

CITY OF LICENSE
CALL LETTERS
FACILITY ID
PREPARED FOR
VERSION
JOB

Red Bluff, CA
KTHM
77121
Alta California Community Media, Inc.
1.0
114034AMD

CONSOLIDATED

ENGINEERING EXHIBIT

FCC Form 340 - Section VII - FM Engineering

ENGINEERING STATEMENT
AMENDMENT TO PENDING APPLICATION BPED-20151216ASJ
KTHM, Red Bluff, CA
Alta California Community Media, Inc.

SUMMARY

This minor amendment proposes to move the transmitter site to Inskip Hill, on an existing tower. **Exhibit 16** shows that the entire community of license would be served.

OWNERSHIP CHANGE

Subsequent to the filing of the pending application being amended herein, KTHM was assigned from Tehama County Community Broadcasters, to ACCM. The assignment was consummated on 11/01/2016.

SETTLEMENT AGREEMENT / SECOND-ADJACENT WAIVER REQUEST

This application is being filed in connection with a Settlement Agreement between Alta California Community Media, Inc. (ACCM), and Educational Media Foundation (EMF) to resolve the mutual exclusivity between the applications for minor changes in licensed stations KTHM, Red Bluff, CA, and KARQ, Redding, CA. The Settlement Agreement is being filed concurrently with this amendment.

The proposed KARQ 100dBu interfering contour overlaps with the proposed KTHM 60dBu protected contour, both in the KTHM BPED-20151216ASJ application, and in the amendment proposed herein. The two parties propose to solve the conflict by ACCM requesting a waiver of 2nd-adjacent *overlap-received* from KARQ.

In support of this waiver request:

- When compared with the licensed KTHM facility, the population within the proposed 60dBu contour would increase from 29,354 to 206,196 persons, a seven-fold improvement.
- The area covered by the KTHM 60dBu contour would increase from 544 to 5947km², an

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eleven-fold increase.

-The proposed area of 100dBu overlap-received from KARQ (APP) would be 0.4km², and would be confined to a remote mountaintop (South Mountain) immediately surrounding the transmitter site. There are **no persons** residing within this contour.¹

-FCC grant of this waiver also benefits KARQ. It solves the conflict and makes the Settlement Agreement possible, When granted, KARQ will be able to improve coverage to their city of license from what is arguably the best practical tower site in the market.

The Commission has granted such waivers of §73.509 in similar circumstances. For example, in *Education Information Corp.*, 6 FCC Rcd 2207 (1992), the Commission granted waivers which allowed WCPE(FM) to receive second adjacent channel overlap for 0.84% of its service area. In that case, the Commission announced that: “We are now inclined to grant waivers of second or third adjacent channel overlap in circumstances ... where the benefit of increased noncommercial educational service so heavily outweighs the potential for interference in very small areas.” Id. at 2208.

In this instant case, the benefit of increasing the KTHM potential listening audience by 7 times, heavily outweighs the potential for interference inside a very small, completely unpopulated area. ACCM believes that the grant of a waiver to permit the received overlap to KTHM is therefore in the public interest and within the scope of the Commission’s waiver policy.

¹Similarly, there is overlap between the KARQ (CP) 100dBu contour, and the KTHM 60dBu contour. The KARQ (CP) 100dBu contour contains no population. KARQ (CP) will be superceded by KARQ (APP).

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EXHIBIT 16

Community of License Coverage

Brown Broadcast Services, Inc.
Job: KTHM_Inskip_Jan2017.fmj
Master Database: 2017_Jan_13.fmd
Lat: N40:20:41 Lon: W121:56:48 NAD-27
Scale: 1:800000
Channel: 215 Class: C1

rfInvestigator Version 3.8.16
by rfSoftware, Inc.
Date: 1/13/2017 5:26:58 PM
Key:

City Grade
Protected
Co-Channel
1st Adj
2nd/3rd Adj

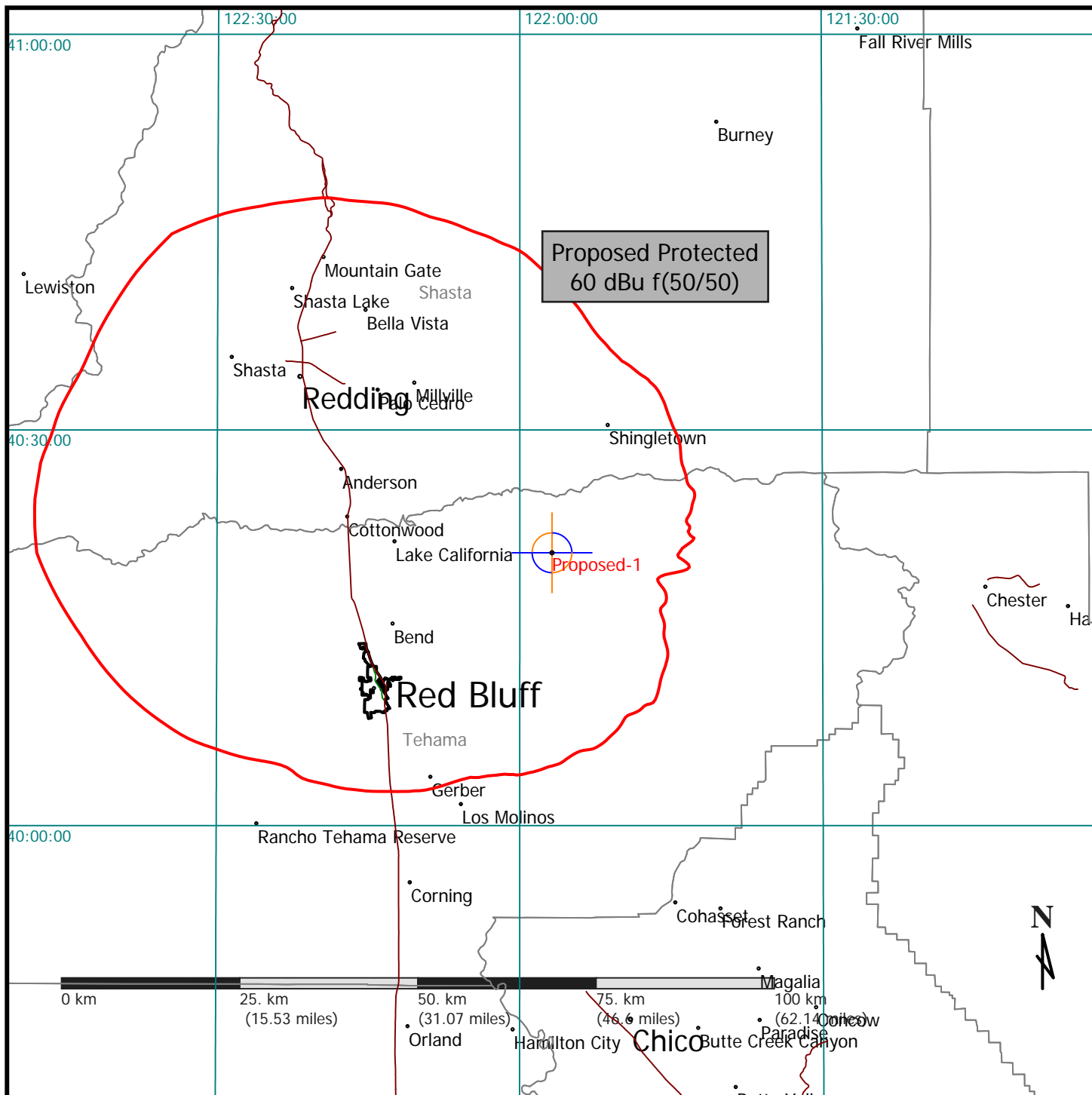


EXHIBIT 18

CONTOUR OVERLAP PROTECTION TO OTHER RESERVED-BAND STATIONS

This proposed minor-amendment meets the contour overlap requirements of §73.509 with respect to all other stations, with the exception of second-adjacent station KARQ, Redding CA. A waiver of *interference-received* from KARQ is requested as part of the preceding Engineering Statement.

KTHM @Inskip Alta California Community Media, Inc.											
REFERENCE 40 20 41.0 N. 121 56 48.0 W.		CH# 215C1- 90.9 MHz, Pwr= 12 kW DA, HAAT= 418.5 M, COR= 926 M Average Protected F(50-50)= 59.1 km Standard Directional						DISPLAY DATES DATA 01-07-17 SEARCH 01-13-17			
CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
215C1 Red Bluff	KTHM!	APP DCX	CA	231.6 51.5	15.39 BPED20151216ASJ	40 15 31.0 122 05 20.0	7.400 411	105.0 674	41.1 Alta California Community	-137.7	-146.6
214A Red Bluff	KTHM!	LIC VX	CA	232.0 51.8	30.74 BLED20091023AAA	40 10 27.0 122 13 55.0	0.100 -41	13.7 299	9.8 Alta California Community	-31.3	-73.8
217A Redding	KARQ	APP DCN	CA	305.5 125.1	59.52 BMPED20151221CJD	40 39 15.5 122 31 16.0	0.110 381	0.5 973	24.4 Educational Media Foundati	-11.2*	27.3
217C2 Redding	KARQ	CP DCX	CA	296.0 115.5	65.99 BMPED20140417AAZ	40 36 10.0 122 38 58.0	0.200 1116	0.7 1931	40.3 Educational Media Foundati	-5.6*	18.8
215C1 Klamath Falls	KSKF	LIC E	OR	7.6 187.8	196.59 BLED19960111KX	42 05 50.0 121 37 59.0	6.500 687	151.3 2004	67.9 Southern Oregon University	2.4	30.7
216C0 Garberville	KMUD	LIC DVN	CA	261.0 79.9	150.22 BLED20151008ABS	40 07 13.0 123 41 31.0	9.000 784	53.6 1229	34.6 Redwood Community Radio	26.1	9.0
218A Redding	KARQ	LIC DVX	CA	326.3 146.0	75.32 BLED20090520ABH	40 54 27.0 122 26 37.0	0.420 376	1.4 1174	33.9 Educational Media Foundati	12.5	30.2
215B Sacramento	KXJZ	LIC CN	CA	167.5 347.8	186.01 BLED19841106KS	38 42 38.0 121 28 54.0	50.000 147	137.0 155	51.5 California State University	19.8	53.2
213C2 Burney	KIBC	LIC CN	CA	14.1 194.2	60.77 BLED19980206KA	40 52 29.0 121 46 13.0	3.000 444	3.4 1631	19.6 Burney Educational Broadca	21.9	25.0
269A Hamilton City	KVXX«	LIC NCX	CA	156.6 336.7	48.24 BLH20050620ABF	39 56 46.0 121 43 17.0	0.530 335	12.8 1037	58.8 Tom F. Huth	22.0R	26.2M
216A Oroville	KROV	LIC DCX	CA	149.6 330.0	108.00 BLED20130424ACP	39 30 18.0 121 18 35.0	0.225 378	48.6 991	28.0 Bird Street Media Project	34.6	38.0
214B Philo	KZYX	LIC CN	CA	223.0 42.0	199.37 BLED19891024KD	39 01 22.0 123 31 17.0	3.400 514	85.1 849	53.1 Mendocino County Public Br	63.0	71.9

Terrain database is FCC NGDC 30 Sec, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference Zone= - Zone 2, Co to 3rd adjacent.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
***affixed to 'IN' or 'OUT' values = site inside restricted contour.
« = Station meets FCC minimum distance spacing for its class.

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All contour calculations were made using the methods and procedures described in 47 CFR §73.313(c). Areas were calculated using a spline integration in one-degree increments. Population totals were calculated by testing each U.S. Census-defined block-centroid population point in the region with a point-in-polygon method. The population was summed for each point within the polygon using data from the 2010 Census.

FMOver calculations were done using V-Soft FM Commander software, using “HAAT method 0 (zero)”, 51 data points per radial, and the FCC-modified version of the NGDC 30 second terrain database. According to V-Soft, this combination results in “astounding agreement” with FCC software.

PROTECTED ZONES REPORT

Protected zones report for KTHM.A on channel 215C1 01-13-2017

Lat. 40 20 41.0 Lng. 121 56 48.0, ERP= 12 kw, HAAT= 418.5 m

Facility is okay with respect to AM station towers.

Closest AM Facility is KBLF, RED BLUFF, CA, L, ND2 at 233.7° at a distance of 28.3 km

Facility is okay with respect to FCC monitoring stations.

Closest FCC Monitoring Station is 291.3 km= Livermore, CA

Facility is okay toward West Virginia Quiet Zone. Distance to center = 3664.9 km

Facility is okay toward Table Mountain. Distance to Center = 1421.9 km, Azimuth = 85.5

Degrees True

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EXHIBIT 18a

Co-Channel Contour Protection

Brown Broadcast Services, Inc.
Job: KTHM_Inskip_Jan2017.fmj
Master Database: 2017_Jan_13.fmd
Lat: N40:20:41 Lon: W121:56:48 NAD-27
Scale: 1:2500000
Channel: 215 Class: C1

PROPOSED

Protected: 60dBu F(50,50)

Interfering: 40dBu F(50,10)

AFFECTED

Protected: 60dBu F(50,50)

Interfering: 40dBu F(50,10)

rfInvestigator Version 3.8.16
by rfSoftware, Inc.

Date: 1/13/2017 6:12:12 PM

Key:

City Grade

Protected

Co-Channel

1st Adj

2nd/3rd Adj

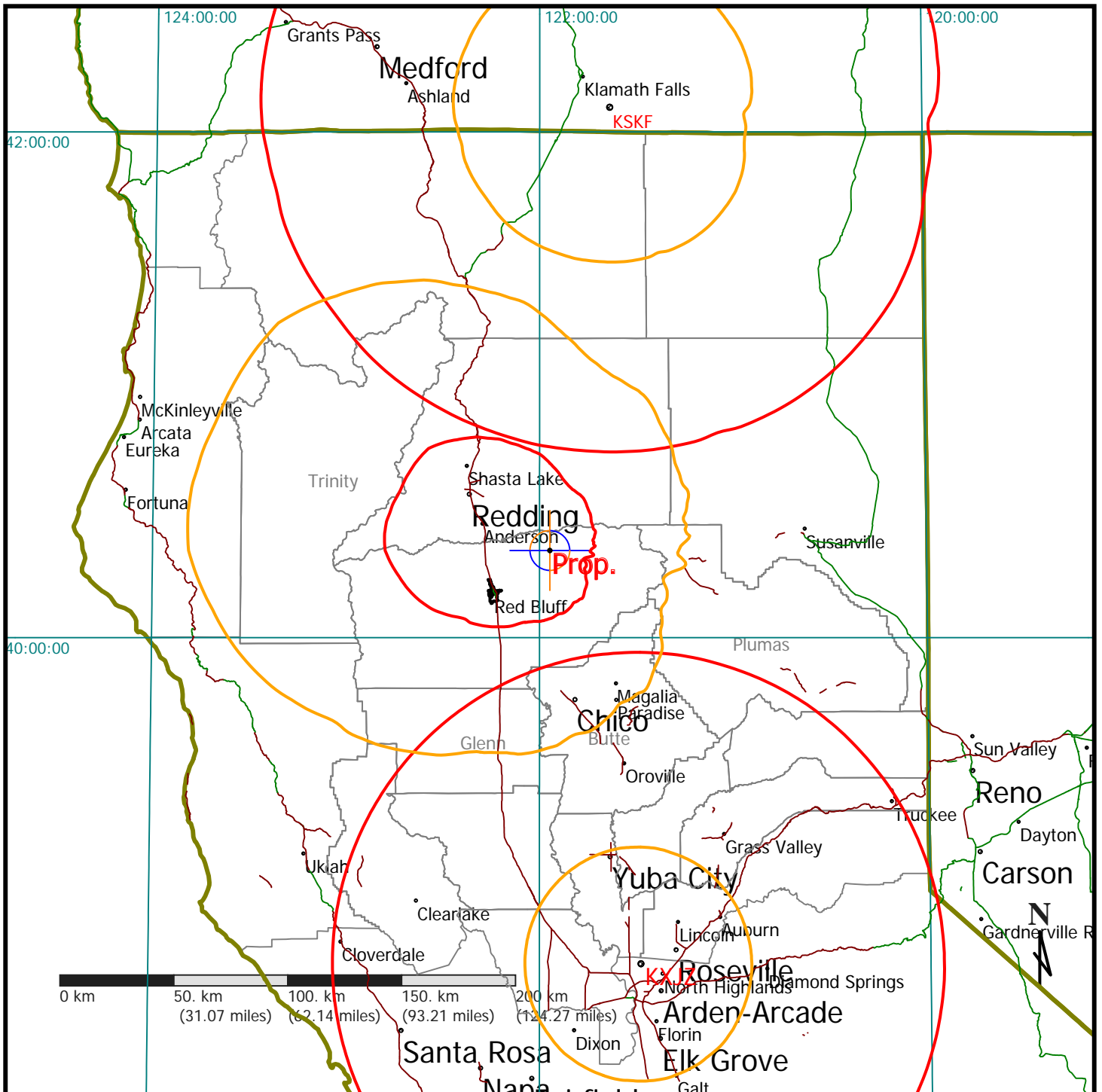


EXHIBIT 18b

FM Over Analysis

KTHM (Prop) vs. KSKF (LIC)

01-13-2017

Terrain Data: FCC NGDC 30 Sec

FMOver Analysis

KTHM. A

KSKF BLED19960111KX

Channel = 215C1
Max ERP = 12 kW
RCAMSL = 926 m
N. Lat. 40 20 41.0
W. Lng. 121 56 48.0
Protected
60 dBu

Channel = 215C1
Max ERP = 6.5 kW
RCAMSL = 2004 m
N. Lat. 42 05 50.0
W. Lng. 121 37 59.0
Interfering
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
323.0	006.7446	0558.4	061.7	203.6	006.5000	0737.1	158.7	38.19	
324.0	006.4580	0555.0	061.1	203.2	006.5000	0736.7	158.0	38.34	
325.0	006.1777	0552.6	060.5	202.8	006.5000	0736.4	157.4	38.48	
326.0	005.9035	0551.1	060.0	202.5	006.5000	0736.1	156.9	38.63	
327.0	005.6356	0549.4	059.4	202.1	006.5000	0735.9	156.3	38.76	
328.0	005.3739	0545.4	058.7	201.7	006.5000	0735.6	155.9	38.86	
329.0	005.1185	0539.7	057.9	201.2	006.5000	0735.4	155.6	38.94	
330.0	004.8692	0533.8	057.1	200.7	006.5000	0735.4	155.3	39.00	
331.0	004.6755	0529.3	056.4	200.3	006.5000	0735.4	155.0	39.08	
332.0	004.4857	0525.2	055.7	199.9	006.5000	0735.5	154.7	39.16	
333.0	004.2999	0521.9	055.1	199.5	006.5000	0735.5	154.4	39.23	
334.0	004.1179	0519.4	054.6	199.1	006.5000	0735.6	154.1	39.30	
335.0	003.9399	0516.7	054.0	198.7	006.5000	0735.6	153.9	39.36	
336.0	003.7659	0512.5	053.3	198.2	006.5000	0735.6	153.7	39.40	
337.0	003.5958	0507.3	052.5	197.8	006.5000	0735.6	153.7	39.41	
338.0	003.4296	0500.9	051.7	197.3	006.5000	0735.7	153.8	39.39	
339.0	003.2673	0494.3	050.9	196.9	006.5000	0735.8	153.9	39.37	
340.0	003.1090	0488.8	050.1	196.4	006.5000	0736.0	154.0	39.35	
341.0	002.9856	0485.1	049.5	196.0	006.5000	0736.2	153.9	39.36	
342.0	002.8648	0482.1	048.9	195.7	006.5000	0736.6	153.9	39.36	
343.0	002.7464	0478.5	048.3	195.3	006.5000	0737.1	154.0	39.36	
344.0	002.6305	0474.6	047.7	194.9	006.5000	0737.6	154.1	39.34	
345.0	002.5172	0470.1	047.0	194.5	006.5000	0738.1	154.2	39.31	
346.0	002.4063	0466.3	046.4	194.1	006.5000	0738.5	154.4	39.27	
347.0	002.2979	0464.0	045.9	193.8	006.5000	0738.9	154.5	39.25	
348.0	002.1920	0463.0	045.4	193.4	006.5000	0739.1	154.6	39.23	
349.0	002.0887	0461.5	044.9	193.1	006.5000	0739.3	154.7	39.20	
350.0	001.9878	0458.2	044.3	192.7	006.5000	0739.5	154.9	39.14	
351.0	001.9085	0454.3	043.8	192.4	006.5000	0739.5	155.2	39.09	
352.0	001.8308	0453.1	043.3	192.1	006.5000	0739.5	155.3	39.05	
353.0	001.7548	0451.7	042.9	191.7	006.5000	0739.3	155.5	39.01	
354.0	001.6803	0448.9	042.4	191.4	006.5000	0739.1	155.7	38.95	
355.0	001.6075	0443.4	041.8	191.1	006.5000	0738.7	156.1	38.84	
356.0	001.5363	0436.0	041.0	190.8	006.5000	0738.3	156.6	38.71	
357.0	001.4666	0427.9	040.3	190.5	006.5000	0737.7	157.2	38.57	
358.0	001.3986	0420.5	039.6	190.2	006.5000	0737.2	157.7	38.42	
359.0	001.3323	0413.6	038.9	189.9	006.5000	0736.7	158.3	38.28	
000.0	001.2675	0405.2	038.1	189.6	006.5000	0736.3	158.9	38.12	
001.0	001.2173	0397.0	037.4	189.3	006.5000	0736.0	159.5	37.98	
002.0	001.1681	0388.5	036.8	189.0	006.5000	0735.7	160.0	37.83	
003.0	001.1200	0381.5	036.2	188.8	006.5000	0735.4	160.6	37.69	
004.0	001.0728	0374.2	035.5	188.6	006.5000	0735.2	161.2	37.55	
005.0	001.0267	0369.1	035.0	188.3	006.5000	0735.0	161.7	37.42	
006.0	000.9816	0363.0	034.3	188.1	006.5000	0734.9	162.3	37.27	
007.0	000.9374	0356.4	033.7	187.9	006.5000	0734.8	162.9	37.10	
008.0	000.8943	0349.2	032.9	187.7	006.5000	0734.7	163.7	36.92	

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009.0	000.8523	0343.8	032.3	187.5	006.5000	0734.7	164.3	36.75
010.0	000.8112	0339.1	031.7	187.3	006.5000	0734.6	165.0	36.59
011.0	000.7791	0334.9	031.2	187.1	006.5000	0734.6	165.5	36.45
012.0	000.7476	0331.6	030.7	187.0	006.5000	0734.5	166.0	36.32
013.0	000.7168	0330.3	030.3	186.8	006.5000	0734.5	166.4	36.21
014.0	000.6866	0329.9	030.0	186.6	006.5000	0734.4	166.8	36.12
015.0	000.6571	0329.0	029.6	186.5	006.5000	0734.4	167.3	36.01
016.0	000.6282	0328.2	029.3	186.3	006.5000	0734.4	167.7	35.90
017.0	000.6000	0329.1	029.0	186.1	006.5000	0734.3	168.1	35.81
018.0	000.5724	0330.9	028.8	186.0	006.5000	0734.2	168.4	35.73
019.0	000.5455	0332.9	028.5	185.8	006.5000	0734.1	168.7	35.64
020.0	000.5192	0335.2	028.3	185.7	006.5000	0734.1	169.1	35.55
021.0	000.5058	0337.3	028.2	185.5	006.5000	0733.9	169.3	35.50
022.0	000.4926	0339.1	028.1	185.4	006.5000	0733.8	169.5	35.44
023.0	000.4795	0340.7	028.0	185.3	006.5000	0733.7	169.8	35.38
024.0	000.4667	0341.6	027.9	185.1	006.5000	0733.6	170.1	35.31
025.0	000.4540	0342.9	027.7	185.0	006.5000	0733.6	170.3	35.24
026.0	000.4414	0345.0	027.6	184.8	006.5000	0733.5	170.6	35.17
027.0	000.4291	0348.3	027.6	184.7	006.5000	0733.5	170.8	35.12
028.0	000.4169	0352.8	027.6	184.5	006.5000	0733.5	171.0	35.07
029.0	000.4049	0356.4	027.5	184.4	006.5000	0733.5	171.3	35.01
030.0	000.3931	0357.5	027.4	184.3	006.5000	0733.6	171.6	34.93
031.0	000.3918	0356.1	027.3	184.1	006.5000	0733.6	171.9	34.86
032.0	000.3905	0353.2	027.2	184.0	006.5000	0733.6	172.2	34.78
033.0	000.3892	0349.2	027.0	183.9	006.5000	0733.6	172.6	34.69
034.0	000.3879	0344.3	026.8	183.8	006.5000	0733.6	173.0	34.59
035.0	000.3866	0338.9	026.5	183.7	006.5000	0733.6	173.5	34.49
036.0	000.3854	0333.5	026.3	183.6	006.5000	0733.5	173.9	34.38
037.0	000.3841	0327.8	026.1	183.6	006.5000	0733.5	174.4	34.28
038.0	000.3828	0321.4	025.8	183.5	006.5000	0733.5	174.9	34.17
039.0	000.3815	0314.6	025.5	183.4	006.5000	0733.5	175.4	34.06
040.0	000.3802	0308.2	025.2	183.4	006.5000	0733.5	175.8	33.95
041.0	000.3802	0302.2	025.0	183.3	006.5000	0733.5	176.3	33.85
042.0	000.3802	0296.2	024.7	183.2	006.5000	0733.5	176.7	33.75
043.0	000.3802	0290.6	024.5	183.2	006.5000	0733.5	177.2	33.65
044.0	000.3802	0285.8	024.3	183.1	006.5000	0733.5	177.6	33.56
045.0	000.3802	0281.8	024.2	183.0	006.5000	0733.5	178.0	33.47
046.0	000.3802	0278.4	024.0	183.0	006.5000	0733.5	178.4	33.39
047.0	000.3802	0274.8	023.9	182.9	006.5000	0733.5	178.8	33.31
048.0	000.3802	0270.7	023.7	182.8	006.5000	0733.5	179.2	33.23
049.0	000.3802	0265.3	023.5	182.8	006.5000	0733.5	179.7	33.14
050.0	000.3802	0258.8	023.2	182.8	006.5000	0733.5	180.1	33.04
051.0	000.3802	0251.7	022.9	182.8	006.5000	0733.5	180.6	32.94
052.0	000.3802	0244.4	022.6	182.8	006.5000	0733.5	181.1	32.84

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503-245-6065

01-13-2017 Terrain Data: FCC NGDC 30 Sec FMOver Analysis

KSKF BLED19960111KX

KTHM. A

Channel = 215C1
 Max ERP = 6.5 kW
 RCAMSL = 2004 m
 N. Lat. 42 05 50.0
 W. Lng. 121 37 59.0
 Protected
 60 dBu

Channel = 215C1
 Max ERP = 12 kW
 RCAMSL = 926 m
 N. Lat. 40 20 41.0
 W. Lng. 121 56 48.0
 Interfering
 40 dBu

Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Actual (dBu)	I X (km)
143.0	006.5000	0726.2	067.7	025.3	000.4496	0343.6	156.0	20.40	
144.0	006.5000	0727.8	067.7	025.2	000.4519	0343.2	154.9	20.61	
145.0	006.5000	0729.4	067.8	025.0	000.4544	0342.9	153.9	20.83	
146.0	006.5000	0731.0	067.8	024.8	000.4570	0342.6	152.8	21.04	
147.0	006.5000	0732.5	067.9	024.5	000.4598	0342.3	151.8	21.26	
148.0	006.5000	0733.9	067.9	024.3	000.4627	0342.0	150.8	21.47	
149.0	006.5000	0735.0	068.0	024.1	000.4658	0341.7	149.8	21.69	
150.0	006.5000	0735.7	068.0	023.8	000.4691	0341.4	148.8	21.90	
151.0	006.5000	0736.0	068.0	023.5	000.4725	0341.2	147.8	22.11	
152.0	006.5000	0735.8	068.0	023.3	000.4762	0340.9	146.9	22.32	
153.0	006.5000	0735.4	068.0	023.0	000.4800	0340.6	146.0	22.53	
154.0	006.5000	0735.1	068.0	022.7	000.4840	0340.2	145.1	22.73	
155.0	006.5000	0735.0	068.0	022.3	000.4881	0339.7	144.2	22.92	
156.0	006.5000	0735.0	068.0	022.0	000.4924	0339.2	143.4	23.12	
157.0	006.5000	0734.6	067.9	021.7	000.4968	0338.6	142.5	23.31	
158.0	006.5000	0732.9	067.9	021.3	000.5015	0337.9	141.7	23.50	
159.0	006.5000	0728.5	067.7	020.9	000.5067	0337.2	141.0	23.67	
160.0	006.5000	0720.6	067.5	020.5	000.5125	0336.3	140.5	23.81	
161.0	006.5000	0711.9	067.2	020.0	000.5185	0335.3	139.9	23.95	
162.0	006.5000	0707.6	067.0	019.6	000.5287	0334.4	139.3	24.14	
163.0	006.5000	0712.7	067.2	019.3	000.5377	0333.6	138.5	24.37	
164.0	006.5000	0722.7	067.5	019.0	000.5459	0332.9	137.5	24.63	
165.0	006.5000	0731.2	067.8	018.6	000.5550	0332.2	136.6	24.87	
166.0	006.5000	0734.5	067.9	018.3	000.5656	0331.4	135.9	25.09	
167.0	006.5000	0735.6	068.0	017.8	000.5770	0330.6	135.2	25.30	
168.0	006.5000	0735.5	068.0	017.4	000.5889	0329.8	134.6	25.50	
169.0	006.5000	0735.4	068.0	017.0	000.6013	0329.0	134.0	25.69	
170.0	006.5000	0735.8	068.0	016.5	000.6139	0328.4	133.5	25.88	
171.0	006.5000	0736.6	068.0	016.1	000.6267	0328.2	132.9	26.09	
172.0	006.5000	0737.3	068.0	015.6	000.6400	0328.4	132.4	26.30	
173.0	006.5000	0737.9	068.1	015.1	000.6536	0328.9	131.9	26.51	
174.0	006.5000	0737.9	068.1	014.6	000.6677	0329.4	131.5	26.72	
175.0	006.5000	0737.7	068.0	014.2	000.6821	0329.8	131.1	26.91	
176.0	006.5000	0736.8	068.0	013.7	000.6970	0330.0	130.8	27.09	
177.0	006.5000	0735.9	068.0	013.2	000.7121	0330.3	130.4	27.26	
178.0	006.5000	0735.6	068.0	012.6	000.7275	0330.7	130.1	27.44	
179.0	006.5000	0735.5	068.0	012.1	000.7432	0331.3	129.8	27.62	
180.0	006.5000	0735.5	068.0	011.6	000.7592	0332.6	129.6	27.81	
181.0	006.5000	0734.8	067.9	011.1	000.7755	0334.5	129.4	28.01	
182.0	006.5000	0734.1	067.9	010.6	000.7921	0336.6	129.2	28.21	
183.0	006.5000	0733.5	067.9	010.1	000.8089	0338.8	129.1	28.41	
184.0	006.5000	0733.6	067.9	009.5	000.8297	0341.4	128.9	28.64	
185.0	006.5000	0733.6	067.9	009.0	000.8513	0343.7	128.8	28.85	
186.0	006.5000	0734.2	067.9	008.5	000.8733	0346.1	128.7	29.06	
187.0	006.5000	0734.5	067.9	008.0	000.8957	0349.4	128.7	29.30	
188.0	006.5000	0734.9	068.0	007.4	000.9183	0353.4	128.7	29.55	
189.0	006.5000	0735.6	068.0	006.9	000.9412	0356.9	128.6	29.78	
190.0	006.5000	0736.9	068.0	006.4	000.9645	0360.3	128.7	30.00	

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191.0	006.5000	0738.6	068.1	005.9	000.9880	0364.0	128.7	30.22
192.0	006.5000	0739.5	068.1	005.3	001.0118	0367.5	128.8	30.42
193.0	006.5000	0739.4	068.1	004.8	001.0357	0370.0	128.9	30.56
194.0	006.5000	0738.6	068.1	004.3	001.0597	0372.3	129.1	30.69
195.0	006.5000	0737.4	068.0	003.8	001.0837	0375.9	129.4	30.83
196.0	006.5000	0736.3	068.0	003.3	001.1077	0379.6	129.7	30.97
197.0	006.5000	0735.7	068.0	002.7	001.1319	0383.3	130.0	31.10
198.0	006.5000	0735.6	068.0	002.2	001.1562	0386.9	130.3	31.22
199.0	006.5000	0735.6	068.0	001.7	001.1806	0390.6	130.6	31.34
200.0	006.5000	0735.4	068.0	001.3	001.2049	0394.9	131.0	31.46
201.0	006.5000	0735.4	068.0	000.8	001.2292	0398.9	131.4	31.56
202.0	006.5000	0735.8	068.0	000.3	001.2535	0402.9	131.8	31.66
203.0	006.5000	0736.5	068.0	359.8	001.2806	0406.9	132.2	31.76
204.0	006.5000	0737.4	068.0	359.3	001.3113	0410.9	132.6	31.86
205.0	006.5000	0738.1	068.1	358.9	001.3420	0414.6	133.1	31.94
206.0	006.5000	0738.5	068.1	358.4	001.3723	0417.7	133.7	31.99
207.0	006.5000	0738.5	068.1	357.9	001.4023	0420.9	134.2	32.03
208.0	006.5000	0738.2	068.1	357.5	001.4319	0424.1	134.8	32.06
209.0	006.5000	0737.8	068.0	357.1	001.4612	0427.3	135.4	32.08
210.0	006.5000	0737.3	068.0	356.7	001.4902	0430.5	136.1	32.10
211.0	006.5000	0737.1	068.0	356.2	001.5189	0433.7	136.7	32.10
212.0	006.5000	0737.0	068.0	355.8	001.5474	0437.5	137.4	32.11
213.0	006.5000	0737.0	068.0	355.4	001.5755	0440.6	138.1	32.10
214.0	006.5000	0737.0	068.0	355.1	001.6032	0443.1	138.9	32.06
215.0	006.5000	0737.0	068.0	354.7	001.6304	0445.3	139.6	32.01
216.0	006.5000	0736.9	068.0	354.3	001.6572	0447.3	140.4	31.95
217.0	006.5000	0736.5	068.0	354.0	001.6832	0449.1	141.2	31.87
218.0	006.5000	0736.0	068.0	353.6	001.7086	0450.5	142.0	31.78
219.0	006.5000	0735.2	068.0	353.3	001.7333	0451.2	142.9	31.66
220.0	006.5000	0734.2	067.9	353.0	001.7572	0451.7	143.8	31.54
221.0	006.5000	0733.0	067.9	352.7	001.7804	0452.2	144.7	31.41
222.0	006.5000	0731.7	067.8	352.4	001.8028	0452.6	145.6	31.28
223.0	006.5000	0730.1	067.8	352.1	001.8243	0453.0	146.5	31.13
224.0	006.5000	0728.1	067.7	351.8	001.8449	0453.3	147.5	30.98
225.0	006.5000	0725.5	067.6	351.6	001.8643	0453.5	148.5	30.82
226.0	006.5000	0722.5	067.5	351.3	001.8826	0453.6	149.5	30.65
227.0	006.5000	0719.2	067.4	351.1	001.9000	0454.0	150.5	30.47
228.0	006.5000	0715.8	067.3	350.9	001.9165	0454.7	151.6	30.30
229.0	006.5000	0712.8	067.2	350.7	001.9327	0455.6	152.6	30.13
230.0	006.5000	0709.8	067.1	350.5	001.9481	0456.4	153.7	29.95
231.0	006.5000	0707.4	067.0	350.3	001.9633	0457.1	154.7	29.78
232.0	006.5000	0705.3	066.9	350.1	001.9780	0457.8	155.8	29.59

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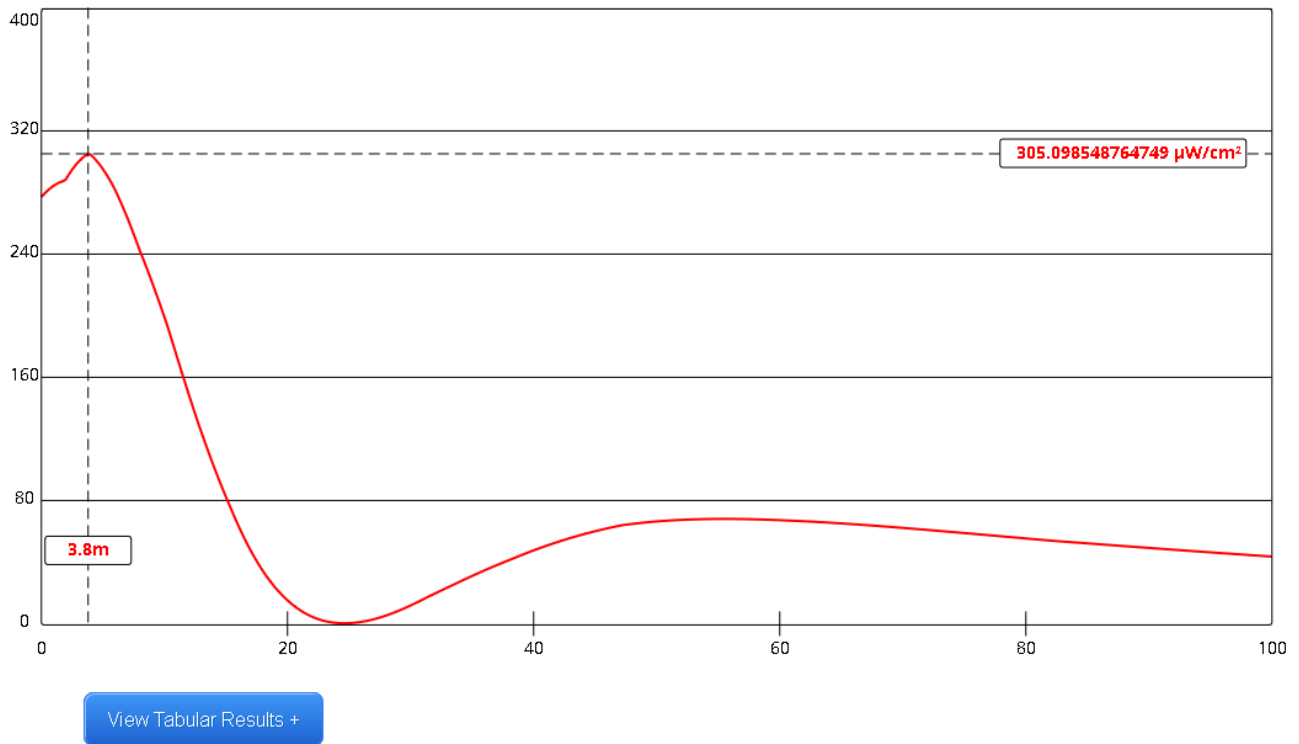
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503-245-6065

EXHIBIT 24

ENVIRONMENTAL PROTECTION ACT / NIER ANALYSIS

The applicant proposes mounting a new antenna on an existing 46m tower. The proposed center of radiation is 24m AGL. A 2 bay, 0.75 wavelength-spaced “slant-log” Shively 6025 Slant 36-D” antenna is proposed. This antenna is not modeled in FM Model (online version), so the “worst-case”EPA Type 1” setting was employed. FM Model predicted a peak ground-level exposure of 305.1μw/cm², at 3.8 meters from the tower.

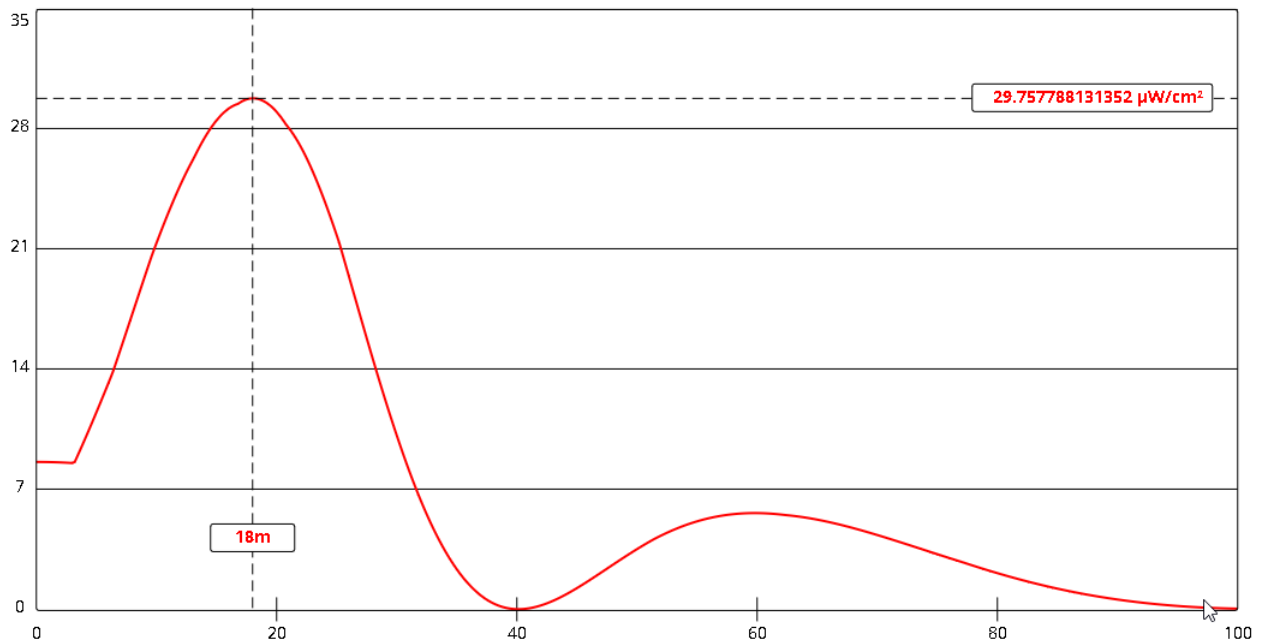


Channel Selection	Channel 215 (90.9 MHz) ▾		
Antenna Type +	EPA Type 1: Ring-and-Stub or "Other" ▾		
Height (m)	<input type="text" value="24"/>	Distance (m)	<input type="text" value="100"/>
ERP-H (W)	<input type="text" value="12000"/>	ERP-V (W)	<input type="text" value="7000"/>
Num of Elements	<input type="text" value="2"/>	Element Spacing (λ)	<input type="text" value=".75"/>
Num of Points	<input type="text" value="500"/>	<input type="button" value="Apply"/>	

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Also on the tower is KKRO, Red Bluff, CA. FCC records show a 3-bay full-wave-spaced G5CPM-3E antenna, with 5.5kW ERP at 38m AGL. Using the appropriate “EPA Type 3” setting, FM Model predicted a peak ground level exposure of $29.8\mu\text{W}/\text{cm}^2$ at 18m from the tower.



[View Tabular Results +](#)

Channel Selection	Channel 274 (102.7 MHz) ▾		
Antenna Type +	EPA Type 3: Opposed U Dipole ▾		
Height (m)	<input type="text" value="38"/>	Distance (m)	<input type="text" value="100"/>
ERP-H (W)	<input type="text" value="5500"/>	ERP-V (W)	<input type="text" value="5500"/>
Num of Elements	<input type="text" value="3"/>	Element Spacing (λ)	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>	<input type="button" value="Apply"/>	

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Although the peak levels from the two stations are not at the same radius, they are added here for simplicity, for a combined total of $334.9\mu\text{w}/\text{cm}^2$, or 33.5% of the Maximum Permissible Exposure (MPE) of $1000\mu\text{w}/\text{cm}^2$ for controlled/occupational environments. The applicant believes that this site qualifies as a controlled/occupational location, in that it is very remote and not readily accessible to the public. Access is controlled by fences, a locked gate, and very rugged terrain.

There are no other broadcast stations in the area, nor any other RF emitters that could make a significant contribution to ground level RF exposures. The applicant will ensure that the site is posted with appropriate RF exposure warning signs. If tower climbing by authorized personnel becomes necessary, transmitter power will be reduced or operation will cease, as necessary, so as to not exceed the RF exposure limits.

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