

MINOR AMENDMENT
RE AMENDMENT OF APPLICATION (BPH20010831ACJ) TO
CHANGE COMMUNITY OF LICENSE, SITE
AND STATION CLASS

WKHI(FM), FRUITLAND, MARYLAND
CHANNEL 298B1 18.5 KW 104 METERS

SEPTEMBER 2001

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WASHINGTON, D.C.

This engineering report has been prepared on behalf of Great Scott Broadcasting (Great Scott), licensee of FM radio station WKHI, Friutland, Maryland in support of an amendment to its minor change application (BPH20010831ACJ) to change community of license, antenna site and station class.

At present WKHI(FM) is licensed to Exmore, Virginia and operates on Channel 298B (107.5 MHz) with 50 kW effective radiated power (ERP) and 82 meters antenna height above average terrain (HAAT). Under MM Docket 99-347, RM 9761, the Commission has allotted FM Channel 298B1 to Fruitland, Maryland and has ordered Great Scott to move the WKHI(FM) operation to Channel 298B1 (107.5 MHz).

In its application Great Scott proposed to operate WKHI(FM) on Channel 298B1 with 20 kW ERP and 104 meters HAAT to serve its new community of license Fruitland, Maryland. Great Scott now proposes to operate with an ERP of 18.5 kw in lieu of the requested 20 kw to avoid contour overlap with the proposed operation (File No. BPH-20010629ABE) of WRXS(FM). No other changes are proposed.

Great Scott requests processing of its application under Section 73.215 of the Commission's rules with respect to the licensed operation of WRXS(FM).

Antenna Site

The proposed WKHI(FM) antenna will be side-mounted on an existing tower with no change in the overall height of the tower above ground. The existing tower is located at 30939 McCormick

Swamp Road in Princess Anne, Somerset County, Maryland. According to the tower's Antenna Structure Registration (1051560) the geographic coordinates (NAD-27) of the site are as follows:

North Latitude: 38° 11' 54"

West Longitude: 75° 40' 49"

The map showing the proposed WKHI(FM) antenna site is on a USGS, 7.5 minutes topographic map (Exhibit E-2) is unchanged and is referenced to the WHKI application (BPH20010831ACJ).

The following tabulation shows the pertinent data for the proposed installation.

Antenna and Elevation Data

Antenna:	ERI, circularly polarized
Directivity:	Non-Directional
Beam Tilt	None
Elevation of the site above mean sea level	5 meters
Elevation of the top of supporting structure above ground	143.7 meters (144 m)
Elevation of the top of supporting structure above mean sea level	148.7 meters (149 m)
Height of radiation center above ground (H&V)	103.6 meters (104 m)
Height of radiation center above mean sea level (H&V)	108.6 meters (109 m)

Height of radiation center above average terrain (H&V)	103.5 meters (104 m)
() to the nearest meter	

Allocation Situation

The attached Table I shows the distances to the pertinent co-channel and adjacent channel stations and allotments from the proposed WKHI(FM) antenna site. As indicated, all distances comply with the minimum separation requirements listed under Sections 73.207 of the Commission's rules except distance to station WRXS(FM), Ocean City, Maryland. Station WRXS(FM) operates on Channel 295A with 6 kW ERP and 92 meters HAAT and has proposed to modify facilities to 2.05 kW ERP and 117 meters HAAT from a different antenna site as indicated in its application (BPH20010629ABE). The actual distance between WKHI and the licensed and proposed operations of WRXS is 46.4 km and 44.7 km, respectively, while a minimum separation of 48 km is required. The proposed operation of WRXS has requested processing under Section 73.215 of the Rules with respect to the WKHI allotment.

Therefore, with respect to licensed and proposed operations of station WRXS, the proposed WKHI operation on Channel 298B1 provides an equivalent contour protection according to Section 73.215 of the Commission's rules (see attached Exhibits E-4 and 4A). As per Section 73.215(b)(2)(ii), the contours are based on maximum class A facilities for the licensed operation of WRXS(FM) rather than its licensed facilities and are based on the actual facilities proposed for the WRXS(FM) proposed operation.

Topographic Data

The average elevation data between 3 to 16 kilometers used for the prediction of coverage and interference contours is based on the computerized 3-second terrain database.

Contour Data and City Grade Coverage

The distances to all pertinent contours were determined according to Section 73.313 of the Commission's rules using Figure 1 and 1a of Section 73.313 and are shown on the attached tables. Exhibit E-3 included in application BPH20010831ACJ shows the predicted coverage contours for the proposed WKHI(FM) operation based on eight radials. Exhibit E-3 indicates the proposed 3.16 mV/m contour would cover all of Fruitland, Maryland as required by Section 73.315 of the Commission's rule. The proposed change from 20 to 18.5 kW does not materially change this exhibit and therefore, it is not being resubmitted.

Main Studio Location

The main studio location would comply with Section 73.1125 of the Commission's rules.

Other Radio Stations

There are three FM stations (WESM-Channel 217B, 91.3 MHz, WZJZ, Channel 223A, 92.5 MHz and WOLC, Channel 273B, 102.5 MHz) located within 10 km of the proposed WKHI(FM) antenna site.

There is a potential of third order intermodulation products on Channel 248 (97.5 MHz) due to the proposed WKHI(FM) mixing with WOLC (FM) signals.

In case of problem to any authorized non-broadcast facilities or radio receivers, the applicant will take the necessary remedial steps to resolve the intermodulation interference.

Blanketing Contour

The blanketing contour (115 dBu) based on an ERP of 18.5 kW will extend 1.7 kilometers from the proposed site. Great Scott will comply with all the pertinent requirements of Section 73.318 of the Commission's rules.

Environmental Statement

Since WKHI(FM) is proposing to locate its antenna to an existing tower, the environmental concerns listed in Section 1.1307(a) of the Commission's rules are not pertinent. Therefore, those issues have not been addressed.

An evaluation has been made to determine compliance with the Commission's specified standards for human exposure to RF fields as set forth in the OET Bulletin No. 65 (Edition 97-01). For a maximum effective radiated power of 37 kW (H&V) and a radiation center of 103.6 meters above ground level, the proposed WKHI(FM) operation would have a maximum of 29.9 microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$) RF field at 2 meters above the base of tower based on an antenna field factor of 0.5 in the downward direction. The Commission's guidelines for the FM band are 1,000 $\mu\text{W}/\text{cm}^2$ for the occupational/controlled and 200 $\mu\text{W}/\text{cm}^2$ for the general population/uncontrolled environment

Therefore, members of the public and personnel working around the proposed WKHI(FM) transmitting facility will not be exposed to RF field levels above those prescribed by the Commission.

With respect to work performed on the tower structure, station WKHI(FM) will establish procedures, including reducing or turning off the power, to ensure the workers are not exposed to levels of radio frequency fields in excess of the Commission's maximum exposure guidelines.

For the reasons stated above, this proposal does not involve any action specified in Section 1.1307(a) and (b) of the Commission's rules; therefore, under Section 1.1306, it is categorically excluded from environmental processing.

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SECTION III-B FM Engineering

TECHNICAL SPECIFICATIONS

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

TECH BOX

1. Channel: _____
2. Class: ☐ A ☐ B1 ☐ B ☐ C3 ☐ C2 ☐ C1 ☐ C ☐ D
3. Antenna Location Coordinates: (NAD 27)
 _____ ° _____ ' _____ " ☐ N ☐ S Latitude
 _____ ° _____ ' _____ " ☐ E ☐ W Longitude
4. One-Step Proposal Allotment Coordinates: (NAD 27) ☐ Not applicable
 _____ ° _____ ' _____ " ☐ N ☐ S Latitude
 _____ ° _____ ' _____ " ☐ E ☐ W Longitude
5. Antenna Structure Registration Number: _____
☐ Not applicable ☐ FAA Notification Filed with FAA
6. Antenna Location Site Elevation Above Mean Sea Level: _____ meters
7. Overall Tower Height Above Ground Level: _____ meters
8. Height of Radiation Center Above Ground Level: _____ meters (H) _____ meters (V)
9. Height of Radiation Center Above Average Terrain: _____ meters (H) _____ meters (V)
10. Effective Radiated Power: _____ kW (H) _____ kW (V)
11. Maximum Effective Radiated Power: ☐ Not applicable _____ kW (H) _____ kW (V)
 (Beam-Tilt Antenna ONLY)
12. Directional Antenna Relative Field Values: ☐ Not applicable (Nondirectional)
 Rotation: _____ ° ☐ No rotation

Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value
0		60		120		180		240		300	
10		70		130		190		250		310	
20		80		140		200		260		320	
30		90		150		210		270		330	
40		100		160		220		280		340	
50		110		170		230		290		350	
Additional Azimuths											

NOTE: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.

CERTIFICATION

**AUXILIARY ANTENNA APPLICANTS ARE NOT REQUIRED TO RESPOND TO ITEMS 13-16.
PROCEED TO ITEM 17.**

13. **Allotment.** The proposed facility complies with the allotment requirements of 47 C.F.R. Section 73.203. ☐ Yes ☐ No

See Explanation
in Exhibit No.
14. **Community Coverage.** The proposed facility complies with 47 C.F.R. Section 73.315. ☐ Yes ☐ No

See Explanation
in Exhibit No.
15. **Main Studio Location.** The proposed main studio location complies with 47 C.F.R. Section 73.1125. ☐ Yes ☐ No

See Explanation
in Exhibit No.
16. **Interference.** The proposed facility complies with all of the following applicable rule sections. Check all those that apply. ☐ Yes ☐ No

See Explanation
in Exhibit No.
- Separation Requirements.**
- a. ☐ 47 C.F.R. Section 73.207.
- Grandfathered Short-Spaced.**
- b. ☐ 47 C.F.R. Section 73.213(a) with respect to station(s): _____

Exhibit No.

Exhibit Required.
- c. ☐ 47 C.F.R. Section 73.213(b) with respect to station(s): _____

Exhibit No.

Exhibit Required.
- d. ☐ 47 C.F.R. Section 73.213(c) with respect to station(s): _____

Exhibit No.

Exhibit Required.
- Contour Protection.**
- e. ☐ 47 C.F.R. Section 73.215 with respect to station(s): _____

Exhibit No.

Exhibit Required.
17. **Environmental Protection Act.** The proposed facility is excluded from environmental processing under 47 C.F.R. Section 1.1306 (*i.e.*, the facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine compliance through the use of the RF worksheets in Appendix A, an **Exhibit is required.** ☐ Yes ☐ No

See Explanation
in Exhibit No.

By checking "Yes" above, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.

PREPARER'S CERTIFICATION ON PAGE 3 MUST BE COMPLETED AND SIGNED.