

S2589 SAT-PPL-20121218-00217 IB2012002889  
Satelites Mexicanos S. A. de C. V.  
SATMEX 5



File # SAT-PPL-20121218-00217

Call Sign S2589 Grant Date 05/31/13  
(or other identifier)

From 05/31/13 Term Dates See To: conditions

Approved: Stephen J. Duall  
Stephen J. Duall  
Chief, Satellite Policy Branch

See also  
SAT-APL-20130308-00028

Approved by OMB  
3060-0678

Date & Time Filed: Dec 18 2012 9:24:55:310AM  
File Number: SAT-PPL-20121218-00217  
Callsign/Satellite ID: S2889

APPLICATION FOR SATELLITE SPACE STATION AUTHORIZATIONS FCC 312 MAIN FORM FOR OFFICIAL USE ONLY	FCC Use Only
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APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:  
Petition for Declaratory Ruling to Add Satmex 5 to Permitted List

1-8. Legal Name of Applicant			
Name:	Satelites Mexicanos S. A. de C. V.	Phone Number:	1152-55-2629-5828
DBA Name:		Fax Number:	1152-55-2629-5865
Street:	Av. Paseo de la Reforma 222, Piso 20 y 21, Col. Juarez	E-Mail:	mgallego@satmex.com
City:	Mexico City	State:	
Country:	Mexico	Zipcode:	-
Attention:	Ms Maria A Gallego		

**Petition of Satélites Mexicanos, S.A. de C.V.**  
**IBFS File Nos. SAT-PPL-20121218-00217 and SAT-APL-20130308-00028**  
**Call Sign S2589**

The petition of Satélites Mexicanos, S.A. de C.V. (Satmex), IBFS File Nos. SAT-PPL-20121218-00217 and SAT-APL-20130308-00028, to add the SATMEX 5 space station (Call Sign S2589) at the 114.9° W.L. orbital location to the Commission's C- and Ku-band Permitted Space Station List (Permitted List) is GRANTED.<sup>1</sup> The operations of SATMEX 5 addressed by this grant are licensed by the Administration of Mexico. Satmex is granted U.S. market to provide Fixed-Satellite Service (FSS), including Direct-to-Home Service (DTH), via SATMEX-5 at the 114.9° W.L. orbital location.<sup>2</sup> Accordingly, each U.S.-licensed earth station with "ALSAT" designated as a point of communication is authorized to access the SATMEX 5 space station at 114.9° W.L. to provide FSS and FSS DTH to, from, or within the United States in the 3700-4200 MHz (space-to-Earth), 5925-6425 MHz (Earth-to-space), 11.7-12.2 GHz (space-to-Earth), and 14.0-14.5 GHz (Earth-to-space) frequency bands. Communications between U.S.-licensed earth stations and the SATMEX 5 space station must be in accordance with the terms, conditions, and technical specifications contained in Satmex's petition and the Federal Communications Commission's rules not waived herein, and are subject to the following conditions:

1. SATMEX 5 is not authorized to provide any Direct Broadcast Satellite (DBS) or Digital Audio Service (DARS) to, from, or within the United States.
2. Communications between U.S.-licensed earth stations and the SATMEX 5 space station must be in compliance with all existing and future space station coordination agreements reached between Mexico and other Administrations.
3. Satmex's request for a waiver of Section 25.210(j) of the Commission's rules, 47 C.F.R. § 25.210(j) is GRANTED, as conditioned. Section 25.210(j) requires geostationary space stations to be maintained within  $\pm 0.05^\circ$  of their assigned orbital locations in the East/West direction unless specifically authorized by the Commission to operate with a different longitudinal tolerance. Satmex requests a waiver to permit U.S. earth stations to communicate with SATMEX-5 while SATMEX-5 operates with an East/West station-keeping volume of  $\pm 0.1^\circ$ . Satmex states that SATMEX-5's power levels will take into account the decreased orbital separation. In its petition, Satmex further states there is no risk of overlap in the station-keeping boxes of three nearby satellites: SATMEX-5 at 114.9° W.L., ViaSat 1 at 115.1° W.L., or SATMEX-6 at 113° W.L.<sup>3</sup> Subsequent to the filing of Satmex's petition, however, Mexsat-3 was launched and is now operating at the 114.8° W.L. orbital location. In its amendment, Satmex states that the stationkeeping boxes of Mexsat-3 and SATMEX-5 overlap, and that Satmex will coordinate stationkeeping maneuvers with the Mexican government, the operator of Mexsat-3, to

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<sup>1</sup> The petition was placed on Public Notice and accepted for filing on March 15, 2013. Policy Branch Information, Satellite Space Applications Accepted for Filing, *Public Notice*, Report No. SAT-00937 (Int'l Bur., rel., Mar. 15, 2013). An amendment to the petition was filed on March 8, 2013. Policy Branch Information, Satellite Space Applications Accepted for Filing, *Public Notice*, Report No. SAT-00938 (Int'l Bur., rel., Mar. 22, 2013).

<sup>2</sup> SATMEX 5 was previously added to the Permitted List at the 116.8° W.L. orbital location in the 3700-4200 MHz (space-to-Earth), 5925-6425 MHz (Earth-to-space), 11.7-12.2 GHz (space-to-Earth), and 14.0-14.5 GHz (Earth-to-space) frequency bands. *See Satelites Mexicanos, S.A. de C.V., Petition for Declaratory Ruling*, DA 00-1793, Order, 15 FCC Rcd 19311 (Int'l Bur. 2000). As part of the petition granted in 2000, SATMEX-5 was assigned the call sign S2589. When Satmex filed its petition and amendment to relocate SATMEX-5 from 116.8° W.L. to 114.9° W.L., SATMEX-5 was assigned a new call sign, S2889. As part of this grant, we correct IBFS to associate the previously-assigned call sign, S2589, with the SATMEX-5 satellite.

<sup>3</sup> In its initial petition, IBFS File No. SAT-PPL-20121218-00217, Satmex states that Solidaridad 2 operates at the 114.9° W.L. orbital location, but will be deorbited prior to SATMEX-5's arrival at 114.9° W.L. *See Satélites Mexicanos, S.A. de C.V. Petition for Declaratory Ruling to Add Satmex 5 to the Permitted Space Station List*, at 5-6. Currently, Solidaridad 2 has not been deorbited, but is no longer operating at the 114.9° W.L. orbital location, according to publicly available sources.

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ensure adequate separation between the satellites. We grant Satmex's request for market access while operating SATMEX-5 with a  $\pm 0.10^\circ$  East/West longitudinal tolerance, so long as no other space station is located within the stationkeeping volume of SATMEX-5. Should such a space station be launched or relocated into the station-keeping volume of SATMEX-5, but whose station-keeping volume would not overlap the station-keeping volume of SATMEX-5 with a  $\pm 0.05$  degree East/West tolerance, Satmex must either maintain a  $\pm 0.05$  degree East/West tolerance or coordinate its operations with that of the other space station.

4. Satmex's request for a waiver of Section 25.210(a)(3) of the Commission's rules, 47 C.F.R. §25.210(a)(3), is GRANTED, as conditioned. Section 25.210(a)(3) requires FSS space stations using the C-band to be capable of switching polarization sense upon ground command. The Commission requires polarity-switching capability for two reasons: (1) to provide U.S.-licensed space stations with the flexibility to operate at different orbital locations, and (2) to mitigate potential interference between adjacent fixed space station systems transmitting analog television signals. *See Telesat Canada*, Order, 22 FCC Rcd 588, ¶ 10 (Int'l Bur., Sat. Div. 2007). This waiver is based upon a finding that the ability to switch polarization is not currently necessary to protect other space stations at adjacent orbital locations from harmful interference because the SATMEX 5 space station's operations will be in compliance with existing coordination agreements. In addition, communications between U.S.-licensed earth stations and SATMEX 5 are conditioned on Satmex accommodating future space station networks that comply with Section 25.210 (a) (3) and on Satmex operating SATMEX 5 pursuant to any existing or future coordination agreements for this location.
5. Satmex's request to waive Sections 25.114(d)(14) (ii) and 25.283(c) of the Commission's rules, 47 C.F.R. §§ 25.114(d)(14)(ii), 25.283 (c), is GRANTED.<sup>4</sup> Sections 25.114(d)(14)(ii) and 25.283(c) specify that space stations must discharge all stored energy sources at end-of-life of the space station. SATMEX-5 is a Boeing 601HP series satellite, which does not completely discharge all stored energy at end of life. Satmex states that SATMEX-5 was launched on December 5, 1998, and states that the helium pressurant vessels that were used during orbit-raising were permanently isolated from the propulsion system by firing a pyrotechnic valve soon after launch, such that the residual gas volume cannot be vented at end of life. Satmex states that, as a result, residual helium pressurant will remain in two identical, inter-connected tanks at end of life, with each tank having a volume of 55 liters and the two tanks containing a total residual mass of 0.4 kg of helium, resulting in remaining pressure of 1900 kPa. The information submitted is not sufficient to support a finding that the underlying purpose of the Section 25.283(c) would be served by sealing the pyrotechnic valve so that the residual helium cannot be removed. Nevertheless, we grant Satmex a partial waiver of Sections 25.114(d)(14)(ii) and 25.283(c). SATMEX-5 was launched and the pyrotechnic valve and tanks sealed before Sections 25.114(d)(14)(ii) and 25.283(c) were adopted. Furthermore, compliance with Sections 25.114(d)(14)(ii) and 25.283(c) is not achievable except through direct retrieval of the spacecraft, which is not practicable at this time. This action is without prejudice to possible future licensing decisions in connection with other spacecraft of the same manufacturing series.
6. For operations of SATMEX-5 to, from, or within the United States, the uplink power density level of SATMEX-5's digital carriers must not exceed -38.7 dBW/Hz and the downlink EIRP density of such carriers must not exceed -32 dBW/Hz for the C-band. Further, for operations of SATMEX-5 to, from, or within the United States, the uplink power density level of SATMEX-5's


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<sup>4</sup> On March 8, 2013, Satmex filed an amendment to clarify certain aspects of the venting requirements of SATMEX-5 at 114.9° W.L., IBFS File No. SAT-APL-20130308-00028 (filed March 8, 2013). This grant takes into account those clarifications.

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digital carriers must not exceed -42 dBW/Hz and the downlink EIRP density of such carriers must not exceed -20 dBW/Hz for the Ku-band.

7. This grant of market access will terminate in the event that the SATMEX 5 space station is relocated from the 114.9° W.L. orbital location or ceases to operate. In either case, SATMEX 5 will be removed from the Permitted List. If Satmex seeks to provide service to the U.S. using another space station, it must file a new application to have that space station placed on the Permitted List.
8. Satmex is afforded thirty days from the date of this action to decline this grant of market access as conditioned. Failure to respond within this period will constitute formal acceptance of the grant of market access as conditioned.
9. 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. Petitions for reconsideration under Section 1.106 or applications for review under Section 1.115 of the Commission's rules, 47 C.F.R. §§ 1.106, 1.115, may be filed within 30 days of the date of the public notice indicating that this action was taken.

 <b>GRANTED*</b> International Bureau *with conditions	File # <u>SAT-PPL-20121218-00217</u> <u>SAT-APL-20130308-00028</u>
	Call Sign <u>S2589</u> Grant Date <u>05/31/13</u> (or other identifier)
	Term Dates see From <u>05/31/13</u> To: <u>conditions</u>
	Approved: <u>Stephen J. Duall</u> Stephen J. Duall Chief, Satellite Policy Branch

9-16. Name of Contact Representative			
Name:	Carlos M. Nalda	Phone Number:	202-626-6659
Company:	Squire Sanders	Fax Number:	
Street:	1200 19th Street NW	E-Mail:	Carlos.Nalda@squiresanders.com
	Suite 300		
City:	Washington	State:	DC
Country:	USA	Zipcode:	20036 -
Attention:		Relationship:	

**CLASSIFICATION OF FILING**

<p>17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.</p> <p>a.</p> <p>(N/A) a1. Earth Station</p> <p><input checked="" type="radio"/> a2. Space Station</p>	<p>b.</p> <p><input type="radio"/> b1. Application for License of New Station (N/A)</p> <p><input type="radio"/> b2. Application for Registration of New Domestic Receive-Only Station (N/A)</p> <p><input type="radio"/> b3. Amendment to a Pending Application (N/A)</p> <p><input type="radio"/> b4. Modification of License or Registration (N/A)</p> <p><input type="radio"/> b5. Assignment of License or Registration (N/A)</p> <p><input type="radio"/> b6. Transfer of Control of License or Registration (N/A)</p> <p><input type="radio"/> b7. Notification of Minor Modification (N/A)</p> <p><input type="radio"/> b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite</p> <p><input type="radio"/> b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States</p> <p><input type="radio"/> b10. Replacement Satellite Application – no new frequency bands</p> <p><input type="radio"/> b11. Replacement Satellite Application – new frequency bands (Not eligible for streamlined processing)</p> <p><input checked="" type="radio"/> b12. Petition for Declaratory Ruling to be Added to the Permitted List</p> <p>(N/A) b13. Other (Please specify)</p>
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17c. 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): Non-feeable application

17c. Fee Classification    BNY – Space Station (Geostationary)

18. If this filing is in reference to an existing station, enter:

(a) Call sign of station:

Not Applicable

19. If this filing is an amendment to a pending application enter:

(a) Date pending application was filed:

Not Applicable

(b) File number of pending application:

Not Applicable

TYPE OF SERVICE

<p>20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Select all that apply:</p> <p><input checked="" type="checkbox"/> a. Fixed Satellite <input type="checkbox"/> b. Mobile Satellite <input type="checkbox"/> c. Radiodetermination Satellite <input type="checkbox"/> d. Earth Exploration Satellite <input checked="" type="checkbox"/> e. Direct to Home Fixed Satellite <input type="checkbox"/> f. Digital Audio Radio Service <input type="checkbox"/> g. Other (please specify)</p>	
<p>21. STATUS: Choose the button next to the applicable status. Choose only one.</p> <p><input type="radio"/> Common Carrier   <input checked="" type="radio"/> Non-Common Carrier</p>	<p>22. If earth station applicant, check all that apply.</p> <p>Not Applicable</p>
<p>23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities:</p> <p><input type="radio"/> Connected to a Public Switched Network   <input type="radio"/> Not connected to a Public Switched Network   <input checked="" type="radio"/> N/A</p>	
<p>24. FREQUENCY BAND(S): Place an "X" in the box(es) next to all applicable frequency band(s).</p> <p><input checked="" type="checkbox"/> a. C-Band (4/6 GHz)   <input checked="" type="checkbox"/> b. Ku-Band (12/14 GHz) <input type="checkbox"/> c. Other (Please specify upper and lower frequencies in MHz.)</p> <p>Frequency Lower:   Frequency Upper: (Please specify additional frequencies in an attachment)</p>	

TYPE OF STATION

25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.

(N/A) a. Fixed Earth Station  
(N/A) b. Temporary-Fixed Earth Station  
(N/A) c. 12/14 GHz VSAT Network  
(N/A) d. Mobile Earth Station  
 e. Geostationary Space Station.  
 f. Non-Geostationary Space Station  
 g. Other (please specify)

26. TYPE OF EARTH STATION FACILITY: Not Applicable

PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an "X" in the box(es) next to all that apply.) Not Applicable

ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. §§ 1.1308 and 1.1311, as an exhibit to this application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments.  Yes  No

ALIEN OWNERSHIP  
Earth station applicants not proposing to provide broadcast, common carrier, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30-34.



29. Is the applicant a foreign government or the representative of any foreign government?	<input type="radio"/> Yes <input checked="" type="radio"/> No
30. Is the applicant an alien or the representative of an alien?	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A
32. Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A
33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A
34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote. <span style="float: right;">Question 34</span>	

**BASIC QUALIFICATIONS**

<p>35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules? If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.</p>	<p><input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p>Technical Appendix</p>
<p>36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explanation of circumstances.</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>
<p>37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explanation of circumstances.</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>
<p>38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>
<p>39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhibit, an explanation of the circumstances.</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>

40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer. Question 40

41. 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.  Yes  No

42a. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43.  Yes  No

42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station? Mexico

43. Description. (Summarize the nature of the application and the services to be provided). (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

Petition for Declaratory Ruling to add the Satmex 5 satellite to the Permitted Space Station List.

Narrative Statement

43a. Geographic Service Rule Certification

By selecting A, the undersigned certifies that the applicant is not subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25.

A

By selecting B, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will comply with such requirements.

B

By selecting C, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will not comply with such requirements because it is not feasible as a technical matter to do so, or that, while technically feasible, such services would require so many compromises in satellite design and operation as to make it economically unreasonable. A narrative description and technical analysis demonstrating this claim are attached.

C

CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

44. Applicant is a (an): (Choose the button next to applicable response.)

- Individual
- Unincorporated Association
- Partnership
- Corporation
- Governmental Entity
- Other (please specify)

45. Name of Person Signing  
Veronica Gutierrez Zamora Garcia

46. Title of Person Signing  
General Counsel

47. Please supply any need attachments.

1:

2:

3:

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).

Completed Schedule S

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