

## REQUEST FOR SPECIAL TEMPORARY AUTHORITY

Telesat Canada (“Telesat”), pursuant to Section 25.120 of the Commission’s rules, hereby requests Special Temporary Authority (“STA”) to operate two earth stations - one located in Pompano Beach, Florida and the other located in Melbourne, Florida - to conduct loop-back tests with Telesat’s non-geostationary orbit (“NGSO”) low earth orbit satellite, LEO 1. Telesat seeks an STA for the 30-day period beginning on August 6, 2019. The technical specifications for these operations are set forth in Attachment 2a and 2b hereto, which provides the information that would be appear in Schedule B of FCC Form 312, if regular authority were being sought.

LEO 1 was launched in January 2018 and is currently in its final mission orbit of 99.5° (circular) at an altitude of 1000 km. Telesat will operate LEO 1 pursuant to the requested STA in accordance with the technical parameters that were specified in Telesat’s Petition for Declaratory Ruling to Grant Access to the U.S. Market for Telesat’s NGSO Constellation (“PDR”), including Schedule S thereto, which was granted by the Commission by *Order and Declaratory Ruling*, released November 3, 2017.<sup>1</sup> STA operations will be limited to two of the bands covered by the PDR, *i.e.*, 28.6-29.1 GHz (Earth-to-space) and 18.8-19.3 GHz (space-to-Earth), which the Commission’s Ka-band plan allocates on a primary basis to NGSO operations.

In accordance with Section 25.120, the earth stations will operate on a non-interference basis. The communications to be made under the STA will be used to test, validate, and demonstrate certain design features of LEO-1, including antenna tracking, RF performance, and end-to-end network performance. These operations will set the stage for providing highly innovative broadband services in the United States. Grant of Telesat’s STA request, therefore, is in the public interest.

Telesat is submitting, as Attachment 3 to this STA request, a detailed orbital debris assessment report prepared by NXTRAC for LEO 1, confirming compliance with U.S. government orbit lifetime and orbital debris mitigation regulations.<sup>2</sup> A radiation hazard study for each earth station is provided in Attachment 2a and 2b hereto.

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<sup>1</sup> FCC 17-147. Telesat’s PDR and the associated grant are hereby incorporated by reference.

<sup>2</sup> In addition, Telesat’s orbital debris plan for LEO 1 has been reviewed by the Canadian licensing authority for the satellite, Innovation, Science and Economic Development Canada, for compliance with the guidelines issued by the Inter-Agency Space Debris Coordination Committee and Telesat is required, by condition of license, to comply with these guidelines.

As indicated above, operations will be limited to the portions of the Ka-band in which NGSO operations have primary status. Accordingly, EPFD limits are inapplicable. Telesat will coordinate its STA operations with the U.S. federal government under footnote US334<sup>3</sup> of the United States Table of Frequency Allocations.<sup>4</sup> Telesat will share ephemeris data in accordance with Section 25.146(e) of the Commission's rules. With regard to matters of physical coordination, there are no operators using similar orbits.

Accordingly, for good cause as shown herein, Telesat requests that the Commission grant Telesat's STA request.

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<sup>3</sup> Telesat has been having discussions with the Commission as to the applicability of US334 and is coordinating with the federal government out of an abundance of caution.

<sup>4</sup> Telesat notes that it answered question E18 in the Schedule B that is provided in Attachment 2a and 2b as "No" (i.e., that frequency coordination is not required) based on its understanding that the question relates to non-federal government coordination requirements, if any.