ENGINEERING EXHIBIT
AMENDMENT OF APPLICATION FOR
CONSTRUCTION PERMIT
STATION WGNO-DT (FACILITY ID 72119)
NEW ORLEANS, LOUISIANA

April 25, 2002

CHANNEL 15 870 KW (MAX-DA) 309 M

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Technical Statement

This Technical Exhibit was prepared on behalf of digital television broadcast station WGNO-DT, New Orleans, Louisiana, in support of an amendment to its pending application for construction permit (See FCC File No. BPCDT-19990901AAE). WGNO-DT is paired with analog NTSC TV station WGNO-TV, Channel 26. The pending application for WGNO-DT proposes operation on Channel 15 with a maximum effective radiated power (ERP) of 870 kW using a directional antenna and an antenna height above average terrain (HAAT) of 312 m. The purpose of this amendment is to change the proposed antenna make, model and pattern. Due to the change in the antenna configuration, the antenna radiation center height will change from 312 m AGL (312 m AMSL, 312 m HAAT) to 309 m AGL (309 m AMSL, 309 m HAAT). The new antenna pattern will facilitate compliance with the FCC's *de minimis* interference requirements. [*†]

[*] See FCC *Public Notice*, "Commission Details Application Filing Procedures Digital Television (DTV)", Released: October 16, 1997; and, FCC *Public Notice*, "Additional Application Processing Guidelines for Digital Television (DTV)", Released: August 10, 1998.
[†] See also letter to WGNO INC. from Clay Pendarvis, Chief, Television Branch, Video Services Division, Mass Media Bureau, In Re: BPCDT-19990901AAE, WGNO-DT, Facility ID:72119, New Orleans, LA; Dated February 27, 2002.

Proposed Facilities

The proposed transmitting antenna will be top-mounted on the existing WGNO tower located at #2 Bayou Bienvenue. The WGNO tower itself is a uniform cross-section guyed structure with a height above ground of 300.2 m (985 ft) (including (1.8 m) 6-ft concrete base). The transmitter site elevation is 0 m AMSL. The antenna center of radiation will be located at 309 m (1015 ft) AGL and 309 m AMSL.

The proposed antenna is an RFS model RD32A. The antenna itself has a height of 18.3 m and an overall height of 19.5 m including top-mounted obstruction lighting. The proposed antenna patterns are included herein in the Appendix to this report. The azimuthal plane pattern is referenced to 0° True. However, the antenna will be oriented at 290° True as reflected on FCC Form 301.

The proposed facility provides minimum 48 dBu, f(50,90), coverage of New Orleans in compliance with Section 73.625(a)(1) of the FCC Rules, as recently adopted by the FCC in MM Docket No. 00-39. Figure 1 herein is a map depicting the predicted coverage contours of the proposed facility.

Tower Registration

The proposed antenna structure has been registered with the FCC. The FCC antenna structure registration number is 1028290. There will be no change in the overall height of the antenna structure as a result of the instant proposal.

Allocation Considerations

The proposed WGNO-DT Channel 15 facility meets the requirements of Section 73.623 of the FCC Rules concerning predicted interference to other existing U.S. NTSC facilities and U.S. DTV allotments and assignments. Longley-Rice interference analyses were conducted pursuant to the requirements of the FCC Rules; OET Bulletin No. 69; and published FCC guidelines for preparation of such interference analyses. The Longley-Rice interference analyses were conducted using the software developed by du Treil, Lundin & Rackley, Inc. based on the FCC published software routines.‡ Stations selected for analysis were determined pursuant to the distance requirements outlined in the FCC DTV Processing Guidelines Public Notice. Accordingly, co-channel DTV and NTSC stations within 429 km and 407 km, respectively, were examined for potential interference; and first-adjacent DTV and NTSC stations within 229 km and 207 km, respectively, were examined for potential interference. Analog taboo-related NTSC stations within 142 km were examined for potential interference. The results of the domestic interference analyses for the proposed WGNO-DT facility are summarized herein at Figure 2. As indicated therein, the proposed facility will meet the 2%/10% criterion outlined in the FCC Rules and published guidelines with respect to all considered stations.§

With respect to Class A TV station protection, the proposal has been evaluated according to the requirements of Section 73.623(c)(5) of the FCC Rules. The analysis reveals no potentially affected Class A TV stations.

‡ The duTreil, Lundin & Rackley, Inc. DTV interference analysis program is a precise implementation of the procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 2 km was employed.
§ Interference analysis results reflect the net change in interference to a given station considering the interference predicted to occur from all other stations (i.e. "masking") including the allotment facility for WGNO-DT. This properly reflects the net interference change for determining compliance with the FCC DTV2%/10% *de minimis* standard.

Environmental Considerations

With respect to the potential for human exposure to radio frequency (RF) radiation, calculations prepared in accordance with FCC Bulletin OET-65 (Edition 97-01) indicate that the proposal will not result in human exposure to RF radiation at ground level in excess of FCC standards. Power density calculations were conducted at 2-m above ground** based on the following conservative assumptions, with the following results:

Call Sign	Channel	Peak Visual ERP or Average ERP (kW)	Aural ERP (kW)	Relative Field Factor††	FCC Limit‡‡ (mW/cm^2)	Percentage of Limit
WGNO-DT	15	870	--	0.16	0.319	2.5%

As indicated above, the exposure to RF radiation at 2-m above ground level will not exceed 2.5% of the FCC limit for general population / uncontrolled exposure. Therefore, the proposal complies with the FCC limits for human exposure to RF radiation and it is categorically excluded from environmental processing. The applicant, in coordination with the other users of the transmission facility, shall reduce power or cease operation as necessary to protect persons having access to the WGNO-DT tower or antenna from radio frequency radiation in excess of the FCC guidelines.

Louis Robert du Treil, Jr.

April 25, 2002

** The radiation center height above ground is 309 m.
†† This is a conservative estimate of the relative field factor in the downward direction.
‡‡ for general population/uncontrolled environments

Scale 1:1 250 000

PREDICTED F(50,90) COVERAGE CONTOURS

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Summary of Allocation Analysis

Stations Potentially Affected by Proposed Station							
Facility Number	Channel	Call	City State	Distance (km)	Status	Application Prefix	Application Reference Number
1	14	WHNO-DT	NEW ORLEANS LA	10.1	PLN	DTVPLN	DTVP0123
2	15	WPMI	MOBILE AL	232.2	LIC	BLCT	19820308KE
3	15	KADN	LAFAYETTE LA	221.7	LIC	BLCT	19890313KI
4	16	KADN-DT	LAFAYETTE LA	221.7	CP	BPCDT	19991101AHD
5	16	KADN-DT	LAFAYETTE LA	221.7	PLN	DTVPLN	DTVP0212
6	16	WMAH-DT	BILOXI MS	129	CP	BPEDT	20000110AAC
7	16	WMAH-DT	BILOXI MS	128.9	PLN	DTVPLN	DTVP0217
8	19	WMAH-TV	BILOXI MS	129	LIC	BLET	20001011ABM

Summary of Interference Analysis for Worst-Case Scenarios							
Facility Number	Interference Population Before Analysis	Interference Population After Analysis	Baseline Population	Net Change in Interference	Percent of Baseline	Permissible Percent of Baseline	Result
1	0	22708	1451575	22708	1.564	2.0	pass
2	11072	16873	1040240	5801	0.558	2.0	pass
3	0	4872	585965	4872	0.831	2.0	pass
4	--	--	--	--	0.00	--	pass
5	--	--	--	--	0.00	--	pass
6	212959	224781	647857	11822	1.825	2.0	pass
7	46935	47899	647857	964	0.149	2.0	pass
8	--	--	--	--	0.00	--	pass

Figure 2
Sheet 2 of 2

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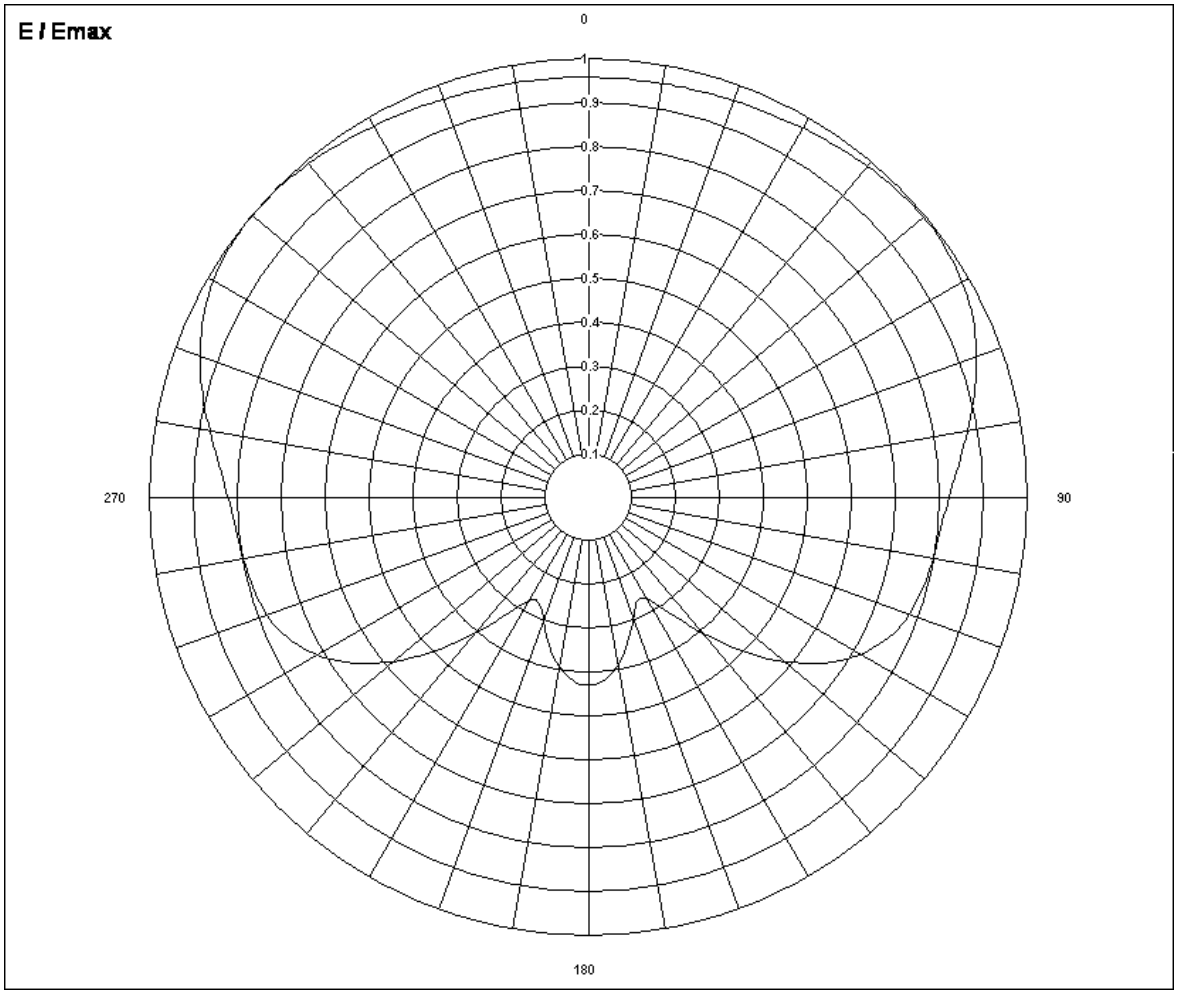
Transmitting Antenna
Manufacturer's Vertical Plane Pattern Data

(three pages follow)

RFS AMERICAS BROADCAST DIVISION

UHF A16479 Pattern (220º) Coverage

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.96	60	0.98	120	0.71	180	0.43	240	0.71	300	0.98
10	0.96	70	0.94	130	0.58	190	0.39	250	0.78	310	0.99
20	0.96	80	0.87	140	0.40	200	0.29	260	0.80	320	0.99
30	0.97	90	0.82	150	0.27	210	0.27	270	0.82	330	0.97
40	0.99	100	0.80	160	0.29	220	0.40	280	0.87	340	0.96
50	0.99	110	0.78	170	0.39	230	0.58	290	0.94	350	0.96



Pattern: A16479
Horizontal Gain: 1.6(2.07 dB)
FCC Data Format

Rev. 001
Date: 3/26/02

ISO 9001
Certificate No. 16441

Tel.: (203) 239-3311
Fax: (203) 239-9260

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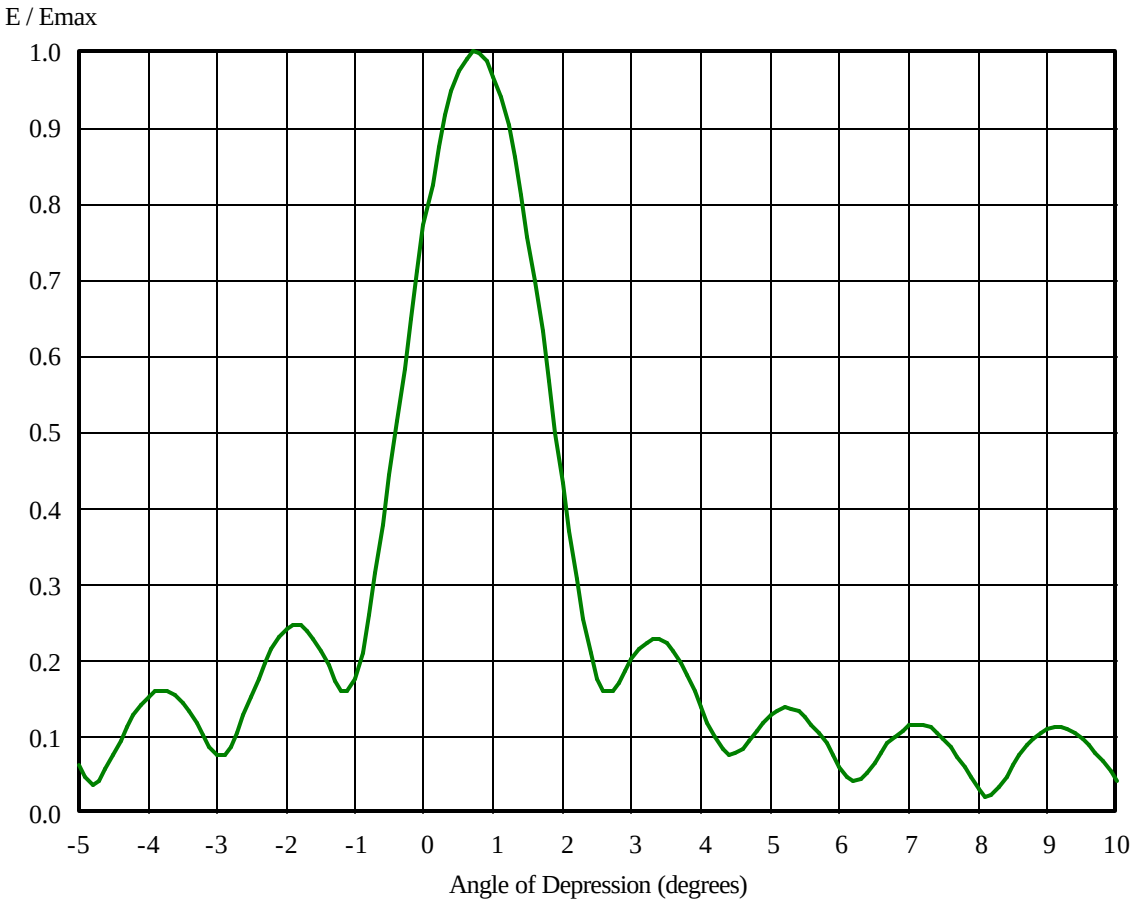
VHF Vertical Radiation Pattern



Antenna Type: UHF
Antenna P/n: RD32A1540H7T00
Channel 15 (479 MHz)
Pattern Gain: 14.17 dBd
Beamtilt: 0.75

Rev. 001
Date: 3/25/02

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Certificate No. 16441

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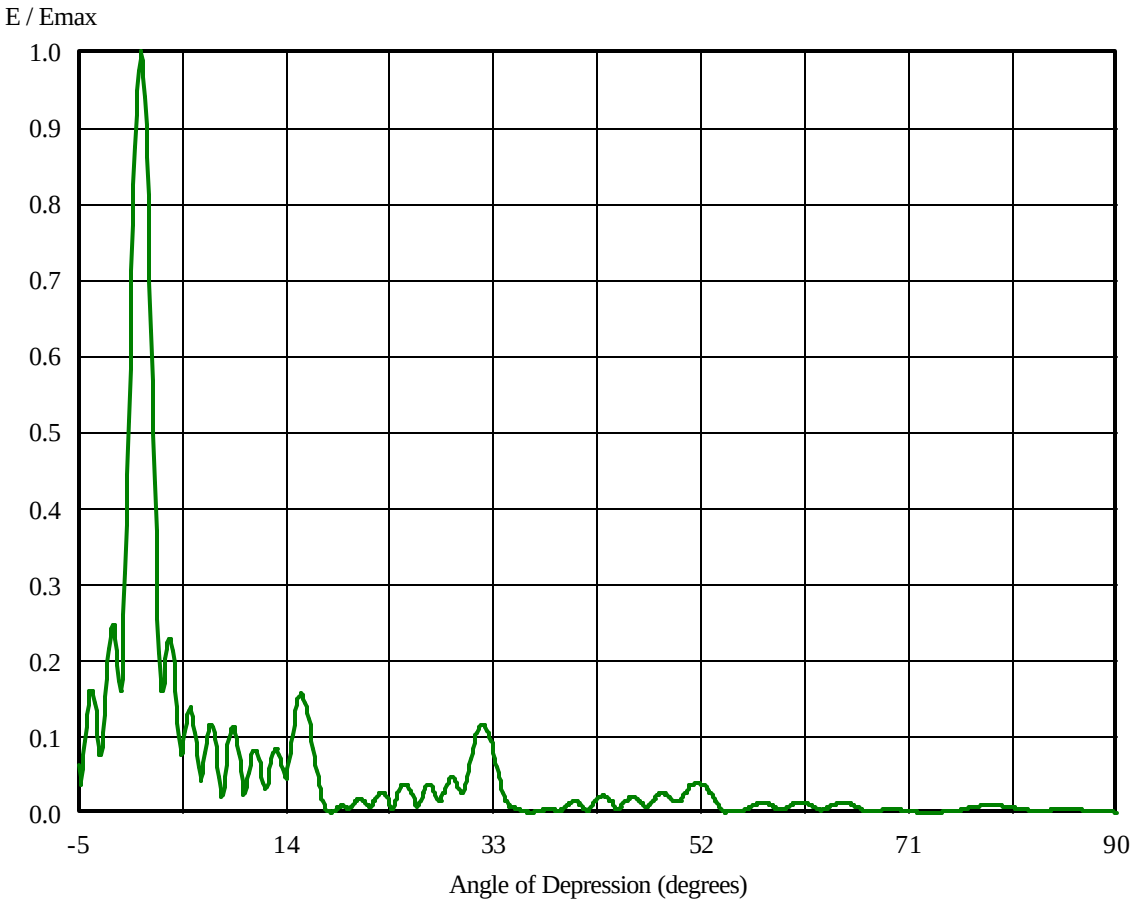
VHF Vertical Radiation Pattern



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Antenna P/n: RD32A1540H7T00
Channel 15 (479 MHz)
Pattern Gain: 14.17 dBd
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