



ENGINEERING STUDY
K283CZ CP MODIFICATION APPLICATION
Translator for KUBC (AM), Montrose, CO
BNPFT-20180508ABB

TECHNICAL STATEMENT

This technical statement and attached exhibits were prepared on behalf of CCR-Montrose IV, LLC, licensee of AM radio station KUBC, 580 kHz, Montrose, CO. Facility ID #73626 and construction permit for K283CZ, facility ID 202972. This application seeks to slightly relocate the proposed antenna to a different tower on the same KUBC (AM) array to place it closer to the transmitter building.

Facilities Proposed

Location (NAD83)	38° 25' 36" N Latitude, 107° 52' 59" W Longitude
Channel	283D (104.5MHz)
Tower Overall AGL Height-	95m
Tower ASR	1063915
Proposed Antenna	ERI 100A-2
Antenna AGL Height-	93m
Site AMSL Height-	1811m
ERP	250Watts- NON-DIRECTIONAL

COMPLIANCE WITH 74.1204(a) [contour overlap]

The proposed translator on channel 283D will remain fully compliant with 74.1204(a). A table showing the allocation is attached as Exhibit A. A map showing the relationship to the closest co-channel or first adjacent channel allotment (KMXV 282C0) is shown in Exhibit B.

COMPLIANCE WITH 74.1204(d)

There will be contour overlap with one second adjacent facility, KRYD, 285C1. Exhibit C is a tabulation showing that the interfering contour will not be closer than 39.3 meters to ground level. Based upon the preceding analysis, it is considered that the proposed operation of 283D will be compliant with 74.1204(d) in that no actual interference will occur to any listeners.

COMPLIANCE WITH 74.1201(g) [AM fill-in]

Exhibit D demonstrates that the proposed translator will be entirely contained within the KUBC (AM) 2mV/m day contour as well as within 25 miles from KUBC.

The proposed facility is not within 320km of the common border between the US and Mexico or Canada.

ENVIRONMENTAL EXHIBIT

The proposed translator facility will utilize a non-directional antenna and will be isocoupled to an existing AM tower (ASR 1063915, Exhibit E) used by the primary station, KUBC. The attachment of the proposed translator antenna will not alter the existing tower structure for purposes of the Nationwide Programmatic Agreement and the NHPA Section 106.

Using the FCC program “FM Model for Windows”, it was calculated that the proposed antenna contributes approximately $0.45\mu\text{W}/\text{cm}^2$ or 0.23 % of the total allowable $200\mu\text{W}/\text{cm}^2$. The maximum was found to be 91 meters from the base of the tower. There are no tall buildings within 100m of the proposed tower, and the tower is fenced preventing public access for KUBC’s RFR compliance requirements.

Other than KUBC (AM) there are no other non-excluded facilities at this site. Because the maximum contribution of the proposed translator for the uncontrolled environment is less than the 10

$\mu\text{W}/\text{cm}^2$ (5.0%) limit as set forth by §1.1307(b)(3), the facility will be in compliance with FCC guidelines and is excluded from further Environmental Assessment under 47CFR 1.1306 and 1.1307.

The proposed new FM translator along with other users at the site will maintain an occupational safety policy and agrees to reduce power or cease operation during periods of maintenance to avoid potentially harmful exposure of personnel to non-ionizing RF radiation.

Respectfully Submitted

A handwritten signature in cursive script that reads "Bert Goldman". The signature is written in black ink and is positioned above the printed name.

Bert Goldman

Technical Consultant

EXHIBIT A- ALLOCATION STUDY

ComStudy 2.2 search of channel 283 (104.5 MHz Class D) at 38-25-36.0 N, 107-52-59.0 W.

CALL	CITY	ST CHN CL	DIST	SEP	BRNG	CLEARANCE
KRYD	NORWOOD	CO 285 C1	30.22	0.00	246.1	-19.24 dB EXHIBIT D
KMXY	GRAND JUNCTION	CO 282 C0	103.39	0.00	313.7	1.13 dB Exhibit B
KKFG	BLOOMFIELD	NM 283 C	198.22	0.00	177.4	22.02 dB
K284AP	GRAND JUNCTION	CO 284 D	103.35	0.00	313.8	25.77 dB
KKFG	BLOOMFIELD	NM 283 C	197.90	0.00	188.6	31.38 dB
KKVM	VAIL	CO 284 C1	182.89	0.00	42.3	32.87 dB
K282BJ	CARBONDALE	CO 282 D	119.03	0.00	21.4	34.76 dB
K283BN	VERNAL	UT 283 D	281.72	0.00	327.0	37.91 dB

LMS as of 2/5/2020

EXHIBIT B 74.1204(a) Compliance

Proposed KUBC 283D from ASR 1063915, 250w ND, 93m AGL 74.1204a Compliance

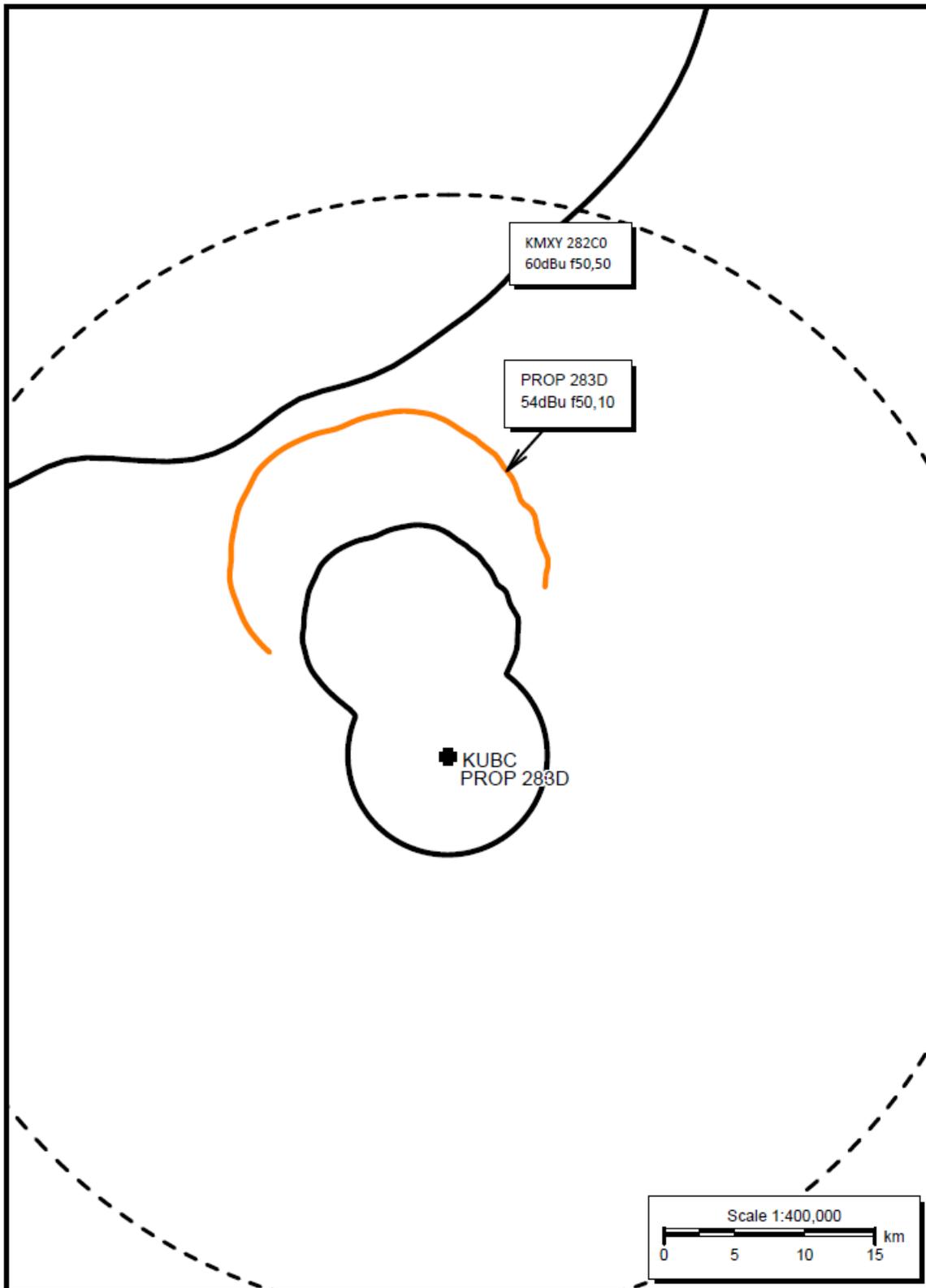


EXHIBIT C 74.1204(d) Compliance to KRYD

K283CZ.C Montrose , CO, Showing Protection to KRYD , Channel: 285

Geographic Coordinates: N. 382536.00 W. 1075259

74.1204(d) Study - Using NED 03 SEC Terrain Database

Translator or LPFM Maximum Licensed ERP = 0.25 kW, Channel: 283

Translator or LPFM Antenna Height AG = 93 meters

K283CZ.C Antenna Model = SHPX1F

Protected Station's Contour = 78.49643 dBu

Translator's or LPFM's full Interference contour 118.49643

Review Azimuth = 0 Degrees True

Horizontal Relative Field at Review Azimuth = 1.000

Translator/LPFM ERP on the horizontal at Review Azimuth = 0.25 kW

Distance between stations = 30.2 km

Protected Station= KRYD, 24 kW, 3074 M meters COR AMSL

Depression Angle From Degree(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.2500	131.8708	131.8708	093.000
05.00	0.993	1.0	0.2465	130.9477	130.4494	081.587
10.00	0.974	1.0	0.2372	128.4421	126.4908	070.696
15.00	0.941	1.0	0.2214	124.0904	119.8621	060.883
20.00	0.897	1.0	0.2012	118.2881	111.1544	052.543
25.00	0.843	1.0	0.1777	111.1670	100.7516	046.019
30.00	0.78	1.0	0.1521	102.8592	089.0787	041.570
35.00	0.709	1.0	0.1257	093.4964	076.5877	039.373
40.00	0.633	1.0	0.1002	083.4742	063.9449	039.344
45.00	0.554	1.0	0.0767	073.0564	051.6587	041.341
50.00	0.473	1.0	0.0559	062.3749	040.0938	045.218
55.00	0.394	1.0	0.0388	051.9571	029.8014	050.439
60.00	0.317	1.0	0.0251	041.8030	020.9015	056.798
65.00	0.245	1.0	0.0150	032.3083	013.6541	063.719
70.00	0.181	1.0	0.0082	023.8686	008.1635	070.571
75.00	0.124	1.0	0.0038	016.3520	004.2322	077.205
80.00	0.077	1.0	0.0015	010.1540	001.7632	083.000
85.00	0.041	1.0	0.0004	005.4067	000.4712	087.614
90.00	0.016	1.0	0.0001	002.1099	000.0000	090.890

EXHIBIT D 74.1201(g) Compliance

Proposed KUBC 283D from ASR 1063915, 250w ND, 93m AGL 74.1201g Compliance

