Exhibit B
Response To FCC Form 312, Question 35

REQUEST FOR WAIVER AND ADDITIONAL TECHNICAL DETAILS

In connection with the attached FCC Form 312, Globalstar LLC ("Globalstar") respectfully requests a waiver of section 2.106 of the Commission's rules, 47 C.F.R. § 2.106 and 47 C.F.R. § 2.106 footnote 5.364, to operate an earth station in the 1610-1618.725 MHz band. As discussed in greater detail below, use of this spectrum is essential for Globalstar to meet the maintenance and stationkeeping needs of its 1.6/2.4 GHz Mobile Satellite Service ("MSS") system[1/] and ultimately to ensure the quality of service that is essential for its customers and for Globalstar to compete in the MSS voice and data marketplace. In the instant application, Globalstar does not seek a waiver of the rules adopted in the *Report and Order* in IB Docket No. 02-364 requiring that Globalstar and Iridium share a portion of the L-Band spectrum (1618.25-1621.35 MHz band) that was originally assigned to Globlastar.[2/] Globalstar will not transmit in the 1618.725-1621.35 MHz band, channels 8 and 9, but does intend to use of all of channel 7, which requires use of the 1618.25-1618.725 MHz band with the shared L-Band spectrum. The Commission's decision requiring Globalstar to share a portion of its spectrum with Iridium was not intended to prohibit Globalstar from the use of its channels, and this limited use of a small portion of the shared spectrum is consistent with the Commission's decision. To the extent the Commission does not agree that this limited proposed use is consistent with the *Report and Order*, Globalstar requests a waiver of the rule to the limited extent necessary and will accept any interference that Iridium may cause with regard to the use of the 1618.25-1618.725 MHz band. In addition, as demonstrated below and in **Exhibit D**, all out-of-band emission limits are met and use of this spectrum at the proposed location for an earth station will not have any impact on radionavigation or radioastronomy systems.

Public Interest Statement

Globalstar seeks authority to operate a Fixed-Satellite Service ("FSS") earth station that consists of a high gain, transmit/receive antenna for use with the Globalstar Payload Test System

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1/ *See* Order and Authorization, *Application of Loral/Qualcomm Partnership, L.P. for Authority to Construct, Launch, and Operate Globalstar, a Low Earth Orbit Satellite System to Provide Mobile Satellite Services in the 1610-1626.5 MHz/2483.5-2500 MHz Bands,* 10 FCC Rcd 2333 (1995), *Erratum*, 10 FCC Rcd 3926. *See also* Order and Authorization, *L/Q Licensee, Inc. Application for modification of license to construct, launch, and operate low-Earth-orbit satellites and request for waiver of Table of Allocations,* 11 FCC Rcd 16410 (1996). The Big LEO system established by L/Q is known as Globalstar, and is now owned and operated by Globalstar LLC.

2/ Report and Order, *Review of The Spectrum Sharing Plan Among Non-Geostationay Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Band,* IB Docket 02-364; Fourth Report and Order and Further Notice of Proposed Rulemaking, *Amendment of Part 2 of the Commision's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems,* ET Docket No. 00-258, 19 FCC Rcd 13356 (2004).

("GPTS"), also known as the In-Orbit Test ("IOT") equipment. Globalstar will use this equipment, to be located at Globalstar's Clifton Gateway Site (See **Exhibit D**), for maintenance and stationkeeping, a vital part of Globalstar's operations.

In-Orbit Test equipment is essential for Globalstar to monitor and maintain its MSS system, to detect and help correct any deviations in optimal performance, and in turn ensure that its customers our guaranteed reliable service. For example, Globalstar will use the antenna for in-orbit testing of its satellite constellation, for life testing to determine whether performance has degraded, for review of system performance, and to monitor and perform initial performance checks when ground spares are launched.

Although the 1610-1618.725 MHz band is allocated exclusively to MSS, it is necessary for Globalstar to operate an FSS earth station, or fixed antenna, for use with its GPTS. To effectively evaluate the Globalstar MSS systems and its components, Globalstar must perform tests in the 1610-1618.725 MHz band. A fixed antenna is the most efficient and least disruptive manner in which to conduct this necessary maintenance and stationkeeping. It is infeasible to conduct the necessary tests and monitor performance with a non-fixed or MSS device particularly because Globalstar transmits using CDMA carriers that are 15 dB below the noise floor.

The earth station will transmit using a single carrier CW only signal with maximum EIRP density of 24 dBW/4 kHz. Globalstar acknowledges that this is 39 dB in excess of the –15 dBW/4 kHz limit applied to mobile earth stations by section 2.106 of the Commission's rules, 47 C.F.R. § 2.106, footnote 5.364.[3/] (See **Exhibit D**). The IOT equipment is used for making return link pattern measurements, and to measure the entire dynamic range of the patterns and side lobes for testing, the signal must be 30 dB above the noise floor. Only the Russian GLONASS system operates in accordance with ITU 5.366, and is thus the subject of footnote 5.364. However, all GLONASS carrier frequencies operate below 1610 MHz and thus GLONASS[4/] is not affected by the proposed earth station.

In addition, the earth station is not mobile and will operate at a *fixed* location that is relatively unpopulated (eliminating the coordination challenges and power limits applicable to MSS terminals). And, as a test antenna, the earth station will only be used for short periods of time, intermittently, and on a non-interference basis. Therefore, exceeding the limits set forth in footnote 5.364 and operating a fixed earth station will not harm other operations in the 1.6 GHz band and adjacent bands.

[3/] The footnote provides that a mobile earth station in the 1610-1626.5 band "shall not produce a peak e.i.r.p. density in excess of –15 dB(W/4 kHz) in the part of the band used by systems operating in accordance with the provisions of No. 5.366 (to which No. 4.10 applies), unless otherwise agreed by the affected administrations. In the part of the band where such systems are not operating, the mean e.i.r.p. of a mobile earth station –3 dB(W/4 kHz)." 47 C.F.R. § 2.106, footnote 5.364.

[4/] *See* Information on GLONASS frequency operation *at* www.glonass-center.ru/frame e.html.

Legal Basis for Waiver

The Commission may waive its rules for good cause shown.[5/] In particular, the Commission has found that a waiver of its rules is appropriate where "special circumstances warrant a deviation from the general rule and such deviation would better serve the public interest than would strict adherence to the general rule" and where the relief requested "would not undermine the policy objective of the rule in question and would otherwise serve the public interest."[6/]

The Commission has specifically granted waivers of the section 2.106 Table of Frequency Allocations in the past for fixed earth stations operations in the 1610-1618.725 MHz band.[7/] In granting such operations, the Commission noted that permission for the operation of fixed earth stations, ancillary to MSS operations, was "consistent with a general policy of flexibility reflected in precedent."[8/] Moreover, in the context of satellite providers the Commission has stated that, given the huge costs of building and operating satellite space stations, "there should be some assurance that operators will be able to continue to serve their customers."[9/]

A waiver of the Table of Frequency Allocations and footnote 5.364 for the operation of Globalstar's fixed earth station for test operations is consistent with the Commission's past waivers for FSS earth stations in the MSS band.[10/] The test antenna is ancillary to Globalstar's MSS operations, yet necessary for the maintenance of its system. Globalstar will not use the earth station as a primary element or terminal in its MSS system, instead it will serve the vital, but ancillary, role of testing and stationkeeping. And, as noted above and in **Exhibit D,** Globalstar will operate the earth station on a non-interference basis and operations in the 1610-1618.725 MHz band and adjacent bands will not be harmed.

5/ *See* 47 C.F.R. § 1.3.

6/ Order and Authorization, *Panamsat Licensee Corp.*, 17 FCC Rcd. 10483, 10492 ¶ 22 (2002) ("*Panamsat Licensee Corp.*"); *Northeast Cellular Tel. Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990); *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

7/ *See* Order and Authorization, *Airtouch Satellite Services US, Inc., Application for Blanket Authorization to Construct and Operate up to 500,000 Mobile Satellite Earth Terminals Through the Globalstar Mobile Satellite System,* at 17,336 ¶ 22, 14 FCC Rcd. 17,328 (1999) (authorizing fixed earth stations for operation in the 1610-1621.35 MHz band).

8/ *Id.* (*citing* Order and Authorization, *Application of Motorola Satellite Communications, Inc., For Modification of license*, 11 FCC Rcd 13,952 (1996). *See also* COMSAT and AMSC, 5 FCC Rcd 4117, 4118 ¶ 8 (1990); AMSC Authorization, 4 FCC Rcd 6041, 6048 ¶ 51 (1989); Geostar Positioning Corp., 4 FCC Rcd 4538, 4539 (1989); and Qualcomm, Inc., 4 FCC Rcd 1543, 1544 (1989).

9/ *Panamsat Licensee Corp.*, at 10484-85 ¶ 5 (*citing* Order and Authorization, *GE Americom Communications, Inc., For Authority to Construct and Launch its GE-2 Replacement Satellite and to operate it at 85° W.L.*, 10 FCC Rcd. 13775 (1995)).

10/ *See supra* note 7.

Grant of the requested waiver would clearly serve the public interest by ensuring that Globalstar can meet the needs of its existing and future customers. A fixed earth station or test antenna is the only efficient way that Globalstar can effectively monitor and maintain the performance of its MSS system. Granting Globalstar's waiver also would serve the FCC's public interest goals of ensuring the development and deployment of MSS.

Conclusion

For these reasons, Globalstar requests that the Commission grant a waiver to permit Globalstar to operate an FSS earth station for testing and stationkeeping of its MSS system.