S2870

SAT-PPL-20120717-00117

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File Number: SAT-PPL-20120717-00117

New Skies Satellites B.V.

SES-6

IB2012001693

File # SAT-PPL-20120717-00117 From 07/12/13 **GRANTED** International Bureau

Call Sign S2870 Grant Date 07/12/13

To: conditions

(or other identifier)

Term Dates See

** GRANTED W/RESPECT TO PERMITTED LIST ONLY; OTHER REQUESTS DEFERRED **

Approved by OMB 3060-0678

+with conditions (corrected 08/08/13) Approved:

Stephen J. Duall Chief, Satellite Policy Branch

APPLICATION FOR SATELLITE SPACE STATION AUTHORIZATIONS FCC 312 MAIN FORM

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APPLICANT INFORMATION

Callsign/Satellite ID: S2870

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

Market access for SES-6 at 40.5W

1–8. Legal Name of Applicant

Name:

New Skies Satellites B.V.

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202-478-7137

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20036

Attention:

Mr. Daniel Mah

Addition of SES-6 to the C- and Ku-Band Permitted Space Station List at 40.5° W.L.

The petition of New Skies Satellites, B.V. (New Skies), IBFS File No. SAT-PPL-20120717-00117, to add SES-6 (Call Sign S2870) at the 40.5° W.L. orbital location to the Commission's C- and Ku-band Permitted Space Station List (Permitted List) is GRANTED. The operations of SES-6 addressed by this grant are licensed by the Administration of the Netherlands. Accordingly, each U.S.-licensed earth station with "ALSAT" or "Permitted List" designated as a point of communication is authorized to access the SES-6 space station at 40.5° W.L. to provide Fixed-Satellite Service (FSS) 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, to, from, or within the United States, subject to the parameters set forth in the earth station license. In addition, New Skies' request is granted to use SES-6 to provide direct-tohome FSS in these conventional C- and Ku-bands (1) within the United States, and (2) between the United States and the Netherlands, current European Union member states, Mexico, Brazil, the Netherlands Antilles, Guatemala, Honduras, Nicaragua, Bermuda, the British Virgin Islands, and the Cavman Islands.³ Communications between U.S.-licensed earth stations and the SES-6 space station must be in accordance with the terms, conditions, and technical specifications contained in New Skies' petition, the Federal Communications Commission's rules not waived herein, and the following conditions:

- 1. Communications between U.S.-licensed earth stations and the SES-6 space station at the 40.5° W.L. orbital location must comply with all existing and future space station coordination agreements reached between the Netherlands and other Administrations.
- 2. Communications between U.S.-licensed earth stations and the SES-6 space station at the 40.5° W.L. orbital location are conditioned on New Skies maintaining the SES-6 space station with an east/west longitudinal station-keeping tolerance of +/- 0.05 degrees.
- 3. New Skies' request for a waiver of Section 25.202 (g) of the Commission's rules, 47 C.F.R. § 25.202(g), to permit U.S. earth stations to receive a beacon signal of 3947.5 MHz from SES-6 at

¹ The Petition was placed on Public Notice on August 31, 2012. Report No. SAT-00893, Public Notice (Int'l Bur., rel. Aug. 31, 2012). No comments were filed. On June 13, 2013, New Skies notified the Commission that the SES-6 space station had been successfully launched on June 3, 2013. Letter from Daniel C.H. Mah, Regulatory Counsel for New Skies Satellites B.V., to Marlene H. Dortch, Secretary, FCC, dated June 13, 2013.

² The current E.U. member states are: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.

³ As part of its petition, New Skies also requested that U.S. earth stations be permitted to conduct telemetry, tracking, and command (TT&C) operations for SES-6 at 40.5° W.L. using the following center frequencies in the conventional C- and Ku-bands: 11.7005 GHz, 11.701 GHz (space-to-Earth); 3947.5 MHz, 12.1995 GHz, 14.00 GHz, and 14.499 GHz (Earth-to-space). This request will be addressed in modifications of earth station licenses that seek to add the SES-6 space station at 40.5° W.L. as a point of communication. *See* IBFS File Nos. SES-MFS-20130603-00461 (E000102) and SES- MFS-20130604-00470 (E000696).

40.5° W.L. is granted, as conditioned.⁴ Section 25.202(g) requires that TT&C operations be conducted at the edges of the allocated bands. SES-6 is intended as a replacement for New Skies' NSS-806 space station currently located at 40.5° W.L.,⁵ which has both telemetry and beacon frequencies allocated in the middle of the C-band and which have been coordinated with adjacent operators, including U.S.-licensed satellites, for many years.⁶ New Skies argues that the use of a beacon in the middle of the C-band for SES-6 simplifies pointing and tracking for those earth stations that currently track NSS-806 and that will be transitioned to SES-6. We grant the requested waiver of Section 25.202(g) subject to the following conditions:

- a. The use of a beacon signal at 3947.5 MHz by SES-6 at 40.5° W.L. must be pursuant to any existing or future coordination agreements with adjacent satellite operators operating in the C-band;
- b. The use of a beacon signal at 3947.5 MHz by SES-6 at 40.5° W.L.is solely on an unprotected and non-harmful interference basis; and
- c. New Skies must accommodate future space station networks that are compliant with Section 25.202 (g).
- 4. New Skies' request for a waiver of Section 25.210(a)(1) of the Commission's rules, 47 C.F.R. § 25.210(a)(1), is granted, as conditioned. Section 25.210(a)(1) requires that C-band operations use orthogonal linear polarization. Like NSS-806, SES-6 uses circular polarization for its C-band communications payload; additionally, one of SES-6's conventional C-band tracking beacons uses linear polarization, but the planes are rotated 45 degrees relative to the equatorial plane. This waiver is granted based upon a finding that there is currently no potential for harmful interference from operations at this location with circular polarization and that there would be an undue hardship to customers if they were required to reconfigure existing circularly-polarized antennas to operate with linear polarization. As a condition of this waiver, New Skies must accommodate future space station networks that comply with Section 25.210(a)(1). Further, New Skies must operate SES-6 pursuant to any existing or future coordination agreements for this location.
- 5. 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, 592, ¶10 (Int'l Bur. 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 SES-6 space station's operations will be in compliance with existing coordination agreements. As a condition of this waiver, New Skies must accommodate future space station networks that comply with Section 25.210(a)(3). Further, New Skies must operate SES-6 pursuant to any existing or future coordination agreements for this location.

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⁴ We do not address in this grant of market access New Skies' request concerning use of a second beacon signal at 4500.1 MHz. See New Skies Petition at 12 n.35.

⁵ New Skies Satellites, N.V., Memorandum Opinion and Order, 16 FCC Rcd 7482 (Sat. Div. 2001). See also New Skies Satellites, N.V., IBFS File No. SAT-MPL-20110923-00187, granted June 28, 2012.

⁶ New Skies Satellites, N.V., 16 FCC Rcd at ¶¶ 70-71.

- 6. New Skies' request for a waiver of Section 25.210(i)(1), of the Commission's rules, 47 C.F.R. § 25.210(i)(1), for the SES-6 space station is granted, as conditioned. Section 25.210(i)(1) requires FSS space station antennas to be designed to meet a cross-polarization isolation of 30 dB within the primary coverage area of the antenna. The minimum cross-polarization isolation of SES-6's communications beams is 25.4 dB; and the minimum for the omnidirectional TT&C beams is 16 dB. This waiver is based upon a finding that these shortfalls will not produce a significant increase in interference, except to the space station itself, and will not adversely affect any other operator. As a condition of the waiver, New Skies must accommodate future satellite networks serving the United States that are two-degree compliant and other licensed radiocommunication systems operating in accordance with the Commission's rules.
- 7. New Skies' request for a waiver of Section 25.211(a) of the Commission's rules, 47 C.F.R. 25.211(a), is dismissed as moot. Section 25.211(a) provides that downlink analog video transmissions in the C-band shall be transmitted only on a center frequency of 3700+20N MHz, where N=1 to 24, with corresponding uplink frequencies 2225 MHz higher. Because New Skies states that there are no plans to use SES-6 for C-band analog video transmissions, there is no need to address its request for waiver of 25.211(a). Should those plans change, however, New Skies must request, and be granted, a modification of its grant of U.S. market access for SES-6 prior to providing downlink analog video transmissions and any such transmission must be coordinated with adjacent satellites.
- 8. New Skies' request for a waiver of Section 25.114(d) (3) of the Commission's rules, 47 C.F.R. § 25.114(d) (3), is granted. Section 25.114(d) (3) requires predicted space station antenna gain contour(s) for each transmit and each receive antenna beam and nominal orbital location requested. New Skies indicates that because certain beams on SES-6 do not intersect with the Earth's surface, it has not provided gain contours for these beams. *See* Attachment A, Annex B, Figures 26-35. We find, however, that Attachment A, Annex B, together with the descriptive characterization provided in figures 26-35 of the Engineering Statement, fulfill the requirements of Section 25.114(d)(3).
- 9. New Skies' request for waiver of Sections 25.114 (d)(14)(ii) and 25.283(c) of the Commission's rules, 47 C.F.R. §§ 25.114(d)(14)(ii) and 25.283, is GRANTED. 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. SES-6 is an EADS Astrium E3000 series satellite, which does not completely discharge all stored energy at end of life. At the completion of mission, upon disposal of the spacecraft, the chemical propulsion tanks will be depleted. A helium pressurant tank, however, will retain a total mass of 1.25 kg of helium with a volume of 182.79 liters at end of life. SES-6 was launched on June 3, 2013. Compliance with Section 25.283(c) is not achievable except through direct retrieval of the spacecraft. The information submitted is not sufficient to support a finding that the underlying purpose of Section 25.283(c) would be served by sealing the helium tank without completely venting it. However, we grant a partial waiver of the rule because undue hardship would result from requiring modification of the space station at this time. This action is without prejudice to possible future licensing decisions in connection with other spacecraft of the same manufacturing series.
- 10. Operations using SES-6 to or from the United States must comply with the power levels specified in Section 25.212 of the Commission's rules, 47 C.F.R. § 25.212, unless New Skies coordinates any operations using power levels exceeding the levels in Section 25.212 with all potentially affected adjacent satellites within 6 degrees orbital separation of the 40.5° W.L. orbital location. New Skies must inform the Commission of any coordinated power levels to be used within the United States that are higher than the limits in Section 25.212. In addition, New Skies must inform all affected U.S.-licensed earth station operators that Section 25.220 of the Commission's rules, 47 C.F.R. § 25.220, applies to

operations that exceed the power levels specified in Section 25.212. In the Ku-band, the downlink EIRP density level of the SES-6 digital carriers must not exceed -20 dBW/Hz, and the input power density level of the uplink digital carriers of U.S.-licensed earth stations operating with SES-6 must not exceed -47 dBW/Hz. In the C-band frequencies, the downlink EIRP density level of the SES-6 digital carriers must not exceed -30 dBW/Hz, and the input power density level of the uplink digital carriers of U.S.-licensed earth stations operating with SES-6 must not exceed -38.7 dBW/Hz.

- 11. This grant of market access will terminate in the event that the SES-6 space station is relocated from the 40.5° W.L. orbital location or ceases to operate. In either case, SES-6 will be removed from the Permitted List. If New Skies wishes 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.
- 12. New Skies is afforded 30 days from the date of release 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 as conditioned.
- 13. This action is taken pursuant to Section 0.261 of the Commission's rules, 47 C.F.R. §§ 0.261, and is effective immediately. Petitions for reconsideration under Section 1.106 of the Commission's rules 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 public notice indicating that this action was taken.

File # SAT- PPL- 20120717- CO117

Call Sign S2870 Grant Date 07/12/13

(or other identifier)

GRANTED*

International Bureau

*with conditions

Stephen J. Duall

(corrected 08/08/13)

Chief, Satellite Policy Branch

9–16. Name of Contact Representative

Name: Karis A. Hastings Phone Number: 202–599–0975

Company: SatCom Law LLC Fax Number:

Street: 1317 F Street, N.W., Suite 400 E-Mail: karis@satcomlaw.com

DC

State:

Country: USA Zipcode: 20004 -

Attention: Relationship: Legal Counsel

CLASSIFICATION OF FILING

City:

Washington

17. Choose the buttonnext to the classification that applies to this filing for o bl. Application for License of New Station both questions a. and b. Choose only one (N/A) b2. Application for Registration of New Domestic Receive-Only Station for 17a and only one for 17b. (N/A) b3. Amendment to a Pending Application (N/A) b4. Modification of License or Registration (N/A) b5. Assignment of License or Registration (N/A) a1. Earth Station (N/A) b6. Transfer of Control of License or Registration a2. Space Station (N/A) b7. Notification of Minor Modification (N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite 6 b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States 6 b10. Replacement Satellite Application – no new frequency bands o b11. Replacement Satellite Application – new frequency bands (Not eligible for streamlined processing) a b12. Petition for Declaratory Ruling to be Added to the Permitted List (N/A) b13. Other (Please specify)

17c. Is a fee submitted with this application?					
o 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): Permitted Space Station List and Market Access Petition					
17c. Fee Classification					
10 TC41' C1' ' ' C					
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:	(b) File number of pending application:				
Not Applicable	NT-4 Augusticality				
Not Applicable	Not Applicable				

TYPE OF SERVICE

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

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 Not Applicable apply.)

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.

O Yes O 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?	O Yes ⊗ No
30. Is the applicant an alien or the representative of an alien?	O Yes ⊙ No O N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	
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?	
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?	
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. BASIC QUALIFICATIONS	

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.	•	Yes	0	No
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 explination of circumstances.	0	Yes	•	No
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 explination of circumstances.	0	Yes	•	No
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	0	Yes	•	No
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 exhinit, an explanation of the circumstances.	0	Yes	•	No

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.	Exh	iibit A		
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	0	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	0	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? The Netherlands				

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.)

Petitioner seeks U.S. market access for the Netherlands-licensed SES-6 spacecraft to be located at 40.5 deg. W.L.

A

OB

OC

Narr and Tech App

43a. Geographic Service Rule Certification	43a.	Geograph	nic Serv	rice Rul	e Certificatio
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By selecting A, the undersigned certifies that the applicant is not subject to the geographic service or geographic coverage requirements specified 47 C.F.R. Part 25.

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.

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.

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) Dutch BV 	
Other (please specify) Dutch BV	
45. Name of Person Signing Daniel C.H. Mah	46. Title of Person Signing Regulatory Counsel
47. Please supply any need attachments.	
1:	2: 3:
(U.S. Code, Title 18, Section	ADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION 1312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

Completed Schedule S

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