

TECHNICAL EXHIBIT  
MINOR CHANGE APPLICATION  
STATION WRHY(FM) (FACILITY ID 10701)  
CENTER, ALABAMA

DECEMBER 19, 2005

CH 290A 0.53 KW 332 M

TECHNICAL EXHIBIT  
MINOR CHANGE APPLICATION  
STATION WRHY(FM) (FACILITY ID 10701)  
CENTRE, ALABAMA  
CH 290A 0.53 KW 332 M

Table of Contents

Technical Narrative

Figure 1	Proposed Transmitter Site Map
Figure 2	Proposed Antenna and Supporting Structure
Figure 3	Proposed Transmitter Site Coverage Map
Figure 4	Proposed Transmitter Site Allocation Study

TECHNICAL EXHIBIT  
MINOR CHANGE APPLICATION  
STATION WRHY(FM) (FACILITY ID 10701)  
CENTRE, ALABAMA  
CH 290A 0.53 KW 332 M

Technical Narrative

The technical exhibit of which this narrative is part was prepared on behalf of a radio station WRHY(FM) assigned to Centre, Alabama. WRHY(FM) is presently licensed on Channel 290A for an effective radiated power of 6 kilowatts with an antenna height above average terrain of 100 meters.<sup>1</sup> By this instant application, it is proposed to specify a different transmitter site, reduce ERP and increase antenna HAAT.

The proposed facility will be located on a tower yet to be constructed, but due to its overall height of less than 200 feet and not located near any public airport, no antenna registration number is required. It is believed that this proposal conforms to all applicable rules and regulations of the FCC.

Proposed Transmitter Location

The transmitting facility will be located on a proposed structure to be located atop *Weisner Mountain*. The location is uniquely described by the following geographic coordinates:

34° 01' 44" North Latitude  
85° 40' 18" West Longitude

The proposed site is shown on the map contained in Figure 1. A sketch showing the antenna and proposed supporting structure is shown on Figure 2.

---

<sup>1</sup> See FCC File Number: BLH-19930414KB.

---

Interference Concerns

The 115 dBu predicted "blanketing" contour of the proposed station would extend radially 0.3 kilometer from the transmitting site. The applicant recognizes its responsibility to resolve complaints of interference, including blanketing and receiver-induced interference as required by Sections 73.315(b), 73.316(e) and 73.318.

FCC Predicted Coverage Contours

The predicted coverage contours for the proposed operation were calculated in accordance with the provisions of Section 73.313. Pursuant with current FCC practice, the distances to the contours were calculated without consideration given to terrain roughness correction factors.

The average terrain elevations from 3 to 16 kilometers along eight radials evenly spaced at 45 degree intervals were obtained from the U.S.G.S. 3-second terrain database. The terrain elevations were then used in combination with the effective radiated power for determining the distances to coverage contours.

Figure 3 is a map showing the predicted coverage contours. While the FCC predicted 70 dBu contour does not completely cover all of the principal community of Centre, it does cover 98.2 percent of the population within Centre (2000 U.S. Census). Since this value exceeds 80 percent, it is in compliance with the Commission's policy on city coverage.

Allocation Study

Channel 290A at the proposed site will satisfy the Commission's minimum separation distance requirements, specified in Section 73.207(b) of the Rules, to all assignments (see Figure 4).

Radiofrequency Electromagnetic Field Exposure

The proposed facility has been evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level in accordance with OST Bulletin No. 65, *Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*.<sup>2</sup> The power density at the base of the tower was calculated using the appropriate procedure contained in Section 2, Supplement A, *Additional Information for Radio and Television Broadcast Stations*, of the Bulletin.

For the calculation, a combined horizontal and vertical polarized effective radiated power of 1.06 kilowatts was employed with a radiation center of 15 meters (49 feet) above ground level. Using the FCC's FM Model program and a 1-bay antenna, the worst-case ground level power density is approximately 0.050 mW/cm<sup>2</sup>. This is 25 percent of the maximum Commission guideline value in an uncontrolled environment for a FM radio station.<sup>3</sup> There are no other know facilities at the proposed site.

When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction or shut down of power if necessary, shall be taken to ensure that the human exposure to radiofrequency electromagnetic will not exceed the FCC guidelines.



Jonathan N. Edwards

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Avenue  
Sarasota, Florida 34237  
(941) 329-6000

December 19, 2005

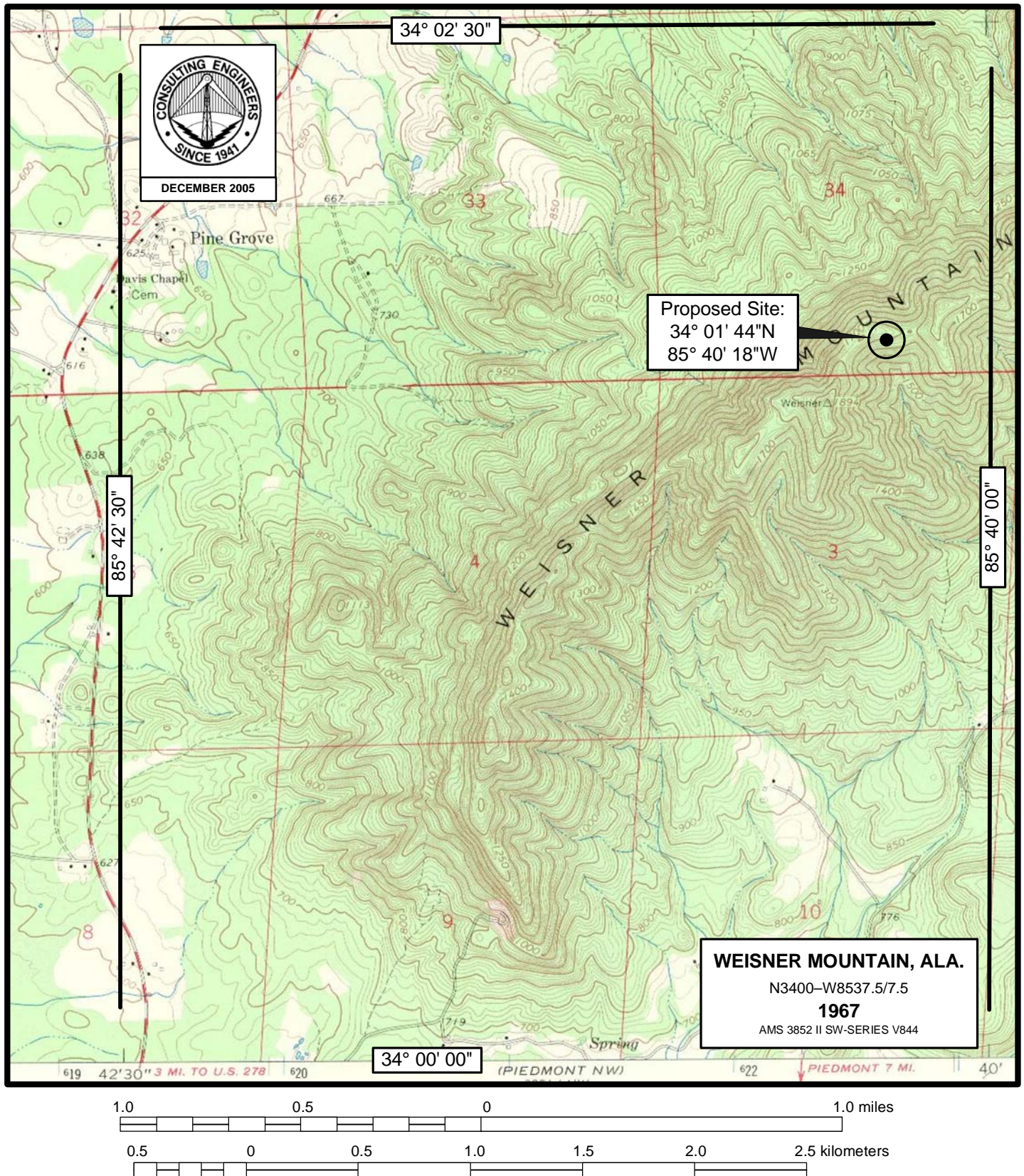
---

<sup>2</sup> OET Bulletin 65, Second Edition 97-01, August, 1997.

<sup>3</sup> The FCC maximum guideline for a FM broadcast station in an uncontrolled environment is 0.2 mW/cm<sup>2</sup>.



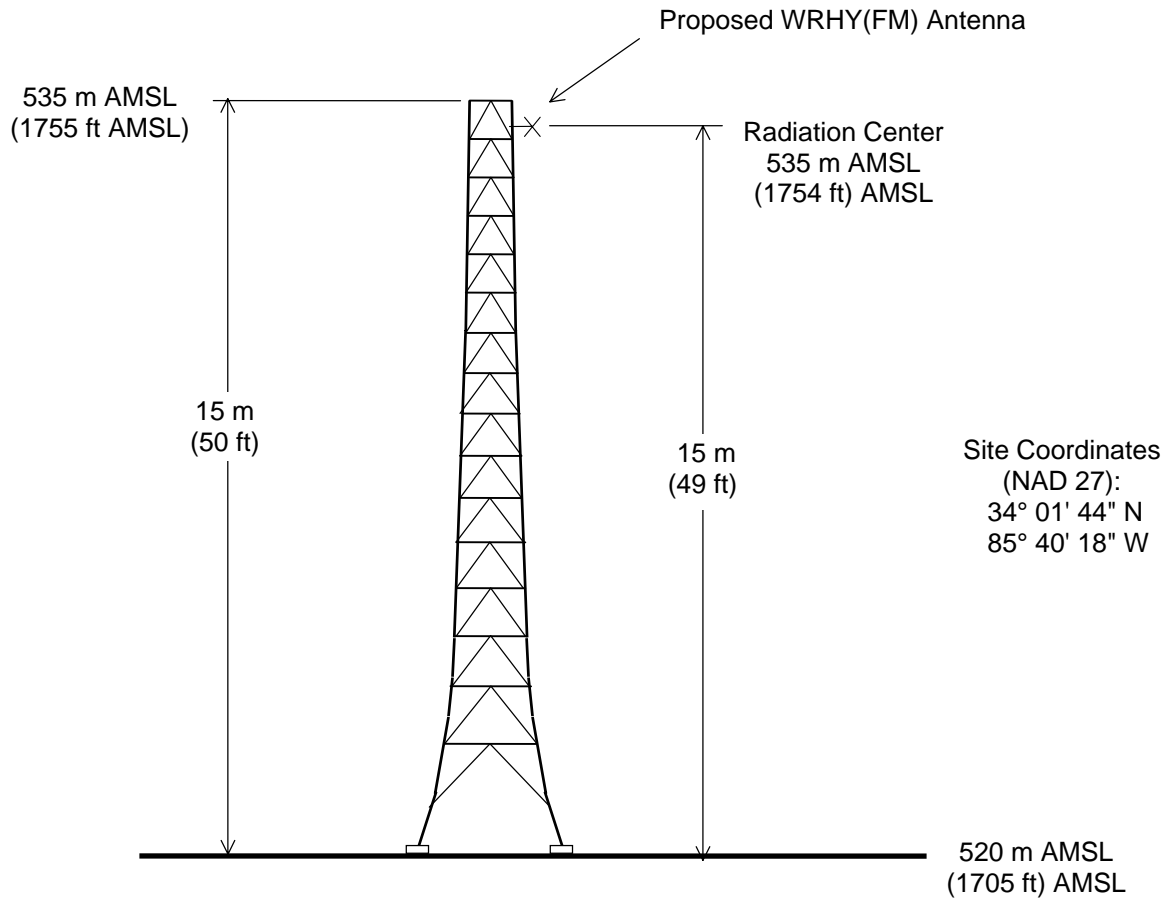
Figure 1



## PROPOSED TRANSMITTER LOCATION

FM STATION WRHY  
CENTRE, ALABAMA  
CH 290A 0.53 KW 332 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



## **PROPOSED ANTENNA AND SUPPORTING STRUCTURE**

RADIO STATION WRHY(FM)

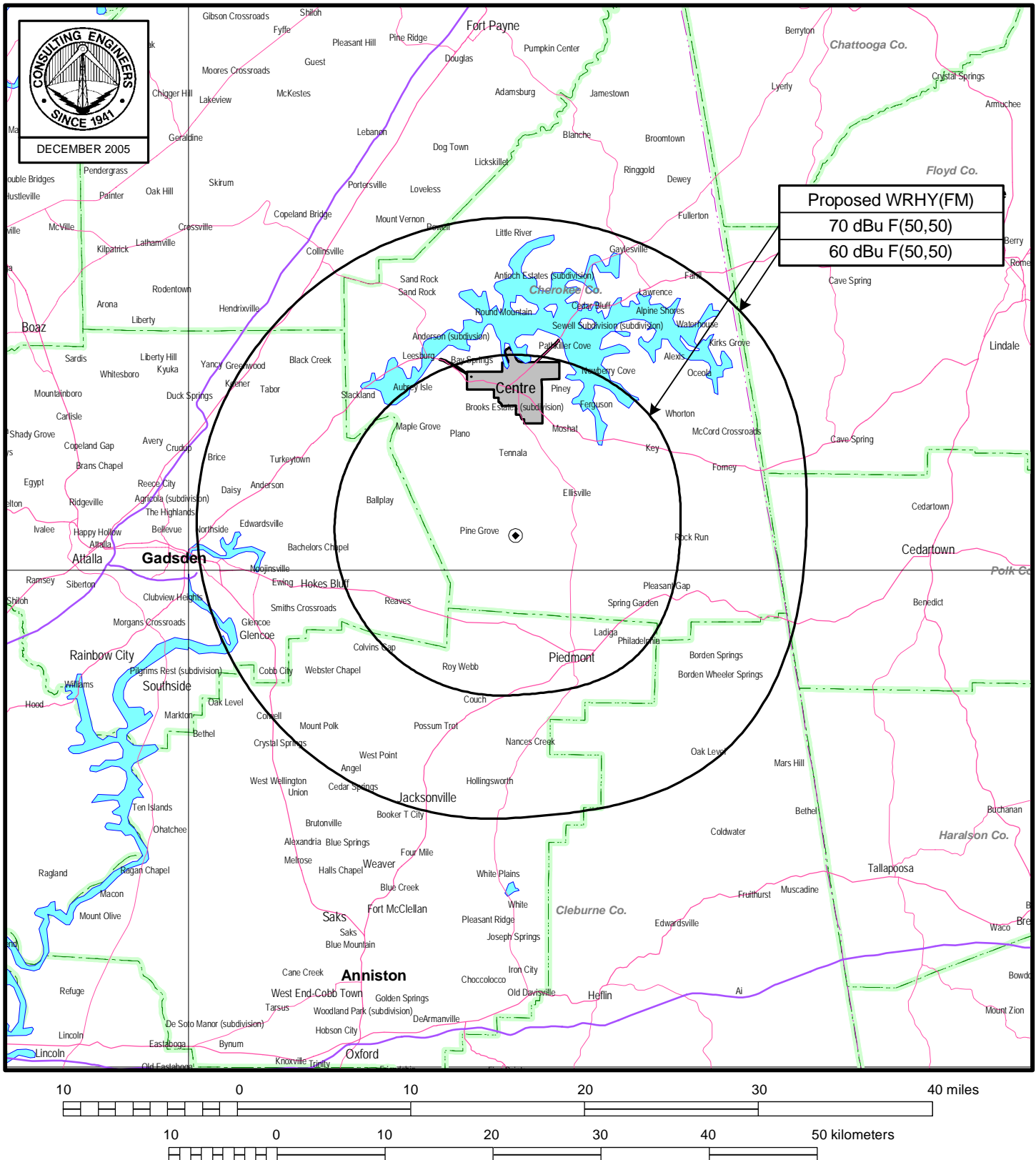
CENTRE, ALABAMA

CH 290A 0.53 KW 332 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



**Figure 3**



## **PREDICTED F(50,50) COVERAGE CONTOURS**

**STATION WRHY(FM)**

**CENTRE, ALABAMA**

**CH 290A 0.53 KW 332 M**

**du Treil, Lundin & Rackley, Inc Sarasota, Florida**



TECHNICAL EXHIBIT  
MINOR CHANGE APPLICATION  
STATION WRHY(FM) (FACILITY ID 10701)  
CENTRE, ALABAMA  
CH 290A 0.53 KW 332 M

Channel 290A Allocation Study

34° 01' 44" North Latitude  
85° 40' 18" West Longitude

Call Id	City St	Status	File Num	Channel Freq	ERP HAAT	DA Id	Latitude Longitude	73 215	Bear	Dist. (km)	Req. min
WSRM 30623	COOSA GA	CP	C 20050321AAD	237A 95.3	4.7 101	N	34-11-51 85-21-21	Y	57.1	34.63	10.0
WSRM 30623	COOSA GA	LIC	C 20050225AAC	237A 95.3	6.0 22	N	34-11-51 85-21-21	Y	57.1	34.63	10.0
WBZY 63406	BOWDON GA	LIC	C 20020220AAB	287C1 105.3	61.0 367	N	33-24-41 84-49-48	Y	131.2	103.81	75.0
WWVA-FM 10698	CANTON GA	LIC	C 20040708ACH	289C2 105.7	20.0 238	N	34-03-58 84-27-15	N	87.5	112.49	106.0
WRHY 10701	CENTRE AL	LIC	C 19930414KB	290A 105.9	6.0 100	N	34-12-14 85-46-20	N	334.6	21.51	115.0
WNRQ 34392	NASHVILLE TN	LIC	C 19831212AN	290C 105.9	100.0 376	N	36-02-08 86-50-56	N	334.7	247.18	226.0
WTAK-FM 25383	HARTSELLE AL	LIC	C 19931026KB	291C3 106.1	5.4 221	N	34-27-45 86-38-36	Y	298.6	101.61	89.0
WSTH-FM 60763	ALEXANDER AL	LIC	C 19950410KB	291C1 106.1	86.0 319	N	32-45-30 85-28-20	N	172.5	142.13	133.0