

TECHNICAL EXHIBIT
DISPLACEMENT RELIEF APPLICATION FOR
MODIFICATION OF LICENSE
CLASS A TV STATION KCLP-CA
FACILITY ID 27621
BOISE, IDAHO
CH 18 60 KW (MAX-DA)

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of a displacement relief application for modification of the license of Class A TV station KCLP-CA at Boise, Idaho (Facility ID: 27621; File No. BLTTA-20010712ABX).

Displacement Relief Justification

Station KCLP-CA currently is authorized (BPTTL-20000907AAK) to operate on NTSC channel 38 with a directional antenna maximum effective radiated power (ERP) of 23.2 kW and an antenna radiation center height above mean sea level (RCMSL) of 2187 meters. As a result of the Report and Order in MM Docket No. 01-85 (DA 01-2592; adopted November 6, 2001; released November 14, 2001) the FCC substituted NTSC channel 39 for NTSC channel 14 at Boise, Idaho. The authorized KCLP-CA NTSC channel 38 operation is one channel below the NTSC channel 39 allotment at Boise and, as such, there is a significant potential for interference to be received by the authorized KCLP-CA operation from the channel 39 allotment. Specifically, calculations using the provisions of OET Bulletin No. 69 indicate that the channel 39 allotment facilities will cause interference to 96% of the total population within the KCLP-CA 74 dBu contour.¹ Therefore, the KCLP-CA operation qualifies for displacement relief pursuant to Section 73.3572(a)(4)(i).

¹ 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. A Sun 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 No. 69.

Proposed Facilities

It is proposed to operate from KCLP-CA's currently authorized transmitter site on channel 18 (494-500 MHz) with a "plus" carrier frequency offset using a Scala model K721347 "composite" directional antenna oriented at 225 degrees true. The maximum ERP at any horizontal or vertical angle will be 60 kW. The antenna will be side-mounted on an existing tower (FCC Tower ID: 1053976).

Response to Paragraph 11 - TV Broadcast Analog Protection

A study has been conducted using the provisions of Section 74.705 which indicates that the proposed KCLP-CA operation will not create prohibited interference to other existing, authorized or proposed NTSC full-power stations.

Response to Paragraph 11 - DTV Station and DTV Table of Allotments Protection

Calculations based on OET Bulletin No. 69 indicate that the proposed KCLP-CA operation on channel 18 complies with the FCC's 0.5% interference threshold criteria to all allotted, proposed or actual DTV operating facilities on channels 17, 18 and 19. Figure 1 provides the output of study based on OET-69 Bulletin which demonstrates that the proposed KCLP-CA operation complies with the FCC's DTV interference criteria.

Response to Paragraph 11 - LPTV, TV Translator, Class A TV and Digital Class A Protection

A study has been conducted which indicates that the KCLP-CA proposal will not create prohibited interference to other existing, authorized or proposed LPTV, TV translator, Class A and digital Class A stations.

Response to Paragraph 11 - Land Mobile Station Protection

The proposed KCLP-CA operation complies with the FCC's interference requirements to all pertinent land mobile radio service (LMRS) stations.

Response to Paragraph 12 - Environmental Protection Act

The proposed KCLP-CA LPTV 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. The vertical relative field pattern for the proposed antenna is shown on Figure 2. Using a conservative relative field factor of 0.1 (for angles below 60 degrees downward), a maximum visual effective radiated power of 60 kilowatts and 10 percent aural power, the calculated power density at 2 meters above ground at the tower base will be 0.0066 mW/cm^2 , or less than 5 percent of the Commission's recommended limit applicable to general population/uncontrolled exposure areas (0.33 mW/cm^2 for TV channel 22). Therefore, based on the new responsibility threshold of 5%, the 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.

Finally, 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 or already has been provided to the FCC by the tower owner as part of the tower registration process.

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OET-69 DTV INTERFERENCE CAUSED STUDY

CELL SIZE : 2.00

Using offset in determining thresholds

DKBGH 42-43-47 114-24-52 18(0) 50.000 kw 1332 m DA 90.0 % 39.1 dBu
FILER ID 6675 83 DTVSERVICE: 83000 NTSCSERVICE: 83000
DTVALT DTV ALLOTMENT

0.92	0.92	0.92	0.92	0.92	0.91	0.91	0.91	0.91	0.90	0.91	0.92
0.93	0.94	0.95	0.96	0.97	0.98	0.99	0.99	0.99	1.00	1.00	1.00
1.00	1.00	0.99	0.99	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93

(225.0 1.00)(226.0 1.00)(227.0 1.00)(228.0 1.00)

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

USING NTSC GRADE B FOR SERVICE AREA

	Area	Pop
within Noise Limited Contour	6663.276855	82911
not affected by terrain losses	6663.276855	82911

KCLP-CA 43-45-18 116-05-52 18(+) 60.000 kw 2187 m DA 10.0 % 72.1
BOISE ID
PROPOSED AMENDMENT

1.00	0.96	0.87	0.73	0.56	0.42	0.27	0.15	0.07	0.05	0.06	0.07
0.07	0.06	0.04	0.02	0.05	0.01	0.12	0.10	0.05	0.02	0.04	0.06
0.07	0.07	0.06	0.05	0.07	0.05	0.27	0.42	0.56	0.73	0.87	0.96

Ref Az: 225.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

	Area	Pop
Interference	0	0

KBGH 42-43-47 114-24-52 18(N) 40.000 kw 1332 m 90.0 % 39.1 dBu
FILER ID 6675 83 DTVSERVICE: 83000 NTSCSERVICE: 83000
CP BPEDT20000427ACR

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	13338.792969	110975
not affected by terrain losses	13174.512695	110966

KCLP-CA 43-45-18 116-05-52 18(+) 60.000 kw 2187 m DA 10.0 % 72.1
BOISE ID
PROPOSED AMENDMENT

1.00	0.96	0.87	0.73	0.56	0.42	0.27	0.15	0.07	0.05	0.06	0.07
0.07	0.06	0.04	0.02	0.05	0.01	0.12	0.10	0.05	0.02	0.04	0.06
0.07	0.07	0.06	0.05	0.07	0.05	0.27	0.42	0.56	0.73	0.87	0.96

Ref Az: 225.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

	Area	Pop
Interference	4.01	0(0.0 FCC - 0.0)

KEPR-T 46-05-51 119-11-29 18(N) 36.400 kw 708.6 m 90.0 % 39.1 dBu

PASCOE WA

CP BPCDT19991027ACX

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	19866.775391	298866
not affected by terrain losses	19103.898438	286985

KCLP-CA 43-45-18 116-05-52 18(+) 60.000 kw 2187 m DA 10.0 % 72.1

BOISE ID

PROPOSED AMENDMENT

1.00	0.96	0.87	0.73	0.56	0.42	0.27	0.15	0.07	0.05	0.06	0.07
0.07	0.06	0.04	0.02	0.05	0.01	0.12	0.10	0.05	0.02	0.04	0.06
0.07	0.07	0.06	0.05	0.07	0.05	0.27	0.42	0.56	0.73	0.87	0.96

Ref Az: 225.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

	Area	Pop
Interference	0	0

DKEPRT 46-05-51 119-11-30 18(0) 50.000 kw 723 m DA 90.0 % 39.1 dBu

PASCO WA 15893 242 DTVSERVICE: 242000 NTSCSERVICE: 225000

DTVALT DTV ALLOTMENT

0.99	0.99	1.00	1.00	1.00	0.99	0.96	0.95	0.93	0.89	0.89	0.89
0.90	0.90	0.91	0.92	0.93	0.94	0.95	0.95	0.94	0.94	0.94	0.93
0.90	0.88	0.86	0.85	0.86	0.88	0.91	0.94	0.95	0.96	0.97	0.98

(44.0 1.00)(45.0 1.00)(46.0 1.00)

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

USING NTSC GRADE B FOR SERVICE AREA

	Area	Pop
within Noise Limited Contour	16335.958984	248503
not affected by terrain losses	15876.634766	241904

KCLP-CA 43-45-18 116-05-52 18(+) 60.000 kw 2187 m DA 10.0 % 72.1

BOISE ID

PROPOSED AMENDMENT

1.00	0.96	0.87	0.73	0.56	0.42	0.27	0.15	0.07	0.05	0.06	0.07
0.07	0.06	0.04	0.02	0.05	0.01	0.12	0.10	0.05	0.02	0.04	0.06
0.07	0.07	0.06	0.05	0.07	0.05	0.27	0.42	0.56	0.73	0.87	0.96

Ref Az: 225.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

	Area	Pop
Interference	0	0

KTVZ 44-04-40 121-19-49 18(N) 50.000 kw 1328 m DA 90.0 % 39.1 dBu

BEND OR 6180 86 DTVSERVICE: 86000 NTSCSERVICE: 83000

CP MOD BMPCDT20020304ADV

0.81	0.92	0.99	0.99	0.94	0.88	0.82	0.78	0.76	0.77	0.78	0.78
0.77	0.75	0.77	0.82	0.89	0.95	0.99	0.99	0.93	0.83	0.70	0.57
0.45	0.37	0.36	0.40	0.44	0.44	0.41	0.37	0.37	0.43	0.54	0.68

(25.0 1.00)(185.0 1.00)(256.0 0.36)(285.0 0.44)(315.0 0.36)

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	13180.972656	101896
not affected by terrain losses	10852.093750	100656

KCLP-CA 43-45-18 116-05-52 18(+) 60.000 kw 2187 m DA 10.0 % 72.1

BOISE ID

PROPOSED AMENDMENT

1.00	0.96	0.87	0.73	0.56	0.42	0.27	0.15	0.07	0.05	0.06	0.07
0.07	0.06	0.04	0.02	0.05	0.01	0.12	0.10	0.05	0.02	0.04	0.06
0.07	0.07	0.06	0.05	0.07	0.05	0.27	0.42	0.56	0.73	0.87	0.96

Ref Az: 225.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

	Area	Pop
Interference	0	0

DKTVZ 44-04-40 121-19-49 18(0) 50.000 kw 1336 m DA 90.0 % 39.1 dBu

BEND OR 6180 86 DTVSERVICE: 86000 NTSCSERVICE: 83000

DTVALT DTV ALLOTMENT

0.75	0.87	0.95	1.00	1.00	0.92	0.80	0.67	0.57	0.51	0.50	0.50
0.50	0.55	0.62	0.73	0.81	0.87	0.87	0.81	0.73	0.62	0.50	0.37
0.25	0.18	0.17	0.21	0.26	0.29	0.26	0.22	0.21	0.29	0.43	0.59

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

USING NTSC GRADE B FOR SERVICE AREA

	Area	Pop
within Noise Limited Contour	6408.235352	87446
not affected by terrain losses	6188.089844	86539

KCLP-CA 43-45-18 116-05-52 18(+) 60.000 kw 2187 m DA 10.0 % 72.1

BOISE ID

PROPOSED AMENDMENT

1.00	0.96	0.87	0.73	0.56	0.42	0.27	0.15	0.07	0.05	0.06	0.07
0.07	0.06	0.04	0.02	0.05	0.01	0.12	0.10	0.05	0.02	0.04	0.06
0.07	0.07	0.06	0.05	0.07	0.05	0.27	0.42	0.56	0.73	0.87	0.96

Ref Az: 225.0

Using DEFAULT vertical antenna pattern

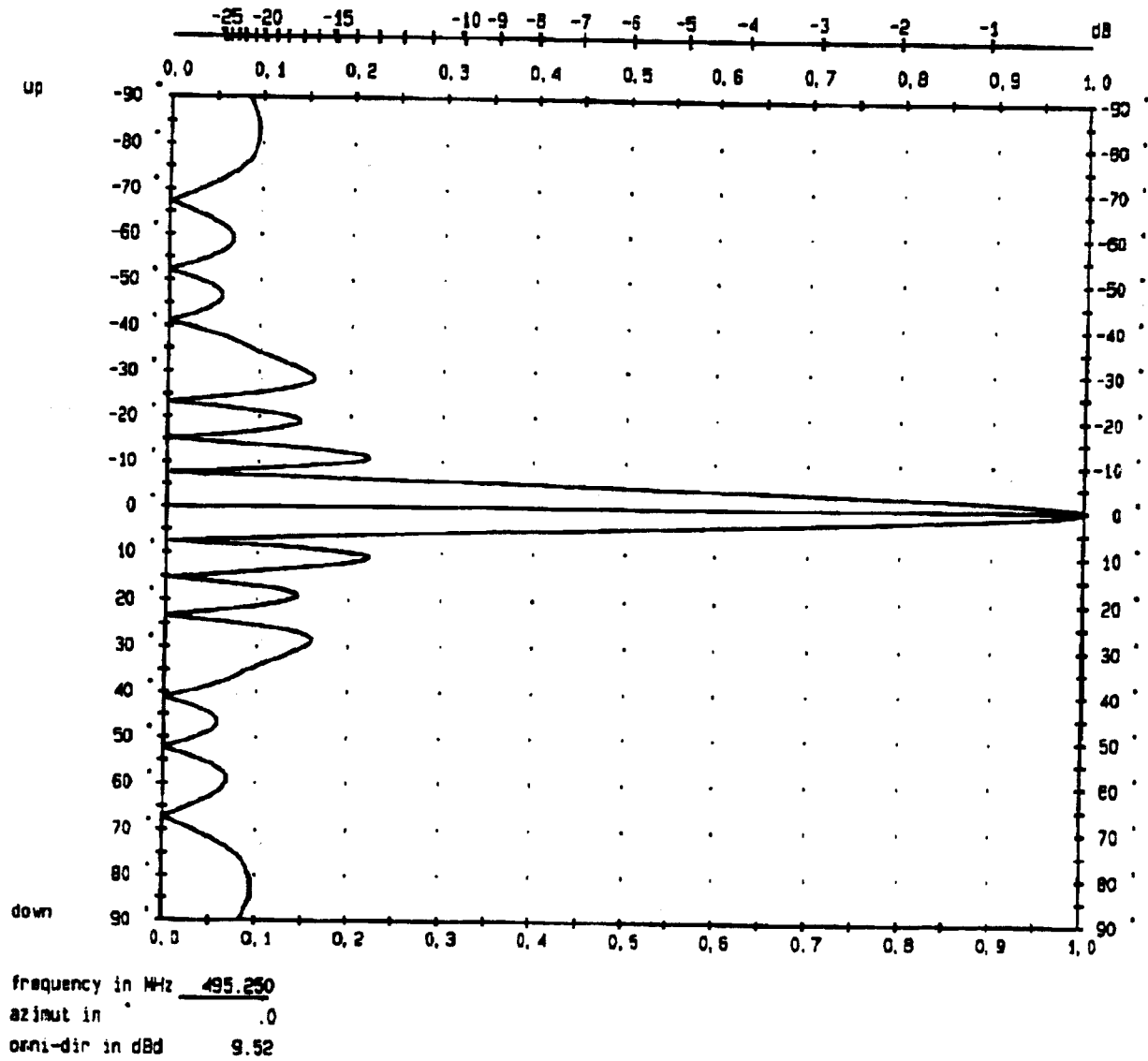
D/U Baseline: 2.00

	Area	Pop
Interference	0	0

Summary of Calculations

Facility	Channel	Type	Baseline	Permissible	IX	%Base
DKBGH, FILER, ID	18	DTV	83000	0.5	0	0.00
KBGH, FILER, ID	18	DTV	110975	0.5	0	0.00
KEPR-T, PASCOE, WA	18	DTV	298866	0.5	0	0.00
DKEPRT, PASCO, WA	18	DTV	248503	0.5	0	0.00
KTVZ, BEND, OR	18	DTV	101896	0.5	0	0.00
DKTVZ, BEND, OR	18	DTV	87446	0.5	0	0.00

Figure 2



SCALA Medford Oregon	4 x 1 K721347 Pane array	Typ No.
MB 3.11. 3 11:20	Channel - 18	B1.