

14 August 1990

KGON - FM, Portland, Oregon

Form 302, Section II-B, Paragraph 8



**Exhibit II**  
**Calculation of Operating Power**

The facility covered under this construction permit consists of a master antenna with several FM broadcast stations combined into it. Power is to be determined by the direct method using the wattmeter which is part of the transmitter as contemplated in section 73.267(b) of the Commission's Rules and Regulations. This wattmeter is calibrated using a dummy antenna and a calorimeter accurate to 2%.

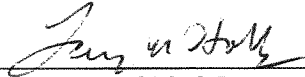
There are three components in the complete transmission system between the output of the transmitter and the input to the antenna. These consist of 20 meters of MYAT Model 301, 7.6 cm I.D. (3-1/8" O.D.), rigid coaxial transmission line connecting the transmitter to the combining equipment; the Shively Laboratory Model 2530E-30/4-3 balanced constant impedance combiner; and 188 meters of MYAT Model 901, 22.9 cm I.D. (9-3/16" O.D.), rigid coaxial transmission line. The losses from these components are tabulated below:

20 meters of 3-1/8" transmission line @ .3117 db/100 meters	.062 db
Combining equipment	.286 db
188 meters of 9-3/16" transmission line @.1007 db/100 meters	.189 db
Total loss in transmission system	.537 db

This is equivalent to a total transmission system efficiency of 88.4 %.

**Certification of Transmitter Efficiency Factor  
KGON (FM) Portland, Oregon**

KGON (FM), Portland, Oregon, has a main and an alternate main transmitter; both Broadcast Electronics FM-35B models. On 2-20, 1999, each transmitter's power amplifier efficiency factor was determined. Transmitter A, the main transmitter, had an efficiency factor of .708. Transmitter B, the alternate main transmitter, had an efficiency factor of .690. The efficiency factors were determined by measuring the PA voltage and PA current while also measuring the output power of each transmitter using a calibrated Altronic Research, Inc. Model PTS50E3 Power Test Load calorimeter, serial # 103, that is equipped with calibrated thermometers, water flow meter, and 50 ohm resistive water-cooled load. On file at the KGON transmitter site is the Altronic factory data specifying that the calorimeter's power measurement accuracy.



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Larry M. Holtz, Chief Operator, KGON

2-20-1999

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Date