Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

ENGINEERING EXHIBIT

Application to Modify Digital Television Station Construction Permit

prepared for

Young Broadcasting of San Francisco, Inc., Debtor-In-Possession
KRON-TV San Francisco, CA
Facility ID 65526
Ch. 38 1000 kW 512 m

Young Broadcasting of San Francisco, Inc., Debtor-In-Possession ("Young") is the licensee of television station KRON-TV, pre-transition analog Channel 4 and digital Channel 57, San Francisco, CA. A Construction Permit ("CP", BMPCDT-20080619AFU) authorizes construction of the KRON-TV post-transition digital facility on Channel 38, as established in Appendix B of the Seventh Report and Order in MB Docket 87-268. At the transition date, KRON-TV commenced operations on digital Channel 38 with a reduced facility pursuant to Special Temporary Authorization ("STA", BDSTA-20080821ACV).

Construction of the transmission facility authorized in the CP has recently been completed, which involves a shared antenna system provided by the tower structure owner. Upon commissioning of the facility and final review of parameters, it has been determined that the as-built directional antenna pattern exceeds the authorized relative field values in some azimuths. There is no change in antenna make and model number, however the final antenna data provided by the manufacturer discloses minor variations in the directional pattern. Accordingly, *Young* herein seeks to modify the CP to incorporate the final directional pattern data.[1] There is no change to the

[1]Contemporaneously with the filing of this application, *Young* is submitting an STA request to operate KRON-TV with the as-built antenna system. The STA request specifies operation at reduced power such that the DTV service contour will not extend beyond that as authorized under BMPCDT-20080619AFU. Full power operation can commence with the grant of the instant application.

currently authorized maximum effective radiated power ("ERP"), antenna location, or antenna height.

The shared antenna system is a Dielectric model TUM-C5SP-14/60H-2-T-R. Elliptical polarization is employed (21.8 percent vertical polarization). The maximum horizontally polarized ERP is 1000 kW, and the maximum vertically polarized ERP is 218 kW. The vertically polarized component does not exceed the horizontally polarized component at any azimuth. The directional antenna's azimuthal patterns are depicted in **Figures 1** and **1A** for horizontal and vertical polarization, respectively. **Figures 2** and **2A** provide the theoretical elevation (vertical plane) pattern.

The antenna has been recently top-mounted on the existing Sutro Tower candelabra antenna supporting structure (FCC Antenna Structure Registration number 1001289), part of an overall reconfiguration to replace the top-mounted analog antennas. There is no change to the overall structure height.

A map is supplied as **Figure 3,** which depicts the standard predicted coverage contours. This map includes the location of San Francisco, KRON-TV's principal community. As demonstrated thereon, the proposed facility complies with §73.625(a)(1), as the entire principal community will be encompassed by the 48 dBμ contour.

The proposed KRON-TV facility's predicted service population provides a 102.3 percent match of the Appendix B facility, as detailed in the following table.

Post-Transition Population Summary

Population Summary (2000 Census) OET Bulletin 69 method	Appendix B	Proposed
Within Noise Limited Contour	7,115,864	7,531,692
Not affected by terrain losses	6,430,468	6,721,713
Lost to all interference	92,241	237,549
Net DTV Service	**6,338,227**	**6,484,164**
Match of Appendix B	---	**102.30%**

A detailed interference study per OET Bulletin 69[2] shows that the proposal complies with the 0.5 percent limit of new interference caused to the Appendix B facilities and current post-transition authorizations of pertinent nearby stations. The interference study output report is provided as **Table 1**. Protection requirements towards authorized Class A stations are also satisfied.

The proposed 1000 kW ERP exceeds the maximum allowed for the antenna HAAT of 512 meters currently permitted by §73.622(f)(6)(i). Section 73.622(f)(5) permits the maximum ERP to be exceeded in order to provide the same geographic coverage area as the largest station within the same market. The total area within the proposed KRON-TV 41 dBμ contour is 36,694 square kilometers, which does not exceed the 41,539 square kilometers within the authorized post-transition contour area associated with station KGO-TV (BLCDT-20090824ADG pending, Ch. 7, San Francisco, CA). A coverage contour comparison map is provided as **Figure 4**. Thus, the ERP specified herein is in compliance with §73.622(f)(5) of the Commission's Rules.

The nearest FCC monitoring station is 62 km distant at Livermore, CA. Using the FCC propagation curves, the proposed F(50,90) signal level at the monitoring station is 3.35 mV/m, which is below the 10 mV/m threshold of §73.1030(c) for further analysis. The site is not located within the areas requiring coordination with "quiet" zones specified in §73.1030(a) and (b). There are no AM stations within 3.2 kilometers of the site, based on information contained within the Commission's database. The site location is beyond the border areas requiring international coordination.

Human Exposure to Radiofrequency Electromagnetic Field (Environmental)

The tower appurtenance reconfiguration to install the shared transmitting antenna involves replacement antennas on an existing antenna support structure. The use of existing transmitting

[2]FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 ("OET-69"). The implementation of OET-69 for this study followed the guidelines of OET-69 as specified therein. A standard cell size of 2 km was employed. Comparisons of various results of this computer program (run on a Sun Sparc processor) to the Commission's implementation of OET-69 show excellent correlation.

locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of §1.1306 of the FCC Rules.

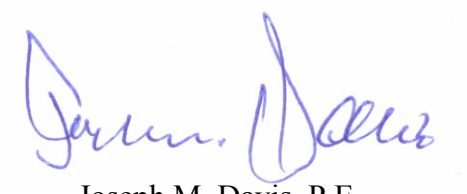
The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission's OET Bulletin Number 65. Based on OET-65 equation (10), and considering 15 percent antenna relative field in downward elevations (pattern data shows less than 15 percent relative field at angles 10 to 90 degrees below the antenna), the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is 11.1 $\mu W/cm^2$, which is 2.7 percent of the general population/uncontrolled maximum permitted exposure limit. This is below the five percent threshold limit described in §1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility for taking any corrective action in the areas where the proposal's contribution is less than five percent.

The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from RF electromagnetic field exposure in excess of FCC guidelines.

The environmental subjects listed under §1.1307(a) are not considered herein. Section 1.1307(a) matters are covered by the structure owner as certified in the associated FCC Antenna Structure Registration number 1001289.

Certification

The undersigned hereby certifies that the foregoing statement and associated attachments were prepared by him or under his direction, and that they are true and correct to the best of his knowledge and belief.



Joseph M. Davis, P.E.
October 26, 2009

Chesapeake RF Consultants, LLC
11993 Kahns Road
Manassas, VA 20112
703-650-9600

List of Attachments

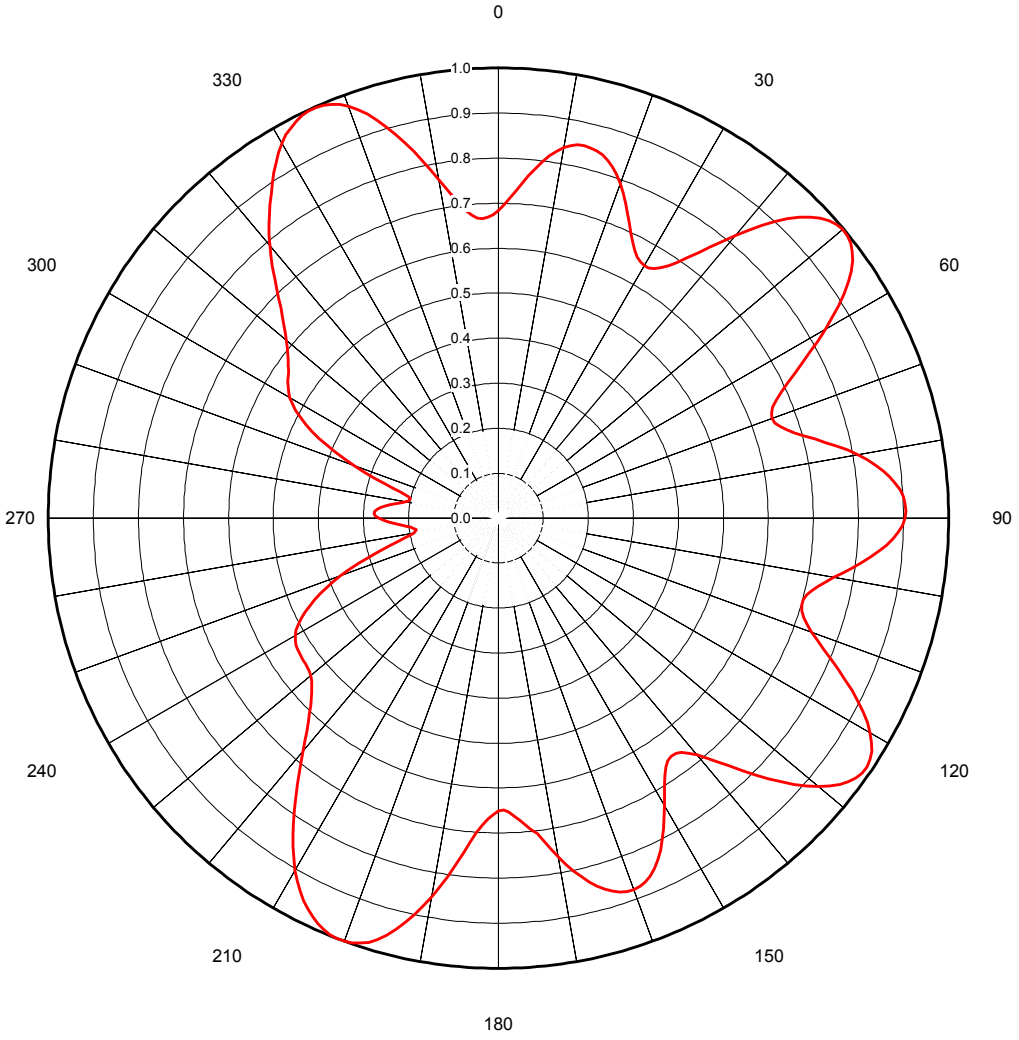
Figure 1, 1A	Antenna Horizontal Plane Pattern
Figure 2, 2A	Antenna Elevation Pattern
Figure 3	Proposed Coverage Contours
Figure 4	Maximum ERP per §73.622(f)
Table 1	OET Bulletin 69 Interference Study
Form 301	Saved Version of Engineering Sections from FCC Form at Time of Upload

Dielectric

Proposal Number	**C-02113**	Revision:	**3**
Date	**12-Sep-08**		
Call Letters	**KRON-DT**	Channel	**38**
Location	**San Francisco, CA**		
Customer			
Antenna Type	**TUM-C5SP-14/60H-2-T-R**		

AZIMUTH PATTERN

Gain	**1.81**	**(2.58 dB)**	Frequency	**617.00 MHz**
Calculated / Measured	**Calculated**		Drawing #	**TUM-C5SP-6170**



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Digital Television and Radio

Figure 1
Antenna Horizontal Plane Pattern
Horizontal Polarization
KRON-TV San Francisco, CA
Facility ID 65526
Ch. 38 1000 kW 512 m

prepared for
Young Broadcasting of San Francisco, Inc., Debtor-In-Possession

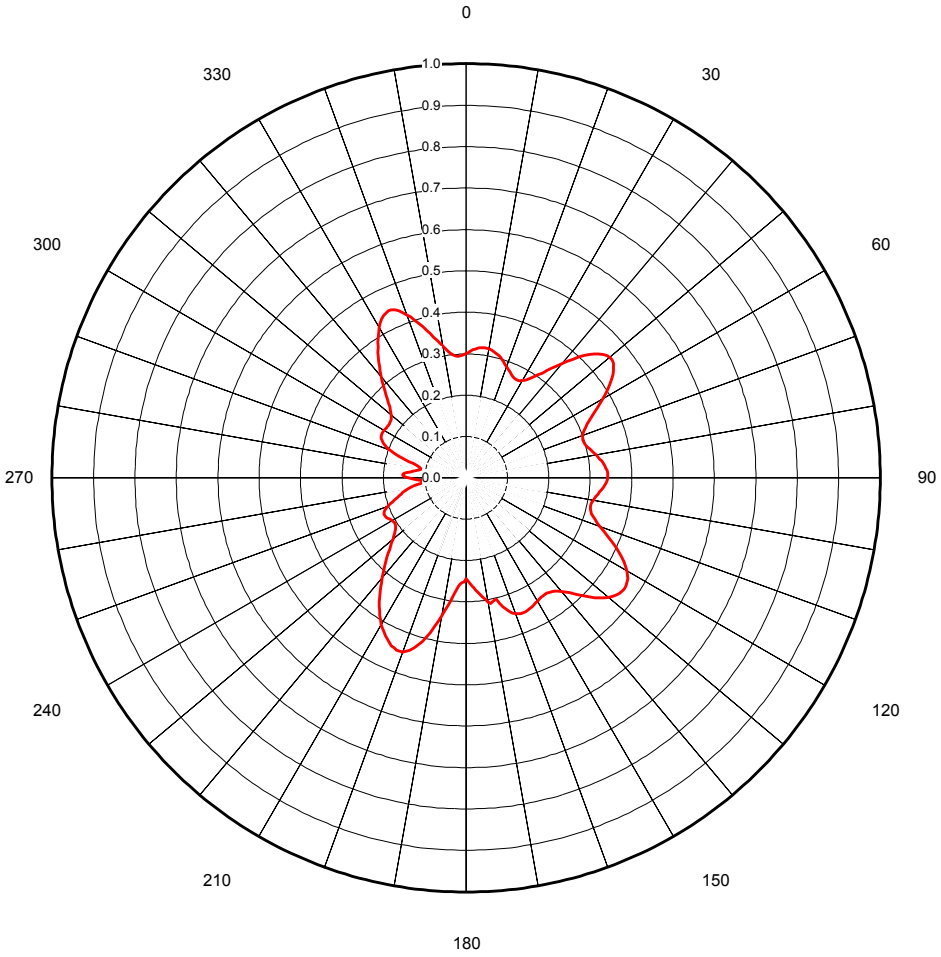
October, 2009

Dielectric

Proposal Number	**EM-02113**	Revision:	**3**
Date	**12-Sep-08**		
Call Letters	**KRON-DT**	Channel	**38**
Location	**San Francisco, CA**		
Customer			
Antenna Type	**TUM-C5SP-14/60H-2-T-R**		

AZIMUTH PATTERN/VERTICAL POLARIZATION

Gain	**2.10 (3.22 dB)**	Frequency	**617.00 MHz**
Calculated / Measured	**Calculated**	Drawing #	**TUM-C5SP-6170**



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Digital Television and Radio

Figure 1A
Antenna Horizontal Plane Pattern
Vertical Polarization
KRON-TV San Francisco, CA
Facility ID 65526
Ch. 38 1000 kW 512 m

prepared for
Young Broadcasting of San Francisco, Inc., Debtor-In-Possession

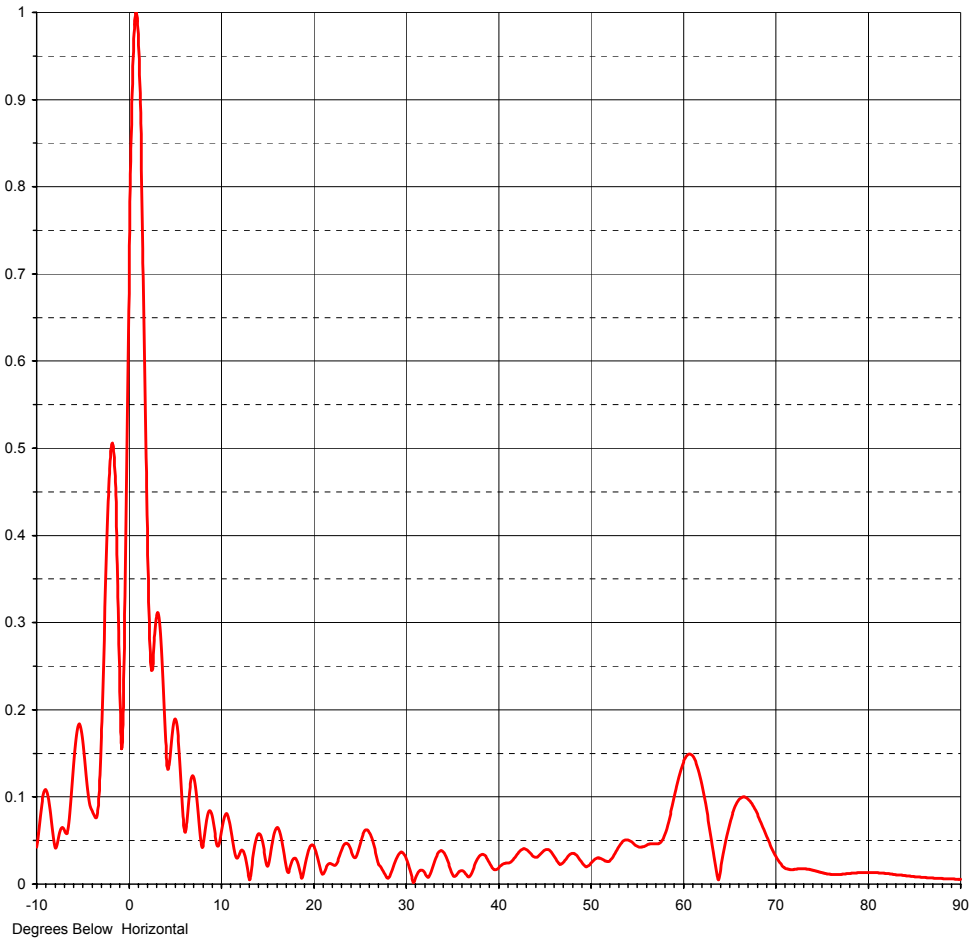
October, 2009

Dielectric

Proposal Number	**C-02113**	Revision:	**3**
Date	**12-Sep-08**		
Call Letters	**KRON-DT**	Channel	**38**
Location	**San Francisco, CA**		
Customer			
Antenna Type	**TUM-C5SP-14/60H-2-T-R**		

ELEVATION PATTERN

RMS Gain at Main Lobe	**25.90 (14.13 dB)**	Beam Tilt	**0.75 deg**
RMS Gain at Horizontal	**12.50 (10.97 dB)**	Frequency	**617.00 MHz**
Calculated / Measured	**Calculated**	Drawing #	**14U269075-90**



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Radiofrequency Consulting Engineers
Digital Television and Radio

Figure 2
Antenna Elevation Pattern
KRON-TV San Francisco, CA
Facility ID 65526
Ch. 38 1000 kW 512 m

prepared for
Young Broadcasting of San Francisco, Inc., Debtor-In-Possession

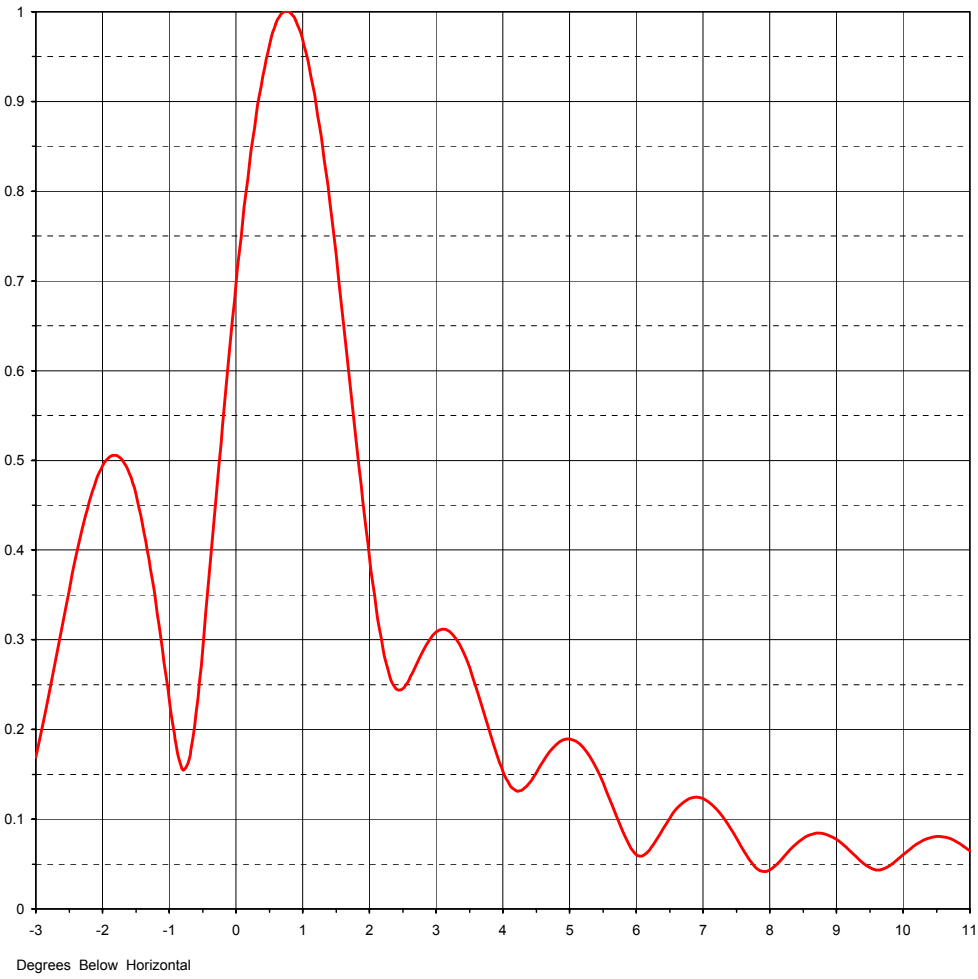
October, 2009

Dielectric

Proposal Number	C-02113	Revision:	3
Date	12-Sep-08		
Call Letters	KRON-DT	Channel	38
Location	San Francisco, CA		
Customer			
Antenna Type	TUM-C5SP-14/60H-2-T-R		

ELEVATION PATTERN

RMS Gain at Main Lobe	25.90 (14.13 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	12.50 (10.97 dB)	Frequency	617.00 MHz
Calculated / Measured	Calculated	Drawing #	14U269075

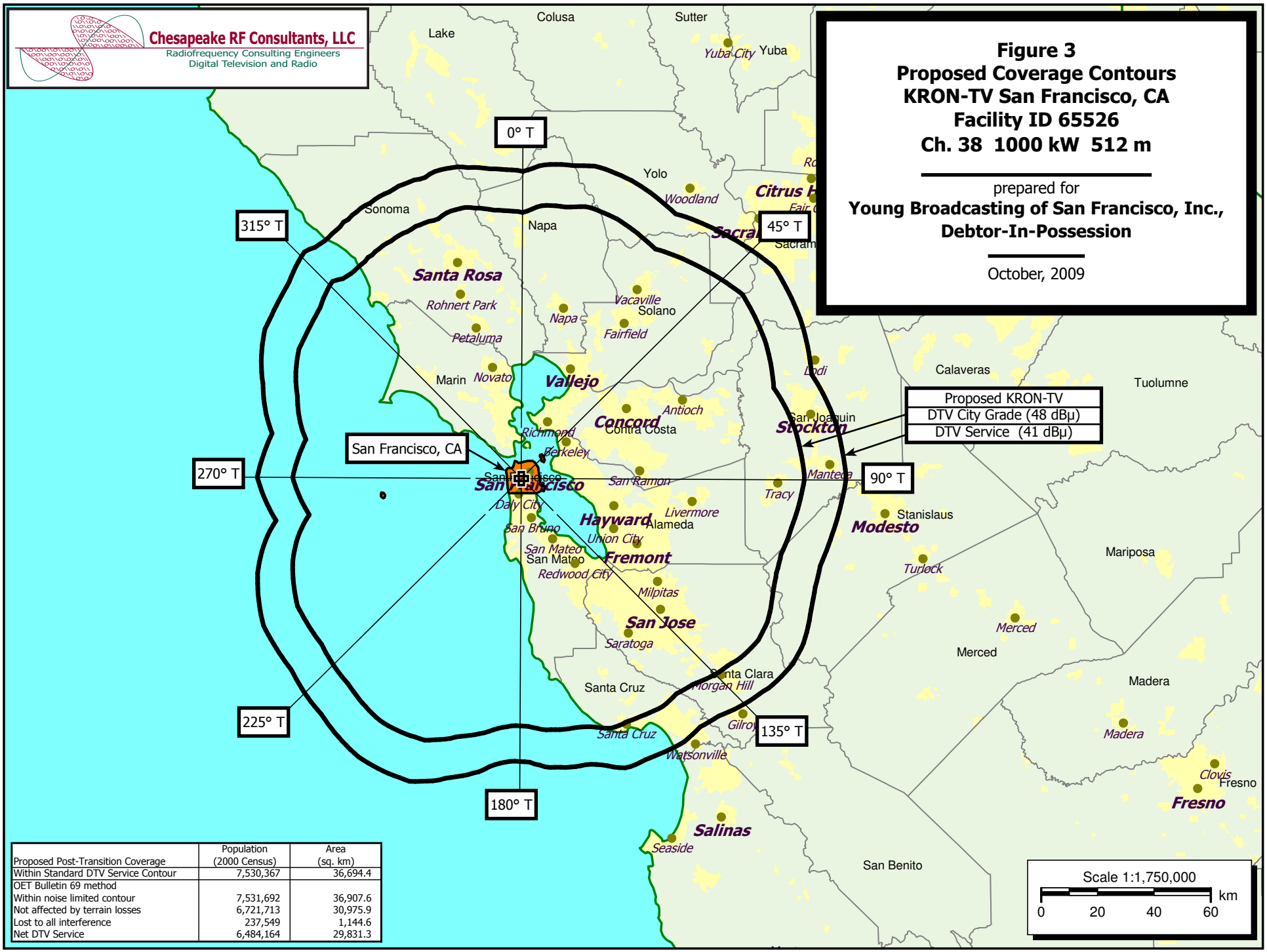


Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Figure 2A
Antenna Elevation Pattern - Detail
KRON-TV San Francisco, CA
Facility ID 65526
Ch. 38 1000 kW 512 m

prepared for
Young Broadcasting of San Francisco, Inc., Debtor-In-Possession

October, 2009



Proposed Post-Transition Coverage	Population (2000 Census)	Area (sq. km)
Within Standard DTV Service Contour	7,530,367	36,694.4
OET Bulletin 69 method		
Within noise limited contour	7,531,692	36,907.6
Not affected by terrain losses	6,721,713	30,975.9
Lost to all interference	237,549	1,144.6
Net DTV Service	6,484,164	29,831.3

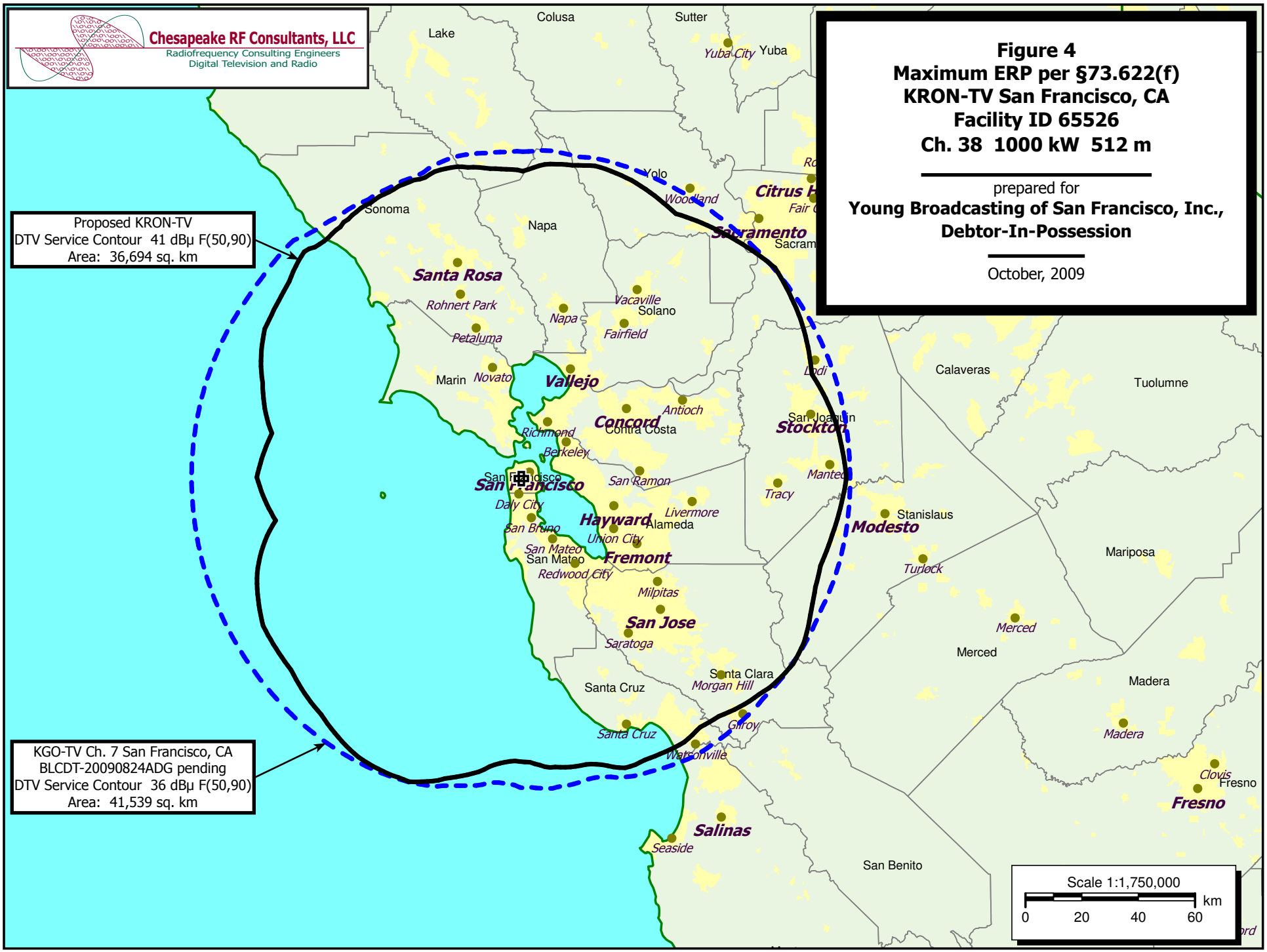

Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio
Figure 4
Maximum ERP per §73.622(f)
KRON-TV San Francisco, CA
Facility ID 65526
Ch. 38 1000 kW 512 m
prepared for
Young Broadcasting of San Francisco, Inc.,
Debtor-In-Possession
October, 2009
Proposed KRON-TV
DTV Service Contour 41 dBµ F(50,90)
Area: 36,694 sq. km
KGO-TV Ch. 7 San Francisco, CA
BLCDT-20090824ADG pending
DTV Service Contour 36 dBµ F(50,90)
Area: 41,539 sq. km
Colusa
Sutter
Lake
Yuba City
Yuba
Yolo
Woodland
Sonoma
Napa
Sacramento
Santa Rosa
Rohnert Park
Petaluma
Vacaville
Solano
Napa
Fairfield
Marin
Novato
Vallejo
Lodi
Calaveras
Tuolumne
Antioch
Concord
Contra Costa
Richmond
Berkeley
Stockton
San Joaquin
San Francisco
San Ramon
Manteca
Tracy
Daly City
Livermore
Hayward
Alameda
Stanislaus
Modesto
San Bruno
Union City
San Mateo
Fremont
Turlock
Mariposa
Redwood City
Milpitas
San Jose
Merced
Saratoga
Santa Clara
Morgan Hill
Madera
Santa Cruz
Gilroy
Watsonville
Clovis
Fresno
Salinas
Seaside
San Benito
Scale 1:1,750,000
km
0
20
40
60

Table 1 KRON-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 1 of 9)

```
TW Census data selected 2000
Post Transition Data Base Selected /space/software/cdbs/pt_tvdb.sff

            TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 10-23-2009    Time: 16:58:47

Record Selected for Analysis

KRON-DT  USERRECORD-01              SAN FRANCISCO        CA US
Channel 38 ERP 1000.  kW   HAAT  517. m  RCAMSL 00543 m
Latitude 037-45-19  Longitude 0122-27-06
Status APP       Zone 2    Border
Dir Antenna Make usr  Model KRON-D38        Beam tilt N  Ref Azimuth 0.
Last update          Cutoff date          Docket
Comments
Applicant



Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km


Facility does not meet maximum height/power limits
Channel 38  ERP = 1000.00  HAAT =  517.

   Azimuth      ERP        HAAT   41.0 dBu F(50,90)
    (Deg)       (kW)       (m)        (km)
     0.0      466.489     517.6      108.5
    45.0      826.281     528.0      114.6
    90.0      815.409     531.9      114.7
   135.0      651.249     524.7      112.2
   180.0      422.500     425.8      100.1
   225.0      372.100     534.5      107.7
   270.0       70.756     537.0       93.3
   315.0      493.506     536.6      110.4



                  Evaluation toward Class A Stations


No Spacing violations or contour overlap to Class A stations

                  Class A Evaluation Complete


Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance
```

Table 1 KRON-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 2 of 9)

```
 Proposed station is OK toward AM broadcast stations

**************************************************************************
                       Start of Interference Analysis


              Proposed Station
Channel     Call         City/State              ARN
   38      KRON-DT    SAN FRANCISCO CA           USERRECORD01

     Stations Potentially Affected by  Proposed Station

Chan   Call      City/State           Dist(km) Status  Application Ref. No.
 23   KEZT-CA  SACRAMENTO CA            123.9  LIC    BLTTL     -19970918JA
 38   KSEE     FRESNO CA                277.3  LIC    BMLCDT    -20080324AIQ
 38   KSEE     FRESNO CA                277.3  PLN    DTVPLN    -DTVP1351
 39   KCNS     SAN FRANCISCO CA           0.0  CP     BPCDT     -20080909ABW
 39   KCNS     SAN FRANCISCO CA           0.0  PLN    DTVPLN    -DTVP1389
 39   KCNS     SAN FRANCISCO CA           0.0  LIC    BLCDT     -20060221AES
 42   KAXT-CA  SANTA CLARA - SAN JO CA   58.5  APP    BDISTTA   -20090629ADB
 46   K46DR    LAKEPORT CA              102.6  APP    BSTA      -20061016ADK
 46   K46DR    LAKEPORT CA              139.9  LIC    BLTT      -19941103IB

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     Analysis of Interference to Affected Station   1


Analysis of current record
Channel     Call           City/State        Application Ref. No.
   23      KEZT-CA    SACRAMENTO CA            BLTTL     -19970918JA

     Stations Potentially Affecting This Station

Chan   Call      City/State           Dist(km) Status  Application Ref. No.
 15   KBSV     CERES CA                 118.0  CP MOD BMPEDT    -20081002ABR
 15   KBSV     CERES CA                 121.4  PLN    DTVPLN    -DTVP0511
 19   KOFY-TV  SAN FRANCISCO CA         123.9  LIC    BLCDT     -20000421ABF
 19   KBWB     SAN FRANCISCO CA         123.9  PLN    DTVPLN    -DTVP0657
 19   KOFY-TV  SAN FRANCISCO CA         123.9  CP MOD BMPCDT    -20090603AGC
 21   KMAX-TV  SACRAMENTO CA             36.3  CP     BPCDT     -20080620ABK
 21   KMAX-TV  SACRAMENTO CA             33.5  PLN    DTVPLN    -DTVP0741
 21   KMAX-TV  SACRAMENTO CA             33.5  LIC    BLCDT     -20041018ABT
 22   K22FR    SACRAMENTO CA             17.4  LIC    BLTT      -20061204ADU
 23   KRCB     COTATI CA                 98.6  CP     BPEDT     -20080617AEI
 23   KRCB     COTATI CA                 98.6  PLN    DTVPLN    -DTVP0824
 23   KRCB     COTATI CA                 98.6  LIC    BLEDT     -20081107ACJ
 23   KMUV-LP  MONTEREY CA              201.2  LIC    BLTTL     -20070402KPQ
 23   K23DT    TAHOE CITY CA            160.9  LIC    BLTT      -19930927IB
 25   KOVR     STOCKTON CA               36.3  LIC    BLCDT     -20050516ANE
 25   KOVR     STOCKTON CA               36.3  PLN    DTVPLN    -DTVP0907
 25   KOVR     STOCKTON CA               36.3  CP     BPCDT     -20080620ABM
 26   KTFK-DT  STOCKTON CA               36.3  CP MOD BMPCDT    -20080616ACI
 26   KTFK-TV  STOCKTON CA               36.3  PLN    DTVPLN    -DTVP0939
 27   KTSF     SAN FRANCISCO CA         128.6  LIC    BLCDT     -20050131AOD
 27   KTSF     SAN FRANCISCO CA         128.6  PLN    DTVPLN    -DTVP0978
 27   KTSF     SAN FRANCISCO CA         128.6  CP     BPCDT     -20080620ALV
 30   KQED     SAN FRANCISCO CA         123.9  CP     BPEDT     -20080314ACI
 30   KQED     SAN FRANCISCO CA         123.9  PLN    DTVPLN    -DTVP1093
 30   KQED     SAN FRANCISCO CA         123.9  LIC    BLEDT     -20000601ADY
 38   KRON-TV  SAN FRANCISCO CA         123.9  PLN    DTVPLN    -DTVP1353
```

Table 1 KRON-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 3 of 9)

```
 38   KRON-DT  SAN FRANCISCO CA          123.9  APP    USERRECORD-01

 Proposed station is beyond the site to
 nearest cell evaluation distance

######################################################################


     Analysis of Interference to Affected Station   2


Analysis of current record
Channel     Call           City/State        Application Ref. No.
   38      KSEE       FRESNO CA               BMLCDT    -20080324AIQ

     Stations Potentially Affecting This Station

Chan   Call      City/State           Dist(km) Status  Application Ref. No.
 38   KPXN-TV  SAN BERNARDINO CA         341.0  LIC    BLCDT     -20050623AAG
 38   KPXN     SAN BERNARDINO CA         341.0  PLN    DTVPLN    -DTVP1352
 38   KRON-TV  SAN FRANCISCO CA          277.3  PLN    DTVPLN    -DTVP1353
 38   KRON-DT  SAN FRANCISCO CA          277.3  APP    USERRECORD-01

 Total scenarios =   1


Result key:        1
Scenario        1  Affected station        2
Before Analysis

Results for: 38A CA FRESNO               BMLCDT    20080324AIQ  LIC
   HAAT  601.0 m, ATV ERP  326.0 kW
                                  POPULATION   AREA (sq km)
   within Noise Limited Contour     1481444      32496.7
   not affected by terrain losses   1468385      28612.0
   lost to NTSC IX                        0          0.0
   lost to additional IX by ATV        1012        445.0
   lost to ATV IX only                 1012        445.0
   lost to all IX                      1012        445.0

 Potential Interfering Stations Included in above Scenario     1

38A CA SAN FRANCISCO        DTVPLN    DTVP1353     PLN

After Analysis

Results for: 38A CA FRESNO               BMLCDT    20080324AIQ  LIC
   HAAT  601.0 m, ATV ERP  326.0 kW
                                  POPULATION   AREA (sq km)
   within Noise Limited Contour     1481444      32496.7
   not affected by terrain losses   1468385      28612.0
   lost to NTSC IX                        0          0.0
   lost to additional IX by ATV        1012        449.0
   lost to ATV IX only                 1012        449.0
   lost to all IX                      1012        449.0

 Potential Interfering Stations Included in above Scenario     1

38A CA SAN FRANCISCO        USERRECORD01           APP

Percent new IX =    0.0000%
```

Table 1 KRON-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 4 of 9)

```
Worst case new IX    0.0000% Scenario      1

######################################################################


     Analysis of Interference to Affected Station   3


Analysis of current record
Channel     Call           City/State        Application Ref. No.
   38      KSEE       FRESNO CA               DTVPLN    -DTVP1351

     Stations Potentially Affecting This Station

Chan   Call      City/State           Dist(km) Status  Application Ref. No.
 38   KPXN-TV  SAN BERNARDINO CA         341.0  LIC    BLCDT     -20050623AAG
 38   KPXN     SAN BERNARDINO CA         341.0  PLN    DTVPLN    -DTVP1352
 38   KRON-TV  SAN FRANCISCO CA          277.3  PLN    DTVPLN    -DTVP1353
 38   KRON-DT  SAN FRANCISCO CA          277.3  APP    USERRECORD-01

 Total scenarios =   1


Result key:        2
Scenario        1  Affected station        3
Before Analysis

Results for: 38A CA FRESNO               DTVPLN    DTVP1351     PLN
   HAAT  601.0 m, ATV ERP  326.0 kW
                                  POPULATION   AREA (sq km)
   within Noise Limited Contour     1481198      32468.6
   not affected by terrain losses   1467516      28567.9
   lost to NTSC IX                        0          0.0
   lost to additional IX by ATV        1291        429.0
   lost to ATV IX only                 1291        429.0
   lost to all IX                      1291        429.0

 Potential Interfering Stations Included in above Scenario     1

38A CA SAN FRANCISCO        DTVPLN    DTVP1353     PLN

After Analysis

Results for: 38A CA FRESNO               DTVPLN    DTVP1351     PLN
   HAAT  601.0 m, ATV ERP  326.0 kW
                                  POPULATION   AREA (sq km)
   within Noise Limited Contour     1481198      32468.6
   not affected by terrain losses   1467516      28567.9
   lost to NTSC IX                        0          0.0
   lost to additional IX by ATV        1291        437.0
   lost to ATV IX only                 1291        437.0
   lost to all IX                      1291        437.0

 Potential Interfering Stations Included in above Scenario     1

38A CA SAN FRANCISCO        USERRECORD01           APP

Percent new IX =    0.0000%

Worst case new IX    0.0000% Scenario      1

######################################################################
```

Table 1 KRON-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 5 of 9)

Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application Ref. No.
39	KCNS	SAN FRANCISCO CA	BPCDT -20080909ABW

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
38	KRON-TV	SAN FRANCISCO CA	0.0	PLN	DTVPLN -DTVP1353
40	KTXL	SACRAMENTO CA	100.8	CP MOD	BMPCDT -20080620ADJ
40	KTXL	SACRAMENTO CA	100.8	PLN	DTVPLN -DTVP1421
38	KRON-DT	SAN FRANCISCO CA	0.0	APP	USERRECORD-01

Proposal causes no interference

##

Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application Ref. No.
39	KCNS	SAN FRANCISCO CA	DTVPLN -DTVP1389

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
38	KRON-TV	SAN FRANCISCO CA	0.0	PLN	DTVPLN -DTVP1353
40	KTXL	SACRAMENTO CA	100.8	CP MOD	BMPCDT -20080620ADJ
40	KTXL	SACRAMENTO CA	100.8	PLN	DTVPLN -DTVP1421
38	KRON-DT	SAN FRANCISCO CA	0.0	APP	USERRECORD-01

Total scenarios = 2

Result key: 3
Scenario 1 Affected station 5
Before Analysis

Results for: 39A CA SAN FRANCISCO DTVPLN DTVP1389 PLN
HAAT 428.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	7305435	31337.1
not affected by terrain losses	6527318	25936.2
lost to NTSC IX	0	0.0
lost to additional IX by ATV	311065	2144.3
lost to ATV IX only	311065	2144.3
lost to all IX	311065	2144.3

Potential Interfering Stations Included in above Scenario 1

40A CA SACRAMENTO BMPCDT 20080620ADJ CP

After Analysis

Results for: 39A CA SAN FRANCISCO DTVPLN DTVP1389 PLN
HAAT 428.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)

Table 1 KRON-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 6 of 9)

within Noise Limited Contour	7305435	31337.1
not affected by terrain losses	6527318	25936.2
lost to NTSC IX	0	0.0
lost to additional IX by ATV	311227	2200.5
lost to ATV IX only	311227	2200.5
lost to all IX	311227	2200.5

Potential Interfering Stations Included in above Scenario 1

40A CA SACRAMENTO BMPCDT 20080620ADJ CP
38A CA SAN FRANCISCO USERRECORD01 APP

Percent new IX = 0.0026%

Worst case new IX 0.0026% Scenario 1

##

Analysis of Interference to Affected Station 6

Analysis of current record

Channel	Call	City/State	Application Ref. No.
39	KCNS	SAN FRANCISCO CA	BLCDT -20060221AES

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
38	KRON-TV	SAN FRANCISCO CA	0.0	PLN	DTVPLN -DTVP1353
40	KTXL	SACRAMENTO CA	100.8	CP MOD	BMPCDT -20080620ADJ
40	KTXL	SACRAMENTO CA	100.8	PLN	DTVPLN -DTVP1421
38	KRON-DT	SAN FRANCISCO CA	0.0	APP	USERRECORD-01

Total scenarios = 2

Result key: 5
Scenario 1 Affected station 6
Before Analysis

Results for: 39A CA SAN FRANCISCO BLCDT 20060221AES LIC
HAAT 428.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	7305435	31337.1
not affected by terrain losses	6527318	25936.2
lost to NTSC IX	0	0.0
lost to additional IX by ATV	311065	2144.3
lost to ATV IX only	311065	2144.3
lost to all IX	311065	2144.3

Potential Interfering Stations Included in above Scenario 1

40A CA SACRAMENTO BMPCDT 20080620ADJ CP

After Analysis

Results for: 39A CA SAN FRANCISCO BLCDT 20060221AES LIC
HAAT 428.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	7305435	31337.1
not affected by terrain losses	6527318	25936.2

Table 1 KRON-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 7 of 9)

```
   lost to NTSC IX                        0         0.0
   lost to additional IX by ATV      311227      2200.5
   lost to ATV IX only               311227      2200.5
   lost to all IX                    311227      2200.5

 Potential Interfering Stations Included in above Scenario     1

40A CA SACRAMENTO           BMPCDT    20080620ADJ  CP
38A CA SAN FRANCISCO        USERRECORD01           APP

Percent new IX =    0.0026%

Worst case new IX    0.0026% Scenario      1

########################################################################


     Analysis of Interference to Affected Station   7


Analysis of current record
Channel     Call          City/State        Application Ref. No.
   42      KAXT-CA    SANTA CLARA - SAN JO CA   BDISTTA   -20090629ADB

     Stations Potentially Affecting This Station

Chan   Call      City/State           Dist(km) Status  Application Ref. No.
 34   KFSF-DT  VALLEJO CA               58.5  CP     BPCDT     -20081031AAE
 34   KFSF-TV  VALLEJO CA               58.5  PLN    DTVPLN    -DTVP1239
 34   KFSF-DT  VALLEJO CA               58.5  LIC    BLCDT     -20030620ABV
 35   KCRA-TV  SACRAMENTO CA            89.3  LIC    BLCDT     -20040122ADR
 35   KCRA-TV  SACRAMENTO CA            91.5  PLN    DTVPLN    -DTVP1276
 35   KCRA-TV  SACRAMENTO CA            91.5  CP     BPCDT     -20080208AEM
 38   KRON-TV  SAN FRANCISCO CA         58.5  PLN    DTVPLN    -DTVP1353
 39   KCNS     SAN FRANCISCO CA         58.5  CP     BPCDT     -20080909ABW
 39   KCNS     SAN FRANCISCO CA         58.5  PLN    DTVPLN    -DTVP1389
 39   KCNS     SAN FRANCISCO CA         58.5  LIC    BLCDT     -20060221AES
 40   KTXL     SACRAMENTO CA            91.7  CP MOD BMPCDT    -20080620ADJ
 40   KTXL     SACRAMENTO CA            91.7  PLN    DTVPLN    -DTVP1421
 41   KKPX-TV  SAN JOSE CA              53.8  LIC    BLCDT     -20021108ABD
 41   KKPX     SAN JOSE CA              53.8  PLN    DTVPLN    -DTVP1458
 42   K42HE    UKIAH CA                184.9  LIC    BLTTL     -20081222ABC
 43   NEW      SACRAMENTO CA           122.4  APP    BNPEDT    -20030922AFV
 43   KCSM-TV  SAN MATEO CA             58.5  LIC    BLEDT     -20030822AFZ
 43   KCSM-TV  SAN MATEO CA             58.5  PLN    DTVPLN    -DTVP1527
 43   KCSM-TV  SAN MATEO CA             58.5  CP     BPEDT     -20080825AAV
 44   KTVU     OAKLAND CA               58.5  APP    BMPCDT    -20080619AIJ
 44   KTVU     OAKLAND CA               58.5  PLN    DTVPLN    -DTVP1564
 44   KTVU     OAKLAND CA               58.5  CP     BPCDT     -20080408AEQ
 45   KBCW     SAN FRANCISCO CA         58.5  LIC    BLCDT     -20020709AAQ
 45   KBCW     SAN FRANCISCO CA         58.5  PLN    DTVPLN    -DTVP1600
 45   KBCW     SAN FRANCISCO CA         58.5  CP     BPCDT     -20080603AAH
 46   KQCA     STOCKTON CA              91.5  LIC    BLCDT     -20060623AAM
 46   KQCA     STOCKTON CA              91.5  PLN    DTVPLN    -DTVP1636
 49   KSTS     SAN JOSE CA               0.0  LIC    BLCDT     -20030507AAT
 49   KSTS     SAN JOSE CA               0.0  PLN    DTVPLN    -DTVP1728
 50   KTEH     SAN JOSE CA               1.3  CP     BPEDT     -20080620AKJ
 50   KTEH     SAN JOSE CA               1.3  PLN    DTVPLN    -DTVP1761
 50   KTEH     SAN JOSE CA               1.3  LIC    BLEDT     -20040826AAR
 38   KRON-DT  SAN FRANCISCO CA         58.5  APP    USERRECORD-01
 Proposal causes no interference
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Table 1 KRON-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 8 of 9)

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     Analysis of Interference to Affected Station   8


Analysis of current record
Channel     Call          City/State        Application Ref. No.
   46      K46DR      LAKEPORT CA              BSTA      -20061016ADK

     Stations Potentially Affecting This Station

Chan   Call      City/State           Dist(km) Status  Application Ref. No.
 38   KRON-TV  SAN FRANCISCO CA         102.6  PLN    DTVPLN    -DTVP1353
 39   KCNS     SAN FRANCISCO CA         102.6  CP     BPCDT     -20080909ABW
 39   KCNS     SAN FRANCISCO CA         102.6  PLN    DTVPLN    -DTVP1389
 39   KCNS     SAN FRANCISCO CA         102.6  LIC    BLCDT     -20060221AES
 43   NEW      SACRAMENTO CA            129.6  APP    BNPEDT    -20030922AFV
 43   KCSM-TV  SAN MATEO CA             102.6  LIC    BLEDT     -20030822AFZ
 43   KCSM-TV  SAN MATEO CA             102.6  PLN    DTVPLN    -DTVP1527
 43   KCSM-TV  SAN MATEO CA             102.6  CP     BPEDT     -20080825AAV
 44   KTVU     OAKLAND CA               102.6  APP    BMPCDT    -20080619AIJ
 44   KTVU     OAKLAND CA               102.6  PLN    DTVPLN    -DTVP1564
 44   KTVU     OAKLAND CA               102.6  CP     BPCDT     -20080408AEQ
 45   KBCW     SAN FRANCISCO CA         102.6  LIC    BLCDT     -20020709AAQ
 45   KBCW     SAN FRANCISCO CA         102.6  PLN    DTVPLN    -DTVP1600
 45   KBCW     SAN FRANCISCO CA         102.6  CP     BPCDT     -20080603AAH
 46   KQCA     STOCKTON CA              108.6  LIC    BLCDT     -20060623AAM
 46   KQCA     STOCKTON CA              108.6  PLN    DTVPLN    -DTVP1636
 46   KRNS-CA  RENO, ETC NV             247.6  LIC    BLTTA     -20051114AFU
 47   KTLN-TV  NOVATO CA                 57.7  LIC    BLCDT     -20080228ACB
 47   KTLN-TV  NOVATO CA                 57.7  PLN    DTVPLN    -DTVP1665
 48   KSPX-TV  SACRAMENTO CA            108.6  LIC    BLCDT     -20050110ABB
 48   KSPX     SACRAMENTO CA            108.6  PLN    DTVPLN    -DTVP1698
 49   KSTS     SAN JOSE CA              145.8  LIC    BLCDT     -20030507AAT
 49   KSTS     SAN JOSE CA              145.8  PLN    DTVPLN    -DTVP1728
 38   KRON-DT  SAN FRANCISCO CA         102.6  APP    USERRECORD-01

 Proposed station is beyond the site to
 nearest cell evaluation distance

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     Analysis of Interference to Affected Station   9


Analysis of current record
Channel     Call          City/State        Application Ref. No.
   46      K46DR      LAKEPORT CA              BLTT      -19941103IB

     Stations Potentially Affecting This Station

Chan   Call      City/State           Dist(km) Status  Application Ref. No.
 38   KRON-TV  SAN FRANCISCO CA         139.9  PLN    DTVPLN    -DTVP1353
 39   KCNS     SAN FRANCISCO CA         139.9  CP     BPCDT     -20080909ABW
 39   KCNS     SAN FRANCISCO CA         139.9  PLN    DTVPLN    -DTVP1389
 39   KCNS     SAN FRANCISCO CA         139.9  LIC    BLCDT     -20060221AES
 43   KHSL-TV  CHICO CA                 140.6  CP     BPCDT     -20070124AKD
 43   KHSL-TV  CHICO CA                 140.6  PLN    DTVPLN    -DTVP1524
 43   KHSL-TV  CHICO CA                 140.6  LIC    BLCDT     -20060315AEZ
 43   KCSM-TV  SAN MATEO CA             139.9  LIC    BLEDT     -20030822AFZ
```

Table 1 KRON-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 9 of 9)

43	KCSM-TV	SAN MATEO CA	139.9	PLN	DTVPLN	-DTVP1527
43	KCSM-TV	SAN MATEO CA	139.9	CP	BPEDT	-20080825AAV
44	KTVU	OAKLAND CA	139.9	APP	BMPCDT	-20080619AIJ
44	KTVU	OAKLAND CA	139.9	PLN	DTVPLN	-DTVP1564
44	KTVU	OAKLAND CA	139.9	CP	BPCDT	-20080408AEQ
45	K45AH	UKIAH CA	31.5	LIC	BLTT	-19830125IK
46	K46HI	REDDING CA	186.3	LIC	BLTTL	-20040329ABN
46	KQCA	STOCKTON CA	137.1	LIC	BLCDT	-20060623AAM
46	KQCA	STOCKTON CA	137.1	PLN	DTVPLN	-DTVP1636
46	KRNS-CA	RENO, ETC NV	251.2	LIC	BLTTA	-20051114AFU
47	KTLN-TV	NOVATO CA	94.5	LIC	BLCDT	-20080228ACB
47	KTLN-TV	NOVATO CA	94.5	PLN	DTVPLN	-DTVP1665
47	K47AL	UKIAH CA	31.5	LIC	BLTTL	-19830223IB
48	KSPX-TV	SACRAMENTO CA	137.1	LIC	BLCDT	-20050110ABB
48	KSPX	SACRAMENTO CA	137.1	PLN	DTVPLN	-DTVP1698
38	KRON-DT	SAN FRANCISCO CA	139.9	APP	USERRECORD-01	

Proposed station is beyond the site to
nearest cell evaluation distance

##

Analysis of Interference to Affected Station 10

Analysis of current record

Channel	Call	City/State	Application Ref. No.
38	KRON-DT	SAN FRANCISCO CA	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
38	KSEE	FRESNO CA	277.3	LIC	BMLCDT -20080324AIQ
38	KSEE	FRESNO CA	277.3	PLN	DTVPLN -DTVP1351
39	KCNS	SAN FRANCISCO CA	0.0	CP	BPCDT -20080909ABW
39	KCNS	SAN FRANCISCO CA	0.0	PLN	DTVPLN -DTVP1389
39	KCNS	SAN FRANCISCO CA	0.0	LIC	BLCDT -20060221AES

Total scenarios = 2

Result key: 7
Scenario 1 Affected station 10
Before Analysis

Results for: 38A CA SAN FRANCISCO USERRECORD01 APP
HAAT 517.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	7531692	36907.6
not affected by terrain losses	6721713	30975.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	237549	1144.6
lost to ATV IX only	237549	1144.6
lost to all IX	237549	1144.6

Potential Interfering Stations Included in above Scenario 1

38A CA FRESNO BMLCDT 20080324AIQ LIC

##

FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

SECTION III-D - DTV Engineering

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

Pre-Transition Certification Checklist: An application concerning a pre-transition channel must complete questions 1(a)-(c), and 2-5. A correct answer of "Yes" to all of the questions will ensure an expeditious grant of a construction permit application to change pre-transition facilities. 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.

Post-Transition Expedited Processing. An application concerning a post-transition channel must complete questions 1(a), (d)-(e), and 2-5. A station applying for a construction permit to build its post-transition channel will receive expedited processing if its application (1) does not seek to expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622(i) ("new DTV Table Appendix B"); (2) specifies facilities that match or closely approximate those defined in the new DTV Table Appendix B facilities; and (3) is filed within 45 days of the effective date of Section 73.616 of the rules adopted in the Report and Order in the Third DTV Periodic Review proceeding, MB Docket No. 07-91.

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 a pre-transition facility 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 a pre-transition facility 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
	(d) It will operate at post-transition facilities that do not expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622(i) ("new DTV Table Appendix B").	( ) Yes (●) No ( ) N/A
	(e) It will operate at post-transition facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the new DTV Table Appendix B.	(●) Yes ( ) No ( ) N/A
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. Applicant must **submit the Exhibit** called for in Item 13.	(●) Yes ( ) No
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 registration 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

SECTION III-D - DTV Engineering

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 38 Analog TV, if any	
2.	Zone: ( ) I (●) II ( ) III	
3.	Antenna Location Coordinates: (NAD 27) Latitude: Degrees 37 Minutes 45 Seconds 19 (●) North ( ) South Longitude: Degrees 122 Minutes 27 Seconds 6 (●) West ( ) East	
4.	Antenna Structure Registration Number: 1001289 ☐ Not Applicable ☐ Notification filed with FAA	
5.	Antenna Location Site Elevation Above Mean Sea Level:	254.2 meters
6.	Overall Tower Height Above Ground Level:	297.7 meters
7.	Height of Radiation Center Above Ground Level:	288.4 meters
8.	Height of Radiation Center Above Average Terrain :	511.7 meters
9.	Maximum Effective Radiated Power (average power):	1000 kW

10. Antenna Specifications:

a. Manufacturer DIE Model TUM-C5SP-14/60H-2-T-R

b. Electrical Beam Tilt:
0.75 degrees ☐ Not Applicable

c. Mechanical Beam Tilt:
degrees toward azimuth
degrees True ☑ Not Applicable
Attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). [Exhibit 43]

d. Polorization:
○ Horizontal ○ Circular ◉ Elliptical

e. Directional Antenna Relative Field Values: ☐ Not applicable (Nondirectional)

[For a composite directional (not off-the-shelf) antenna, press the following button to fill in the relative field values subform.]
[Relative Field Values]

10e. Directional Antenna Relative Field Values

[Fill in this subform for a composite directional (not off-the-shelf) antenna, only.]

e. Directional Antenna Relative Field Values:

Rotation (Degrees): ☑ No Rotation

Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value
0	0.683	10	0.836	20	0.791	30	0.647	40	0.82	50	0.998
60	0.838	70	0.647	80	0.811	90	0.903	100	0.757	110	0.74
120	0.954	130	0.928	140	0.686	150	0.738	160	0.878	170	0.763
180	0.65	190	0.854	200	1	210	0.903	220	0.675	230	0.545
240	0.521	250	0.372	260	0.191	270	0.266	280	0.21	290	0.341
300	0.535	310	0.615	320	0.79	330	0.961	340	0.973	350	0.764
Additional Azimuths		13	0.849	89	0.905	124	0.987	335	0.998		

Relative Field Polar Plot

If a directional antenna is proposed, the requirements of 47 C.F.R. Sections 73.625(c) must be satisfied. **Exhibit required.** [Exhibit 44]

11. Does the proposed facility satisfy the pre-transition 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.") and/or the post-transition interference protection provisions of 47 C.F.R. Section 73.616? ◉ Yes ○ No [Exhibit 45]

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

12. If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefore. (Applicable only if **Certification Checklist** item 3 is answered "No.") [Exhibit 46]

13. **Environmental Protection Act. Submit in an Exhibit** the following: [Exhibit 47]

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.

PREPARERS CERTIFICATION ON SECTION III MUST BE COMPLETED AND SIGNED.

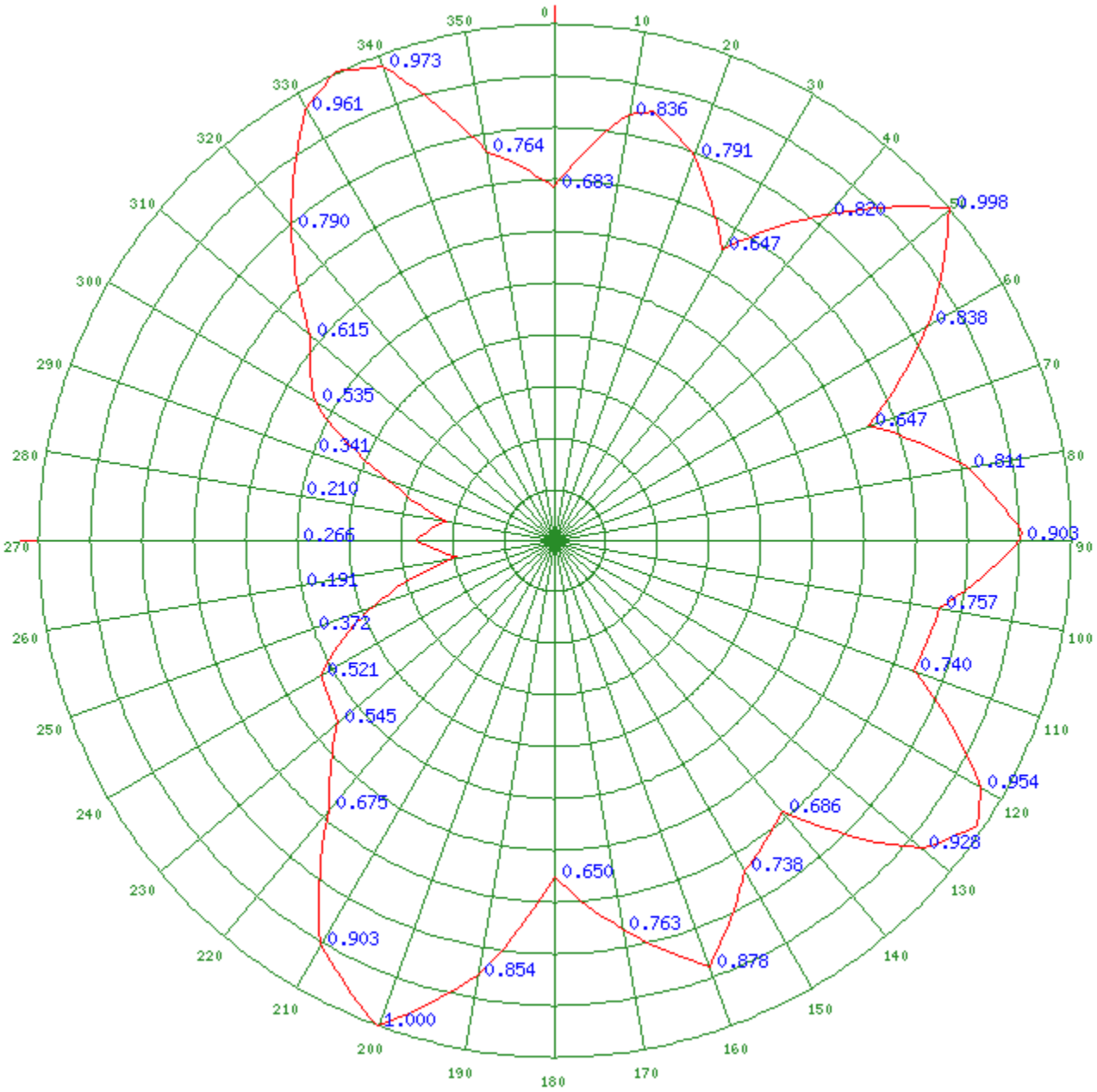
SECTION III - PREPARER'S CERTIFICATION

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name	Relationship to Applicant (e.g., Consulting Engineer)	
JOSEPH M. DAVIS, P.E.	CONSULTING ENGINEER	
Signature	Date	
	10/26/2009	
Mailing Address		
CHESAPEAKE RF CONSULTANTS, LLC 11993 KAHNS ROAD		
City	State or Country (if foreign address)	Zip Code
MANASSAS	VA	20112 -
Telephone Number (include area code)	E-Mail Address (if available)	
7036509600	JOSEPH.DAVIS@RF-CONSULTANTS.COM	

Any specified rotation has already been applied to the plotted pattern.
Field strength values shown on a rotated pattern may differ from the listed values because intermediate azimuths are interpolated between entered azimuths.

Close Window



FM Query FCC TV Query