

From: Laura Stefani

To: Nimesh Sangani

Date: June 03, 2021

Subject: Additional Information Request

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Message:

1. Please provide the entirety of your response #2 (from the Supplemental response dated May 21, 2021) to include Table 2 (page 2) with the actual component names displayed in the table and accompanying explanation.

RESPONSE: AST has filed an Updated Supplemental Orbital Debris Response that provides the names and numbers of the components (in the non-public version). The updated response also provides additional information to Questions 5 and 6, to further aid the Commission in its understanding. A redacted public version has also been filed.

2. Please confirm the following timeframes and actions are accurate from response #7 (Supplemental response): The total time required for the spacecraft (using propulsion) to effect a 10 km altitude change is 2 days (1 day to process the CDM, 1 day to move 10 km.) The total time required (using high-drag) to effect a 100 m change is 3 days (1 day to process the CDM, 2 days to move 100 m.)

RESPONSE: It appears that there is confusion about concept of operations. In any collision avoidance scenario, AST will only adjust the altitude by 100 m. In the first instance, AST can separate the spacecraft from its original position by a sphere of influence with radius of 10 km. The 10 km is not the altitude change, but rather the distance from the original position as a result of the different orbital periods from changing the altitude by 100 m. This altitude change can be reached in a matter of hours using the electric propulsion, but takes closer to 2 days to do so with the high drag. This means that the actual separation distance using the high drag maneuver will be slightly less than the 10 km achievable with the electric propulsion.

3. Please indicate whether PNG has acceded to the Convention on Registration of Objects Launched into Outer Space.

RESPONSE: While PNG has not acceded to the Convention, it has registered other satellite systems with the UN and will register the BW3 as well.