

[Exhibit 12]

## **Non-Interference Compliance**

Regarding FCC File Number: BNPFT-20030317EXZ

### **Description of Exhibit 12 Contents**

This exhibit demonstrates that the proposed facility complies with contour overlap and interference protection provisions in all the applicable rule sections and that this application for a construction permit is in full compliance with 47 CFR 74.1204.

Page 2 of this exhibit is an explanation of the tabulated data, which is included as evidence on page 5 of this exhibit.

Pages 3 and 4 of this exhibit contain an explanation of the method used to demonstrate compliance with contour overlap and interference protection provisions based on 47 CFR 74.1204(d), which states:

*"an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable."*

In addition, page 4 includes a tabulation of the second and third adjacent stations which this application is required to protect and the field strengths of those stations in the vicinity of the proposed translator. The field strengths given were based on contours predicted using FCC contour algorithms and 3 arc second terrain data.

**Let it be noted that should any actual real world interference occur, the applicant certifies that it will promptly suspend operation of this translator in accordance with 47 CFR 74.1203.**

Page 5 of this exhibit is the tabulated data from the interference analysis, which shows all stations that this application had to consider for contour protection. These tabulated values were generated using high resolution 3 arc second terrain data for the best possible accuracy.

Page 6 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 min quadrangle at full scale with the calculated area of interference overlaid. The sheet includes the quadrangle name and measurement scale at the bottom-left corner (note: "Mt" refers to meters). The area of interference was calculated using a free-space calculation (see FCC 98-117, Appendix A, pg. 41 for reference to the equation used).

## Explanation of Frequency Finder Results

The interference analysis for this application was performed using the "Frequency Finder" module in RadioSoft's Comstudy, version 2.2.

Frequency Finder analyzes data taken directly from the FCC's FM database and looks for prohibited overlap with contours of adjacent stations and prohibited proximity to stations 53 or 54 channels from the proposed station (IF) using 3 arc second terrain data and the FCC's contour algorithms. The results tabulated are the stations returned from that analysis. (Note: Because Comstudy was looking at the FCC's FM database, it took into account the proposed translator when doing the analysis and returned it in the tabulated results. For the sake of simplicity, that record has been deleted from all tabulated results.)

The first several columns of the table are self-explanatory. They give various data on the stations in question. The column labeled "Clr" gives the proposed translator's "clearance" with respect to the tabulated station, either in dB or km. The values listed with no units are given in km and are for stations located on an IF to the proposed site's channel.

**A negative value in the "Clr" column does NOT necessarily represent prohibited contour overlap, as explained below.**

A negative value listed in the "Clr" column would indicate either overlap of interference and protected contours or prohibited proximity to an IF station except in the following situations:

-Since the proposed station's Effective Radiated Power (ERP) is 13 watts, a negative value in km (no units listed in the table) does not represent a violation of the CFR, according to 47 CFR 1204(g), which states that "FM translator stations and booster stations operating with less than 100 watts ERP will be treated as class D stations and will not be subject to intermediate frequency separation requirements."

- A second or third adjacent LP100 station cannot represent a violation of the CFR, as 47 CFR 74.1204(a)(4) requires protection of only co-channel and first adjacent LP100 stations.

- 47 CFR 74.1204(a) requires only the protection of "AUTHORIZED commercial or noncommercial educational FM broadcast stations, FM translators, ..." Any entry with a status listed as "RSV," "USE" or "APP" does not represent an authorized station and therefore is not protected under 47 CFR 74.1204. The one exception is the case of LP100 applications. The note to 47 CFR 74.1204(a)(4) states that "LPFM applications and permits that have not yet been licensed must be considered as operating with the maximum permitted facilities." Therefore, any first adjacent or co-channel LP100 station, no matter the status, is protected.

-Entries highlighted in red are those stations where there is overlap of predicted contours and lack of population has been demonstrated within the area of interference.

## Compliance with 47 CFR 74.1204(d)

The proposed translator's Maximum Effective Radiated Power (ERP) is 0.013kW at 90 meters above ground level. According to 47 CFR, 74.1204(a), the desired to undesired ratio between 2nd/3rd adjacent stations is 40dB, making the proposed translator's interfering contour 102.5dBu F(50,10). (See the next page for more discussion on the determination of the signal strength of the proposed translator's area of interference.)

Using a free-space calculation (equation referenced in FCC 98-117, Appendix A, pg. 41), the proposed translator's F(50,10) interference contour was calculated and the maximum horizontal plane was plotted on the pertinent portion of a USGS quadrangle (page 6 of this exhibit). However, the field strength of the proposed translator's antenna varies with angle of depression from horizontal. The antenna relative fields are tabulated below at 5 degree increments, starting at 5 degrees below horizontal. Antenna relative field strength data was provided and certified by the manufacturer of the proposed antenna. Using a free space calculation that neglects any loss due to reflection (equation referenced in FCC 98-117, Appendix A, pg. 41), the vertical ground clearance of the proposed application's F(50,10) interference contour at each angle has been tabulated. As shown below, the area of interference clears the ground by 50.1 meters at the lowest point. The applicant has taken into account USGS quadrangles and relevant aerial photography in stating that no structures, except possibly tower support structures, puncture the proposed area of interference. Hence, in accordance with 47 CFR 74.1204(d) and the clarification provided by the FCC in the decision Re: Living Way Ministries (FCC 02-244), there is a lack of population within the proposed area of interference and therefore this application is in full compliance with 47 CFR 74.1204.

**Antenna Manufacturer:** SWR

**Maximum ERP:** 13 watts

**Antenna Model Number:** 3FM1-0.5

**CORAGL:** 90 m

**F(50,10) Contour:** 102.5 dBu

Depression Angle (from COR)	Antenna Relative Field	ERP (watts)	Distance to F(50,10) Interfering Contour from Antenna (m)	Horizontal Distance of F(50,10) Interfering Contour from Tower (m)	Vert. Clearance of F(50,10) Interfering Contour above TGL (m)
5	0.972	12.28	184.3	183.6	73.9
10	0.891	10.32	169.0	166.4	60.7
15	0.767	7.65	145.5	140.5	52.4
20	0.615	4.92	116.6	109.6	50.1
25	0.452	2.66	85.7	77.7	53.8
30	0.293	1.12	55.6	48.1	62.2
35	0.151	0.30	28.6	23.5	73.6
40	0.035	0.02	6.6	5.1	85.7
45	0.052	0.04	9.9	7.0	83.0
50	0.109	0.15	20.7	13.3	74.2
55	0.141	0.26	26.7	15.3	68.1
60	0.151	0.30	28.6	14.3	65.2
65	0.146	0.28	27.7	11.7	64.9
70	0.131	0.22	24.8	8.5	66.7
75	0.11	0.16	20.9	5.4	69.8
80	0.085	0.09	16.1	2.8	74.1
85	0.059	0.05	11.2	1.0	78.9
90	0.033	0.01	6.3	0.0	83.7

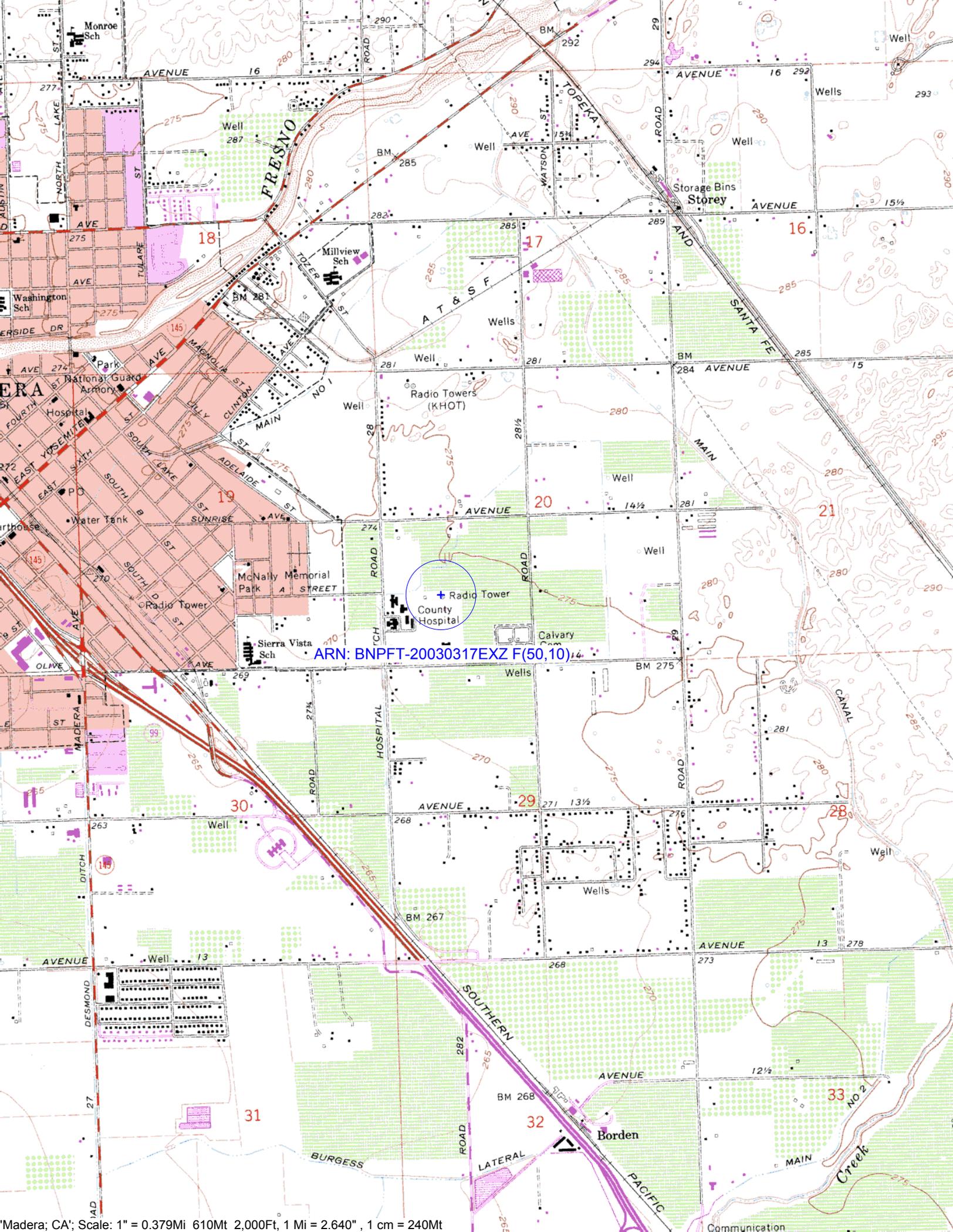
Minimum F(50,10) Clearance above TGL **50.1 m**

The F(50,50) signal strength of all relevant second and third adjacent stations have been examined, and are tabulated below. Column three shows the station's signal level at the proposed translator's tower site, and column four gives the minimum value within the entire proposed translator's standard F(50,10) contour (100 dBu for most classes, 94 dBu for class B's, 97 dBu for class B1's). For signal levels too great to determine, 999 was entered. The minimum F(50,50) contour within the proposed translator's standard F(50,10) contour was used to calculate the proposed translator's interference contour, thereby assuring a minimum undesired-to-desired ratio of 40dB for all relevant adjacent stations, as required in 47 CFR, 74.1204(a).

FCC File Number	Call Sign	F(50,50) Contour at Tower	Min. F(50,50) Contour
BLH19980408KB	KMGV	62.8dBu	62.5dBu
Minimum F(50,50) Protected Contour of Adjacent Station Within Proposed Application's 100dBu F(50,10) Contour:			<b>62.5dBu</b>

Callsign	State	City	Channel	ERP_w	Licensee	ARN	Class	Status	Distance_km	Cir	Facility_id
KMGV	CA	FRESNO	250	2100	INFINITY RADIO OPERATIONS INC.	BLH19980408KB	B	LIC	55.16	-9.13 dB	18409
NEW	CA	CALWA	252	250	ROBERT J. CONNELLY, JR.	BNPFT20030317FYG	D	APP	43.11	4.97 dB	151151
KSOF	CA	DINUBA	255	19000	CAPSTAR TX LIMITED PARTNERSHIP	BLH19840924DD	B	LIC	103.51	4.91 dB	54560
NEW	CA	IDRIA	253	250	KING CITY COMMUNICATIONS CORPORATION	BNPFT20030317EHP	D	APP	84.93	5.77 dB	152826
NEW	CA	SANGER	252	250	ROBERT J. CONNELLY, JR.	BNPFT20030317EIT	D	APP	53.44	6.74 dB	155581
NEW	CA	FIREBAUGH	252	120	RADIO ASSIST MINISTRY, INC.	BNPFT20030317EVN	D	APP	39.52	7.53 dB	151316
NEW	CA	SELMA	252	250	ROBERT J. CONNELLY, JR.	BNPFT20030317EDO	D	APP	55.33	8.48 dB	155321
NEW	CA	DINUBA	252	250	ROBERT J. CONNELLY, JR.	BNPFT20030317EKQ	D	APP	73.93	12.50 dB	155566
NEW	CA	HANFORD	252	250	ROBERT J. CONNELLY, JR.	BNPFT20030317FHH	D	APP	77.68	13.88 dB	155498
KHRN	CA	HURON	252	6000	HURON BROADCASTING, LLC	BPH20030307ABB	A	APP	75.56	15.07 dB	86866
NEW	CA	REEDLEY	252	27	RADIO ASSIST MINISTRY, INC.	BNPFT20030317EYU	D	APP	64.74	16.21 dB	151412
NEW	CA	FRESNO	253	100	THE INTERFAITH ALLIANCE OF CENTRAL CALIFORNIA	BNPL20000605ALD	LP100	APP	30.59	17.16 dB	124564
NEW	CA	FRESNO	253	100	LABOR/COMMUNITY ALLIANCE	BNPL20000605AIH	LP100	APP	30.59	17.16 dB	124379
NEW	CA	FRESNO	253	100	THE FRESNO CENTER FOR NONVIOLENCE	BNPL20000605AMV	LP100	APP	30.59	17.16 dB	124830
NEW	CA	FRESNO	253	100	EL COMITE DE LOS POBRES	BNPL20000605AMJ	LP100	APP	30.59	17.16 dB	124765
NEW	CA	HANFORD	252	55	RADIO ASSIST MINISTRY, INC.	BNPFT20030317EVQ	D	APP	74.65	17.45 dB	151319
NEW	CA	FRESNO	253	100	PROPHETIC FACTS MINISTRIES	BNPL20000608ABX	LP100	APP	30.85	17.78 dB	124650
KLOQ-FM	CA	WINTON	254	6000	MAPLETON COMMUNICATIONS, LLC	BLH19990119KH	A	LIC	63.7	19.05 dB	65374
NEW	CA	SANGER	253	250	ROBERT J. CONNELLY, JR.	BNPFT20030317EHK	D	APP	53.44	20.74 dB	155608
NEW	CA	CLOVIS	253	100	LIGHT AND LIFE FELLOWSHIP CHURCH	BNPL20000602ABR	LP100	APP	35.13	21.61 dB	123787
NEW	CA	SELMA	253	250	ROBERT J. CONNELLY, JR.	BNPFT20030317ERO	D	APP	55.33	22.48 dB	155535
970522ME	CA	HURON	252	0	POINT BROADCASTING COMPANY		A	USE	77.17	23.82 dB	86864
KMGV	CA	FRESNO	250	0	INFINITY RADIO OPERATIONS INC.		B	USE	32.1	23.40 dB	18409
K252CK	CA	SALINAS	252	10	CALVARY CHAPEL OF TWIN FALLS, INC.	BLFT20000808ABR	D	LIC	149.16	23.63 dB	71995
KWNN	CA	TURLOCK	252	2000	SILVERADO BROADCASTING COMPANY	BLH19871001KC	A	LIC	99.97	24.53 dB	60427
KHRN	CA	HURON	252	100	HURON BROADCASTING, LLC	BLH20030305AAL	A	LIC	83.95	24.05 dB	86866
NEW	CA	DINUBA	253	250	ROBERT J. CONNELLY, JR.	BNPFT20030317ENN	D	APP	73.93	26.50 dB	155559
NEW	CA	DINUBA	253	250	ROBERT J. CONNELLY, JR.	BNPFT20030317ENW	D	APP	73.93	26.50 dB	155558
NEW	CA	VISALIA	252	100	ROBERT SHIPMAN MINISTRIES	BNPL20000605AIJ	LP100	APP	97.06	27.94 dB	124380
NEW	CA	VISALIA	252	100	COLLEGE OF THE SEQUOIAS	BNPL20000602AFA	LP100	APP	95.19	27.38 dB	124183
NEW	CA	HANFORD	251	250	ROBERT J. CONNELLY, JR.	BNPFT20030317FEH	D	APP	77.68	27.88 dB	155506
NEW	CA	YOSEMITE VILLAGE	252	10	BOTT COMMUNICATIONS, INC.	BNPFT20030313ALI	D	APP	95.02	28.35 dB	142353
K252CE	CA	OLANCHA, ETC.	252	5	INYO COUNTY TV ADVISORY COMMISSION	BLFT19860609TF	D	LIC	170.55	28.27 dB	29041
NEW	CA	WOODLAKE	252	27	RADIO ASSIST MINISTRY, INC.	BNPFT20030317FBS	D	APP	103.04	28.69 dB	151446

KUFX	CA	SAN JOSE	253	10000 CITICASTERS LICENSES, L.P.	BMLH20010711ACO	B	LIC	172.58 30.79 dB	65415
KWNN	CA	TURLOCK	252	0 SILVERADO BROADCASTING COMPANY		A	USE	99.97 30.58 dB	60427
NEW	CA	REEDLEY	253	27 EDGEWATER BROADCASTING INC.	BNPFT20030317CYD	D	APP	64.74 30.21 dB	147715
NEW	CA	REEDLEY	253	27 RADIO ASSIST MINISTRY, INC.	BNPFT20030317EZA	D	APP	64.74 30.21 dB	151418
KSOF	CA	DINUBA	255	0 CAPSTAR TX LIMITED PARTNERSHIP		B	USE	103.51 32.10 dB	54560
KISQ	CA	SAN FRANCISCO	251	100000 AMFM RADIO LICENSES, L.L.C.	BMLH20000830AFM	B	LIC	239.7 32.97 dB	59964
KISQ	CA	SAN FRANCISCO	251	75000 AMFM RADIO LICENSES, L.L.C.	BPH20020129ABG	B	CP	239.73 34.05 dB	59964
KRXQ	CA	SACRAMENTO	253	50000 ENTERCOM SACRAMENTO LICENSE, LLC	BLH19931005KB	B	LIC	209.89 34.19 dB	20354
KKJG	CA	SAN LUIS OBISPO	251	4500 AGM SAN LUIS OBISPO, L.P.	BLH19970324KG	B	LIC	185.64 35.87 dB	71713
KCVR-FM	CA	COLUMBIA	255	6000 ENTRAVISION HOLDINGS, LLC	BLH19960509KC	A	LIC	123.62 36.51 dB	12063
KBUL-FM	NV	CARSON CITY	251	72000 CITADEL BROADCASTING COMPANY	BLH19950504KB	C	LIC	257.25 38.63 dB	11245



ARN: BNPFT-20030317EXZ F(50,10)