

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of

Amendment of Section 73.202(b))	
Table of Allotments)	MB Docket No. 03-44
FM Broadcast Stations)	RM - 10650
(Water Mill and Noyack, New York))	RM - 11396
)	

To: Office of Secretary
Attn: The Commission

FILED/ACCEPTED

MAY 28 2009

Federal Communications Commission
Office of the Secretary

SECOND SUPPLEMENT TO APPLICATION FOR REVIEW

Sacred Heart University, Inc. ("SHU"), licensee of Station WSUF(FM), Noyack, New York, by its counsel, hereby submits this Second Supplement¹ in the above captioned proceeding.² This Supplement is being filed to inform the Commission of a new development. Specifically, Station WEDY-DT, New Haven, Connecticut, will be operating on Channel 6 as its post-transition digital channel. One of the reasons cited in the *Memorandum Opinion and Order*³ in this proceeding, denying SHU's Counterproposal, was the elimination of the need to protect Ch 6 television Station WLNE-TV, New Bedford, Massachusetts post transition. As will be demonstrated, the protection that will be required for WEDY-DT on Channel 6 will be even more burdensome for WSUF than the past (and current) protection of WLNE-TV. In support hereof, SHU states as follows:

¹ On November 21, 2008, SHU submitted a Supplement to report the filing of a related contingent application.

² SHU is concurrently filing a Motion to Accept the Second Supplement.

³ 23 FCC Rcd 12790 (Media Bureau 2008)

1. SHU filed a Counterproposal in this proceeding to reserve Channel *277A for NCE use and requested that the license for WSUF be modified to specify Channel *277A instead of its current Channel 210B1.⁴ The proposal, if granted, would permit SHU to operate WSUF with improved facilities,⁵ provide a second NCE service to a large underserved population,⁶ and eliminate overlap with Channel 6 Station WEDY-DT post transition.

2. SHU recognizes that analog Station WLNE-TV is vacating Channel 6 and will be operating on Channel 49 as its post-transition DTV channel. However, according to recent rulings from the Media Bureau, WSUF must protect WLNE-TV's operation on Channel 6 until the Media Bureau releases a public notice announcing that it will accept applications premised on the termination of analog Channel 6 transmissions.⁷ Even though the DTV transition is scheduled for June 12, 2009, it is uncertain how long the Commission will require WSUF to protect WLNE-TV on Channel 6.

3. Regardless, even though the protection to WLNE-TV will ultimately be eliminated,⁸ WSUF will be required to protect Channel 6 television Station WEDY-DT post-

⁴ The Commission has held that, in order to justify reservation of a commercial channel for NCE use (here Channel *277A), a party must demonstrate that the NCE band (Channels 201-220) is precluded from being used. *See Reexamination of the Comparative Standards for Noncommercial Educational Applicants*, 15 FCC Rcd 7386 (2000). SHU submitted technical exhibits in its counterproposal that demonstrated that (i) WSUF currently operates on Channel 210B1 with a directional antenna that is vertically polarized to protect TV Channel 6 Station WLNE, New Bedford, Massachusetts, and (ii) no other channels in the reserved portion of the FM band were available.

⁵ By moving to Channel *277A, WSUF could provide an increase in 70 dBu coverage to 26,812 (a 189% increase) and an increase in its 60 dBu contour to 33,549 persons (a 48.8% increase).

⁶ SHU demonstrated that WSUF would provide a second NCE service to 23,654 persons which is 22.9% of its 60 dBu coverage area.

⁷ *See Media Bureau Provides Guidance to NCE FM Stations Regarding Television Channel 6 Protection Requirements*, DA 09-744 (April 1, 2009).

⁸ WLNE is planning to operate on Ch. 49 post transition.

transition based on current Commission policy. As demonstrated in the attached Engineering Statement, this protection will preclude any improvement for WSUF on Ch. 210B1 in the future. Although SHU has requested a channel change for WSUF from Class B1 to Class A, this change actually results in an improvement in WSUF's facilities because, by operating with 6 kW ERP on Channel *277A (instead of Channel 210B1), WSUF(FM) will no longer need to use its current directional antenna to protect Channel 6 Station WLNE-TV (or Station WEDY-DT in the future).

4. As shown in the attached Engineering Statement, Station WEDY-DT was authorized to operate on Channel 6 despite causing overlap to Station WSUF based on the current Section 73.525 methodology. The value of the WSUF interfering contour is 2.2 kW ERP. The predicted area of interference based on the current methodology is expected to be 14,058 persons in an area of 348 sq. km.⁹ Since the rule limits the amount of interference to 4,000 persons, WEDY-DT elected to waive this additional amount of population affected (without the Commission soliciting any input from SHU). As a result, WSUF may suffer more interference from WEDY-DT than it did from WLNE-TV and will be completely precluded from any future improvement or from eliminating its directional operation. On the other hand, if WSUF's license were to be modified to specify Channel *277A, Station WEDY-DT would benefit by eliminating overlap affecting 14,058 persons.

5. Accordingly, SHU urges the Commission to consider the impact of newly authorized Channel 6 Station WEDY-DT (in addition to the continued protection afforded to WLNE-TV) with respect to the operation of WSUF in the reserved portion of the FM band.

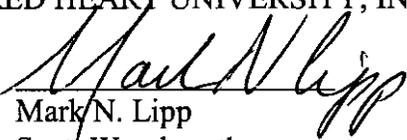
⁹ The actual interference that will be caused by Station WSUF to the operation of WEDY-DT is not yet known.

When properly taken into consideration, it is clear that the Media Bureau's reliance on the elimination of Channel 6 protection post transition to deny SHU's Counterproposal was improper.

Respectfully Submitted,

SACRED HEART UNIVERSITY, INC.

By:


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May 28, 2009

Its Counsel

**ENGINEERING STATEMENT
IN SUPPORT OF AMENDMENT TO APPLICATION FOR REVIEW
IN THE MATTER OF
MO&O, DA-08-1956
ADDITION OF CH 277A TO THE TABLE OF ALLOTMENTS
AT WATER MILL & NOYACK, NEW YORK
REGARDING LICENSED WSUF CH 210B1
COMPLIANCE WITH FCC CH 6 PROTECTION REQUIREMENTS
AND ASSOCIATED PUBLIC SERVICE FACTORS REGARDING
PROPOSED WSUF CH 277A, NOYACK, NEW YORK**

MAY 2009

SUMMARY

The following statement has been prepared on behalf of Sacred Heart University, Inc. ("SHU") licensee of non-commercial FM Station WSUF, CH 210B1, Noyack, New York and Petitioner for CH 277A at Noyack, New York. In the Commission's MO&O released August 22, 2008 it was stated, at paragraph 13, ".....We do not believe that this case presents such rare circumstances. The interference problems caused by Station WLNE-TV, Channel 6, New Bedford, Massachusetts, will be eliminated by the station's move to UHF television Channel 49 as part of the transition from analog to digital television, thereby undermining SHU's primary rationale for its alternate proposal." SHU will demonstrate herein that the Commission's conclusion is in error because WEDY-DT, television Channel 6, New Haven, Connecticut, is an even more preclusive facility in terms of limiting WSUF CH 210 coverage than was WLNE and the Commission failed to address WEDY-DT in its MO&O as referenced above. WEDY-DT is scheduled to commence operation on DTV CH6 in June 2009 at the termination of WLNE use of analog CH 6. Further, the continued presence of WSUF on CH 210 is believed to adversely impact the WEDY-DT coverage area and, thus, is not in the public interest.

WSUF CH 210 INTERFERENCE ANALYSIS TO WEDY-DT TELEVISION CHANNEL 6

This statement addresses *Section 73.525* of the Commission's Rules concerning NCE FM protection of Channel 6 television service utilizing the methods outlined in the rule Section. Based on the analysis herein, and in concert with current FCC processing under Section 73.525

of the Rules as applied to DTV Channel 6 television interference, it is believed that the currently licensed WSUF, CH 210B1, Noyack, New York facility is effectively precluded from implementing any improvement in coverage even after the transition of analog CH 6 television station WLNE-TV, New Bedford, MA to CH 49 due to the new presence of WEDY-DT, New Haven, CT on CH 6 after the transition making it a preclusion in the WSUF allocation picture not heretofore taken into account by the FCC staff. Further, significant interference to WEDY-DT is found to be associated with the licensed WSUF CH 210B1 facility.

Based on communication with the FCC Audio Division staff, 73.525 methodology must be employed to demonstrate protection to Channel 6 DTV facilities. It is noted that the staff has not provided, as of the date of this statement, specific guidance concerning how DTV contours are to be protected since 73.525 does not address DTV. The methodology employed here is that filed in WNTI(FM), FCC ID 9759, 340 application for CP, FCC file number BPED-20090105AFC, granted March 13, 2009, believing that grant of the application indicates general acceptance of the process used.

There is one Channel 6 full service DTV facility considered in this study, WEDY-DT, New Haven, Connecticut, as it is the only full service TV 6 facility that will be located within 196 km of the WSUF Channel 210B1 operation {73.525(a)(1)} post transition. (WEDY was formerly licensed on Ch. 65 at New Haven, CT.)

The WSUF transmitter site is located within the WEDY-DT 28 dBu F(50,90) coverage contour and this contour has been treated as the equivalent of the analog TV 6 47 dBu F(50,50) Grade B contour as this is the extent of the DTV protected contour for Channels 2 - 6. The contour location is based on the notified radiation center and ERP with terrain data derived from the NGDC 30 second database. *Figure 1*, attached, depicts the WEDY-DT 28 dBu F(50,90) contour and the associated WSUF 67.3 dBu F(50,10) interfering contour. The 67.3 dBu contour is based on the full ERP of 12 kW. *Figure 2* is an expanded view of *Figure 1*.

The required dB offset for NCE operation on CH 210 has been obtained from *Figure 1 Section 73.599*. Pertinent CH 210 interfering contours have been determined using the formula (CH 6 analog contour in dBu) + (Figure 1 offset in dB) = (CH 210 interfering contour in dBu).

<u>Analog TV 6 Contour dBu</u>	<u>Figure 1 offset dB</u>	<u>NCE FM Interfering Contour dBu</u>
47	20.3	67.3
48	18.5	66.5
49	17.2	66.2
50	16.0	66.0
51	15.0	66.0
52	14.0	66.0
53	13.0	66.0
54	12.0	66.0
55	11.0	66.0

Table I, attached, is a conversion table that lists the CH 6 analog dBu contour value and the equivalent DTV contour based on the 47 dBu Grade B analog contour and the 28 dBu DTV contour being located at the same distance from the transmitter site. Table II refines the process by developing an offset value for DTV that places the DTV contour the exact same distance from the site as the analog contour.

For the WSUF study of interference to WEDY-DT, the protected DTV contour values are found in the third column of Table II. WSUF interfering contours values are obtained from the third

column of the Table above (on this page). For the final determination of grandfathered interference between WSUF and WEDY-DT, the following steps were taken.

In accordance with 73.525(e)(4)(ii) of the Rules, WSUF is licensed for mixed polarity. The predicted area of interference lies outside the limits of a city of 50,000 persons. The licensed vertically polarized ERP is 12 kW and the maximum horizontally polarized ERP is 1.9 kW. Under these circumstances the value of ERP used for TV 6 calculations is $(1.9 \text{ kW}) + (12 \text{ kW} \text{ divided by } 40) = P = 2.2 \text{ kW}$. Figure 3 depicts the WSUF interfering contour locations based on the 2.2 kW ERP.

In accordance with Section 73.525(e)(1)(iii) of the Commission's Rules, an adjustment of 6 dB has been added to the NCE-FM interfering contour. DTV stations do not have a Grade A contour per se and thus it is assumed that the WSUF area of interference lies outside that contour. The WSUF ERP has been reduced by 6 dB plus and minus 110 degrees of the bearing from the WSUF to WEDY-DT to account for receive antenna directivity factor. Figure 3 depicts the WSUF interfering contours based on inclusion of receive directivity

Figure 4 is a depiction of the proposed WSUF 66 dBu F(50,10) interfering contour and the and WEDY-DT 28 dBu F(50,90) coverage contours. It is believed that this represents the worst case area of interference to WEDY-DT associated with the licensed WSUF facility. Population within the predicted area of interference is 14,058 persons in an area of 347.85 square kilometers. Section 73.525 of the Rules limits interference for new NCE FM stations to a maximum of 4,000 persons respect to TV 6 interference. WEDY-DT has elected to accept the greater level of interference from WSUF. This grandfathered interference, under the current rules, prevents WSUF from any improvement in coverage area and from implementing circular polarization as such changes would only serve to increase prohibited interference to WEDY-DT.

Based on the analysis proffered herein, and in concert with current FCC processing under Section 73.525 of the Rules as applied to DTV Channel 6 television interference, it is believed that the currently licensed WSUF, CH 210B1, Noyack, New York facility is effectively precluded

from implementing any improvement in coverage even after the transition of analog CH 6 television station WLNE-TV, New Bedford, MA to CH 49 due to the new presence of WEDY-DT, New Haven, CT on CH 6 after the transition making it a new preclusion in the WSUF allocation picture.

WEDY-DT INTERFERENCE TO WSUF CH 210B1

As stated previously, there are currently no known published protection standards for DTV CH 6 to NCE FM service. There are also no known protection standards for DTV CH 6 to FM stations employing the iBiquity HD Radio system through which WSUF currently delivers its program content by both analog and HD. SHU believes that the public interest is not served by the potential loss of service to its existing listener base through interference generated by DTV Channel 6.

PUBLIC INTEREST FACTORS

As stated above, the continued presence of the WSUF CH 210B1 facility is not in the public interest due to the fact that it will cause interference to some 14,058 persons in an area of 347.85 square kilometers inside the WEDY-DT protected 28 dBu service contour. It is noted that this interference is more significant than the interference caused to WLNE due to fact that the WSUF transmitter site is located outside the WLNE 47 dBu protected service contour where the WSUF transmitter site is located inside the WEDY-DT 28 dBu service contour.

Additionally, and as previously described in the original Application for Review, the public interest is best served by the allotment of CH 277A to Noyack and the deletion of CH 210B1. This statement is supported by the fact that the WSUF current CH 210B1 facility must operate with a directional antenna and horizontally polarized ERP of only 1.9 kW to protect Channel 6 television. As a result of this protection, and due to the small amount of land area covered, WSUF's coverage area is less than that which a full Class A signal would provide to Long Island from the proposed CH 277A allotment. The allotment of CH 277A, and deletion of CH 210B1, at

Noyack, New York will provide a second NCE signal to 23,654 persons which is 22.9% of the current WSUF 60 dBu population total of 103,430 persons.

Further, by moving from CH 210B1 to CH 277A, SHU can reach 26,812 more persons (a 189% increase) in an area with 269 more square kilometers (a 143% increase) within its 70 dBu contour and 33,549 more persons (a 48.8% increase) in an area of 314 square kilometers (a 49.2% increase) within its 60 dBu contour.

CONCLUSION

It has been clearly demonstrated herein, using *Section 73.525* criteria as directed and approved by the Audio division staff, that WEDY-DT is predicted to lose service as a result of WSUF interference to some 14,058 persons in an area of 347.85 square kilometers inside the WEDY-DT protected 28 dBu service contour. The FCC OET-69 program designed for computing predicted DTV service and interference does not include a function to compute interference from NCE FM stations to DTV CH 6. However, if this function were available, it is believed that the impact to WEDY-DT would be predicted to be significantly greater as there are areas on Long Island, inside the WEDY-DT predicted 28 dBu service contour, which will receive a weak WEDY signal due to terrain losses.

The record reflects the fact that the proposed CH 277A allotment, and deletion of CH 210B1, at Noyack, New York, will provide a second NCE signal to 23,654 persons which is 22.9% of the current WSUF 60 dBu population total of 103,430 persons. Moving WSUF from CH 210B1 to CH 277A will permit WSUF to reach 33,549 more persons (a 48.8% increase) in an area of 314 square kilometers (a 49.2% increase) within its 60 dBu contour. It is believed that the real world potential improvement in coverage is even greater when the fact that WSUF can employ circular polarization on CH 277 is considered.

Finally, SHU is concerned that its existing service on CH 210B1 will be subject to interference from WEDY-DT once that station commences operation.

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The foregoing was prepared on behalf of **Sacred Heart University** by Laura M. Mizrahi of *Communications Technologies, Inc.*, Marlton, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. The statements herein are true and correct of her own knowledge, except such statements made on information and belief, and as to these statements she believes them to be true and correct.

/s/ Laura M. Mizrahi

for Communications Technologies, Inc.

Marlton, New Jersey

May 26, 2009

TABLE I

WSUF CH 210B1 1.9 kW H. Pol. & 12 kW V. Pol. @ 109 m HAAT

NOYACK, NEW YORK

APRIL 2009

INITIAL CONVERSION TABLE

NTSC TO DTV PROTECTED CONTOURS

<u>TV 6 Analog Contour</u>	<u>dB Offset</u>	<u>TV6 DTV Contour</u>
47 dBu	19 dB	28 dBu
48 dBu	19 dB	29 dBu
49 dBu	19 dB	30 dBu
50 dBu	19 dB	31 dBu
51 dBu	19 dB	32 dBu
52 dBu	19 dB	33 dBu
53 dBu	19 dB	34 dBu
54 dBu	19 dB	35 dBu
55 dBu	19 dB	36 dBu
56 dBu	19 dB	37 dBu
57 dBu	19 dB	38 dBu

TABLE II

WSUF CH 210B1 1.9 kW H. Pol. & 12 kW V. Pol. @ 109 m HAAT

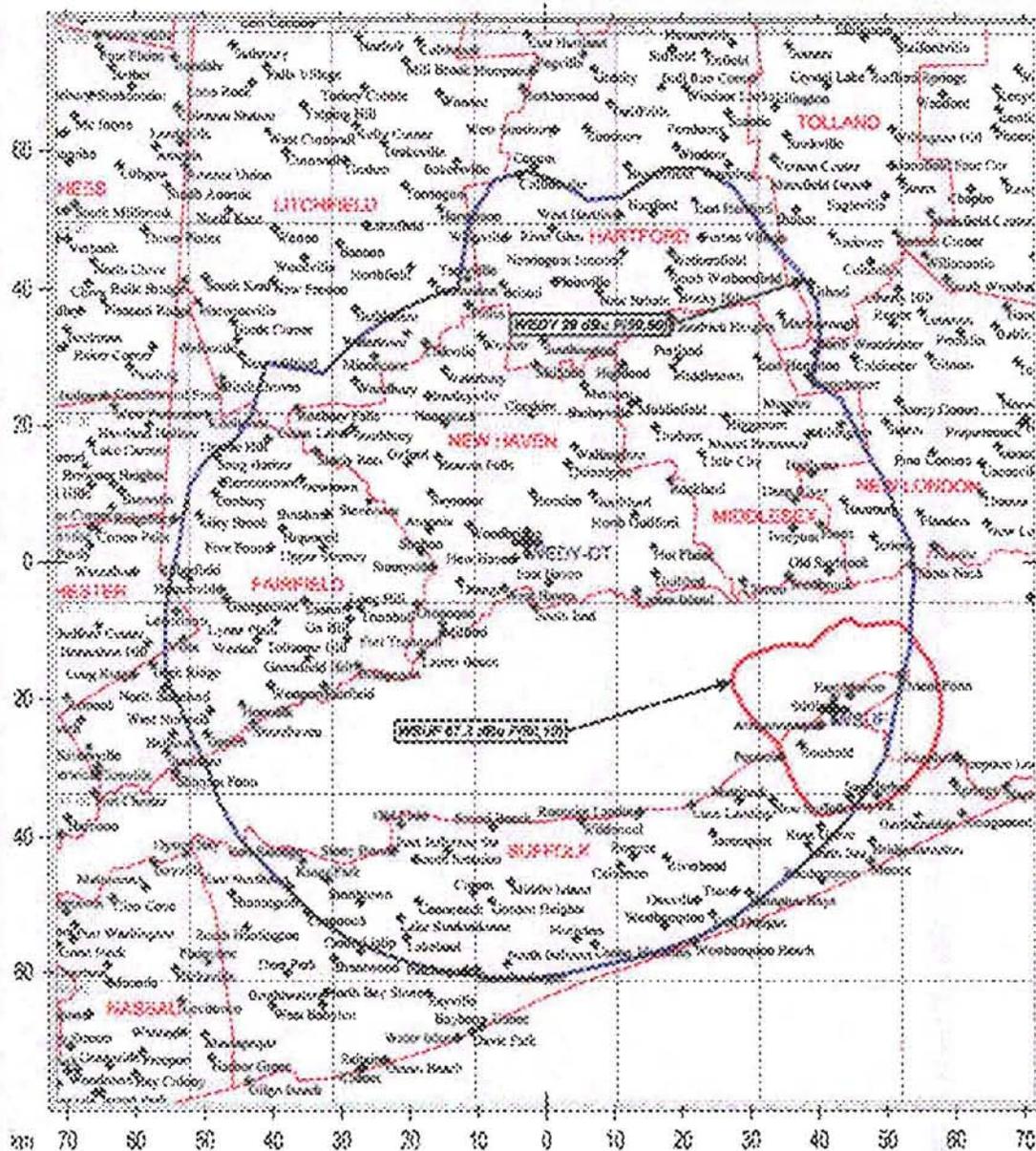
NOYACK, NEW YORK

APRIL 2009

ANALOG TO DIGITAL CONTOUR DISTANCE COMPARISON

<u>NTSC 11.76 kW @ 88 M HAAT</u>	<u>dB Offset</u>	<u>DTV 0.4 kW @ 88 M HAAT</u>
47 dBu = 56.1 kM	0	28 dBu = 56.1 kM
48 = 54.02 kM	+ 0.24	29.24 = 54.02 kM
49 = 51.97 kM	+ 0.48	30.48 = 51.97 kM
50 = 49.92 kM	+ 0.73	31.73 = 49.92 kM
51 = 47.87 kM	+ 0.98	32.98 = 47.87 kM
52 = 45.86 kM	+ 1.23	34.23 = 45.86 kM
53 = 43.91 kM	+ 1.47	35.47 = 43.91 kM
54 = 42.00 kM	+ 1.70	36.70 = 42.00 kM
55 = 40.13 kM	+1.93	37.93 = 40.13 kM
56 = 38.29 kM	+ 2.14	39.14 = 38.29 kM
57 = 36.46 kM	+ 2.35	40.35 = 36.46 kM

WSUF CH 210B: LNFWR POL. 12KW V. PQL @ 109 M HAAT NOYACK, NY



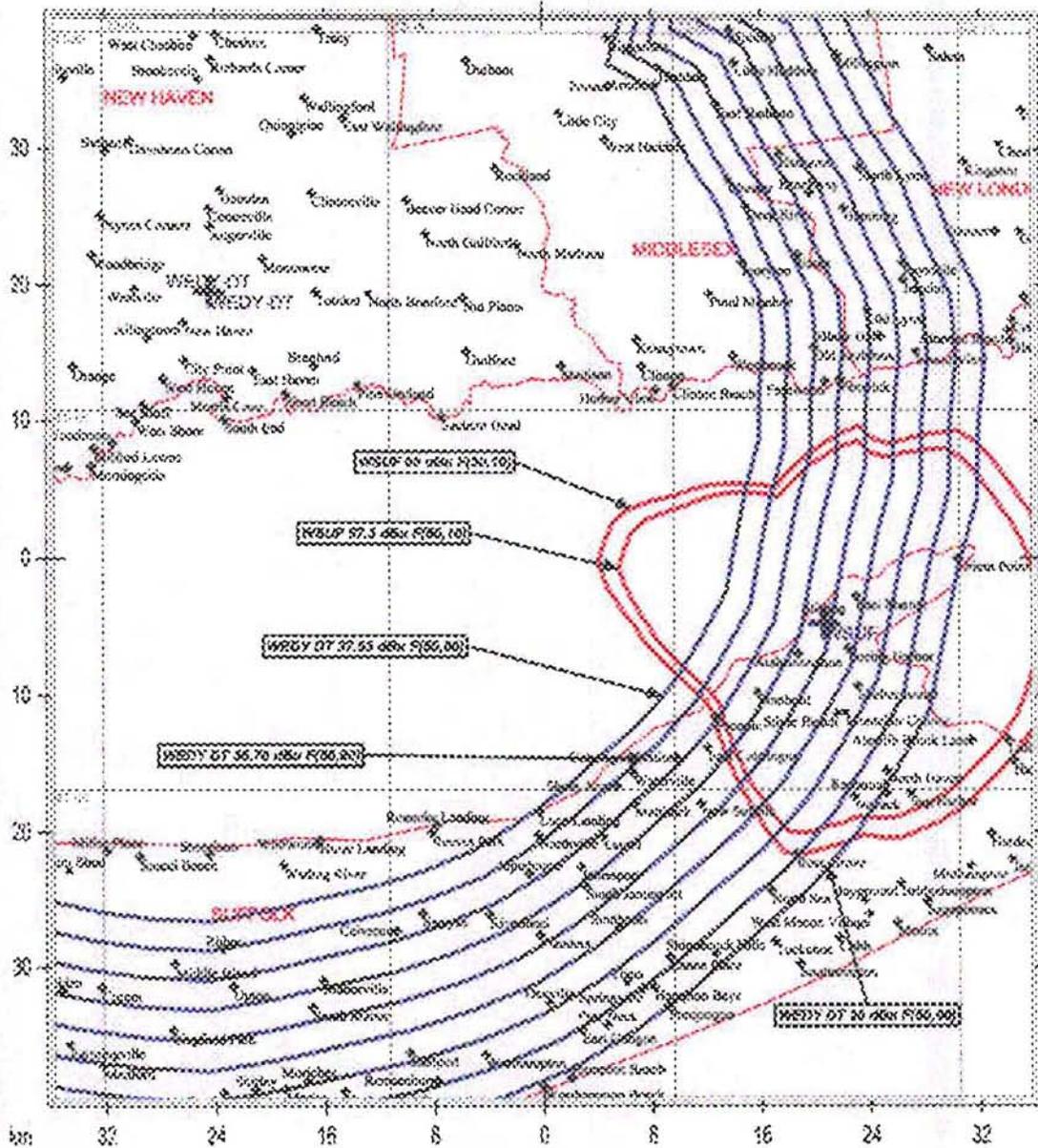
Communications Technologies, Inc. Marlon, New Jersey

Country Borders Lat/Lon Grid

Map Scale: 1:1000000 1 cm = 10.00 km V/H Size: 158.19 x 142.91 km

Figure 1

WSJF CH 210B1 1.9 kW H. POL. 12 kW V. POL. @ 109 M HAAT NYACK, NY



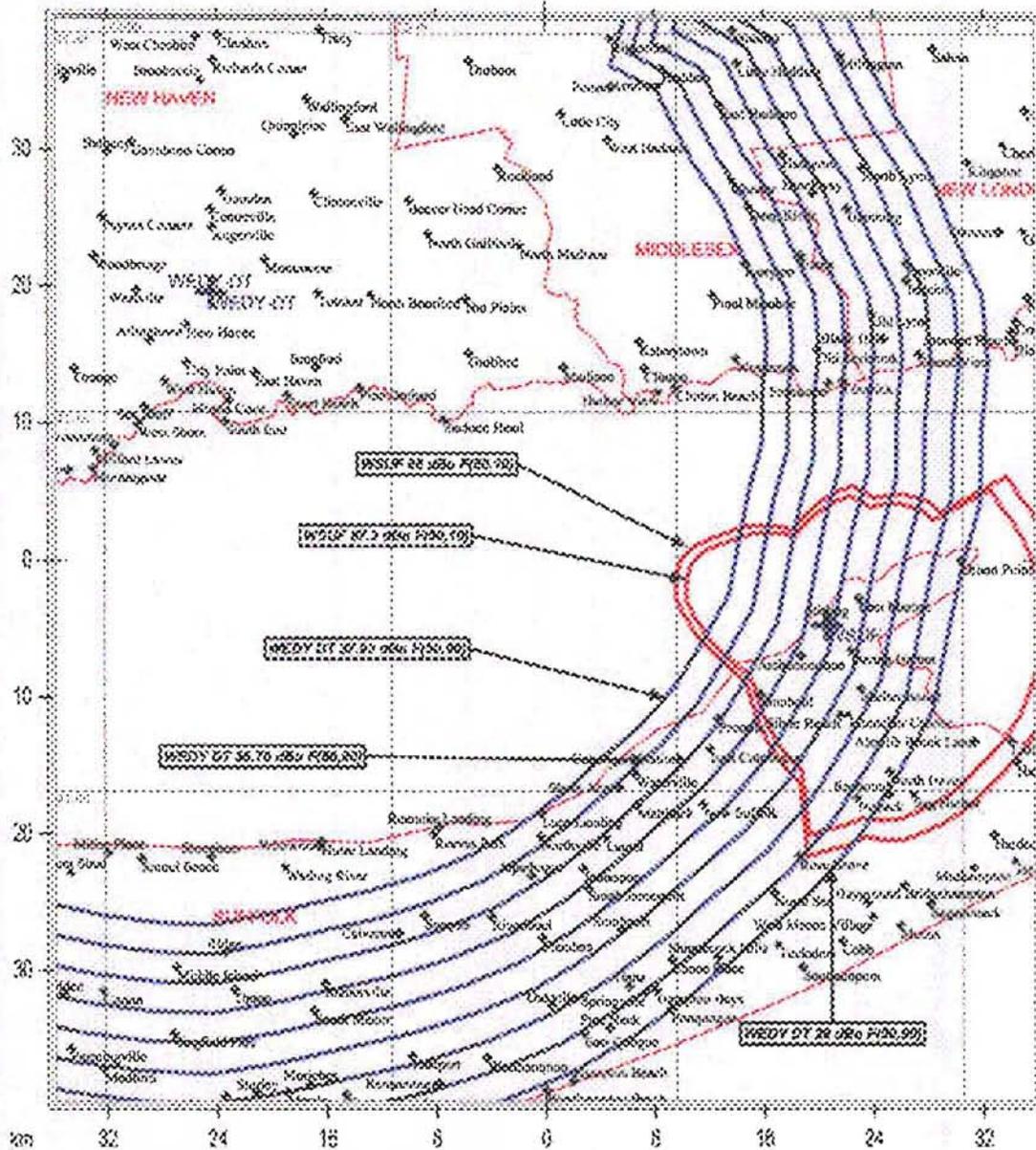
Communications Technologies, Inc. Marlton, New Jersey

Country Borders Lat/Long Grid

Map Scale: 1:500000 1 cm = 5.00 km View Size: 79.99 x 71.45 km

Figure 2

WSJF CH 21(8B) L9 EW H POL. 12 EW V POL. @ 109 M HAAT NOYACK, NY



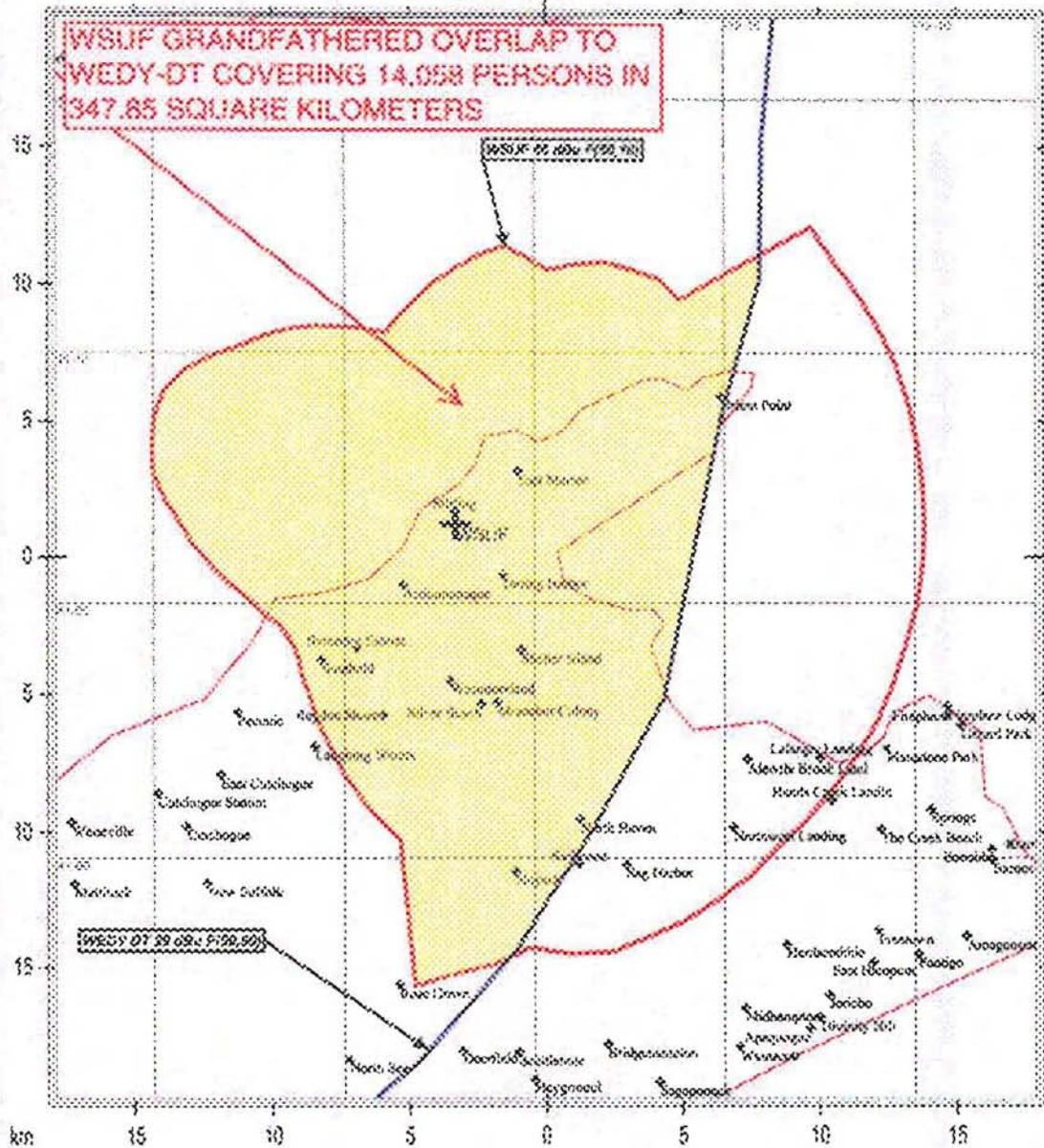
Communications Technologies, Inc. Marlton, New Jersey

County Borders Lat/lon Grid

Map Scale: 1:500000 1 cm = 5.00 km V33 Size: 79.89 x 71.45 km

Figure 3

WSUF CH 21081 1.9°W H. POL. 12°W V. POL. @ 109 M HAAT NOYACK, NY



Communications Technologies, Inc. Marlton, New Jersey

County Borders Lat/Long Grid

Map Scale: 1:250000 1 cm = 2.50 km View Size: 39.55 x 35.73 km

Figure 4

CERTIFICATE OF SERVICE

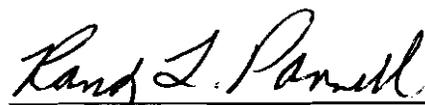
I, Randy Pannell, in the law firm of Wiley Rein LLP, do hereby certify that I have on this 28th day of May, 2009, caused to be mailed by first class mail, postage prepaid, copies of the foregoing "**Second Supplement**" to the following:

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