

RESPONSE TO FCC QUESTIONS
Part 5 License Application, Form 442
Response to Questions from Spectrum Coordination Branch

Applicant: Aquila Space, Inc.

File No.: 0299-EX-PL-2015

Correspondence Reference Number: None Specified

Number of Spacecraft in this Application: two (2)

What are the anticipated launch and integration dates?

Response: Current Values:

Launch Dates (Corvus-BC1 and -BC2): Earliest Date: May 1, 2016

Integration of Payload to L/V: Earliest Date: March 7, 2016

Question 1: Type of Satellite(s): Geostationary or Non-Geostationary

Response: Non-Geostationary Satellite (NGSO)

Question 1A: Satellites are Non-Geostationary so, this question is not applicable.

Question 1B: Orbit ?

Response: NGSO:

Inclination Angle: 97.83 °

Apogee Height: 610 km

Perigee Height: 610 km

Period: 1.61492 hours

Number of Satellites in System: 2

Format, in accordance with NTIA Redbook, Chapter 9:

REM01*ORB,97.8IN00610AP00610PE001.61H02NRT01

Question 2: The satellite transmitter gain and beamwidth of the three most used emitters?

Response:

401.175 MHz Telemetry Link: Gain: 2.1 dBi; Half Power Beamwidth: 120°

XAD01 02G120B

26.8 GHz Data Link: Gain: 23.5 dBi; Half Power Beamwidth: 10.2°

XAD02 24G10B

1615-1618.725 MHz *Intersatellite Link*: Gain: 6.0 dBi; Half Power
Beamwidth: 90°

XAD03 06G90B

And for XAD03, Question 1B: Response changes and becomes:

REM02*ORB,97.8IN00610AP00610PE1.61H02NRR01

Question 3: The satellite transmitter antenna azimuth?

Response:

401.175 MHz: XAZ01 EC

26.800 GHz: XAZ02 NB

Question 4: The Earth Station Receiver antenna gain, beamwidth, azimuth range, site elevation above sea level and the antenna height?

Response:

402.600 MHz (Command Link):

Gain: 20.86 dBd (23.01 dBi)

Half Power Beamwidth: 12.0°

Azimuth Range: 360°

Site Elev. Above MSL: 9.0 meters

Antenna Height Above MT: 11 meters

Format, in accordance with NTIA Redbook, Chapter 9:

RAD01 23G012B000-360A00009H011

Question 5: The Earth station receiver antenna azimuth; the minimum elevation angle:

Response:

402.600 MHz (Command Link):

Antenna Azimuth Range: 0.0° to 360.0°

Antenna Elevation Range: 5.0° to 90.0°

RAZ01 A000-360V05

Question 6: Satellite Type?

Response: Spacecraft (plural) are two 6U Cubesats

S945 AGN Cubesat, Corvus-BC1 and Corvus-BC2

Question 7: Transmitter Antenna Polarization:

Response (Transmitter Polarization):

401.175 MHz Telemetry Link: Polarization: Linear

XAP01 J

26.800 GHz High Speed Data Link: Polarization: RHCP

XAP02 R

1615-1618.725 MHz *Intersatellite Link*: Polarization: LHCP

XAP03 L

Response (Receiver Polarization):

402.600 MHz Command Link: Polarization: Linear

RAP01 J

2488.500-2492.225 MHz *Intersatellite Link*: Polarization: RHCP

RAP02 R