TECHNICAL EXHIBIT
APPLICATION FOR MODIFICATION OF
LICENSED FACILITY
(FCC FILE NO. BLTTL-20031212ABR)
LPTV STATION KHSC-LP
FACILITY ID 23271
FRESNO, CALIFORNIA
CH 38 150 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 licensed facility for LPTV station KHSC-LP at Fresno, California (Facility ID: 23271; File No. BLTTL-20031212ABR). Specifically, this application proposes to modify the current directional antenna system (Superior Broadcast Products UP-6-NC), and to increase the maximum effective radiated power (ERP) towards the radio horizon to 150 kW. The maximum ERP at any horizontal or vertical angle will also be 150 kW. No other changes are proposed including no change in transmitter site, channel (38), antenna radiation center or community of license (Fresno). As detailed below, this application is considered a "minor change" in facilities pursuant to Section 73.3572.

Minor Change Application

Figure 1 depicts the licensed and herein proposed 74 dBu contours for KHSC-LP. As indicated, the proposed 74 dBu contour encompasses the majority of the licensed 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 KHSC-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 facility of KSEE on channel 24 at Fresno, CA (BLCT-2300), the licensed and authorized facilities of KCNS on co-channel 38 at San Francisco, CA (BMLCT-19980916KE & BPCT-19980731LJ), and the

licensed and authorized facilities of KPMR on co-channel 38 at Santa Barbara, CA (BLCT-20010209ABS & BMPCT-20000406AAS). Therefore, waiver of Section 74.705 is requested with respect to KSEE, KCNS and KPMR. Justification for the waiver requests is provided below.

Station KSEE operates on channel 24, a –14 sound image taboo channel. Based on the provisions of the OET-69 Bulletin as permitted by FCC rules [Section 74.705(e)], it is believed that KHSC-LP's proposed operation complies with the FCC's interference criteria towards KSEE's licensed operation. 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 are tabulated on Figure 2 and, as indicated, the proposal is not predicted to cause any interference to KSEE.[1]

Stations KCNS and KPMR operate co-channel to the proposed KHSC-LP operation. Again, based on the provisions of the OET-69 Bulletin, it is believed that KHSC-LP's proposed operation complies with the FCC's interference criteria towards the licensed and authorized operations of KCNS and KPMR. The results of the OET Bulletin No. 69 are tabulated on Figure 2 and, as indicated, the proposal is not predicted to cause any interference to KCNS and also complies with the FCC's 0.5% interference threshold criteria towards KPMR.

DTV Station and DTV Table of Allotments Protection

Calculations based on OET Bulletin No. 69 indicate that the proposed KHSC-LP operation on channel 38 complies with the FCC's 0.5% interference threshold criteria to all allotted, proposed or actual DTV operating facilities on channels 38 and 39 (channel 37 reserved for radio astronomy). Figure 2 provides the output of the study based on the OET-69 Bulletin.

[1] The du Treil, Lundin & Rackley, Inc. 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 using the provisions of Section 74.705 which indicates that the KHSC-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 the licensed facility of KMSG-LP on channel 39 at Fresno, CA (BPTTL-20030822AEX) and the pending application for K27GZ on co-channel 38 at Mariposa, CA (BPTT-20040109AAS). However, based on the provisions of the OET-69 Bulletin, it is believed that KHSC-LP's proposed operation complies with the FCC's interference criteria towards these operations. 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 these calculations are also tabulated on Figure 2 and, as indicated, the KHSC-LP proposal is not predicted to cause any interference to K27GZ and also complies with the FCC's 0.5% interference threshold criteria towards KMSG-LP.[2]

Land Mobile Station Protection

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

Environmental Considerations

The proposed facility has been evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level in accordance with OET Bulletin No. 65, Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields.[3] The power density at the base of the tower was calculated using the appropriate procedures contained in the Bulletin.

The proposed KHSC-LP antenna will be side-mounted on an existing 30.5-meter (100 foot) tower. The antenna center of radiation is located 11.3 meters (37 feet) above ground level. The calculated power density at 2 meters above ground level

[2] It is noted that the pending application of K52FK for channel 39 at Fresno, CA (BPTTL-20020709AAY) was dismissed by the FCC on 8/26/03.
3 OET Bulletin 65, Second Edition 97-01, August, 1997.

(AGL) was calculated using the appropriate equation contained in the Bulletin. Using a greater than expected vertical relative field value of 0.2, a visual effective radiated power of 150 kilowatts and 10 percent aural power, the calculated power density at 2 meters above the ground is 1.1589 milliwatts per square centimeter (mW/cm^2). Since this is a controlled site, this is 56% of the recommended limit of 2.06 mW/cm^2 for channel 38 applicable to controlled exposure areas. However, as this is a multi-user site measurements will be made to substantiate compliance with the 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.

It is noted that this technical exhibit only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be provided to the FCC by the tower owner as part of the tower registration process.

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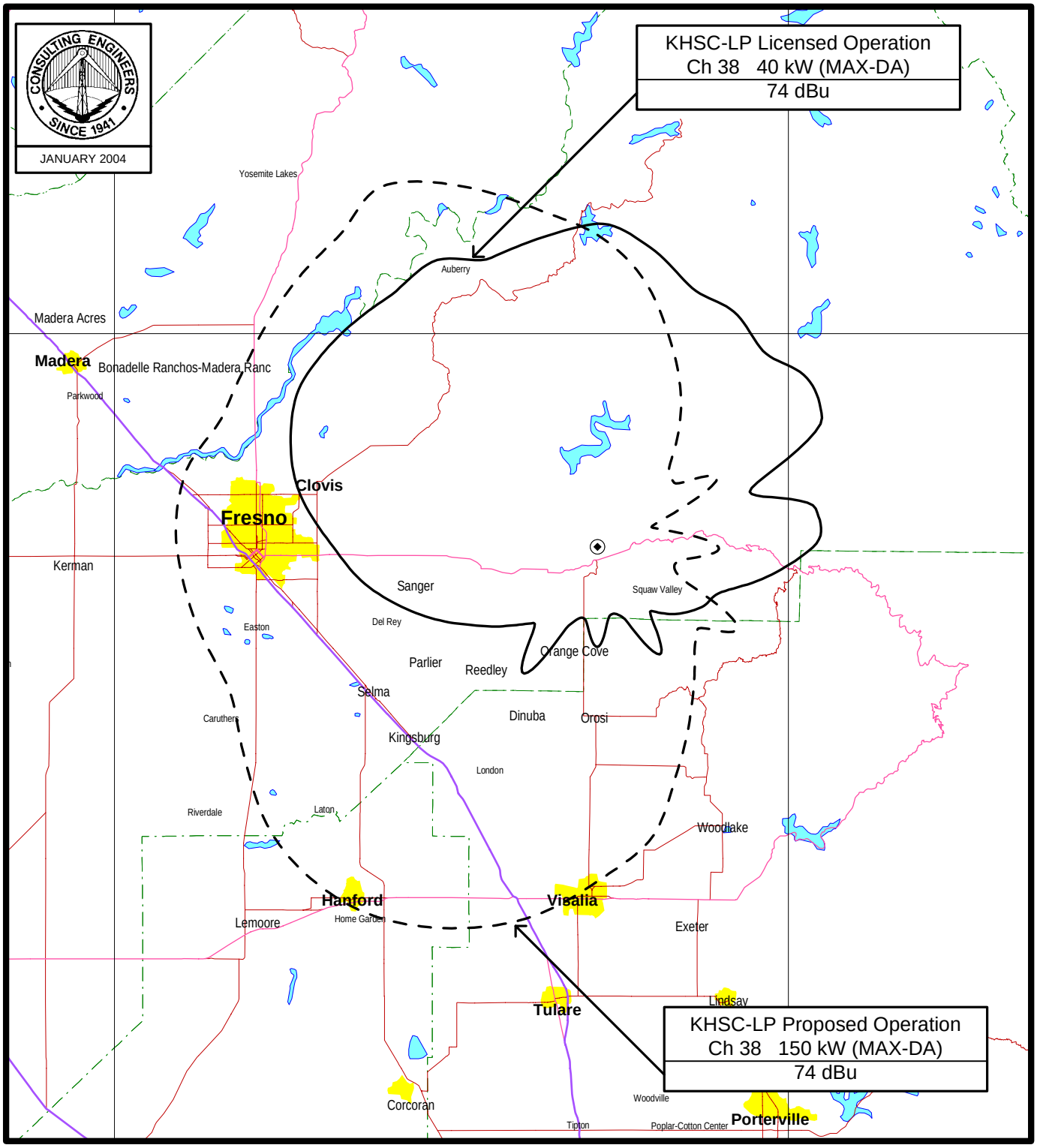
Figure 1



PREDICTED FCC COVERAGE CONTOURS

LPTV STATION KHSC-LP

FRESNO, CALIFORNIA

CH 38 150 KW (MAX-DA)

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

OET-69 INTERFERENCE CAUSED STUDY

CELL SIZE : 2.00
Using offset in determining thresholds

****
KSEE 36-44-45 119-16-53 24(Z) 1580.000 kw 1121 m DA 50.0 % 62.7 dBu
FRESNO CA 22381 1109 FCC NTSC BL: 1138542 FCC IX POP%: 0.0
LIC BLCT2300
0.35 0.27 0.28 0.33 0.36 0.37 0.37 0.36 0.33 0.28 0.27 0.35
0.49 0.60 0.68 0.74 0.79 0.82 0.84 0.86 0.89 0.93 0.97 1.00
0.98 0.95 0.93 0.89 0.86 0.84 0.82 0.79 0.75 0.68 0.60 0.49
(235.0 1.00)
Ref Az: 0.0
Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	26348.615234	1138615
not affected by terrain losses	22942.300781	1117125

****
KHSC-L 36-44-46 119-16-57 38(-) 150.000 kw 1035 m DA 10.0 % 74.0
FRESNO CA
PROPOSED
0.93 0.85 0.72 0.81 0.95 1.00 0.93 0.74 0.57 0.43 0.32 0.20
0.13 0.09 0.06 0.12 0.05 0.04 0.07 0.04 0.05 0.12 0.06 0.09
0.13 0.20 0.32 0.43 0.57 0.74 0.93 1.00 0.95 0.81 0.72 0.85
Ref Az: 270.0
Using DEFAULT vertical antenna pattern

D/U Baseline: -25.00

	Area	Pop
Interference	0	0

****
K27GZ 37-31-59 120-01-33 38(+) 2.800 kw 1310 m DA 50.0 % 74.0 dBu
MARIPOSA CA
APP BPTT20040109AAS
1.00 0.95 0.79 0.76 0.90 0.90 0.76 0.79 0.95 1.00 0.97 0.87
0.73 0.56 0.38 0.22 0.09 0.02 0.01 0.01 0.01 0.01 0.01 0.01
0.01 0.01 0.01 0.01 0.02 0.09 0.22 0.38 0.56 0.73 0.87 0.97
(25.0 0.74)(45.0 0.93)(65.0 0.74)
Ref Az: 225.0
Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	1047.720337	424
not affected by terrain losses	906.681030	424

****
KHSC-L 36-44-46 119-16-57 38(-) 150.000 kw 1035 m DA 10.0 % 74.0
FRESNO CA
PROPOSED
0.93 0.85 0.72 0.81 0.95 1.00 0.93 0.74 0.57 0.43 0.32 0.20
0.13 0.09 0.06 0.12 0.05 0.04 0.07 0.04 0.05 0.12 0.06 0.09
0.13 0.20 0.32 0.43 0.57 0.74 0.93 1.00 0.95 0.81 0.72 0.85
Ref Az: 270.0
Using DEFAULT vertical antenna pattern

D/U Baseline: 28.00

	Area	Pop
Interference	0	0

****

KCNS2 37-45-19 122-27-06 38(Z) 5000.000 kw 476 m DA 50.0 % 64.0 dBu
SAN FRANCISCO CA 14924 4781 FCC NTSC BL: 5747703 FCC IX POP%: 0.1
CP BPCT19980731LJ

0.52 0.69 0.84 0.94 0.99 0.99 0.91 0.80 0.68 0.61 0.59 0.64
0.73 0.86 0.96 1.00 0.97 0.90 0.77 0.56 0.40 0.28 0.23 0.23
0.24 0.26 0.30 0.33 0.34 0.32 0.28 0.26 0.23 0.23 0.27 0.26

Ref Az: 0.0
Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	21696.742188	5747326
not affected by terrain losses	16349.887695	5091757

****

KHSC-L 36-44-46 119-16-57 38(-) 150.000 kw 1035 m DA 10.0 % 74.0
FRESNO CA
PROPOSED

0.93 0.85 0.72 0.81 0.95 1.00 0.93 0.74 0.57 0.43 0.32 0.20
0.13 0.09 0.06 0.12 0.05 0.04 0.07 0.04 0.05 0.12 0.06 0.09
0.13 0.20 0.32 0.43 0.57 0.74 0.93 1.00 0.95 0.81 0.72 0.85

Ref Az: 270.0
Using DEFAULT vertical antenna pattern

D/U Baseline: 28.00

	Area	Pop
Interference	20.09	0

****

KCNS 37-45-20 122-27-05 38(Z) 5000.000 kw 476 m DA 50.0 % 64.0 dBu
SAN FRANCISCO CA 14924 4781 FCC NTSC BL: 5747703 FCC IX POP%: 0.1
LIC BMLCT19980916KE

0.52 0.69 0.84 0.94 0.99 0.99 0.91 0.80 0.68 0.61 0.59 0.64
0.73 0.86 0.96 1.00 0.97 0.90 0.77 0.56 0.40 0.28 0.23 0.23
0.24 0.26 0.30 0.33 0.34 0.32 0.28 0.26 0.23 0.23 0.27 0.26

Ref Az: 0.0
Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	21692.583984	5747627
not affected by terrain losses	16317.643555	5108829

****

KHSC-L 36-44-46 119-16-57 38(-) 150.000 kw 1035 m DA 10.0 % 74.0
FRESNO CA
PROPOSED

0.93 0.85 0.72 0.81 0.95 1.00 0.93 0.74 0.57 0.43 0.32 0.20
0.13 0.09 0.06 0.12 0.05 0.04 0.07 0.04 0.05 0.12 0.06 0.09
0.13 0.20 0.32 0.43 0.57 0.74 0.93 1.00 0.95 0.81 0.72 0.85

Ref Az: 270.0
Using DEFAULT vertical antenna pattern

D/U Baseline: 28.00

	Area	Pop
Interference	20.09	0

****
KPXN 34-12-46 118-03-41 38(N) 1000.000 kw 1706.6 m DA 90.0 % 41.0 dBu
SAN BERNARDINO CA 16989 11222 DTVSERVICE:11222000 NTSCSERVICE:11248000
CP MOD BMPCDT20021126AAU
0.27 0.28 0.26 0.26 0.33 0.47 0.65 0.81 0.94 1.00 0.98 0.90
0.78 0.63 0.47 0.32 0.19 0.09 0.04 0.05 0.09 0.13 0.15 0.14
0.10 0.06 0.04 0.10 0.19 0.28 0.33 0.33 0.29 0.23 0.21 0.23
(95.0 1.00)(185.0 0.04)(255.0 0.04)(305.0 0.34)
Ref Az: 0.0
Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	34492.535156	13974439
not affected by terrain losses	24171.585938	12955564

****
KHSC-L 36-44-46 119-16-57 38(-) 150.000 kw 1035 m DA 10.0 % 74.0
FRESNO CA
PROPOSED
0.93 0.85 0.72 0.81 0.95 1.00 0.93 0.74 0.57 0.43 0.32 0.20
0.13 0.09 0.06 0.12 0.05 0.04 0.07 0.04 0.05 0.12 0.06 0.09
0.13 0.20 0.32 0.43 0.57 0.74 0.93 1.00 0.95 0.81 0.72 0.85
Ref Az: 270.0
Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

	Area	Pop
Interference	0	0

****
DKZKI 34-11-15 117-41-58 38(0) 210.000 kw 1679 m DA 90.0 % 41.0 dBu
SAN BERNARDINO CA 16989 11222 DTVSERVICE:11222000 NTSCSERVICE:11248000
DTVALT DTV ALLOTMENT
0.24 0.28 0.26 0.19 0.14 0.19 0.37 0.57 0.76 0.92 0.95 1.00
0.91 0.82 0.61 0.48 0.37 0.21 0.20 0.17 0.17 0.17 0.19 0.20
0.20 0.23 0.27 0.36 0.38 0.40 0.43 0.36 0.29 0.17 0.14 0.19
Ref Az: 0.0
Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	24981.576172	13533865
not affected by terrain losses	17951.001953	11774067

****
KHSC-L 36-44-46 119-16-57 38(-) 150.000 kw 1035 m DA 10.0 % 74.0
FRESNO CA
PROPOSED
0.93 0.85 0.72 0.81 0.95 1.00 0.93 0.74 0.57 0.43 0.32 0.20
0.13 0.09 0.06 0.12 0.05 0.04 0.07 0.04 0.05 0.12 0.06 0.09
0.13 0.20 0.32 0.43 0.57 0.74 0.93 1.00 0.95 0.81 0.72 0.85
Ref Az: 270.0
Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

	Area	Pop
Interference	0	0

****

KPMR2 34-31-28 119-57-35 38(Z) 2450.000 kw 1260 m DA 50.0 % 64.0 dBu
SANTA BARBARA CA 22947 768 FCC NTSC BL: 969666 FCC IX POP%: 0.6
LIC BLCT20010209ABS
0.93 0.79 0.62 0.46 0.33 0.26 0.26 0.33 0.46 0.62 0.79 0.93
1.00 0.98 0.90 0.75 0.57 0.39 0.24 0.19 0.18 0.18 0.19 0.19
0.19 0.19 0.18 0.18 0.19 0.24 0.39 0.57 0.75 0.90 0.98 1.00
(122.0 1.00)(348.0 1.00)
Ref Az: 0.0
Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	26879.433594	965646
not affected by terrain losses	19097.697266	766523

****
KHSC-L 36-44-46 119-16-57 38(-) 150.000 kw 1035 m DA 10.0 % 74.0
FRESNO CA
PROPOSED
0.93 0.85 0.72 0.81 0.95 1.00 0.93 0.74 0.57 0.43 0.32 0.20
0.13 0.09 0.06 0.12 0.05 0.04 0.07 0.04 0.05 0.12 0.06 0.09
0.13 0.20 0.32 0.43 0.57 0.74 0.93 1.00 0.95 0.81 0.72 0.85
Ref Az: 270.0
Using DEFAULT vertical antenna pattern

D/U Baseline: 28.00

	Area	Pop
Interference	64.48	25(0.00%)

****
KPMR 34-31-28 119-57-35 38(Z) 2450.000 kw 1260 m DA 50.0 % 64.0 dBu
SANTA BARBARA CA 22947 768 FCC NTSC BL: 969666 FCC IX POP%: 0.6
CP MOD BMPCT20000406AAS
0.93 0.79 0.62 0.46 0.33 0.26 0.26 0.33 0.46 0.62 0.79 0.93
1.00 0.98 0.90 0.75 0.57 0.39 0.24 0.19 0.18 0.18 0.19 0.19
0.19 0.19 0.18 0.18 0.19 0.24 0.39 0.57 0.75 0.90 0.98 1.00
(122.0 1.00)(348.0 1.00)
Ref Az: 0.0
Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	26879.433594	965646
not affected by terrain losses	19097.697266	766523

****
KHSC-L 36-44-46 119-16-57 38(-) 150.000 kw 1035 m DA 10.0 % 74.0
FRESNO CA
PROPOSED
0.93 0.85 0.72 0.81 0.95 1.00 0.93 0.74 0.57 0.43 0.32 0.20
0.13 0.09 0.06 0.12 0.05 0.04 0.07 0.04 0.05 0.12 0.06 0.09
0.13 0.20 0.32 0.43 0.57 0.74 0.93 1.00 0.95 0.81 0.72 0.85
Ref Az: 270.0
Using DEFAULT vertical antenna pattern

D/U Baseline: 28.00

	Area	Pop
Interference	64.48	25(0.00%)

****

KMSG-L 37-04-26 119-25-52 39(+) 39.000 kw 1394 m DA 50.0 % 74.1 dBu
FRESNO CA
CP BPTTL20030822AEX

1.00	1.00	1.00	1.00	1.00	0.99	0.95	0.89	0.81	0.73	0.61	0.53
0.43	0.29	0.15	0.07	0.09	0.14	0.15	0.14	0.09	0.07	0.15	0.29
0.43	0.53	0.62	0.73	0.81	0.89	0.95	0.99	1.00	1.00	1.00	1.00

Ref Az: 260.0
Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	4246.252930	323002
not affected by terrain losses	3629.344482	323002

****

KHSC-L 36-44-46 119-16-57 38(-) 150.000 kw 1035 m DA 10.0 % 74.0
FRESNO CA
PROPOSED

0.93	0.85	0.72	0.81	0.95	1.00	0.93	0.74	0.57	0.43	0.32	0.20
0.13	0.09	0.06	0.12	0.05	0.04	0.07	0.04	0.05	0.12	0.06	0.09
0.13	0.20	0.32	0.43	0.57	0.74	0.93	1.00	0.95	0.81	0.72	0.85

Ref Az: 270.0
Using DEFAULT vertical antenna pattern

D/U Baseline: -3.00

	Area	Pop
Interference	200.29	144(0.05%)

Summary of Calculations

Facility	Channel	Type	Baseline	Permissible	IX	%Base
KSEE, FRESNO, CA	24	TV	1138542	0.5	0	0.00
K27GZ, MARIPOSA, CA	38	TV	424	0.5	0	0.00
KCNS2, SAN FRANCISCO, C	38	TV	5747703	0.5	0	0.00
KCNS, SAN FRANCISCO, CA	38	TV	5747703	0.5	0	0.00
KPXN, SAN BERNARDINO, C	38	DTV	13974439	0.5	0	0.00
DKZKI, SAN BERNARDINO,	38	DTV	13533865	0.5	0	0.00
KPMR2, SANTA BARBARA, C	38	TV	969666	0.5	25	0.00
KPMR, SANTA BARBARA, CA	38	TV	969666	0.5	25	0.00
KMSG-L, FRESNO, CA	39	TV	323002	0.5	144	0.05