

Village of Trumansburg)

Tompkins County) SS:

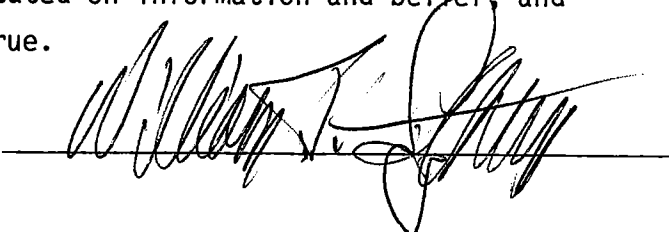
State of New York)

William J. Sitzman, being duly sworn upon his oath, deposes and states that:

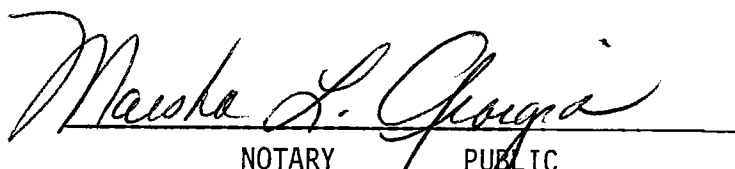
He is president of and a consulting communications engineer with the firm Independent Broadcast Consultants, Inc., with offices at 110 County Rd. #146, Trumansburg, New York 14886-9721.

His qualifications are a matter of record with the Federal Communications Commission, having filed numerous technical and engineering reports with them in the past which were accepted for filing and subsequently were granted approval.

The facts contained in this report subscribed by him are true of his own personal knowledge, except those stated on information and belief, and those facts he verily believes to be true.



Subscribed and sworn to before me this 4 day of April, 2006.



NOTARY PUBLIC

MARSHA L. GEORGIA
Notary Public, State of New York
No. 4791735
Qualified in Tompkins County
Commission Expires Sept. 30, 192009

CERTIFICATION

This is to certify that the undersigned Robert A. Lynch is employed by the firm Independent Broadcast Consultants. Inc., of 110 County Road 146, Trumansburg, New York. In that professional capacity, Mr. Lynch participated in the daytime and nighttime analysis required to prepare the instant application by the Educational Media Foundation for the minor change in licensed facilities of Radio Station WPLX, Germantown Tennessee;

That Mr. Lynch's involvement in the proposed WPLX application included a study and determination of daytime and nighttime radiation pattern limitations, daytime and nighttime pattern design, Critical Hours analysis, assurance of the proposal's compliance with FCC allocation criteria, and exhibit preparation;

That his qualifications are a matter of record with the Federal Communications Commission and that he is thoroughly familiar with FCC allocation standards and Commission Rules and policy;

That to the best of his knowledge, the representations contained in this application and presented by him are true and accurate.

April 4, 2006


Robert A. Lynch
Consulting Engineer

EDUCATIONAL MEDIA FOUNDATION

Radio Station WPLX
Germantown, TN
1180 kHz.
5kW-D, 3.5kW-CH, 85w-N, DA-3, U

ENGINEERING STATEMENT

This report and its supporting exhibits are being prepared on behalf of the Educational Media Foundation (EMF), Rocklin, CA, licensee of AM broadcast station WPLX, Germantown, TN (FCC ID # 52906.) By this filing, EMF seeks a minor change in the licensed WPLX facilities. As currently licensed, WPLX broadcasts on 1170 kHz. utilizing 1000 watts power daytime (only). Under this instant proposal, WPLX would migrate one frequency upward to 1180 kHz., relocate antenna site to that being vacated by the licensed (and co-owned) KQPN (formerly KSUD), West Memphis, AR (FCC ID # 48749), and operate with 5 kilowatts Daytime, 3.5 kilowatts Critical Hours, and 85 watts Nighttime as an unlimited-time Class D facility. Once program test authority is granted WPLX to operate from the new site on 1180 kHz, the station will surrender its authorization for 1170 kHz. The proposed WPLX community of license would remain that of Germantown, TN; and since the proposed frequency change is only one upward from that licensed, this application is considered a minor change.

[It should be noted that a prior—and different—WPLX minor change proposal, under File Numbers BP-20010921AAO and BMP-20030725ABH expired February 4, 2006. It should further be noted that EMF has currently pending major change construction permit application BMJP-20050106AAG which would reassign WPLX's community of license to Capleville, TN and also relocate WPLX to the KQPN site with somewhat different facilities than are proposed herein. It is this engineer's understanding that the licensee, concurrent with this filing, will either withdraw the referenced major change application, or otherwise act so as to remove it from conflict with the proposal advanced herein.]

PROPOSED FACILITIES:

As stated above, this proposed minor change would relocate WPLX on 1180 kHz. to the currently-licensed site of KQPN, West Memphis, AR. At this writing, KQPN, 730 kHz., is in the process of relocating its facilities to a new site under FCC Construction Permit BP-20020924ABP. A license application and directional antenna proof-of-performance is expected to be filed shortly. As such, KQPN will have vacated its currently-licensed site, that proposed for WPLX, well in advance of this application's approval and implementation. Therefore, no diplexing is proposed between the proposed WPLX and any other station.

FIGURES 1 and 2 of this application provide, respectively, a vertical plan sketch and property plat of the proposed modified WPLX facilities at the licensed KQPN site. Towers #1 (SW) and #2 (NE) on that site are existing. Tower #1 stands 70.4 meters (231') AGL and carries antenna structure registration number 1035168. The taller Tower #2 stands 84.1 meters (276') AGL and carries registration number 1035169. To implement this proposal, a third tower, shorter than either of those adjoining, would be constructed 109.4 meters east of Tower #1, forming a three-tower dog-leg array. Tower #3, as proposed, would stand only 60.3 meters (198') AGL. Given the third tower's shorter height in relation to its adjacent structures and the array's distance from notified airports, no registration of this third tower is deemed necessary, though such registration will be commenced should Commission staff deem it necessary.

The two existing KQPN towers and the proposed Tower #3 will be top-loaded in accordance with the specifications proposed in FIGURES 1, 8 and 17 of this application.

As an unlimited-time Class D facility, WPLX would operate with two distinct three-tower antenna patterns; one employed for both Daytime and Critical Hours, and a second employed for 85-watt Nighttime operation. The Daytime pattern would broadcast with 5 kilowatts, with a cutback to 3.5 kilowatts during Critical Hours. As such, the proposed WPLX would qualify for DA-3 licensing status.

FACILITY & COMMUNITY COVERAGE COMPLIANCE:

EMF and this engineer believes this proposal fully complies with all engineering standards and assignment requirements as cited in question III-A-7 of FCC Form 301, as well as the community coverage requirements of Section 73.24(i) of the Rules. With respect to community coverage, FIGURES 5A and 6A depict Daytime and Critical Hours 5 mV/m signal coverage from this proposal, utilizing measured soil conductivity whenever possible, with the designated community boundaries of Germantown, TN clearly defined and the community shaded. FIGURE 7 similarly shows proposed Nighttime Interference-free 11.492 mV/m operation, again with Germantown, TN clearly defined. Though the proposed WPLX would not provide Interference-free Nighttime coverage over any of Germantown, TN, § 73.24(i) exempts Class D facilities, such as WPLX, from the normal 80% nighttime coverage requirements. As shown in FIGURE 5A, the proposed WPLX Daytime facility would cover 100% of Germantown with a 5 mV/m signal as required by § 73.24(i).

As for required community coverage during Critical Hours, the Rules are silent. However, following discussions between this office's engineers and

Commission staff, it has been understood that Commission policy will apply an 80% standard for required community coverage during Critical Hours. This proposal clearly satisfies that requirement. Utilizing expanded-scale planimetric analysis, the undersigned has calculated that the proposed WPLX during Critical Hours would place a 5 mV/m signal (at 3.5 kW power) over 97.4% of Germantown, TN (see FIGURE 6A and its footnote.) It should be noted that bearings toward Germantown employ measured soil conductivities which extend well past community boundaries (see FIGURE 10A and Appendix A-1.) Should processing staff request a more detailed population count to confirm community coverage, such will be supplied.

DAYTIME ALLOCATION CONSIDERATIONS:

A study has been made of stations on 1180 kHz. and on channels within 30 kHz. of that frequency to determine protection requirements for the proposed WPLX during Daytime operation. Those stations deemed close enough to warrant contour analysis are:

| | | |
|--|-----------|-----------------------------|
| WZQZ - Trion, GA | 1180 kHz. | 5 kW-D |
| WGAB - Newburgh, IN | 1180 kHz. | 0.67 kW-D, 0.001 kW-N, U |
| WJNT - Pearl, MS | 1180 kHz. | 50 kW-D, 0.5 kW-N, DA-N, U |
| WHAM - Rochester, NY (Class A) | 1180 kHz. | 50 kW, U |
| KUGT - Jackson, MO | 1170 kHz. | 0.25 kW-D |
| WHMT - Humboldt, TN | 1190 kHz. | 0.42 kW-D |
| NEW - Pine Bluff, AR (see: <u>BNP-20051031ADR</u>) | 1190 kHz. | 10 kW-D, 0.45 kW-N, DA-N, U |
| WMPS - Bartlett, TN | 1210 kHz. | 10 kW-D, 0.25 kW-N, DA-2, U |

FIGURES 9A and 9B provide computer-generated allocation maps based on FCC Figure M-3 which represent the predicted daytime contours of the proposed WPLX and those of stations WZQZ, WGAB, WJNT, KUGT, WHMT and NEW-Pine Bluff. (Contours for WHAM, both protected and interfering, fall beyond the maps' boundaries.) As shown, the proposed WPLX contours clear those of all stations undertaken for analysis.

FIGURES 10A-10I provide manual or computer-generated tabulations of soil conductivities for the proposed WPLX and each of the above-referenced stations.

In support of this allocation analysis, this application supplies soil conductivity measurement data from both the proposed WPLX (licensed KQPN/KSUD) site, as well as from the licensed facilities of WMPS, 1210 kHz, and WJNT, 1180 kHz. FIGURES 11A-11F provide field measurement data, and then graph analysis, on five (5) conductivity radials commissioned by this office to be run from the KSUD (now KQPN) site, namely at azimuths 35.6°T, 55.6°T, 75.6°T, 132°T and 195°T.

FIGURES 12A-12E provide field measurement data, and then graph analysis, on four (4) conductivity radials run from WMPS at bearings 175°T, 205°T, 235°T and 265°T. FIGURES 13A-13C provide field measurement data, and then graph analysis, of WJNT conductivity radials at three azimuths, 05°T, 25°T and 345°T.

All field measurements have been properly taken and presented. The radials were measured either by Rob Herring, James Stanford or Ronald Eudaly, engineers whose qualifications are known to engineering staff in this office. Measurement instruments employed by these engineers are those referenced. Additional documentation, including engineers' affidavits and/or calibration certificates will be supplied upon Commission request.

Additional soil conductivity measurement data for stations KQPN (KSUD) and WMPS (WGSF) are supplied in Appendix A-1 and Appendix A-2, respectively. These measurements and analysis are from prior filings accepted and approved by the Commission, and on file. They are being resubmitted as a part of this application in accordance with recently-revised Commission policy.

NIGHTTIME ALLOCATION CONSIDERATIONS:

FIGURES 15 through 20 comprise a complete study of this proposal's nighttime facilities and compliance with § 73.182 interference protection criteria. As demonstrated, this proposal complies fully with all nighttime protection standards.

FIGURE 15 is a computer-generated nighttime limit study for 1180 kHz. at the proposed WPLX antenna site. This study shows a nighttime 50% RSS limit of 11.492 mV/m and a 25% RSS limit of 11.492 mV/m, with the sole contributor being WHAM.

FIGURES 16A through 16D provide a detailed nighttime protection study for the proposed WPLX, both co-channel and on both adjacent channel frequencies. Most detailed is the protection requirement to co-channel Class A station WHAM, to which maximum permissible radiation was calculated to as many as 19 points on the WHAM 0.5 mV/m 50% skywave contour, beginning at the Atlantic Ocean shoreline. Also calculated are maximum permissible radiation values to all Class B co-channel stations; Canadian, Mexican and Region II notified facilities and proposals deemed close enough to warrant merit; Class B stations on 1170 kHz. and 1190 kHz; numerous points on the KFAQ, 1170 kHz, protected 0.5 mV/m nighttime groundwave contour (14 points) and WWVA, 1170 kHz, protected 0.5 mV/m nighttime groundwave contour (7 points); and the sites or reference coordinates of all pending nighttime proposals on the three pertinent frequencies. FIGURE 16C,

Pages 1-3 provides individual night limit calculations for co-channel stations WJNT, Pearl, MS; KGOL, Humble, TX; and KYDZ, Bellevue, NE. FIGURE 16D depicts all protection requirements of less than 375 mV/m/km in polar graph form.

As specified in FIGURE 17, the proposed WPLX 85-watt nighttime operation carries a theoretical RMS of 99.607 mV/m/km and a theoretical RSS of 131.281 mV/m/km, producing an RSS-to-RMS ratio of 1.32:1, which will allow excellent stability and bandwidth.

FIGURES 18 and 19 tabulate, then depict in graph form, proposed WPLX nighttime radiation at pertinent vertical angles to as many as 12 points on the WHAM protected nighttime contour, eight (8) points on the KFAQ (adjacent channel) protected groundwave contour, and to the sites of WJNT, KYDZ, KGOL, and the Proposed NEW station at Pace, FL. As shown, the WPLX proposal complies with nighttime protection requirements at the pertinent vertical angles. As an added demonstration of this proposal's protection of WHAM's nighttime skywave contour, FIGURE 20 supplies a computer-generated nighttime allocation map showing the WHAM protected contour and this proposal's corresponding interfering contour. No overlap between the two contours occurs at any azimuth.

CRITICAL HOURS CONSIDERATIONS:

FIGURES 14A-14C comprise this proposal's Critical Hours protection study to the protected 0.1 mV/m Daytime groundwave contour of WHAM, Rochester, NY. FIGURE 14A provides a tabulation of maximum permissible Critical Hours radiation to as many as 15 groundwave contour and U.S.-Canadian border points, as well as to the WHAM site itself. Also supplied are the proposed WPLX radiation values toward these 16 points in both the horizontal plane and at the pertinent vertical angles as specified in § 73.187. All maximum permissible values were calculated manually using the (English unit) curves of § 73.190, then converted to metric values. In all instances, the proposed WPLX Critical Hours operation at 3.5 kW produces radiation values less than the maximum permissible at the specified vertical angle.

As supportive documentation, FIGURE 14B supplies a polar graph representation of the WHAM Critical Hours protection requirements; FIGURE 14C provides a computer-generated tabulation of the WHAM 0.100 mV/m groundwave contour employing Figure M-3 conductivity values.

ENVIRONMENTAL CONSIDERATIONS:

The Commission's Rules implementing the Environmental Policy Act does not

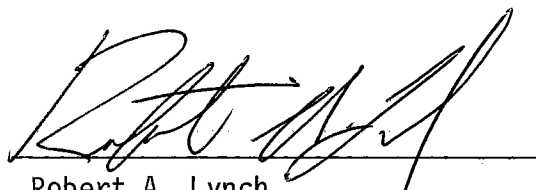
categorize this proposal as a major action, as it does not involve any of the facilities or actions listed under § 1.305 or § 1.307 of the Rules.

Regarding the non-ionizing radiofrequency emission from the proposed antenna, Table 1 on Page 49 of O.E.T. Bulletin No. 65 lists the distances in meters at which fields from AM stations are predicted to fall below the FCC and ANSI maximum. Assuming the worst-case of 5000-watt daytime power being fed into any of the three antennas, Table 1 requires a fence to be at least five (5) meters from the tower face. The applicant proposes a fence to be at least 5.5 meters (or 18 feet) from each tower face. It should be noted that fences already exist around towers #1 and #2, both of which will be expanded if necessary. The applicant reserves the right to undertake ground-level power density measurements to demonstrate that fences of a lesser radius may prove effective in preventing excessive radiation.

CONCLUSION:

In all respects, the proposed minor change of Radio Station WPLX complies with Commission Rules and policy. The proposal would provide all of Germantown, TN 5 mV/m Daytime coverage, and nearly-complete (97%) Critical Hours coverage. It would also allow WPLX to institute Nighttime coverage on its new frequency. WPLX lost its antenna to an accident some years ago, and has been operating since on repeated Special Temporary Authorizations. Implementation of this proposal will eliminate the need for continued STA's and utilize a soon-to-be abandoned antenna site, thereby precluding the economic, environmental and aesthetic dilemmas inherent in constructing a new site. As such, the proposal clearly satisfies the Public Interest.

April 4, 2006



Robert A. Lynch
for: William J. Sitzman
Consulting Engineer