COPY

READ INSTRUCTIONS CAREFULLY Approved by OMB BEFORE PROCEEDING 3060-0589 FEDERAL COMMUNICATIONS COMMISSION Page No 1 of 1 REMITTANCE ADVICE SPECIAL USE AUG 272003 (1) LOCKBOX # 358210 FCC/MELLON FCC USE ONLY **SECTION A - PAYER INFORMATION** (2) PAYER NAME (if paying by credit card, enter name exactly as it appears on your card) (3) TOTAL AMOUNT PAID (U.S. Dollars and cents) \$2,435.00 Wiley Rein & Fielding LLP (4) STREET ADDRESS LINE NO. 1 1776 K Street, NW (5) STREET ADDRESS LINE NO. 2 (7) STATE (8) ZIP CODE (6) CITY DC 20006 Washington (9) DAYTIME TELEPHONE NUMBER (include area code) (10) COUNTRY CODE (if n 202.719.7000 FCC REGISTRATION NUMBER (FRN) AND TAX IDENTIFICATION NUMBER (TIN) REQUIRED (11) PAYER (FRN) (12) PAYER (TIN) 0521289988 0002-1517-44 IF PAYER NAME AND THE APPLICANT NAME ARE DIFFERENT, COMPLETE SECTION B IF MORE THAN ONE APPLICANT, USE CONTINUATION SHEETS (FORM 159-C) (13) APPLICANT NAME Sirius Satellite Radio Inc. (14) STREET ADDRESS LINE NO. 1 1221 Avenue of the Americas (15) STREET ADDRESS LINE NO. 2 36th Floor (17) STATE (16) CITY (18) ZIP CODE NY 10020 **New York** (19) DAYTIME TELEPHONE NUMBER (include area code) (20) COUNTRY CODE (if not in U.S.A.) 212.584.5100 FCC REGISTRATION NUMBER (FRN) AND TAX IDENTIFICATION NUMBER (TIN) REQUIRED (22) APPLICANT (TIN) (21) APPLICANT (FRN) 0521700207 0006-3457-30 COMPLETE SECTION C FOR EACH SERVICE, IF MORE BOXES ARE NEEDED, USE CONTINUATION SHEET (23A) CALL SIGN/OTHER ID (24A) PAYMENT TYPE CODE (25A) QUANTITY 1 (26A) FEE DUE FOR (PTC) (27A) TOTAL FEE FCC USE ONLY \$2,435.00 \$2,435.00 (28A) FCC CODE 1 (29A) FCC CODE 2 (23B) CALL SIGN/OTHER ID (24B) PAYMENT TYPE CODE (25B) QUANTITY (26B) FEE DUE FOR (PTC) (27B) TOTAL FEE FCC USE ONLY (28B) FCC CODE I (29B) FCC CODE 2 SECTION D - CERTIFICATION (30) CERTIFICATION STATEMENT
I, HEATHER (). DIXOY , certify under penalty of perjury that the foregoing and supporting information is true and correct to the best of my knowledge, information and belief. SIGNATURE

SECTION E - CREDIT CARD PAYMENT INFORMATION



1221 Avenue of the Americas New York, NY 10020 tel// 212.584.5100 fax// 212.584.5200 sirius.com

August 26, 2003

### BY HAND DELIVERY

Ms. Marlene H. Dortch Secretary Federal Communications Commission 236 Massachusetts Avenue, NE Washington, DC 20002 Received

**SEP 1 6** 2003

Policy Branch International Bureau

Re: Request to Modify Existing Special Temporary Authority to Operate Satellite DARS Terrestrial Repeaters and Request for Special Temporary Authority to Operate Additional Satellite DARS Terrestrial Repeaters

Dear Ms. Dortch:

Sirius Satellite Radio Inc. ("Sirius") hereby requests that the Federal Communications Commission ("FCC" or "Commission") modify its existing special temporary authority ("STA") to operate satellite digital audio radio service ("satellite DARS") terrestrial repeaters located in Denver, Colorado; Detroit, Michigan; Houston, Texas; New Haven, Connecticut; Springfield, Massachusetts; and Washington, D.C. In addition, Sirius requests STA to operate 135 additional repeaters throughout the country.

The Commission initially granted Sirius STA to operate its Denver, Detroit, Houston, New Haven, Springfield and D.C. repeaters on September 17, 2001 and required Sirius to operate the repeaters "as specified in Exhibit A of the STA request." In August 2002, Sirius requested that the FCC modify its STA to operate the Detroit, Springfield and D.C. repeaters.<sup>2</sup>

Sirius Satellite Radio Inc. Application for Special Temporary Authority to Operate Satellite Digital Audio Radio Service Complementary Terrestrial Repeaters, Order and Authorization, File No. SAT-STA-20010724-00064, 2001 FCC LEXIS 4931, DA 01-2171, ¶ 17 (Sept. 17, 2001) ("Sirius STA Order").

Letter from Robert D. Briskman, Sirius Satellite Radio Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission (dated Aug. 15, 2002) ("August Request").

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Since filing the August Request, Sirius has identified a few "holes" and weaknesses in its repeater coverage, requiring changes to the RF configurations of the Denver, Detroit, Houston, New Haven and D.C. repeaters, and to the location and RF configuration of the Springfield repeater. Thus, Sirius herein requests that the FCC modify its STA to operate these five repeaters as specified in Exhibit 1.<sup>3</sup>

Sirius also has identified remaining gaps in its satellite coverage that must be filled using medium-powered repeaters and herein requests authority to install and operate such repeaters in 105 additional locations as specified in Exhibit 2. The operation of these repeaters will ensure continuous service to customers across the country. Finally, Sirius has identified a number of gaps in its satellite coverage that can be filled using low-power repeaters, and requests authority to install low-power repeaters in 30 locations as specified in Exhibit 2.

Sirius notes that, with respect to its proposed modifications to the technical specifications of its Detroit, Springfield and D.C. repeaters, the August Request is superseded by this request.

It is universally acknowledged that operation of satellite DARS repeaters with EIRPs at or below 2 kW ("low power repeaters") will not cause interference to WCS facilities (which can operate at the identical power) nor to other authorized radiocommunications facilities. Metricom, Inc., Debtor-in-Possession, Comments, FCC File No. SAT-STA-20010724-00064, at 8 (filed Aug. 21, 2001) ("Metricom's system can accommodate operations of SDARS terrestrial repeaters at power levels at or below 2 kW EIRP."); Wireless Communications Association International, Inc., Comments in Opposition to Grant of STA Requests, FCC File No. SAT-STA-20010724-00064, at 5-6 (filed Aug. 21, 2001) (requesting imposition of a 2 kW EIRP limit); WorldCom, Inc., Opposition to STA Request, FCC File No. SAT-STA-20010724-00064, at 2 (filed Aug. 21, 2001) ("WorldCom would not object to repeaters that are limited to a maximum power of 2 kW."); BellSouth Wireless Cable, Inc., Comments, FCC File No. SAT-STA-20010724-00064, at 30 (filed Aug. 21, 2001); AT&T Wireless Services, Inc., Comments, FCC File No. SAT-STA-20010724-00064, at 7 (filed Aug. 21, 2001) ("AWS and other WCS licensees have advocated that SDARS terrestrial repeaters be limited to no more than 2 kW EIRP.").

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As a courtesy, Sirius contacted representatives for each entity holding a WCS license covering a market affected by its proposals (*i.e.*, WorldCom, AT&T Wireless, BellSouth, Comcast, BAL/RIVGAM, Metricom, Voicestream, Telecorp, Verizon Laboratories, NTELOS, Allegheny Communications, Cellutech, Stratos Offshore and Central States Communications) to notify them of its proposed modifications to its STA and its intent to seek STA to operate additional repeaters throughout the country. Sirius requested that the licensees respond by August 22, 2003. No WCS licensee commented or objected.

Sirius respectfully requests that the Commission modify its STA to operate the Denver, Detroit, Houston, New Haven, Springfield and D.C. repeaters and grant it STA to operate new repeaters in the locations specified in Exhibit 2. Grant of this STA request will not alter Sirius' obligations to protect WCS and other authorized radiocommunications facilities from interference. Further, such action will not affect the final characteristics of these and the other Sirius terrestrial repeaters, which remain subject to the outcome of the Commission's Further Notice of Proposed Rulemaking. Grant of this request, however, will serve the public interest by allowing Sirius to provide improved commercial service to customers.

If there are any questions about this submission, please do not hesitate to contact the undersigned.

Patrick L. Donnelly

Executive Vice President and General

Counsel

Sirius Satellite Radio Inc.

### Enclosure

<sup>&</sup>lt;sup>5</sup> Sirius STA Order ¶ 13.

Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band, Report and Order, Memorandum Opinion and Order, and Further Notice of Proposed Rulemaking, 12 FCC Rcd 5754 (1997).

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cc (w/encl): Stephen Duall

Robert Koppel, WorldCom

William Wiltshire, Counsel for AT&T Wireless

Neale Hightower, BellSouth

Christina Burrow, Counsel for Comcast

James Balitsos, BAL/RIVGAM

Tom W. Davidson, Counsel for Metricom

Dan Menser, Voicestream

Thomas Sullivan, Counsel for Telecorp Donald Brittingham, Verizon Laboratories

Mary McDermott, NTELOS

Todd Rosenberg, Counsel for Allegheny Communications

Mia Lovink, Cellutech

Gregory Necaise, Stratos Offshore

Dana Frix, Counsel for Central States Communications

# Sirius Satellite Radio Exhibit I

#### Current STA Authorization

	T T		l	Secto	or I			Sect	or 2			Secto	r 3		Coord	linates	Antenna Height
Market	No Of Setors	Antenna Type	Antenna Beamwidth	Orientation '	Downtill	EiRP (Watts)	Antenna Bearnwidth	Orientation	Downtilt	EiRP (Watts)	Antenna Beamwidth	Orientation	Downtilt	EiRP (Watts)	Longitude (W)	Latitude (N)	(feet)
Denver, CO	2	HMD8PV180-R05-H	180	150	0	6309.57	180	330	0	7585.78		-	-		104-59-22.06	39-44-52.04	598
Detroit, MI	<del>                                     </del>	HMD8V45-R05-H	45	90	0	199952.62	45	315	0	19952.62	-	-	-		83-14-35.42	42-28-28.15	389
Houston, TX	<del>                                     </del>	HMD8V90-R05-H	90	175	0	9772.37	90	295	0	9772.37		-	-		95-21-50.00	29-45-37.00	1060
New Haven, CT	<del>                                     </del>	HMD8PV180-R05-H	180	250	0	10715.19			-		-	-			72-55-20.00	41-18-33.00	243
Springfield, MA	i	HMD8V90-R05-H	90	90	0	14125.38					-	·	-		72-35-33.50	42-06-09.50	445
Washington, DC		HMD8V360-R05-H	Omni		· ·	6918.31	-	-	-	-			-	-	77-00-41.00	38-53-48.00	156

#### Proposed STA Authorization

				Secto	or !			Sect	or 2			Secto	ог 3		Соога	dinates	Antenna Heigh
Market	No Of Setors	Antenna Type	Antenna Beamwidth	Orientation	Downtilt	EiRP (Watts)	Antenna Beamwidth	Orientation	Downtilt	EiRP (Watts)	Antenna Beamwidth	Orientation	Downtilt	EiRP (Watts)	Longitude (W)	Latitude (N)	(feel)
Denver, CO	2	HMD8V360-R05-H	Omni	10.0		3200,00	Omni	15.711 <u>4</u> .111.7		3200,00		-			104-59-22.06	39-44-52.04	598
Detroit, MI	1 1	EMS-FR65-18-00NVL	65	75	5	2800.00	65	165	. 5	2800,00	65	315	0	6200,00	83-14-35.42	42-28-28.15	389
Houston, TX	,	HMD8PV180-R05-H	180	200	0	6000.00	180	270	0	6000,00	-	-	-	1	95-21-50.00	29-45-37.00	1060
New Haven, CT	-	EMS-FR90-17-00NL	90	205	0	4900.00	90	295	0	4900.00	-	-	-		72-55-20.00	41-18-33.00	243
Springfield, MA	2	HMD8PV180-R05-H	180	0	0	3500.00	180	1 0	0	3500,00	-	-	-	-	72-35-26 99	42-06-08.00	334
Washington, DC	2	HMD8PV360-R05-H	Omni			3500,00	Omni	T -	-	3500.00		•			77-00-41.00	38-53-48.00	156

	No Of			Secto	or I			Secto	or 2			Secto	or 3		Coord	linates	
Market	Setors	Antenna Type	Antenna	Orientation	Downtilt	EiRP (Watts)	Antenna	Orientation	Downtilt	EiRP (Watts)	Antenna	Orientation	Downtilt	EiRP (Watts)	Longitude (W)	Latitude (N)	Antenna Height (feet)
Allentown, PA	1	Andrew HMD8V360-R05-H	Beamwidth Omni	0	0	180.00	Beamwidth	Officiation	DOWN	Circi (waits)	Beamwidth	Offentation	Downsin	EIRF (Walts)	75-28-10.50	40-36-10.20	204
Ann Arbor, MI	2	HMD8V120-R05-H	120	150	0	180.00	120	340	0	180.00		<del>-</del>			83-44-32.33	42-16-40.26	270
Arlington, TX	1	EMS FR90-17-00NVL	90	20	0	7000.00	120	340		100.00		<del>                                     </del>	-		97-06-10.08	32-45-42.84	198
Asheville, NC	1	EMS FR90-17-00NVL	90	140	0	7000.00	<del></del>		-	<u> </u>					82-33-21.82	35-35-47.93	156
Atlanta, GA	1	EMS FR90-17-00NVL	90	220	0	7000.00		<u> </u>				-	-	-		33-39-35.60	199
Atlanta, GA	1	EMS FR90-17-00NVL	90	100	0	7000.00		<del>-</del>		<del></del>		<del>                                     </del>			84-25-30.26 84-15-19.00	33-43-03.00	150
Atlantic City/Cape May, NJ	1	EMS FR90-17-00NVL	90	60	0	7000.00		-	-	<del>  -                                   </del>	<del></del>	-	-	<u> </u>	74-26-49,83	39-21-02.86	429
Augusta, GA	1	EMS FR90-17-00NVL	90	300	0	7000.00				<del></del>	<u> </u>	<u> </u>			81-57-52.43		127
Bakersfield, CA	1	EMS FR90-17-00NVL	90	1 0	0	7000.00		<del></del>		· ·		-		<del></del>	119-01-4.56	33-28-30.07	150
Baton Rouge, LA	1	EMS FR90-17-00NVL	90	90	0	7000.00		<u> </u>		<del>-</del>		-			91-11-17.45	35-22-23.67 30-27-05.47	310
Boise, ID	1	EMS FR90-17-00NVL	90	30	0	7000.00				<u> </u>	<del></del>	-					267
Boston, MA	1	EMS FR90-17-00NVL	90	235	0	7000.00		<del>                                     </del>	<del></del>	<del>- :</del>	<del></del>	<del></del>	-	-	116-12-08.70	43-36-53.07	200
Boston, MA	1	EMS FR90-17-00NVL	90	180	0	7000.00	<del></del>	<del></del>	<del></del>	<del>  </del>	<del>-</del> -			<u> </u>	71-14-07.80	42-20-51.65	210
Bridgeport, CT	2	EMS RV80-18-00NV	80	50	0	360.00	80	310	0	360.00	<del></del>			-	71-02-30.82	42-16-26.65	240
Charleston, SC	1	EMS FR90-17-00NVL	90	300	0	7000.00	00	310				-			73-11-19.05	41-10-42.35	154
Charleston, WV	1	EMS FR90-17-00NVL	90	230	0	7000.00	-	<del>                                     </del>	-	-				-	79-56-12.81	32-47-10.42	384
Chattanooga, TN	1	EMS FR90-17-00NVL	90	140	0	7000.00	<del>-</del> -	<del></del>	<del></del>	<del></del>	<u> </u>	ļ	<u> </u>	<del>                                     </del>	81-37-58.37	38-21-02.68	300
Chicago, IL	1	EMS FR90-17-00NVL	90	165	0	7000.00		-	-	<del>                                     </del>	<del></del> -			<u> </u>	85-18-41.84	35-02-56.86	250
Chicago, IL	1	EMS FR90-17-00NVL	90	290	0	7000.00	<del>-</del> -	<u> </u>	<del>:</del>	<b>├</b> ं	<del>- :</del> -	<del></del>	-	<u> </u>	87-35-25.68	41-48-24.88	130
Colorado Springs, CO		EMS FR90-17-00NVL	90	30	0	7000.00	<del>-</del> -	<u> </u>	· · · · · · · · · · · · · · · · · · ·		<u> </u>	-			87-51-34.67	41-59-27.33	230
Columbia, SC	<del>   </del>	Andrew HMD8V360-R05-H	Omni	0	0	180.00			<u> </u>	<del></del>	<del>-</del> -		<u> </u>	<u> </u>	104-49-31.14	38-49-57.18	290
Corpus Christi, TX	1	EMS FR90-17-00NVL	90	250	0	7000,00	<u> </u>	<del></del>	-	<u> </u>	<u> </u>	-	-		81-01-53.60	34-00-07.80	411
Danbury, CT	+ +-	EMS FR90-17-00NVL	90	260	0	7000.00		<u> </u>	<u> </u>	<del> </del>		<del>                                     </del>	-	<u> </u>	97-23-29.14	27-47-55.45	84
Denver, CO	<del>                                     </del>	EMS FR90-17-00NVL	90	170	0	7000.00			-	<del></del>	<u> </u>	-			73-26-41.28	41-23-59.64	
Des Moines, IA	<del>                                      </del>	Andrew HMD8V360-R05-H	Omni	0	0	180.00		-	-	<u> </u>	<del></del>	-			104-53-49.55	39-37-49.74	229 476
Detroit, MI	2	EMS RV80-18-00NV	80	125	4	360.00	80	210	0	360.00		<b>↓</b>	<u> </u>	<u> </u>	93-37-32.70	41-35-14.80	135
Detroit, MI	2	EMS RV80-18-00NV	80	50	0	360.00	80	280			<u> </u>	<u> </u>		<del>-</del>	83-13-10.15	42-19-13.13	190
Detroit MI	2	EMS RV80-18-00NV	80	90	0	360.00	80	245	0	360.00 360.00	<u>-</u>	-		<u> </u>	83-03-50.80	42-22-20.00	120
El Paso, TX	1	EMS FR90-17-00NVL	90	30	0	7000.00	- 00	243				-	•	<del></del>	83-05-01.95 106-29-08.41	42-29-16.80 31-45-37.47	296
Flint, MI	<del>  i  </del>	Andrew HMD8V360-R05-H	Omni	0	0	180.00	<u> </u>				<del></del>		-	<del>-</del> -	83-41-24.14	43-00-56.46	260
Fresno, CA	1	EMS FR90-17-00NVL	90	220	0	7000.00		<del>-</del>	-	<del> </del>	<u> </u>	-		<u> </u>	119-47-40.75	36-44-16.47	173
Ft Meyers, FL	2	EMS RV80-18-00NV	80	130	0	360.00	80	310	0	360.00	<del></del>	<del>.</del>	-		81-47-26.00	26-33-53.00	154
Ft Wayne, IN	1	EMS FR90-17-00NVL	90	320	0	7000.00	- 00	310		360.00	<del></del>	<u> </u>		-	85-08-19.62	41-04-41,24	442
Galveston, TX	1 1	EMS FR90-17-00NVL	90	230	0	7000.00	<del></del>	<del></del>		<del></del>	<del></del>	<del> </del>		<u> </u>	94-47-21.45	29-18-24.50	358
Glendale, CA	2	EMS RV80-18-00NV	80	70	0	80.00	80	330	0	80.00		<del>                                     </del>		<del>                                     </del>	118-15-18.05	34-09-17,84	80
Grand Rapids, MI	<del>                                     </del>	Andrew HMD8V360-R05-H	Omni	0	0	180.00		330		30.00			<del>-</del>	<del></del>	85-40-24.50	42-57-50.10	340
Greenville, SC	1	EMS FR90-17-00NVL	90	0	0	7000.00	<del></del>	<del>                                     </del>	<del>-</del>	<del></del>	<del></del>		<u> </u>	<u> </u>	82-23-59.13	34-50-56.55	132
Hilton Head, SC	1	EMS FR90-17-00NVL	90	300	0	7000.00	<del>-</del>	<del>-</del>	-	<del></del>	<del> </del>	<del>-</del>	<u> </u>	<del></del>	80-43-02.00	32-10-00.99	70
Houston, TX	1	EMS FR90-17-00NVL	90	350	0	7000.00	<del></del>	<del></del>	-	ļ <u>.</u>	<del>-</del>	<u> </u>	-		95-23-48.22	29-56-16.20	188
Huntsville, AL	1	EMS FR90-17-00NVL	90	190	0	7000.00	<del></del>		<u> </u>	<del> </del>						34-43-51.59	148
Jersey City, NJ	1	EMS FR90-17-00NVL	90	260	0	7000.00	<del>-</del> -	<u> </u>		<del>⊢÷</del>	<del></del>	<del>                                     </del>	-		86-35-11.82 74-02-03.89	40-42-57.09	548
Kokomo, IN	1	Andrew HMD8V360-R05-H	Omni	0	0	180.00		<del>-</del>	<del></del>	<del>                                     </del>	<del>                                     </del>		<del>-</del> -	<del> </del>	86-06-30.78	40-42-37.09	78
Lakeland-Winter Haven, FL	<del>                                     </del>	EMS FR90-17-00NVL	90	180	0	7000.00	<del></del>	<del></del>	<del></del>	<del>⊢.</del>	<del></del>	<del>                                     </del>		<del>-</del>	81-57-19,65	28-02-37.97	128
Lancaster, PA	1	EMS FR90-17-00NVL	90	300	0	7000.00		<del>-</del>	-	+-	<del></del>	<del></del>		<del></del>	76-18-11.29	40-02-13.22	195
Lansing, MI	1 1	EMS FR90-17-00NVL	90	120	0	7000.00	<del></del>	<del></del>	<del></del>	<del></del>	<del> </del> -	<del></del>		<del></del>		40-02-13.22	345
Las Vegas, NV	1	EMS RV80-18-00NV	80	180	0	100.00		<del>-</del>	<del>-</del> -	<del>                                     </del>	<del>-</del>	<del>                                     </del>	-	<del>  :  </del>	84-33-07.21 115-10-19.33	36-06-02.24	250
Lexington, KY	2	Andrew HMD8V360-R05-H	Omni	0	0	2000.00	Omni	0	0	2000.00	<del></del>	<del></del>	<u> </u>	<u> </u>	84-30-01.50	38-02-50.80	333
Lincoln, NE	1 1	EMS FR90-17-00NVL	90	330	0	7000.00	Jinn	<del></del>	<u> </u>	2000.00	<del></del>	<u> </u>		<del>-</del>	96-42-00.90	40-48-32.88	398
Los Angeles, CA	1	EMS RV80-18-00NV	80	135	0	800.00	$\vdash$	<del> </del>	<u> </u>	<del> </del>	<b></b> _	<del>                                     </del>		<del>                                     </del>	117-45-00.18	33-39-32.54	148
Los Angeles, CA	2	EMS RV80-18-00NV	80	15	0	800.00	80	130	0	800.00	<del></del>	-		<u> </u>	117-45-00.18	33-39-32.54	155
Los Angeles, CA	1	EMS RV80-18-00NV	80	230	0	800.00	- 30	130	, , , , , , , , , , , , , , , , , , ,	000.00	<del></del>			<u> </u>	118-08-30.20	33-48-14.50	180
Los Angeles, CA	2	EMS FR65-18-00NVL	65	80	0	3500.00	65	200	0	3500.00	<del></del>		<u> </u>	<u> </u>		33-56-44.38	140
Los Angeles, CA	1	EMS FR90-17-00NVL	90	280	0	7000.00	- 65	200		3500.00	<u> </u>	-	<u> </u>	<u> </u>	117-22-20.00		208
Los Angeles, CA	1	EMS FR90-17-00NVL	90	100	0	7000.00	<del></del>	<del></del>	-	<b>├</b>		<del>-</del>	<u> </u>	<del></del>	117-32-32.82	33-52-51.943	146
Los Angeles, CA	1	EMS FR90-17-00NVL	90	45	0	7000.00	<del></del>	<del></del>	· - · -	<del></del>	<u> </u>	<del>-</del>	-	<del>-</del>	117-43-33.79	34-02-37.96	140
Los Angeles, CA	+ +	EMS FR90-17-00NVL	90	130				<u> </u>	•	<u> </u>		-		<u> </u>	118-08-37.64	34-08-32.51	
Los Angeles, CA		EMS FR90-17-00NVL		130	0	7000.00	<u> </u>	<u> </u>	<u> </u>	<u> </u>		<del>                                     </del>		<u> </u>	117-55-30.39	33-48-37.79	140
Los Angeles, CA	'	EMS FR90-17-00NVL	90		0	7000.00	<del>-</del> -	<u> </u>	<u> </u>	<u> </u>	<del></del>	<u> </u>		┷	117-52-27.79	33-37-04.91	200
Lowell, MA	<del>                                     </del>	EMS FR90-17-00NVL	90 90	110	0	7000.00	<u> </u>	· ·	<u> </u>	<u> </u>	-				117-48-49.79	33-51-49.94	250
LUTTER, IVIA	•	EM9 LK80-17-00NVL	i an	0	0	7000.00			1 .		i -	1 .	1 -	1 - 1	71-18-44.06	42-38-57.14	220

				Sector	-			Sector	,			Socior			Coord	nates	
Market	Setors	Antenna Type	Antenna				Antenna		Н		Antenna	lanc	3 6				Antenna Height
			Beamwidth	Orientation	Downtilt	EiRP (Watts)	Beamwidth	Orientation	Downtilt	EiRP (Watts)	Beamwidth	Orientation	Downtilt	EiRP (Watts)	Longitude (W)	Latitude (N)	(teet)
Madison W	- -		6	98	٥	7000.00						,	·	·	37-37	32-50-13.73	125
Manchaster MA	†	EMS EDSO 17 DONA	Cmo	0	٥	180.00			-	•				-	89-23-07.58	43-04-25.54	190
Marin County CA	-	EMS FROD 17 DONN	8	000	>  c	7000,00		1							70-43-35.09	42-35-35.81	344
Miami, FL	-	FMS FR90-17-00NVI	8	200		7000.00		1	1	1	•	•			122-43-34.03	37-54-48.87	320
Miami, FL	-	EMS FR90-17-00NVL	6	255	,	7000 00		1	1	1					80-19-25.81	25-49-24-54	507
Minneapolis, MN	-	EMS FR90-17-00NVL	06	220	0	7000.00	].			1	.			.	93-13-34 20	44-51-21 12	232
Mobile, AL	-	HMD8PV180-R05-H	180	270	0	320 00				†					88.02.29.27	30.41.34.80	507
Modesto, CA	-	EMS FR90-17-00NVL	96	105	0	7000.00									121-00-20 98	37-38-34 73	150
Naples, FL	-	Andrew HMD8V360-R05-H	Omni	0	٥	180.00		,			,				81-45-50.00	26-09-18.99	110
New Haven/Meriden, CT	1	EMS FR90-17-00NVL	06	110	0	2000.00				,			,		72-48-16.64	41-33-03.65	190
New Orleans, LA	1	EMS FR90-17-00NVL	06	270	0	7000.00								,	90-11-59.67	29-54-52.97	175
New York, NY	1	EMS FR90-17-00NVL	06	100	0	7000.00									73-49-51.83	40-42-52.63	239
New York, NY	+	EMS FR90-17-00NVL	06	75	0	7000.00			1		, ,			]	73-29-28.42	40-49-18.98	178
New York, NY	1	EMS FR90-17-00NVL	06	06	0	7000.00									73-21-51.36	40-42-32.75	175
New York, NY	2	EMS FR65-18-00NVL	65	30	0	7000.00	65	330	0	7000.00	[	,			74-00-25.74	41-02-56.88	300
New York, NY	-	EMS FR90-17-00NVL	06	160	0	7000.00	,			,					73-58-26.76	40-40-13.44	212
New York, NY	-	EMS FR90-17-00NVL	06	135	0	7000.00		,		,	,				73-47-48.12	40-40-00.12	150
Newark / East Orange, NJ	-	EMS FR90-17-00NVL	06	295	0	7000.00			,	-					74-13-31.31	40-45-45.88	86
Newark / Elizabeth NJ	-	EMS FR90-17-00NVL	90	250	0	7000.00	-	-			-				74-12-59.48	40-39-42.63	243
Newark, NJ	-	EMS FR90-17-00NVL	90	250	0	7000.00		ı						,	74-11-21.48	40-43-53.32	165
Newark, NJ	-	EMS FR90-17-00NVL	06	290	0	7000.00			,			-	-		74-11-09.04	40-45-08.03	239
North Hollywood/Burbank, CA	-	EMS RV80-18-00NV	80	330	0	800.00	-			•	-		,	-	118-22-11.00	34-08-44.00	06
Oakland, CA	-	EMS FR90-17-00NVL	06	08 9	٥	7000.00	-	,		•				,	122-15-54.63	37-48-38.24	404
Official Inc.	-	EMS FR30-17-00NVL	90	45	0	7000.00		,							95-56-13.54	41-15-34,23	634
Palm Reach FI	-	EMS KV80-18-00NV	G 8	130	0	900.00				1	$\cdot$			·	81-20-17.6	28-27-15.7	0.5
Paramis N.1	,	EMS FRSC-17-CONVE	200	200		00000	, 8		, (	, 00					80-04-8.46	26-27-37.50	165
Pebble Beach, CA	,	EMS FR90-17-00NVI	8 8	020		700000	8	2		000.000	-[				121 55 19 00	36.35.40.00	45
Pensacola, FL	-	EMS FR90-17-00NVL	8	Ĉ	0	2000.00		1	1	1.					87-12-53-48	30-24-37 41	125
Philadelphia, PA	-	EMS FR90-17-00NVL	06	300	0	7000,00									75-12-11.16	40-00-11 52	280
Philadelphia, PA	-	EMS FR90-17-00NVL	06	356	0	7000.00		,		<b>.</b>					75-10-27.74	40-01-34.85	160
Philadelphia, PA	1	EMS FR90-17-00NVL	90	215	0	7000.00									75-13-50.88	39-54-01.80	151
Pittsburgh, PA	1	EMS FR90-17-00NVL	06	180	0	7000.00					,				80-06-03.80	40-23-27.75	195
Port Chester, NY	-	EMS FR65-18-00NVL	65	20	0	7000.00									73-40-26.00	41-00-19.00	80
Portland, ME	-	EMS FR90-17-00NVL	8	240	0	7000.00	-	,	'						70-15-13.24	43-39-40.37	200
Providence, RI	-	EMS FR90-17-00NVL	06	245	0	7000.00			,						71-27-46.79	41-43-40,64	204
Raieign-Dumam, NC	- -	Andrew HMU8V360-R05-H		0	0	180.00	•			'					78-54-08.70	35-59-53.30	239
Redlands, CA	-	EMS FR90-17-00NVI	S S	110	0 0	7000.00	٠   ٠	.	.	.   .	. [	, .			/5-55-29.3/ 117-12-02.86	34-04-04 95	190
Reno, NV	-	Andrew HMD8V360-R05-H	Omni	0	0	180.00		,		Ì,	-					39-31-31 00	250
Richardson, TX	-	EMS FR90-17-00NVL	96	20	0	7000.00								,	96-49-06.36	32-55-22.14	225
Roanoke, VA	+	EMS FR90-17-00NVL	06	0	0	2000.00									79-56-25.65	37-16-21.97	320
San Bernardino, CA	-	EMS FR90-17-00NVL	06	90	0	2000.00			-	,	,				117-17-35.6	34-06-23.64	182
San Diego, CA	-	EMS FR90-17-00NVL	90	330	0	7000.00	-	•						·	117-07-35.88	32-46-27.82	187
San Francisco CA	- -	EMS FR90-17-00NVL	8	165	0	7000.00		•		•	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	,	,		122-26-51 10	37-38-44.23	202
San Francisco, CA	1	EMS FR90-17-00NVL	8 6	150	, 0	7000.00					.   -		. [		122-01-44-20	37-26-56.22	262
San Francisco, CA	-	EMS FR90-17-00NVL	06	180	0	7000.00				1					122-05-34.13	37-36-47.25	139
San Jose, CA	-	EMS FR90-17-00NVL	06	140	0	2000.00		,		,	,		[.		121-57-00 22	37-21-56.62	125
Santa Barbara, CA	1	EMS FR90-17-00NVL	96	0	0	7000.00	-				•				119-50-53.99	34-24-46.00	207
Santa Rosa, CA	-	EMS FR90-17-00NVL	06	06	0	7000.00								,	122-42-29.54	38-26-13.02	140
Sarasota, FL	-	EMS FR90-17-00NVL	06	06	0	2000.00	-	ŗ						,	82-34-46.15	27-19-18.93	250
Scranton, PA	-	EMS FR90-17-00NVL	06	0	0	7000.00	•		,		•			·	75-39-54.81	41-24-32.15	165
Seattle, WA	-	EMS FR90-17-00NVL	6	110	0	7000.00	-			•	•			·	122-11-46.22	47-36-53.23	358
Shreveport, LA	- -	EMS FR90-17-00NVL	8 8	300	0	7000.00				1					93-44-52.49	32-30-50.25	354
Stamford, CT	- -	FMS FR90-17-00NVI	8 6	35		2000.00	-					. ]			73-32-07-60	1 4	200
Stamford, CT	-	EMS FR90-17-00NVL	06	25	0	7000.00	,				,				73-26-04.20	4_	220
Stockton, CA	-	EMS FR90-17-00NVL	90	310	0	7000.00							,		121-17-12.15	37-57-11.92	142

# Sirius Satellite Radio Exhibit 2

	No Of			Secto	or I			Secto	or 2			Secto	or 3		Соот	dinates	Anienna Height
Market	Setors	Antenna Type	Antenna Beamwidth	Orientation	Downtilt	EiRP (Watts)	Antenna Beamwidth	Orientation	Downtilt	EiRP (Watts)	Antenna Beamwidth	Orientation	Downtilt	EiRP (Watts)	Longitude (W)	Latitude (N)	(feet)
Tacoma, WA	2	EMS FR65-18-00NVL	65	170	0	3500.00	65	330	0	3500.00	-	,		1	122-26-16.91	47-15-07.84	215
Toledo, OH	2	Andrew HMD8V360-R05-H	Ömni	0	0	2000.00	Omni	0	0	2000.00	· ·			-	83-32-07.10	41-39-04.00	400
Trenton, NJ	2	HMD8PV180-R05-H	180	20	Ō	7000.00	180	20	0	7000.00	-	·	-	-	74-46-03.54	40-13-12.780	180
Tyson's Comer, VA	2	EMS FR90-17-00NVL	90	100	0	7000.00	90	290	0	7000.00	-		-	<del> </del>	77-13-43.70	38-55-22.20	165
Vallejo-Fairfield, CA	1	EMS FR90-17-00NVL	90	45	0	7000.00			-	-	-		-	-	122-15-23.70	38-06-04.3	65
Ventura, CA	1	EMS FR90-17-00NVL	90	30	0	7000.00	-	-		-	-	·	-	-	119-17-37.94	34-16-36.26	120
Washington DC 1	1	EMS FR90-17-00NVL	90	150	0	7000.00	-	-	-	-	-	-		-	76-56-59.00	38-51-38.00	220
Washington DC 2	1	EMS FR90-17-00NVL	90	180	Ó	7000.00	-	-		-	-	-		-	77-02-34.08	38-48-44.60	155
Washington DC 3	1	EMS FR90-17-00NVL	90	90	0	7000.00	-	-	-	-	-		-	-	76-52-57.10	38-59-26.60	205
Washington DC 4	1	EMS FR90-17-00NVL	90	315	0	7000.00	-	-	-	-	-	1—-		-	77-08-30.08	39-00-56.60	255
Washington DC 5	1	EMS FR90-17-00NVL	90	190	0	7000.00	-	-	-	-	-	-		<del></del>	77-10-57.07	38-46-51.60	160
Washington DC 6	1	EMS FR90-17-00NVL	90	270	0	7000.00	-		-	-	-	·	-	1 -	77-21-20.05	38-56-57.60	218
Waterbury, CT	1	Andrew HMD8V360-R05-H	Omni	0	0	180.00	-	-	-	-	-	·	-	· ·	73-02-43.02	41-33-43.00	131
West Palm Beach, FL	2	HMD8PV180-R05-H	180	60	0	150.00	180	240	0	150.00	· -	-		1	80-04-34.00	26-41-28.00	200
Wichita, KS	1	EMS FR90-17-00NVL	90	10	0	7000.00	-	-		1 -	1			1	97-20-17.82	37-41-23.57	325
Worcester, MA	2	Andrew HMD8V360-R05-H	Omni	0	0	2000.00	Omní	0	0	2000.00	· .		-	-	71-48-12.9	42-15-47.66	333