

Evaluation of Compliance with FCC
Guidelines for Human Exposure to
Radiofrequency Electromagnetic Fields
Western New Life, Inc.
WNVE (FM) 101.5 MHz, Ceiba, Puerto Rico

Engineering Statement

On April 11, 2017, between the hours of 10:00 AM and 1:00 PM, electromagnetic radiofrequency (RF) field strength measurements were performed at the transmitter site of WNVE (FM), Facility Id: 3250, located in Ceiba, Puerto Rico. The parameters of the WNVE CP (File Number: BPH-20140717ACI) are as follows:

NAD27 coordinates: 18°-16'-50.0"N, 065°-40'-13.0"W

Site elevation: 291 meters AMSL

Antenna RC: 22 meters AGL = 313 meters AMSL

Antenna HAAT: 224 meters

Transmitting Frequency 101.5 MHz

ERP 6.0 kW (Hpol).

The whole area around the transmitting facilities of WNVE and other nearby RF emitters was observed along the road leading to the site and around nearby or close areas where public can be present, following the guidelines of the FCC Bulletin OET 65 "Evaluating Compliance with Federal Communications Commission Guidelines for Human Exposure to Radiofrequency Electromagnetic Field", Edition 97-01, August 1997.

Procedure

The area around the transmitter site was first scanned to identify the points with highest fields near where the public may be present. Eleven discrete locations, shown in the attached map in Figure 1, were measured, first with an electric field probe, calibrated per the FCC curve for broadcast emissions (FCC shaped), then with a linear magnetic probe covering the AM, FM, and TV bands.

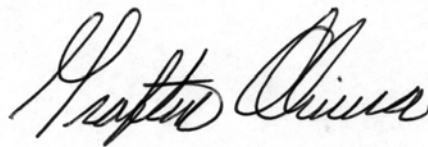
The power density levels recorded were taken with a Narda Electromagnetic Survey Meter, Model NMB-550, S/N E-0944, calibrated on 10/19/2015, FCC Shaped E Field probe, Model EA-5091 (300 kHz – 60 GHz), S/N 01091, calibrated on

10/20/2015, and a linear magnetic probe, Model HF0191 (27 MHz – 1 GHz), S/N A-0081, calibrated on 6/12/2015; copies of the certificates of calibration are included as Appendix 1.

For this analysis the Maximum Permissible Exposure (MPE) for an Uncontrolled Environment were used as the base for comparative analysis according to ANSI/IEEE standards. As defined on the FCC Report and Order 96-326 released on August 1, 1996. The results of the RF measurements, averaged over six minute's intervals, are shown in Figure 2 for the measurements points shown in Figure 1. Since the magnetic probe is flat, not FCC shaped, and covering a broad spectrum (27 MHz – 1 GHz), the magnetic field readings, in terms of the percentage of the maximum allowed, tend to read higher than the corresponding electric field measurements.

Conclusions

The electromagnetic radiation measurements performed at the WNVE transmitter site demonstrate that the RF levels around the site do not exceed the maximum permissible exposure levels for an uncontrolled environment. The area around the WNVE site should be considered an uncontrolled environment since access to the premises is not strictly limited to authorized personnel with knowledge that radio frequency radiation is present.



Grafton Olivera, P.E.

Consulting Engineer

5119 60th Drive E

Bradenton, Florida 34203

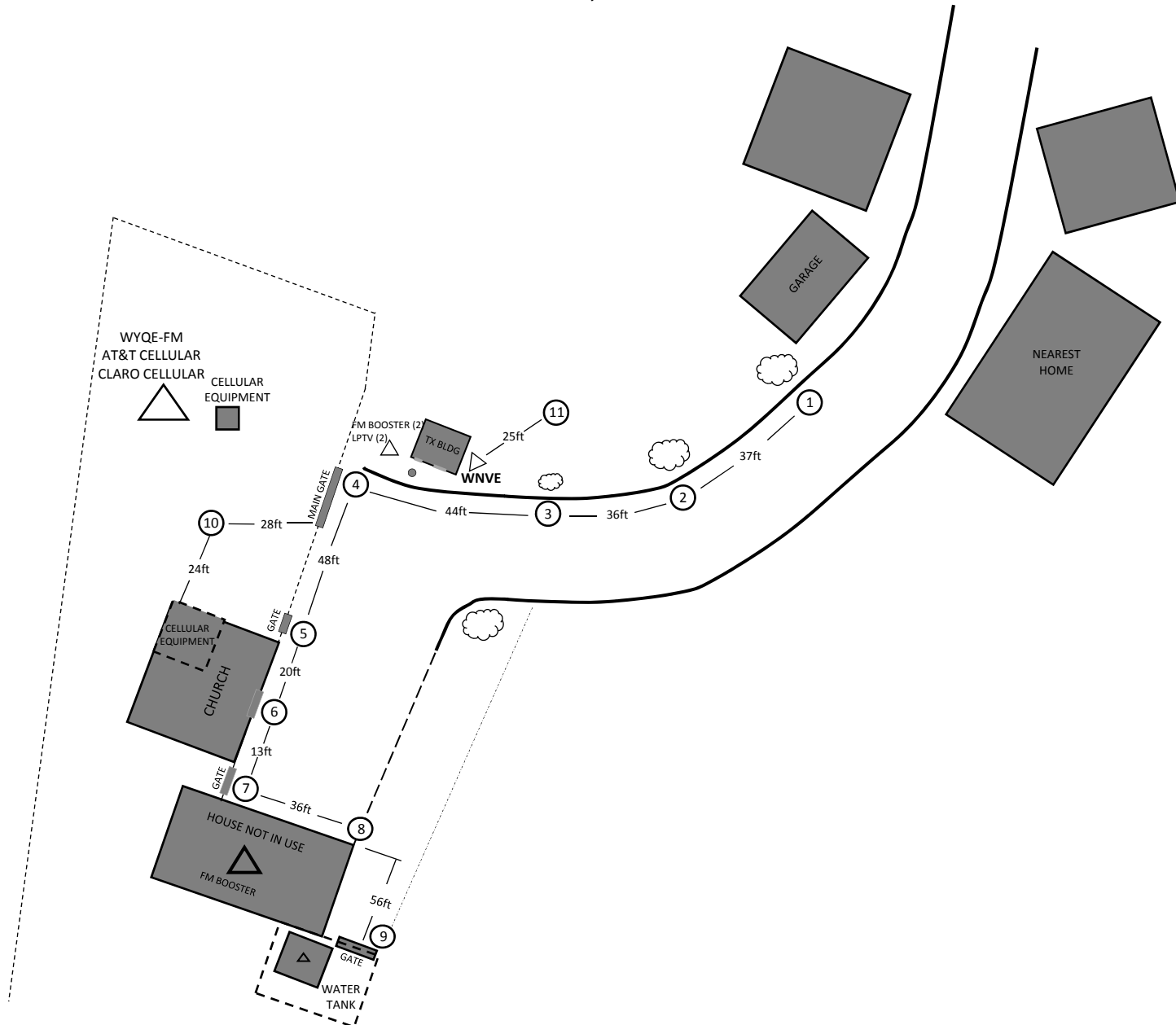
(941) 323-0381

April 11, 2017

WNVE (FM)

Ceiba, PR

Figure 1



NOT DRAWN TO SCALE

[illegible]

APPENDIX 1



10401 Roselle St. San Diego, CA 92121
Phone: (858) 558-6500 Fax: (858) 558-6570
www.atecorp.com

Certificate of Conformance

The following instrument was inspected and found to be fully operational and passed all functional tests as required and/or specified by the manufacturer's inspection/test procedure or by an equivalent Advanced Test Equipment Corp. approved test procedure.

Manufacturer: Narda

Model: NSG3040-IEC

Serial number: NBM-550

Issued by: _____

A large, stylized handwritten signature in black ink, written over a horizontal line.

Date: 3/29/2017

QF40/051107





10401 Roselle St. San Diego, CA 92121
Phone: (858) 558-6500 Fax: (858) 558-6570
www.atecorp.com

Certificate of Conformance

The following instrument was inspected and found to be fully operational and passed all functional tests as required and/or specified by the manufacturer's inspection/test procedure or by an equivalent Advanced Test Equipment Corp. approved test procedure.

Manufacturer: Narda

Model: EA5091

Serial number: 01091

Issued by: _____

Date: 3/29/2017

QI-40/051107

A large, stylized handwritten signature in black ink, consisting of several loops and a long horizontal stroke at the end.





**Advanced
Test Equipment**

10401 Roselle St. San Diego, CA 92121
Phone: (858) 558-6500 Fax: (858) 558-6570
www.atecorp.com

Certificate of Conformance

The following instrument was inspected and found to be fully operational and passed all functional tests as required and/or specified by the manufacturer's inspection/test procedure or by an equivalent Advanced Test Equipment Corp. approved test procedure.

Manufacturer: Narda

Model: HF0191

Serial number: A-0081

Issued by: 

Date: 3/29/2017

QF40/051107





Certificate of Calibration

Asset ID
16445Certificate Number
19911

Certificate Number: 19911

Certificate Date: 3/29/2017

Manufacturer: Narda

Model: NBM-550.2400/101B

Serial Number: E-0944

Description: 100 kHz - 60 GHz Broadband Field Strength M

Date Received: 02/09/2016

Date of Calibration: 10/19/2015

Recommended Due Date: 10/19/2017

Temperature: 23.70 °C

Relative Humidity: 40.9 %RH

Cal Procedure

2401-8700-00 A

Customer Name: Advanced Test Equipment Corporation

Customer Address:: 10401 Roselle Street, San Diego CA 92121

PO Number:

CRM Order Number: End of Rental

Comments:

Calibration performed by an Authorized Subcontractor

This Calibration is traceable to the International System of Units (SI), through National Metrology Institutes, ratio metric techniques, or natural physical constants. This certificate applies only to the item identified and shall not be reproduced other than in full, without the specific written approval by ATEC Corporation Laboratory. The calibration has been completed in accordance with ATEC Corporation Quality System.

This calibration conforms to the requirements of ISO/IEC 17025:2005 and ANSI/NCSL Z540-1:1994 (R2002).

In the attached measurement results, deviation may be expressed with units, Measured Value (MV) - Nominal Value (NV) or as a proportion of the nominal value ((MV-NV)/NV), expressed without units with a scalar multiplier such as % (0.01), or as a ratio of the units (mA/A, μ V/V, etc.).

Descriptions such as μ A/A, μ V/V, and others, where used to annotate results or column headings are the preferred replacements for what was historically labeled as "ppm" or parts-per-million and described the results in that column, unless otherwise noted by units symbols.

Where applicable, the expanded uncertainty of measurement at the time of test is given in the following pages. They are calculated in accordance with the method described in the ISO Guide to the Expression of Uncertainty in Measurement (GUM). The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k, such that the confidence level approximates 95%.

This Calibration certificate may contain data that is not covered by the A21.A Scope of Accreditation. Unaccredited material, where applicable is indicated by an asterisk (*), or confined to clearly marked sections. Functional (Pass / Fail) tests are not accredited.

No statement of compliance with specifications is made or implied on this certificate. However, measurement results are reviewed, where applicable, to establish where any measurement result exceeded the manufacturer's specifications.

Measured values (MV) greater than the Manufacturer's specification (Spec) are indicated by "X".

Calibration Performed By:		Authorized by:	
Christensen, Rick	Techician	Javier Estrada	03/29/2017
Name	Title	Metrology Supervisor	Certificate Date

ATEC Corporation calibration documents are electronically signed utilizing Munk's ats Metrology Software Suite of Applications.

ATEC Corporation
10401 Roselle St
San Diego, CA 92121

Telephone
888-488-2832

Facsimile
858-588-6570

Internet
www.ATC.Corp.com

QV2U122711



Certificate of Calibration



Certificate Number: 17333

Certificate Date: 3/29/2017

Manufacturer: Narda

Model: HF0191

Serial Number: A-0081

Description: 27MHz-1GHz H Field (Flat) Probe for NBM S

Date Received: 07/07/2015

Date of Calibration: 6/12/2015

Recommended Due Date: 6/12/2017

Temperature: 25.00 °C

Relative Humidity: 40.1 %RH

Cal Procedure
2402-8706-00A

Customer Name: Advanced Test Equipment Corporation

Customer Address: 10401 Roselle Street, San Diego CA 92121

PO Number:

CRM Order Number: Return from Repair and/or Calibration

Comments:

Operational checkout after return from cal at Narda and entering cal info into mudcats system

This Calibration is traceable to the International System of Units (SI), through National Metrology Institutes, ratio metric techniques, or natural physical constants. This certificate applies only to the item identified and shall not be reproduced other than in full, without the specific written approval by ATEC Corporation Laboratory. The calibration has been completed in accordance with ATEC Corporation Quality System.

This calibration conforms to the requirements of ISO/IEC 17025:2005 and ANSI/NCSL Z540-1:1994 (R2002).

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Descriptions such as μ A/A, μ V/V, and others, where used to annotate results or column headings are the preferred replacements for what was historically labeled as "ppm" or parts-per-million and described the results in that column, unless otherwise noted by units symbols.

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No statement of compliance with specifications is made or implied on this certificate. However, measurement results are reviewed, where applicable, to establish where any measurement result exceeded the manufacturer's specifications.

Measured values (MV) greater than the Manufacturer's specification (Spec) are indicated by "X".

Calibration Performed By:		Authorized by:	
Christensen, Rick	Technician	Javier Estrada	03/29/2017
Name	Title	Metrology Supervisor	Certificate Date

ATEC Corporation calibration documents are electronically signed utilizing MudCats Metrology Software Suite of Applications

ATEC Corporation
10401 Roselle St.
San Diego, CA 92121

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Facsimile
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Internet
www.ATECcorp.com

QF 21/122713