

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of

Application of RBC Signals, LLC for a	)	
60-Day Special Temporary Authorization	)	Call Sign: E220057
to Operate with Non-Geostationary Orbit	)	
Spacecraft	)	File No.: SES-STA-_____
	)	

**REQUEST FOR 60-DAY SPECIAL TEMPORARY AUTHORIZATION
(S-band 4.5m Antenna Uplink – Deadhorse, Alaska)**

RBC Signals, LLC (“RBC Signals”), pursuant to Section 25.120 of the Commission’s rules, 47 C.F.R. § 25.120, respectfully seeks a 60-day special temporary authorization (“STA”) to operate its fixed 4.5-meter earth station in Deadhorse, Alaska (the “Deadhorse 4.5m”) to conduct telemetry, tracking, and command (“TT&C”) uplink operations in portions of the 2025-2100 MHz band (Earth-to-space) band to support three U.S.-licensed satellites: the GHOS-1 and GHOS-2 satellites operated by Orbital Sidekick, Inc., and the Tomorrow-R1 satellite operated by The Tomorrow Companies, Inc., which are scheduled to launch on the SpaceX Transport-7 mission in the April 11-12, 2023 time frame.

RBC Signals will soon file a license modification application to add the satellites as points of communication to its earth station license.¹ However, given the fast-approaching launch date, RBC Signals respectfully requests the Commission grant this 60-day STA to allow it to provide necessary TT&C support during the pendency of its application for longer-term authority.

¹ See RBC Signals, LLC, File No. SES-LIC-20220509-00468, Call Sign E220057 (granted Feb. 16, 2023).

I. DISCUSSION

RBC Signals is a Redmond, Washington-based company providing innovative earth station services in the United States and around the world both to U.S. government and commercial clients. RBC Signals has provided similar ground station support for multiple spacecraft from the Deadhorse 4.5m² and nearby 6.0m earth station with no resulting harmful interference. RBC Signals will continue to ensure that its TT&C operations will not cause harmful interference to current or future co-frequency operations and that the interests of the United States are accommodated.

RBC Signals seeks to provide TT&C uplink communications using the Deadhorse 4.5m in portions of the 2025-2110 MHz (Earth-to-space) band to support U.S.-licensed satellite operations, as described below.

A. Satellite Overview

Orbital Sidekick has been authorized to operate the GHOSSt-1 and GHOSSt-2 satellites,³ and The Tomorrow Companies has been authorized to operate the Tomorrow-R1 satellite,⁴ all of which are scheduled to launch on the SpaceX Transporter-7 mission. RBC Signals incorporates by reference the technical and public interest considerations set forth in the underlying satellite applications filed by the satellite operators and highlights the need for TT&C support for these U.S.-licensed satellites. RBC Signals also provides summary earth station and satellite operational parameters in the attached Exhibit A.

² See, e.g., RBC Signals, LLC, File Nos. SES-LIC-20220509-00468 (granted Feb. 16, 2023), 0857-EX-CN-2022 (granted Oct. 25, 2022), and SES-STA-20220415-00412 (granted Jun. 13, 2022).

³ Orbital Sidekick, Inc., File No. SAT-LOA-20220325-00035, Call Sign S3139 (granted Dec. 7, 2022).

⁴ See The Tomorrow Companies, Inc., File No. 1689-EX-ST-2021, Call Sign, (granted Dec. 1, 2022).

B. Summary of Frequency Use

In Table 1 below, RBC Signals presents information on the frequencies requested herein, which are identical for all proposed satellite points of communications and within the range previously coordinated for use by the Deadhorse 4.5m earth station.⁵

Table 1 - Summary of Frequency Use

Satellite	Center Frequency	Emission Designator
GHOSt-1	2055 MHz	300KG1D
GHOSt-2	2055 MHz	300KG1D
Tomorrow-R1	2055 MHz	300KG1D

C. Frequency Allocations and Compatibility

The United States Table of Frequency Allocations (“Table of Allocations”), Section 2.106 of the Commission’s rules, 47 C.F.R. § 2.106, provides that the 2025-2110 MHz band is allocated on a primary basis to non-Federal terrestrial fixed and mobile services. Non-federal Earth-to-space transmissions may be authorized on a case-by-case basis for space research and Earth exploration-satellite service (“EESS”) operations, so long as such operations are conducted on a non-interference basis with Federal and non-Federal users of the band.⁶ RBC Signals will operate these links on a non-interference basis, as required by the Table of Allocations.

The Table of Allocations also provides that the 2025-2110 MHz band is allocated on a primary basis to space operations, EECS, and space research. In the United States, space operations are limited to federal operators, and EECS use by commercial operators is subject to conditions as may be applied on a case-by-case basis and the limitation that any use may not cause harmful interference to authorized operations. RBC Signals understands that there are

⁵ See *supra* n. 1 and 2.

⁶ See 47 C.F.R. § 2.106, fn. US347.

certain U.S. government operations conducted in the 2025-2110 MHz band, including use by the National Aeronautics and Space Administration (“NASA”).⁷ RBC Signals will continue its coordination efforts with NASA and other government agencies to ensure compatibility of the proposed operations.

D. Frequency Coordination and Interference

Previous coordination reports which supported the Deadhorse 4.5m and nearby 6.0m earth station show no interference cases. RBC Signals understands that the satellite operators have coordinated access to the required frequencies for their respective operations. RBC Signals notes that it has operated in the subject spectrum using the Deadhorse 4.5m without any harmful interference incidents.

Nonetheless, RBC Signals will operate the 4.5m earth station on an unprotected, non-interference basis and if RBC Signals learns that its operations are causing harmful interference to other operations, it will suspend or modify its operations immediately to resolve such interference.

The 24/7 point of contact for the proposed operations is:

John Ames
RBC Signals Operations
Email: john.ames@rbcsignals.com
Mobile: 719.502.6206

E. Waiver Request

To the extent necessary, RBC Signals requests waiver of the Table of Allocations to permit the proposed TT&C transmit operations in the 2025-2110 MHz band. Specifically, a

⁷ See https://www.ntia.doc.gov/files/ntia/publications/compendium/2025.00-2110.00_01MAR14.pdf.

waiver may be appropriate to the extent the Commission concludes that any of the proposed operations do not conform to the available non-Federal allocations in the band.

The Commission may waive any of its rules for “good cause” shown.⁸ In general, waiver is appropriate if (i) special circumstances warrant a deviation from the general rule; and (ii) such deviation would better serve the public interest than would strict adherence to the rule.⁹ Special circumstances justify grant of the requested waivers and grant will not undermine the policy objectives of the rules and will otherwise serve the public interest.

Given RBC Signals’ limited spectrum use, prior use of the same frequencies for the same operations using the Deadhorse 4.5m without interference incident, and successful coordination of these frequencies, the public interest would be served by permitting the 4.5m Earth Station to support the operations of the satellites identified herein. RBC Signals will continue to ensure that its earth station transmit operations do not increase the potential for interference into current or future U.S. government or commercial users. RBC Signals therefore respectfully requests, if a waiver is needed, that it be granted by the Commission.

F. Public Interest Consideration

RBC Signals is at the forefront of reinventing TT&C and earth station support solutions and grant of the requested application would promote U.S. leadership in innovative satellite technologies and services. RBC Signals will conduct all operations in accordance with the Commission’s rules and requirements. RBC Signals is attaching a draft Form 312 Schedule B

⁸ See 47 C.F.R. § 1.3; *Northeast Cellular Tel. Co. v. FCC*, 897 F.2d 1164 (D.C. Cir. 1990); *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

⁹ See *Northeast Cellular*, 897 F.2d at 1166; see also *WAIT Radio*, 418 F.2d at 1157.

and incorporates by reference the public interest considerations included in the applications, as well as the operational specifications included in the authorizations, of the subject spacecraft.¹⁰

Grant of this application will further the public interest by enabling TT&C support for the GHOS-1, GHOS-2, and Tomorrow-R1 missions. In addition, there have been no instances of harmful interference from TT&C uplink operations at this facility in the subject spectrum and RBC Signals will continue to ensure interference-free operations from its Deadhorse 4.5m earth station.

II. CONCLUSION

Based on the foregoing, RBC Signals respectfully requests that the Commission grant this 60-day STA application to enable the Deadhorse 4.5m to provide TT&C uplink services GHOS-1, GHOS-2, and Tomorrow-R1 as requested herein.

¹⁰ RBC requests leave to update the technical or operational data associated with this application should the Commission seek any clarifying or supplemental information in considering this request.

EXHIBIT A

RBC Signals, LLC – Application for ground station operations to support GHOS-1&2 and TOMORROW-R1 from its 4.5 meter earth station in Deadhorse, Alaska

Call Sign E220057

Antenna	
Antenna Description	Orbit Gaia-100
Antenna size	4.5m
Transmit Center Frequency	2055 MHz
Receive Center Frequency	N/A
Polarization	Right Hand Circular
Bandwidth	300 kHz
Transmit Gain	34.1 dBi
Maximum EIRP Density per Carrier	25.35 dBW/4 kHz
Latitude (NAD83)	70° 12' 44.6" N
Longitude (NAD83)	148° 24' 39.5" W
Point of Communication	
Satellite	GHOS-1
Call Sign	S3139
Satellite Type	NGSO
Orbit*	525 km; 97.5° inclination
Point of Communication	
Satellite	GHOS-2
Call Sign	S3139
Satellite Type	NGSO
Orbit*	525 km; 97.5° inclination

Point of Communication	
Satellite	TOMORROW-R1
Call Sign	WS9XWX
Satellite Type	NGSO
Orbit*	550 km; 97.5° inclination

* Based on satellite application and authorization information. Final orbital parameters may depend on launch provider deployment.