

# **ENGINEERING REPORT**

Auction 83 Translator Application

**File No. BNPFT-20030314AWN**

NEW CH249D – Adrian, MI  
Taylor University Broadcasting

August, 2003

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# **TABLE OF CONTENTS**

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Discussion of Report

## **FM Booster/Fill-in Translator Requirements (none required)**

### **Interference Requirements**

Exhibit 11.1 - Copy of Existing Antenna Structure Registration

Exhibit 11.2 - Vertical Plan of Antenna System and Support Tower

Exhibit 11.3 - Proposed Contour Study

Exhibit 11.4 - Map of Proposed Translator vs. Parent Station

### **Contour Overlap Requirements**

Exhibit 12.1 - Tabulation of Proposed Allocation

Exhibit 12.2 - Contour Protections Toward Select Stations

## **TV Channel 6 Protection Requirements (none required)**

## **Unattended Operation Requirements (See Discussion)**

## **Multiple Translator Requirements (See Discussion)**

## **RF Radiation Study Requirement (See Discussion)**

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

## Discussion

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This firm has been retained to prepare the required engineering report for an Auction 83 FM Translator Long Form Application filing. This filing is for pending Translator Application BNPFT-20030314AWN for a new CH249D Translator facility for Adrian, MI. The facility will serve as a translator for non-commercial FM station WBCY, Archbold, OH. WBCY operates on Channel 208B1, 89.5 MHz. The proposed translator will operate on Channel 249D with 55 watts at a max HAAT of 65 meters.

It has been determined the translator may be used in the area without interference to any existing FM broadcast station or translator. Allocation details are found in **Exhibit 12.1**. **Exhibit 11.4** of this report is a map showing the relationship of the primary station protected contour to the protected contour of the translator station. The translator site is outside the primary contour, and the 1 mV/m (60 dBu) contour of the translator extends beyond the primary station 1 mV/m contour. A map of the proposed service area has been included in **Exhibit 11.3**. The proposed site has been relocated slightly from the original application, however the move qualifies as a minor change as the service contour serves substantially the same area.

The proposed translator is located within 320 kilometers of the border between the United States of America and Canada. This proposal meets the requirements of 47 C.F.R. §74.1235(d)(3).

The translator will employ a one bay circularly polarized antenna. The antenna will be mounted on the tower bearing Antenna Structure Registration Number 1049395. A copy of the ASR has been included as **Exhibit 11.1**.

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 translator 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 translator 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 contours results from calculations performed in accordance with §73.313(d) and §73.333 Figure 1.

Munn-Reese, Inc. - Coldwater, MI 49036						
N. Lat. = 41 53 16 W. Lng. = 84 01 57						
HAAT and Distance to Contour - FCC Method - 30 Arc Sec.						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	253.8	24.2	0.1200	-9.21	1.000	5.90
030	239.8	38.2	0.1200	-9.21	1.000	6.59
060	226.4	51.6	0.1200	-9.21	1.000	7.74
090	213.0	65.0	0.1200	-9.21	1.000	8.74
120	214.3	63.7	0.1200	-9.21	1.000	8.66
150	218.5	59.5	0.1200	-9.21	1.000	8.37
180	229.5	48.5	0.1200	-9.21	1.000	7.47
210	238.4	39.6	0.1200	-9.21	1.000	6.71
240	245.9	32.1	0.1200	-9.21	1.000	6.07
270	257.3	20.7	0.1200	-9.21	1.000	5.90
300	266.1	11.9	0.1200	-9.21	1.000	5.90
330	264.0	14.0	0.1200	-9.21	1.000	5.90
Ave El= 238.93 M HAAT= 39.07 M AMSL= 278 M						