EXHIBIT A

The following description of commercial antenna's are proposed for NAVY ESM testing. This antenna selection will be manually oriented in horizontal and vertical directions. This configuration is to test a Navy receive only antenna and detection system. The test will be conducted using signals at individual frequencies within the specified requested frequency ranges in the application. A range instead of the individual frequency are provided for classification reasons. Antennas listed will be connected to a Commercial-Off-The-Shelf (COTS) programmable signal source and amplifier. The directional antennas below are proposed to be pointed downward to the NAVY receive antenna, adjusted for horizontal and vertical orientations, in single frequency test events, operating one antenna at any given time. The individual operation of these antenna's are planned from the same fixed location listed in the STA application request.

Antenna 1 (for 1.5-30MHz only):

Type: Omni Directional Monopole
Manufacturer: Force 12 Inc. Model # SIGMA-40XK
Gain: 1dB
Omni-directional
Polarization: vertical and horizontal

Antenna 2 (for 1.5-30MHz only):

Type: Modular Directional Dipole
Manufacturer Shakespeare Co.
Model# 120-20 75391 A.T. (ANT ELEMENT TIP)
120-2 75361 A.T. (ANT ELEMENT 2ND MOBILE),
120-34 75431 A.T. (ANT ELEMENT 3RD MOBILE),
120-8 75371 A.T. (ANT ELEMENT 4TH MOBILE),
120-14 75381 A.T. (ANT EXTENSION SECTION)
Type: Dipole
Gain: 3 dB
Half Power beam Width: 150 deg when horizontal
Omni-directional when oriented vertical
Polarization: vertical and horizontal

Antenna 3 (for frequencies above 30MHz in the application):

Type: Log Periodic
Manufacturer: Sunol Sciences Corporation
Model #: LPA JB1-UN or equivalent
Gain: 8 dB
Half Power beam Width: 45 deg at 2000MHz. 60-80 deg at 30MHz.
Orientation in the Horizontal Plane: 216° True North
Orientation in the Vertical Plane: -10° referenced to horizon
Polarization: vertical and horizontal