

TECHNICAL EXHIBIT  
AMENDMENT TO PENDING APPLICATION  
NEW FM STATION  
FACILITY ID 122296  
GREENVILLE, MISSISSIPPI  
CH 218C3    25 KW    67 M

Technical Narrative

This technical exhibit supports an amendment to the pending application for a new non-commercial educational (NCE) FM station on channel 218C3 (91.5 MHz) at Greenville, Mississippi. The proposed FM station has a pending application to operate on channel 218C3 with a non-directional antenna effective radiated power (ERP) of 25 kilowatts (kW) (vertical polarization only) and an antenna height above average terrain (HAAT) of 92 meters (BNPED-20000118AET). This amendment proposes to change transmitter site and decrease HAAT.

Proposed Facilities

The proposed transmitter site is located 13 kilometers south of the previous site (NAD27 coordinates: 33-32-11 N, 91-19-45 W). The FCC antenna structure registration number is 1021909 (see Figure 2). It is proposed to operate with a non-directional ERP of 25 kW, vertical polarization only, and an antenna HAAT of 67 meters.

### Blanketing Interference Concerns

The 115 dBu predicted "blanketing" contour of the proposed station would extend radially 2 kilometers from the transmitting site. No interference problems are expected; however the applicant recognizes its responsibility to resolve complaints of blanketing interference as required by Section 73.318.

### Coverage Contours

The FCC predicted coverage contour for the proposed FM station antenna was calculated in accordance with Section 73.313. No consideration was given to terrain roughness correction factors. The average elevations from 3 to 16 kilometers along 8 radials evenly spaced at 45-degree intervals were obtained from the U.S.G.S. 3-second digitized terrain database. The antenna radiation center heights above average terrain in the individual directions and the ERP were used in conjunction with the F(50,50) curves of Section 73.333 (Figure 1) to determine distances to contours.

The coverage map in Figure 3 shows the proposed FM station's 60-dBu coverage contour. The total population of Greenville, MS according to the 2000 U.S. Census is 41,600 people, of which 40,000 people (96%) fall within the 60-dBu contour of the proposed FM station. Therefore, the proposed FM station meets the coverage requirement in Section 73.515 of the Commission's rules to provide at least 50% of the population within the community of license with a 60 dBu signal.

### Allocation Considerations

Sheet 1 of Figure 4 contains a contour overlap study based on pertinent co-channel and adjacent protected and interfering contours as specified in Section 73.509 of the Commission's rules. The allocation requirements outlined in Section 73.509 concern only prohibited overlap, not separation requirements. The FCC's FM database was used as the basis for the study. It indicates that there are no short-spacings to any commercial channel stations. It does indicate that there is a short spacing to a non-commercial channel station, namely KGRM in Grambling, Louisiana, on channel 218C2. This station has its pertinent protected and interfering contours plotted on the map in Sheet 2 of Figure 4. It is noted that no prohibited overlap will occur between the proposed FM operation and KGRM.

The proposed site is outside the coordination distances for Mexico and Canada. The closest FCC monitoring station is at Powder Springs, Georgia located more than 600 kilometers to the east. The closest radio astronomy site conducting research on TV channel 37 is at North Liberty, IA located more than 900 kilometers to the north. These separations are considered sufficient to avoid interference from the proposed operation.

### Channel 6 Protection

Station WABG-TV on channel 6 (Greenwood, MS) is located 78 kilometers east-southeast of the proposed FM station. The majority of the proposed FM interfering contour is located outside of the predicted Grade A contour for WABG-TV.

Figure 5 is a map showing the City Grade, Grade A and Grade B contours for WABG-TV and the interfering contour for the proposed FM station, as specified in Section 73.525. The map also shows the minor civil divisions (MCD) for the surrounding counties.

The population within the predicted interference area was determined by a computer program, which adds the populations of census enumeration districts whose centroids lie within the contour. The 2000 U.S. Census was employed. The population within the predicted interference area is 190 (less than the limit of 3000 people per Section 73.525(c)). No population adjustments were claimed.

#### Radiofrequency Electromagnetic Field Exposure

The proposed FM facility was evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the proposed ERP 4-bay 1 wavelength spaced "rototiller" type antenna centered at 63 meters above ground level. The proposed effective radiated power is 25 kilowatts (vertical polarization only). Using the FCC's FM Model program, the worst-case relative field is approximately  $25 \mu\text{W}/\text{cm}^2$ . This is 8 percent of the FCC's recommended limit of  $0.2 \text{ mW}/\text{cm}^2$  for FM frequencies for an "uncontrolled" environment. There are no other known broadcast stations at or near this proposed transmitter site.

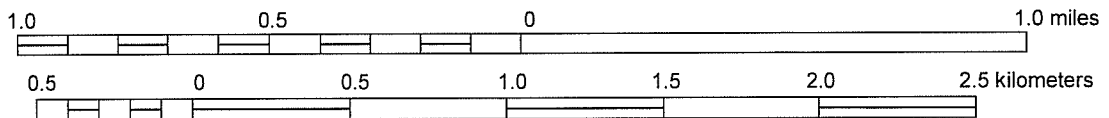
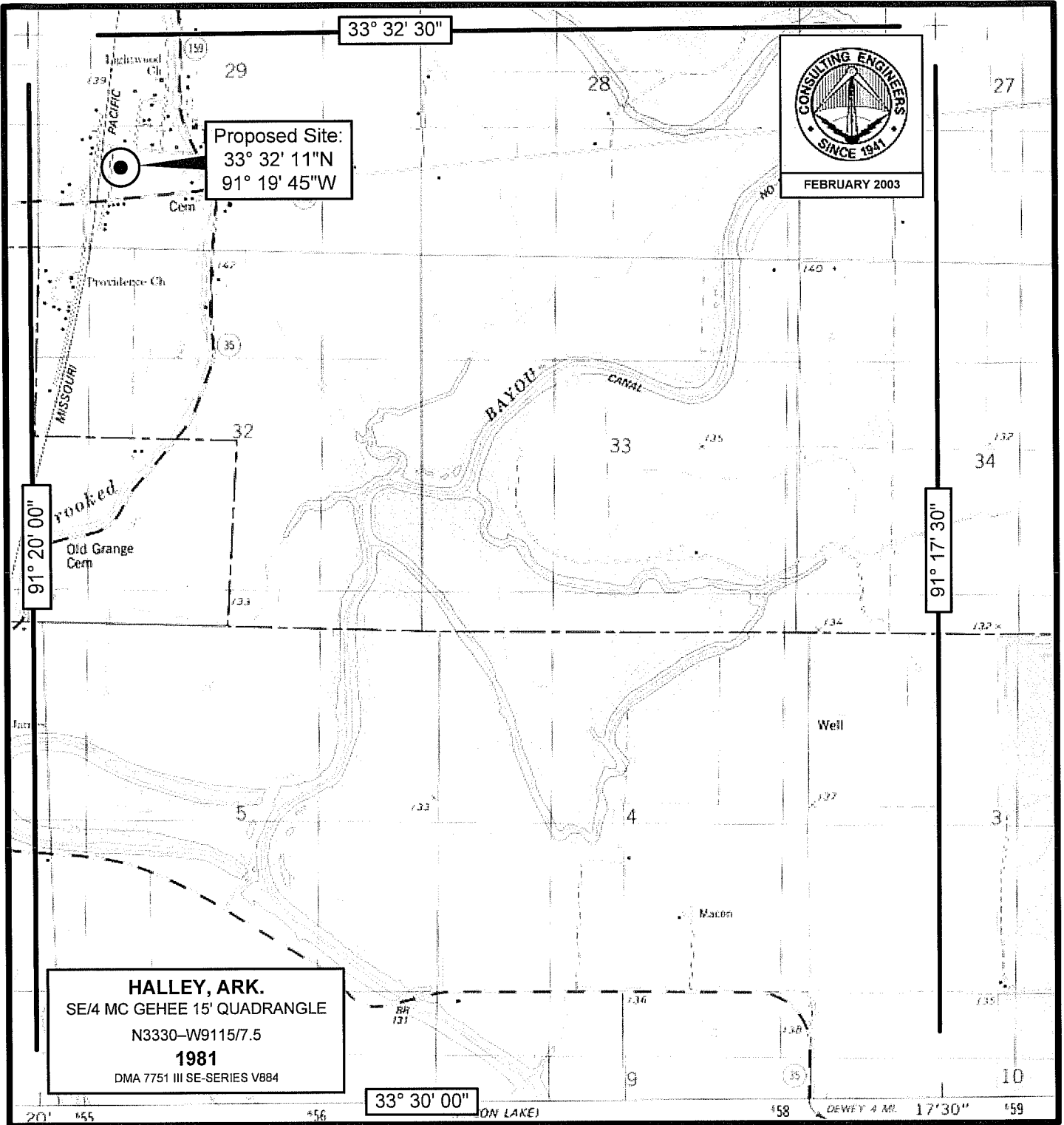
Access to the transmitting site is restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down. The proposed new FM operation appears to be otherwise categorically excluded from environmental processing.

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Figure 1



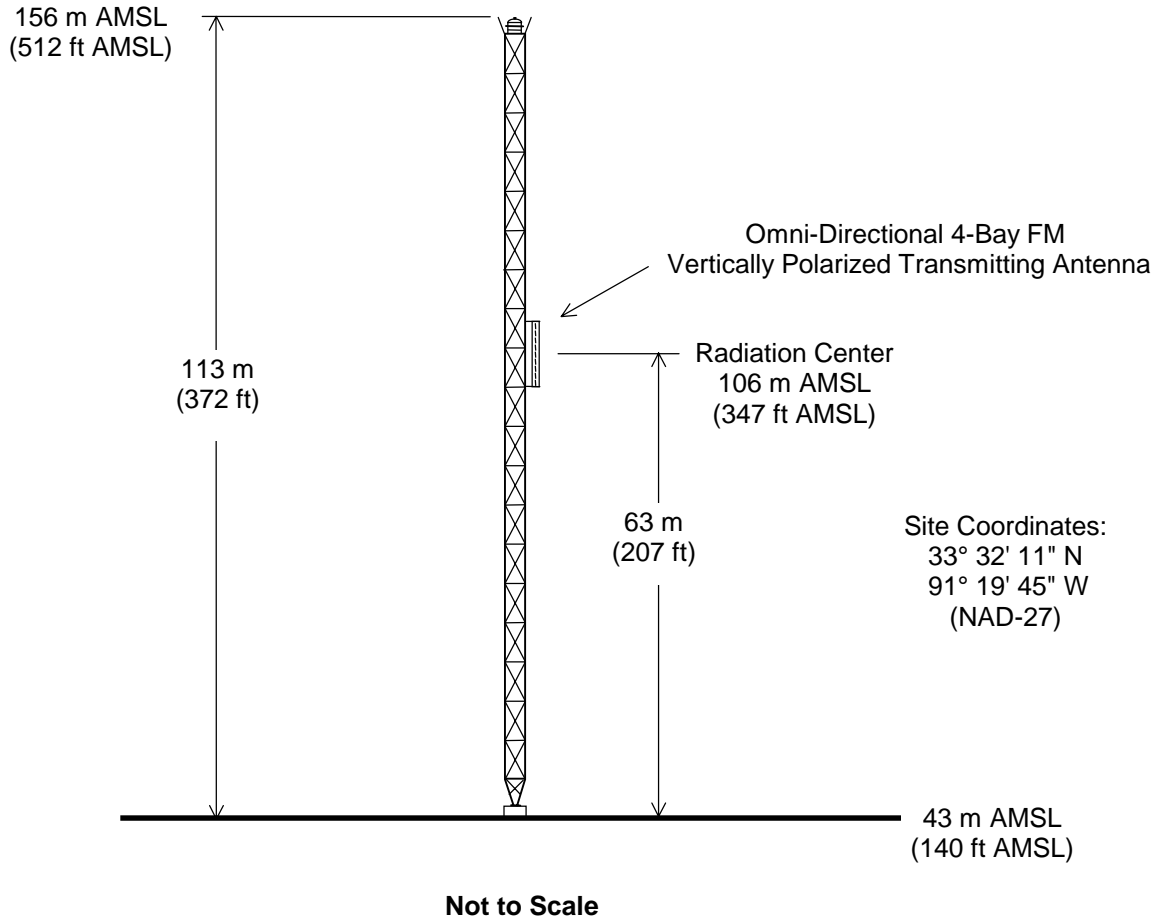
## **PROPOSED TRANSMITTER LOCATION**

**NEW FM STATION**  
**GREENVILLE, MISSISSIPPI**  
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Figure 2



Antenna Reg. No. 1021909



## PROPOSED ANTENNA AND SUPPORTING STRUCTURE

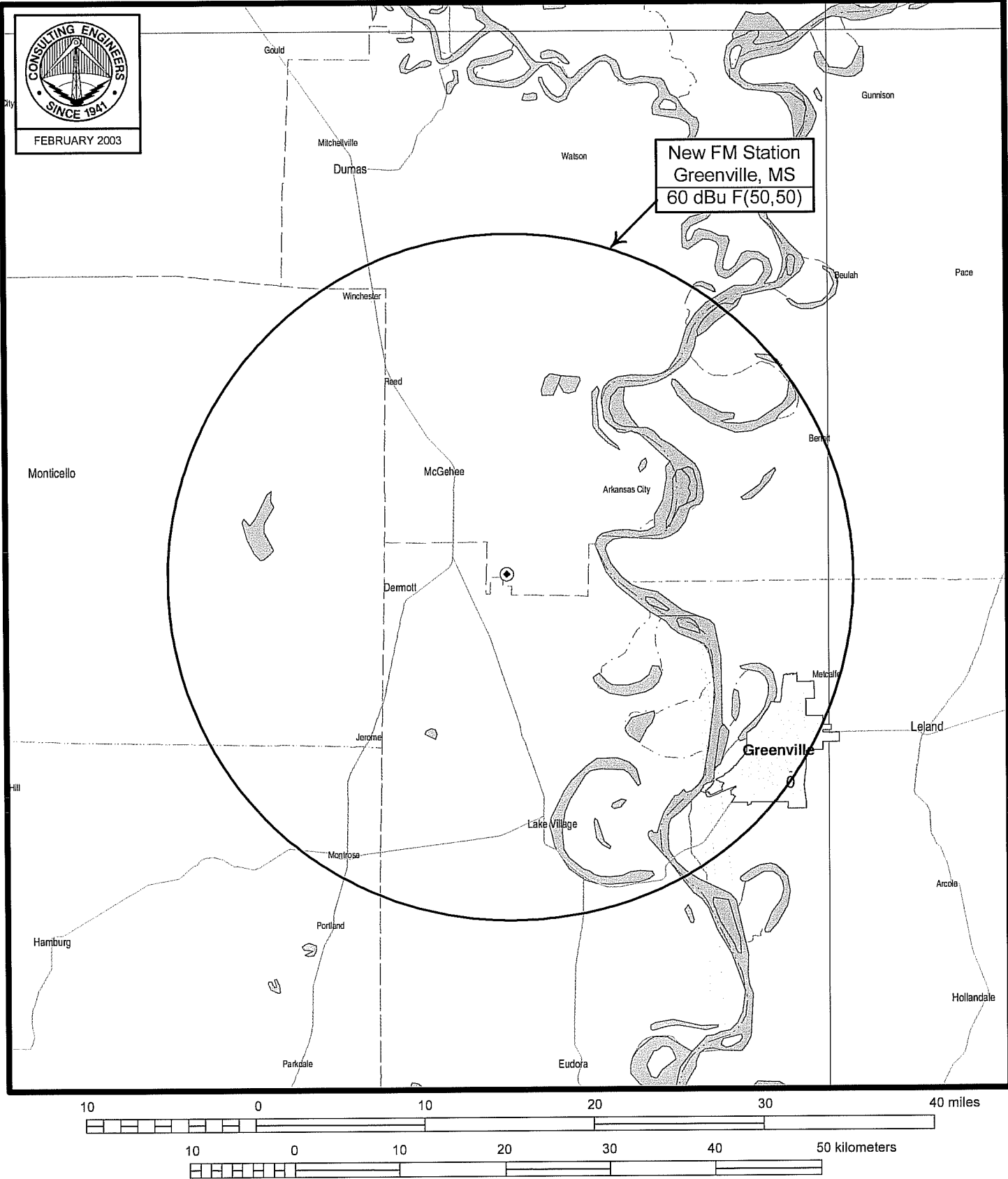
NEW FM STATION

GREENVILLE, MISSISSIPPI

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Figure 3



**PREDICTED COVERAGE CONTOUR**

NEW FM STATION  
GREENVILLE, MISSISSIPPI  
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CDBS FM CONTOUR OVERLAP STUDY

2/20/2003

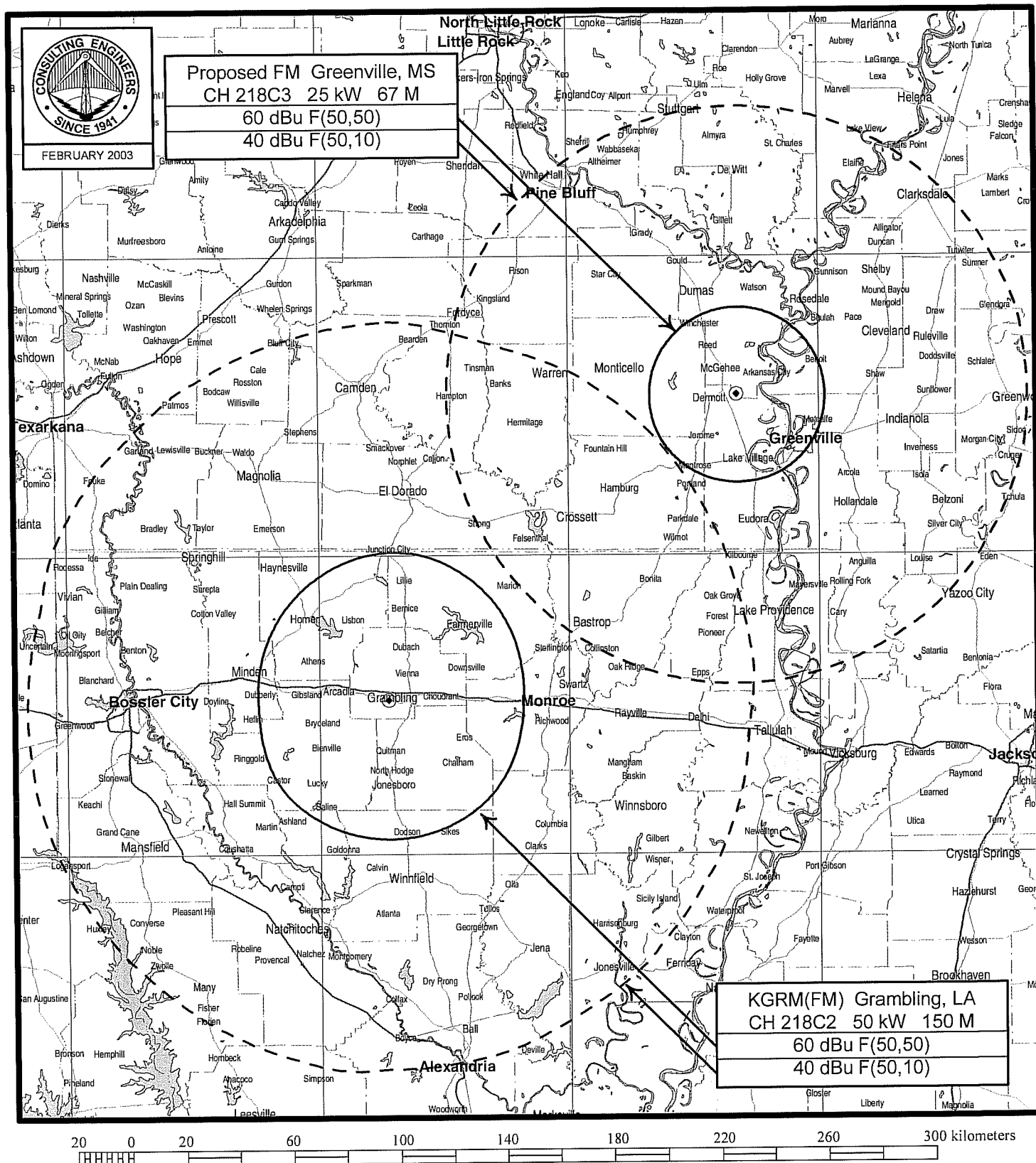
Channel: 218

ERP = 25 kW MAX HAAT = 71

Separation Buffer: 50 km

Coordinates: 33-32-11 91-19-45

| Call<br>Id   | City<br>St       | File<br>Status | Num   | Channel<br>Freq | ERP<br>HAAT   | DA<br>Id     | Latitude<br>Longitude | 73<br>215             | Bear | Dist.<br>(km) | Req.<br>km)  |
|--|------------------|----------------|-------|-----------------|---------------|--------------|-----------------------|-----------------------|------|---------------|--------------|
| WMAO-F<br>43177  | GREENWOOD<br>MS  | BLIC           | LED C | 19831114AL      | 215C1<br>90.9 | 100.0<br>272 | N                     | 33-22-34<br>090-32-32 | N    | 103.5         | 75.29 73.5   |
| WMPN-F<br>46682  | JACKSON<br>MS    | BLIC           | LED C | 20010430AA      | 217C<br>91.3  | 45.0<br>456  | N                     | 32-11-29<br>090-24-22 | N    | 149.8         | 172.37 144.6 |
| None<br>122296   | GREENVILLE<br>MS | BNPED          | APP C | 20000118AE      | 218C3<br>91.5 | 25.0<br>95   | N                     | 33-39-06<br>091-18-54 | N    | 5.8           | 12.85 146.6  |
| <i>(Applicant's Existing Proposed Facility.)</i>           |                  |                |       |                 |               |              |                       |                       |      |               |              |
| WAVI<br>78221  | OXFORD<br>MS     | BLIC           | LED C | 20020207AA      | 218C3<br>91.5 | 8.13<br>191  | Y                     | 34-11-57<br>089-49-09 | N    | 61.7          | 157.88 149.0 |
| KGRM<br>24741  | GRAMBLING<br>LA  | BLIC           | LED C | 19901005KA      | 218C2<br>91.5 | 50.0<br>175  | N                     | 32-30-56<br>092-43-27 | N    | 229.3         | 172.64 174.6 |
| <i>(No actual contour overlap. See Figure 4, Sheet 2).</i> |                  |                |       |                 |               |              |                       |                       |      |               |              |
| WVSD<br>43178  | ITTA BENA<br>MS  | BLIC           | LED C | 19900507KD      | 219A<br>91.7  | 3.0<br>94    | N                     | 33-31-05<br>090-20-38 | N    | 91.0          | 91.55 77.4   |
| KBDO<br>78630  | DES ARC<br>AR    | BLIC           | LED C | 19990910AA      | 219C1<br>91.7 | 56.0<br>218  | Y                     | 35-00-08<br>091-44-41 | Y    | 346.9         | 167.04 122.0 |
| KBDO<br>78630  | DES ARC<br>AR    | BPED           | APP C | 20010921AA      | 219C1<br>91.7 | 75.0<br>218  | Y                     | 35-00-08<br>091-44-41 | N    | 346.9         | 167.04 126.1 |
| WIIQ<br>66330  | LELAND<br>MS     | BLH            | LIC C | 19900924KE      | 272A<br>102.3 | 1.7<br>143   | N                     | 33-23-50<br>091-00-33 | N    | 117.4         | 33.51 10.0   |

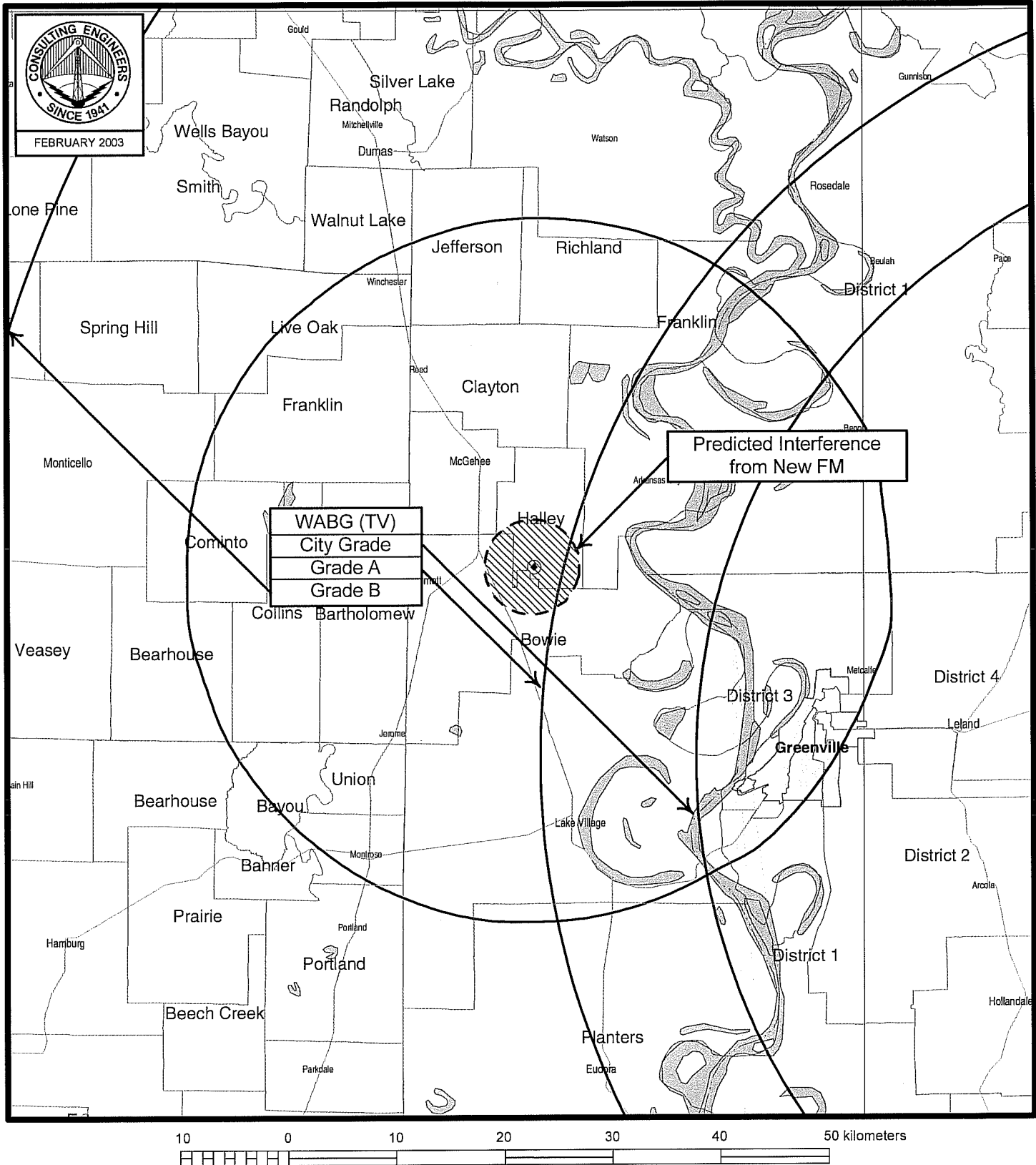


## CONTOUR OVERLAP MAP

NEW FM STATION  
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du Treil, Lundin & Rackley, Inc., Sarasota, Florida

Figure 5



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