

**Goldman Engineering Management
Auburn, CA**

ENGINEERING EXHIBIT
IN SUPPORT OF AN
APPLICATION FOR CONSTRUCTION PERMIT
KEJY – EUREKA, CALIFORNIA
790KHZ – Class D, 5KW DAY/ 0.11KW NIGHT – ND
CDBS FACILITY ID: 41339
APPLICATION TO CHANGE FREQUENCY
760KHZ- CLASS B, 0.5KW DAY/ 0.34KW NIGHT - ND

Applicant: EUREKA BROADCASTING CO, INC.

December 2020
Amended April 2021

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GENERAL

Goldman Engineering has been authorized by Eureka Broadcasting Company, Inc. (“EBCI”), licensee of Standard Broadcast Station, KEJY, Eureka, California, to prepare this Engineering Statement, FCC Form 301 (Section III), and the attached figures in support of an application for Construction Permit to make a minor change frequency (3rd adjacent), relocate the KEJY antenna system 1 kilometer northwest of the existing licensed site, change from a class D to class B station and operate non-directionally both day and night. KEJY is presently licensed to operate on 790kHz with a power of 5.0kW daytime and 110W nighttime. EBCI wishes to duplex on 760kHz into the existing antenna systems for co-owned station KWSW, 980kHz, 5kW, Day, ND, 500 watts night -DA and will use only the west tower of that array with the parameters shown below:

KEJY PROPOSED SPECIFICATIONS

- | | |
|-------------------------------------|----------------------|
| 1. Frequency | 760kHz |
| 2. Class | B |
| 3. Hours of operation | Unlimited |
| 4. Daytime/ Nighttime operation | |
| 5. Power | 500W Day/ 340W Night |
| a. Antenna location (NAD27) | 40° 48’ 02” N Lat |
| ASR 1039557 (Figure 2) ¹ | 124° 07’ 39” W Lon |
| b. NON-DIRECTIONAL OPERATION | |

¹ Although KEJY will only be using this tower (ASR 1039557), because KEJY will co-locate with KWSW, the center-of-array coordinates for KWSW are used for KEJY in keeping with FCC policy.

GROUND SYSTEM

It is proposed to use the existing ground system in use for KWSW. Based upon the most recent license from KWSW, the ground system “consists of 120-250' (69.5°) equally spaced, buried copper wire radials about the base of each tower. Intersecting radials shortened and bonded to common transverse copper strap midway between towers.” There will be no changes made to the existing ground system.

ANTENNA EFFICIENCY

This application proposes no new tower construction on the existing KWSW property. The present KWSW antenna system consists of a total of two, series excited, uniform cross-section, guyed, vertical steel towers. KEJY will be using the West tower. The tower drawing is shown in Figure 1. At 760kHz, the tower, which is 71.6m above the base insulator, is 65.4 electrical degrees in height at 760kHz.

- Pursuant to Figure 8 of Section 73.190 of the Commission's rules, at 0.5kW using 120, 69.5-degree radials, the theoretical RMS for the proposed daytime and nighttime operation will be 273.7 mV/m per kW at 1km. Total RMS for Day operation is 193.6mV/m
- At 340 watts nighttime operation, the theoretical RMS for the proposed facility will be 273.7 mV/m per kW at 1km. The RMS for nighttime operation is 159.6mV/m
- There will be a remote reading base ammeter to determine operating power.

TOWERS AND REGISTRATION

A sketch of the tower at the subject site is attached as Figure 1. The proposed tower is registered (ASR 1039557). The tower is 73.1m AGL. Ground elevation at the tower is 1.1m. The height above the base insulator is 71.6m, which translates into an electrical height of 65.4 degrees.

The overall height above mean sea level of the towers is 74.2m. The ASR for the tower is attached as figure 2.

BLANKETING INTERFERENCE AND STATION INTERACTION

KEJY will be relocating to an existing facility used by KWSW. There is no population within the 1V/m blanketing contour. There are 40,254 people within the 25mV/m. Therefore, the proposed operation of KEJY will be compliant with 73.24(g). The proposed 1000mV/m contour is shown in Figure 3.

In response to all complaints of blanketing interference, the applicant will undertake steps to mitigate the interference in accordance with the requirements of section 73.88 of the Commission's Rules and Regulations.

The proposed KEJY antenna site is collocated with station KWSW. Filtering and detuning circuits will be installed and adjusted at the base of each of the two towers at the site to minimize the interaction of KEJY with KWSW such that no adverse impact will result from the collocation of the two stations. Detuning of the second tower at the site to the frequency of 760 will assure that there is no distortion of the KEJY pattern. The site is located within 3 kilometers AM station KIIH (1400kHz). Filters already exist for KEJY at the KIIH site (currently set for 790kHz). The filters will be modified to use at 760kHz to assure no adverse interaction occurs between KEJY and KIIH.

COVERAGE CONTOURS

The proposed daytime and nighttime service contours are shown on the map of figure 4 (Day) and 5 (Night). The proposed 5.0mV/m daytime contour fully encompasses the entire community of license, Eureka, California. Figure 7 depicts proposed nighttime 20.4mV/m NIF contour. The proposed KEJY nighttime facility is projected to cover 86.3% of the principal community of Eureka, CA by area and 98.3% of the population. Daytimes, KEJY will cover 100% of Eureka, CA from both a population and area standpoint. Based upon the above, KEJY will be compliant with 73.24(i) of the commission's rules.

DAYTIME ALLOCATION STUDY

As a non-directional facility, the closest protection to KEJY (760kHz) was determined to be incoming interference from KCBC (770kHz), Manteca. Toward KCBC, the maximum allowable limit is 628.9mV/m @ 1km. The daytime study is shown as Figure 6 with the daytime allocation map shown on figure 7. Figure 8 shows the daytime limits in all directions. All daytime allocations are based upon M3 standard conductivities.

CRITICAL HOURS EVALUATION

The KEJY proposed daytime operation was evaluated for critical hours limits. The only pertinent station is WJR, Detroit. As shown in Figure 13, there are no critical hours limitations to WJR.

NIGHTTIME ALLOCATION STUDY

For nighttime operation, the closest limitation is to KGB, 760kHz, San Diego, CA. The results of the nighttime allocation study are shown in Figures 9 through 12.

ENVIRONMENTAL IMPACT

This application for construction permit to authorize a minor change in the KEJY transmission facilities proposes that KEJY be collocated with KWSW. No additional towers or additional ground system will be constructed. Consequently, with the exception of Section 1.1307(b), with respect to RF radiation (see next section), the proposed installation for KEJY is categorically excluded from environmental processing by Note 3 of Section 1.1306 of the Commission's rules.

COMPLIANCE WITH RF RADIATION REGULATIONS

Access to the area surrounding the proposed tower is restricted by a six foot chain link fence. Fence gates are locked at all times except when station personnel are performing maintenance within the restricted access area. Appropriate warning signs are posted at regular intervals warning of high radio frequency energy levels within the fenced areas.

Tables 1 and 2 of Supplement A (Edition 97-01) to OET Bulletin 65 (Edition 97-01) provide compliance distances for tower heights of 0.1 and 0.25 wavelength, respectively. During daytime operation, only KEJY will use the west tower. At night, both KEJY and KWSW will share the west tower, however, the total power in the west tower at night will be only 840 watts, therefore at the west tower, the singular KEJY 500W operation should be the defining power level for purposes of RF radiation evaluation. The electrical height of the tower at the KEJY frequency (760kHz) is 0.18 wavelength. Based upon the above parameters, a fence 2 meters from the tower base would be compliant with radiofrequency energy requirements. The licensee will verify that fences are installed at least 2m from the base of each tower to ensure compliance with RFR exposure to the general public.

As stated above, access to the area surrounding the base of the KEJY/ KWSW towers will be restricted to authorized maintenance personnel only. The licensees of both stations in a cooperative effort, will institute joint procedures to ensure protection of station personnel and tower contractors working on or in the immediate vicinity of the towers. Procedures will be followed during times of service or maintenance of the transmission systems to ensure that personnel are not exposed to energy levels more than the maximum permissible exposure limit. Based upon the above analysis, the proposed facility will be in compliance with Section 1.1307(b) pertaining to RF Radiation.

CERTIFICATION

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

A handwritten signature in black ink, appearing to read "Bertram S. Goldman", with a long horizontal flourish extending to the right.

Bertram S. Goldman
Goldman Engineering Management, Inc

Figure 1- KEJY TOWER SKETCH

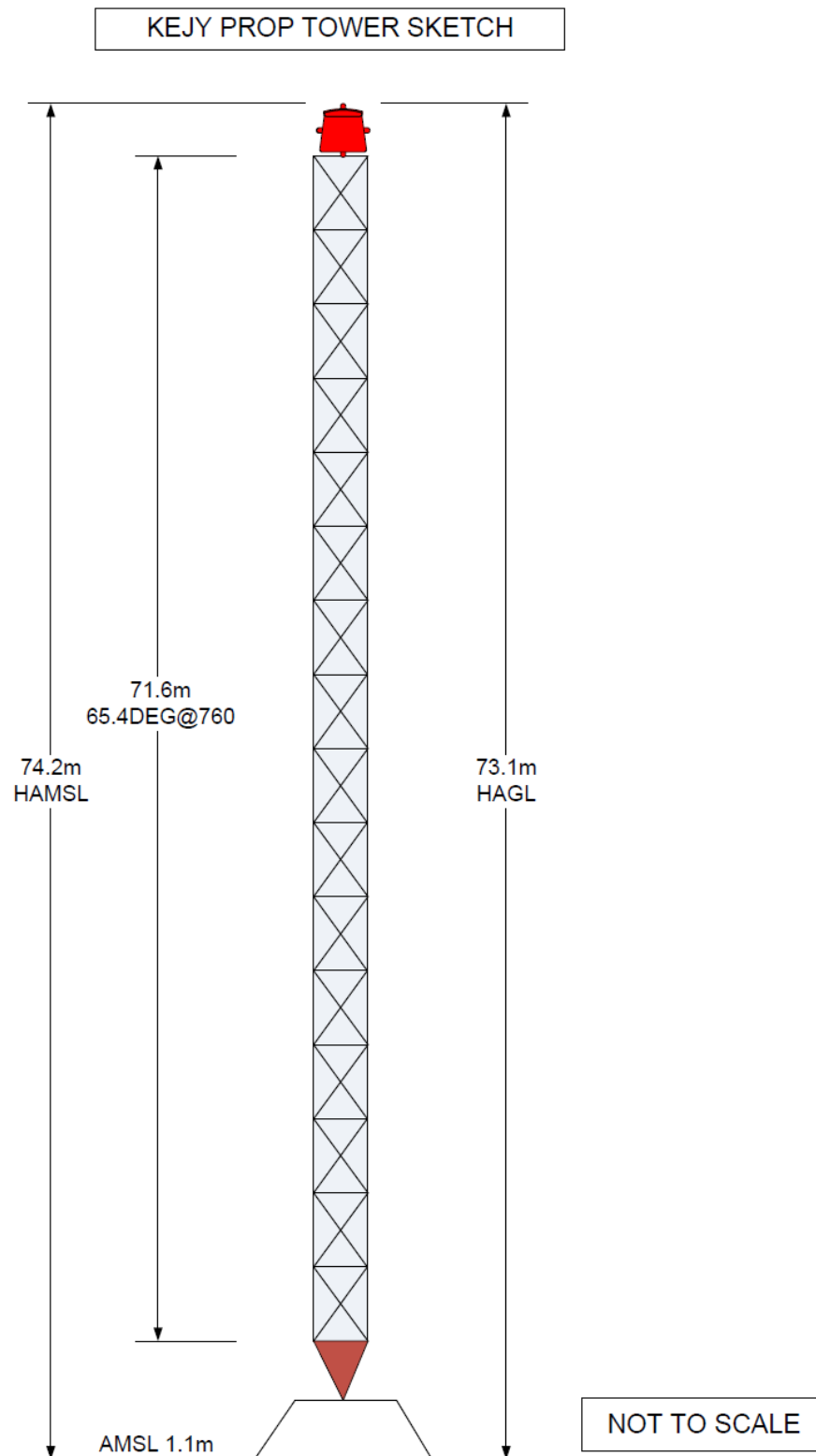


Figure 2- TOWER ASR

Registration 1039557

 [Map Registration](#)

Registration Detail

Reg Number	1039557	Status	Constructed
File Number	A1070770	Constructed	10/30/2009
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type GTOWER - Guyed Structure Used for Communication Purposes

Location (in NAD83 Coordinates)

Lat/Long	40-48-01.0 N 124-07-46.0 W	Address	TWR 1 - 1101 MARSH RD
City, State	EUREKA , CA		
Zip	95501	County	HUMBOLDT
Center of AM Array	40-48-01.5 N 124-07-43.5 W	Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
1.1	73.1
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
74.2	72.2

Painting and Lighting Specifications

FAA Chapters 3, 4, 5, 12

Paint and Light in Accordance with FAA Circular Number 70/7460-1L

FAA Notification

FAA Study	2017-AWP-2579-OE	FAA Issue Date	04/14/2017
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Owner & Contact Information

FRN	0009382235	Owner Entity Type	Corporation
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Owner

EUREKA BROADCASTING COMPANY DBA KINS
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Last Action Status

Status	Constructed	Received	04/19/2017
Purpose	Notification	Entered	04/19/2017
Mode	Interactive		

FIGURE 3- BLANKETING

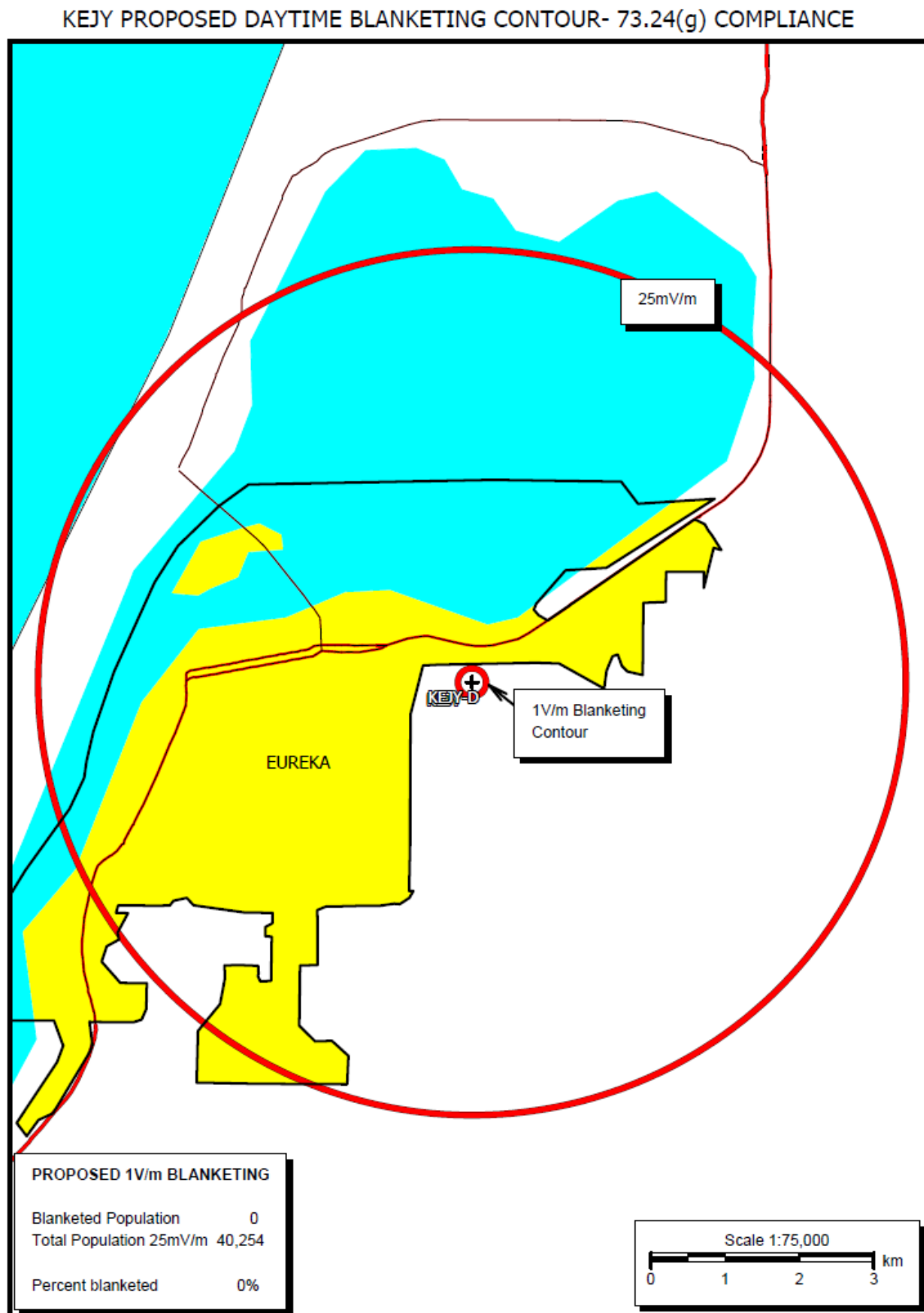


FIGURE 4- KEJY PROPOSED DAYTIME CONTOUR

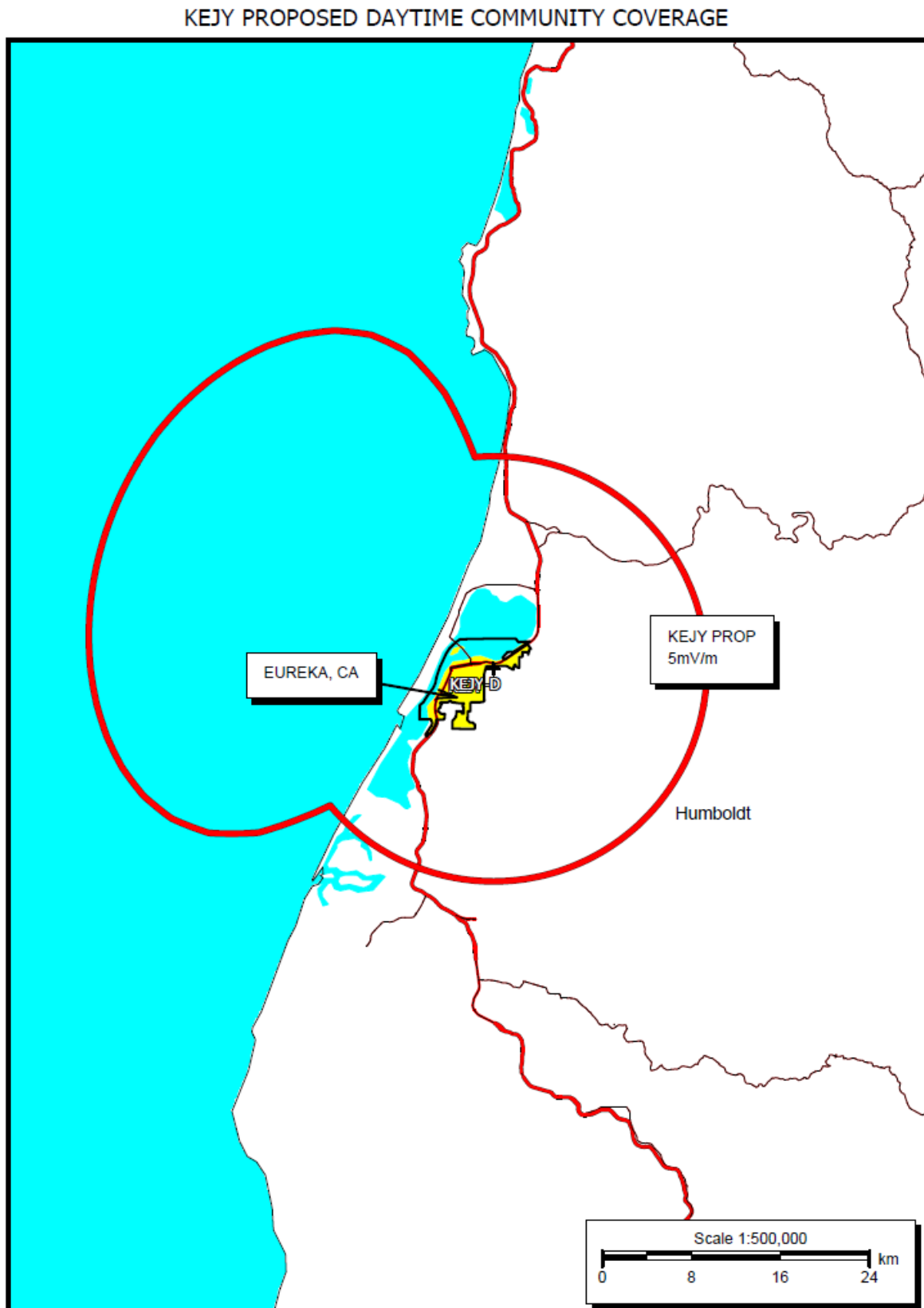


FIGURE 5- KEJY PROPOSED NIGHTTIME CONTOUR

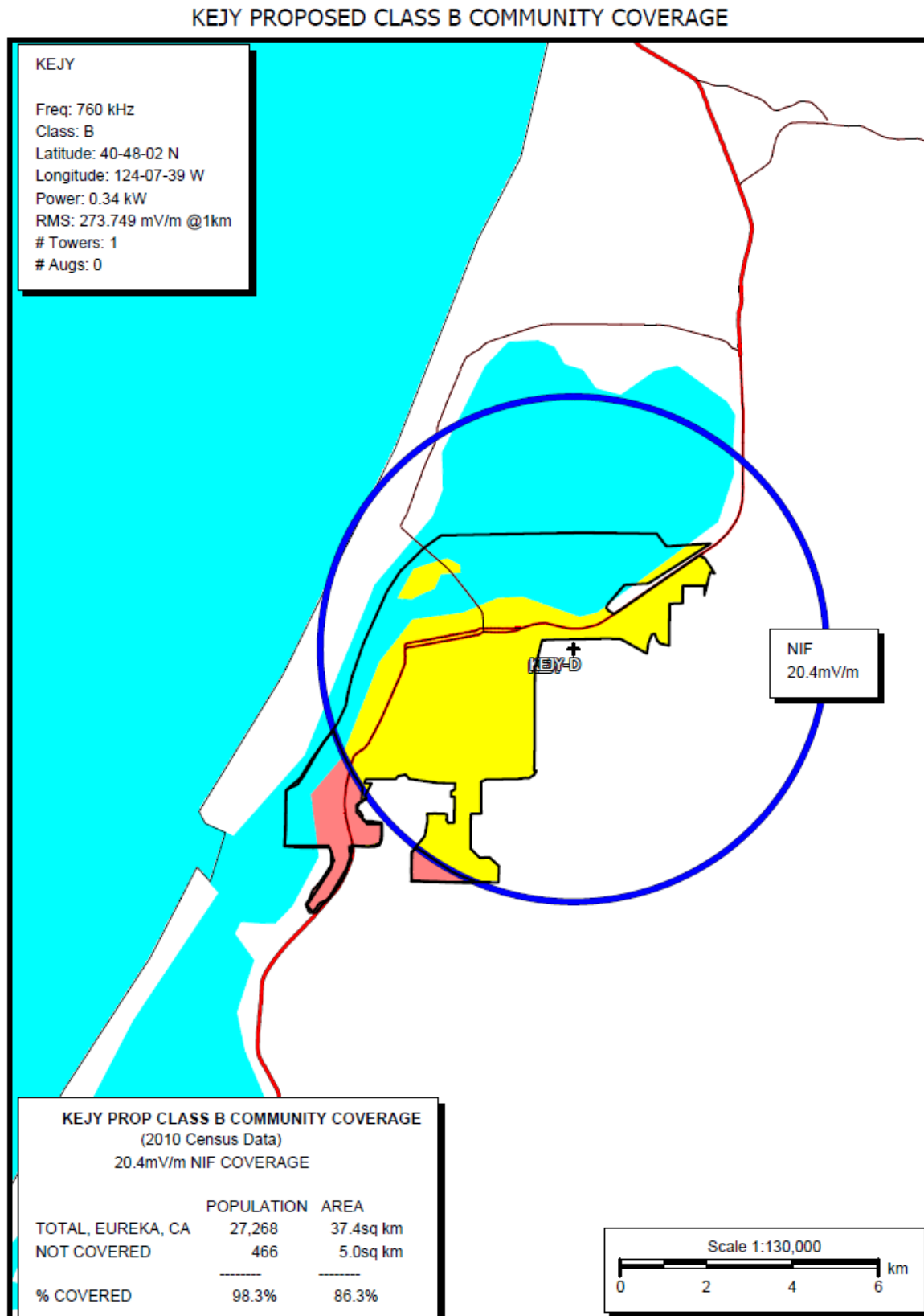


FIGURE 6, DAYTIME ALLOCATION STUDY

AM Daytime Study

Reference Station:

Call: KEJY

Freq: 760 kHz

EUREKA, CA, US

Lat: 40-48-02 N

Power: 0.5 kW

Lng: 124-07-39 W

Theo RMS: 273.75 mV/m @ 1km

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swth	TL Swth	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	65.4	0	0	0.0	0.0	0.0	0.0

Call	Freq	City	ST	Dist	Azi	In	Out
KCBC	770	MANTECA	CA	435.2	141.0	37.92	63.33
KEZX	730	MEDFORD	OR	200.4	33.7	186.56	186.56
KCBS	740	SAN FRANCISCO	CA	325.8	155.5	192.24	192.24
KXTG	750	PORTLAND	OR	529.1	15.6	242.67	272.47
KKOH	780	RENO	NV	388.6	110.1	283.45	283.45
KTTH	770	SEATTLE	WA	745.1	11.2	472.24	501.30
KGB	760	SAN DIEGO	CA	1086.1	146.4	627.02	708.51
CKQR	760	CASTLEGAR	BC	1074.1	30.9	671.85	838.16
CKQR	760	CASTLEGAR	BC	1074.1	30.9	671.85	838.16
KTBA	760	TUBA CITY	AZ	1236.0	118.7	896.81	926.10

FIGURE 7, DAYTIME ALLOCATION MAP

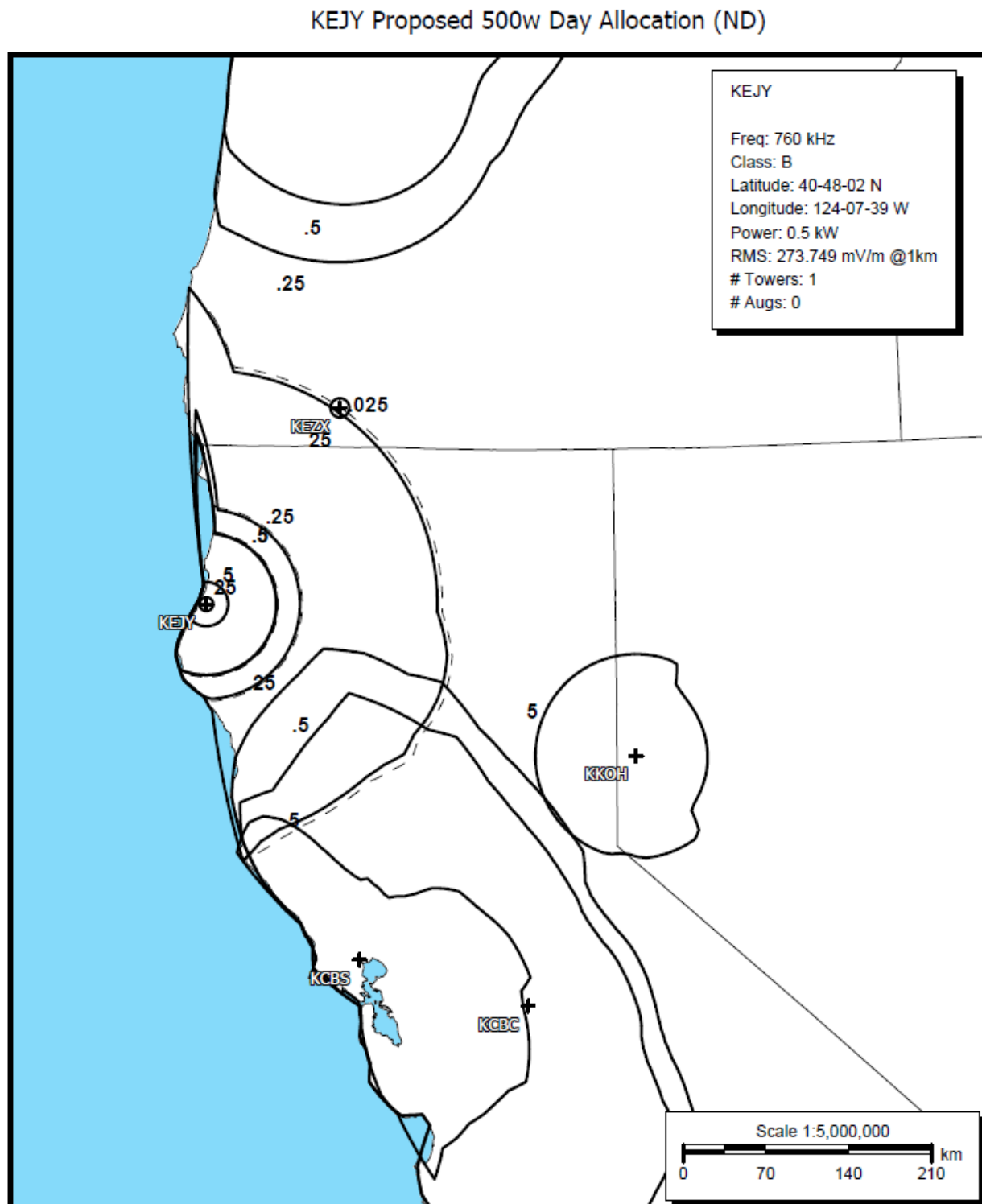


FIGURE 8-DAYTIME LIMITREPORT

Radiation Limit Report for KEJY

Frequency: 760 kHz

Latitude: 40-48-02 N Longitude: 124-07-39 W

* indicates contour of proposed station

Azi (deg)	Rad Limit (mV/m@1km)	Call Letters	Contour Overlap	Azi (deg)	Rad Limit (mV/m@1km)	Call Letters	Contour Overlap
-							
0	9999.9	No Limit		180	9999.9	No Limit	
5	9999.9	No Limit		185	9999.9	No Limit	
10	9999.9	No Limit		190	9999.9	No Limit	
15	9999.9	No Limit		195	9999.9	No Limit	
20	9999.9	No Limit		200	9999.9	No Limit	
25	9999.9	No Limit		205	9999.9	No Limit	
30	9999.9	No Limit		210	9999.9	No Limit	
35	9999.9	No Limit		215	9999.9	No Limit	
40	9999.9	No Limit		220	9999.9	No Limit	
45	9999.9	No Limit		225	9999.9	No Limit	
50	9999.9	No Limit		230	9999.9	No Limit	
55	9999.9	No Limit		235	9999.9	No Limit	
60	9999.9	No Limit		240	9999.9	No Limit	
65	9999.9	No Limit		245	9999.9	No Limit	
70	9999.9	No Limit		250	9999.9	No Limit	
75	9999.9	No Limit		255	9999.9	No Limit	
80	9999.9	No Limit		260	9999.9	No Limit	
85	9999.9	No Limit		265	9999.9	No Limit	
90	9999.9	No Limit		270	9999.9	No Limit	
95	9999.9	No Limit		275	9999.9	No Limit	
100	9999.9	No Limit		280	9999.9	No Limit	
105	9999.9	No Limit		285	9999.9	No Limit	
110	773.0	KCBC	[0.500* 0.250]	290	9999.9	No Limit	
115	710.0	KCBC	[0.500* 0.250]	295	9999.9	No Limit	
120	670.9	KCBC	[0.500* 0.250]	300	9999.9	No Limit	
125	649.9	KCBC	[0.500* 0.250]	305	9999.9	No Limit	
130	631.8	KCBC	[0.500* 0.250]	310	9999.9	No Limit	
135	628.9	KCBC	[0.500* 0.250]	315	9999.9	No Limit	
140	641.5	KCBC	[0.500* 0.250]	320	9999.9	No Limit	
145	671.0	KCBC	[0.500* 0.250]	325	9999.9	No Limit	
150	721.1	KCBC	[0.500* 0.250]	330	9999.9	No Limit	
155	797.7	KCBC	[0.500* 0.250]	335	9999.9	No Limit	
160	935.1	KCBC	[0.500* 0.250]	340	9999.9	No Limit	
165	1183.1	KCBC	[0.500* 0.250]	345	9999.9	No Limit	
170	1078.3	KCBC	[0.500* 0.250]	350	9999.9	No Limit	
175	9999.9	No Limit		355	9999.9	No Limit	

FIGURE 9 KEJY PROP NIGHTTIME ND OPERATION

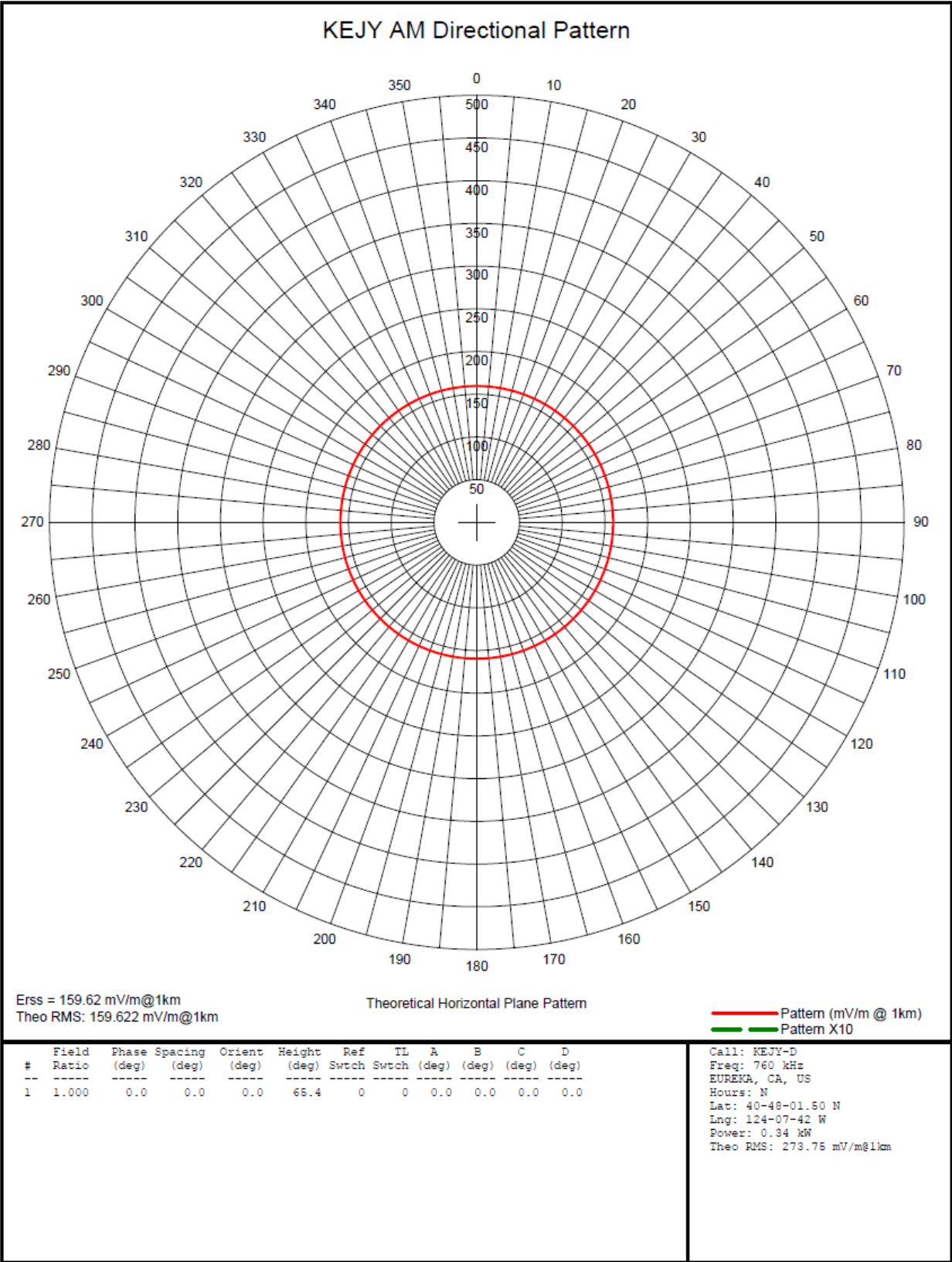


FIGURE 10- NIGHT PROTECTIONS REPORT

KEJY PROP NIGHT PROTECTIONS REPORT (760kHz, 310w)

Night Allocation Protection Report

Call: KEJY-D

Freq: 760 kHz

EUREKA, CA, US

Hours: N

Lat: 40-48-01.50 N

Lng: 124-07-42 W

Power: 0.34 kW

Number of Ground System Radials: 120 / Average Ground Radial Length: 69.5 deg

Theo RMS: 273.75 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	65.4	0	0	0.0	0.0	0.0	0.0

Call Letters	Ct	St	City	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
KGB	US	CA	SAN DIEGO	40.05	1.290	161.07	158.84	2.22
50% = 4.267, 25% = 5.249; KKB=3.40 WJR=2.58 KTKR=1.72 CB 76-A=1.54								
KEEB/ =1.53 CKQR/A=1.29								

CKQR/A	CA	BC	CASTLEGAR	57.08	3.061	268.15	157.85	110.30
50% = 6.123, 25% = 7.268; KDFD=3.72 CJME/A=3.52 CFLD/U=3.35 KGB=3.01 WJR=2.51								

CKQR/A	CA	BC	CASTLEGAR	57.08	3.061	268.15	157.85	110.30
50% = 6.123, 25% = 7.268; KDFD=3.72 CJME/A=3.52 CFLD/U=3.35 KGB=3.01 WJR=2.51								

WJR (0)	US	MI	DETROIT	2.33	0.855	1835.91s	159.62	1676.28
WJR (1)	US	MI	DETROIT	2.32	0.861	1857.37s	159.62	1697.74
WJR (2)	US	MI	DETROIT	2.31	0.862	1869.56s	159.62	1709.93
WJR (3)	US	MI	DETROIT	2.29	0.867	1888.09s	159.62	1728.47
WJR (4)	US	MI	DETROIT	2.28	0.870	1905.27s	159.62	1745.65
WJR (5)	US	MI	DETROIT	2.27	0.870	1912.76s	159.62	1753.14
WJR (6)	US	MI	DETROIT	2.26	0.872	1927.11s	159.62	1767.49
WJR (7)	US	MI	DETROIT	2.25	0.874	1940.14s	159.62	1780.52
WJR (8)	US	MI	DETROIT	2.24	0.876	1951.86s	159.62	1792.24
WJR (9)	US	MI	DETROIT	2.24	0.879	1963.50s	159.62	1803.88
WJR (10)	US	MI	DETROIT	2.25	0.885	1969.77s	159.62	1810.15
WJR (11)	US	MI	DETROIT	2.26	0.880	1950.19s	159.62	1790.57
WJR (12)	US	MI	DETROIT	2.26	0.872	1924.99s	159.62	1765.37
WJR (13)	US	MI	DETROIT	2.27	0.862	1896.39s	159.62	1736.76
WJR (14)	US	MI	DETROIT	2.28	0.846	1855.59s	159.62	1695.97
WJR (15)	US	MI	DETROIT	2.28	0.824	1803.82s	159.62	1644.20
WJR (16)	US	MI	DETROIT	2.29	0.803	1754.02s	159.62	1594.40
WJR (17)	US	MI	DETROIT	2.30	0.779	1696.25s	159.62	1536.63
WJR (18)	US	MI	DETROIT	2.30	0.816	1773.17g	159.62	1613.55
WJR (19)	US	MI	DETROIT	2.30	0.892	1936.09g	159.62	1776.46
WJR (20)	US	MI	DETROIT	2.31	0.972	2105.55g	159.62	1945.92
WJR (21)	US	MI	DETROIT	2.31	1.053	2277.35g	159.62	2117.73
WJR (22)	US	MI	DETROIT	2.32	1.137	2454.36g	159.62	2294.74
WJR (23)	US	MI	DETROIT	2.32	1.223	2638.05g	159.62	2478.43
WJR (24)	US	MI	DETROIT	2.32	1.301	2800.78g	159.62	2641.16
WJR (25)	US	MI	DETROIT	2.32	1.392	2992.90g	159.62	2833.28
WJR (26)	US	MI	DETROIT	2.33	1.490	3201.36g	159.62	3041.73
WJR (27)	US	MI	DETROIT	2.33	1.590	3411.68g	159.62	3252.06
WJR (28)	US	MI	DETROIT	2.33	1.693	3629.70g	159.62	3470.08
WJR (29)	US	MI	DETROIT	2.33	1.799	3853.09g	159.62	3693.47
WJR (30)	US	MI	DETROIT	2.36	2.369	5019.34g	159.62	4859.71

WJR (31)	US MI DETROIT	2.38	3.074	6450.63g	159.62	6291.01
WJR (32)	US MI DETROIT	2.40	3.898	8117.37g	159.62	7957.75
WJR (33)	US MI DETROIT	2.42	4.902	10138.01g	159.62	9978.39
WJR (34)	US MI DETROIT	2.43	6.061	12460.46g	159.62	12300.84
WJR (35)	US MI DETROIT	2.45	7.315	14955.30g	159.62	14795.68
WJR (36)	US MI DETROIT	2.45	7.623	15585.83g	159.62	15426.21
WJR (37)	US MI DETROIT	2.46	9.118	18513.08g	159.62	18353.45
WJR (38)	US MI DETROIT	2.47	9.947	20173.96g	159.62	20014.34
WJR (39)	US MI DETROIT	2.47	10.698	21671.07g	159.62	21511.45
WJR (40)	US MI DETROIT	2.47	11.597	23447.17g	159.62	23287.55
WJR (41)	US MI DETROIT	2.47	12.098	24459.12g	159.62	24299.50
WJR (42)	US MI DETROIT	2.47	12.557	25383.11g	159.62	25223.49
WJR (43)	US MI DETROIT	2.48	13.510	27275.17g	159.62	27115.55
WJR (44)	US MI DETROIT	2.48	14.659	29545.22g	159.62	29385.60
WJR (45)	US MI DETROIT	2.49	16.076	32334.53g	159.62	32174.91
WJR (46)	US MI DETROIT	2.49	17.633	35401.00g	159.62	35241.38
WJR (47)	US MI DETROIT	2.49	18.700	37518.40g	159.62	37358.78
WJR (48)	US MI DETROIT	2.49	19.587	39268.84g	159.62	39109.22
WJR (49)	US MI DETROIT	2.50	20.480	41000.84g	159.62	40841.21
WJR (50)	US MI DETROIT	2.51	24.110	47950.53g	159.62	47790.91
WJR (51)	US MI DETROIT	2.56	39.858	77820.33g	159.62	77660.70
WJR (52)	US MI DETROIT	2.57	43.458	84638.87g	159.62	84479.24
WJR (53)	US MI DETROIT	2.57	47.042	91419.08g	159.62	91259.46
WJR (54)	US MI DETROIT	2.58	50.631	98201.92g	159.62	98042.30
WJR (55)	US MI DETROIT	2.65	278.529	524790.59g	159.62	524630.97
WJR (56)	US MI DETROIT	2.65	283.000	533178.99g	159.62	533019.36
WJR (57)	US MI DETROIT	2.65	287.379	541395.29g	159.62	541235.67
WJR (58)	US MI DETROIT	2.65	291.667	549438.66g	159.62	549279.04
WJR (59)	US MI DETROIT	2.65	295.833	557252.47g	159.62	557092.85
WJR (60)	US MI DETROIT	2.65	299.895	564869.98g	159.62	564710.36
WJR (61)	US MI DETROIT	2.65	303.857	572298.80g	159.62	572139.18
WJR (62)	US MI DETROIT	2.65	307.718	579538.55g	159.62	579378.93
WJR (63)	US MI DETROIT	1.26	0.500	1979.15S	159.62	1819.53
WJR (64)	US MI DETROIT	1.26	0.500	1980.67S	159.62	1821.05
WJR (65)	US MI DETROIT	1.26	0.500	1983.55S	159.62	1823.93
WJR (66)	US MI DETROIT	1.26	0.500	1984.17S	159.62	1824.55
WJR (67)	US MI DETROIT	1.26	0.500	1984.35S	159.62	1824.72
WJR (68)	US MI DETROIT	1.26	0.500	1985.86S	159.62	1826.24
WJR (69)	US MI DETROIT	1.26	0.500	1985.14S	159.62	1825.52
WJR (70)	US MI DETROIT	1.26	0.500	1985.75S	159.62	1826.13
WJR (71)	US MI DETROIT	1.26	0.500	1984.14S	159.62	1824.52
WJR (72)	US MI DETROIT	1.26	0.500	1983.84S	159.62	1824.22
WJR (73)	US MI DETROIT	1.26	0.500	1981.36S	159.62	1821.73
WJR (74)	US MI DETROIT	1.26	0.500	1978.44S	159.62	1818.82
WJR (75)	US MI DETROIT	1.26	0.500	1976.81S	159.62	1817.19
WJR (76)	US MI DETROIT	1.27	0.500	1973.04S	159.62	1813.42
WJR (77)	US MI DETROIT	1.27	0.500	1970.53S	159.62	1810.91
WJR (78)	US MI DETROIT	1.27	0.500	1965.93S	159.62	1806.31
WJR (79)	US MI DETROIT	1.27	0.500	1962.57S	159.62	1802.95
WJR (80)	US MI DETROIT	1.28	0.500	1957.15S	159.62	1797.53
WJR (81)	US MI DETROIT	1.28	0.500	1951.34S	159.62	1791.72
WJR (82)	US MI DETROIT	1.28	0.500	1946.75S	159.62	1787.13
WJR (83)	US MI DETROIT	1.29	0.500	1940.18S	159.62	1780.55
WJR (84)	US MI DETROIT	1.29	0.500	1934.79S	159.62	1775.17
WJR (85)	US MI DETROIT	1.30	0.500	1927.47S	159.62	1767.85
WJR (86)	US MI DETROIT	1.30	0.500	1921.32S	159.62	1761.70
WJR (87)	US MI DETROIT	1.31	0.500	1913.30S	159.62	1753.67
WJR (88)	US MI DETROIT	1.31	0.500	1906.41S	159.62	1746.79
WJR (89)	US MI DETROIT	1.32	0.500	1897.71S	159.62	1738.09
WJR (90)	US MI DETROIT	1.32	0.500	1888.71S	159.62	1729.09
WJR (91)	US MI DETROIT	1.33	0.500	1880.80S	159.62	1721.18
WJR (92)	US MI DETROIT	1.34	0.500	1871.18S	159.62	1711.55
WJR (93)	US MI DETROIT	1.34	0.500	1862.62S	159.62	1703.00
WJR (94)	US MI DETROIT	1.35	0.500	1852.42S	159.62	1692.80
WJR (95)	US MI DETROIT	1.36	0.500	1843.27S	159.62	1683.64
WJR (96)	US MI DETROIT	1.36	0.500	1832.53S	159.62	1672.91
WJR (97)	US MI DETROIT	1.37	0.500	1822.81S	159.62	1663.18
WJR (98)	US MI DETROIT	1.38	0.500	1811.57S	159.62	1651.95
WJR (99)	US MI DETROIT	1.39	0.500	1800.12S	159.62	1640.50
WJR (100)	US MI DETROIT	1.40	0.500	1789.64S	159.62	1630.02
WJR (101)	US MI DETROIT	1.41	0.500	1777.75S	159.62	1618.13

WJR (102)	US MI DETROIT	1.41	0.500	1766.80S	159.62	1607.18
WJR (103)	US MI DETROIT	1.42	0.500	1754.52S	159.62	1594.90
WJR (104)	US MI DETROIT	1.44	0.500	1742.07S	159.62	1582.45
WJR (105)	US MI DETROIT	1.44	0.500	1730.52S	159.62	1570.90
WJR (106)	US MI DETROIT	1.46	0.500	1717.74S	159.62	1558.12
WJR (107)	US MI DETROIT	1.47	0.500	1705.83S	159.62	1546.21
WJR (108)	US MI DETROIT	1.48	0.500	1692.76S	159.62	1533.14
WJR (109)	US MI DETROIT	1.49	0.503	1686.31s	159.62	1526.69
WJR (110)	US MI DETROIT	1.51	0.511	1689.34s	159.62	1529.72
WJR (111)	US MI DETROIT	1.53	0.517	1688.73s	159.62	1529.11
WJR (112)	US MI DETROIT	1.55	0.520	1680.67s	159.62	1521.05
WJR (113)	US MI DETROIT	1.56	0.521	1670.57s	159.62	1510.95
WJR (114)	US MI DETROIT	1.57	0.523	1659.84s	159.62	1500.21
WJR (115)	US MI DETROIT	1.59	0.525	1651.38s	159.62	1491.76
WJR (116)	US MI DETROIT	1.60	0.522	1631.88s	159.62	1472.26
WJR (117)	US MI DETROIT	1.60	0.514	1601.84s	159.62	1442.22
WJR (118)	US MI DETROIT	1.62	0.514	1588.55s	159.62	1428.93
WJR (119)	US MI DETROIT	1.63	0.514	1574.24s	159.62	1414.62
WJR (120)	US MI DETROIT	1.65	0.514	1561.50s	159.62	1401.87
WJR (121)	US MI DETROIT	1.66	0.513	1545.55s	159.62	1385.93
WJR (122)	US MI DETROIT	1.67	0.513	1531.64s	159.62	1372.02
WJR (123)	US MI DETROIT	1.69	0.512	1514.62s	159.62	1355.00
WJR (124)	US MI DETROIT	1.70	0.512	1502.04s	159.62	1342.42
WJR (125)	US MI DETROIT	1.72	0.512	1487.49s	159.62	1327.87
WJR (126)	US MI DETROIT	1.74	0.511	1472.45s	159.62	1312.82
WJR (127)	US MI DETROIT	1.75	0.512	1459.32s	159.62	1299.70
WJR (128)	US MI DETROIT	1.77	0.511	1443.30s	159.62	1283.68
WJR (129)	US MI DETROIT	1.78	0.506	1421.01s	159.62	1261.39
WJR (130)	US MI DETROIT	1.79	0.500	1394.00S	159.62	1234.38
WJR (131)	US MI DETROIT	1.81	0.500	1380.07S	159.62	1220.45
WJR (132)	US MI DETROIT	1.83	0.500	1366.66S	159.62	1207.04
WJR (133)	US MI DETROIT	1.85	0.500	1352.81S	159.62	1193.19
WJR (134)	US MI DETROIT	1.87	0.500	1339.01S	159.62	1179.39
WJR (135)	US MI DETROIT	1.89	0.500	1325.70S	159.62	1166.08
WJR (136)	US MI DETROIT	1.91	0.500	1312.02S	159.62	1152.39
WJR (137)	US MI DETROIT	1.93	0.500	1298.40S	159.62	1138.78
WJR (138)	US MI DETROIT	1.95	0.500	1285.23S	159.62	1125.61
WJR (139)	US MI DETROIT	1.97	0.500	1271.74S	159.62	1112.12
WJR (140)	US MI DETROIT	1.99	0.500	1258.33S	159.62	1098.71
WJR (141)	US MI DETROIT	2.01	0.500	1245.01S	159.62	1085.39
WJR (142)	US MI DETROIT	2.03	0.500	1232.08S	159.62	1072.46
WJR (143)	US MI DETROIT	2.05	0.500	1218.91S	159.62	1059.29
WJR (144)	US MI DETROIT	2.07	0.500	1205.83S	159.62	1046.21
WJR (145)	US MI DETROIT	2.10	0.500	1192.84S	159.62	1033.21
WJR (146)	US MI DETROIT	2.12	0.500	1180.20S	159.62	1020.58
WJR (147)	US MI DETROIT	2.14	0.500	1167.38S	159.62	1007.76
WJR (148)	US MI DETROIT	2.17	0.500	1154.67S	159.62	995.04
WJR (149)	US MI DETROIT	2.19	0.500	1142.05S	159.62	982.42
WJR (150)	US MI DETROIT	2.21	0.500	1129.53S	159.62	969.90
WJR (151)	US MI DETROIT	2.24	0.500	1117.31S	159.62	957.69
WJR (152)	US MI DETROIT	2.26	0.500	1104.98S	159.62	945.36
WJR (153)	US MI DETROIT	2.29	0.500	1092.76S	159.62	933.14
WJR (154)	US MI DETROIT	2.31	0.500	1080.64S	159.62	921.02
WJR (155)	US MI DETROIT	2.34	0.500	1068.63S	159.62	909.01
WJR (156)	US MI DETROIT	2.37	0.500	1056.87S	159.62	897.25
WJR (157)	US MI DETROIT	2.39	0.500	1045.06S	159.62	885.44
WJR (158)	US MI DETROIT	2.42	0.500	1033.37S	159.62	873.74
WJR (159)	US MI DETROIT	2.45	0.500	1021.78S	159.62	862.15
WJR (160)	US MI DETROIT	2.47	0.500	1010.29S	159.62	850.67
WJR (161)	US MI DETROIT	2.50	0.500	998.92S	159.62	839.30
WJR (162)	US MI DETROIT	2.53	0.500	987.75S	159.62	828.13
WJR (163)	US MI DETROIT	2.56	0.500	976.60S	159.62	816.97
WJR (164)	US MI DETROIT	2.59	0.500	965.55S	159.62	805.93
WJR (165)	US MI DETROIT	2.62	0.500	954.61S	159.62	794.99
WJR (166)	US MI DETROIT	2.65	0.500	943.79S	159.62	784.17
WJR (167)	US MI DETROIT	2.68	0.500	933.08S	159.62	773.45
WJR (168)	US MI DETROIT	2.71	0.500	922.47S	159.62	762.85
WJR (169)	US MI DETROIT	2.74	0.500	911.99S	159.62	752.36
WJR (170)	US MI DETROIT	2.77	0.500	901.63S	159.62	742.01
WJR (171)	US MI DETROIT	2.80	0.500	891.36S	159.62	731.74
WJR (172)	US MI DETROIT	2.84	0.500	881.20S	159.62	721.57

WJR (173)	US MI DETROIT	2.87	0.500	871.15S	159.62	711.52
WJR (174)	US MI DETROIT	2.90	0.500	861.21S	159.62	701.59
WJR (175)	US MI DETROIT	2.94	0.500	851.38S	159.62	691.76
WJR (176)	US MI DETROIT	2.97	0.500	841.66S	159.62	682.04
WJR (177)	US MI DETROIT	3.00	0.500	832.06S	159.62	672.44
WJR (178)	US MI DETROIT	3.04	0.500	822.56S	159.62	662.94
WJR (179)	US MI DETROIT	3.07	0.500	813.18S	159.62	653.56
WJR (180)	US MI DETROIT	3.11	0.500	803.91S	159.62	644.28
WJR (181)	US MI DETROIT	3.15	0.500	794.74S	159.62	635.12
WJR (182)	US MI DETROIT	3.18	0.500	785.69S	159.62	626.07
WJR (183)	US MI DETROIT	3.22	0.500	776.75S	159.62	617.13
WJR (184)	US MI DETROIT	3.26	0.500	767.91S	159.62	608.29
WJR (185)	US MI DETROIT	3.29	0.500	759.19S	159.62	599.57
WJR (186)	US MI DETROIT	3.33	0.500	750.58S	159.62	590.96
WJR (187)	US MI DETROIT	3.37	0.500	742.07S	159.62	582.45
WJR (188)	US MI DETROIT	3.41	0.500	733.68S	159.62	574.06
WJR (189)	US MI DETROIT	3.45	0.500	725.39S	159.62	565.77
WJR (190)	US MI DETROIT	3.49	0.500	717.21S	159.62	557.59
WJR (191)	US MI DETROIT	3.53	0.500	709.14S	159.62	549.52
WJR (192)	US MI DETROIT	3.57	0.500	701.18S	159.62	541.56
WJR (193)	US MI DETROIT	3.61	0.500	693.33S	159.62	533.71
WJR (194)	US MI DETROIT	3.65	0.500	685.59S	159.62	525.96
WJR (195)	US MI DETROIT	3.69	0.500	677.95S	159.62	518.33
WJR (196)	US MI DETROIT	3.73	0.500	670.42S	159.62	510.80
WJR (197)	US MI DETROIT	3.77	0.500	663.00S	159.62	503.38
WJR (198)	US MI DETROIT	3.81	0.500	655.69S	159.62	496.07
WJR (199)	US MI DETROIT	3.86	0.500	648.49S	159.62	488.86
WJR (200)	US MI DETROIT	3.90	0.500	641.39S	159.62	481.77
WJR (201)	US MI DETROIT	3.94	0.500	634.55S	159.62	474.93
WJR (202)	US MI DETROIT	3.98	0.500	627.68S	159.62	468.05
WJR (203)	US MI DETROIT	4.03	0.500	620.91S	159.62	461.29
WJR (204)	US MI DETROIT	4.07	0.500	614.25S	159.62	454.62
WJR (205)	US MI DETROIT	4.11	0.500	607.69S	159.62	448.07
WJR (206)	US MI DETROIT	4.16	0.500	601.25S	159.62	441.63
WJR (207)	US MI DETROIT	4.20	0.500	594.91S	159.62	435.29
WJR (208)	US MI DETROIT	4.25	0.500	588.68S	159.62	429.06
WJR (209)	US MI DETROIT	4.29	0.500	582.75S	159.62	423.13
WJR (210)	US MI DETROIT	4.33	0.500	576.74S	159.62	417.12
WJR (211)	US MI DETROIT	4.38	0.500	570.84S	159.62	411.22
WJR (212)	US MI DETROIT	4.42	0.500	565.05S	159.62	405.43
WJR (213)	US MI DETROIT	4.47	0.500	559.36S	159.62	399.74
WJR (214)	US MI DETROIT	4.51	0.500	553.79S	159.62	394.17
WJR (215)	US MI DETROIT	4.56	0.500	548.54S	159.62	388.92
WJR (216)	US MI DETROIT	4.60	0.500	543.19S	159.62	383.56
WJR (217)	US MI DETROIT	4.65	0.500	537.94S	159.62	378.32
WJR (218)	US MI DETROIT	4.69	0.500	532.81S	159.62	373.19
WJR (219)	US MI DETROIT	4.74	0.500	527.79S	159.62	368.17
WJR (220)	US MI DETROIT	4.78	0.500	523.11S	159.62	363.49
WJR (221)	US MI DETROIT	4.82	0.500	518.31S	159.62	358.69
WJR (222)	US MI DETROIT	4.87	0.500	513.62S	159.62	354.00
WJR (223)	US MI DETROIT	4.91	0.500	509.05S	159.62	349.42
WJR (224)	US MI DETROIT	4.95	0.500	504.58S	159.62	344.96
WJR (225)	US MI DETROIT	5.00	0.500	500.48S	159.62	340.86
WJR (226)	US MI DETROIT	5.04	0.500	496.24S	159.62	336.62
WJR (227)	US MI DETROIT	5.08	0.500	492.12S	159.62	332.50
WJR (228)	US MI DETROIT	5.12	0.500	488.11S	159.62	328.48
WJR (229)	US MI DETROIT	5.16	0.500	484.47S	159.62	324.85
WJR (230)	US MI DETROIT	5.20	0.500	480.69S	159.62	321.07
WJR (231)	US MI DETROIT	5.24	0.500	477.02S	159.62	317.40
WJR (232)	US MI DETROIT	5.28	0.500	473.75S	159.62	314.12
WJR (233)	US MI DETROIT	5.32	0.500	470.31S	159.62	310.69
WJR (234)	US MI DETROIT	5.35	0.500	466.99S	159.62	307.37
WJR (235)	US MI DETROIT	5.39	0.500	463.79S	159.62	304.17
WJR (236)	US MI DETROIT	5.42	0.500	460.99S	159.62	301.37
WJR (237)	US MI DETROIT	5.46	0.500	458.02S	159.62	298.40
WJR (238)	US MI DETROIT	5.49	0.500	455.17S	159.62	295.55
WJR (239)	US MI DETROIT	5.52	0.500	452.74S	159.62	293.12
WJR (240)	US MI DETROIT	5.55	0.500	450.13S	159.62	290.51
WJR (241)	US MI DETROIT	5.58	0.500	447.64S	159.62	288.02
WJR (242)	US MI DETROIT	5.61	0.500	445.58S	159.62	285.95
WJR (243)	US MI DETROIT	5.64	0.500	443.33S	159.62	283.71

WJR (244)	US MI DETROIT	5.67	0.500	441.20S	159.62	281.58
WJR (245)	US MI DETROIT	5.69	0.500	439.51S	159.62	279.89
WJR (246)	US MI DETROIT	5.71	0.500	437.63S	159.62	278.01
WJR (247)	US MI DETROIT	5.74	0.500	435.87S	159.62	276.25
WJR (248)	US MI DETROIT	5.75	0.500	434.56S	159.62	274.94
WJR (249)	US MI DETROIT	5.77	0.500	433.05S	159.62	273.43
WJR (250)	US MI DETROIT	5.79	0.500	431.66S	159.62	272.04
WJR (251)	US MI DETROIT	5.80	0.500	430.74S	159.62	271.11
WJR (252)	US MI DETROIT	5.82	0.500	429.60S	159.62	269.98
WJR (253)	US MI DETROIT	5.83	0.500	428.94S	159.62	269.32
WJR (254)	US MI DETROIT	5.84	0.500	428.06S	159.62	268.44
WJR (255)	US MI DETROIT	5.85	0.500	427.31S	159.62	267.69
WJR (256)	US MI DETROIT	5.85	0.500	427.04S	159.62	267.42
WJR (257)	US MI DETROIT	5.86	0.500	426.55S	159.62	266.93
WJR (258)	US MI DETROIT	5.87	0.500	426.19S	159.62	266.57
WJR (259)	US MI DETROIT	5.86	0.500	426.32S	159.62	266.70
WJR (260)	US MI DETROIT	5.87	0.500	426.23S	159.62	266.60
WJR (261)	US MI DETROIT	5.86	0.500	426.62S	159.62	267.00
WJR (262)	US MI DETROIT	5.86	0.500	426.80S	159.62	267.18
WJR (263)	US MI DETROIT	5.85	0.500	427.11S	159.62	267.48
WJR (264)	US MI DETROIT	5.84	0.500	427.91S	159.62	268.29
WJR (265)	US MI DETROIT	5.83	0.500	428.50S	159.62	268.87
WJR (266)	US MI DETROIT	5.82	0.500	429.58S	159.62	269.96
WJR (267)	US MI DETROIT	5.81	0.500	430.44S	159.62	270.82
WJR (268)	US MI DETROIT	5.79	0.500	431.81S	159.62	272.18
WJR (269)	US MI DETROIT	5.77	0.500	432.94S	159.62	273.32
WJR (270)	US MI DETROIT	5.76	0.500	434.22S	159.62	274.60
WJR (271)	US MI DETROIT	5.73	0.500	436.01S	159.62	276.39
WJR (272)	US MI DETROIT	5.71	0.500	437.58S	159.62	277.95
WJR (273)	US MI DETROIT	5.69	0.500	439.66S	159.62	280.04
WJR (274)	US MI DETROIT	5.66	0.500	441.51S	159.62	281.89
WJR (275)	US MI DETROIT	5.63	0.500	443.89S	159.62	284.27
WJR (276)	US MI DETROIT	5.60	0.500	446.03S	159.62	286.41
WJR (277)	US MI DETROIT	5.58	0.500	448.32S	159.62	288.70
WJR (278)	US MI DETROIT	5.54	0.500	451.14S	159.62	291.52
WJR (279)	US MI DETROIT	5.51	0.500	453.73S	159.62	294.11
WJR (280)	US MI DETROIT	5.47	0.500	456.86S	159.62	297.23
WJR (281)	US MI DETROIT	5.44	0.500	459.75S	159.62	300.13
WJR (282)	US MI DETROIT	5.40	0.500	463.18S	159.62	303.56
WJR (283)	US MI DETROIT	5.36	0.500	466.38S	159.62	306.75
WJR (284)	US MI DETROIT	5.32	0.500	470.11S	159.62	310.49
WJR (285)	US MI DETROIT	5.28	0.500	473.62S	159.62	314.00
WJR (286)	US MI DETROIT	5.23	0.500	477.67S	159.62	318.05
WJR (287)	US MI DETROIT	5.19	0.500	481.50S	159.62	321.88
WJR (288)	US MI DETROIT	5.15	0.500	485.48S	159.62	325.86
WJR (289)	US MI DETROIT	5.10	0.500	490.01S	159.62	330.39
WJR (290)	US MI DETROIT	5.06	0.500	494.31S	159.62	334.69
WJR (291)	US MI DETROIT	5.01	0.500	499.16S	159.62	339.54
WJR (292)	US MI DETROIT	4.96	0.500	503.79S	159.62	344.17
WJR (293)	US MI DETROIT	4.91	0.500	508.97S	159.62	349.34
WJR (294)	US MI DETROIT	4.86	0.500	513.93S	159.62	354.30
WJR (295)	US MI DETROIT	4.82	0.500	519.05S	159.62	359.43
WJR (296)	US MI DETROIT	4.76	0.500	524.72S	159.62	365.10
WJR (297)	US MI DETROIT	4.72	0.500	530.19S	159.62	370.56
WJR (298)	US MI DETROIT	4.66	0.500	536.19S	159.62	376.57
WJR (299)	US MI DETROIT	4.61	0.500	541.99S	159.62	382.37
WJR (300)	US MI DETROIT	4.56	0.500	548.33S	159.62	388.71
WJR (301)	US MI DETROIT	4.51	0.500	554.48S	159.62	394.85
WJR (302)	US MI DETROIT	4.46	0.500	560.80S	159.62	401.18
WJR (303)	US MI DETROIT	4.40	0.500	567.65S	159.62	408.03
WJR (304)	US MI DETROIT	4.35	0.500	574.32S	159.62	414.70
WJR (305)	US MI DETROIT	4.30	0.500	581.51S	159.62	421.89
WJR (306)	US MI DETROIT	4.25	0.500	588.53S	159.62	428.91
WJR (307)	US MI DETROIT	4.19	0.500	596.07S	159.62	436.45
WJR (308)	US MI DETROIT	4.14	0.500	603.45S	159.62	443.83
WJR (309)	US MI DETROIT	4.09	0.500	611.01S	159.62	451.39
WJR (310)	US MI DETROIT	4.04	0.500	619.07S	159.62	459.44
WJR (311)	US MI DETROIT	3.99	0.500	626.99S	159.62	467.36
WJR (312)	US MI DETROIT	3.93	0.500	635.39S	159.62	475.77
WJR (313)	US MI DETROIT	3.88	0.500	643.67S	159.62	484.05
WJR (314)	US MI DETROIT	3.83	0.500	652.13S	159.62	492.51

WJR (315)	US MI DETROIT	3.78	0.500	661.06S	159.62	501.44
WJR (316)	US MI DETROIT	3.73	0.500	669.89S	159.62	510.27
WJR (317)	US MI DETROIT	3.68	0.500	678.90S	159.62	519.28
WJR (318)	US MI DETROIT	3.63	0.500	688.36S	159.62	528.74
WJR (319)	US MI DETROIT	3.58	0.500	697.73S	159.62	538.11
WJR (320)	US MI DETROIT	3.53	0.500	707.30S	159.62	547.68
WJR (321)	US MI DETROIT	3.49	0.500	717.27S	159.62	557.65
WJR (322)	US MI DETROIT	3.44	0.500	727.20S	159.62	567.58
WJR (323)	US MI DETROIT	3.39	0.500	737.31S	159.62	577.69
WJR (324)	US MI DETROIT	3.34	0.500	747.80S	159.62	588.18
WJR (325)	US MI DETROIT	3.30	0.500	758.27S	159.62	598.65
WJR (326)	US MI DETROIT	3.25	0.500	768.93S	159.62	609.31
WJR (327)	US MI DETROIT	3.21	0.500	779.93S	159.62	620.31
WJR (328)	US MI DETROIT	3.16	0.500	790.94S	159.62	631.32
WJR (329)	US MI DETROIT	3.12	0.500	802.13S	159.62	642.51
WJR (330)	US MI DETROIT	3.07	0.500	813.51S	159.62	653.89
WJR (331)	US MI DETROIT	3.03	0.500	825.17S	159.62	665.55
WJR (332)	US MI DETROIT	2.99	0.500	836.89S	159.62	677.27
WJR (333)	US MI DETROIT	2.95	0.500	848.79S	159.62	689.17
WJR (334)	US MI DETROIT	2.90	0.500	860.92S	159.62	701.30
WJR (335)	US MI DETROIT	2.86	0.500	873.16S	159.62	713.54
WJR (336)	US MI DETROIT	2.82	0.500	885.57S	159.62	725.95
WJR (337)	US MI DETROIT	2.78	0.512	920.29S	159.62	760.67
WJR (338)	US MI DETROIT	2.75	0.531	967.35S	159.62	807.73
WJR (339)	US MI DETROIT	2.71	0.548	1011.05S	159.62	851.43
WJR (340)	US MI DETROIT	2.68	0.565	1055.88S	159.62	896.25
WJR (341)	US MI DETROIT	2.65	0.582	1099.47S	159.62	939.84
WJR (342)	US MI DETROIT	2.62	0.599	1144.33S	159.62	984.71
WJR (343)	US MI DETROIT	2.59	0.614	1185.10S	159.62	1025.48
WJR (344)	US MI DETROIT	2.56	0.627	1224.44S	159.62	1064.81
WJR (345)	US MI DETROIT	2.54	0.642	1265.70S	159.62	1106.08
WJR (346)	US MI DETROIT	2.51	0.655	1302.12S	159.62	1142.50
WJR (347)	US MI DETROIT	2.51	0.714	1423.51S	159.62	1263.89
WJR (348)	US MI DETROIT	2.49	0.735	1476.65S	159.62	1317.03
WJR (349)	US MI DETROIT	2.46	0.732	1484.46S	159.62	1324.84
WJR (350)	US MI DETROIT	2.44	0.732	1498.55S	159.62	1338.93
WJR (351)	US MI DETROIT	2.42	0.728	1504.98S	159.62	1345.35
WJR (352)	US MI DETROIT	2.42	0.789	1627.63S	159.62	1468.01
WJR (353)	US MI DETROIT	2.41	0.804	1666.22S	159.62	1506.60
WJR (354)	US MI DETROIT	2.39	0.796	1665.38S	159.62	1505.76
WJR (355)	US MI DETROIT	2.37	0.799	1684.76S	159.62	1525.14
WJR (356)	US MI DETROIT	2.35	0.797	1694.41S	159.62	1534.79
WJR (357)	US MI DETROIT	2.34	0.807	1725.34S	159.62	1565.71
WJR (358)	US MI DETROIT	2.35	0.849	1803.24S	159.62	1643.62
WJR (359)	US MI DETROIT	2.34	0.852	1820.44S	159.62	1660.82
KDFD	US CO THORNTON	17.55	1.853	527.74	159.56	368.18
50% = 6.532, 25% = 7.41; WJR=6.53 KMMJ=2.65 KKOB=2.28						
KGU	US HI HONOLULU	5.52	1.001	906.24	159.62	746.62
50% = 4.005, 25% = 4.005; KGB=4.01						
KXTG	US OR PORTLAND	107.06	2.239	1045.74	153.83	891.91
50% = 8.511, 25% = 8.957; KOAL=8.51 KMMJ=2.79						
KTKR	US TX SAN ANTONIO	7.97	1.955	1226.20	159.62	1066.58
50% = 7.497, 25% = 7.818; WJR=7.50 CB 76-A=2.22						
CJME/A	CA SK REGINA	13.72	3.702	1349.52	159.52	1189.99
50% = 7.405, 25% = 8.111; WJR=7.40 KDFD=3.31						
CFLD/U	CA BC BURNS LAKE	26.33	7.455	1415.45	159.17	1256.29
50% = 14.909, 25% = 15.606; CKQR/A=14.91 CJME/A=4.61						
CFLD/U	CA BC BURNS LAKE	26.33	7.455	1415.45	159.17	1256.29
50% = 14.909, 25% = 15.606; CKQR/A=14.91 CJME/A=4.61						
XENY/O	MX SO NOGALES	22.31	6.861	1537.86	159.30	1378.57
50% = 13.721, 25% = 14.964; KGB=13.72 KTKR=4.57 KDFD=3.84						
XENY/O	MX SO NOGALES	22.31	6.861	1537.86	159.30	1378.57

50% = 13.721, 25% = 14.964; KGB=13.72 KTKR=4.57 KDFD=3.84

KTTH US WA SEATTLE 63.57 2.132 1677.13 157.10 1520.03
50% = 7.933, 25% = 8.529; Kkob=7.93 CKQR/A=2.25 KKOH=2.18

KCBC US CA MANTECA 142.93 6.372 2229.17 150.84 2078.33
50% = 25.489, 25% = 25.489; Kkob=21.06 KKOH=14.36

KKOB US NM ALBUQUERQUE 18.60 0.947 2546.80 159.57 2387.22
50% = 3.142, 25% = 3.893; WABC=2.62 XEIH/A=1.73 XEHB/A=1.28 KTTH=1.22
CX12-A=1.12 XEACH/A=0.95

XEABC/O MX MX SAN SEBASTIAN C 2.73 2.143 3926.53 159.62 3766.91
50% = 4.474, 25% = 5.011; XEZZ/ =3.93 WJR=2.14 KGB=1.80 KTKR=1.36

XEABC/A MX DF MEXICO 2.75 2.158 3927.22 159.62 3767.59
50% = 4.494, 25% = 5.039; XEZZ/ =3.94 WJR=2.16 KGB=1.81 KTKR=1.39

XEES/O MX CH CHIHUAHUA 8.82 7.137 4046.80 159.62 3887.18
50% = 14.275, 25% = 14.772; KTKR=11.94 KGB=7.82 KDFD=3.80

XEES/O MX CH CHIHUAHUA 8.82 7.137 4046.80 159.62 3887.18
50% = 14.275, 25% = 14.772; KTKR=11.94 KGB=7.82 KDFD=3.80

XE/O MX TA REYNOSA 3.90 3.173 4067.91 159.62 3908.29
50% = 6.345, 25% = 6.994; KTKR=4.75 WJR=4.20 XEZZ/ =2.94

XENVA2/O MX CH OJINAGA 8.18 6.710 4099.85 159.62 3940.23
50% = 13.42, 25% = 15.373; KTKR=13.42 KGB=4.78 KDFD=4.39 WJR=3.77

XEES/A MX CH LABOR DE TERRAZ 8.75 7.180 4103.43 159.62 3943.81
50% = 14.36, 25% = 14.834; KTKR=11.94 KGB=7.98 KDFD=3.72

KOAL US UT PRICE 34.17 2.861 4186.49 158.99 4027.50
50% = 10.572, 25% = 11.444; KMMJ=10.57 WSB=4.38

KERR US MT POLSON 32.18 2.804 4356.87 158.87 4197.99
50% = 10.46, 25% = 11.218; KOAL=9.27 KMMJ=4.85 CJVR/A=2.87 KXTG=2.86

XEEB/ MX SO CD.OBREGON 10.95 11.102 5070.04 159.59 4910.45
50% = 22.204, 25% = 23.224; KGB=22.20 KTKR=6.81

XEEB/O MX SO CD.OBREGON 10.95 11.102 5070.04 159.59 4910.45
50% = 22.204, 25% = 23.224; KGB=22.20 KTKR=6.81

XEEB/O MX SO CD.OBREGON 10.95 11.102 5070.04 159.59 4910.45
50% = 22.204, 25% = 23.224; KGB=22.20 KTKR=6.81

XEEB1/O MX SO CD.OBREGON 10.95 11.102 5070.04 159.59 4910.45
50% = 22.204, 25% = 23.224; KGB=22.20 KTKR=6.81

FIGURE 11- NIGHT RADIATION REPORT

KEJY PROP NIGHTTIME RADIATION REPORT

AM Radiation Report

Call: KEJY-D
Freq: 760 kHz
EUREKA, CA, US
Hours: N
Lat: 40-48-01.50 N
Lng: 124-07-42 W
Power: 0.34 kW
Number of Ground System Radials: 120 / Average Ground Radial Length: 69.5 deg
Theo RMS: 273.75 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	65.4	0	0	0.0	0.0	0.0	0.0

Standard Horizontal Plane Pattern

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	159.62	5.0	159.62	10.0	159.62
15.0	159.62	20.0	159.62	25.0	159.62
30.0	159.62	35.0	159.62	40.0	159.62
45.0	159.62	50.0	159.62	55.0	159.62
60.0	159.62	65.0	159.62	70.0	159.62
75.0	159.62	80.0	159.62	85.0	159.62
90.0	159.62	95.0	159.62	100.0	159.62
105.0	159.62	110.0	159.62	115.0	159.62
120.0	159.62	125.0	159.62	130.0	159.62
135.0	159.62	140.0	159.62	145.0	159.62
150.0	159.62	155.0	159.62	160.0	159.62
165.0	159.62	170.0	159.62	175.0	159.62
180.0	159.62	185.0	159.62	190.0	159.62
195.0	159.62	200.0	159.62	205.0	159.62
210.0	159.62	215.0	159.62	220.0	159.62
225.0	159.62	230.0	159.62	235.0	159.62
240.0	159.62	245.0	159.62	250.0	159.62
255.0	159.62	260.0	159.62	265.0	159.62
270.0	159.62	275.0	159.62	280.0	159.62
285.0	159.62	290.0	159.62	295.0	159.62
300.0	159.62	305.0	159.62	310.0	159.62
315.0	159.62	320.0	159.62	325.0	159.62
330.0	159.62	335.0	159.62	340.0	159.62
345.0	159.62	350.0	159.62	355.0	159.62

Call: KEJY-D
 Freq: 760 kHz
 EUREKA, CA, US
 Hours: N
 Lat: 40-48-01.50 N
 Lng: 124-07-42 W
 Power: 0.34 kW
 Number of Ground System Radials: 120 / Average Ground Radial Length: 69.5 deg
 Theo RMS: 273.75 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	65.4	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 10.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	156.65	5.0	156.65	10.0	156.65
15.0	156.65	20.0	156.65	25.0	156.65
30.0	156.65	35.0	156.65	40.0	156.65
45.0	156.65	50.0	156.65	55.0	156.65
60.0	156.65	65.0	156.65	70.0	156.65
75.0	156.65	80.0	156.65	85.0	156.65
90.0	156.65	95.0	156.65	100.0	156.65
105.0	156.65	110.0	156.65	115.0	156.65
120.0	156.65	125.0	156.65	130.0	156.65
135.0	156.65	140.0	156.65	145.0	156.65
150.0	156.65	155.0	156.65	160.0	156.65
165.0	156.65	170.0	156.65	175.0	156.65
180.0	156.65	185.0	156.65	190.0	156.65
195.0	156.65	200.0	156.65	205.0	156.65
210.0	156.65	215.0	156.65	220.0	156.65
225.0	156.65	230.0	156.65	235.0	156.65
240.0	156.65	245.0	156.65	250.0	156.65
255.0	156.65	260.0	156.65	265.0	156.65
270.0	156.65	275.0	156.65	280.0	156.65
285.0	156.65	290.0	156.65	295.0	156.65
300.0	156.65	305.0	156.65	310.0	156.65
315.0	156.65	320.0	156.65	325.0	156.65
330.0	156.65	335.0	156.65	340.0	156.65
345.0	156.65	350.0	156.65	355.0	156.65

Call: KEJY-D
 Freq: 760 kHz
 EUREKA, CA, US
 Hours: N
 Lat: 40-48-01.50 N
 Lng: 124-07-42 W
 Power: 0.34 kW
 Number of Ground System Radials: 120 / Average Ground Radial Length: 69.5 deg
 Theo RMS: 273.75 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	65.4	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 20.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	147.97	5.0	147.97	10.0	147.97
15.0	147.97	20.0	147.97	25.0	147.97
30.0	147.97	35.0	147.97	40.0	147.97
45.0	147.97	50.0	147.97	55.0	147.97
60.0	147.97	65.0	147.97	70.0	147.97
75.0	147.97	80.0	147.97	85.0	147.97
90.0	147.97	95.0	147.97	100.0	147.97
105.0	147.97	110.0	147.97	115.0	147.97
120.0	147.97	125.0	147.97	130.0	147.97
135.0	147.97	140.0	147.97	145.0	147.97
150.0	147.97	155.0	147.97	160.0	147.97
165.0	147.97	170.0	147.97	175.0	147.97
180.0	147.97	185.0	147.97	190.0	147.97
195.0	147.97	200.0	147.97	205.0	147.97
210.0	147.97	215.0	147.97	220.0	147.97
225.0	147.97	230.0	147.97	235.0	147.97
240.0	147.97	245.0	147.97	250.0	147.97
255.0	147.97	260.0	147.97	265.0	147.97
270.0	147.97	275.0	147.97	280.0	147.97
285.0	147.97	290.0	147.97	295.0	147.97
300.0	147.97	305.0	147.97	310.0	147.97
315.0	147.97	320.0	147.97	325.0	147.97
330.0	147.97	335.0	147.97	340.0	147.97
345.0	147.97	350.0	147.97	355.0	147.97

Call: KEJY-D
 Freq: 760 kHz
 EUREKA, CA, US
 Hours: N
 Lat: 40-48-01.50 N
 Lng: 124-07-42 W
 Power: 0.34 kW
 Number of Ground System Radials: 120 / Average Ground Radial Length: 69.5 deg
 Theo RMS: 273.75 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	TL Switch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	65.4	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 30.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	134.27	5.0	134.27	10.0	134.27
15.0	134.27	20.0	134.27	25.0	134.27
30.0	134.27	35.0	134.27	40.0	134.27
45.0	134.27	50.0	134.27	55.0	134.27
60.0	134.27	65.0	134.27	70.0	134.27
75.0	134.27	80.0	134.27	85.0	134.27
90.0	134.27	95.0	134.27	100.0	134.27
105.0	134.27	110.0	134.27	115.0	134.27
120.0	134.27	125.0	134.27	130.0	134.27
135.0	134.27	140.0	134.27	145.0	134.27
150.0	134.27	155.0	134.27	160.0	134.27
165.0	134.27	170.0	134.27	175.0	134.27
180.0	134.27	185.0	134.27	190.0	134.27
195.0	134.27	200.0	134.27	205.0	134.27
210.0	134.27	215.0	134.27	220.0	134.27
225.0	134.27	230.0	134.27	235.0	134.27
240.0	134.27	245.0	134.27	250.0	134.27
255.0	134.27	260.0	134.27	265.0	134.27
270.0	134.27	275.0	134.27	280.0	134.27
285.0	134.27	290.0	134.27	295.0	134.27
300.0	134.27	305.0	134.27	310.0	134.27
315.0	134.27	320.0	134.27	325.0	134.27
330.0	134.27	335.0	134.27	340.0	134.27
345.0	134.27	350.0	134.27	355.0	134.27

Call: KEJY-D
 Freq: 760 kHz
 EUREKA, CA, US
 Hours: N
 Lat: 40-48-01.50 N
 Lng: 124-07-42 W
 Power: 0.34 kW
 Number of Ground System Radials: 120 / Average Ground Radial Length: 69.5 deg
 Theo RMS: 273.75 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	65.4	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 40.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	116.52	5.0	116.52	10.0	116.52
15.0	116.52	20.0	116.52	25.0	116.52
30.0	116.52	35.0	116.52	40.0	116.52
45.0	116.52	50.0	116.52	55.0	116.52
60.0	116.52	65.0	116.52	70.0	116.52
75.0	116.52	80.0	116.52	85.0	116.52
90.0	116.52	95.0	116.52	100.0	116.52
105.0	116.52	110.0	116.52	115.0	116.52
120.0	116.52	125.0	116.52	130.0	116.52
135.0	116.52	140.0	116.52	145.0	116.52
150.0	116.52	155.0	116.52	160.0	116.52
165.0	116.52	170.0	116.52	175.0	116.52
180.0	116.52	185.0	116.52	190.0	116.52
195.0	116.52	200.0	116.52	205.0	116.52
210.0	116.52	215.0	116.52	220.0	116.52
225.0	116.52	230.0	116.52	235.0	116.52
240.0	116.52	245.0	116.52	250.0	116.52
255.0	116.52	260.0	116.52	265.0	116.52
270.0	116.52	275.0	116.52	280.0	116.52
285.0	116.52	290.0	116.52	295.0	116.52
300.0	116.52	305.0	116.52	310.0	116.52
315.0	116.52	320.0	116.52	325.0	116.52
330.0	116.52	335.0	116.52	340.0	116.52
345.0	116.52	350.0	116.52	355.0	116.52

Call: KEJY-D
 Freq: 760 kHz
 EUREKA, CA, US
 Hours: N
 Lat: 40-48-01.50 N
 Lng: 124-07-42 W
 Power: 0.34 kW
 Number of Ground System Radials: 120 / Average Ground Radial Length: 69.5 deg
 Theo RMS: 273.75 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	TL Switch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	65.4	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 50.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	95.80	5.0	95.80	10.0	95.80
15.0	95.80	20.0	95.80	25.0	95.80
30.0	95.80	35.0	95.80	40.0	95.80
45.0	95.80	50.0	95.80	55.0	95.80
60.0	95.80	65.0	95.80	70.0	95.80
75.0	95.80	80.0	95.80	85.0	95.80
90.0	95.80	95.0	95.80	100.0	95.80
105.0	95.80	110.0	95.80	115.0	95.80
120.0	95.80	125.0	95.80	130.0	95.80
135.0	95.80	140.0	95.80	145.0	95.80
150.0	95.80	155.0	95.80	160.0	95.80
165.0	95.80	170.0	95.80	175.0	95.80
180.0	95.80	185.0	95.80	190.0	95.80
195.0	95.80	200.0	95.80	205.0	95.80
210.0	95.80	215.0	95.80	220.0	95.80
225.0	95.80	230.0	95.80	235.0	95.80
240.0	95.80	245.0	95.80	250.0	95.80
255.0	95.80	260.0	95.80	265.0	95.80
270.0	95.80	275.0	95.80	280.0	95.80
285.0	95.80	290.0	95.80	295.0	95.80
300.0	95.80	305.0	95.80	310.0	95.80
315.0	95.80	320.0	95.80	325.0	95.80
330.0	95.80	335.0	95.80	340.0	95.80
345.0	95.80	350.0	95.80	355.0	95.80

Call: KEJY-D
 Freq: 760 kHz
 EUREKA, CA, US
 Hours: N
 Lat: 40-48-01.50 N
 Lng: 124-07-42 W
 Power: 0.34 kW
 Number of Ground System Radials: 120 / Average Ground Radial Length: 69.5 deg
 Theo RMS: 273.75 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	TL Switch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	65.4	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 60.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	73.09	5.0	73.09	10.0	73.09
15.0	73.09	20.0	73.09	25.0	73.09
30.0	73.09	35.0	73.09	40.0	73.09
45.0	73.09	50.0	73.09	55.0	73.09
60.0	73.09	65.0	73.09	70.0	73.09
75.0	73.09	80.0	73.09	85.0	73.09
90.0	73.09	95.0	73.09	100.0	73.09
105.0	73.09	110.0	73.09	115.0	73.09
120.0	73.09	125.0	73.09	130.0	73.09
135.0	73.09	140.0	73.09	145.0	73.09
150.0	73.09	155.0	73.09	160.0	73.09
165.0	73.09	170.0	73.09	175.0	73.09
180.0	73.09	185.0	73.09	190.0	73.09
195.0	73.09	200.0	73.09	205.0	73.09
210.0	73.09	215.0	73.09	220.0	73.09
225.0	73.09	230.0	73.09	235.0	73.09
240.0	73.09	245.0	73.09	250.0	73.09
255.0	73.09	260.0	73.09	265.0	73.09
270.0	73.09	275.0	73.09	280.0	73.09
285.0	73.09	290.0	73.09	295.0	73.09
300.0	73.09	305.0	73.09	310.0	73.09
315.0	73.09	320.0	73.09	325.0	73.09
330.0	73.09	335.0	73.09	340.0	73.09
345.0	73.09	350.0	73.09	355.0	73.09

FIGURE 12 NIGHT PRESENT/PROPOSED PROTECTION REPORT

Protected Station: KGB, 760 kHz - SAN DIEGO, CA, US
 Coordinates: 32-50-33 N, 117-01-30 W
 Standard: FCC Rules (1992 Skywave Propagation Model) [10%]

Current:

Call	Freq (kHz)	Limit (mV/m)	(%)
-----	-----	-----	-----
KKOB	0770	3.397	100.0
WJR	0760	2.583	76.0
-----	50%	-----	-----
KTKR	0760	1.718	40.2
CB 76-A	0760	1.541	33.5
XEEB/	0760	1.533	31.5
CKQR/A	0760	1.290	25.3
-----	25%	-----	-----
*KEJY	0760	1.286	24.5
KOAL	0750	1.238	22.9
XEABC/A	0760	1.152	20.7
KGU	0760	0.957	16.8
XZZZ/	0760	0.673	11.7
KAMA	0750	0.640	11.0
KDFD	0760	0.633	10.8

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
-----	-----	-----	-----
KKOB	0770	3.397	100.0
WJR	0760	2.583	76.0
-----	50%	-----	-----
KTKR	0760	1.718	40.2
CB 76-A	0760	1.541	33.5
XEEB/	0760	1.533	31.5
CKQR/A	0760	1.290	25.3
-----	25%	-----	-----
*KEJY-PRO	0760	1.272	24.2
KOAL	0750	1.238	22.9
XEABC/A	0760	1.152	20.7
KGU	0760	0.957	16.8
XZZZ/	0760	0.673	11.7
KAMA	0750	0.640	11.0
KDFD	0760	0.633	10.8

Protected Station: CKQR/A, 760 kHz - CASTLEGAR, BC, CA
 Coordinates: 49-18-05 N, 117-36-50 W
 Standard: Canadian (Figure 4) [10%]

Current:

Call	Freq (kHz)	Limit (mV/m)	(%)
-----	-----	-----	-----
KDFD	0760	3.723	100.0
CJME/A	0760	3.525	94.6
CFLD/U	0760	3.347	65.2
-----	50%	-----	-----
KGB	0760	3.007	49.1
WJR	0760	2.509	36.7
-----	25%	-----	-----

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
-----	-----	-----	-----
KDFD	0760	3.723	100.0
CJME/A	0760	3.525	94.6
CFLD/U	0760	3.347	65.2
-----	50%	-----	-----
KGB	0760	3.007	49.1
WJR	0760	2.509	36.7
*KEJY-PRO	0760	1.802	24.7
-----	25%	-----	-----

Protected Station: CKQR/A, 760 kHz - CASTLEGAR, BC, CA
 Coordinates: 49-18-05 N, 117-36-50 W
 Standard: Canadian (Figure 4) [10%]

Current:

Call	Freq (kHz)	Limit (mV/m)	(%)
-----	-----	-----	-----
KDFD	0760	3.723	100.0
CJME/A	0760	3.525	94.6
CFLD/U	0760	3.347	65.2
-----	50%	-----	-----
KGB	0760	3.007	49.1
WJR	0760	2.509	36.7
-----	25%	-----	-----

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
-----	-----	-----	-----
KDFD	0760	3.723	100.0
CJME/A	0760	3.525	94.6
CFLD/U	0760	3.347	65.2
-----	50%	-----	-----
KGB	0760	3.007	49.1
WJR	0760	2.509	36.7
*KEJY-PRO	0760	1.802	24.7
-----	25%	-----	-----

FIGURE 13 CRITICAL HOURS ANALYSIS

Critical Hours Radiation Report

Call: KEJY-D
 Freq: 760 kHz
 EUREKA, CA, US
 Hours: N
 Lat: 40-48-01.50 N
 Lng: 124-07-42 W
 Power: 0.5 kW
 Number of Ground System Radials: 120 / Average Ground Radial Length: 69.5 deg
 Theo RMS: 273.75 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	TL Switch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	65.4	0	0	0.0	0.0	0.0	0.0

Interpolation factors for 760 kHz:

K(500) = 0.480
 K(1000) = 0.520
 K(1600) = 0.000

Call: WJR
 Freq: 760 kHz
 DETROIT, MI, US
 Hours: U
 Lat: 42-10-05 N
 Lng: 083-12-54 W
 Power: 50.0 kW
 Theo RMS: 402.34 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	TL Switch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	194.7	0	0	0.0	0.0	0.0	0.0

Permissible radiation calculated using FCC 73.190 curves.
 Calculations performed using distance to the class A station's 0.1 mV/m contour.

Class A Azimuth (deg)	Reference Azimuth (deg)	Distance to 0.1 mV (km) / (mi)	Max Vert Angle (deg)	Max Rad Below Ang (mV/m@1km)	Permiss Radiation (mV/m@1km)	Margin (mV/m@1km)
349.08	67.00	3256.5 / 2023.5	0.0	193.57	11711.8	11518.2 **
331.13	68.00	3146.5 / 1955.1	0.0	193.57	11424.3	11230.8 **
323.89	69.00	3128.0 / 1943.6	0.0	193.57	11359.4	11165.8 **
313.03	70.00	3083.0 / 1915.7	0.0	193.57	11239.7	11046.2 **
303.67	71.00	3053.6 / 1897.4	0.0	193.57	11154.5	10961.0 **
294.81	72.00	3028.2 / 1881.6	0.0	193.57	11077.6	10884.0 **
287.01	73.00	3032.1 / 1884.1	0.0	193.57	11067.9	10874.3 **
278.35	74.00	3083.1 / 1915.7	0.0	193.57	11165.3	10971.7 **
268.63	75.00	3087.9 / 1918.7	0.0	193.57	11111.6	10918.0 **
259.22	76.00	3095.0 / 1923.2	0.0	193.57	11061.2	10867.7 **
253.09	77.00	3074.5 / 1910.4	0.0	193.57	10949.7	10756.1 **
246.89	78.00	3071.6 / 1908.6	0.0	193.57	10880.9	10687.3 **
236.31	79.00	3121.9 / 1939.8	0.0	193.57	10939.3	10745.7 **
228.80	80.00	3149.3 / 1956.9	0.0	193.57	10951.3	10757.8 **
201.81	81.00	3335.6 / 2072.7	0.0	193.57	11325.3	11131.7 **

Class A Azimuth (deg)	Reference Azimuth (deg)	Distance to 0.1 mV (km) / (mi)	K(500) Value (mV/m@1km)	K(1000) Value (mV/m@1km)	Permiss Radiation (mV/m@1km)	
349.08	67.00	3256.5 / 2023.5	16093.44	7667.20	11711.8	**
331.13	68.00	3146.5 / 1955.1	16093.44	7114.38	11424.3	**
323.89	69.00	3128.0 / 1943.6	16093.44	6989.52	11359.4	**
313.03	70.00	3083.0 / 1915.7	16093.44	6759.41	11239.7	**
303.67	71.00	3053.6 / 1897.4	16093.44	6595.54	11154.5	**
294.81	72.00	3028.2 / 1881.6	16093.44	6447.55	11077.6	**
287.01	73.00	3032.1 / 1884.1	16093.44	6428.85	11067.9	**
278.35	74.00	3083.1 / 1915.7	16093.44	6616.16	11165.3	**
268.63	75.00	3087.9 / 1918.7	15991.53	6607.03	11111.6	**
259.22	76.00	3095.0 / 1923.2	15883.08	6610.30	11061.2	**
253.09	77.00	3074.5 / 1910.4	15775.30	6495.31	10949.7	**
246.89	78.00	3071.6 / 1908.6	15671.44	6458.82	10880.9	**
236.31	79.00	3121.9 / 1939.8	15574.73	6660.39	10939.3	**
228.80	80.00	3149.3 / 1956.9	15488.42	6763.25	10951.3	**
201.81	81.00	3335.6 / 2072.7	15414.98	7550.20	11325.3	**

** Indicates that the distance and/or azimuth was out of the range of the 73.190 permissible radiation graphs. The calculated permissible radiation is invalid.