

**JULES COHEN, P.E.
CONSULTING ENGINEER**

**ENGINEERING STATEMENT IN SUPPORT OF
SPECIAL TEMPORARY AUTHORITY
KCRA HEARST-ARGYLE TELEVISION, INC.
KQCA-DT, STOCKTON, CALIFORNIA**

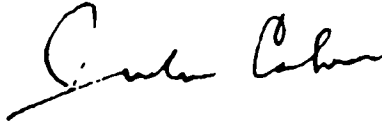
This engineering statement, prepared on behalf of KCRA Hearst-Argyle, Television, Inc., licensee of KQCA-TV, Stockton, California, is in support of a request for Special Temporary Authority (STA) for KQCA-DT. KQCA-DT has pending an application for modification of construction permit (File No. BMPCDT-20020626AAA) requesting authority to share the antenna of KMAX-DT, Sacramento, California, authorized in construction permit BPCDT-19991029AGC. The antenna has been placed on the existing registered tower licensed to KCRA-TV. The antenna conforms to the issued construction permit with a minor change. The antenna radiation center has been lowered from the specified 590 meters above ground and above mean sea level to 583 meters.

KQCA-DT requests permission to operate temporarily at an effective radiated power of 385.9 kilowatts (25.9 dBk). At that power level, the f(50,90) signal strength over the principal community is substantially in excess of the signal strength required by FCC rules.

For easy reference purposes, a copy of the digital technical portion of the 301 form is attached.

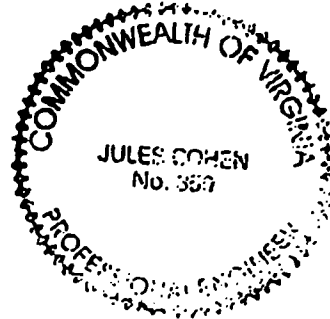
Jules Cohen, P.E.
Consulting Engineer

I declare under the penalty of perjury that the foregoing is correct to the best of my knowledge and belief.



Jules Cohen, P.E.

January 13, 2004



Complete Questions 1-5 of the Certification Checklist and provide all data and information for the proposed facility, as requested in Technical Specifications, Items 1-13.

Certification Checklist: A correct answer of "Yes" to all of the questions below will ensure an expeditious grant of a construction permit. However, if the proposed facility is located within the Canadian or Mexican borders, coordination of the proposal under the appropriate treaties may be required prior to grant of the application. An answer of "No" will require additional evaluation of the applicable information in this form before a construction permit can be granted.

1. The proposed DTV facility complies with 47 C.F.R. Section 73.622 in the following respects:

- (a) It will operate on the DTV channel for this station as established in 47 C.F.R. Section 73.622. ☒ Yes ☐ No
- (b) It will operate from a transmitting antenna located within 5.0 km (3.1 miles) of the DTV reference site for this station as established in 47 C.F.R. Section 73.622. ☐ Yes ☒ No
- (c) It will operate with an effective radiated power (ERP) and antenna height above average terrain (HAAT) that do not exceed the DTV reference ERP and HAAT for this station as established in 47 C.F.R. Section 73.622. ☒ Yes ☐ No
2. The proposed facility will not have a significant environmental impact, including exposure of workers or the general public to levels of RF radiation exceeding the applicable health and safety guidelines, and therefore will not come within 47 C.F.R. Section 1.1307. ☒ Yes ☐ No

Applicant must submit the Exhibit called for in Item 13.

3. Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community. ☒ Yes ☐ No
4. The requirements of 47 C.F.R. Section 73.1030 regarding notification to radio astronomy installations, radio receiving installations and FCC monitoring stations have either been satisfied or are not applicable. ☒ Yes ☐ No
5. The antenna structure to be used by this facility has been registered by the Commission and will not require reregistration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely effect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7. ☒ Yes ☐ No

TECHNICAL SPECIFICATIONS

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

TECH BOX

| | | | | | | | | |
|--|---|---|--------------|-------|---------------|-------------------|-------------|----|
| 1. Channel Number: | DTV <u>46</u> | Analog TV, if any <u>58</u> | | | | | | |
| 2. Zone: | <input type="checkbox"/> I | <input checked="" type="checkbox"/> II <input type="checkbox"/> III | | | | | | |
| 3. Antenna Location Coordinates: (NAD 27) | <u>38</u> ° <u>15</u> ' <u>54</u> " <input checked="" type="checkbox"/> N <input type="checkbox"/> S Latitude <u>121</u> ° <u>29</u> ' <u>24</u> " <input type="checkbox"/> E <input checked="" type="checkbox"/> W Longitude | | | | | | | |
| 4. Antenna Structure Registration Number: | <u>1015686</u> <input type="checkbox"/> Not applicable <input type="checkbox"/> FAA Notification Filed with FAA | | | | | | | |
| 5. Antenna Location Site Elevation Above Mean Sea Level: | <u>0</u> meters | | | | | | | |
| 6. Overall Tower Height Above Ground Level: | <u>610</u> meters | | | | | | | |
| 7. Height of Radiation Center Above Ground Level: | <u>583</u> meters | | | | | | | |
| 8. Height of Radiation Center Above Average Terrain: | <u>580</u> meters | | | | | | | |
| 9. Maximum Effective Radiated Power (average power): | <u>385.9</u> kW | | | | | | | |
| 10. Antenna Specifications: | <table border="1"><tr><td>Manufacturer</td><td>Model</td></tr><tr><td>a. DIELECTRIC</td><td>TUG-05-16/80H-1-B</td></tr></table> b. Electrical Beam Tilt: <u>0.75</u> degrees <input type="checkbox"/> Not Applicable c. Mechanical Beam Tilt: _____ degrees toward azimuth _____ degrees True <input checked="" type="checkbox"/> Not Applicable Attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). d. Polarization: <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <table border="1"><tr><td>Exhibit No.</td></tr><tr><td>39</td></tr></table> | | Manufacturer | Model | a. DIELECTRIC | TUG-05-16/80H-1-B | Exhibit No. | 39 |
| Manufacturer | Model | | | | | | | |
| a. DIELECTRIC | TUG-05-16/80H-1-B | | | | | | | |
| Exhibit No. | | | | | | | | |
| 39 | | | | | | | | |

c. Directional Antenna Relative Field Values:

☒ Not applicable (Nondirectional)

Rotation: _____°

☐ No rotation

| Degree | Value | Degree | Value | Degree | Value | Degree | Value | Degree | Value | Degree | Value |
|---------------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| 0 | | 60 | | 120 | | 180 | | 240 | | 300 | |
| 10 | | 70 | | 130 | | 190 | | 250 | | 310 | |
| 20 | | 80 | | 140 | | 200 | | 260 | | 320 | |
| 30 | | 90 | | 150 | | 210 | | 270 | | 330 | |
| 40 | | 100 | | 160 | | 220 | | 280 | | 340 | |
| 50 | | 110 | | 170 | | 230 | | 290 | | 350 | |
| Additional Azimuths | | | | | | | | | | | |

If a directional antenna is proposed, the requirements of 47 C.F.R. Section 73.625(c) must be satisfied. Exhibit required.

Exhibit No.

11. Does the proposed facility satisfy the interference protection provisions of 47 C.F.R. Section 73.623(a)? (Applicable only if Certification Checklist Items 1(a), (b), or (c) are answered "No.")

☒ Yes ☐ No

If "No," attach as an Exhibit justification therefor, including a summary of any related previously granted waivers.

Exhibit No.

12. If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefor. (Applicable only if Certification Checklist Item 3 is answered "No.")

Exhibit No.

13. Environmental Protection Act. Submit as an Exhibit the following:

Exhibit No.

43

- a. If Certification Checklist Item 2 is answered "Yes," a brief explanation of why an Environmental Assessment is not required. Also describe in the Exhibit the steps that will be taken to limit RF radiation exposure to the public and to persons authorized access to the tower site.

By checking "Yes" to Certification Checklist Item 2, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.

If Certification Checklist Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R. Section 1.1311.

PREPARER'S CERTIFICATION IN SECTION III MUST BE COMPLETED AND SIGNED.

Dielectric

Proposal #: **DCA-10040-6** Antenna Type: **TUG-05-16/80H-2-B**
 Call Letters: **KMAX** Location: **Sacramento, CA**

Channel: **21 DTV**

| Electrical Specifications | | Value | | Remarks |
|---|------------------|------------------|--------------|--|
| | | Ratio | dB | |
| RMS Gain at Main Lobe over Halfwave Dipole | Hpol | 30.9 | 14.90 | |
| | Vpol | | | |
| RMS Gain at Horizontal over Halfwave Dipole | Hpol | 15.4 | 11.88 | |
| | Vpol | | | |
| Peak Directional Gain over Halfwave Dipole | Hpol | | | |
| | Vpol | | | |
| Peak Directional Gain at Horizontal over Halfwave Dipole | Hpol | | | |
| | Vpol | | | |
| Circularity | | ±/- 1.5 dB | | |
| Axial Ratio | | dB | | |
| Beam Tilt | | 0.75 deg | | |
| Average Power | DTV | 160 kW | 22.04 dBk | |
| Antenna Input: | T/L | 2 x 7-3/16 in | 75.0 ohm | Type: EI/DCA EHT |
| Maximum Antenna Input VSWR | | Channel 1.10 : 1 | | Note: Recommend Antenna and feed line be pressurized to 15 PSI |
| Patterns | Azimuth | TUG-05-5150 | | |
| | Elevation | 16U309000 | 16U309000-90 | |
| Mechanical Specifications | | Metric | English | Full Stack |
| Height with Lightning Protector | H4 | m | ft | 118.1 ft |
| Height Less Lightning Protector | H2 | 18.9 m | 61.9 ft | 114.1 ft |
| Height of Center of Radiation | H3 | 9.4 m | 31.0 ft | Above tower top |
| Basic Wind Speed | V | 144.8 km/h | 90 mi/h | TIA/BIA-222-F. |
| Force Coeff. x Projected Area | CaAc | 12.91 m² | 139.0 ft² | Above tower top 236 ft² |
| Moment Arm | D1 | 9.6 m | 31.5 ft | Above tower top 52.4 ft |
| Force Coeff. x Projected Area | CaAc | m² | ft² | ft² |
| Moment Arm | D3 | m | ft | ft |
| Pole Bury Length | D2 | m | ft | ft |
| Weight | W | 11.4 t | 25,200 lbs | 32,300 lbs |
| Radome | Full Cylindrical | | | White |
| Antenna designed in accordance with ATSC specifications for design of structural steel for building as prescribed by TIA/BIA-222-F. | | | | |

NOTE:

Prepared By :
 Original Date : 19-Aug-02

SRR

Revision: 6

Approved By :
 Rev. Date: 3-Apr-03

RN

Dielectric

Proposal #: **DCA-10040-6** Antenna Type: **TUG-05-16/80H-1-B**
 Call Letters: **KQCA** Location: **Sacramento, CA**

Channel: **46 DTV**

| Electrical Specifications | | Value | | Remarks | | | |
|---|-----------|--|--------------|--------------------------------|--|--|--|
| | | Ratio | dB | | | | |
| RMS Gain at Main Lobe over Halfwave Dipole | Hpol | 32.7 | 15.15 | | | | |
| | Vpol | | | | | | |
| RMS Gain at Horizontal over Halfwave Dipole | Hpol | 9.1 | 9.59 | | | | |
| | Vpol | | | | | | |
| Peak Directional Gain over Halfwave Dipole | Hpol | | | | | | |
| | Vpol | | | | | | |
| Peak Directional Gain at Horizontal over Halfwave Dipole | Hpol | | | | | | |
| | Vpol | | | | | | |
| Circularity | | +/- 1.5 dB | | | | | |
| Axial Ratio | | dB | | | | | |
| Beam Tilt | | 0.75 deg | | | | | |
| Average Power DTV | | | | See Ch 21 Specifications Sheet | | | |
| Antenna Input: | T/L 2 x | 7-3/16 in | 75.0 ohm | Type: EIA/DCA EHT | | | |
| Maximum Antenna Input VSWR | | Channel 1.10 : 1 | | | | | |
| Patterns | Azimuth | TUG-05-6650 | | | | | |
| | Elevation | 16U327000 | 16U327000-90 | | | | |
| Mechanical Specifications | | Metric | English | Full Stack | | | |
| Height with Lightning Protector | H4 | See Ch 21 Specifications Sheet for Mechanical Specifications | | | | | |
| Height Less Lightning Protector | H2 | | | | | | |
| Height of Center of Radiation | H3 | | | | | | |
| Basic Wind Speed | V | | | | | | |
| Force Coeff. x Projected Area | CaAc | | | | | | |
| Moment Arm | D1 | | | | | | |
| Force Coeff. x Projected Area | CaAc | | | | | | |
| Moment Arm | D3 | | | | | | |
| Pole Bury Length | D2 | | | | | | |
| Weight | W | | | | | | |
| Radome | | | | | | | |
| Antenna designed in accordance with AISC specifications for design of structural steel for building as prescribed by TIA/EIA-222-F. | | | | | | | |

NOTE:

Prepared By :
 Original Date : 19-Aug-02

SRR

Revision: 6

Approved By :
 Rev. Date: 3-Apr-03

RN



| | | | |
|-----------------|--------------------------|-----------|-----------|
| Proposal Number | DCA-10040 | Revision: | 6 |
| Date | 3-Apr-03 | | |
| Call Letters | KQCA | Channel | 46 |
| Location | Sacramento, CA | | |
| Customer | Richland Tower | | |
| Antenna Type | TUG-05-16/80H-1-B | | |

SYSTEM SUMMARY

Antenna:

| | | | | |
|-----------|--------------------------|--------------|----------------|----------------------|
| Type: | TUG-05-16/80H-1-B | ERP: | 600 kW | (27.78 dBk) |
| Channel: | 46 | Gain*: | 32.7 | (15.15 dB) |
| Location: | Sacramento, CA | Input Power: | 18.3 kW | (12.64 dBk) |

H Pol

Transmission Line:

| | | | |
|------------|------------------|--------------|----------------|
| Type: | digit/EHT | Attenuation: | 2.29 dB |
| Size: | 7-3/16 in | Efficiency: | 59.0% |
| Impedance: | 75 ohm | | |
| Length: | 2,050 ft | | 624.8 m |

| | | | |
|-----------|------------|--------------|----------------|
| Combiner: | DCA | Attenuation: | 0.25 dB |
| | | Efficiency: | 94.4% |

Combiner Input:

Power Required: **33.0 kW (15.18 dBk)**

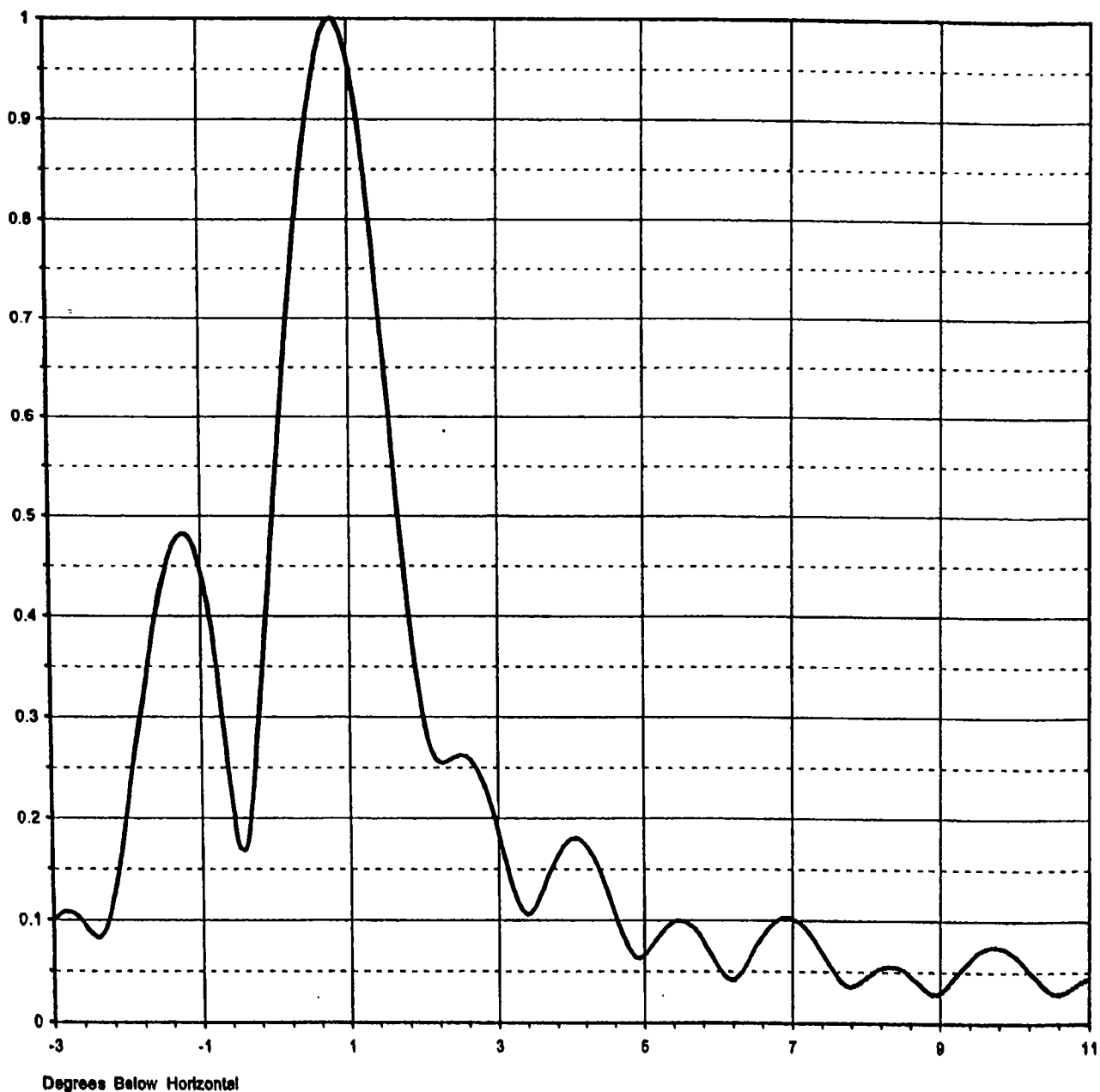
* Gain is with respect to half wave dipole.



| | | | |
|-----------------|--------------------------|-----------|-----------|
| Proposal Number | DCA-10040 | Revision: | 6 |
| Date | 3-Apr-03 | | |
| Call Letters | KQCA | Channel | 46 |
| Location | Sacramento, CA | | |
| Customer | Richland Tower | | |
| Antenna Type | TUG-05-16/80H-1-B | | |

ELEVATION PATTERN

| | | | |
|------------------------|-------------------------|-----------|-------------------|
| RMS Gain at Main Lobe | 32.70 (15.15 dB) | Beam Tilt | 0.75 deg |
| RMS Gain at Horizontal | 9.10 (9.59 dB) | Frequency | 665.00 MHz |
| Calculated / Measured | Calculated | Drawing # | 16U327000 |

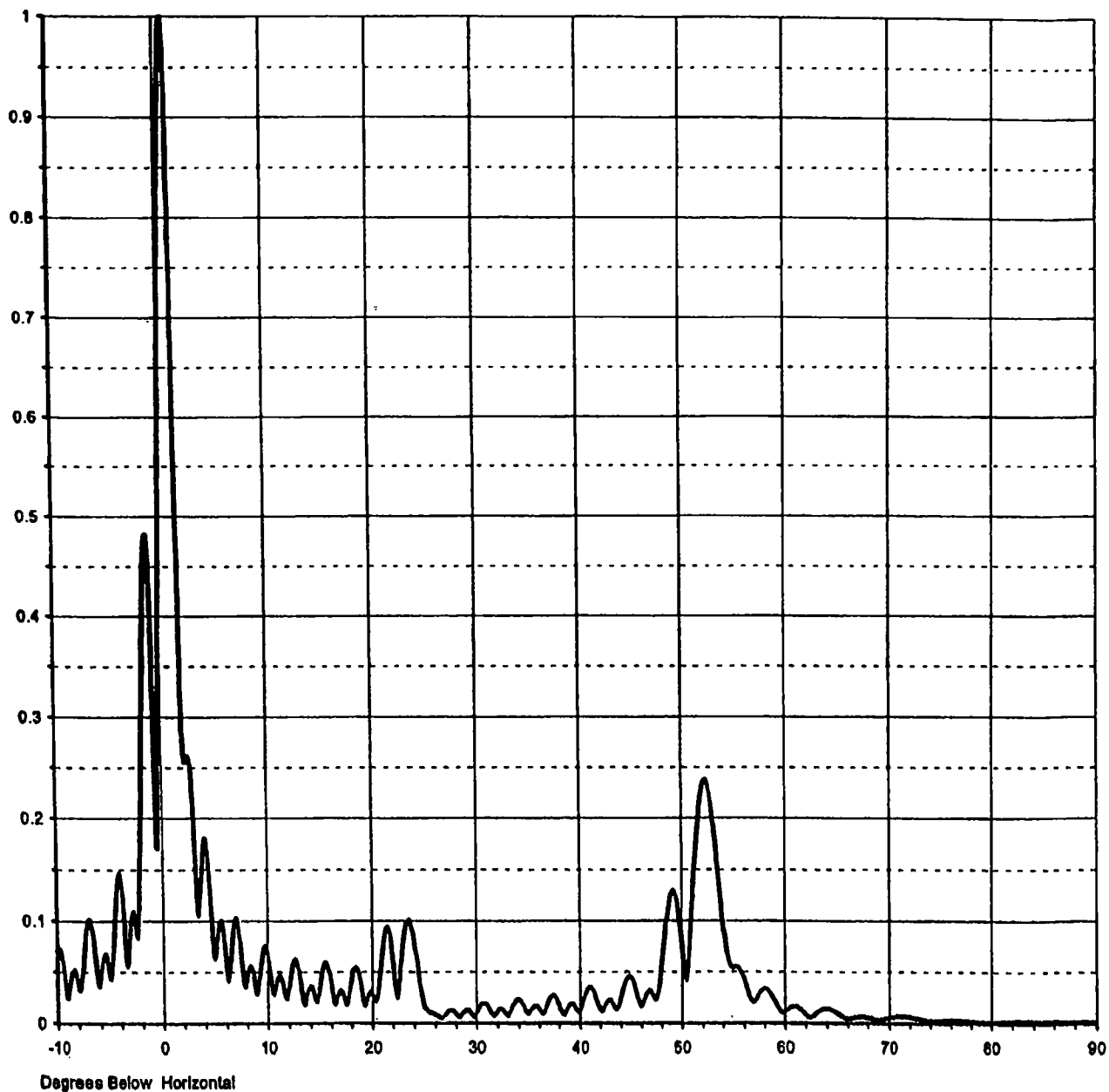




| | | | |
|-----------------|-------------------|-----------|----|
| Proposal Number | DCA-10040 | Revision: | 6 |
| Date | 3-Apr-03 | | |
| Call Letters | KQCA | Channel | 46 |
| Location | Sacramento, CA | | |
| Customer | Richland Tower | | |
| Antenna Type | TUG-05-16/80H-1-B | | |

ELEVATION PATTERN

| | | | |
|------------------------|--------------------|-----------|--------------|
| RMS Gain at Main Lobe | 32.70 (15.15 dB) | Beam Tilt | 0.75 deg |
| RMS Gain at Horizontal | 9.10 (9.59 dB) | Frequency | 665.00 MHz |
| Calculated / Measured | Calculated | Drawing # | 16U327000-90 |





Proposal Number **DCA-10040** Revision: **6**
 Date **3-Apr-03**
 Call Letters **KQCA** Channel **46**
 Location **Sacramento, CA**
 Customer **Richland Tower**
 Antenna Type **TUG-O5-16/80H-1-B**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **16U327000-90**

| Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| -10.0 | 0.070 | 2.4 | 0.259 | 10.8 | 0.030 | 30.5 | 0.016 | 51.0 | 0.096 | 71.5 | 0.007 |
| -9.5 | 0.060 | 2.6 | 0.259 | 10.8 | 0.031 | 31.0 | 0.018 | 51.5 | 0.173 | 72.0 | 0.008 |
| -9.0 | 0.024 | 2.8 | 0.234 | 11.0 | 0.040 | 31.5 | 0.010 | 52.0 | 0.224 | 72.5 | 0.005 |
| -8.5 | 0.051 | 3.0 | 0.186 | 11.5 | 0.040 | 32.0 | 0.010 | 52.5 | 0.237 | 73.0 | 0.004 |
| -8.0 | 0.035 | 3.2 | 0.131 | 12.0 | 0.027 | 32.5 | 0.013 | 53.0 | 0.212 | 73.5 | 0.003 |
| -7.5 | 0.064 | 3.4 | 0.108 | 12.5 | 0.058 | 33.0 | 0.008 | 53.5 | 0.163 | 74.0 | 0.002 |
| -7.0 | 0.101 | 3.6 | 0.128 | 13.0 | 0.052 | 33.5 | 0.015 | 54.0 | 0.106 | 74.5 | 0.002 |
| -6.5 | 0.067 | 3.8 | 0.162 | 13.5 | 0.019 | 34.0 | 0.023 | 54.5 | 0.065 | 75.0 | 0.002 |
| -6.0 | 0.044 | 4.0 | 0.179 | 14.0 | 0.035 | 34.5 | 0.018 | 55.0 | 0.054 | 75.5 | 0.003 |
| -5.5 | 0.066 | 4.2 | 0.174 | 14.5 | 0.027 | 35.0 | 0.010 | 55.5 | 0.054 | 76.0 | 0.003 |
| -5.0 | 0.046 | 4.4 | 0.147 | 15.0 | 0.033 | 35.5 | 0.015 | 56.0 | 0.046 | 76.5 | 0.003 |
| -4.5 | 0.121 | 4.6 | 0.107 | 15.5 | 0.058 | 36.0 | 0.015 | 56.5 | 0.030 | 77.0 | 0.003 |
| -4.0 | 0.139 | 4.8 | 0.071 | 16.0 | 0.044 | 36.5 | 0.009 | 57.0 | 0.021 | 77.5 | 0.002 |
| -3.5 | 0.063 | 5.0 | 0.065 | 16.5 | 0.019 | 37.0 | 0.020 | 57.5 | 0.027 | 78.0 | 0.002 |
| -3.0 | 0.098 | 5.2 | 0.084 | 17.0 | 0.032 | 37.5 | 0.027 | 58.0 | 0.033 | 78.5 | 0.002 |
| -2.8 | 0.108 | 5.4 | 0.098 | 17.5 | 0.020 | 38.0 | 0.020 | 58.5 | 0.032 | 79.0 | 0.001 |
| -2.6 | 0.097 | 5.6 | 0.097 | 18.0 | 0.036 | 38.5 | 0.009 | 59.0 | 0.024 | 79.5 | 0.001 |
| -2.4 | 0.083 | 5.8 | 0.080 | 18.5 | 0.054 | 39.0 | 0.016 | 59.5 | 0.014 | 80.0 | 0.001 |
| -2.2 | 0.122 | 6.0 | 0.055 | 19.0 | 0.035 | 39.5 | 0.017 | 60.0 | 0.011 | 80.5 | 0.002 |
| -2.0 | 0.210 | 6.2 | 0.042 | 19.5 | 0.019 | 40.0 | 0.011 | 60.5 | 0.014 | 81.0 | 0.002 |
| -1.8 | 0.312 | 6.4 | 0.059 | 20.0 | 0.030 | 40.5 | 0.023 | 61.0 | 0.016 | 81.5 | 0.002 |
| -1.6 | 0.403 | 6.6 | 0.084 | 20.5 | 0.022 | 41.0 | 0.034 | 61.5 | 0.014 | 82.0 | 0.002 |
| -1.4 | 0.465 | 6.8 | 0.100 | 21.0 | 0.063 | 41.5 | 0.031 | 62.0 | 0.009 | 82.5 | 0.002 |
| -1.2 | 0.481 | 7.0 | 0.101 | 21.5 | 0.093 | 42.0 | 0.016 | 62.5 | 0.006 | 83.0 | 0.002 |
| -1.0 | 0.443 | 7.2 | 0.090 | 22.0 | 0.073 | 42.5 | 0.015 | 63.0 | 0.009 | 83.5 | 0.002 |
| -0.8 | 0.350 | 7.4 | 0.068 | 22.5 | 0.025 | 43.0 | 0.022 | 63.5 | 0.013 | 84.0 | 0.002 |
| -0.6 | 0.223 | 7.6 | 0.046 | 23.0 | 0.068 | 43.5 | 0.016 | 64.0 | 0.014 | 84.5 | 0.002 |
| -0.4 | 0.171 | 7.8 | 0.036 | 23.5 | 0.099 | 44.0 | 0.019 | 64.5 | 0.013 | 85.0 | 0.002 |
| -0.2 | 0.319 | 8.0 | 0.044 | 24.0 | 0.088 | 44.5 | 0.037 | 65.0 | 0.010 | 85.5 | 0.002 |
| 0.0 | 0.526 | 8.2 | 0.053 | 24.5 | 0.052 | 45.0 | 0.045 | 65.5 | 0.006 | 86.0 | 0.002 |
| 0.2 | 0.721 | 8.4 | 0.054 | 25.0 | 0.020 | 45.5 | 0.035 | 66.0 | 0.004 | 86.5 | 0.002 |
| 0.4 | 0.876 | 8.6 | 0.046 | 25.5 | 0.011 | 46.0 | 0.018 | 66.5 | 0.005 | 87.0 | 0.002 |
| 0.6 | 0.972 | 8.8 | 0.033 | 26.0 | 0.009 | 46.5 | 0.025 | 67.0 | 0.006 | 87.5 | 0.002 |
| 0.8 | 1.000 | 9.0 | 0.030 | 26.5 | 0.006 | 47.0 | 0.031 | 67.5 | 0.006 | 88.0 | 0.002 |
| 1.0 | 0.959 | 9.2 | 0.044 | 27.0 | 0.007 | 47.5 | 0.024 | 68.0 | 0.005 | 88.5 | 0.002 |
| 1.2 | 0.857 | 9.4 | 0.061 | 27.5 | 0.012 | 48.0 | 0.047 | 68.5 | 0.004 | 89.0 | 0.002 |
| 1.4 | 0.713 | 9.6 | 0.072 | 28.0 | 0.010 | 48.5 | 0.092 | 69.0 | 0.003 | 89.5 | 0.001 |
| 1.6 | 0.551 | 9.8 | 0.075 | 28.5 | 0.006 | 49.0 | 0.124 | 69.5 | 0.004 | 90.0 | 0.001 |
| 1.8 | 0.399 | 10.0 | 0.071 | 29.0 | 0.012 | 49.5 | 0.124 | 70.0 | 0.005 | | |
| 2.0 | 0.294 | 10.2 | 0.059 | 29.5 | 0.010 | 50.0 | 0.087 | 70.5 | 0.006 | | |
| 2.2 | 0.256 | 10.4 | 0.043 | 30.0 | 0.007 | 50.5 | 0.042 | 71.0 | 0.007 | | |

Jules Cohen, P.E.
Consulting Engineer

EXHIBIT NO. 43

APPLICATION FOR SPECIAL TEMPORARY AUTHORITY
KCRA HEARST-ARGYLE TELEVISION, INC.
KQCA-DT, STOCKTON, CALIFORNIA

Environmental Considerations

The radiation center of the antenna to be used for the proposed Special Temporary Authorization (STA) for KQCA-DT is 583 meters above ground. Use of this existing tower with no change in height assures the avoidance of a significant effect that would require preparation of an environmental assessment. Furthermore, as discussed below, the operation would comply with maximum permitted RF exposure.

Calculated maximum RF exposure in the vicinity of the KMAX-DT/KQCA-DT tower, at a height of two meters above ground, from the proposed STA operation on channel 46 is 2.12 microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$), 0.48 percent of the general population/uncontrolled maximum permitted exposure of $443 \mu\text{W}/\text{cm}^2$ at channel 46.

Procedures for avoiding excessive exposure during work on the tower assure that, with the digital transmission system in use, maintenance tasks can be carried out without subjecting workmen to exposure in excess of that permitted by the rules. Power is reduced, or transmitters shut down as necessary to avoid over-exposure.