

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, DC 20554

In the Matters of	)	
	)	
Amendment of Part 27 of the	)	
Commission’s Rules to Govern the	)	WT Docket No. 07-293
Operation of Wireless Communications	)	
Services in the 2.3 GHz Band	)	
	)	
Establishment of Rules and Policies for the	)	IB Docket No. 95-91
Digital Audio Radio Satellite Service in the	)	GEN Docket No. 90-357
2310-2360 MHz Frequency Band	)	RM No. 8610

**COMMENTS OF STRATOS OFFSHORE SERVICES COMPANY**

Stratos Offshore Services Company (“Stratos”), licensee of the four 2.3 GHz band Wireless Communications Service (“WCS”) authorizations for the Gulf of Mexico service area,<sup>1</sup> hereby responds to the *Public Notice* soliciting comment on specific proposed revisions to the Part 25 and Part 27 rules governing WCS and the Digital Audio Radio Service (“DARS”) (the “*Public Notice*”).<sup>2</sup> For the reasons set forth below, Stratos urges that the draft Part 27 rules be modified so as not to frustrate Stratos’ deployment of point-to-point links utilizing WCS spectrum in the Gulf of Mexico.

**I. INTRODUCTION**

Stratos is an international provider of vital communications resources, the most important of which for purposes of these proceedings is its comprehensive communications network in the Gulf of Mexico. That network, consisting of microwave, satellite, and other forms of radio communications, links together hundreds of offshore

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<sup>1</sup> The call signs assigned Stratos’ licenses are KNLB212, KNLB319, KNLB320 and KNLB321.

<sup>2</sup> Commission Staff Requests That Interested Parties Supplement The Record On Draft Interference Rules For Wireless Communications Service And Satellite Digital Audio Radio Service, *Public Notice*, DA 10-592 (rel. Apr. 2, 2010) (“*Public Notice*”).

oil and gas exploration and production platforms and ancillary facilities. Stratos' customers rely on these communications resources to, among other things, monitor unmanned facilities, control sea traffic and, in the event of emergencies, coordinate fire, safety and rescue personnel. Stratos has been an aggressive competitor in the Gulf communications marketplace, and currently serves over 60% of the oil and gas rigs and platforms in the Gulf utilizing the range of spectrum solutions at its disposal. Stratos' system is the most robust, comprehensive communications system serving the Gulf of Mexico. In many areas, Stratos is the sole communications service provider, and other communications systems are not readily available to connect the numerous oil and gas facilities and personnel located in the Gulf.

Stratos employs its WCS spectrum holdings extensively as part of its Gulf network. At present, it has 200 fixed point-to-point transmitters deployed on its WCS spectrum within the Gulf service area, with 32 operating on the A block, 122 on the B block and 23 on each of the C and D blocks.<sup>3</sup> Stratos has deployed a frequency division duplex ("FDD") solution utilizing equipment from Alcatel Lucent that pairs channels in the 2305-2320 MHz segment of the WCS band for communications in one direction with channels in the 2345-2360 MHz segment of the WCS band for communications in the reverse direction. In addition, Stratos is evaluating a potential new offering that would provide a fixed broadband service to itinerant oil and gas industry support facilities in the Gulf utilizing time division duplex ("TDD") technology.

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<sup>3</sup> Unlike other WCS licensees, who have faced substantial marketplace uncertainty for more than a decade due to the lack of technical rules governing DARS terrestrial repeaters and have thus been reluctant to deploy, Stratos has been reasonably confident that repeaters would not be deployed in the Gulf and thus has been able to move forward with the implementation of its business plan.

These services are all permitted under the current Part 27 rules applicable to WCS. To the extent the rule changes advanced in the *Public Notice* are intended to facilitate mobile operations in the WCS band, they do nothing to further Stratos' ability to meet the unique communications needs in the Gulf. Nonetheless, Stratos appreciates the Commission's desire, as reflected in the National Broadband Plan, to modify the WCS rules to advance the ability of land-based licensees to use WCS spectrum to provide mobile broadband offerings.<sup>4</sup> In implementing this element of the National Broadband Plan, however, the Commission should assure that its efforts to protect adjacent services from WCS mobile interference do not undermine Stratos' well-established use of WCS spectrum in the manner that best meets the unique needs of the Gulf community.

## II. DISCUSSION

The WCS Coalition has shared its comments in response to the *Public Notice* with Stratos, and Stratos endorses the concerns expressed by the WCS Coalition. Stratos is submitting these separate comments to highlight two issues of particular applicability to Stratos and its operations in the Gulf.

### A. *THE COMMISSION SHOULD NOT BAR POINT-TO-POINT FDD OPERATIONS FROM THE 2305-2320 MHZ SEGMENT OF THE WCS BAND.*

Of greatest concern to Stratos is the proposal set forth in draft Section 27.50(a)(1)(iii) that “[b]ase and fixed stations using frequency division duplex (FDD) technology are restricted to transmitting in the 2345-2360 MHz bands.”<sup>5</sup> Read literally, this proposal would appear to bar point-to-point fixed stations employing FDD technology from operating in the 2305-2320 MHz portion of the WCS band. Stratos

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<sup>4</sup> See FCC, *Connecting America: The National Broadband Plan*, at 85-86 (rel. Mar. 16, 2010) (recommendation 5.8.1).

<sup>5</sup> See *Public Notice* at 9.

strenuously objects to adoption of this proposal for a very simple reason – *it would require Stratos to cease its long-standing use of the WCS band in the Gulf, as every one of the point-to-point FDD 2.3 GHz link pairs deployed by Stratos to provide vital services to the oil and gas industry uses the 2305-2320 MHz segment for communications in one direction* and its equipment is not tunable to operate in the 2345-2360 MHz segment in both directions. As the Stratos network is the only network providing service to many oil and gas facilities in the Gulf, and in many areas is the only network readily available to provide such service, adoption of the rules as presently proposed would have a direct and dire impact on the ability of oil and gas companies to establish and maintain these critical communications links.

From the time the Commission first adopted rules to govern WCS operations in the 2.3 GHz band, WCS licensees have been free to use the entire band, both the 2305-2320 MHz segment and the 2345-2360 MHz segment, for FDD point-to-point links. Based on the rules that have been in place for more than a dozen years, Stratos has invested many millions of dollars to deploy its FDD WCS network in the Gulf – a network that is used to provide critical communications services to the oil and gas industry. Both the satellite DARS and Mobile Aeronautical Telemetry (“MAT”) communities actively participated in the Commission rulemaking proceeding at which those rules were adopted,<sup>6</sup> and neither sought Commission reconsideration or appellate review when those rules were adopted.

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<sup>6</sup> Comments of Aerospace and Flight Test Radio Coordinating Council, GN Docket No. 96-228 (filed Dec. 4, 1996); Comments of American Mobile Radio Corporation, GN Docket No. 96-228 (filed Dec. 4, 1996); Reply Comments of Aerospace and Flight Test Radio Coordinating Council, GN Docket No. 96-228 (filed Dec. 16, 1996); Reply Comments of Satellite CD Radio, Inc., GN Docket No. 96-228 (filed Dec. 16, 1996).

To Stratos' knowledge, there has *never* been a complaint to the Commission of interference caused by any of Stratos' point-to-point links in the 2305-2320 MHz segment. Not surprisingly, then, there is nothing in the *Notice of Proposed Rulemaking* that commenced WT Docket No. 07-293 suggesting the Commission intended to modify Part 27 to preclude FDD point-to-point links in the 2305-2320 MHz segment.<sup>7</sup> And, no participant in these proceedings has suggested that point-to-point FDD fixed links be precluded from operating in the 2305-2320 MHz segment of the WCS band.<sup>8</sup>

Put simply, there is absolutely nothing in the record of these proceedings to support new rules that preclude point-to-point FDD links from operating in the 2305-2320 MHz segment of the WCS band. Against this backdrop, Stratos can only assume that proposed Section 27.50(a)(1)(iii) was intended to force those WCS licensees that elect to deploy mobile FDD systems to employ the lower WCS segment for mobile-to-base transmissions and to use the upper WCS segment for base-to-mobile transmissions. If the Commission is disposed to adopting such a requirement for mobile FDD systems

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<sup>7</sup> See 5 U.S.C. § 553(b)-(c) (requiring public notice and opportunity to comment before adopting a substantive rule change); *American Radio Relay League, Inc. v. FCC*, 524 F.3d 227, 236-40 (D.C. Cir. 2008) (remanding FCC order for failing to satisfy the notice and comment requirements of the Administrative Procedure Act ("APA")); *Sprint Corp. v. FCC*, 315 F.3d 369, 377 (D.C. Cir. 2003) ("Because the Commission failed to issue a new NPRM to afford proper notice and opportunity for comment, we grant the petitions, vacate the rule, and remand the case to the Commission.").

<sup>8</sup> To the extent there have been proposals addressing FDD usage of the band, none have suggested stripping licensees of their current ability to deploy point-to-point FDD links using the 2305-2320 MHz segment. Sirius XM Radio Inc. has suggested that mobile systems be required to use the 2305-2315 MHz for mobile device transmission, but to the best of Stratos' knowledge has not suggested any limit on the spectrum that could be used for FDD point-to-point links. See Letter from Robert L. Pettit, Counsel to Sirius XM Radio, Inc., to Marlene H. Dortch, Secretary, FCC, IB Docket No. 95-91, Attachment at Slide 12 (filed Jan. 22, 2010). And, while the Aerospace and Flight Test Radio Coordinating Council ("AFTRCC") has urged that use of the 2345-2360 MHz band by FDD systems be limited to base stations (presumably including fixed stations) and closed to mobile use, to the best of Stratos' knowledge AFTRCC has never proposed any limit on the use of the 2305-2320 MHz band. See Letter from William K. Keane, Counsel for AFTRCC, to Marlene H. Dortch, Secretary, FCC, IB Docket No. 95-91, Attachment at Slide 9 (filed Mar. 29, 2010).

(and Stratos takes no position as to whether such a requirement should be adopted), Stratos suggests it do so explicitly by amending draft Section 27.50(a)(1)(iii) to read as follows:

Mobile systems using frequency division duplex (FDD) technology are restricted to utilizing the 2305-2320 MHz band for mobile-to-base station transmissions and the 2345-2360 MHz band for base station-to-mobile transmissions.

Such language will eliminate any risk of ambiguity as to whether the Commission has eliminated the present ability of licensees to deploy FDD point-to-point systems utilizing both segments of the WCS band and provide Stratos with the regulatory certainty it needs to continue operating and expanding its FDD point-to-point network to meet the needs of the oil and gas industry in the Gulf.

*B. THE COMMISSION SHOULD RETAIN THE EXISTING OOBE LIMITS BELOW 2305 MHZ AND ABOVE 2360 MHZ.*

Proposed rule Section 27.53(a)(1) set forth in the *Public Notice* would require WCS point-to-point facilities to attenuate out-of-band emissions (“OOBE”) as follows:<sup>9</sup>

<b>Frequencies</b>	<b>Minimum Attenuation</b>
Below 2300 MHz	70+10log(P)
2305-2300 MHz	43+10log(P)
2320-2345 MHz	75+10log(P)
2360-2362 MHz	43+10log(P)
2362.5-2365 MHz	55+10log(P)
2365-2376.5 MHz	70+10log(P)
2367.5-2370 MHz	72+10log(P)
Above 2370 MHz	75+10log(P)

As a matter of principle, it is far from clear that the record supports a tightening of the OOBE limits applicable to fixed WCS stations as proposed by the *Public Notice*.

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<sup>9</sup> See *Public Notice* at 10.

However, although certain of these requirements are more stringent than those currently applicable, Stratos has been advised by its vendor that its presently installed 2.3 GHz band FDD point-to-point equipment complies with these proposed OOB limits (albeit without much margin). Thus, Stratos does not object to adoption of the OOB requirements proposed in the *Public Notice*.

Stratos is particularly pleased that the *Public Notice* proposal addresses Stratos' earlier concern about the potential adoption of a  $75+10\log(P)$  OOB attenuation requirement below 2305 MHz and/or above 2360 MHz.<sup>10</sup> Were such a requirement to be imposed, Stratos would be required to waste approximately 2.5 MHz of the lower A block channel and 2.5 MHz of the upper B block channel as guardband due to the lack of available filters capable of meeting that limit at band edge. Suffice it to say that there is absolutely no basis in the record to require Stratos to make that sacrifice. The MAT community participated extensively in the 1997 proceeding during which the current fixed OOB limits were adopted, it sought neither Commission reconsideration nor appellate review after such limits were adopted, and it has presented absolutely no showing that the other rule changes being considered by the Commission here justify such an aggressive tightening of the OOB limits imposed on fixed WCS facilities.<sup>11</sup> If MAT has modified its facilities since 1997 such that they are more vulnerable than previously, it is MAT, not Stratos, that should be devoting its spectrum to guardband.

At a minimum, should the Commission be disposed in these proceedings to impose more restrictive OOB requirements on WCS licensees than those set forth in the

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<sup>10</sup> See Letter from Paul J. Sinderbrand, Counsel to Stratos Offshore Services Company, to Monica Desai, Deputy Chief, Wireless Telecommunications Bureau, FCC, WT Docket No. 07-293, at 1 n.1 (filed Mar. 26, 2010).

<sup>11</sup> *Supra* note 8.

*Public Notice*, the Commission should grandfather facilities constructed by Stratos and others in compliance with the permanent rules that had become final.<sup>12</sup> Such grandfathering would be particularly appropriate in Stratos' case given that there have been no complaints of interference caused by Stratos' extensive WCS network. The Commission has previously found it appropriate to grandfather existing facilities to ensure the continuity of operations, preserve investments, and mitigate unnecessary costs to existing licensees when the potential for interference is minimal and few alternatives exist for maintaining operations.<sup>13</sup> Stratos' well-established network facilities in the Gulf of Mexico should be afforded similar treatment.

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<sup>12</sup> Because Stratos constructed its point-to-point links in compliance with Commission rules that had been adopted and become final, its grandfathering request is readily distinguishable from the *Public Notice's* proposed refusal to grandfather DARS terrestrial repeaters that were constructed pursuant to special temporary authorizations that specifically warned the facilities might have to be modified upon the adoption of final rules.

<sup>13</sup> See Amendment of Parts 13 and 80 of the Commission's Rules Concerning Maritime Communications, *Second Report and Order, Sixth Report and Order, and Second Further Notice of Proposed Rule Making*, 19 FCC Rcd 3120, 3134 ¶ 25 (2004) ("We believe it would impose unnecessary costs on ship station licensees and possible burdens on manufacturers to require that they immediately replace all existing radio equipment that does not comply with the new requirements, so we will grandfather existing equipment indefinitely from these requirements. Non-compliant equipment installed prior to the effective date of these rules may continue to be used for its remaining useful life."); Amendment of Parts 2 and 25 to Implement the Global Mobile Personal Communications by Satellite (GMPCS) Memorandum of Understanding and Arrangements, *Second Report and Order*, 18 FCC Rcd 24423, 24457 ¶ 102 (2003) ("We agree that previously manufactured L-band METs should be grandfathered, given the difficulty of recalling such existing METs and since there has been no complaint of interference from such devices to date."); Amendment of Part 90 of the Commission's Rules and Policies for Applications and Licensing of Low Power Operations in the Private Land Mobile Radio 450-470 MHz Band, *Report and Order*, 18 FCC Rcd 3948, 3980 ¶ 80 (2003) ("Rather than requiring some of these licensees to discontinue existing authorizations, we will grandfather these high power stations. Our decision here is due, in large part, to our belief that future low power users can be protected from these high power operations and the lack of sufficient comparable alternative frequencies for such operations."); Amendment of the Commission's Rules With Regard to the 3650-3700 MHz Government Transfer Band, *First Report and Order, and Second Notice of Proposed Rule Making*, 15 FCC Rcd 20488, 20500 ¶ 24 (2000) ("While incumbent FSS operations could relocate to other bands that are available for FSS, relocation would necessitate significant reconfiguration costs and disrupt continuity of operations. Recognizing the importance of providing continuity of service to the public, we will grandfather existing FSS earth station sites indefinitely. We also believe that the Commission should not mandate relocation of FSS operations to other bands because FSS and terrestrial operations, as limited by

### III. CONCLUSION

As the WCS licensee for the Gulf of Mexico, Stratos faces unique challenges in deploying WCS and has a unique perspective on the rules and policies that should govern the 2.3 GHz band. While little in these proceedings will be of particular benefit to Stratos, Stratos appreciates the Commission's desire to eliminate obsolete restrictions on the band that have precluded mobile uses. The Commission must take care, however, that it does not inadvertently frustrate Stratos' ongoing ability to meet the needs of the oil and gas industries in the Gulf using the 2.3 GHz band. Adoption of the proposals advanced above, coupled with the suggestions being made by the WCS Coalition, will assure that Stratos can continue providing the same high quality communications services its customer base has come to rely upon.

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this *First Report and Order*, are not fundamentally incompatible.”) (citations omitted); Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band To Reallocate the 29.5-30.0 GHz Frequency Band, To Establish Rules and Policies for Local Multipoint Distribution Service And for Fixed Satellite Services, *Second Report and Order, Order on Reconsideration, and Fifth Notice of Proposed Rulemaking*, 12 FCC Rcd 12545, 12588-90 ¶¶ 99, 102 (1997) (grandfathering incumbent licensees and allowing them to renew their licenses to preserve “investments and the public benefits being derived.”).