

TECHNICAL EXHIBIT
MINOR AMENDMENT TO LPTV
DISPLACEMENT APPLICATION
STATION WPXU-LP (FACILITY ID 2129)
AMITYVILLE, NEW YORK

JULY 30, 2001

CH 19(+) 20 KW (MAX-DA)

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Table of Contents

	Technical Narrative
Figure 1	Vertical Antenna Pattern
Figure 2	Predicted Contour
Figure 3	OET-69 Computer Output (DTV)

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Technical Narrative

The technical exhibit of which this narrative is part supports a minor amendment to the application for low-power television station (LPTV) WPXU-LP at Amityville, New York. Station WPXU-LP has an application pending to operating on channel 19 with a directional antenna (DA) maximum visual effective radiated power (ERP) of 20.2 kilowatts (kW) and an antenna radiation center height above mean sea level (RCAMSL) of 107.9 meters (BMPTTL-JG0601AR). This application proposes a slight decrease in ERP and a different directional antenna to alleviate the proposed impact to land mobile radio service (LMRS) assignments in northern New Jersey.

Proposed Facilities

The transmitter site is located at 40-44-45 N, 73-37-29 W. Station WPXU-LP proposes to use an Antenna Concepts ACS16AR directional antenna (cardioid-type) on the existing 82.3 meter tower (FCC tower registration no. 1038682). The proposed maximum visual ERP will be 20 kW and the antenna RCAMSL remains 107.9 meters. The major lobe of the proposed antenna pattern will be oriented toward 79° True. There will be no change in transmitter site, RCAMSL, channel or frequency offset (plus) or community of license.

NTSC Allocation Considerations

A study has been conducted using the provisions of Sections 74.705, 74.707 and 74.709 to assure that the proposal will not create prohibited interference with other authorized or pending NTSC full-power and LPTV stations. The proposed WPXU-LP operation complies with the FCC's normal analog allocation requirements.

Protection is afforded to the reservation for LMRS on channel 19 at Philadelphia, Pennsylvania (see Figure 2). Also shown on Figure 2 are the locations of the closest LMRS base stations (as "stars") in northern New Jersey on channel 19 as derived from the FCC master frequency database. The proposed 52 dBu F(50,10) contour does not overlap the Philadelphia channel 19 LMRS service area (130 km), nor does the proposed 52 dBu F(50,10) contour extend into New Jersey.

The proposed facility is located outside of the border areas of Mexico and Canada and, therefore, coordination with those countries is not required.

DTV Allocation Considerations

Pertinent DTV allotments and assignments on channels 18, 19 and 20 have been examined using the procedures outlined in the FCC's OET-69 bulletin.¹ Interference calculations from the proposed WPXU-LP operation to other DTV operations are summarized below.

¹ The duTreil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and 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 1 km was employed. An Alpha based processor computer system was employed. The results have been found to be in very close agreement with the results of the FCC implementation of OET Bulletin No. 69.

Protected DTV Station	FCC Baseline	Proposed Interference Population
WGBH-DT (CP), DTV-19, Boston, MA	6,740,000	2,067 (0.03%)
WGBH, DTV-19 allotment	6,740,000	2,463 (0.04%)

The above calculated interference percentages are all less than 0.5% and, therefore, can be considered “de minimis” (see Figure 3 for detailed interference study).

The proposed WPXU-LP operation does not cause calculated interference to any other DTV assignment. If necessary, a waiver of the FCC rules is respectfully requested based on no prohibitive interference being caused to pertinent NTSC and DTV assignments using the procedures outlined in the FCC’s OET-69 Bulletin.

Radiofrequency Electromagnetic Field Exposure

The proposed WPXU-LP facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. A maximum visual ERP of 20 kW with 10% aural power was assumed. A conservative relative field value of 0.2 was assumed for the antenna’s downward radiation (see Figure 1). The calculated power density at a point 2 meters above ground level is 0.0024 mW/cm². This is less than 1% of the FCC's recommended limit of 0.34 mW/cm² for channel 19 for an “uncontrolled” environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. As this will be a multi-user site an agreement will control access to the site. 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.

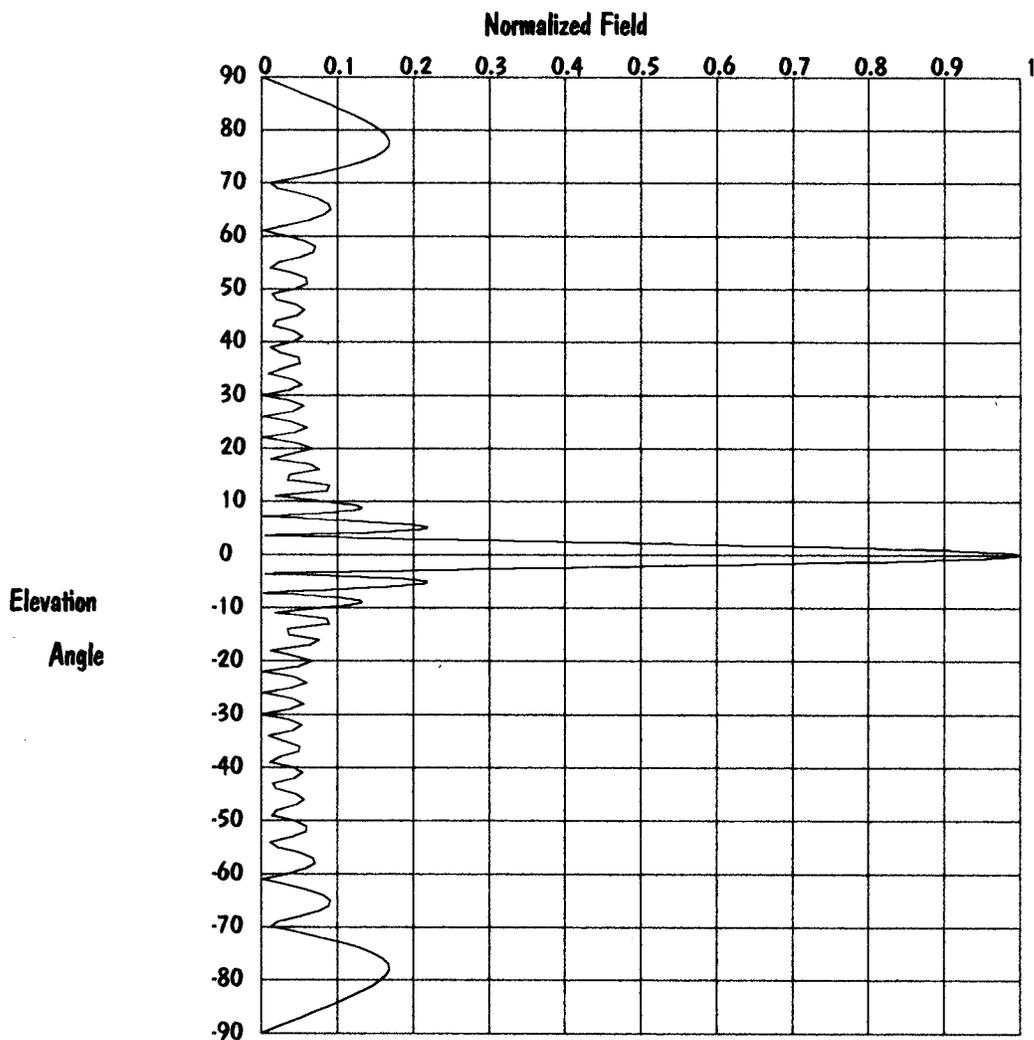
The proposed WPXU-LP operation appears to be otherwise categorically excluded from environmental processing.

In addition, it appears that the existing structure is otherwise excluded from environmental processing as it complies with all the criteria for such an exclusion in Section 1.1306.

Jonathan N. Edwards

du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237

July 30, 2001



Elevation Pattern

Scale: Linear

Units: Absolute

Antenna Concepts Inc.

CLIENT: *du Treil, Landin & Rackley, Inc.*

Date: 4/13/1998

ANTENNA TYPE: *ACS 16 bay Low Power slot*

FREQUENCY: *UHF*

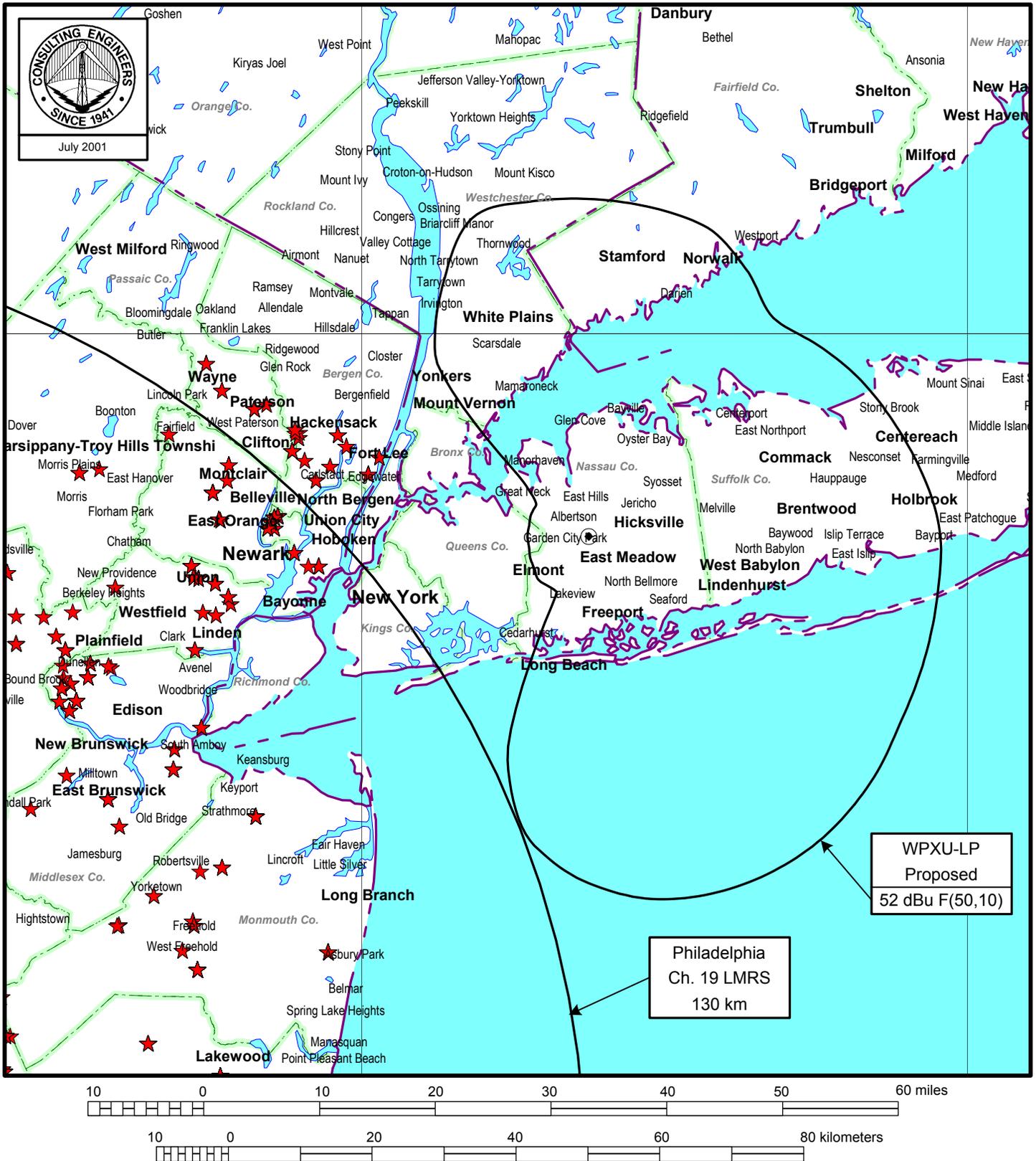
PATTERN POL.: *Horizontal*

Beam Tilt (Deg.): *0*

Elev. DIRECTIVITY: *18.539/ 12.681dBd*

Null Fill (%): *, ,*

Figure 2



PREDICTED CONTOURS
STATION WPXU-LP
AMITYVILLE, NEW YORK
CH 19 20 KW (MAX-DA)
du Treil, Lundin & Rackley, Inc Sarasota, Florida

INTERFERENCE CAUSED BY WPXU-LP

CELL SIZE : 1.00 km

Using offset in determining thresholds

Per 6th Report & Order and FCC OET-69 Bulletin

WMBC-DT 41-00-43 74-35-32 18(N) 95.0 kw 594.5 m AMSL 90.0 % 39.1 dBu
 NEWTON NJ
 CP BPCDT19991029AFC

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	22336.21	14674326
not affected by terrain losses	21443.63	14541356

WPXUAR 40-44-45 73-37-29 19(+) 20.0 kw-DA 108 m AMSL 10.0 % 72.2
 AMITYVILLE NY

1.00	0.98	0.95	0.92	0.91	0.95	0.99	1.00	0.97	0.90	0.76	0.59
0.30	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.30	0.59	0.76	0.90	0.97	1.00	0.99	0.95	0.91	0.92	0.95	0.98

Ref Az: 79.0

Using DEFAULT vertical antenna pattern

D/U Baseline: -49.00

	Area	Pop
Interference	0	0

W19CI 41-00-20 076-12-50 19(Z) 1.180 kw 535 m DA 50.0 % 72.2 dBu
 BERWICK PA
 LIC BLTTL20001206AAX

0.76	0.61	0.47	0.27	0.08	0.05	0.07	0.11	0.23	0.38	0.46	0.37
0.20	0.09	0.07	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06
0.06	0.05	0.07	0.25	0.46	0.60	0.75	0.88	0.97	1.00	0.97	0.89

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	225.5110	24897
not affected by terrain losses	225.5110	24897

WPXUAR 40-44-45 73-37-29 19(+) 20.0 kw-DA 108 m AMSL 10.0 % 72.2
 AMITYVILLE NY

1.00	0.98	0.95	0.92	0.91	0.95	0.99	1.00	0.97	0.90	0.76	0.59
0.30	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.30	0.59	0.76	0.90	0.97	1.00	0.99	0.95	0.91	0.92	0.95	0.98

Ref Az: 79.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 28.00

	Area	Pop
Interference	0	0

DWGBHTV 42-18-37 71-14-14 19(0) 1000.0 kw-DA 361 m AMSL 90.0 % 39.2 dBu
 BOSTON MA 29979 6740 DTVSERVICE: 6740000 NTSCSERVICE: 6697000
 DTVALT DTV ALLOTMENT

0.99	0.98	0.97	0.96	0.95	0.95	0.96	0.96	0.97	0.97	0.97	0.97
0.97	0.97	0.98	0.98	0.99	0.99	1.00	1.00	1.00	1.00	0.99	0.99
0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

USING NTSC GRADE B FOR SERVICE AREA

	Area	Pop
within Noise Limited Contour	33542.22	6978960
not affected by terrain losses	31894.64	6864024

WPXUAR 40-44-45 73-37-29 19(+) 20.0 kw-DA 108 m AMSL 10.0 % 72.2
 AMITYVILLE NY

1.00	0.98	0.95	0.92	0.91	0.95	0.99	1.00	0.97	0.90	0.76	0.59
0.30	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.30	0.59	0.76	0.90	0.97	1.00	0.99	0.95	0.91	0.92	0.95	0.98

Ref Az: 79.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

	Area	Pop
Interference	41.69	2463 (0.04%)

WGBH-DT 42-18-37 71-14-14 19(N) 700.0 kw 417 m AMSL 90.0 % 39.2 dBu
 BOSTON MA 29979 6740 DTVSERVICE: 6740000 NTSCSERVICE: 6697000
 CP BPEDT19980827KH

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	34164.33	7017596
not affected by terrain losses	32579.29	6897766

WPXUAR 40-44-45 73-37-29 19(+) 20.0 kw-DA 108 m AMSL 10.0 % 72.2
 AMITYVILLE NY

1.00	0.98	0.95	0.92	0.91	0.95	0.99	1.00	0.97	0.90	0.76	0.59
0.30	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.30	0.59	0.76	0.90	0.97	1.00	0.99	0.95	0.91	0.92	0.95	0.98

Ref Az: 79.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

	Area	Pop
Interference	31.76	2067 (0.03%)

DWSYT 42-52-50 76-11-59 19(0) 50.0 kw-DA 799 m AMSL 90.0 % 39.2 dBu
 SYRACUSE NY 14537 1032 DTVSERVICE: 1032000 NTSCSERVICE: 978000
 DTVALT DTV ALLOTMENT

0.97	0.73	0.62	0.86	0.97	0.96	1.00	0.83	0.48	0.47	0.51	0.30
0.18	0.25	0.24	0.18	0.30	0.51	0.46	0.46	0.80	0.97	0.96	0.95
0.82	0.60	0.72	0.98	0.84	0.66	0.83	0.93	0.95	0.84	0.66	0.86

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

USING NTSC GRADE B FOR SERVICE AREA

	Area	Pop
within Noise Limited Contour	15268.41	1075125
not affected by terrain losses	14668.09	1050541

WPXUAR 40-44-45 73-37-29 19(+) 20.0 kw-DA 108 m AMSL 10.0 % 72.2
 AMITYVILLE NY

1.00	0.98	0.95	0.92	0.91	0.95	0.99	1.00	0.97	0.90	0.76	0.59
0.30	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.30	0.59	0.76	0.90	0.97	1.00	0.99	0.95	0.91	0.92	0.95	0.98

Ref Az: 79.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

	Area	Pop
Interference	0	0

WSYT-DT 42-52-50 76-12-00 19(N) 621.0 kw-DA 799 m AMSL 90.0 % 39.2 dBu
 SYRACUSE NY 14537 1032 DTVSERVICE: 1032000 NTSCSERVICE: 978000
 APP BPCDT19991029ADL

0.37	0.56	0.75	0.91	0.99	0.98	0.90	0.80	0.76	0.82	0.92	0.99
0.99	0.91	0.81	0.75	0.80	0.90	0.99	0.99	0.91	0.75	0.56	0.37
0.24	0.24	0.37	0.54	0.68	0.77	0.76	0.67	0.52	0.35	0.23	0.24

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	32254.51	1876280
not affected by terrain losses	30118.63	1645668

WPXUAR 40-44-45 73-37-29 19(+) 20.0 kw-DA 108 m AMSL 10.0 % 72.2
 AMITYVILLE NY

1.00	0.98	0.95	0.92	0.91	0.95	0.99	1.00	0.97	0.90	0.76	0.59
0.30	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.30	0.59	0.76	0.90	0.97	1.00	0.99	0.95	0.91	0.92	0.95	0.98

Ref Az: 79.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

	Area	Pop
Interference	0	0