

ENGINEERING REPORT

New FM Booster Application for
KYFO-FM – Ogden, UT
95.5 MHz

Lic No. BLED-19981125KD

May, 2007

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(Exhibit Numbering is in response to FCC Online Form 349, Section III-A)

Discussion

This firm has been retained to prepare the required engineering report in support of an application for an FM booster station for KYFO-FM, Ogden, UT, File No. BLED-19981125KD. KYFO-FM operates on Channel 238C1, 95.5 MHz. The proposed booster service contour will be entirely located within the service contour of KYFO-FM. This proposal meets the requirements of 47 C.F.R. §74.1235(c).

It has been determined that the booster may be used in the area without interference to any existing FM broadcast station, except to the signal of KYFO-FM. **Exhibit 12.1** of this report is a map showing the relationship of the booster to the primary station protected contour. The booster site is within the primary contour, and the 1 mV/m (60 dBu) contour of the booster does not extend beyond the primary station 1 mV/m contour.

The antenna will be a directional “off the shelf” vertically polarized Kathrein Scala FMVMP one bay dipole. Directional antenna information has been included as **Exhibit 12.2**. The antenna will be mounted on an existing tower bearing ASR No. 1044646. The proposed antenna will not increase the overall tower height, therefore the FAA need not be notified. A copy of the existing Antenna Structure Registration has been included in **Exhibit 10.1**. A copy of the vertical antenna plan has been included in **Exhibit 10.2**.

The proposed facility meets the requirements of the Rules for operation without a licensed operator in attendance. The transmitter site may be reached promptly at all hours and in all seasons. The transmitter will be equipped with proper control and interface circuits which will place the booster in a non-radiating condition in the event the proper incoming signal is absent. The transmitter and controls will be placed in a locked area to prevent unauthorized tampering with the equipment. A person or persons will be assigned to observe the signals of the station each day, and to take corrective action if required. The equipment proposed for operation is listed in the type-approved list of the Commission.

Prompt suspension of the booster operation will be made, in the event of equipment failure that could cause operation outside the specifications of the Rules. The data contained in this report is responsive to the Rules of the Commission, and provides information for FCC Form 349.

Discussion (continued)

RADIATION PROTECTION: The Commission requires an engineering study regarding compliance with the guidelines for human protection from radiofrequency radiation. This report section is in response to that provision of the Rules.

The current Federal Communications Commission guidelines for RF radiation protection are set forth in OET Bulletin No. 65 (Edition 97-01), and the accompanying Supplement A, (Edition 97-01).

The facility proposed in this application is in compliance with the provisions of the FCC Rules and Guidelines concerning human exposure to radiofrequency radiation to observers located on the ground. Since the facility will operate with an ERP of less than 100 watts, §1.1307(b)(1) categorically exempts the facility from the requirement for special showings.

In the event work would be required in proximity to the antenna such that the person or persons working in the area would be potentially exposed to fields in excess of the guidelines set forth in OET Bulletin No. 65 (Edition 97-01), the transmitter power will be reduced or the station will cease operation during the critical period.

DISTANCES TO CONTOURS: The following tabulation of the distances to the proposed service contour results from calculations performed in accordance with §73.313(d) and §73.333 Figure 1.

N. Lat. = 40 48 29 W. Lng. = 111 53 22 HAAT and Distance to Contour - FCC Method - 30 Arc Sec.						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	1339.6	503.4	0.0000	-52.01	0.030	0.56
030	1872.7	-29.7	0.0000	-52.01	0.030	0.56
060	2245.5	-402.5	0.0000	-52.01	0.030	0.56
090	2022.6	-179.6	0.0000	-52.01	0.030	0.56
120	1786.1	56.9	0.0000	-47.57	0.050	0.93
150	1420.1	422.9	0.0021	-26.84	0.544	7.15
180	1304.1	538.9	0.0059	-22.31	0.916	11.02
210	1295.6	547.4	0.0067	-21.72	0.980	11.56
240	1298.8	544.2	0.0033	-24.77	0.690	9.18
270	1287.6	555.4	0.0003	-35.97	0.190	3.25
300	1286.4	556.6	0.0000	-52.01	0.030	0.56
330	1294.2	548.8	0.0000	-52.01	0.030	0.56

Ave El= 1537.77 M HAAT= 305.23 M AMSL= 1843 M