

From: Christopher Voorhees

To: Anthony Serafini

Date: May 09, 2014

Subject:

Message:

To: Anthony Serafini
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From: Christopher Voorhees
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Applicant: Planetary Resources Development Corporation
File Number: 0313-EX-ST-2014
Correspondence Reference Number: 23865
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In response to FCC correspondence dated 05/08/2014, Ref # 23865, please see the following explanation:

1. The Arkyd 3 space station includes demonstration of two (2) onboard RF transceivers: the Microhard Systems MHX-2420-SL and the Ubiquiti Networks XR2. Each radio has a slightly different frequency range, and each uses a different RF patch antenna on the spacecraft. Therefore, since there were two different antennas each with a different emission onboard the space station, they were listed separately on the application. For reference, a summary of the space station RF configuration is as follows, in the order that they appear on the application

a) Space Station Antenna 1:

- RF Transceiver: Microhard Systems MHX-2420-SL
- Frequency: 2.4000 - 2.4835 GHz (as listed on application)
- Half power beam width - 160 degrees (as listed on application)

b) Space Station Antenna 2:

- RF Transceiver: Ubiquiti Networks
- Frequency: 2.4000 - 2.4850 GHz (as listed on application)
- Half power beam width - 90 degrees (as listed on application)

Additional information about both RF transceivers can be found in Section 5 of the application's Attachment.

2. The ground station associated with this application includes both of the RF transceivers listed in #1. Since, in the case of the ground station, both transceivers use the same antenna, the application included a single ground station antenna with two emissions. For reference, a summary of the ground station emissions are as follows in the order that they appear on the application:

a) Ground Station Emission 1:

- RF Transceiver: Microhard Systems MHX-2024-SL
- Frequency: 2.4000 - 2.4835 GHz (as listed on application)

b) Ground Station Emission 2:

- RF Transceiver: Ubiquiti Networks XR2
- Frequency: 2.4000 - 2.4850 GHz (as listed on application)

Additional information about both RF transceivers can be found in Section 5 of the application's Attachment.

3. Therefore, total quantity of transmitting equipment associated with this STA is as follows:

- a) Space Station: Microhard Systems MHX-2420-SL: Qty = 1; Ubiquiti Networks XR2: Qty = 1
- b) Ground Station: Microhard Systems MHX-2420-SL: Qty = 1; Ubiquiti Networks XR2: Qty = 1

Please let me know if you have any questions or need further information.

Regards,

Chris Voorhees
VP of Spacecraft Development
Planetary Resources Development Corporation