

Exhibits Referenced on FCC Form 442

Exhibit # 1

Emissions

The requested frequency is for a Secondary Search Radar System that will operate in conjunction with a modified ASR-7 Airport Surveillance Radar. The transmitter is a fixed frequency transmitter operating 1030 +/- .2 MHz with vertical polarization. The transmitter has a peak power of 3000 watts generating three .8 microsecs. interrogation pulses per transmission repetition interval. Pulse 2 (P2) and pulse 3 (P3) are referenced to pulse 1 with P2 always trailing P1 by 2 microsecs. P3 trails P1 by 3, 5, 8, or 21 microsecs dependent on which mode of response is desired. The pulse repetition rate is either staggered or fixed dependent on mode of operation of the primary radar. The repetition rates are: 316, 350, 356, 373, 391 or 400 per second. The duty cycle of the transmitter is .00075 to .00096 dependent on repetition rate. The horizontal radiation pattern is nominally 4.2 degrees at the -3dB point.

Exhibit # 2

Modulating Signal

The output signal is three .8 microsecs cw interrogation pulses per transmission repetition interval. Pulse 2 (P2) and pulse 3 (P3) are referenced to pulse 1 with P2 always trailing P1 by 2 microsecs. P3 trails P1 by 3, 5, 8, or 21 microsecs dependent on which mode of response is desired. The pulse repetition rate is either staggered or fixed dependent on mode of operation of the primary radar. The repetition rates are: 316, 350, 356, 373, 391 or 400 per second. The modulation and timing is defined by Air Traffic Control Radar Beacon Systems (ATCRBS) standards.

Exhibit # 3

Bandwidth

The carrier Frequency is fixed at 1030 +/- .2 MHz and is defined by Air Traffic Control Radar Beacon Systems (ATCRBS) standards.

Exhibit # 4

Sensis Corporation and the Air Force Research Laboratory Information Directorate have mutually agreed upon a USAF Cooperative Research and Development agreement, USAF CRADA Number 98-IF-12, to evaluate ASR-7 radars using improved technologies. The purpose of this CRADA is to use government facilities at AFRL Verona Research Facility, Verona, New York, in support of Sensis Corporation research evaluation on ASR-7 radars. This effort will establish a performance baseline for digitizing the older radars system that friendly foreign countries and the U.S. Government presently employ in the Air Defense and Air Traffic Control areas. The Government will benefit by sharing digitized performance baseline data for upgrading their existing analog. The Secondary Search Radar (SSR) is integrated into the ASR-7 radar and is a key component in establishing a performance baseline.

Exhibit # 5

The equipment is located on a test site owned and operated by Air Force Research Laboratory Information Directorate which have numerous towers and antenna installed. The highest point on the test site is a tower

and antenna configuration 76 m high which has an aviation obstruction light installed. This a permanent structure and is located 198 m from the requested location. Exhibit 5 drawing shows a large wooden pole 21.3 m high which is located 7.32 m from the center of the antenna. The pole is a permanent structure owned an operated by Air Force Research Laboratory Information Directorate. Based on the existent of the near by warning light and the height of surrounding structures the requested installation presents no aeronautical hazard.

.....

Exhibit # 6 vertical

