From: Mike Miller

To: Nimesh Sangani Date: July 20, 2020

Subject: Additional Information Request

Message:

1) Technical description is missing frequency bands.

Answer: The Technical Description, attached, now states " The communications package on board SpaceICE is a GOMSpace NanoCom AX100 UHF radio. " Please let me know if further definition of the frequency beyond UHF, is required.

2) In the Spacecap the Uplink minimum power density seems a bit low. Our estimate by emission code would put it around -12.5 instead of what the applicant lists as -36.5. Please verify.

Answer: We checked the calculation and we agree. The attached spacecap, with extension mdb changed to txt, has been corrected.

3) No uplink frequency in form 442, however it is in the spacecap.

Answer: For the SpaceIce mission, the ground station is owned and operated by University of Illinois, which is separate from Northwestern University, the owner / operator of SpaceIce. UI have separately filed for a license modification for this operation, it is modification file 0121-EX-CM-2020.

We did not show the uplink for the UI ground station in the application, because we did not want to give the impression we were asking for the operation of the UI ground station to be licensed to Northwestern. But if it is better to show it, we will add it, please just let me know.