



United States of America
FEDERAL COMMUNICATIONS COMMISSION
FM BROADCAST STATION CONSTRUCTION PERMIT

Authorizing Official:

Official Mailing Address:

PUBLIC BROADCASTING OF COLORADO, INC.
7409 SOUTH ALTON COURT
BRIDGES BROADCAST CENTER
CENTENNIAL CO 80112

Susan N. Crawford
Senior Engineer
Audio Division
Media Bureau

Facility ID: 83535

Grant Date: May 29, 2012

Call Sign: KVOB

This permit expires 3:00 a.m.
local time, 36 months after the
grant date specified above.

Permit File Number: BPED-20120417AAA

Subject to the provisions of the Communications Act of 1934, as amended, subsequent acts and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions set forth in this permit, the permittee is hereby authorized to construct the radio transmitting apparatus herein described. Installation and adjustment of equipment not specifically set forth herein shall be in accordance with representations contained in the permittee's application for construction permit except for such modifications as are presently permitted, without application, by the Commission's Rules.

Commission rules which became effective on February 16, 1999, have a bearing on this construction permit. See Report & Order, Streamlining of Mass Media Applications, MM Docket No. 98-43, 13 FCC RCD 23056, Para. 77-90 (November 25, 1998); 63 Fed. Reg. 70039 (December 18, 1998). Pursuant to these rules, this construction permit will be subject to automatic forfeiture unless construction is complete and an application for license to cover is filed prior to expiration. See Section 73.3598.

Equipment and program tests shall be conducted only pursuant to Sections 73.1610 and 73.1620 of the Commission's Rules.

Name of Permittee: PUBLIC BROADCASTING OF COLORADO, INC.

Station Location: CO-LAKEWOOD

Frequency (MHz): 88.1

Channel: 201

Class: C3

Hours of Operation: Unlimited

Transmitter: Type Accepted. See Sections 73.1660, 73.1665 and 73.1670 of the Commission's Rules.

Transmitter output power: As required to achieve authorized ERP.

Antenna type: Directional

Antenna Coordinates: North Latitude: 39 deg 43 min 49 sec

West Longitude: 105 deg 15 min 00 sec

	Horizontally Polarized Antenna	Vertically Polarized Antenna
Effective radiated power in the Horizontal Plane (kW):	2.10	2.10
Height of radiation center above ground (Meters):	43	43
Height of radiation center above mean sea level (Meters):	2334	2334
Height of radiation center above average terrain (Meters):	275	275

Antenna structure registration number: 1024865

Overall height of antenna structure above ground (including obstruction lighting if any) see the registration for this antenna structure.

Special operating conditions or restrictions:

- 1 BEFORE PROGRAM TESTS ARE AUTHORIZED, permittee shall submit the results of a complete proof-of-performance to establish the horizontal plane radiation patterns for both the horizontally and vertically polarized radiation components. This proof-of-performance may be accomplished using the complete full size antenna, or individual bays therefrom, mounted on a supporting structure of identical dimensions and configuration as the proposed structure, including all braces, ladders, conduits, coaxial lines, and other appurtenances; or using a carefully manufactured scale model of the entire antenna, or individual bays therefrom, mounted on an equally scaled model of the proposed supporting structure, including all appurtenances. Engineering exhibits should include a description of the antenna testing facilities and equipment employed, including appropriate photographs or sketches and a description of the testing procedures, including scale factor, measurements frequency, and equipment calibration.
- 2 BEFORE PROGRAM TESTS ARE AUTHORIZED, permittee shall submit an affidavit from a licensed surveyor to establish that the directional antenna has been oriented at the proper azimuth.
- 3 BEFORE PROGRAM TESTS ARE AUTHORIZED, permittee/licensee shall submit an affidavit that the installation of the directional antenna system was overseen by a qualified engineer. This affidavit shall include a certification by the engineer that the antenna was installed pursuant to the manufacturer's instructions and list the qualifications of the certifying engineer.

Special operating conditions or restrictions:

- 4 The relative field strength of neither the measured horizontally nor vertically polarized radiation component shall exceed at any azimuth the value indicated on the composite radiation pattern authorized by this construction permit.

A relative field strength of 1.0 on the composite radiation pattern herein authorized corresponds to the following effective radiated power:

2.10 kilowatts.

Principal minima and their associated field strength limits:

80 degrees True: 1.35 kilowatts
270 degrees True: 0.084 kilowatt.

- 5 BEFORE PROGRAM TESTS ARE AUTHORIZED, the permittee must submit an exhibit demonstrating that the measured directional antenna pattern complies with the appropriate community coverage provisions of 47 C.F.R. Sections 73.315 or 73.515 (See 47 C.F.R. Section 73.316(c)(2)(ix)(B)).
- 6 Permittee has specified use of an EPA Type 1, circularly polarized, directional, two bay, FM transmitting antenna with half wavelength bay spacing to demonstrate compliance with the FCC radiofrequency electromagnetic field exposure guidelines. If any other type or size of antenna is used with the facilities authorized herein, THE AUTOMATIC PROGRAM TEST PROVISIONS OF 47 C.F.R. SECTION 73.1620 WILL NOT APPLY. In this case, a FORMAL REQUEST FOR PROGRAM TEST AUTHORITY must be filed in conjunction with FCC 302-FM, application for license, BEFORE program tests will be authorized. The request must include a revised RF field showing to demonstrate continued compliance with the FCC guidelines.
- 7 If the antenna is mounted on an existing tower that is base-insulated or detuned at the frequency of AM station KGCQ(AM), Facility ID No. 161314, Golden, CO, the applicant shall notify the AM station. If necessary, the AM station may determine operating power by a method described in Section 73.51(a)(1) or (d), and/or request temporary authority from the Commission in Washington, D.C. to operate with parameters at variance in order to maintain monitoring point field strengths within authorized limits. Permittee shall be responsible for readjustment and continued maintenance of any detuning apparatus necessary to prevent adverse effects upon the radiation pattern of the AM station. Both before and after the installation of the antenna and transmission line on the tower, a partial proof of performance, as defined by Section 73.154(a) of the Commission's Rules, shall be conducted to establish that the AM array has not been adversely affected. The results of the partial proofs shall be submitted to the Commission with the application for license to cover this permit.

If the antenna is mounted on an existing tower that is not base-insulated or detuned at the AM frequency, the permittee shall submit a certification to this effect.

- 8 Further modifications of KGNU-FM, Facility ID No. 6512, Boulder, Colorado, will not be construed as a per se modification of the authorized KVOD(FM) facilities. (See Educational Information Corporation, 6 FCC Rcd. 2207(1991)).

Special operating conditions or restrictions:

- 9 The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

*** END OF AUTHORIZATION ***