

**OPERATION OF CALL SIGN E050099
UNDER SPECIAL TEMPORARY AUTHORITY**

On October 27, 2020, the Commission granted Special Temporary Authority (“STA”) to GUSA Licensee LLC (together with its parent Globalstar, Inc., “Globalstar”) with respect to operation of its licensed feeder link earth station antenna in Sebring, FL, under call sign E050099.¹ (Globalstar seeks renewal of call sign E050099 in the instant application.)

Under the granted STA for call sign E050099, Globalstar is operating one of its new, second-generation feeder link earth station antennas. Globalstar’s second-generation feeder link antennas are more efficient than Globalstar’s first-generation transceivers, requiring less power and only minimal maintenance. These second-generation facilities also provide superior satellite-tracking capability, relying on state-of-the-art auto-track technology.

Globalstar’s second-generation antennas are similar to its current gateway systems from an RF perspective and comply with all applicable Commission regulations. Temporary authorization of Globalstar’s second-generation earth station resulted in a slight increase in total EIRP for operations under call sign E050099. Specifically, total EIRP for this Sebring antenna under this STA increased from 68.0 dBW to 68.4 dBW. Globalstar provided the relevant technical parameters in the technical exhibit to its August 4, 2020 STA request for call sign E050099 (attached to this exhibit).²

In addition, on December 9, 2020, GUSA Licensee LLC requested a 60-day extension of its existing STA so that it can continue to test and validate the operations of its second-generation antenna under this call sign.³ On December 15, 2020, GUSA Licensee LLC requested modification of its permanent license so that it can operate its second-generation earth station antenna under call sign E050099 on a permanent basis.⁴ Both applications are currently pending at the Commission.

¹ See FCC File No. SES-STA-20200804-00820; *Satellite Communications Services Information re: Actions Taken*, Public Notice, Report No. SES-02314 at 21-22 (Oct. 28, 2020).

² Application of GUSA Licensee LLC, Exhibit 2: Earth Station Technical Information for STA Request, FCC File No. SES-STA-20200804-00820 (Aug. 4, 2020).

³ Application of GUSA Licensee LLC, FCC File No. SES-STA-20201209-01322 (Dec. 9, 2020).

⁴ Application of GUSA Licensee LLC, FCC File No. SES-MOD-20201215-01381 (Dec. 15, 2020).

Attachment

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:

Sebring-3 STA extension

1. Applicant

Name:	GUSA Licensee LLC	Phone Number:	985-335-1503
DBA Name:		Fax Number:	985-335-1703
Street:	1351 Holiday Square Blvd.	E-Mail:	Barbee.Ponder@Globalstar.com
City:	Covington	State:	LA
Country:	USA	Zipcode:	70433 -
Attention:	Mr L. Barbee Ponder IV		

2. Contact

Name:	Wen Doong	Phone Number:	985-335-1675
Company:	Globalstar, Inc.	Fax Number:	
Street:	1351 Holiday Square Blvd.	E-Mail:	Wen.Doong@Globalstar.com
City:	Covington	State:	LA
Country:	USA	Zipcode:	70433 -
Attention:		Relationship:	Engineer

(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)

3. Reference File Number SESSTA2020050800509 or Submission ID

4a. Is a fee submitted with this application?

If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).

Governmental Entity Noncommercial educational licensee

Other (please explain):

4b. Fee Classification CGX – Fixed Satellite Transmit/Receive Earth Station

5. Type Request

Use Prior to Grant

Change Station Location

Other

6. Requested Use Prior Date

10/29/2020

7. City Sebring

8. Latitude

(dd mm ss.s h) 27 27 35.6 N

9. State FL	10. Longitude (dd mm ss.s h) 81 21 28.4 W
11. Please supply any need attachments. Attachment 1: Cover letter Attachment 2: Technical exhibit Attachment 3:	
12. Description. (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.) <div style="border: 1px solid black; padding: 5px; margin: 10px 0;">GUSA Licensee LLC (together with its parent Globalstar, Inc., ('Globalstar')) is seeking a 60-day extension of its existing STA in order to continue to test and validate two waveforms for use in conjunction with Globalstar's licensed gateway earth station at Sebring, FL, and also to begin operating one of its second-generation feeder link antennas</div>	
13. By checking Yes, the undersigned certifies that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes. <input checked="" type="radio"/> Yes <input type="radio"/> No	
14. Name of Person Signing L. Barbee Ponder IV	15. Title of Person Signing General Counsel and VP – Regulatory Affairs
WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).	

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12. Description

GUSA Licensee LLC (together with its parent Globalstar, Inc., ('Globalstar')) is seeking a 60-day extension of its existing STA in order to continue to test and validate two waveforms for use in conjunction with Globalstar's licensed gateway earth station at Sebring, FL, and also to begin operating one of its second-generation feeder link antennas under call sign E050099.

LAWLER, METZGER, KEENEY & LOGAN, LLC

1717 K STREET, NW
SUITE 1075
WASHINGTON, D.C. 20006

STEPHEN J. BERMAN

PHONE (202) 777-7700
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August 4, 2020

Via Electronic Filing

Tom Sullivan
Chief, International Bureau
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: **Request for 60-Day Extension of STA (Sebring, FL)**
GUSA Licensee LLC – FCC File No. SES-STA-20200508-00509

Dear Mr. Sullivan:

Under Section 25.120(a) of the Commission's rules, GUSA Licensee LLC (together with its parent Globalstar, Inc., "Globalstar") hereby requests a 60-day extension of its existing, above-captioned Special Temporary Authority ("STA"), so that it can continue to test and validate two waveforms using Globalstar's licensed feeder link earth station antenna operating under call sign E050099, in Sebring, FL.¹ Globalstar hopes to use these new waveforms to improve and enhance its future safety-of-life mobile satellite service ("MSS") offerings. In addition, pursuant to this 60-day STA extension request, Globalstar now seeks authority to commence operating one of its new second-generation feeder link earth station antennas under call sign E05099 during the 60-day STA period. Grant of this requested STA extension will provide significant operational benefits for Globalstar's MSS network.

During September 2020, Globalstar plans to decommission the first-generation earth station antenna currently operating in Sebring under call sign E050099 and replace that antenna with its second-generation feeder link model, a 6-meter Seatel dish with a radome. Notably, Globalstar's second-generation antennas will be more efficient than Globalstar's existing transceivers, requiring less power and only minimal maintenance. These second-generation facilities will also provide superior satellite-tracking capability, relying on state-of-the-art auto-track technology.² Once authorized and installed (likely during the 60-day STA period rather

¹ 47 C.F.R. § 25.120(a). The Commission granted Globalstar's current STA for testing of the new waveforms under call sign E050099 on June 30, 2020. *See* FCC File No. SES-STA-20200508-00509; *Satellite Communications Services Information re: Actions Taken*, Public Notice, Report No. SES-02281 at 275 (July 1, 2020).

² Given the operational benefits associated with its second-generation feeder link antennas, Globalstar plans to deploy these antennas at all of its U.S. gateway locations over the next one to two years.

than at the outset), Globalstar's new antenna under call sign E050099 will become fully operational at the Sebring gateway and carry an appropriate share of Globalstar's commercial MSS traffic.

Globalstar's second-generation feeder link earth station antennas will be similar to its current gateway systems from an RF perspective and will comply with all applicable Commission regulations. Globalstar provides the relevant technical parameters for its second-generation earth station antenna in the Technical Exhibit ("Exhibit 2") to this STA request.

In addition to supporting all the carriers that are currently supported by Globalstar's existing Sebring gateway facilities, Globalstar plans to utilize its second-generation feeder link antenna under call sign E050099 to continue to evaluate its two new waveforms for use over its MSS network. Under its current STA, Globalstar has transmitted these waveforms on a test basis over this feeder link gateway antenna – as well as over its other licensed gateway antennas in Sebring – because this approach represents the best means of assessing, validating, and finalizing the parameters for these carriers.³ While this test activity has been productive and yielded essential information regarding the performance of the waveforms, Globalstar will need to conduct additional testing and validation through another 60-day STA period to ensure that its carriers will meet the specific requirements of its safety-of-life service offerings.

Globalstar provides the relevant technical parameters for its proposed transmission of these waveforms using its second-generation antenna in the Technical Exhibit to this application ("Exhibit 2"). As described in Exhibit 2 (and as Globalstar has previously described), the new waveforms are burst mode packet data carriers that will support short-messaging data services.⁴ In its testing to date, the channel bandwidth for one of these waveforms has been 200 kHz at 5096-5250 MHz and 20 kHz at 6900-7055 MHz, while the bandwidth for the second waveform has been 2 MHz at 5096-5250 MHz and 200 kHz at 6900-7055 MHz. Globalstar now plans to modify this second waveform so that it has an uplink bandwidth of 4.5 MHz at 5096-5250 MHz (the downlink bandwidth for this waveform would remain 200 kHz at 6900-7055 MHz). This wider uplink bandwidth should improve service quality by providing greater protection against narrowband interference.⁵

³ Globalstar through its subsidiaries has concurrently filed additional STA extension requests so that it can continue to utilize its other authorized Sebring earth station antennas in this test program, as well as its licensed earth station antennas in Clifton, TX, and Las Palmas, PR.

⁴ Globalstar provided the relevant technical waveform parameters for its testing to date in the Technical Exhibit to its May 8, 2020 STA request. *See* Application of GUSA Licensee LLC, Exhibit 2: Earth Station Technical Information for STA Request, FCC File No. SES-STA-20200508-00509 (May 8, 2020).

⁵ As indicated in its other concurrently filed extension requests, Globalstar pursuant to its test program also seeks to transmit the revised 4.5 MHz-bandwidth waveform from its other authorized earth station antennas in Sebring, as well as from its licensed earth stations in Clifton and Las Palmas.

As Exhibit 2 indicates, while the total EIRP for these modified test transmissions is the same as for Globalstar's existing licensed services, the EIRP density for these waveforms exceeds the EIRP density values for Globalstar's current feeder link operations.⁶ These test transmissions nonetheless create no greater potential for interference than Globalstar's existing operations at 5091-5250 MHz/6875-7055 MHz. In addition, while Globalstar's Sebring gateways are transmitting this revised test waveform traffic concurrently with its existing, licensed commercial feeder link traffic, Globalstar will continue to avoid any interference to its current MSS operations through appropriate frequency separation in these bands.

Grant of this STA extension request by the current STA's August 29, 2020 expiration date will enable Globalstar to begin operating its second-generation earth station antenna under call sign E050099 during the new 60-day STA period, and will allow it to continue testing the new waveforms and develop enhanced safety-of-life services as rapidly as possible. Within the near future, Globalstar will seek permanent authority for this second-generation earth station antenna by applying for modification of its operations under call sign E050099.⁷

Please do not hesitate to contact me with any questions.

Respectfully submitted,

/s/ Stephen J. Berman
Stephen J. Berman

cc: Paul Blais

⁶ The revised test waveform with a 4.5 MHz uplink bandwidth has a lower EIRP density than the current test waveform with a 2 MHz uplink bandwidth.

⁷ Once the testing and validation process has been completed for the new waveforms, Globalstar will also seek to modify call sign E050099 to permit use of these waveforms on a permanent basis.

Exhibit 2: Earth Station Technical Information for STA Request

GUSA Licensee LLC (together with its parent Globalstar, Inc., ("Globalstar")) is seeking a 60-day extension of its existing Special Temporary Authority ("STA") in order to continue its testing and validation of two new waveforms using its gateway earth station facility at Sebring, Florida. During this 60-day STA extension period, Globalstar also proposes to begin operating a second-generation feeder link antenna under call sign E050099. Under the proposed STA, Globalstar will use this second-generation earth station antenna to test and validate the new waveforms and also to carry commercial mobile satellite service traffic. This antenna will have the following parameters:

File No.:	SES-STA-20200508-00509
Call Sign:	E050099 (SBRG-3)
STA term:	August 30, 2020 to October 29, 2020
Location:	Sebring, Florida
Latitude:	27° 27' 35.6" N
Longitude:	81° 21' 28.4" W
Transmit frequency:	5091 – 5250 MHz
Receive frequency:	6875 – 7055 MHz
Polarization:	RHCP & LHCP
Antenna Size:	6 m
Gain:	Tx: 47.5 dBi at 5.150 GHz Rx: 51.2 dBi at 6.975 GHz
Max. antenna height:	28.5 feet above ground level
Necessary Bandwidth:	Transmit bandwidth is 159 MHz Receive bandwidth is 180 MHz Maximum carrier bandwidth is 2.5 MHz Maximum carrier bandwidth for test waveforms is 4.5 MHz for transmit and 200 KHz for receive
Carrier:	See table below, including final four rows for new waveforms

<u>Frequency Band (MHz)</u>	<u>T/R Mode & Polarization</u>	<u>Emission Designator</u>	<u>Maximum EIRP (dBW)</u>	<u>Maximum EIRP Density (dBW/4kHz)</u>	<u>Modulation</u>
5091 - 5092	Tx- LHCP	76K0F2D	68	55.2	FM subcarrier on telecommand carrier
6875.95 – 6877.15	Rx – LHCP	7K00G1D			Telemetry carrier
5096 – 5250	Tx – L/RHCP	1M23XXX	59	34.1	White noise modulated carrier for testing
6900 – 7055	Rx – L/RHCP	1M23XXX			White noise modulated carrier for testing
5096 – 5250	Tx – L/RHCP	N0N	59	59	Unmodulated CW for testing
6900 – 7055	Rx – L/RHCP	N0N			Unmodulated CW for testing
5096 – 5250	Tx – L/RHCP	1M23G7W	55	30.1	CDMA/voice and data
6900 – 7055	Rx – L/RHCP	1M23G7W			CDMA/voice and data
5096 – 5250	Tx – L/RHCP	1M23G2W	55	30.1	CDMA/for single-carrier AMSS.
6900 – 7055	Rx – L/RHCP	1M23G2W			CDMA/for single-carrier AMSS
6900 – 7055	Rx – L/RHCP	2M50G7D			Direct sequence CDMA for single-carrier telemetry data
6900 – 7055	Rx – L/RHCP	2M50G2D			Direct sequence CDMA for single-carrier telemetry data
5096 – 5250	Tx – L/RHCP	2M46G7W	55	27.1	CDMA/voice and data
6900 – 7055	Rx – L/RHCP	2M46G7W			CDMA/voice and data
5096 – 5250	Tx – L/RHCP	2M46G2W	55	27.1	CDMA/for single-carrier AMSS.
6900 – 7055	Rx – L/RHCP	2M46G2W			CDMA/for single-carrier AMSS
5091.38 – 5091.62	Tx- LHCP	40K0G2D	68	58	Telecommand carrier
6875.9 – 6879.1	Rx – LHCP	70K0G7D			Telemetry carrier

5096 – 5250	Tx – L/RHCP	200KG7D	68	51	Burst mode packet data with $\pi/2$ -BPSK modulation
6900 – 7055	Rx – L/RHCP	20K0G7D			Burst mode packet data with BPSK modulation
5096 – 5250	Tx – L/RHCP	4M50G7D	68	37.5	Burst mode packet data with $\pi/2$ -BPSK modulation
6900 – 7055	Rx – L/RHCP	200KG7D			Burst mode packet data with BPSK modulation

Maximum EIRP: 68.4 dBW (for all carriers combined)

Maximum EIRP Density: 51 dBW/4 KHz

Satellite: S2115 (U.S.-licensed Globalstar Big LEO MSS system)

Orbital Location: NGSO (1414 km altitude, 52 degree inclination)

Elevation Angle (E/W): 5 degrees to 90 degrees

Azimuth (E/W): 0 degrees to 360 degrees

Satellite: HIBLEO-X GLOBALSTAR 2.0 (French-licensed Globalstar Big LEO MSS system)

Orbital Location: NGSO (1414 km altitude, 52 degree inclination)

Elevation Angle (E/W): 5 degrees to 90 degrees

Azimuth (E/W): 0 degrees to 360 degrees

NOTE: The telecommand / telemetry carrier with designator 40K0G2D/70K0G7D are for GLOBALSTAR 2.0 satellites while the telecommand / telemetry carrier with designator 76K0F2D/7K00G1D are for current Globalstar satellites (Call Sign S2115).

Information on MLS Sites

For the Sebring, Florida, Globalstar gateway site, there are three potential MLS sites, i.e., Category III airports, within the 213 nautical miles transmit co-ordination distance. The Sebring site is located at 27-27-35 N, 81-21-28 W. The airports are:

JAX	Jacksonville International Airport, approximately 182 nautical miles from Sebring
TPA	Tampa International Airport, approximately 70 nautical miles away
MCO	Orlando International Airport, approximately 58 nautical miles away

These sites fall outside the 39.8 nautical mile maximum trigger distance for MLS/MSS coordination. In addition, based on a directory used for MLS coordination purposes, and to the best of its knowledge, Globalstar believes that MLS is not active at any of those sites and will not be active during the requested 60-day STA period.