



Approved by OMB  
3060-0678

File # SAT-STA-20100901-00188  
Call Sign S2402 Grant Date 09/10/10  
(or other identifier) Term Dates Period of  
From 09/10/10 To: 30 days

Date & Time Filed: Sep 1 2010 3:45:07:076PM  
File Number: SAT-STA-20100901-00188  
Callsign:

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

\* with conditions

FEDERAL COMMUNICATIONS COMMISSION  
APPLICATION FOR SPACE STATION SPECIAL TEMPORARY AUTHORITY

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APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:  
Request for Special Temporary Authority to De-Orbit the Intelsat 802 Satellite, Call Sign S2402

1. Applicant

<b>Name:</b>	Intelsat North America LLC	<b>Phone Number:</b>	202-944-7848
<b>DBA Name:</b>		<b>Fax Number:</b>	202-944-7870
<b>Street:</b>	c/o Intelsat Corporation 3400 International Drive, N.W.	<b>E-Mail:</b>	susan.crandall@intelsat.com
<b>City:</b>	Washington	<b>State:</b>	DC
<b>Country:</b>	USA	<b>Zipcode:</b>	20008 -3006
<b>Attention:</b>	Susan H Crandall		

**Attachment to Grant  
PanAmSat Licensee Corp.  
IBFS File No. SAT-STA-20100901-00188  
Call Sign S2402**

The application of Intelsat North America LLC (Intelsat) for special temporary authority, IBFS File No. SAT-STA-20100901-00188, IS GRANTED. Accordingly, Intelsat is authorized for a period of 30 days commencing on September 10, 2010, to perform tracking, telemetry, and telecommand (TT&C) functions with the Intelsat 802 satellite, Call Sign S2402, necessary to execute end-of-life maneuvers boosting the satellite to a disposal orbit above the geostationary arc in accordance with the terms, conditions, and technical specifications set forth in its application, the Commission's rules, and the following conditions:

1. Intelsat shall coordinate all orbit raising maneuver TT&C operations with existing geostationary satellites to ensure that no unacceptable interference results from its TT&C operations during its disposal operations.
2. During the disposal operations, no harmful interference shall be caused by Intelsat 802 to any other lawfully operating space station or radio communications system and operations of the Intelsat 802 satellite shall cease immediately upon notification of such interference.
3. Intelsat 802 is required to accept interference from other lawfully operating space stations of radio communications systems.
4. We grant Intelsat's request for a waiver of Section 25.283(c) of the Commission's rules, 47 C.F.R. § 25.283(c), which requires that all stored energy will be discharged at the spacecraft's end of life. Intelsat 802 is a Lockheed Martin A-7000 spacecraft. Intelsat states that an oxidizer tank was sealed off after completion of transfer orbit operations soon after the launch of Intelsat 802 on June 25, 1997. The sealed tank contains approximately 14.92 kg of oxidizer remaining in the tank, with the tank volume being approximately 660 liters. We waive Section 25.283(c) in light of the fact that the action taken to seal the tank was taken prior to the adoption of this rule, and compliance would require direct retrieval of the spacecraft.
5. Any action taken or expense incurred as a result of operations pursuant to this special temporary authority is solely at Intelsat's own risk.
6. Within 30 days of completion of the end-of-life maneuvers, Intelsat shall send a letter to the Chief, Satellite Division, International Bureau, indicating the apogee and perigee of the Intelsat 802 disposal orbit.



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Stephen J. Duall  
Chief, Satellite Policy Branch

<b>2. Contact</b>	
<b>Name:</b> Jennifer D Hindin	<b>Phone Number:</b> 202-719-4975
<b>Company:</b> Wiley Rein Llp	<b>Fax Number:</b>
<b>Street:</b> 1776 K Street, NW	<b>E-Mail:</b> jhindin@wileyrein.com
<b>City:</b> Washington	<b>State:</b> DC
<b>Country:</b> USA	<b>Zipcode:</b> 20006 -
<b>Attention:</b>	<b>Relationship:</b> Legal Counsel
(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 or Submission ID	
4a. Is a fee submitted with this application?	
<input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).	
<input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee	
<input type="radio"/> Other(please explain):	
4b. Fee Classification CRY - Space Station (Geostationary)	
5. Type Request	
<input type="radio"/> Change Station Location	<input type="radio"/> Extend Expiration Date
	<input checked="" type="radio"/> Other
6. Temporary Orbit Location	
7. Requested Extended Expiration Date	
	2010-10-09 00:00:00.0

8. 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.)

Intelsat North America LLC, pursuant to Section 25.210 of the rules of the Federal Communications Commission, herein requests STA, beginning on September 10 and lasting for a period of thirty days, to de-orbit the Intelsat 802 satellite (call sign S2402) from its current location at 32.9 E.L. and to perform TT&C functions with Intelsat 802 during this

9. 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

10. Name of Person Signing  
Susan H. Crandall

11. Title of Person Signing  
Asst. General Counsel, Intelsat Corporation

12. Please supply any need attachments.

Attachment 1: STA Request

Attachment 2:

Attachment 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).

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## **8. Description**

Intelsat North America LLC, pursuant to Section 25.210 of the rules of the Federal Communications Commission, herein requests STA, beginning on September 10 and lasting for a period of thirty days, to de-orbit the Intelsat 802 satellite (call sign S2402) from its current location at 32.9 E.L. and to perform TT&C functions with Intelsat 802 during this maneuver. Intelsat also seeks waiver of Section 25.283(c) of the Commission's rules to the extent the rule requires Intelsat to discharge all propellant remaining in the satellite upon de-orbiting.

September 1, 2010

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, DC 20554



Re: Request for Special Temporary Authority to De-Orbit the Intelsat 802  
Satellite, Call Sign S2402

Dear Ms. Dortch:

Intelsat North America LLC (“Intelsat”), pursuant to Section 25.210 of the rules of the Federal Communications Commission (“FCC” or “Commission”),<sup>1</sup> herein requests Special Temporary Authority (“STA”) for 30 days, from September 10, 2010 through October 9, 2010, to de-orbit the Intelsat 802 satellite (call sign S2402) from its current location at 32.9° E.L.<sup>2</sup> and to perform telemetry, tracking and command (TT&C) functions with Intelsat 802 during this maneuver.<sup>3</sup> Intelsat also seeks waiver of Section 25.283(c) of the Commission’s rules to the extent the rule requires Intelsat to discharge all propellant remaining in the satellite upon de-orbiting.<sup>4</sup>

Grant of this STA is in the public interest. The Intelsat 802 satellite was launched on June 25, 1997 and is nearing the end of its useful life. Intelsat seeks to commence de-orbiting the spacecraft sometime between September 10, 2010 and October 9, 2010.

Intelsat intends to de-orbit the Intelsat 802 satellite to a perigee 150 km above synchronous altitude. Intelsat has reserved 12.26 kilograms of fuel for this

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<sup>1</sup> 47 C.F.R. § 25.210.

<sup>2</sup> See *Policy Branch Information; Actions Taken*, Report No. SAT-00231, File No. SAT-MOD-20040527-00107 (July 30, 2004).

<sup>3</sup> Intelsat has filed this STA request, an FCC Form 159 and a filing fee electronically via the International Bureau’s Filing System.

<sup>4</sup> 47 C.F.R. § 25.283(c) (“... a space station licensee shall ensure, unless prevented by technical failures beyond its control, that all stored energy sources on board the satellite are discharge by venting excess propellant, discharging batteries, relieving pressure vessels, and other appropriate measures.”).

purpose. To calculate the reserved fuel figure, Intelsat used the “rocket equation” – *i.e.*, it used the expected mass of the satellite at the end of life and the required delta-velocity to achieve the desired orbit. Intelsat has assessed the fuel gauging uncertainty and believes it has provided an adequate margin or fuel reserve to address the uncertainty in the remaining propellant. As a satellite launched prior to March 18, 2002, the minimum perigee requirements for decommissioning set forth in Section 25.283(a) of the Commission’s rules do not apply to Intelsat 802.<sup>5</sup>

The de-orbit of Intelsat 802 will not cause any significant risk of harmful interference to other satellites. During the de-orbit, the satellite’s communications payload will remain inactive and only the TT&C payload will operate. Intelsat requests authority to operate the following TT&C frequencies: 6173.7 MHz (LHCP) and 6176.3 MHz (RHCP) (command uplink); 3947.5 MHz (RHCP), 3948.0 MHz (RHCP), 3952.5 MHz (RHCP) and 3952.0 MHz (RHCP) (telemetry downlink). These frequencies will be coordinated and will operate on a non-interference basis.<sup>6</sup>

Finally, to the extent Section 25.283(c) of the Commission’s rules requires Intelsat to discharge all propellant remaining in the Intelsat 802 satellite upon de-orbiting, Intelsat requests waiver of this rule. Under Section 1.3 of the Commission’s rules, the Commission has authority to waive its rules “for good cause shown.”<sup>7</sup> Good cause exists if “special circumstances warrant a deviation from the general rule and such deviation will serve the public interest” better than adherence to the general rule.<sup>8</sup> In determining whether waiver is appropriate, the Commission should “take into account considerations of hardship, equity, or more effective implementation of overall policy.”<sup>9</sup> As shown below, there is good cause for the requested waiver.

Waiver is appropriate in this case because grant would not undermine the purpose of the rule, which is to reduce the risk of accidental explosion. Intelsat

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<sup>5</sup> 47 C.F.R. § 25.283(d).

<sup>6</sup> See 47 C.F.R. § 25.283(b).

<sup>7</sup> 47 C.F.R. § 1.3; *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

<sup>8</sup> *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990).

<sup>9</sup> *WAIT Radio*, 418 F.2d at 1159.



802 is expected to have 14.92 kg of oxidizer remaining in the tank at the end of its mission, with the tank volume being approximately 660 liters. This minimal amount of oxidizer will not cause the pressure in the oxidizer tank to exceed its burst pressure, even in a worst case end-of-life temperature scenario. Moreover, Intelsat will take steps to minimize the risk of reaction between fuel and oxidizer by using best efforts to vent both the fuel and pressurant through thrusters at the end of the mission. Oxidizer remaining in the propellant manifolds also will be expelled by performing an engine pulsing maneuver. The minimal amount of residual oxidizer, combined with these end-of-life measures, will ensure that there is little risk of accidental explosion following the end-of-life of the Intelsat 802 satellite.

Grant of this waiver is also supported on hardship grounds. Intelsat 802 is currently in orbit and a design change cannot be accomplished at this time. Waiver in these circumstances is further supported by the fact the Intelsat 802 satellite was licensed prior to adoption of the rule requiring discharge of remaining fuel at end of life.<sup>10</sup> Waiver of Section 25.283(c) is also consistent with Commission precedent.<sup>11</sup>

For the reasons set forth herein, Intelsat respectfully requests that the Commission expeditiously grant this request for special temporary authority to de-orbit the Intelsat 802 satellite.

Sincerely,

*/s/ Susan H. Crandall*

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<sup>10</sup> The Commission originally granted Comsat authority to launch the Intelsat 802 satellite on May 6, 1997. *See Comsat Corporation Application for Authority to Participate in the Launch of Intelsat VIII (F-2)*, Order and Authorization, 12 FCC Rcd 6012 (May 6, 1997). The Commission's orbital debris mitigation rule requiring discharge of all propellant, Section 25.283(c), was adopted in an order released June 21, 2004 that became effective October 12, 2004. *Mitigation of Orbital Debris*, Second Report and Order, 19 FCC Rcd 11567 (2004); *Mitigation of Orbital Debris*, 69 Fed. Reg. 54581-54589 (Sept. 9, 2004).

<sup>11</sup> *See PanAmSat Licensee Corp. Amendment to Application for Modification of Authority to Launch and Operate*, SAT-AMD-20070716-00102 (filed July 16, 2007) (stamp grant with conditions Oct. 4, 2007) (granting partial waiver of Section 25.283(c) to Intelsat 11 (call sign S2237) on hardship grounds).

Ms. Marlene H. Dortch  
September 1, 2010  
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Susan H. Crandall  
Assistant General Counsel  
Intelsat Corporation

cc: Robert Nelson  
Karl Kensinger  
Kathryn Medley  
Stephen Duall