

SAT-STA-20061013-00121

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Sirius XM Radio Inc.

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Term Dates see To: conditions

Approved: Stephen J. Duall

Stephen J. Duall
Chief, Satellite Policy Branch



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 Modification of SDARS Terrestrial Repeater STA - 180 Days

1. Applicant

Name:	Sirius Satellite Radio Inc.	Phone Number:	212-584-5100
DBA Name:		Fax Number:	212-584-5353
Street:	1221 Avenue of the Americas 36th Floor	E-Mail:	
City:	New York	State:	NY
Country:	USA	Zipcode:	10020 -
Attention:	Mr. Patrick L. Donnelly		

Attachment to Grant
Application of Sirius Satellite Radio Inc. for Special Temporary Authority
IBFS File No. SAT–STA–20061013–00121


Special temporary authority (STA) is granted to Sirius Satellite Radio Inc. (Sirius) to operate the terrestrial repeaters as specified in Attachment E to the Consent Decree adopted on July 25, 2008 (FCC 08-176), for a period of 180 days. This grant is taken in response to the Commission's instruction in the *Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band*, IB Docket No. 95-91, *Second Report and Order*, FCC 10-82 (rel. May 20, 2010).¹ As a result of the Commission's instruction, we also take the ministerial action of dismissing the petition filed by the WCS Coalition to deny Sirius's STA request to operate a repeater in Wilmington, Delaware, at a power level in excess of 2,000 watts equivalent isotropically radiated power. This authorization is granted according to the technical parameters specified in Sirius' application and is subject to the terms and conditions of the Consent Decree and the conditions below.

1. Any actions taken as a result of this STA are solely at the applicant's own risk. This STA shall not prejudice the outcome of the final rules adopted by the Commission in IB Docket No. 95-91.
2. SDARS terrestrial repeaters are restricted to the simultaneous retransmission of the complete programming, and only that programming, transmitted by the SDARS licensee's satellite(s) directly to the SDARS licensee's subscribers' receivers, and may not be used to distribute any information not also transmitted to all subscribers' receivers.
3. Coordination of the operations of the terrestrial repeaters shall be completed with all affected Administrations prior to operation, in accordance with all applicable international agreements including those with Canada and Mexico.
4. The terrestrial repeaters shall comply with Part 17 of the Commission's rules – Construction, Marking, and Lighting of Antenna Structures.
5. The terrestrial repeaters shall comply with Part 1 of the Commission's rules, Subpart I – Procedures Implementing the National Environmental Policy Act of 1969, including the guidelines for human exposure to radio frequency electromagnetic fields as defined in Sections 1.1307(b) and 1.1310 of the Commission's rules.
6. Any SDARS terrestrial repeater operating at a power level greater than 2-watt average EIRP is required to attenuate its out-of-band emissions below the transmitter power P by a factor of not less than $90 + 10 \log (P)$ dB in a 1-megahertz bandwidth outside the 2320-2345 MHz band, where P is average transmitter output power in watts. Any SDARS terrestrial repeater operating at a power level equal to or less than 2-watt average EIRP is required to attenuate its out-of-band emissions below the transmitter power P by a factor of not less than $75 + 10 \log (P)$ dB in a 1-megahertz bandwidth outside the 2320-2345 MHz band, where P is average transmitter output power in watts.
7. This STA expires after 180 days, or on the date that permanent authority to operate the covered repeater operations becomes effective, whichever occurs first.
8. Sirius is granted 30 days from the date of the release of this authorization to decline the authorization as conditioned. Failure to respond within that period will constitute formal acceptance of the authorization as conditioned.

¹ *Second Report and Order* at para. 264 (instructing the International Bureau to grant all requests for STA to operate terrestrial repeaters pending as of May 20, 2010).

Attachment to Grant
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9. This action is taken on delegated authority pursuant to 47 C.F.R. § 0.261 and is effective upon release. Petitions for reconsideration under 47 C.F.R. § 1.106 or applications for review under 47 C.F.R. § 1.115 may be filed within 30 days of the date of the Public Notice announcing this action.

 GRANTED* International Bureau *with conditions	File # <u>SAT-STA-20061013-00121</u>
	Call Sign _____ Grant Date <u>12/21/10</u>
	(or other identifier)
	From <u>12/21/10</u> Term Dates <u>See</u> To: <u>conditions</u>
	Approved: <u><i>Stephen J. Duall</i></u> Stephen J. Duall Chief, Satellite Policy Branch

2. Contact			
Name:	Mr. Patrick L. Donnelly	Phone Number:	212-584-5100
Company:	Sirius Satellite Radio	Fax Number:	212-584-5353
Street:	1221 Avenue of the Americas	E-Mail:	
City:	New York	State:	NY
Country:	USA	Zipcode:	10020 --
Attention:		Relationship:	Same
(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 SATSTA2005030100053 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 CXW -- Space Station (Non-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	

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.)

Sirius Satellite Radio herein requests Special Temporary Authority to operate 11 satellite digital audio radio service terrestrial repeaters for 180 days.

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
Patrick L. Donnelly

11. Title of Person Signing
Executive VP and Gen. Counsel

12. Please supply any need attachments.

Attachment 1: Exhibit

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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THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

Attachment

Sirius Satellite Radio Inc. (“Sirius”) hereby requests Special Temporary Authority (“STA”), pursuant to Section 25.120(b)(2) of the Commission’s rules,¹ for a period of 180 days, to operate 11 satellite digital audio radio service (“DARS”) terrestrial repeaters pursuant to the technical parameters in the attached Exhibit. These repeaters already have been constructed, although none is currently operating. This application requests a modification of Sirius’ repeater STA so it may resume service from these locations. These repeaters will not generate harmful interference given that: (1) all but one of the subject repeaters were operating at or below currently authorized power levels; (2) all but one of the subject repeaters were operating within 10 miles of their reported locations; (3) Sirius is unaware of any operational WCS stations in the vicinity of the subject repeaters; and (4) Sirius is unaware of any complaints of interference from the subject repeaters.

As the Commission knows, delivering high-quality music, news and entertainment to mobile users throughout the coterminous United States requires parallel terrestrial transmitters to overcome service availability shortfalls from multipath interference as well as blocking/shadowing.² Thus, the International Telecommunication Union definition of satellite DARS includes “[c]omplementary terrestrial repeaters.”³ Similar language in the United States Table of Frequency Allocations (as amended in 1995) reinforces the role of DARS repeaters: “[t]he band 2310-2360 MHz is allocated to the broadcasting-satellite service (sound) and *complementary terrestrial broadcasting service* on a primary basis.”⁴ In order to permit seamless switching between transmit sources, the FCC first granted an STA to Sirius and XM on September 17, 2001,⁵ with minor amendment and augmentation since.⁶ The terrestrial component of the Sirius

¹ 47 C.F.R. § 25.120(b)(2). Sirius concurrently is seeking authority under Section 25.120(b)(4) to restore operations for 30 days.

² *Sirius Satellite Radio Inc. Application for Special Temporary Authority to Operate Satellite Digital Audio Radio Service Complementary Terrestrial Repeaters*, Order and Authorization, 16 FCC Rcd 16773, ¶2 (Int’l Bur. 2001) (“*2001 STA Grant Order*”) (“use of complementary terrestrial repeaters to overcome the effects of satellite signal blockage and multipath interference was recognized by the Commission when it adopted service rules for SDARS.”); *Establishment of Rules and Policies for the Digital Audio Radio Service in the 2310-2360 MHz Band*, Report and Order, Memorandum Opinion and Order, and Further Notice of Proposed Rulemaking, 12 FCC Rcd 5754,5810 (1997) (“*DARS R & O/Notice*”) (“These terrestrial gap-fillers would re-transmit the information from the satellite to overcome the effects of signal blockage and multipath interference.”).

³ ITU Table of Frequency Allocations footnote 5.396.

⁴ 4 C.F.R. § 2.106 footnote US327 (2005) (emphasis added).

⁵ *Id.*

⁶ Most recently, in September 2004, the Commission granted Sirius a new STA to operate for 180 days or until the Commission issued final rules governing the use of satellite DARS terrestrial repeaters. *See, e.g., Sirius Satellite Radio Inc. Request to Modify Special Temporary Authority To Operate Satellite DARS Terrestrial Repeaters*, Order and Authorization, 19 FCC Rcd 18140 (2004) (“*2004 STA Grant Order*”); *DARS R & O/Notice*, 12 FCC Rcd at 5810-12 (¶¶ 138-42). Sirius timely filed for renewal of this

satellite radio service consists of 240 transmit sites, of which approximately 130 currently are operational, with 16 additional sites sought but not yet granted.⁷

The Exhibit details the technical parameters of the 11 terrestrial repeaters included in this application. It also lists characteristics of 11 sites already authorized by STA. The lists are broadly similar. With one exception, the repeaters were placed at locations departing slightly from the STA – more than half of them within two miles of their reported sites. In addition, some of the 11 repeaters were built with beamwidths, orientations, sectorization, and/or heights different from the STA's terms. Sirius regrets these errors and is taking steps to help ensure that these errors will not occur in the future.

Although the *2001 STA Grant Order* requires that Sirius pre-coordinate with WCS licensees any repeater affecting an operational WCS base station,⁸ Sirius is not aware of any operational WCS base station in any of the cities listed in the Exhibit and has therefore not provided notice of these proposed modifications to the WCS licensees. However, to the extent deemed necessary by the Commission, Sirius requests a waiver of the pre-coordination requirement. There is good cause for the requested waiver because Sirius received no complaints of interference caused by the former, variant, repeater parameters, and waiving notice will expedite service restoration for Sirius subscribers.⁹ Sirius notes that the 11 repeaters compensated for localized satellite service availability shortfalls.

In sum, Sirius requests special and temporary authorization of the now-dormant transmitters. Especially absent any potential interference to other licensed networks, the public interest would best be served by meeting customer demand for the seamless service envisioned in the Commission's DARS rulemaking—by rapidly granting this application. Accordingly, Sirius requests that the Commission issue a revised 180-day STA authorizing operation of the subject 11 repeaters in accordance with the parameters in the Exhibit. Sirius acknowledges that the conditions imposed in the *2001 STA Grant Order*¹⁰ will apply to any grant of this application.

STA on March 1, 2005. See File No. SAT-STA-20050301-00053. To date, the Commission has not acted on this request. Under Section 1.62(f) of the Commission's rules, the timely filed renewal tolls the expiration of the previously granted STA. 47 C.F.R. § 1.62(f).

⁷ See IBFS File No. SAT-STA-20060623-00067.

⁸ *2001 STA Grant Order* at ¶ 14.

⁹ See 47 C.F.R. § 1.3; *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969); *Northeast Cellular Tel. Co. v. FCC*, 897 F.2d 1166 (D.C. Cir. 1990).

¹⁰ The conditions make all Sirius repeaters subject to the outcome of the Commission's rulemaking in IB Docket 95-91.

**EXHIBIT
SIRIUS SATELLITE RADIO**

Current STA

Market	No Of Sectors	Antenna Type	Sector 1			Sector 2			Sector 3			Coordinates		Antenna Height (feet)		
			Antenna Beamwidth	Orientation	Down tilt	EIRP (Watts)	Antenna Beamwidth	Orientation	Down tilt	EIRP (Watts)	Antenna Beamwidth	Orientation	Down tilt		EIRP (Watts)	Longitude (W)
Akron, OH	1	HMD8V90-R05-H	90	320	0	14100	-	-	-	-	-	-	-	81-30-14.00	41-03-53.00	150
Atlanta, GA	1	EMS FR90-17-00NVL	90	220	0	7000	-	-	-	-	-	-	-	84-25-30.26	33-39-35.60	199
Greensboro, NC	1	HMD8V90-R05-H	90	240	0	14100	-	-	-	-	-	-	-	79-45-38.10	36-05-10.30	504
Harrisburg	1	HMD8V90-R05-H	90	140	0	22400	-	-	-	-	-	-	-	75-56-45.00	40-19-07.00	178
Knoxville, TN	1	HMD8V90-R05-H	90	90	0	22400	-	-	-	-	-	-	-	84-01-22.60	35-57-46.20	265
Lansing, MI	1	EMS FR90-17-00NVL	90	120	0	7000	-	-	-	-	-	-	-	84-33-07.21	42-43-56.76	345
Monterey, CA	1	HMD8PV180-R05-H	180	180	0	9000	-	-	-	-	-	-	-	121-51-24.00	36-36-26.00	135
Orlando, FL	1	EMS RV80-18-00NV	80	130	0	800	-	-	-	-	-	-	-	81-20-17.6	28-27-15.7	90
Pebble Beach, CA	1	EMS FR90-17-00NVL	90	270	0	7000	-	-	-	-	-	-	-	121-55-19.00	36-35-10.00	45
Philadelphia, PA	1	EMS FR90-17-00NVL	90	300	0	7000	-	-	-	-	-	-	-	75-12-11.16	40-00-11.52	280
Wilmington, DE	1	HMD8V90-R05-H	90	225	0	14200	-	-	-	-	-	-	-	75-32-49.00	39-44-53.00	430

Modifications

Market	No Of Sectors	Antenna Type	Sector 1			Sector 2			Sector 3			Coordinates		Antenna Height (feet)		
			Antenna Beamwidth	Orientation	Down tilt	EIRP (Watts)	Antenna Beamwidth	Orientation	Down tilt	EIRP (Watts)	Antenna Beamwidth	Orientation	Down tilt		EIRP (Watts)	Longitude (W)
Akron, OH	2	HMD8PV180-R05-H	180	0	0	150	180	0	150	-	-	-	-	81-31-09.00	41-04-53.80	325
Atlanta, GA	2	EMS FR65-18-00NVL	65	180	0	3000	230	0	3000	-	-	-	-	84-25-54.70	33-39-37.40	130
Greensboro, NC	2	Andrew HMD8V360-R05-H	Omni	0	0	1800	Omni	0	1800	-	-	-	-	79-47-26.90	36-04-30.50	320
Harrisburg, PA	2	Andrew HMD8V360-R05-H	Omni	0	0	1800	Omni	0	1800	-	-	-	-	76-52-45.14	40-15-36.01	290
Knoxville, TN	2	Andrew HMD8V360-R05-H	Omni	0	0	1800	Omni	0	1800	-	-	-	-	83-54-58.40	35-57-45.30	332
Detroit, MI	2	DB992HG28N-S	28	85	0	225	270	0	225	-	-	-	-	83-18-56.52	42-22-57.65	150
Monterey, CA	3	EMS RV80-18-00NV	80	120	0	250	230	0	250	80	350	0	250	121-53-38.40	36-36-02.10	110
Orlando, FL	1	EMS FR65-18-00NVL	65	120	0	7000	-	-	-	-	-	-	-	81-21-54.00	28-26-51.00	90
Pebble Beach, CA	1	Andrew HMD8V360-R05-H	Omni	0	0	1800	Omni	0	1800	-	-	-	-	121-55-22.50	36-35-9.70	50
Philadelphia, PA	2	EMS FR65-18-00NVL, EMS FR90-17-00NVL	65	30	0	3500	315	0	2900	-	-	-	-	75-19-32.00	40-04-06.00	60
Wilmington, DE	2	EMS FR90-17-00NVL	90	190	0	2900	260	0	2900	-	-	-	-	75-32-46.68	39-44-55.58	312

CERTIFICATE OF SERVICE

I, Pam Conley, do hereby certify that on October 13, 2006, I served a copy of Sirius' **Request For Modification of SDARS Terrestrial Repeater STA (180 days)** upon the following parties by U.S. first-class mail, postage pre-paid:

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 /s/ Pam Conley
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