The following parameters of the TPS59 Radar, and Test Equipment, is provided to the FAA regional office, for acquiring FAA coordination and concurrence. The NGT numbers are needed to modify and renew a FCC experimental license WC2XRP that expires August 1st, 2009. If any question please contact John Witt Lockheed Martin Syracuse 315-456-3003.

The TPS59 transportable radar will be operated within a radius of 1 km at the following three sites:

(1) Syracuse within 1 km, NY - NL 43-06-44; WL 76-11-18

(2) E.Syracuse within 1 km, NY - NL 43-05-23; WL 76-05-53

(3) S.Syracuse wthin 1 km, NY - NL 42-55-37; WL 75-55-27

- Frequencies:

1261-1289 MHz and 1353-1392 MHz(Emission Designator 12M5P0N)
(Restrictions of operating azimuth from the existing license are listed under the detailed discription of proposed operating conditions near the bottom of this document)

1261-1289 MHz and 1353-1392 MHz(Emission Designator 10M0Q3N)
(The license will be modified to include a radar replacement digital modulator with the emission designator as 10M0Q3N)

1261-1289 MHz (Emission Designator N0N)
1353-1392 MHz (Emission Designator N0N)
(The license will be modified to include unmodulated CW test signal sources)

- peak envelope power (PEP);
  Radar Tx output = 46kW PEP+Antenna Gain = 258 MW (ERP) including losses
  Test N0N Tx output = 100mW + Antenna Gain = 5W (ERP)
  - type of antenna;
    Radar: TPS59 Solid State Phased Array
    Test Signal: Directional Horn (AR Worldwide #AT4002A, 35deg (Max 3db beam width)

- transmit antenna gain; **Radar Main Beam = 38.95dB**
  Test Tower Horn Antenna = 17 db
- elevation above sea level of the antenna site;

(1) Syracuse: 124 m (407 feet)

(2) E.Syracuse: 122.5 m (402 feet)

(3) S.Syracuse: 403 m (1322 feet)

- height above ground of the focal point of the Radar antenna;

Radar: Syracuse Sites: 6.7 m (22 feet)

  - height above ground of the NON Test Signal from a test tower antenna;

(1) Syracuse: 28 m (92 feet)

(2) E.Syracuse: 42.7m (140 feet)

(3) S.Syracuse: 12.2 m (40 feet)

  - antenna polarization; **Radar: Horizontal**
    Test Signal: Vertical

- The azimuth that the antenna is pointed or appropriate designator to indicate whether the antenna is rotating, non-directional, etc.; **Continuous Rotation (360 degrees)**

- pulse repetition rate (PRR) that the equipment is capable of operating on to include PRR stagger sequences if appropriate, whether the PRR is adjustable and what PRR's the equipment can accept, and any other information that would be helpful in understanding the pulse characteristics (staggered, jittered, fixed) of the equipment;

Radar: Variable PRF – Pseudo random and fixed, between 1 to 1000 Pulses Per Sec (PPS).

- pulse width;

Radar:Variable; 2usec,25usec-1000usec

- equipment nomenclatures;

Radar: AN/TPS-59 Transportable Solid State Radar
Test Signals: HP8657B Signal Generator or equiv.

- whether the equipment is capable of blanking transmissions in certain azimuths and any limitations with respect to blanking;

Radar: Yes, capable of blanking by sectors of 1.0 degree increments.

Test Signals: No, Test signals are pointing at fixed Azimuth for the following 3 locations:

(1) Syracuse: 235 deg true north
(2) E.Syracuse: 55 deg true north
(3) S.Syracuse: 267 deg true north

- radius of operations if appropriate;

Station Locations are less than a 1km radius around 3 central coordinates listed as (1),2),and(3). Actual transmission is line-of-site from the temporary test pad locations within this 1km radius zone.

- detailed description of the proposed operation to include any technical parameters that will be altered during operations.

Troubleshooting and operating production radar's for customer witnessed contract acceptance testing, and performance verification. NON unmodulated CW Test signals are pointed at the radar and activated intermittently for radar calibration.

Each of the following station locations will observe the following restrictions of the current license:

(1) Syracuse within 1 km, NY - NL 43-06-44; WL 76-11-18

Operations on 1264-1286MHz will be in accordance with the following: PRR = 1-1000 pps, pulse duration = 2us and ERP = 241 MW peak. TRANSMISSIONS ARE REQUIRED TO BE BLANKED BETWEEN 5-15 DEG, and 178-188 DEG REF TO TRUE NORTH.

Operations on 1353-1392MHz will be in accordance with the following: PRR = 1-1000 pps, pulse duration = 2us and ERP = 241 MW peak. TRANSMISSIONS ARE REQUIRED TO BE BLANKED BETWEEN 14-24 DEG REF TO TRUE NORTH.

(2) E.Syracuse within 1 km, NY - NL 43-05-23; WL 76-05-53

Operations on 1264-1286MHz will be in accordance with the following: PRR = 1-1000 pps, pulse duration = 2us and ERP = 241 MW peak. TRANSMISSIONS ARE REQUIRED TO BE BLANKED BETWEEN 3-13 DEG, and 180-190 DEG REF TO TRUE NORTH.

Operations on 1353-1392MHz will be in accordance with the following: PRR = 1-1000 pps, pulse duration = 2us and ERP = 241 MW peak. TRANSMISSIONS ARE REQUIRED TO BE BLANKED BETWEEN 10-20 DEG REF TO TRUE NORTH.

(3) S.Syracuse within 1 km, NY - NL 42-55-37; WL 75-55-27

Operations on 1264-1286MHz will be in accordance with the following: PRR = 1-1000 pps, pulse duration = 2us and ERP = 241 MW peak. TRANSMISSIONS ARE REQUIRED TO BE BLANKED BETWEEN 5-15 DEG, and 178-188 DEG REF TO TRUE NORTH.

Operations on 1353-1392 MHz will be in accordance with the following: PRR = 1-1000 pps, pulse duration = 2us and ERP = 241 MW peak. TRANSMISSIONS ARE REQUIRED TO BE BLANKED BETWEEN 14-24 DEG REF TO TRUE NORTH.