

**REQUEST FOR SPECIAL TEMPORARY AUTHORITY**

**1. Introduction**

By the instant application (“Application”), DRS C3 & Aviation Company (“DRS C3&A”) requests that the Commission grant Special Temporary Authority (“STA”) to permit DRS C3&A to operate the facilities (the “Facilities”) specified in the instant application.

**2. Purpose and Nature of the Operation**

DRS C3&A is a world leader in Naval display consoles and is a leading supplier of networked and integrated sensor control systems for military and homeland security missions. DRS C3&A incorporates dynamic technologies in command, control, computing, and communications to provide new approaches for seamless homeland security, homeland defense, and military operations. The company’s solutions for force protection, undersea warfare and ship self-defense incorporate virtually undetectable radar, day/night video and a multi-sensor tracking system to provide highly accurate detections and tracking of targets. Designed and built for border, coastal/port defense, and surveillance the systems automatically identify and classify moving ground and shallow-water targets, contributing to national security objectives to safeguard borders, littoral regions and valuable assets from terrorist acts.

Confidential information regarding the purpose and nature of the experiment, as well as the transmitting equipment, is contained at Confidential Exhibit 3.

**3. Interference Mitigation**

DRS C3&A is well aware of its obligations under Part 5 of the Commission’s rules to avoid interference to co-channel licensees in non-experimental services, and will take all steps to ensure compliance with this obligation. With respect to interference mitigation, DRS C3&A 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 device has the capability to inhibit radiation from specific azimuth sectors and that DRS C3&A stands ready to work with FAA to identify any reasonably necessary azimuth restrictions for the system.

**4. Operational Issues**

The transmitter will be operated at temporary fixed locations and will only transmit when stationary. The radar will be mounted on a mast attached to a trailer with an overall height of less than 6 meters above the ground.

Controls will be put in place such that company personnel, customers, or members of the public are not subjected to RF power density levels that exceed the Maximum Permissible Exposure (MPE) limits as given in Part 1.1310 of the FCC Rules. An analysis of the power density levels in the area surrounding the transmitting antenna based on the FCC's OET Bulletin Number 651 indicates that the MPE limit is exceeded for areas within 5.3 and 11.8 feet for controlled and uncontrolled exposure limits, respectively. The parameters used in this

calculation are shown below in Table 1 and Table 2.

**Table 1 – Power Density Analysis**

| <b>Parameter</b>                   | <b>Value</b> |
|------------------------------------|--------------|
| Operational frequency, MHz         | 10, 250      |
| Transmitter output power (peak), W | 10           |
| Antenna gain (mainbeam), dBi       | 18           |
| Ground reflection factor           | 1.6          |

**Table 2 – Power Density Analysis Results**

| <b>Parameter</b>                                 | <b>Controlled</b> | <b>Uncontrolled</b> |
|--------------------------------------------------|-------------------|---------------------|
| Maximum Permissible Exposure, mW/cm <sup>2</sup> | 5                 | 1                   |
| Minimum required distance, meters                | 1.6               | 3.6                 |
| Minimum required distance, feet                  | 5.3               | 11.8                |

**4. Stop Buzzer.**

DRS C3&A advises that the following will be available by wireless telephone and will act as “stop buzzers” if any issues regarding interference arise during testing:

Dave Breitkreitz – (520) 240-2471

For the foregoing reasons, DRS C3&A respectfully submits that approval of this Application is in the public interest, convenience and necessity.