

Exhibit 4

Antenna Information for Antenna Registration #3

**9.6-10.402 GHz
16.0-16.702 GHz**

The following information is provided with respect to the facilities identified at Antenna Registration #3 of the instant STA Request:

Area of Operation

As indicated in the accompanying FCC Form, the facilities identified at Antenna Registration #3 specify “Fixed” facilities at the specified geographic coordinates. In order to accommodate the requirements of the subject contract, by this STA Request, BAE Systems requests authority to operate the specified fixed transmissions within a 1,500 foot radius from the centerpoint geographic coordinates identified in the STA Request (i.e., 1,500 foot radius around 42-48-22 N.Lat.; 071-25-33 W.Long. [NAD 83]). Commission approval of such area of operation will provide BAE Systems with the flexibility it requires to move the specified test equipment to any appropriate testing location on the Litchfield Antenna Test Range during the authorized term of operation, in accordance with the requirements of the experiment.

Transmitting Equipment

The requested facilities represent a transmit system designed by BAE Systems (ESE1) that is comprised of an Agilent signal generator (E8267D) and HD Communications amplifier (HD18274) as its component parts.

Manufacturer	Model	Quantity	Experimental
Component: Agilent	E8267D	1	Yes
Component: HD Communications	HD18274	1	Yes
System: BAE Systems	ESE1	1	Yes

Beamwidth and Orientation of Antenna and Other Technical Issues

This directional antenna is a mechanically rotating dish in azimuth a maximum of 90°.

Manufacturer	Model #	Gain (Nominal)	3dB BW E (Vertical)	3dB BW H (Horizontal)
Radio- Research	RRI 21-1-4TN	+33 dBi	4°	4°

Antenna Information for Antenna Registration #3, cont.

Information Regarding Emissions, Modulating Signals and Waveforms

For each band, and at each specified power level, various emissions designators are listed, as follows:

400 mW – NON, FXN, GXN
4W – NON, FXN, GXN
40W – NON, FXN, GXN

For each of the specified emissions, the simulator will generate different waveforms and modulating signals to represent different threats, as follows:

Emissions	Duty Cycle/Pulse Width/PRI	Modulating Signal
For “FXN” emissions with 2% duty cycle	2%/10 usec/500 usec	500 kHz/usec (5 MHz)
For other “FXN” emissions with .1% or 2% duty cycle	.1%/300 nsec/300 usec .2%/1 usec/500 usec	None
For “GXN” emissions	1.3%/3900 nsec/300 usec	13 bit Barker (300 nsec chip)
For other “FXN” emissions with a 100% duty cycle	100%/990 usec/1msec	5 kHz/usec ($\approx$ 5 MHz sawtooth)

Note Regarding Power Designations

For each specified band, the FCC Form lists three separate “Mean” Output Power and ERP values, as follows:

9.6-10.402 GHz – 400 mW, 4W, 40W
16.0-16.702 GHz – 400 mW, 4W, 40W;

This is a pulsed radar system. As explained in the above table, the pulse duration and duty cycle are adjustable within the specified parameters. The simulator will be operated using various waveforms and emissions at the three specified levels of maximum average power. Therefore:

Where a 400mW power level is specified, operations will occur between 20 mW-400mW
Where a 4W power level is specified, operations will occur between 200 mW-4W
Where a 40W power level is specified, operations will occur between 2W-40W

As this is a pulsed system, and BAE Systems intends to operate only within these defined parameters, the “Mean” power approach is the most accurate in defining output power and ERP.

Antenna Information for Antenna Registration #3, cont.

Frequency Requirements

The continuous bands specified on the FCC Form are:

9.6-10.402 GHz; and
16.0-16.702 GHz

Based on the requirements of the subject contract, the specific frequencies within these bands on which BAE Systems must operate include the following frequency pairs:

<u>Band</u>	<u>Specific Frequency Pairs</u>
9.6-10.402 GHz	9.6, 9.602
	9.7, 9.702
	9.8, 9.802
	9.9, 9.902
	10.0, 10.002
	10.1, 10.102
	10.2, 10.202
	10.3, 10.302
	10.4, 10.402
16.0-16.702 GHz	16.0, 16.002
	16.1, 16.102
	16.2, 16.202
	16.3, 16.302
	16.4, 16.402
	16.5, 16.502
	16.6, 16.602
	16.7, 16.702

For this Antenna Registration #3, BAE Systems' minimum requirements are to receive:

- One of the specified frequency pairs in the 9.6-10.402 GHz band
- One of the specified frequency pairs in the 16.0-16.702 GHz band