

Applicant: Swarm Technologies, Inc.
Call Sign: E190861
File No.: SES-STA-20191112-01481
Special Temporary Authority (STA)

Swarm Technologies, Inc. ("Swarm") is granted special temporary authority for 60-days, beginning June 18, 2020, or upon the next launch of SWARM NGSO satellite constellation (Call Sign S3041) to orbital altitudes 300-550 km, to operate its fixed satellite earth station (E190858) in Brewster, WA, at 48°08'49.2"N, 119° 41'45.6"W, with the S3041 to provide telemetry, tracking and command ("TT&C") of the satellites and Internet Of Things (IOT) data communications in the 137-138 MHz (space-to-Earth) and 148-149.95 MHz (Earth-to-space) frequency bands under the following conditions:

1. Operations shall not cause harmful interference to, and shall not claim protection from, interference caused to it by any other lawfully operating station and it shall cease transmission(s) immediately upon notice of such interference.
2. In the event of any harmful interference under this grant of STA, Swarm, E190861, must cease operations immediately upon notification of such interference, and must inform the Commission, in writing, immediately of such an event.
3. The licensee shall, at all times, take all necessary measures to ensure that operation of this (these) authorized earth station(s) does not create potential exposure of humans to radiofrequency radiation in excess of the FCC exposure limits defined in 47 CFR §§ 1.1307(b) and 1.1310. Physical measures must be taken to ensure compliance with limits for both occupational/controlled exposure and for general population/uncontrolled exposure, as defined in these rule sections. Compliance can be accomplished in most cases by appropriate restrictions, such as fencing. Requirements for restrictions can be determined by predictions based on calculations, modeling, or by field measurements. The FCC's OET Bulletin 65 (available on-line at www.fcc.gov/oet/rfsafety) provides information on predicting exposure levels and on methods for ensuring compliance, including the use of warning and alerting signs and protective equipment for workers.
4. Swarm shall operate on a co-primary basis in the Federal and non-Federal frequency allocations in the 149.90-149.95 MHz frequency band with the radio navigation-satellite service (RNSS).
5. The 148-149.9 MHz frequency band is allocated to the space operation service (Earth-to-space) on a primary basis, subject to agreement obtained under No. 9.21. The bandwidth of any individual transmission shall not exceed ± 25 kHz. The mobile-satellite service shall not constrain the development and use of the fixed, mobile and space operation services in the band 148.0-149.9 MHz. Notwithstanding these limitations, the applicant's request for a waiver to use up to 250 kHz necessary bandwidth for any individual transmission in the frequency band 148.0-149.9 MHz for: (a) routine mobile satellite service ("MSS") commercial operations, signal

testing, and monitoring purposes; and (b) to support U.S. government sponsored and approved contracts, subject to no harmful interference to FIXED and MOBILE operations in the 148.0-149.9 MHz band, is GRANTED.

6. Swarm must update the 24x7 contact information for the Swarm constellation (S3041) network immediately if it changes. Currently it is Benjamin Longmier, Ph.: (608) 225-3173.
7. Swarm Technologies, Inc. must comply with the terms and conditions of its space station authorization, IBFS File No. SAT-LOA-20181221-00094 (granted on Oct. 17, 2019) in operating the authorized user terminals.
8. Operations are subject to the requirements of Footnote US323 of the US Table of Frequency Allocations, 47 CFR § 2.106. Footnote US323 states: “In the band 148–149.9 MHz, no individual mobile earth station shall transmit on the same frequency being actively used by fixed and mobile stations and shall transmit no more than 1% of the time during any 15 minute period; except, individual mobile earth stations in this band that do not avoid frequencies actively being used by the fixed and mobile services shall not exceed a power density of -16 dBW/4 kHz and shall transmit no more than 0.25% of the time during any 15 minute period. Any single transmission from any individual mobile earth station operating in this band shall not exceed 450 ms in duration and consecutive transmissions from a single mobile earth station on the same frequency shall be separated by at least 15 seconds. Land earth stations in this band shall be subject to electromagnetic compatibility analysis and coordination with terrestrial fixed and mobile stations.”
9. Grant of this authorization is without prejudice to any determination that the Commission may make regarding Swarm’s pending application FCC IBFS File No.: SES-LIC-20191022-01367 or future applications.
10. Any action taken or expense incurred as a result of operations pursuant to this STA is solely at Swarm’s risk.

This action is issued pursuant to Section 0.261 of the Commission’s rules on delegated authority, 47 C.F.R. §0.261, and is effective immediately.