From: Laurie Sussman

To: Behnam Ghaffari Date: June 13, 2017

Subject: 0368-EX-CN-2017

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Message:

Dear Mr. Ghaffari:

In response to your request for additional information on May 31, 2017 for license application 0368-EX-CN-2017, Rockwell Collins, Inc. confirms that there will be 2-way communication with a satellite in space. Accordingly, we provide the following requested information:

Please provide the following information with respect to the satellite(s):

For Cedar Rapids, IA:

- 1. Name of satellite: SES-2
- 2. Longitude of satellite: 87 degrees West
- 3. Satellite coverage (Narrow Beam(NB) or Earth Coverage(EC)): Narrow
- 4. Receive antenna gain: 36 dBi
- 5. Beamwidth of the receive antenna at the half power points: 2.9 degrees

For Melbourne, FL:

- 1. Name of satellite: SES-10
- 2. Longitude of satellite: 67 degrees West
- 3. Satellite coverage (Narrow Beam(NB) or Earth Coverage(EC)): Narrow
- 4. Receive antenna gain: 36 dBi
- 5. Beamwidth of the receive antenna at the half power points: 2.9 degrees

Please provide the following information with respect the transceiver ground-station antenna(s):

For Cedar Rapids, IA:

- 1. Transmit antenna gain (dbi): 43 dBi
- 2. Beamwidth of transmit antenna at the half-power points: 1.2 degrees
- 3. Transmit antenna azimuth: 179.0 degrees
- 4. Elevation of transmit antenna MSL (in meters): 258 meters
- 5. Elevation of transmit antenna AGL (in meters): 10 meters

For Melbourne, FL:

- 1. Transmit antenna gain (dbi): 43 dBi
- 2. Beamwidth of transmit antenna at the half-power points: 1.2 degrees
- 3. Transmit antenna azimuth: 152.8 degrees
- 4. Elevation of transmit antenna MSL (in meters): 7 meters
- 5. Elevation of transmit antenna AGL (in meters): 0 meters

Should you have any additional questions, please let us know.

Sincerely,

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Counsel for Rockwell Collins, Inc.