

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)

ASTROVISION INTERNATIONAL, INC.)

Application to Modify Authorization to Launch)
and Operate a Remote Sensing Satellite System to)
Extend Milestones)

File No: SAT-MOD-20030528-00094

Call Signs: S2418
S2419**ORDER****Adopted: February 7, 2007****Released: February 7, 2007**

By the Chief, International Bureau:

I. INTRODUCTION

1. In this Order, we deny AstroVision International, Inc.'s (AstroVision's) application to modify the construction completion and launch milestones for two remote sensing satellites authorized to operate in the 8025-8400 MHz (downlink) and 2025-2110 MHz (uplink) bands at the 90° W.L. and 160° W.L. orbital locations. We find that AstroVision has not justified its requested four-year extensions of the construction completion and launch dates for the satellites. Since grant of the two licenses over six years ago, AstroVision has made little progress in constructing either of these satellites. Further, it has not provided any evidence that it is committed to continuing with their implementation. AstroVision's failure to comply with the milestone conditions of its licenses renders the licenses null and void. Accordingly, these orbital locations and associated frequencies are available for reassignment.

II. BACKGROUND**A. The AVStar*1 and AVStar*2 Licenses and Preliminary Construction**

2. In November 2000, the International Bureau (Bureau) authorized AstroVision to construct, launch, and operate two geostationary satellite orbit (GSO) remote sensing satellites to be positioned at the 90° W.L. and 160° W.L. orbital locations.¹ AstroVision asserted that its satellites would appeal to broad commercial sectors, including the agriculture, forestry, non-renewable resources (mining), energy, transportation, and real estate industries.² AstroVision projected that it would require 2

¹ Application of AstroVision International Inc. for Authority to Launch and Operate a Private Remote Sensing Satellite System in Geostationary Orbit, *Order and Authorization*, 15 FCC Rcd 22299 (Int'l Bur. 2000) (*AstroVision Order*).

² *Id.*

1/2 years to construct and launch the first satellite and three years to construct and launch the second satellite.³

3. As is the case in all satellite licenses, AstroVision's license included a condition requiring it to meet specified system implementation deadlines. Despite AstroVision's representation that it could launch both satellites within three years, the license afforded AstroVision approximately three and four years, respectively, to construct and launch each satellite. Specifically, the condition provided that the license would become null and void if AstroVision failed to comply with the following schedule.⁴

	<u>Commence Construction</u>	<u>Complete Construction</u>	<u>Launch</u>
First Satellite	March 2001	June 2003	September 2003
Second Satellite	December 2003	June 2004	December 2004

4. In a letter dated April 3, 2001, AstroVision stated that it satisfied its construction commencement milestone by entering into a contract on March 30, 2001 for the construction of two satellites.⁵ While AstroVision did not reference the spacecraft manufacturer in the letter, it later identified Ball Aerospace and Technology Corporation (Ball) as the prime contractor for both satellites.⁶ According to AstroVision, Ball initiated development of the first satellite in May 2001, when it began to construct an "on-board processor."⁷ Furthermore, Malin Space Science Systems (Malin) also received a contract for the preliminary development of the satellites' sensor complement in November 2000, and developed a working prototype of the sensor payload.⁸

B. The Extension Application

5. In May 2003, AstroVision filed a license modification application, requesting a four-year extension of the construction completion and launch dates for each of the satellites. AstroVision asserts that the grant of its request is warranted because its unique technology will promote commercial use of U.S.-licensed imaging satellites and will provide life-saving services to numerous customers. It also asserts that it has "incurred expenditures in excess of \$10 million" and paid approximately \$2 million under its construction contracts with Ball and Malin.⁹

6. In its modification application, AstroVision also provides documents referencing numerous contract suspension agreements between AstroVision and Ball. The documents indicate that AstroVision and Ball mutually agreed to initially suspend the construction contract for a nine-month

³ See Application of AstroVision International, Inc. for Authority to Launch and Operate a Private Remote Sensing Satellite System in Geostationary Orbit, File Nos. SAT-LOA-20000518-00090/91 (filed May 18, 2000) (License Application) at 8, 39.

⁴ *AstroVision Order*, 15 FCC Rcd at 22306.

⁵ See Letter from Pantelis Michalopoulos, Counsel to AstroVision, to Donald Abelson, Chief, International Bureau (Apr. 3, 2001) (April 2001 Letter), attaching certification of Milestone Compliance from AstroVision's Executive Vice President.

⁶ See Application of AstroVision International, Inc. to Modify Authorization to Launch and Operate a Remote Sensing Satellite System to Extend Milestones, File No. SAT-MOD-20030528-00094 (filed May 28, 2003) (Modification Application) at Attachment 1.

⁷ Modification Application at 3-4.

⁸ Modification Application at 5, Attachment 2.

⁹ Modification Application at 6-7.

period from June 30, 2001 through March 31, 2002.¹⁰ At the end of this period, AstroVision and Ball agreed to extend the suspension for several additional periods, until October 4, 2002.¹¹ AstroVision does not provide information on the status of the contract between October and December 2002, although it submits a December 16, 2002 contract amendment halting development of the satellites subject to a "re-evaluation at restart" on June 1, 2003.¹²

7. Despite the suspension of construction, AstroVision states that it is "committed to developing its system and to providing every assurance to the Commission that it is proceeding on a timely basis."¹³ To allow the Commission to measure its progress, it proposes to meet "interim construction tasks" during the first year of the extension.¹⁴ These include defining all filters for the visual cameras, conducting preliminary design review of the system, and delivering an interface control document to the communications system subcontractor. AstroVision asserts that this work will allow it to complete critical design review within two years and to launch the satellites within four years.¹⁵

C. Subsequent Developments

8. In December 2003, AstroVision filed a letter notifying the Commission that "following a brief period of time during which the contract with Ball had technically lapsed, the contract has been reinstated by the parties and is in full force and effect."¹⁶ The letter also indicates that Ball and AstroVision agreed to engage in additional discussions regarding certain provisions of the agreement, including delivery dates and payment schedule.¹⁷ In the three years since that correspondence, AstroVision has not provided nor submitted any modifications to the contract to the Commission.

9. On August 25, 2005, in response to an inquiry by Bureau staff, AstroVision submitted a letter in which it states that its contract with Ball remains in effect.¹⁸ AstroVision also indicates that Ball has completed the System Requirements Review (SRR) for the satellite buses and associated systems and has updated the original satellite system design to include technology improvements that will be used in the Preliminary Design Review (PDR). AstroVision also states that it has paid Ball \$938,000.00.¹⁹ Further, AstroVision indicates that Malin held an SRR on the sensor suite and a PDR/Critical Design Review (CDR) on the optics for all sensors and has built, and tested, a prototype of the camera. Further, AstroVision states that it has been instrumental in establishing AstroVision Australia (AVA), which is

¹⁰ Modification Application Attachment 1, Letter from James D. Elliot, Manager of Contracts, Ball, to Michael Hewins, AstroVision (Mar. 29, 2002).

¹¹ Modification Application Attachment 1, Letter from James D. Elliot, Manager of Contracts, Ball, to Michael Hewins, AstroVision (June 28, 2002); Letter from James D. Elliot, Manager of Contracts, Ball, to Michael Hewins, AstroVision (Aug. 13, 2002); Letter from James D. Elliot, Manager of Contracts, Ball, to Michael Hewins, AstroVision (Sept. 24, 2002).

¹² Modification Application, Attachment 1, AVStar Contract Amendment (Dec. 16, 2002).

¹³ Modification Application at 16.

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ See Letter from Jennifer Hindin, Counsel to AstroVision, to Marlene Dortch (Dec. 23, 2003) (December 2003 Letter).

¹⁷ *Id.*

¹⁸ See Letter from Jennifer Hindin, Counsel to AstroVision, to Marlene H. Dortch, FCC (Aug. 25, 2005) (August 2005 Letter).

¹⁹ August 2005 Letter at 1.

interested in providing weather and environmental services in Australia and throughout Asia. AstroVision maintains that it has an agreement to license intellectual property to AVA, which will allow AstroVision to pursue a global market development strategy.²⁰ AstroVision acknowledges that it has not yet secured a launch vehicle for either satellite. It states that the satellites' small size will enable them to be launched as secondary payloads or as primary payloads on a smaller launch vehicle. AstroVision indicates that it anticipates no difficulty in securing a launch vehicle by the requested launch dates of September 2007 and December 2008.²¹

III. DISCUSSION

10. The Commission has required satellite licensees to adhere to milestone schedules for more than two decades.²² Milestone schedules are designed to ensure that licensees are proceeding with implementation in a timely manner, and that the scarce orbit spectrum resource is not being warehoused by licensees unable or unwilling to proceed with their plans.²³ Warehousing could hinder the availability of services to the public at the earliest possible date by blocking entry by other entities willing and able to proceed immediately with the construction and launch of their satellite systems.²⁴

11. AstroVision seeks to extend the construction completion and launch milestones for each of its satellites by four years. Section 25.117(b) of the Commission's rules provides that the Commission will grant milestone extensions when: (1) the additional time is required to due unforeseeable circumstances beyond the applicant's control or, (2) unique and overriding public interest concerns justify the extension.²⁵

12. AstroVision does not contend that delay in constructing the satellites is due to circumstances beyond its control. Rather, it contends that, pursuant to Section 25.117(b)(2), unique and overriding public interest concerns justify its extension request. In the alternative, AstroVision requests a

²⁰ *Id* at 2. We note that according to its website, AstroVision Australia is no longer in operation. See www.AstroVisionAustralia.com.

²¹ *Id* at 3.

²² See, e.g., Inquiry into the Development of Regulatory Policy in Regard to Direct Broadcast Satellites, *Report and Order*, 90 F.C.C.2d 676, 719 (para. 114) (1982) (adopting rule requiring DBS licensees to "begin construction or complete contracting for construction" of satellites within one year after receiving construction permits), and MCI Communications Corp., *Memorandum Opinion and Order*, 2 FCC Rcd 233, 233 (para. 5) (Com. Car. Bur. 1987) (*MCI Order*) (noting that a milestone schedule is included in each domestic space station authorization issued by the Commission); see also Norris Satellite Communications, Inc., *Memorandum Opinion and Order*, 12 FCC Rcd 22299 (1997), Morning Star Satellite Company, L.L.C., *Memorandum Opinion and Order*, 15 FCC Rcd 11350 (Int'l Bur. 2000), *aff'd*, 16 FCC Rcd 11550 (2001)

²³ See, e.g., Advanced Communications Corporation, *Memorandum Opinion and Order*, 10 FCC Rcd 13337, 13338 (para. 4) (Int'l Bur. 1995), *aff'd*, 11 FCC Rcd 3399 (1995), *aff'd*, *Advanced Communications Corporation v. FCC*, 84 F.3d 1452 (D.C. Cir. 1996) (unpublished order available at 1996 WL 250460); National Exchange Satellite, Inc., *Memorandum Opinion and Order*, 7 FCC Rcd 1990 (Com. Car. Bur. 1992) (*Nexsat Order*); AMSC Subsidiary Corp., *Memorandum Opinion and Order*, 8 FCC Rcd 4040, 4042 (para. 13) (1993) Motorola, Inc. and Teledesic LLC, *Memorandum Opinion and Order*, 17 FCC Rcd 16543 (Int'l Bur. 2002)

²⁴ *Space Station Licensing Reform Order*, 18 FCC Rcd at 10827 (para. 173), citing *Nexsat Order*, 7 FCC Rcd at 1991 (para. 8); *MCI Order*, 2 FCC Rcd at 233 (para. 5); Columbia Communications Corp, *Memorandum Opinion and Order*, 15 FCC Rcd 15566, 15571 (Int'l Bur. 2000) (para. 11).

²⁵ 47 C.F.R. §25.117(b). At the time it filed its modification application, this rule was contained in Section 25.117(e) of the Commission's rules. Section 25.117(e) was moved in its entirety to Section 25.117(b) in 2003. See Amendment of the Commission's Space Station Licensing Rules and Policies, *Third Report and Order*, 18 FCC Rcd 13486 (2003). We will refer to the rule in this *Order* as Section 25.117(b).

waiver of Section 25.117(b), contending that it has demonstrated progress and grant of additional time will not preclude future entrants.²⁶

13. We find that AstroVision has not justified an extension or a waiver. First, we are not persuaded that the design of AstroVision's system, in itself, provides a compelling public interest rationale to effectively double the amount of time in which AstroVision has to construct and launch its satellites. AstroVision states that no other authorized remote sensing system can replicate its ability to provide live, true color, 24-hour per day, high resolution products.²⁷ It also indicates that no currently licensed system provides imaging capability from geostationary orbit. AstroVision argues that, for these reasons, numerous industries, including the aviation and maritime industries, will use its satellites to detect "life-threatening" events with greater advance warning.²⁸ It further states that extending the milestones will promote the use of U.S.-licensed commercial imaging satellites, a primary objective of the 1984 Land Remote-Sensing Commercialization Act and the 1992 Land Remote Sensing Policy Act.²⁹

14. Other than general parameters designed to prevent interference, the Commission has never dictated space station design parameters. Rather, it has allowed licensees the flexibility to construct and launch satellites tailored to the licensees' particular business plans.³⁰ While AstroVision's satellites may eventually have certain characteristics and capabilities not offered by other satellites, the vast majority of operating space stations can make a similar claim.³¹ Thus, permitting AstroVision to delay implementation of its system based on the "uniqueness" of its system would allow it to encumber spectrum to the exclusion of other applicants seeking to implement their own "unique" systems. Further, we do not see how denying AstroVision's extension will discourage use of remote-sensing satellite systems. AstroVision may reapply for a GSO-license at any time at any available orbital location, including the 90° W.L. and 160° W.L. orbital locations at issue here. Further, allowing others the opportunity to implement remote-sensing systems at orbital locations and frequency bands held by AstroVision for over six years should encourage competition and innovation in the industry.

15. Second, we disagree with AstroVision that an extension is warranted because it has made progress in implementing the satellites and, thus, is not warehousing spectrum.³² After six years, AstroVision offers superficial and anecdotal evidence of an effort to design the first satellite. It provides no concrete information to help the Commission discern the precise status of system construction. In its August 2005 letter, AstroVision indicates that it has amended its contract to include revised payment schedules to Ball. It has not, however, explained the nature of these changes nor submitted an amended contract to the Commission. AstroVision also states that it has updated its satellite design to reflect the needs of prospective customers. It has not, however, applied to modify its license to reflect these updates. Additionally, AstroVision states that it has expended over \$10 million towards implementation and made contract payments amounting to \$938,000.00 to Ball.³³ It does not, however, indicate how it expended

²⁶ Modification Application at 7.

²⁷ *Id.* at 8.

²⁸ *Id.* at 9.

²⁹ *Id.* at 8-10.

³⁰ See, e.g., *Teledesic LLC*, 14 FCC Rcd 2261 (Int'l Bur. 1999); *GTE Spacenet Corp.*, 5 FCC Rcd 4112 (Com. Car. Bur. 1990); *American Satellite Co.*, 5 FCC Rcd 1186 (Com. Car. Bur. 1990).

³¹ In fact the Geostationary Operational Environmental Satellite (GOES) fleet operated by the National Oceanic and Atmospheric Administration (NOAA) is now using GSO satellites to observe weather patterns and geological activity. See <http://www.noaa.gov/satellites.html>.

³² Modification Application at 12.

³³ On the record before us, it is not clear how this \$938,000 payment to Ball corresponds with the \$2 million AstroVision previously reported it had paid to Ball and Malin. See para. 5, *supra*.

any of these funds, what construction progress resulted from these expenditures, or what progress has been made in the eighteen months since August 2005. Even assuming that AstroVision has expended approximately \$11 million towards satellite construction, this constitutes less than 10% of its estimated cost to construct and launch both satellites.³⁴ Finally, AstroVision acknowledges that it does not have a launch contract for either satellite. While it states that it does not anticipate any difficulty procuring timely launch arrangements, it has never provided any details on its launch plans--despite the fact that its proposed launch date for its first satellite is less than a year away.

16. We also disagree with AstroVision that a milestone waiver is warranted because the authorization affords AstroVision only 30 months to construct and launch the first satellite, in contrast to the five years the Bureau generally provides in other licenses.³⁵ Aside from the fact that the requested extension would provide AstroVision with over seven and eight years, respectively, to launch its two satellites, AstroVision asserted in its application that it would launch its first satellite 30 months after grant.³⁶ The Commission crafted the milestones in the AstroVision license on the basis of this projection.

17. Finally, we do not agree that the Bureau's milestone extension to EarthWatch³⁷ (now DigitalGlobe) supports AstroVision's request for a waiver. The Bureau granted EarthWatch a six-month extension of time to complete construction of one of the two satellites it was constructing. EarthWatch requested the extension to allow it to conduct additional tests on several components of the satellite to ensure proper in-orbit operations.³⁸ In granting the brief extension, the Bureau found no reason to question EarthWatch's intention to proceed with its system.³⁹ Significantly, the Bureau denied EarthWatch's requested 18-month extension of the launch date for the satellite, finding that EarthWatch had not justified such a lengthy extension of time. In contrast, AstroVision requests four-year extensions of the construction completion and launch dates for both of its authorized satellites. AstroVision has allowed the primary contract for the construction of the AVStar*1 to lapse,⁴⁰ and has never finalized the separate contract to procure the satellites' sensors.⁴¹ Indeed, more than six years after grant, AstroVision had still not presented us with any evidence that it has finalized the design for either satellite. In this context, AstroVision offers none of the compelling facts that justified the short-term milestone extension to EarthWatch.

IV. CONCLUSION

18. We conclude that AstroVision has failed to meet its satellite construction and launch milestones as required by its authorization and that neither an extension of time nor a waiver of the Commission's rules is justified. AstroVision's failure to meet these milestones renders its authorizations null and void. The orbital locations and associated frequencies that had been assigned to AstroVision are now available for reassignment.

³⁴ License Application at 39.

³⁵ Modification Application at 15.

³⁶ License Application at 9 and 39. Indeed, AstroVision acknowledges that larger and more complicated satellites require additional time to develop and launch than the AstroVision satellites, which were designed to be small satellites using field-tested equipment.

³⁷ See EarthWatch Inc., *Modification of Authorization to Construct, Launch, and Operate a Remote Sensing Satellite System*, Order and Authorization, 15 FCC Rcd 13594 (Int'l Bur. 2000).

³⁸ *Id.* at 13597 (para. 7)

³⁹ *Id.* at 13598 (para. 12).

⁴⁰ See AstroVision December 2003 Letter.

⁴¹ Modification Application at 4.

V. ORDERING CLAUSES

19. Accordingly, IT IS ORDERED that AstroVision's Modification Application for An Extension of Time to Complete Construction and to Launch a Remote Sensing Satellite System, File No. SAT-MOD-20030528-00094, is DENIED.

20. IT IS FURTHER ORDERED that the authorizations held by AstroVision International, Inc., File Nos. SAT-LOA-20000518-00090 (Call Sign S2418) and SAT-LOA-20000518-00091 (Call Sign S2419) are DECLARED NULL and VOID.

21. IT IS FURTHER ORDERED that the orbital assignments at 90° W.L. and 160° W.L. and the associated frequencies at 8025-8400 MHz (downlink) and 2025-2110 MHz (uplink) bands are available for reassignment.

22. This Order is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective upon release.

FEDERAL COMMUNICATIONS COMMISSION



Helen Domenici
Chief, International Bureau