

**PUBLIC INTEREST STATEMENT**

**1. Introduction**

By the instant application (“Application”), Leidos, Inc. (“Leidos”) requests that the Commission grant a 6-month Special Temporary Authority – from 5/30/2015-11/30/2015 - to operate the facilities (the “Facilities”) specified in the Application.

**2. Purpose and Scope of Operation**

Leidos is a leading provider of scientific, engineering, systems integration and technical services and solutions. Leidos’s Surveillance and Reconnaissance Group provides maritime intelligence, surveillance, and reconnaissance (ISR) as well as airborne reconnaissance, with an emphasis on mission capability integration and services and products for the military space domain. Working in high-risk environments, SRG employees leverage full spectrum phenomenology, including sensors and signature detection, to deliver superior technology-driven, mission-responsive ISR collection and associated processing, exploitation, and dissemination solutions to support our nation's security in the space, air, land, and maritime domains. The testing for which authority is sought in the instant Application is a critical part of the manufacture and delivery of systems designed to support the Warfighter in ISR activities.

The specific purpose of the system for which authority is requested is described at Exhibit 3, which is subject to Leidos’s “Confidentiality Request” attached to the Application at Exhibit 2. As a general matter, the instant Application seeks Commission authority to operate the specified Facilities within a 100 km radius of two specified centerpoint locations. Similar parameters were previously authorized by the Commission under call sign WG2XGY to SAIC (now known as Leidos), which Leidos hopes will help the review process, and in this regard this Application seeks authorization at much lower power levels than previously authorized.

**3. Other Technical Information**

|                  |                                                                                                                     |
|------------------|---------------------------------------------------------------------------------------------------------------------|
| Single Aperture: | CW transmit power is 0.10 Watts                                                                                     |
|                  | Attenuators are also available to further reduce transmit power                                                     |
|                  | Gain is 16.3 dBi at 9.5 GHz                                                                                         |
|                  | Beamwidth of transmitting scalar feed horn antenna is 30.3° at 9.5 GHz for vertical, 29.3° at 9.5GHz for horizontal |

#### **4. Interference Mitigation**

Operation of the requested Facilities will not be continuous. Rather, authority for only limited and sporadic operation of the Facilities is requested during the authorized timeframe, i.e., at any given authorized location, the cumulative period of operation in any given 24 hour period will be no more than 8 hours. In the off state, no measurable power will be radiated. In addition, only one unit will be operated at any given time at any of the specified locations in the Application.

The transmit antenna has a wide beamwidth but will be fixed in pointing direction rather than rotating during transmission.

Leidos understands that FAA (or other stakeholders) may require certain limited azimuth and/or elevation blanking in order to ensure that the proposed Facilities do not pose a threat of interference to adjacent emitters. Accordingly, this is to confirm that the subject radar system has such blanking capabilities and that Leidos stands ready to work with FAA to identify any reasonably necessary azimuth and/or elevation restrictions for the system.

Authority is requested for only limited and sporadic operation of the Facilities during the authorized timeframe. The majority of operations of the Facilities will be conducted inside the laboratory. When out doors, the operation will be sporadic, not continuous. In fact, there may be extended periods of non-operation during the authorized period, while other non-RF transmission aspects of the experiment are conducted.

Based on the location of the experiment, the technical parameters of the operation, and the manner in which the experiment will be conducted, interference to any co-channel or adjacent channel operations (including for example radio astronomy) is mitigated.

#### **5. Power**

The ERP indicated in the application is on the order of 10s of Watts, however the maximum power available into transmit antenna is under 0.5Watt and will be attenuated to 100s of mW given the required link budgets to complete our experiments. The Equivalent or Effective Radiated Power (ERP) is 4W.

#### **6. Prevention of Interference**

Leidos hereby advises the Commission that Leidos's King-Sang Chan will personally monitor the experiments for which authority is requested, and will act as a "stop buzzer" if any issues regarding interference arise during testing. Mr. Chan can be reached on his cell phone at 703-304-0674