

TECHNICAL EXHIBIT
DISPLACEMENT APPLICATION FOR CONSTRUCTION PERMIT
TV TRANSLATOR STATION K53DR
CORTEZ, COLORADO
CH 50 1.8 KW (MAX-DA)

Technical Narrative

The technical exhibit of which this narrative is part supports a displacement relief application for construction permit for K53DR on channel 53 at Cortez, Colorado.

Station K53DR currently is licensed (BLTT-890919IJ) to operate on channel 53 with a directional maximum effective radiated power (ERP) of 8.83 kilowatt and an antenna radiation center height above mean sea level (RCMSL) of 2703 meters. By this instant displacement application, K53DR is seeking a core spectrum channel since it operates on a channel greater than 51. Since there is no change in transmitter site it is apparent that there will be common contour overlap of the 74 dBu contours.

This displacement application proposes operation on channel 50 at the current site. A Kathrein-Scala 2xPRTV-47/50/HV directional antenna array with an ERP of 1.8 kW and antenna RCMSL of 2704 meters is proposed. The antenna major lobes will be oriented with main lobes at 0° and 275° True.

Summary of Proposed Facilities

Below is a tabulation of the proposed facility.

Channel:	50(z)
Geographic Coordinates:	37° 19' 32" North Latitude 108° 08' 42" West Longitude
Radiation Center:	2704 meters AMSL
Antenna Type:	Scala Composite
Transmitter Power Output:	0.1 kilowatt (100 watts)
Transmission Line:	LDF5-50A (7/8" Foam - 100 feet)
Effective Radiated Power:	1.8 kilowatt

NTSC Allocation Considerations

A study has been conducted based on the provisions of Sections 74.705, 74.707 and 74.709 of the Commission's Rules which indicates that the proposal will not create prohibited interference with other existing or authorized NTSC full-power or LPTV stations pursuant to OET Bulletin 69. Interference to a new Channel 50 LPTV station is predicted (BNPTTL-20000828AYB and BNPTTL-20000828ALO), however, this displacement application has priority over applications for new LPTV stations.

DTV Allocation Considerations

The proposed operation will not cause interference, predicted pursuant to OET Bulletin 69, to DTV facilities on channels 49, 50 or 51.

Radiofrequency Electromagnetic Field Exposure

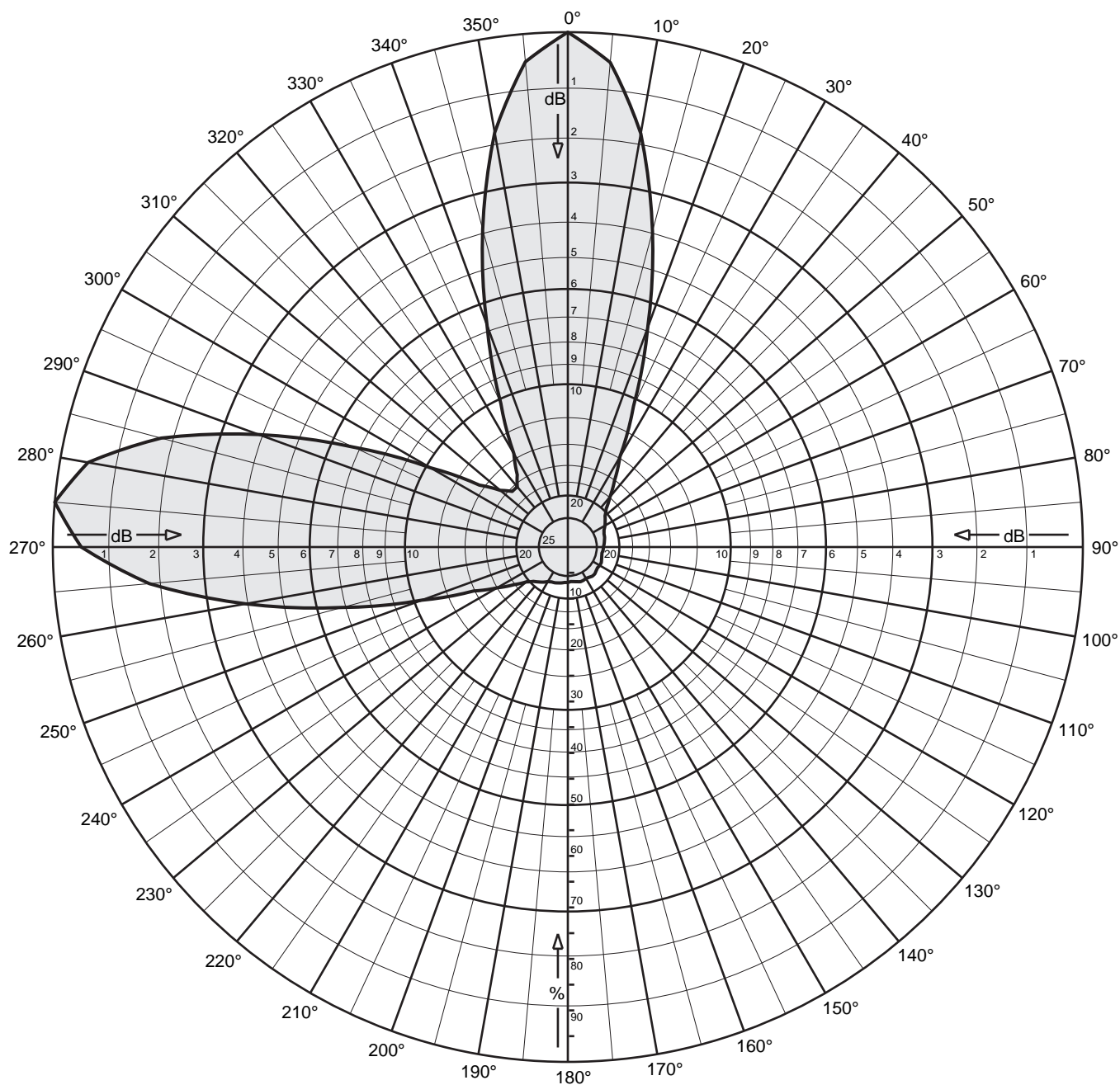
The proposed K53DR facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the proposed antenna is located 14 meters above ground level with a maximum visual ERP of 1.8 kW. A conservative relative field value of 0.25 was assumed for the proposed antenna. Therefore, the "worst-case" calculated power density at a point 2 meters above ground level will be 0.02 mW/cm². This is less than 5% of the FCC's recommended limit of 0.46 mW/cm² for channel 50 for an "uncontrolled" environment.

Access to the tower is currently restricted and appropriately marked with warning signs. Furthermore, procedures among all co-located users of the tower will be in effect for instances in which workers or other authorized personnel climb into the restricted area to ensure that appropriate measures are taken to assure worker safety with respect to radio frequency electromagnetic field exposure. Such procedures include reducing the average exposure by spreading out the work over a longer period of time or scheduling work when the station is at reduced power or shut down.

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2xPRTV-47/50/HV Paraflector array
 one ant. skewed 0 deg., w/ 50% Power
 one ant. skewed 275 deg., w/ 50% Power
 Max Gain: 13.3 dBd
 Power-x: 21.4
 Horizontal Polarization
 Horizontal Plane Pattern



2xPRTV-47/50/HV Paraflector array
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Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	13.30	21.38	180	0.069	-23.25	-9.95	0.10
10	0.816	-1.77	11.53	14.22	190	0.071	-23.00	-9.70	0.11
20	0.453	-6.87	6.43	4.39	200	0.074	-22.63	-9.33	0.12
30	0.202	-13.89	-0.59	0.87	210	0.077	-22.22	-8.92	0.13
40	0.127	-17.90	-4.60	0.35	220	0.088	-21.07	-7.77	0.17
50	0.094	-20.51	-7.21	0.19	230	0.105	-19.55	-6.25	0.24
60	0.083	-21.59	-8.29	0.15	240	0.158	-16.01	-2.71	0.54
70	0.075	-22.53	-9.23	0.12	250	0.302	-10.41	2.89	1.94
80	0.072	-22.83	-9.53	0.11	260	0.635	-3.94	9.36	8.62
90	0.069	-23.22	-9.92	0.10	270	0.945	-0.49	12.81	19.08
100	0.067	-23.45	-10.15	0.10	280	0.946	-0.48	12.82	19.13
110	0.070	-23.14	-9.84	0.10	290	0.639	-3.89	9.41	8.73
120	0.071	-22.92	-9.62	0.11	300	0.308	-10.24	3.06	2.03
130	0.072	-22.89	-9.59	0.11	310	0.171	-15.33	-2.03	0.63
140	0.074	-22.62	-9.32	0.12	320	0.153	-16.32	-3.02	0.50
150	0.070	-23.07	-9.77	0.11	330	0.210	-13.57	-0.27	0.94
160	0.072	-22.89	-9.59	0.11	340	0.459	-6.76	6.54	4.50
170	0.068	-23.32	-10.02	0.10	350	0.818	-1.75	11.55	14.29