

TECHNICAL EXHIBIT
APPLICATION FOR FM CONSTRUCTION PERMIT
RADIO STATION KGVN(FM)
SUN VALLEY, NEVADA

JUNE 14, 2000

CH 229A 3.6 KW (MAX-DA) 129 M

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Technical Narrative

The technical exhibit of which this narrative is part was prepared on behalf of radio station KGVN(FM) on Channel 229A assigned to Sun Valley, Nevada. KGVN(FM) presently is licensed for an effective radiated power of 3.6 kilowatts with an antenna height above terrain of 129 meters.¹ By this instant application, KGVN(FM) proposes to modify its directional antenna pattern envelope. No change is transmitter site, radiation center or maximum effective radiated power (ERP) is requested.

The proposal would not be subject to environmental processing in accordance with Section 1.1306. No Tower Registration Number is required as the overall tower height is less than 200 feet and is not located near any airport. It is believed that this proposal conforms with all applicable rules and regulations of the FCC.

¹ See FCC File Number: BLH-981028KD.

FCC Predicted Coverage Contours

The predicted coverage contours for the proposed operation were calculated in accordance with the provisions of Section 73.313. Pursuant with current FCC practice, the distances to the contours were calculated without consideration given to terrain roughness correction factors.

The average terrain elevations from 3 to 13.6 kilometers along eight radials evenly spaced at 45 degree intervals were obtained from the National Geophysical Data Center's (NGDC) 30-second terrain database. The terrain elevations were then used in combination with the effective radiated powers for determining the distances to coverage contours.

Figure 1 is a map showing the predicted coverage contours. As the map illustrates, the FCC predicted 70 dBu contour entirely encompasses the principal community of Sun Valley. The Sun Valley community limits shown were obtained from the 1994 U.S. Census Topologically Integrated Geographic Encoding and Referencing (TIGER) data files.

Allocation Study

Channel 229A at the proposed site will satisfy the Commission's minimum separation distance requirements, specified in Section 73.207(b) of the Rules, to all assignments except to KRLT(FM) on Channel 230A assigned to South Lake Tahoe, Nevada. As can be seen from Sheet 1 of Figure 2, KRLT(FM) is short-spaced to the proposed KGVN(FM). However, employing the directional antenna envelope as described below, no prohibited contour overlap will occur between KRLT(FM) and the proposed KGVN(FM) as shown by Sheet

2 of Figure 2. It is noted that KRLT(FM) is licensed pursuant to Section 73.215 and therefore, only the actual facilities are employed for contour protection.

Directional Antenna Pattern Envelope

In order to protect KRLT(FM) at South Lake Tahoe, KGVN(FM) proposes the use of a directional antenna. Figure 3 contains a plot of the proposed directional antenna radiation pattern envelope relative field, calculated in accordance with Section 73.313.6(c)(2-3) of the Commission's Rules. The actual directional antenna to be used will be designed to optimally meet this pattern envelope. The ratio of the pattern envelope maximum to minimum radiation does not exceed 15 dB nor does the radiation vary more than 2 dB per 10° of azimuth, in accordance with Section 73.313.6(b). The antenna will be mounted on the proposed tower in accordance with the specific instructions of the antenna manufacturer. No other antennas will be mounted on the tower at the same level as the proposed directional antenna, nor will the proposed directional antenna be mounted on the tower at a distance from any other antenna such that proper operation of the directional antenna would be hindered. Any additional information required by Section 73.316 will be supplied with the application for license.

Environmental Considerations

The proposed facility has been evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level in accordance with OST Bulletin No. 65, *Evaluating Compliance with FCC Specified Guidelines for*

*Human Exposure to Radiofrequency Electromagnetic Fields.*²

The power density at the base of the tower was calculated using the appropriate procedure contained in Section 2, Supplement A, *Additional Information for Radio and Television Broadcast Stations*, of the Bulletin.

For the calculation, a combined horizontal and vertical polarized effective radiated power of 7.2 kilowatts is employed with a radiation center of 29 meters above ground level. A Shivily 6800 series 2-bay antenna will be employed. The Commission's FM Model software program was employed for the calculations resulting with a predicted power density at ground level will not exceed 0.05 mW/cm² at ground level. This will be less than 5 percent of the Commission's guideline value in an controlled environment for a FM radio station.³

As noted in a past KGVN(FM) application for construction permit, the general population does not have access to any area within the vicinity of the entire KGVN(FM) community use antenna farm.⁴ Therefore, the KGVN(FM) transmitter site can be considered as a controlled electromagnetic environment.

Access to the transmitting site is restricted and appropriately marked with warning signs. When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction or shut down of power if necessary, shall be taken to ensure that the human exposure

² OET Bulletin 3.65, Second Edition 97-01, August, 1997.

³ The FCC maximum guideline for a FM broadcast station in an uncontrolled environment is 1.0 mW/cm².


⁴ See FCC File Number: BMPH-970306IA.

to radiofrequency radiation will not exceed the FCC
guidelines.

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June 14, 2000

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JUNE 2000

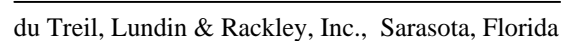
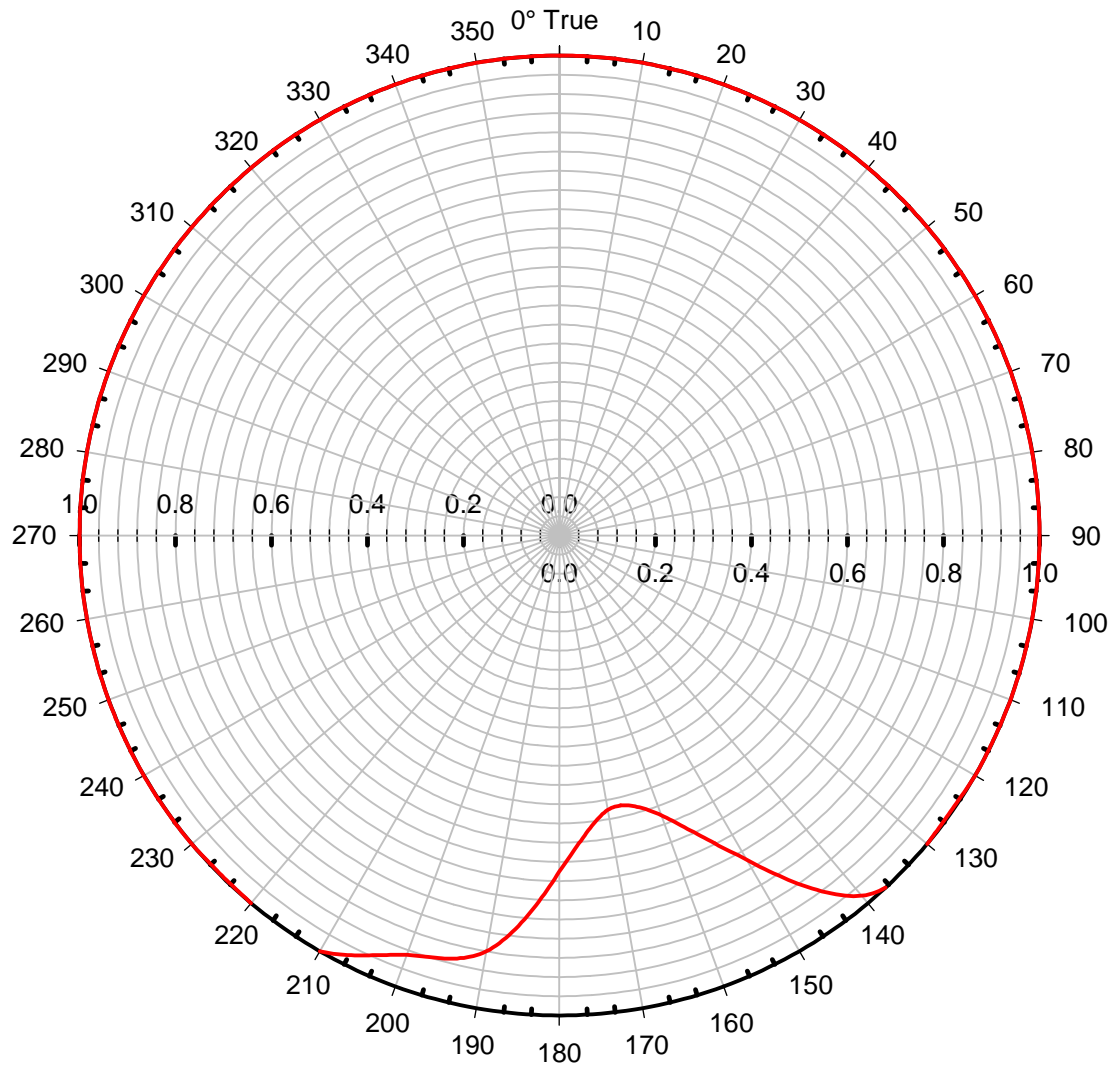


Figure 2



HORIZONTAL PLANE RELATIVE FIELD PATTERN

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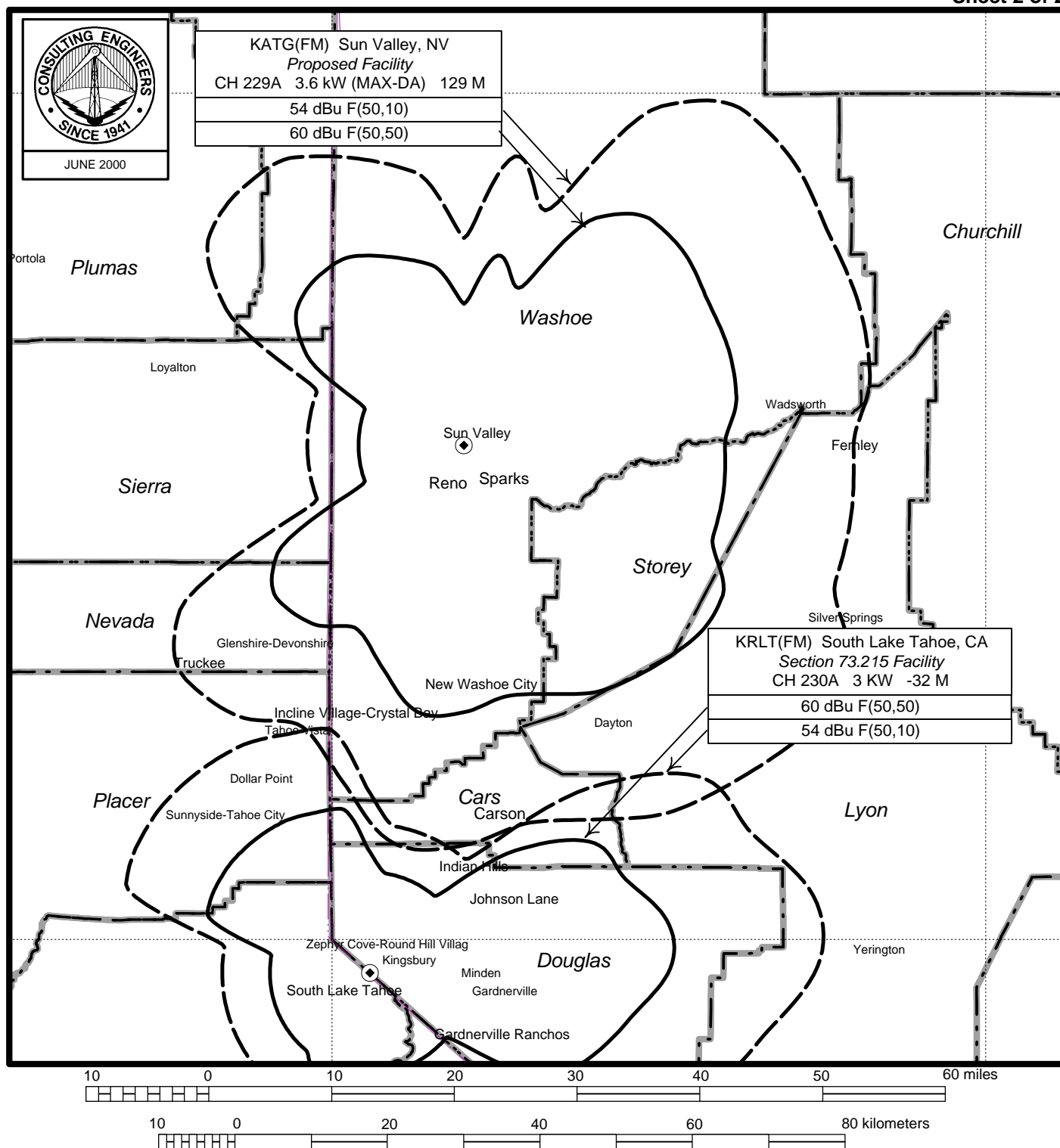
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Channel 229A Allocation Study

39° 35" 02" North Latitude
119° 47' 54" West Longitude

Call Status	City State	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-Tru	Dist. (km)	Req. (km)
KJDX LIC	Susanville CA	BLH860716KA	227C 93.3	100. 352.0	40-27-13 120-34-14	326.0	116.94	95
KGVN LIC	Sun Valley NV	BLH981028KD	229A 93.7	3.6 DA 129.0	39-35-02 119-47-54	.0	.00	
<i>(Applicant's existing facility.)</i>								
KXOA LIC	Roseville CA	BLH940615KA	229B1 93.7	25. 100.0	38-44-22 121-12-50	232.9	154.15	143
KRLT LIC	South Lake Tahoe CA	BPH990930AO	230A 93.9	3. -32.0	38-57-38 119-56-32	190.2	70.32	72
<i>(Section 73.215 Processing.)</i>								



SECTION 73.215 ALLOCATION STUDY

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