

Skywave Study
In Support of an Application to
Change Antenna Location
KLDC, Denver, Colorado
Facility ID 12364
1220 kHz, 0.5 kW-D/0.014 kW-N, DA-D

KLZ proposes non-directional secondary nighttime coverage for KLDC using tower #2 of the proposed daytime directional antenna at a power of 14 watts. This proposed operation will not enter into the 25% RSS calculation of any facility. XEB is the only Class A protection of concern, and there are three XEB night records in the database, all of which are U.S. objected:

XEB	1220	kHz	Hours:U	100.000	kW	Status:O (O)	Class:A	19-19-45N	99-09-38W
				Q: .0000				SAN LORENZO TEZO, DF, MX	-
								Std. RMS:3990.000	mV/m/km
				Facility No.:	102710			Change List: 980003	
Twr.	Field	Phase	Spacing	Orient	Height	A	B	C	D
1	1.000	0.0	0.0	0.0	193.3	0.0	0.0	0.0	0

XEB	1220	kHz	Hours:N	100.000	kW	Status:O (O)	Class:A	19-18-31N	99-03-32W
				Q:.0000				SAN LORENZO TEZO, DF, MX	-
								Std. RMS:4216.300	mV/m/km
			Facility No.:	102710				Change List: 980003	
Twr.	Field	Phase	Spacing	Orient	Height	A	B	C	D
1	1.000	0.0	0.0	0.0	180.2	0.0	0.0	0.0	0.0

XEB1	Hours:N	Status:P (O)	19-18-29N	99-03-32W					
1220 kHz	100.000 kW	Class:A	SAN LORENZO TEZO, DF, MX	-					
	Q:.0000		Std. RMS:4442.400 mV/m/km						
	Facility No.: 114266		Change List: 980003						
Twr.	Field	Phase	Spacing	Orient	Height	A	B	C	D
1	1.000	0.0	0.0	0.0	197.7	0.0	0.0	0.0	0.0

The proposed KLDC secondary night operation fully protects XEB as follows:

Proposed Night Limits

KLDC-P 1220 kHz to Co-Channel Stations: XEB-U .5 mV/m 50% SKYWAVE

*** Facilities/Points with Proposed Limits less than .45 mV/m are NOT printed

Facility or Contour	Location	Dist km	Azim deg	Theta deg	Max IDF mV/m/km	Skywave uV/m	Limit mV/m	Required Protect	
XEB-340	31-04-45N 104-09-06W	977.2	175.5	8.9	8.9	35.3	66.5	0.470	0.500
XEB-345	31-26-27N 102-57-00W	951.6	168.4	9.2	9.2	35.3	69.2	0.488	0.500
XEB-350	31-42-06N 101-42-33W	951.2	161.0	9.2	9.2	35.3	69.3	0.489	0.500
XEB-355	31-51-34N 100-26-30W	976.1	154.0	8.9	8.9	35.3	66.6	0.471	0.500

Exhibit 18

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Proposed Night Limits

KLDC-P 1220 kHz to Co-Channel Stations: XEB .5 mV/m 50% SKYWAVE

*** Facilities/Points with Proposed Limits less than .45 mV/m are NOT printed

Facility or Contour	Location	Dist km	Azim deg	Theta deg	Max IDF mV/m/km	Skywave uV/m	Limit mV/m	Required Protect
XEB-335	30-50-48N 105-20-57W	1001.0	182.2	8.6	8.6	35.4	64.0	0.453 0.500

Proposed Night Limits

KLDC-P 1220 kHz to Co-Channel Stations: XEB1 .5 mV/m 50% SKYWAVE

*** Facilities/Points with Proposed Limits less than .45 mV/m are NOT printed

Facility or Contour	Location	Dist km	Azim deg	Theta deg	Max IDF mV/m/km	Skywave uV/m	Limit mV/m	Required Protect
XEB1-335	31-02-24N 105-28-04W	980.0	182.9	8.8	8.8	35.3	66.2	0.468 0.502

Class B protections are as follows:

Proposed Night Limits

KLDC-P 1220 kHz to Adjacent Channel Stations: **1210 kHz**

*** Facilities/Points with Proposed Limits less than .1 mV/m are NOT printed

Facility or Contour	Location	Dist km	Azim deg	Theta deg	Max IDF mV/m/km	Skywave uV/m	Limit mV/m	Required Protect
KHAT-L	41-15-19N 105-33-01W	164.8	342.3	40.8	55.0	24.8	334.3	0.166 6.390

Proposed Night Limits

KLDC-P 1220 kHz to Co-Channel Stations: **1220 kHz**

*** Facilities/Points with Proposed Limits less than .1 mV/m are NOT printed

Facility or Contour	Location	Dist km	Azim deg	Theta deg	Max IDF mV/m/km	Skywave uV/m	Limit mV/m	Required Protect
XENVA2-P	31-03-48N 114-50-10W	1322.8	225.6	5.3	5.3	35.7	36.9	0.264 7.826
XELPZ-P	24-09-41N 110-20-44W	1815.3	197.8	1.9	1.9	35.9	14.2	0.102 31.494
XENVA2-P	28-41-50N 100-30-40W	1304.4	160.4	5.4	5.4	35.7	38.2	0.273 45.060
KTMZ-L	34-01-11N 117-43-03W	1304.4	244.3	3.4	7.4	35.9	28.7	0.206 2.579
WLPO-L	41-18-14N 89-05-44W	1347.0	78.0	3.1	7.0	35.9	22.4	0.161 2.901
KLBB-L	45-03-15N 92-49-42W	1149.3	55.9	4.5	9.2	35.8	27.9	0.200 3.253
KDDR-L	46-07-23N 98-05-21W	893.1	36.5	7.1	13.0	35.5	43.6	0.310 2.616
KHTS-L	34-27-55N 118-24-07W	1331.4	247.6	3.2	7.2	35.9	27.6	0.198 2.738
CJOC-P	49-42-40N 112-43-20W	1255.1	333.4	5.8	5.8	35.7	41.8	0.298 1.680

Exhibit 18

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CJRB-O	49-15-26N	1115.5	18.7	7.2	7.2	35.5	53.3	0.379	7.029
	100-03-24W								
CJRL-P	49-45-53N	1376.9	33.4	4.8	4.8	35.8	33.4	0.239	4.288
	94-26-40W								

Proposed Night Limits

KLDC-P 1220 kHz to Adjacent Channel Stations: **1230 kHz**

*** Facilities/Points with Proposed Limits less than .1 mV/m are NOT printed

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Facility or Contour	Location	Dist km	Azim deg	Theta deg	Max IDF mV/m/km	Skywave uV/m	Limit Required mV/m	Protect
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-- No 1230 kHz stations with Proposed Limits in excess of .1 mV/m --

The proposed KLDC secondary night facility will not enter the limit of any class B station.