Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Application of New ICO Satellite	)	File Nos. SES-LIC-20071203-01646,
Services G.P. for Blanket Authority for	)	SES-AMD-20080118-00075, and
Ancillary Terrestrial Component Base	)	SES-AMD-20080219-00172
Stations and Mobile Terminals for	)	
2 GHz Mobile Satellite Service	)	

PETITION TO DENY OF SPRINT NEXTEL CORPORATION

SPRINT NEXTEL CORPORATION

Lawrence R. Krevor
Vice President, Government Affairs – Spectrum

Trey Hanbury
Director, Government Affairs

2001 Edmund Halley Drive
Reston, VA 20191
(703) 433-4141

April 4, 2008

SUMMARY

New ICO Satellite Services G.P. (ICO) seeks authority to operate an Ancillary Terrestrial Component (ATC) network in the 2 GHz band in connection with its 2 GHz Mobile Satellite Service (MSS) system. The Commission should deny ICO's ATC application.

ICO has failed to meet crucial gating criteria that are a prerequisite for ATC authorization and has taken no steps to ensure that it will complete this requirement. If the MSS spectrum is not cleared for MSS use, ICO cannot provide the national coverage it must offer as a prerequisite to ATC authority. ICO will not have access to this spectrum unless it either relocates the Broadcast Auxiliary Service (BAS) licensees from this band, or pays the debt it owes to Sprint Nextel to perform this activity on its behalf as the Commission's rules and policies require. ICO is seeking to evade both obligations, however. By failing to satisfy its band clearing obligations, ICO is in no position to certify that it has the right to obtain lucrative ATC authority from the Commission.

The Commission should also deny ICO's request for ATC authority because it will cause a significant risk of interference to other licensees. ICO seeks a number of waivers of the Commission's technical rules. Its waiver requests would rewrite these rules entirely to accommodate a service the Commission never considered at the time of the MSS ATC decision. ICO's proposed ATC authorization seems quite likely to interfere with scores of millions of current cellular phone users. ICO does not propose any interference-mitigation measures that might protect incumbent operators against harmful interference, but instead proposes significantly higher power operations and higher levels of out-of-band emissions than ever contemplated by any of the current CMRS users that ICO uses as its benchmark for interference protection. ICO's proposed changes would significantly raise the levels of interference that

could be caused by MSS/ATC transmissions to a variety of Advanced Wireless Services and Personal Communications Services that operate in neighboring bands. Therefore, the Commission should deny ICO's application for ATC authority.

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PETITION TO DENY OF SPRINT NEXTEL CORPORATION

I. Introduction

New ICO Satellite Services G.P. (ICO) seeks authority to operate an Ancillary Terrestrial Component (ATC) network in the 2 GHz band in connection with its 2 GHz Mobile Satellite Service (MSS) system. The Commission should deny ICO's ATC application. First, ICO has failed to meet crucial gating criteria that are a prerequisite for ATC authorization and has taken no steps to ensure that this requirement will be complete. Specifically, if the MSS spectrum is not cleared for MSS use, ICO cannot provide the national MSS coverage it must offer. Yet, ICO has attempted to evade its band-clearing obligations by failing to relocate Broadcast Auxiliary Service (BAS) licensees itself and also by seeking to avoid reimbursing Sprint Nextel Corporation (Sprint Nextel) for ICO's *pro rata* share of BAS relocation costs. By failing to satisfy its band clearing obligations, ICO is in no position to certify that it has the right to obtain lucrative ATC authority from the Commission. Second, ICO does not seek mere deviations from the rules, but wants to rewrite the technical rules entirely to accommodate a service the Commission never considered at the time of the MSS ATC decision. Third, ICO's ATC authorization seems quite likely to interfere with scores of millions of current cellular phone

users. ICO does not propose any interference-mitigation measures that might protect incumbent operators against harmful interference, but instead proposes significantly higher power operations than ever contemplated by any of the current CMRS users that ICO uses as its benchmark for interference protection. Therefore, the Commission should deny ICO's application for ATC authority.

II. ICO Has Failed to Meet its Nationwide Coverage Gating Criteria and Has Taken No Steps to Ensure that this Obligation is Complete.

ICO cannot offer nationwide MSS coverage and has failed to take any steps to ensure that it will be able to meet this gating criterion any time in the foreseeable future. Under Section 25.149 of the Commission's rules, ICO cannot offer MSS ATC until it first demonstrates that its "mobile-satellite service [is] commercially available . . . in accordance with the coverage requirements that pertain to each band."[1] Licensees in the 2 GHz mobile-satellite service must offer continuous nationwide service, including Puerto Rico and the Virgin Islands. To obtain ATC authority, ICO need not demonstrate that its satellite is currently capable of operating nationally, but it must – at a minimum – "*demonstrate that [it] . . . will comply*" with the nationwide coverage requirement through certification or other means.[2] ICO has wholly failed to demonstrate how it will comply with a nationwide coverage requirement because the spectrum in which it seeks to operate its satellite is not available nationally. ICO will not have access to the 2 GHz MSS spectrum unless it either relocates the BAS licensees from the spectrum its satellites will occupy, or pays the debt it owes to Sprint Nextel to perform this activity on its behalf as the Commission's rules and policies require.

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[1] 47 C.F.R. 25.149(b).

[2] *Id.*

ICO's BAS relocation obligation is not subject to debate: ICO bears an obligation to either relocate eligible BAS facilities or reimburse Sprint Nextel for a portion of the cost of doing so. The Commission has repeatedly stated that "both Sprint Nextel and 2 GHz MSS licensees have equal obligations to relocate the 2 GHz BAS incumbents."[3] The Commission has also affirmed that "the underlying relocation rules . . . established for MSS entrants to undertake the relocation of BAS incumbents" remain unchanged.[4] ICO, however, apparently has no intention of itself performing any portion of the work associated with BAS relocation. ICO has done nothing to relocate BAS licensees – not a single relocation agreement signed, not a single piece of equipment ordered, not a single BAS licensee relocated. Sprint Nextel has offered ICO numerous ways in which it could participate in the BAS relocation already underway; however, ICO has refused. Most recently, Sprint Nextel proposed to enter a contractual agreement with

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[3] *See, e.g., Improving Public Safety Communications in the 800 MHz Band; Consolidating the 800 and 900 MHz Industrial/Land Transportation and Business Pool Channels*, Order, 23 FCC Rcd. 575, ¶ 2 (2008).

[4] *Improving Public Safety Communications in the 800 MHz Band; Consolidating the 800 and 900 MHz Industrial/Land Transportation and Business Pool Channels*, WT Docket No. 02-55, Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, FCC 08-73, 2008 FCC LEXIS 1896, ¶ 39 (rel. March 5, 2008) (*BAS Extension Order*), citing *Improving Public Safety Communications in the 800 MHz Band; Consolidating the 800 and 900 MHz Industrial/Land Transportation and Business Pool Channels*, Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order, 19 FCC Rcd. 14969, ¶ 250 (2004) (*800 MHz R&O*), *as amended by* Erratum, WT Docket No. 02-55 (rel. Sep. 10, 2004); Second Erratum, 19 FCC Rcd. 19651 (2004) (subsequent history omitted). Specifically, prior to beginning operations, ICO must relocate (i) the BAS incumbents in the top thirty markets and (ii) all fixed BAS links, regardless of market size. 47 C.F.R. § 74.690(e)(1)(i). The Commission recently stated that:

> As we noted in the *800 MHz R&O*, 'except as discussed below, those rules will remain in effect.' At no place in our rules, the *800 MHz R&O*, or subsequent orders have we stated that MSS was no longer obligated to relocate BAS in the top 30 markets and all fixed BAS prior to beginning operations.

BAS Extension Order ¶ 39 n.118 (citations omitted).

ICO that would have allowed the company to directly participate in the BAS relocation framework that Sprint Nextel has established. ICO has not responded.

Given its failure to engage in any element of the BAS relocation process, ICO's certification under section 25.149 that ICO's MSS satellite will offer nationwide coverage is not credible. The Commission cannot accept ICO's certification that it will meet its gating criteria in this proceeding for the simple reason that *ICO has clearly indicated that it will not comply with its obligations to relocate BAS licensees – either by relocating them itself or by paying its fair share of the relocation costs.*[5] ICO is not carrying its fair share of the burden of clearing BAS incumbents, which is a prerequisite before it can offer nationwide MSS service. ICO therefore is in no position to certify that it is taking the steps necessary to satisfy its ATC gating criteria. The band in which ICO seeks to operate is not cleared and ICO has done *nothing* to clear it.[6]

Quite apart from the glaring inconsistencies in ICO's own statements, allowing ICO to avoid its reimbursement obligations to Sprint Nextel has a direct bearing on the merits of ICO's application for ATC authority and its associated waiver requests. ICO will use ATC services to offer a variety of mass-market, wireless narrowband and broadband services and in doing so will compete directly against Sprint Nextel for subscribers and revenue. Allowing ICO to escape its BAS reimbursement obligations would artificially and unfairly lower its costs of deploying its

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[5] On February 4, 2008, Sprint Nextel sent a letter to ICO regarding its *pro rata* share of BAS relocation expenses. In this letter, Sprint Nextel provided ICO with an initial interim billing estimate for ICO's *pro rata* reimbursement obligation, and in good faith proposed a meeting between the companies' respective business and finance teams to ensure a timely payment. In a February 12, 2008 letter to Sprint Nextel, however, ICO stated that it is "impossible to know" whether or when MSS licensees must reimburse Sprint Nextel, notwithstanding the clear findings to the contrary in the Commission's orders.

[6] ICO suggests in a footnote it may seek a waiver of this crucial gating requirement "at a later date" if the BAS transition is not complete. *See* "Description of ICO MSS/ATC Services and Public Interest Benefits," attached as Exhibit 1 to IBFS File No. SES-AMD-20080118-00075, at 8 n.17 (Jan. 18, 2008) ("ICO Application Description").

terrestrial services by at least $100 million and at the same time improperly impose at least a $100 million surcharge on Sprint Nextel's ability to provide competing terrestrial wireless services. The Commission has previously recognized that allowing a late-entering carrier to avoid reimbursing the earlier-entering spectrum clearing carrier would create an unfair and impermissible competitive advantage.[7] The Commission can prevent this anti-competitive outcome by denying ICO's ATC authority unless and until ICO meet its *pro rata* payment obligation for BAS relocation.

III. ICO Proposes Deviations from the Rules so Numerous and Extensive that They Will Greatly Increase the Likelihood of Harmful Interference.

ICO does not seek minor changes or deviations from the complex and inter-related interference protections, but instead wants to rewrite the rules in their entirety. For example, ICO's proposed change section 25.252(a)(1) represents a 33.6 dB relaxation from the current rule, and would permit out-of-band emissions from ATC base stations 2290 times stronger than is currently permitted.[8] ICO also proposes an almost four-fold increase in base station power.[9] In addition, ICO proposes a doubling of the mobile power, and a five-fold or more increase in

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[7] *Amendment to the Commission's Rules Regarding a Plan for Sharing the Costs of Microwave Relocation*, Memorandum Opinion and Order on Reconsideration, 15 FCC Rcd.13999, ¶ 16 (2000) (finding that later-entrants that benefit from the clearance of spectrum by a first entrant would receive a "significant competitive advantage" if they were not required to reimburse the first entrant for a share of the relocation costs).

[8] Section 25.252(a)(1) limits ATC base station out-of-channel emissions to -100.6 dBW/4 kHz. When adjusted to the one megahertz measurement bandwidth ICO is requesting, the current limit is equivalent to -76.6 dBW/1 MHz.

[9] Section 25.252(a)(2) limits ATC base station power to a peak EIRP of 27 dBW in a 1.23 MHz bandwidth. When adjusted to the one megahertz measurement bandwidth ICO is requesting, the current limit is equivalent to 26.1 dBW/1 MHz. ICO's request for a base station power limit of 32 dBW/1 MHz is a 5.9 dB, or almost four-fold, increase to the current limit.

power for non-mobile user devices.[10] Furthermore, ICO proposes to relax the out-of-band emissions from both base stations and users devices by as much as 13 dB in the first 1 MHz outside their frequency block.[11] ICO's proposed system architecture represents a radical departure from the cdma2000 architecture on which the Commission sought and received public comment and for which the Commission conducted extensive interference analysis when it adopted the ATC rules.

The changes that ICO has sought produce significantly greater potential interference that the current rules allow. Although the Commission's rules permit applicants to apply for systems other than cdma2000, the Commission's rules stipulate that any proposed changes must "produce no greater potential interference" than permitted under the current rules.[12] Each of ICO's proposed changes – permitting 2290 times as much out-of-band emissions, relaxing emissions by

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[10] Section 25.252(b)(1) limits the power of mobile terminals to 1.0 dBW in a 1.23 MHz bandwidth. When adjusted to the one megahertz measurement bandwidth ICO is requesting, the current limit is equivalent to 0.1 dBW/1 MHz. The 2 watt limit (3 dBW/1 MHz) power limit proposed by ICO is 2.9 dB, or 1.95 times, higher than the current limit. ICO's proposed 2 watt transmitter power limit for non-mobile devices would result in a 7.9 dB (or 6.2 times) increase in power if a 5 dB gain antenna is used, assuming no loss in the antenna feeder line. If an even higher gain antenna were used, the increase in power would be even more significant.

[11] Section 25.252(c)(4) currently specifies that measurements be made using measurement instrumentation employing a resolution bandwidth of one megahertz or greater. ICO requests that "in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (*i.e.* 1 MHz or 1 percent of emission bandwidth, as specified)." ICO Application Description at 18, 27. If ICO were to employ a five megahertz wide signal, then compliance would need to be demonstrated in a 50 kHz bandwidth. This would result in a 13 dB (or twenty-fold) relaxation in the out-of-band limits in this adjacent spectrum.

[12] 47 CFR 25.252, Note 1 ("The preceding rules of §25.252 are based on cdma2000 system architecture. To the extent that a 2 GHz MSS licensee is able to demonstrate that the use of a different system architecture would produce no greater potential interference than that produced as a result of implementing the rules of this section, an MSS licensee is permitted to apply for ATC authorization based on another system architecture.").

33.6 dB, increasing base station power by four-fold, and more – greatly increases the likelihood of harmful interference. Therefore, ICO's request does not comply with the express language of section 25.252 and is inappropriate for waiver.

IV. Grant of ICO's ATC Application Will Cause Harmful Interference to Licensed and Operational Services and Diminish the Utility of Terrestrial Bands Slated for Competitive Bidding.

ICO proposes a number of changes that would increase the permitted power and out-of-band emissions from MSS ATC devices. These changes would significantly raise the levels of interference that could be caused by MSS/ATC transmissions to a variety of Advanced Wireless Services (AWS) and Personal Communications Services (PCS) that operate in neighboring bands. Of particular concern in this regard is ICO's proposal to permit non-mobile user stations to transmit with transmitter power levels of 2 watts, without a limit on the antenna gain or EIRP of those stations. Neither the PCS nor AWS rules currently permit higher power levels for non-mobile user stations.[13] Furthermore, this increased limit would result in widespread interference to mobile receivers operating in the H-block (1995-2000 MHz), G-block (1990-1995 MHz), and PCS (1930-1990 MHz) bands. The proximity of the frequencies used by MSS/ATC mobile transmitters (2000-2020 MHz) to these other services – combined with a large installed base of equipment that can tolerate little unpredicted interference – is critical. There is a significant record in several proceedings about the consequences that can occur when user transmitters are

[13] Section 24.232(c), as modified in 2008, limits mobile/portable broadband PCS stations to 2 watts EIRP power. *See Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27 and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services,* WT Docket No. 03-264, FCC 08-85 (rel. Mar. 21, 2008). Section 27.50(d)(4) limits fixed, mobile, and portable (hand-held) stations operating in the AWS-1 (1710-1755 MHz band) to 1 watt EIRP. A power limit for non-mobile user stations similar to that proposed by ICO is contained in the BRS/EBS rules, Section 27.50(h)(2); however, this applies in a band much higher in frequency and with many different characteristics and service requirements.

located in spectrum near to that being used by mobile receivers.[14] Without appropriate safeguards that Sprint Nextel and others have proposed to protect against harmful interference in other bands, such as tighter out-of-band emissions, or reductions in the transmitter power, interference can occur when user transmitters are located near other mobile receivers. This interference can occur in two ways: as a result of out-of-band emissions from the user devices into the mobile receivers, and as a result of receiver overload of mobile receivers simply because of the presence of strong signals in an adjacent band.

ICO's proposed power increase for non-mobile devices threatens to cause widespread receiver overload interference to H-block, G-block, and PCS mobile receivers. The distances at which such receiver overload can occur has been the matter of significant debate; however, in no case has a party in those proceedings proposed to permit the user devices to transmit with more than the 2 watts specified in current broadband PCS rules.[15] ICO's proposal, however, would permit potentially one million user terminals to operate with EIRP power levels many times in excess of the two watt limit contemplated – and hotly debated – in other bands. ICO's pursuit of a greater than 2 watt EIRP means that the distance at which mobile receiver overload could occur, and the frequency at which it would occur, is significantly greater than any of that predicted in

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[14] *See, e.g., Service Rules for Advanced Wireless Services in the 2155-2175 MHz Band*, Notice of Proposed Rulemaking, 22 FCC Rcd. 17035, ¶¶ 16-20, 60, 66 (considering technical rules for operations in AWS-3 band); *Advanced Wireless Services in the 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2175-2180 MHz Bands*, Notice of Proposed Rulemaking, 19 FCC Rcd. 19263, ¶¶ 89-92 (2004) (considering technical rules for operations in the "H block" at 1915-1920 MHz/1995-2000 MHz); *Spectrum and Service Rules for Ancillary Terrestrial Components in the 1.6/2.4 GHz Big LEO Bands; Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands*, IB Docket Nos. 07-253 and 02-364, RM-11339, Second Order on Reconsideration, Second Report and Order, and Notice of Proposed Rulemaking, 22 FCC Rcd. 19733 (2007).

[15] In many cases, parties have proposed power limits significantly less than 2 watts.

the other proceedings. At risk are scores of millions of PCS consumers with handsets not designed to expect such high-powered signals in the adjacent frequency bands.

ICO's interference study suggesting that these sweeping changes are of no moment is flawed in several material ways. ICO ignores the increase in interference its proposed changes would cause to the tens or hundreds of millions of consumers that occupy adjacent bands, and instead compares the interference its proposed operations will create with the interference that is permitted *between other services* not yet deployed. ICO sets the bar artificially low, which is neither appropriate nor accurate. For example, ICO – in analyzing the impact of its user device transmissions at 2000-2020 MHz towards the H-block, G-block, and PCS mobile receivers – has completely ignored the issue of mobile receiver overload that can occur when these devices are located nearby. ICO has compared the interference its out-of-band emissions would cause to those caused under the Commission's rules between PCS devices; however, the PCS industry has recognized that those rules are not sufficient to avoid interference and has imposed much tighter out-of-band emissions limits on a voluntary basis. As a result, ICO's assumption that no interference would occur if they comply with rules similar to PCS and AWS is faulty.

V. Conclusion

To protect competition, ensure compliance with the Commission's cost sharing policies and prevent harmful interference to existing and planned terrestrial operations, the Commission should deny ICO's ATC application and its associated waiver requests.

Respectfully submitted,

SPRINT NEXTEL CORPORATION

Lawrence R. Krevor
Vice President, Government Affairs – Spectrum
Trey Hanbury
Director, Government Affairs
2001 Edmund Halley Drive
Reston, VA 20191
(703) 433-4141

April 4, 2008

Declaration

I declare under penalty of perjury that the technical and engineering information contained in the foregoing Petition to Deny of Sprint Nextel Corporation is true and correct to the best of my personal knowledge and belief.

Executed on April 4, 2008

Richard B. Engelman

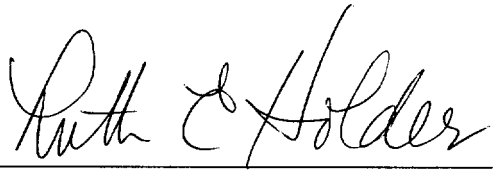
Richard B. Engelman
Director, Spectrum Resources
Government Affairs
Sprint Nextel Corporation

Certificate of Service

I, Ruth E. Holder, hereby certify that on this 4th day of April, 2008, I caused true and correct copies of the foregoing Petition to Deny of Sprint Nextel Corporation to be mailed by first class U.S. mail, postage prepaid, to:

Cheryl A. Tritt
Morrison & Foerster
2000 Pennsylvania Ave. NW, Suite 500
Washington, DC 20006

Dennis Schmitt
New ICO Satellite Services G.P.
2300 Carillon Point
Kirkland, WA 98033



Ruth E. Holder