Nimesh Sangani

_____

From:	Michael Miller <mlmiller@sterk.space>
Sent:	Monday, May 3, 2021 2:57 PM
To:	Nimesh Sangani
Subject:	RFI Mars Outpost 0022-EX-ST-2021 ref 60892 Revised
Attachments:	Mars Outpost April 14.txt; Mars Outpost Stop Buzzer.pdf; Mars Outpost SatData NTIA April 27 R2.pdf

Hi Nimesh,

Thank you for noting these items. Here is our response on each:

1) When I coordinated your STA request your emission request you 1M00G1D but now it shows up as 2M00G1D. Why did you change your emission? What is the value that you're requesting? I can't see any exhibit in your application that suggest that you changed the emission.
Answer: The design was not changed, but the bandwidth calculation was corrected.   The 1 MHz data flow goes through a Convolutional Encoder which doubles the data rate and doubles the bandwidth to 2MHz. So, the correct calculated bandwidth is 2 MHz.

2) During coordination of other matters NASA and NanoRacks LLC., NASA was informed the EIRP is expected to be 9 dBW. This is in excess of the requested of 8.013 dBW based on the 2W and 5 dBi gain antenna.
Answer: On March 3, our project initially told NASA the EIRP is 9 dBW. Later that day, a clarification was sent to NASA, indicating that the 9 dBW number was a simple outside estimate, that did not take into account cable and connector losses. NASA accepted this explanation.

3) Will the transmitters radiate continuously once activated, until de-orbit with F9 upper stage?
Answer: Yes. The period of transmitting is expected to be less than 6 hours based on the current de orbit plan.

4) Are you planning to have a command link?
Answer: Yes. This link is licensed and operated by the ground station owner, the Near Earth Network. The command link is described in the revised NTIA Space Data Form, and Spacecap (extension changed to .txt), attached. Both have been posted as exhibits to the application.

5) Will you be able to shutdown if harmful interference is experienced to licensed users?
Answer: Yes. The command set includes a shutdown command. The Stop Buzzer contact information is attached and has been posted as an exhibit to the application. The stop buzzer is:
Nathan Bishop, Outpost Project Manager, NanoRacks LLC
Phone: 979-218-5650 (cell)
Address:
503 Forge River Road
Webster, TX 77598
email: nbishop@nanoracks.com

Please let me know any other information required.

Thanks,

Mike
415 385-3842

---------- Forwarded message ---------
From: <oetech@fcc.gov>
Date: Wed, Mar 24, 2021 at 8:12 AM
Subject: Additional Information Request
To: <mlmiller@sterk.space>

Office of Engineering and Technology

To:	Michael Miller, Nanoracks LLC
	mlmiller@sterk.space
From:	Nimesh Sangani
	Nimesh.Sangani@fcc.gov

Applicant:	Nanoracks LLC
File Number:	0022-EX-ST-2021
Correspondence Reference Number:	60892
Date of Original Email:	03/24/2021

1) When I coordinated your STA request your emission request you 1M00G1D but now it shows up as 2M00G1D. Why did you change your emission? What is the value that you're requesting? I can't see any exhibit in your application that suggest that you changed the emission. 2) During coordination of other matters NASA and NanoRacks LLC., NASA was informed the EIRP is expected to be 9 dBW. This is in excess of the requested of 8.013 dBW based on the 2W and 5 dBi gain antenna. 3) Will the trasmitters radiate continously once activated, until de-orbit with F9 upper stage? 4) Are you planning to have a command link? 5) Will you be able to shutdown if harmful interference is experienced to licensed users?

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 30 days of 03/24/2021 may result in application dismissal pursuant to Section 5.67 and forfeiture of the filing fee pursuant to Section 1.1108.

DO NOT Reply to this email by using the reply button. In order for your response to be processed expeditiously, you must upload your response via the Internet by visiting The OET Experimental Licensing System, followed by clicking on the "Reply to Correspondence" hyperlink.