From: Jean-Francois Latour <JeanFrancois_Latour@transalta.com>
Sent: Tuesday, July 28, 2020 5:49 PM
To: Monroe, Pamela <Pamela.Monroe@sec.nh.gov>
Cc: Ethan Mollasalehi <Ethan_Mollasalehi@transalta.com>
Subject: Antrim Wind - ADLS optimization update

Dear Ms. Pamela Monroe,

Per your request, here is an update regarding the Aircraft Detection Lighting System (ADLS) optimization at Antrim Wind Energy facility (AWE).

Couple months ago, AWE and the ADLS' manufacturer has assembled a dedicated task group to help the execution and coordination of the ADLS' optimization. The task group meets once a week to assure continuous process in the optimization.

Regarding the adjustment of the non-tracking zones (and other settings) in order to reduce the number of uncertainty events, several adjustments were done at different time between the commissioning of the ADLS and now. At this point, further data acquisition is necessary before any additional changes can be made in order to assure the detection of any and all aircraft inside the Detection Zone. Nevertheless, the number of uncertainty events has been reduced to less than one per night on average according to the last statistical analysis (ref: June 5 email to your attention) and up to 4 per night. Recall that these uncertainty events refer to the FAA AC 70/7460-1L section 14.2.2.1 requirement: "[…] *In the event detection of the aircraft is lost while being continuously monitored within the 3 NM/1,000 foot (5.5 km/304 m) volume, the ADLS should initiate a 30-minute timer and keep the obstruction lights on until the timer expires.* […]"

Regarding the Permanent Echo optimization, all existing potential echo/target within the required radar range have been reexplored. While the task group is continuing to look for ways to optimize Permanent Echo, it is possible that we already reached a point where this cannot be reasonably further optimized. Note that the aerial light "on time" due to temporary loss of Permanent Echo, in the absence of heavy precipitation, has been reduced to something quite minimal (on average less than one minute per night according to data provided by the ADLS manufacturer since the beginning of July).

In conclusion, we want to reiterate that the ADLS currently operates as per FAA requirements and as mentioned by the ADLS manufacturer in his May 1, 2020 letter, " […] *the system is designed to only allow the obstruction lighting to be turned off when there is absolute certainty of no movement within the FAA determined Detection Zone*."

I hope this could put in perspective the performance of the AWE's ADLS.
Thanks and best regards,

Jeff L.

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