

From: Erik Stromberg

To: Nimesh Sangani

Date: July 08, 2019

Subject: Additional Information Request

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Message:

Between the original filing for the license and the new request, we made the programmatic risk reduction decision of moving from 2x home-built battery packs using Panasonic ACA4000PE3 18650 cells, 2 strings of 3 in series per pack, to a single COTS battery pack provided by Pumpkin Space called the BM-2 battery pack (reference: SKU: 710-01640 /B2 /C0 at Pumpkin Space's website for datasheet on battery packs or I can upload as separate attachment if needed). This new pack is a single 72 Whr battery pack with 2 strings of 4 cells in series. The battery cells are LG 18650HG2 cells and meet the United Nations Battery Compliance (UN transportation regulation test T1-T8) and the IEC Safety Requirements (Report # BA-4786867568-A-1). The pack provides Over Voltage, Over Current, Under Voltage, and Over Temperature controls and safety switches. These packs have flown on both ISS-launched missions (like SORTIE), as well as other CubeSat missions.

I would like to confirm that the statements included in the ODAR are still accurate in regards to explosion risk and passivation. Our new battery pack complies and has been tested against ISS safety requirements for secondary payloads and meet all requirements for operation and handling for the ISS including outgassing, inhibit switching, and protection circuitry.

Please let me know if there are any additional questions. Thanks for the help!