



The Tomorrow Companies, Inc.
9 Channel Center, 7th Floor
Boston, MA 02210

April 6, 2023

BY ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
45 L Street, N.E.
Washington, DC 20554

Subject: SAT-LOA-20221201-00167

Dear Ms. Dortch,

The Tomorrow Companies Inc. (Tomorrow.io) hereby submits an amendment, specifically addressing the following:

- Amended Technical Narrative, with updates as detailed in Exhibit A
- Amended Schedule S and GIMS files, with updates as detailed in Exhibit A
- Updated ITU API, with updates as detailed in Exhibit A

Under separate cover we will be providing the Schedule S, GIMS and updated ITU API documentation.

As summarized in Exhibit A, the various PFD related inputs were modified to assure consistency between the Technical Narrative, the ITU API and the Schedule S. It is noted here that the PFD limit was previously and is still being met with the updates reflected in the amendment.

In addition, Tomorrow.io is including a copy of its letter from NOAA Commercial Remote Sensing Regulatory Affairs office stating no license is required.

Sincerely,

/s/ Kristina Hloptsidis
Kristina Hloptsidis
Vice President, Regulatory and Operations

Exhibit A

Technical Narrative Summary of Updates:

X-band PFD at Earth's surface

- Corrected the max contingency EIRP from 8 dBW to 3 dBW
 - Reducing the RF power by 6 dB
 - Adding back the 1 dB of RF losses
- Corrected the max normal EIRP from 8 dBW to 9 dBW
 - Adding back the 1 dB of RF losses

X-band PFD at GSO arc

- Corrected the max contingency EIRP from 2 dBW to 3 dBW
 - Increased the PFD by 1 dB, still passes with plenty of margin
 - Adding back the 1 dB of RF losses
- Corrected the max normal EIRP from 8 dBW to 9 dBW
 - Increased the PFD by 1 dB, still passes with plenty of margin
 - Adding back the 1 dB of RF losses

Schedule S Summary of Updates:

Transmitting Beams 1: XTX

- Corrected the Peak Gain from 5.6 dBi to 6.0 dBi
 - Matches the ITU filing
- Corrected the Peak EIRP from 7.6 dBW to 9.0 dBW
 - 0.4 dBi peak gain increase from above
 - 1.0 dBW RF power increase (removed the 1 dB of RF losses)
- Corrected the Max. Transmit EIRP density from -54.4 dBW/Hz to -53.0 dBW/Hz
 - 1.4 dB increase due to the 1.4 dB increase in EIRP
- Corrected the Max. Power Flux Density Values
 - Slight changes in value to reflect 1.4 dB increase in EIRP
 - Changed the orbit altitude from 350km to 500km to match the Technical Narrative
 - Changed the reference BW from 1 MHz to 4 kHz
 - This translates to a 24 dB increase in PFD

ITU API and GIMS Summary of Updates:

- Upgraded to SpaceCap v9.1
- Removed omni antenna pattern ID for the following beams:
 - SRX (already has pattern in GIMS but also the ND-SPACE reference in AP4)
 - XTX (already has pattern in GIMS but also the ND-SPACE reference in AP4)
 - ERX
 - ERX2
 - ERX3
 - ERX4
 - ERX5

- Added antenna beam patterns to GIMS for the following beams:
 - ERX
 - ERX2
 - ERX3
 - ERX4
 - ERX5
- Replaced alpha/beta angle inputs of 0 for the same list of ERX beams above with Attachment 1 describing the beam pointing
- Removed the No 4.4 designation for
 - XTX
- Increased the RF power and RF power density for all XTX emissions
 - To match the changes above in Schedule S and Technical Narrative and remove the 1 dB of RF losses previously added
- Kept the srv_cls designation for groups associated with XTX and SRX as OT and not CR
 - OT is Operational Traffic
 - CR is [Station Open to Limited Public Correspondence]
 - This was a Carlos Flores concern which I just changed to make him happy, it would not have caused any issues, we can change back if you prefer
- Unchecked the option to [Transmit only when visible] from everything but the XTX beam



February 22, 2023

Ms. Kristina Hloptsidis
VP, Regulatory and Operations
Tomorrow.io
9 Channel Center, 7th floor
Boston, MA 02210

RE: NOAA Commercial Remote Sensing Regulatory Affairs License Inquiry

Dear Ms. Hloptsidis:

Pursuant to 15 CFR § 960.5(a), the National Oceanic and Atmospheric Administration's (NOAA) Commercial Remote Sensing Regulatory Affairs (CRSRA) office, has reviewed your Initial Contact Form, submitted on February 21, 2023, concerning your proposed the Tomorrow.io Weather Constellation (Sounders) private remote sensing space system. Under the authority of the Secretary of Commerce under 51 U.S.C. § 60121 *et seq.* and 15 CFR Part 960, delegated to NOAA, we have determined that the proposed system as described in your Initial Contact Form does not fall within the Secretary's jurisdiction and therefore will not be required to apply for a NOAA license. This determination was made based on the fact that your system does not perform remote sensing as defined in 15 C.F.R. § 960.4 because your system will not collect unenhanced data in an orbit of the Earth which can be processed into imagery of the surface features of the Earth.

If the factual circumstances of the information provided change, please submit a new Initial Contact Form, as you may be subject to the Secretary's jurisdiction. Additionally, please contact CRSRA with any future systems you may plan to operate in order to obtain a licensing determination on that specific system and its mission.

Please refer any questions regarding this determination to Frank Rostan at 301-520-5202 or by email at CRSRA@noaa.gov.

Sincerely,

Alan D. Robinson
Acting Director, Commercial Remote Sensing
Regulatory Affairs

cc: Glenn Tallia, NOAA GC

