

GRAHAM BROCK, INC.

BROADCAST TECHNICAL CONSULTANTS

NEW LOW POWER TV APPLICATION

LAWRENCE LOESCH

NEW LPTV STATION

CH 56Z - (722-728 MHZ) - 11.5 KW

MANTEO, NORTH CAROLINA

July 2000

TECHNICAL EXHIBIT

Copyright 2000

NEW LOW POWER TV APPLICATION
LAWRENCE LOESCH
NEW LPTV STATION
CH 56Z - (722-728 MHZ) - 11.5 KW
MANTEO, NORTH CAROLINA
July 2000

TECHNICAL STATEMENT

This technical statement and attached exhibits were prepared on behalf of Lawrence Loesch ("LL"), an applicant seeking authority to construct a new LPTV station at Manteo, North Carolina. The site proposed in this instant application meets the 121 kilometers distance from all geographic restrictions listed in the Commission's Public Notice announcing the opening of the limited LPTV filing window.

LL is proposing to locate the antenna for his new LPTV station on an existing tower. As such, the Federal Aviation Administration has not been apprised of this proposal. The tower has been registered with the FCC and assigned tower registration #1203259. All exhibits called for on FCC Form 346, Section III, are attached hereto. All remaining exhibits used to certify the questions asked on the form have been forwarded to the applicant and are available for submission to the Commission upon request.¹

1) All LPTV, NTSC and DTV facilities' contours were calculated using the 3 second arc database with data regarding the facilities extracted from the CDBS database. We assume no liability for errors or omissions in these databases, that may be adverse to the requests contained herein. All DTV facilities were evaluated based on the applied for facilities, unless the DTV allocation was superior.

NEW LOW POWER TV APPLICATION
LAWRENCE LOESCH
NEW LPTV STATION
CH 56Z - (722-728 MHZ) - 11.5 KW
MANTEO, NORTH CAROLINA
July 2000

EXHIBIT A

Radio Frequency and Environmental Assessment

A study has been made to determine whether this proposal is in compliance with 47 C.F.R. §1.1307 of the Commission's rules and with OET Bulletin #65, dated August 1997 ("Bulletin"), regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. This study considers all nearby stations and utilizes the appropriate formulas contained in the Bulletin.

Environmental Analysis

The proposed LPTV tower does not involve the use of high intensity white lighting (strobes) in a residential neighborhood. The structure is not located in an officially designated wilderness area or wildlife preserve, nor does it threaten the existence or habitat of endangered species. The facility does not affect districts, sites, buildings, structures or objects significant in American history, architecture, archaeology, engineering or culture that are listed in the National Register of Historic Places, or are eligible for listing, nor does it affect Indian religious sites. Further, the site is not located in a floodplain and did not, to the knowledge of the applicant, require significant change in surface features (wetland fill, deforestation or water diversion) at the time of construction.

Radio Frequency Radiation Study

This radio frequency radiation study is being conducted to determine whether this proposal is in compliance with OET Bulletin Number 65, dated August 1997, regarding human

exposure to radio frequency radiation in the vicinity of broadcast towers. This study considers all nearby contributing stations, specifically the co-located WOBR, WOBR-FM and WOBX-FM, and utilizes the appropriate formulas contained in the OET Bulletin.²

In association with this instant application, Lawrence Loesch is simultaneously filing four other LPTV applications, specifying identical LPTV facilities (with the exception of the channel) to the herein requested facility. The proposed LPTV antenna systems will each be mounted with their center of radiation at 70.1 meters (230.0 feet) above the ground at the proposed tower location and will each operate with an effective radiated power of 11.5 kilowatts in the horizontal plane. As denoted in OET Bulletin Number 65, Supplement A, Page 31, the typical UHF antenna has a downward relative field of less than 0.1. Therefore, the contribution of each LPTV antenna system is based on a field of 0.1 or 115 watts. At two meters, the height of an average person, above the ground at the base of the proposed tower, each of the proposed antenna systems contributes 0.0005 mw. Based on exposure limitations for a controlled environment, <0.1% of the allowable ANSI limit is reached at two meters above the ground at the base of the proposed tower. For uncontrolled environments, no more than 0.2% of the ANSI limit is reached at two meters above the ground at the base of the tower.³ Therefore, the maximum contribution of all five LPTV stations, in the uncontrolled environment is 1.0%.

The co-located WOBR-FM six bay antenna system is mounted with its center of radiation 88.7 meters (291.0 feet) above the ground at the base of the tower and operates with an effective radiated power of 25.0 kilowatts in the horizontal and vertical planes (circularly

-
- 2) The contributions of the FM facilities were calculated using the FMModel program. The actual antennas and number of bays were used to determine the contributions of the FM stations.
 - 3) The percentage of the LPTV stations' contributions for uncontrolled areas changes slightly with the channel under study. However, 0.2% was the highest for all five channels and is, therefore, considered worst case.

polarized). The authorized WOBR-FM antenna is a Harris Corp./Electronics Research, Inc., Model FML-6E (FCC Type #3). The WOBR-FM antenna system contributes 0.0151 mw.⁴ Based on exposure limitations for a controlled environment, 1.5% of the allowable ANSI limit is reached at two meters above the ground at the base of the proposed tower. For uncontrolled environments, 7.6% of the ANSI limit is reached at two meters above the ground at the base of the tower.

The authorized co-located WOBX-FM six bay antenna system will be mounted with its center of radiation 88.7 meters (291.0 feet) above the ground at the base of the tower and operate with an effective radiated power of 50.0 kilowatts in the horizontal and vertical planes (circularly polarized). The authorized WOBX-FM antenna will be an Electronics Research, Inc., Model SHPX-6E (FCC Type #3).⁵ The WOBX-FM antenna system will contribute 0.0303 mw.⁶ Based on exposure limitations for a controlled environment, 3.0% of the allowable ANSI limit is reached at two meters above the ground at the base of the proposed tower. For uncontrolled environments, 15.2% of the ANSI limit is reached at two meters above the ground at the base of the tower.

The co-located WOBR AM facility operates on 1530 kHz with a nominal power of 1.0 kilowatt, with a two tower directional antenna system. The LPTV facilities and both FM facilities are or will be located on the 179.1° tower (which approaches a ½ wavelength tower). Following installation of the herein proposed LPTV antennas, a fence will be installed a minimum of 3.0 meters out from the base of the tower. At this distance, the WOBR radiator

-
- 4) This level of field occurs at 28.0 meters out from the base of the tower and is considered worst case for RFR calculations.
 - 5) Lawrence Loesch is a principal of East Carolina Radio, Inc., the permittee of WOBX-FM.
 - 6) This level of field occurs 28.0 meters out from the base of the tower and is considered worst case for RFR calculations.

contributes 105 V/m or 0.058 A/m. Due to the operating frequency, the limitations for uncontrolled environments are lower than the controlled. Therefore, the uncontrolled were evaluated and considered worst case. The WOBR radiator contributes 19.5% of the electric field and 4.1% of the magnetic field. Since the electric field is the higher percentage, it is, therefore, considered worst case.

Combining the contributions of the proposed LPTV stations, WOBR, WOBR-FM and WOBX-FM, a total of 43.3% of the limit for uncontrolled environments is reached at the base of the tower. Since this level for uncontrolled environments is well below the 100% limit defined by the Commission, the proposed LPTV facility is believed to be in compliance with the radio frequency radiation exposure limits as is required by the Federal Communications Commission. Further, Lawrence Loesch ("Loesch") will post warning signs in the vicinity of the tower warning of potential radio frequency radiation hazards at the site. In addition, Loesch will reduce the power of the proposed facility or cease operation, in cooperation and coordination with other tower users, as necessary, to protect persons having access to the site, tower or antenna from radio frequency radiation in excess of FCC guidelines. Based on the above factors, this proposal is categorically excluded from environmental processing pursuant to §1.1306 of the Commission's rules.

AFFIDAVIT AND QUALIFICATIONS OF CONSULTANT

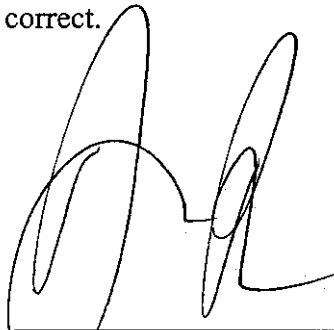
State of Georgia)
St. Simons Island) ss:
County of Glynn)

JEFFERSON G. BROCK, being duly sworn, deposes and says that he is an officer of Graham Brock, Inc. Graham Brock has been engaged by Lawrence Loesch to prepare the attached Technical Exhibit.

His qualifications are a matter of record before the Federal Communications Commission. He has been active in Broadcast Engineering since 1979.

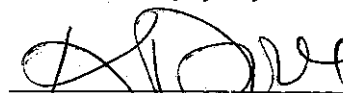
The attached report was either prepared by him or under his direction and all material and exhibits attached hereto are believed to be true and correct.

This the 28th day of July, 2000.



Jefferson G. Brock
Affiant

*Sworn to and subscribed before me
this the 28th day of July, 2000.*



Notary Public, State of Georgia
My Commission Expires: April 20, 2002