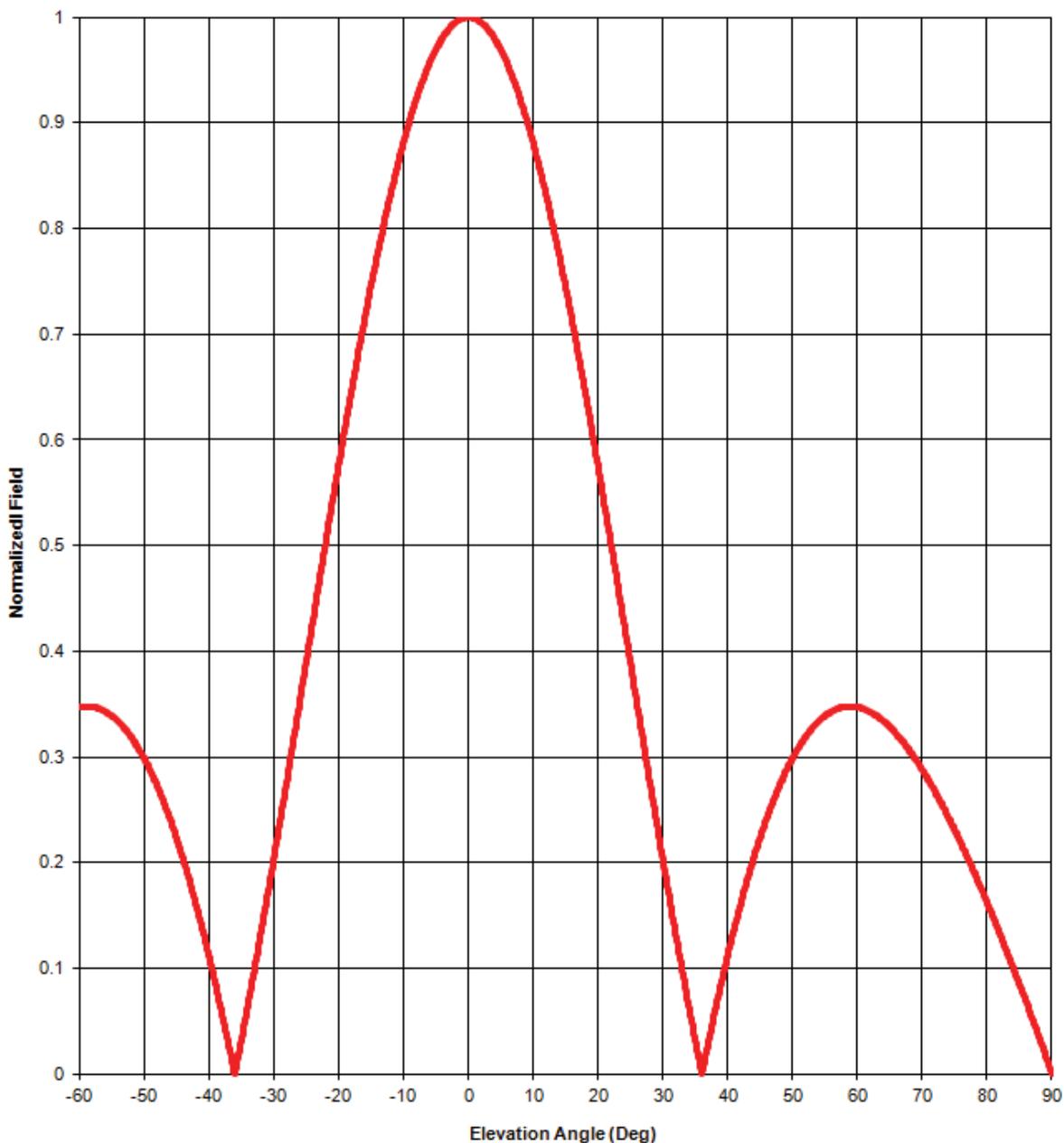
F = 0.35 relative field
 ERP = 200 watts
 R = 19 meters

For this proposal, the calculated power density is:

$S = 2.3 \mu\text{W}/\text{cm}^2$, or 1.13% of uncontrolled public access limit of $200 \mu\text{W}/\text{cm}^2$. This is less than 5%, therefore no further analysis required.

Applicant will cease transmission from this location whenever there are workmen on the tower.

Elevation pattern



Antenna model: 6812b, 2-bay full-wave-spaced

Test frequency: 98.1 MHz

Gain (maximum):

| Power | dB |
|-------|---------|
| 1.00 | 0.02 dB |

Document No. 6812b 2-bay fw (130701)

| Degrees | Rel. Field |
|---------|------------|---------|------------|---------|------------|---------|------------|---------|------------|
| 1 | 0.999 | 19 | 0.612 | 37 | 0.029 | 55 | 0.339 | 73 | 0.256 |
| 2 | 0.995 | 20 | 0.576 | 38 | 0.058 | 56 | 0.343 | 74 | 0.244 |
| 3 | 0.989 | 21 | 0.539 | 39 | 0.086 | 57 | 0.346 | 75 | 0.231 |
| 4 | 0.980 | 22 | 0.502 | 40 | 0.112 | 58 | 0.348 | 76 | 0.218 |
| 5 | 0.969 | 23 | 0.465 | 41 | 0.137 | 59 | 0.348 | 77 | 0.205 |
| 6 | 0.956 | 24 | 0.427 | 42 | 0.161 | 60 | 0.347 | 78 | 0.191 |
| 7 | 0.941 | 25 | 0.389 | 43 | 0.183 | 61 | 0.345 | 79 | 0.177 |
| 8 | 0.923 | 26 | 0.352 | 44 | 0.204 | 62 | 0.343 | 80 | 0.162 |
| 9 | 0.903 | 27 | 0.314 | 45 | 0.224 | 63 | 0.339 | 81 | 0.148 |
| 10 | 0.881 | 28 | 0.277 | 46 | 0.242 | 64 | 0.334 | 82 | 0.132 |
| 11 | 0.858 | 29 | 0.240 | 47 | 0.258 | 65 | 0.328 | 83 | 0.117 |
| 12 | 0.832 | 30 | 0.203 | 48 | 0.273 | 66 | 0.322 | 84 | 0.101 |
| 13 | 0.805 | 31 | 0.168 | 49 | 0.287 | 67 | 0.315 | 85 | 0.085 |
| 14 | 0.776 | 32 | 0.132 | 50 | 0.299 | 68 | 0.306 | 86 | 0.069 |
| 15 | 0.745 | 33 | 0.098 | 51 | 0.310 | 69 | 0.298 | 87 | 0.052 |
| 16 | 0.714 | 34 | 0.065 | 52 | 0.319 | 70 | 0.288 | 88 | 0.036 |
| 17 | 0.681 | 35 | 0.032 | 53 | 0.327 | 71 | 0.278 | 89 | 0.018 |
| 18 | 0.647 | 36 | 0.001 | 54 | 0.334 | 72 | 0.267 | 90 | 0.000 |

Elevation Pattern Tabulation

Antenna model: 6812b, 2-bay full-wave-spaced

Relative Field at 0° Depression = 1.000

Exhibit 11 Figure 2 Page 2 Manufacturer Elevation Pattern

EXHIBIT 11

KHJS CP and KHJS Proposed locations

Legend

-  KHJS prop
-  KHJS-LP - CP

KHJS prop

KHJS-LP - CP

Gulfdale Dr

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Google earth

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100 m



EXHIBIT 11

120.7 dbu @ 60 degrees - 11.3 meters
120.7 dbu @ 65 degrees - 9.4 meters

Legend

-  KHJS 11.3 meters
-  KHJS 9.4 meters
-  KHJS prop

KHJS prop

