

ENGINEERING EXHIBIT
APPLICATION FOR
MODIFICATION OF CONSTRUCTION PERMIT
NOE CORP., LLC
STATION KNOE-DT, MONROE, LOUISIANA
CH. 7 17.0 KW (AVG.) 518 METERS

Noe Corp., LLC (hereafter, Noe) is the permittee in FCC File No. BPCDT-20001024ABE for the construction of a new facility for Station KNOE-DT, Monroe, Louisiana. The permit is for operation on television Channel 7 (174-180 MHz) with effective radiated power (ERP) of 5.0 kW and antenna radiation center height of 518 meters above average terrain.

By means of the instant application, Noe seeks to modify the construction permit to reflect an increase in ERP to 17.0 kW. No other change is proposed. The details of the proposed operation and an interference analysis which demonstrates compliance with the FCC's requirements, are furnished herein.

MAJOR ENGINEERING DETAILS

The transmitter's NAD '27 site geographic coordinates are: 32° 11' 50" N. Latitude; 92° 04' 14" W. Longitude. The tower which will support the antenna is in existence. The Antenna Structure Registration Number (ASRN) is 1040625. The overall structure height above ground level is 605 meters; and above mean sea level, is 624 meters.

The antenna that will be employed is the same as set forth in the underlying application for construction permit, BPCDT-20001024ABE. It is a Dielectric, Model THA-06-3H/18HD-1. The antenna is omnidirectional and it will be mounted as authorized in BPCDT-20001024ABE, i.e., with the radiation center at a height of 523

meters above ground level; 542 meters above mean sea level. As stated earlier, only the effective radiated power is proposed to be changed.

SERVICE CONTOURS

Figure 1 is a map that shows the calculated 43 dBu (principal community) and 36 dBu (noise-limited) F(50,90) service contours for the proposed operation. Monroe is completely encompassed by the proposed 43 dBu contour, as required. Figure 2 provides the distances to the contours depicted in Figure 1, together with the underlying supporting data. The U.S. G. S. 3 arc-second terrain elevation database was used to establish the antenna radiation center height above the terrain average for the interval from 3.2-16.1 kilometers along each of the standard 45° spaced radials.

INTERFERENCE CONSIDERATIONS

Interference studies for the proposed KNOE-DT operation have been conducted using the FCC's tv_process program on a Sunblade computer. In the past, the results have been found to be in very good agreement with the results that have been furnished in Appendix B of the Second Memorandum Opinion and Order on Reconsideration of the Fifth and Sixth Report and Orders in MM Docket No. 87-268.

No changes in the FCC's default settings for the tv_process program were made for the studies conducted relative to the instant proposal. Only the records for the proposed KNOE-DT 17.0 kW operation were substituted for the records for KNOE-DT's outstanding 5.0 kW construction permit operation in BPCDT-20001024ABE. In this manner, the interference impact of the KNOE-DT proposal alone could be obtained.

The study results are provided in tabular form in Figure 3. Figure 3 demonstrates that no station, other than co-channel analog Station KPLC-TV, Lake Charles, Louisiana, would receive more than the permitted 2 %, "de minimis", interference from the

proposed operation, and no station will have cumulative interference exceeding the permitted 10 % limit.

Analog Station KNOE-TV is on Channel 8, which is first adjacent to the KNOE-DT, Channel 7 operation. Analog Station KPLC-TV is on Channel 7, which is first adjacent to the KPLC-DT, Channel 8, operation. As sanctioned in Section 73.623 (f) of the Rules, an agreement between the licensees of KNOE-TV and KPLC-TV is on file which contemplates the reception of interference by each licensee's analog station from the other licensee's DTV operation during the transition. After the transition, each licensee will revert to its analog channel for its permanent DTV operation, and the interference will disappear. This temporary increase in received analog interference by each station is believed to be in the public interest since it will afford an opportunity for increased service by each station's DTV facility.

In effect, the FCC has already determined that the referenced Agreement is in the public interest since the FCC authorized a power increase for KPLC-DT, Channel 8, from 5 kW to 20 kW (see, BMPCDT-20021002AAU). This latter proposal increased the interference to KNOE-DT above the normally permitted 2 %, de minimis, maximum. The KPLC-DT application relied on this same Agreement. Noe, pursuant to the Agreement, is seeking to establish for KNOE-DT, a mode of operation relative to KPLC-TV that is essentially the equivalent of the operation that has been authorized for KPLC-DT relative to KNOE-TV.

ENVIRONMENTAL IMPACT CONSIDERATIONS

The proposed KNOE-DT operation will be from the same location as employed for KNOE-TV, KLTM-TV, and KNOE-FM. Since the site is already employed for broadcasting purposes, the only environmental concern from the list included in Section

1.1307 of the Rules is the one relating to radio-frequency radiation (rfr) exposure to humans. The following paragraphs address this matter.

Rfr exposure to the public at uncontrolled locations and to workers at controlled locations, are addressed. In order to assess the prospective impact of the proposed KNOE-DT operation on the public, a test calculation was performed assuming worst-case conditions. In other words, the full 17 kW ERP that will be employed was assumed to be projected downward to a target that is located 2 meters above ground level at the tower base. The result would represent the maximum exposure that could occur anywhere.

Using the equation given in OST Bulletin 65, but modifying the equation when used for KNOE-DT to take into account that the ERP is average power, rather than peak visual power with 10 % aural power, a power density level of 0.00207 mW/cm^2 at the target was obtained. The foregoing result takes into account a 1.6 ground reflection coefficient and an antenna radiation center distance of 521 meters to the target.

The maximum permitted exposure (MPE) at Channel 7 (174-180 MHz) is 0.2 mW/cm^2 . The worst-case calculation result for the proposed KNOE-DT operation represents 1.0 % of the MPE.

Similar worst-case calculation results for KNOE-TV, Ch. 8, 316 kW, with radiation center at 585 mAGL; KLTM-TV, Ch. 13, 316 kW, with radiation center at 551 mAGL; and KNOE-FM, Ch. 270, 100 kW (H), 99 kW (V), with radiation center at 469 mAGL yield, respectively, contributions to the MPE of 7.8 %, 8.5 %, and 15.5 %. No danger arises that the contributions of all the stations on the tower will exceed 100 % of the MPE at any uncontrolled location.

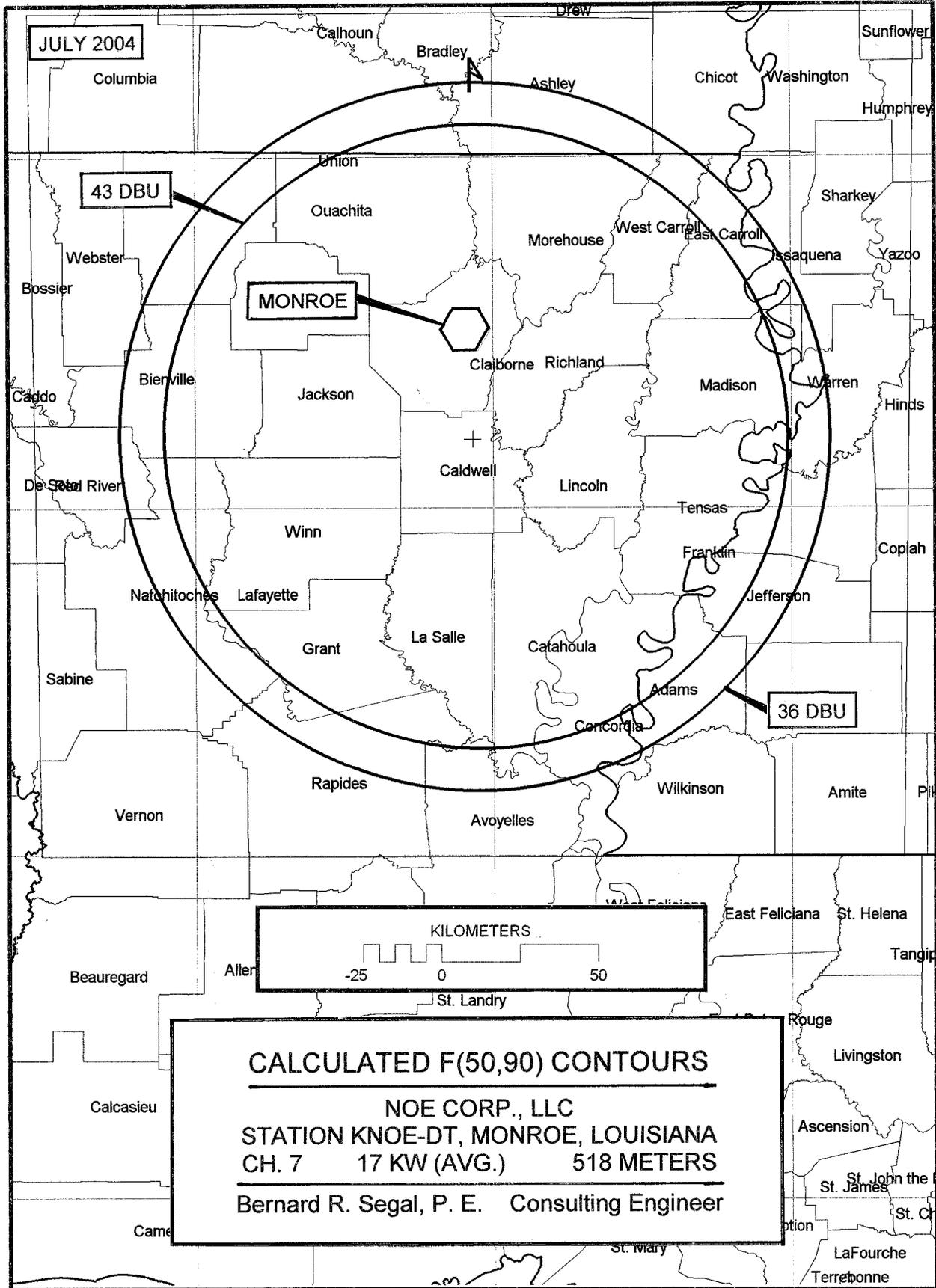
Insofar as worker protection to overexposure is concerned, the tower owner, Noe, requires that power be reduced, or excitation to one, or more, antennas be terminated according to the location on the tower where the work must be performed. The same practice will continue when the KNOE-DT antenna is added. The tower is fenced, and access within the fenced area is available only to authorized personnel. A radiation hazard warning sign is posted. Thus, the area within the fence, including the tower, is a controlled location area. The policies that prevail, and their continued observance, will assure the avoidance of overexposure of workers to rfr according to the FCC's adopted Standard.

Based on the foregoing discussion relating to environmental concerns, the proposed operation will have no significant impact on the environment, and an environmental assessment is not required.

I declare under penalty of perjury that the foregoing is true and correct. Executed on July 30, 2004.


Bernard R. Segal, P. E.

FIGURE 1



BERNARD R. SEGAL, P. E.
CONSULTING ENGINEER
KENSINGTON, MARYLAND

FIGURE 2

KNOE-DT, MONROE, LOUISIANA
CH. 7 17.0 KW (AVG.) 518 METERS

Tabulation of Average Elevations, and
Calculated Distances to F(50,90) Contours

Site Coordinates: 32° 11' 50" North Latitude
92° 04' 14" West Longitude

Antenna Radiation Center: 542 mAMSL

<u>Azimuth</u> (Deg. T.)	<u>Radiation Center</u> Above 3.2-16.1 km Terrain Avg (meters)	<u>Distance to</u>	
		<u>43 dBu,</u> Contour (km)	<u>36 dBu</u> Contour (km)
0	524	99.4	112.7
45	528	99.6	112.8
90	529	99.6	112.8
135	529	99.6	112.9
180	516	98.7	112.3
225	496	97.1	111.1
270	499	97.3	111.3
315	<u>520</u>	99.2	112.6
Standard eight radial average:		518	

Note: Terrain elevation data obtained from U.S.G.S. 3 arc-second database.

FIGURE 3

INTERFERENCE ANALYSIS RESULTS
KNOE-DT, MONROE, LOUISIANA
CH. 7 17.0 KW (AVG.) 518 METERS

Site Coordinates: 32° 11' 50" N. Lat.
92° 04' 50" W. Long.

Antenna radiation center: 542 mAMSL

Station Identification	Current Service (1990)	Population Not Affected By Terrain Losses	Interference From Proposed KNOE-DT (Pop.) (%)		Cumulative DTV Interference With KNOE-DT (%)
KATV Little Rock, AR BLCT-1499 Ch. 7, 316 kW, 591 m	941,000	963,171	15,128	1.6	1.6
KPLC-TV Lake Charles, LA a)BLCT-19800616KH Ch. 7, 316 kW, 459 m	940,058	951,195	35,562	3.7	3.7
b)BPCT-20021002AAR Ch. 7, 316 kW, 451 m	940,368	950,789	32,837	3.5	3.5
WDAM-TV Laurel, MS BLCT-2375 Ch. 7, 316 kW, 155 m	328,249	329,142	6,689	2.0	2.0
KLTV Tyler, TX BLCT-19841121KK Ch. 7, 316 kW, 302 m	618,706	686,269	634	0.1	0.1

Note: The "Current Service" column reflects the Grade B contour population, per the 1990 U.S. Census, reduced by the Longley-Rice determinations of losses due to terrain and analog station interference.

Other stations that were considered, but not listed, because no interference would result from the proposed KNOE-DT operation, are: KJUN-CA, Morgan City, LA, Ch. 7, and KPLC-DT, Lake Charles, LA, Ch. 8 (per the DTV plan and per the authorized application for power increase to 20 kW in BMPCDT-20021002AAU).