WLNO - Antenna Monitor and Sample System - Exhibit 10

WLNO utilizes a Potomac Instruments AM-1901 antenna monitor. The antenna monitor is provided an ATU output sample over equal length (see Exhibit 7) sample lines from Delta Electronics Toroidal Current Transformers, model TCT-1, that provides a 0.5 volt per ampere. The sample lines are LDF-12-50J, ½ inch foam dielectric coaxial cable. Equal length short pieces of RG-58 cable facilitate connection to the antenna monitor in the equipment rack.

The calibration of the PI-AM1901 was verified by comparing the tower current ratio and phase, at the carrier frequency, using a Hewlett-Packard 8753C network analyzer. The carrier reference signal, supplied by the analyzer was amplified and fed into the common point of the respective directional antenna. The network analyzer was calibrated using the internal calibration function at the time of measurement.

In the case of the daytime directional, Tower 7 (ref) sample line was connected to the analyzer "B" receiver port and Tower 3 sample line was connected to the analyzer "A" receiver port.

For the nighttime directional case, Tower 2 (ref) sample line was connected to the analyzer "B" receiver port and Towers 1, 3, 4, 5 and 6 sample lines were successively connected to the analyzer "A" receiver port.

The measurements of the antenna monitor ratio and phase were made immediately upon applying full authorized power to each directional mode after an adequate inactive period, so as to minimize the effects of system warming.

DAYTIME

Tower	Network	Analyzer	Antenna	Monitor
	Ratio	Phase	Ratio	Phase
3	1.023	+88.0	1.025	+88.1
7	1.000	0.0	1.000	0.0

NIGHTTIME

Tower	Network	Analyzer	Antenna	Monitor
	Ratio	Phase	Ratio	Phase
1	0.500	-04.4	0.499	-04.5
2	1.000	00.0	1.000	00.0
3	0.542	+01.9	0.540	+02.0
4	0.455	+76.0	0.455	+76.0
5	0.933	+79.7	0.930	+79.5
6	0.498	+83.8	0.500	+84.0

The network analyzer and the antenna monitor agreed within the Potomac Instruments rated antenna monitor accuracy of 0.010 ratio and 1.0 degree phase.