

WKRI
Cokesbury, South Carolina
Application for Modified Facilities for New Noncommercial FM Station
On Channel 220 Class C3
by
Spirit Broadcasting Group, Inc.

Exhibit 1 1
Second Service for Section 307(b) Preference

November 2009

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Table of Contents

Description	Page
Declaration.....	2
Narrative	3
Second Service Population	3
Change of Area	4
Table 1: Comparative First and Second Service Population for MX Group 223.....	5
Public Interest Benefit of Change of Area.....	5
Source of Data	5
First and Second Service Map.....	Figure 1
Proposed First and Second Service Map.....	Figure 2
First and Second Service Change Area	Figure 3

Declaration

I declare, under penalty of perjury, that I am a technical consultant to broadcasting and other communications systems, that I have over twenty-five years of experience in the engineering of broadcast and other communications systems, that I am familiar with the Federal Communications Commission's Rules found in the Code of Federal Regulations Title 47, that I am a Professional Engineer registered in North Carolina, that I have prepared or supervised the preparation of the attached Exhibit 11, Second Service for Section 307(b) Preference for Spirit Broadcasting Group, Inc., and that all of the facts therein, except for facts of which the Federal Communications Commission may take official notice, are true to the best of my knowledge and belief.



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Narrative

Spirit is proposing modified facilities for WKRI, Cokesbury, South Carolina, including a move to a new site, increase in height, change to an omnidirectional antenna, and a reduction in Effective Radiated Power to comply with class maximum coverage area facilities. The proposed modification increases the service area population from 133,389 to 189,089, an increase of 55,700 persons, or 41.7% of the original population.

This Exhibit provides details of the Second Noncommercial Service on reserved channels for a modified construction permit for new station WKRI to serve Cokesbury, South Carolina. This proposal was studied under the procedures in the Public Notice¹ which provided additional details for the window during which this application is filed. All licensed facilities and all construction permits for new unbuilt but authorized facilities were considered. All service data is as of the close of the filing window.

Second Service Population

This proposal serves a second service area with a population of 33,002 persons. The second service population is 17.4% of the population within the proposed 60 dBu F(50,50) service contour. Because the population exceeds the threshold, this application should be considered under Priority 2, providing second receptive service preference. Figure 1 shows the area and data.

There is also first service population which is to be considered in Section 307(b) analysis. The first and second service tabulation is:

¹ Media Bureau Announces NCE FM New Station and Major Change Filing Procedures For October 12 – October 18, 2007 Window; Limited Application Filing Freeze to Commence on September 8, 2007, DA 07-3521, released August 9, 2007.

	Population	Percentage
First Service	66,533	35.2
Second Service	33,002	17.4
Total First and Second Service	99,535	52.6

Change of Area

The change in transmitter site permits a significant increase in coverage area population, from 133,400 persons to 189,089 persons. As shown on Figure 3, coverage is no longer proposed to an area of 268.16 square kilometers with a population of 1,500 persons. There is new first service area of 74.34 square kilometers with a population of 889 persons. The net change in first service population is a reduction of 611 persons, which is 0.9% of the first service population, and 193.82 square kilometers, or 9% of the original first service area.

Second service population increases by 106.06 square kilometers and 654 persons. The total change in population for Section 307(b) preference is a gain of 43 persons.

The WKRI construction permit was awarded based on Section 307(b) preference for both first and second service². As the table below shows, the changes proposed for WKRI do not change any of the rankings of the mutually exclusive applications in Group 223.

² See *Threshold Fair Distribution Analysis of 32 Groups of Mutually Exclusive Applications for Permits to Construct New or Modified Noncommercial Educational FM Stations*, MEMORANDUM OPINION AND ORDER, DA 08-1537, released June 30, 2008, at paragraphs 28 and 63.

Table 1: Comparative First and Second Service Population for MX Group 223

Applicant	Network of Glory, LLC	Spirit Broadcasting Group, Inc.	Proposed Modified Spirit Broadcasting Group, Inc.	I.E.C. Social, Educational, and Humanitarian Aid, Inc.	Cultural Renewal Radio
Community	Clinton, SC	Cokesbury, SC	Cokesbury, SC	Joanna, SC	Laurens, SC
First Service	59,280	67,144	66,533	63,034	65,301
Margin Over Next Best	n/a	1,992	1,232	3,754	2,267
Rank	Fourth	First	Still First	Third	Second
Second Service	22,622	32,348	33,002	17,553	28,608
First Plus Second	81,902	99,492	99,535	80,587	93,907
Margin Over Next Best	1,315	5,585	5,628	n/a	13,005
Ranking	Third	First	Still First	Fourth	Second

Public Interest Benefit of Change of Area

The Section 307(b) analysis of the proposed modified facilities indicates a preference for the modified facilities. First service alone was not a deciding factor in the mutually exclusive group. As shown above, the facilities proposed by Spirit would receive the same ranking as the preferred applicant that the original Spirit facilities received. The newly proposed transmitter site was not available at the time of the original filing. The proposed modified facilities will provide service to a 41.7% greater population than the original facilities, itself a public interest benefit.

Source of Data

Transmitter location, effective radiated power, directional antenna pattern, and elevation data are extracted from the Commission's CDBS. All contours for existing and proposed facilities are calculated using height above average terrain calculated at one degree

horizontal increments. Terrain data is extracted from the V-Soft Communications NED 03 terrain database. The NED 03 database is derived from the USGS National Elevation Data 30 meter terrain database. The USGS National Elevation Dataset has been developed by merging the highest-resolution, best-quality elevation data available across the United States into a seamless raster format. NED is the result of the maturation of the USGS effort to provide 1:24,000-scale Digital Elevation Model (DEM) data for the conterminous US and 1:63,360-scale DEM data for Alaska.

All population data is from 2000 U.S. Census SF1 data files. Population is counted by considering the location of the centroid of each census bloc. The data for each block is counted if it falls within the area being counted.



