

September 19, 2014

File Number: 37BA-190556

VIA ELECTRONIC FILING

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Satmex Market Access Application
FCC File No. SAT-LOI-20140617-00070

Dear Ms. Dortch:

Pursuant to Section 1.65 of the Commission's rules, 47 C.F.R. § 1.65, and at the request of Satellite Division staff, Satélites Mexicanos, S.A. de C.V. ("Satmex") hereby submits certain additional information regarding the Satmex 9 satellite ("Satmex 9"). Satmex provides the following information to further clarify information contained in its application to obtain U.S. market access for Satmex 9, filed on June 17, 2014 (the "Market Access Application").¹

I. *Telemetry, Tracking & Control ("TT&C") Operations*

In the Technical Annex provided as an attachment to the Market Access Application, Satmex did not provide any information related to TT&C because all TT&C operations will be conducted from "a satellite control center and TT&C earth stations that are located in Mexico."² In the interest of providing as much information as possible regarding the planned operations for Satmex 9, Satmex provides the following clarifying information in response to the Commission's inquiry:

(i) Downlink. Satmex plans for Satmex 9 to transmit TT&C downlink signals in the C-band, at 4,198.2 MHz and 4,199.8 MHz.

(ii) Uplink. Satmex plans for Satmex 9 to transmit TT&C uplink signals in the C-band, at 6,421.3 MHz and 6,423.3 MHz.

¹ See FCC File No. SAT-LOI-20140617-00070, call sign S2926.

² See Technical Annex at A-3.

The Commission's rules currently require that TT&C functions be "conducted at either or both edges of the allocated band(s)."³ As described above, all TT&C operations planned for Satmex 9 will be conducted at the edges of the C-band.⁴ Thus, Satmex 9 will comply with Commission rules regarding the location of TT&C transmissions.

II. *Orbital Debris/End of Life Information*

Satellite Division staff also requested some additional information related to the orbital debris/end of life information submitted in the Technical Annex. After consultation with Boeing Satellite Systems International, Inc. ("Boeing"), the manufacturer of Satmex 9, Satmex provides the following clarifying information:

- (i) the mass of the xenon gas used on the spacecraft is 300 kg nominal, with a 320 kg maximum.
- (ii) the volume of the tank on the spacecraft is capable of accommodating up to 450 kg of fuel, but the tank is typically filled up to a limit of 320 kg in order to maintain a 4:1 burst ratio. (Note: burst ratio is defined as the actual burst pressure of the tank divided by the maximum working pressure).
- (iii) the tank burst pressure specification is 7300 psi, but the tank has been successfully tested on a qualification model to a pressure of 9300 psi which demonstrates the specification is met with considerable margin.
- (iv) no gases (other than xenon) will be used on the spacecraft; the 702SP satellite is an all-electric propulsion bus.
- (v) Satmex will contract with the Massachusetts Institute of Technology to perform space situational awareness monitoring duties for Satmex 9.

All other statements made in the orbital debris mitigation plan submitted in the Technical Annex remain valid and no specific updates are necessary at this time.⁵ Orbital debris considerations continue to be incorporated into the ongoing design reviews and test plans. Satmex will notify the Commission in the event that any changes to the orbital debris mitigation plan become necessary.

³ See 47 C.F.R. § 25.202(g).

⁴ The conventional C-band allocations for fixed-satellite operations are at 3,700 – 4,200 MHz and 5,925 – 6,425 MHz. Thus, the planned uplink TT&C operations for Satmex 9 will be within 4 MHz of the edge of the C-band and the planned downlink TT&C operations will be within 2 MHz.

⁵ See Technical Annex at A-5 – A-9.



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Thank you for your attention to and consideration of the Market Access Application. Please do not hesitate to contact the undersigned should you need any additional information.

Very truly yours,

/s/ Brian D. Weimer

Brian D. Weimer
for SHEPPARD, MULLIN, RICHTER & HAMPTON LLP

COUNSEL TO SATMEX

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