

ENGINEERING REPORT

FM Translator “Long Form” Filing for Original Construction Permit Application

NEW277D – Sampson, WA
File No. BNPFT-20030314AHJ
Facility ID No. 146604

Long-Form Filing pursuant to
DA 13-283 (AUC-03-83-D)
“Auction 83 Singleton”

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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 a Construction Permit “Long Form” Filing for FM Translator Application BNPFT-20030314AHJ (Facility ID No. 146604). The Original “Short-Form” Application specified operation on CH277D (103.3 MHz) with 0.250 kW of non-directional power at an antenna COR of 29 meters AMSL. Amended Operating Parameters will be requested in this “Long-Form” Filing. Continued operation on Channel CH277D (103.3 MHz) with a power of 0.142 kW ERP is requested from a new site location. A vertically polarized non-directional antenna will be utilized at the new antenna COR height of 79 meters AMSL. The translator will rebroadcast primary station KGHO-LP(FM) – Hoquiam, WA, CH253L1 (Facility ID No. 134721) as a regular (non-fill-in) non-commercial FM Translator.

Pursuant to Public Notice DA 13-283 (Report No. AUC-03-83-D) and its Attachment B, this “Long-Form” Filing proposes amended parameters more than 39 km from any Appendix A Market Grid. Therefore, the applicant is not required to submit supplemental LPFM Grid Test Showings. In addition, the amended site does not reside within any “out-of-grid” Top-50 Spectrum Limited Market Boundaries, therefore no supplemental Top-50 Transmitter Site Test Showings are required either.

The facility will be located at the existing tower bearing Antenna Structure Registration Number 1215242. A copy of the existing ASR has been included in **Exhibit 13.1**. The vertical antenna system has been plotted in **Exhibit 13.2**. As this proposal will not increase the overall tower height, it is believed the FAA need not be notified.

It has been determined the translator may be used in the area without interference to any existing FM broadcast station or facility with the exception of KNBQ(FM) – Centralia, WA (CH275C). General allocation details are found in **Exhibit 13.5**. A §74.1204(d) Second Adjacent Channel Given Interference Waiver is requested toward KNBQ(FM) as included in **Exhibit 13.7**. Full protection will be afforded the facility as the calculated interference area will not reach the ground nor a 7 meter artificial plane representing a standard two story building when taking into account the downward radiation characteristics of the antenna as supplied by the antenna manufacturer. A copy of the antenna manufacturer’s antenna specifications has been included in **Exhibit 13.8**. There is one (1) facility, existing or proposed, close enough to merit further study. Therefore supplemental contour protection studies have been provided toward third adjacent channel protection APP280D – Aberdeen, WA (BNPFT-20030310BIO) as included in **Exhibit(s) 13.6**. It is believed sufficient clearance exists precluding the need for additional contour protection showings.

The applicant would like to note the use of the NED 03 second terrain database for all allocation, contour and HAAT calculations contained here-in.

The proposed 60 dBμ contour of the Translator lies wholly outside of the KGHO-LP(FM) primary daytime 60 dBμ contour. A map of the proposed service contour in relation to the primary station service contour has been included in **Exhibit 13.4**. The Translator will rebroadcast KBHO-LP(FM) directly off-air as a non-fill-in FM Translator.

The proposed operating parameters have been changed from the original “Short-Form” values, however the proposed service contour serves a portion of the present service area as seen in **Exhibit 13.3**.

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 FM Broadcast facility proposed in this application will not produce human exposure to radiofrequency radiation in excess of the applicable safety standards specified in §1.1307(b)(3) of the Commission's rules concerning RF contributors of less than 5%. ***Exhibit 17.1*** provides the details of the study that was made to demonstrate compliance. The facility is properly marked with signs, and entry is restricted by means of fencing with locked doors and/or gates. Any other means as may be required to protect employees and the general public will be employed.

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 utilizing the NED 03 second terrain database.

N. Lat. = 465500 W. Lng. = 1235751						
HAAT and Distance to Contour,						
FCC, FM 2-10 Mi, 51 pts Method - NED 03 SEC						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	37.9	41.1	0.1420	-8.48	1.000	7.14
030	16.7	62.3	0.1420	-8.48	1.000	8.96
060	13.0	66.0	0.1420	-8.48	1.000	9.21
090	91.4	-12.4	0.1420	-8.48	1.000	6.15
120	88.4	-9.4	0.1420	-8.48	1.000	6.15
150	99.5	-20.5	0.1420	-8.48	1.000	6.15
180	54.9	24.1	0.1420	-8.48	1.000	6.15
210	44.0	35.0	0.1420	-8.48	1.000	6.59
240	5.0	74.0	0.1420	-8.48	1.000	9.73
270	0.1	78.9	0.1420	-8.48	1.000	10.03
300	0.3	78.7	0.1420	-8.48	1.000	10.02
330	0.1	78.9	0.1420	-8.48	1.000	10.03
Ave El= 37.61 M HAAT= 41.39 M AMSL= 79 M						