

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

In the Matter of)	
)	
EarthWatch Incorporated)	
)	
Modification of Authorization to)	File No. SAT-MOD-19990720-00074
Construct, Launch and Operate a)	
Remote Sensing Satellite System)	

ORDER AND AUTHORIZATION

Adopted: April 21, 2000

Released: April 24, 2000

By the Chief, Satellite and Radiocommunication Division, International Bureau:

I. INTRODUCTION

1. By this Order, we grant EarthWatch Incorporated (EarthWatch) authority to modify its remote-sensing satellite system. Specifically, we grant EarthWatch authority to modify the orbital inclination of two of its Low-Earth Orbiting (LEO) satellites, “QuickBird-1” and “QuickBird-2,” and we modify the construction completion and launch milestone deadlines for QuickBird-2. These actions will enable EarthWatch to serve its customers better, thereby enhancing competition in the market for remote-sensing services.

II. BACKGROUND

2. EarthWatch was the first company to propose a commercial remote-sensing satellite system pursuant to the Land Remote Sensing Commercialization Act, adopted by Congress in 1984.¹ Remote-sensing satellites use in-orbit passive optical sensors to measure light reflected from the earth’s surface, and then transmit that information to a central earth station where it is transformed into useable information about the “remotely sensed” object or phenomenon.² Satellite remote-sensing systems can be used for mapping, resource conservation, law enforcement, national security, environmental monitoring, and forecasting functions.³

3. In 1995, the International Bureau (Bureau) authorized EarthWatch to construct, launch, and operate a remote-sensing satellite system.⁴ In 1997, the Bureau granted EarthWatch a modification of its license to add QuickBird-1 and QuickBird-2 to its satellite system, both

¹ Application of EarthWatch Incorporated For Authority to Construct, Launch and Operate a Remote Sensing-Satellite System, *Order and Authorization*, 10 FCC Rcd 10467, 10467 (para. 3) (Int’l Bur., 1995) (*EarthWatch Authorization Order*), citing Land Remote Sensing Commercialization Act, 15 U.S.C. § 4201 *et seq.*

² *EarthWatch Authorization Order*, 10 FCC Rcd at 10467 (para. 2).

³ *EarthWatch Authorization Order*, 10 FCC Rcd at 10468 (para. 6).

⁴ *EarthWatch Authorization Order*, 10 FCC Rcd at 10467 (paras. 1-2).

orbiting at inclination angles of 52° and at altitudes of 600 kilometers.⁵ Both satellites have construction completion milestones of June 2000, and launch milestones of August 2000.⁶

4. EarthWatch filed an application to modify the inclination of the orbital plane of QuickBird-1 from 52° to 66°, and of QuickBird-2 from 52° to 98°. ⁷ EarthWatch also requests extension of the QuickBird-2 construction completion deadline from June 2000 to December 2000, and launch deadline for Quickbird-2 from August 2000 to December 2001. ⁸ We put EarthWatch's application on public notice, and no comments were filed. For the reasons discussed below, we find it in the public interest to grant EarthWatch's orbital inclination request. We also conclude that it is in the public interest to extend EarthWatch's construction completion milestone for QuickBird-2 from June 2000 to December 2000, and to extend its launch milestone from August 2000, but only to April 2001.

III. DISCUSSION

A. Orbital Inclination

5. EarthWatch requests authority to change the inclination of the orbital plane of QuickBird-1 from 52° to 66°, and the inclination of QuickBird-2 from 52° to 98°. ⁹ The Commission has traditionally designed its satellite licensing policies to be flexible enough to allow satellite operators to respond to changing technological, market, and regulatory conditions. ¹⁰ The *EarthWatch Authorization Order* followed this precedent, and further explained that spacecraft design decisions should be left to each space station licensee, because the licensee is in a better position to determine how to tailor its system to meet the particular needs of its customer base. ¹¹ The Bureau explained further that, if a proposal appears technically efficient and will permit additional entrants, the Bureau generally authorizes the system if it is

⁵ EarthWatch Incorporated, *Order and Authorization*, File No. 137-SAT-ML-96, 12 FCC Rcd 21637, 21638 (para. 5) (Int'l Bur. 1997) (*First EarthWatch Modification Order*).

⁶ The Bureau originally established a construction completion deadline of July 1998 and a launch deadline of August 1998 for both satellites. *First EarthWatch Modification Order*, 12 FCC Rcd at 21643 (para. 19). In the *Second EarthWatch Modification Order*, the Bureau extended the construction completion deadline to June 2000, and the launch deadline to August 2000. EarthWatch Incorporated, *Order and Authorization*, File No. 85-SAT-ML-97, 12 FCC Rcd 19556, 19560 (para. 13) (Int'l Bur. 1997) (*Second EarthWatch Modification Order*). The Bureau found that a waiver was justified because EarthWatch had started construction of its satellites. The Bureau also concluded that a more lenient approach to EarthWatch's request was warranted because of the United States commercial remote-sensing industry was in its early stages of development. *Second EarthWatch Modification Order*, 12 FCC Rcd at 19559 (para. 10).

⁷ EarthWatch 1999 Request at 1.

⁸ EarthWatch 1999 Request at 1. It did not request extension of the construction completion and launch milestones for QuickBird-1.

⁹ EarthWatch 1999 Request at 1.

¹⁰ See Assignment of Orbital Locations to Space Stations in the Domestic Fixed-Satellite Service, Memorandum Opinion and Order, 3 FCC Rcd 6972, 6972 (para. 2) (1988).

¹¹ *EarthWatch Authorization Order*, 10 FCC Rcd at 10469 (para. 10).

otherwise in the public interest.¹² In this Order, we conclude that we should also leave orbital inclination decisions regarding remote-sensing satellite systems to licensees, because they are in a better position to tailor their systems to meet the particular needs of their customers. We also conclude that EarthWatch's proposed orbital inclination changes are technically efficient, will permit additional entrants, and otherwise are in the public interest.

6. First, EarthWatch's requested orbital inclination changes do not appear technically inefficient. This conclusion is based on the fact that the Bureau has found in other circumstances that a change in orbital inclination by itself does not increase the potential for interference,¹³ and because no one opposed EarthWatch's requested changes in orbital inclination. Second, EarthWatch's proposed changes will not preclude other commercial remote sensing systems. The *EarthWatch Authorization Order* concluded that additional entry in the commercial remote sensing satellite market is possible,¹⁴ and nothing in EarthWatch's modification application leads to a different conclusion. Finally, there is no basis in the record to conclude that the request would be inconsistent with the public interest. We therefore grant EarthWatch authority to modify the orbital inclinations of QuickBird-1 and QuickBird-2.

B. Milestone Extension

7. EarthWatch also seeks to extend the construction completion date for its second satellite, Quickbird-2, from June 2000 to December 2000, and to extend the launch date for this satellite from August 2000 to December 2001.¹⁵ According to EarthWatch, these extensions are necessary to allow additional testing of some of the components of QuickBird-2, to ensure proper operation of the satellite in orbit.¹⁶ EarthWatch further states that the construction of both satellites has begun, and that it will meet the currently scheduled launch date for Quickbird-1.¹⁷ EarthWatch also explains that the extension would allow it develop the market for services derived from QuickBird-1 before introducing the services of QuickBird-2.¹⁸

8. We find that EarthWatch has not justified an extension of its construction completion or launch milestones. Section 25.117(e)(1) of the Commission's rules permits milestone extensions only for circumstances beyond the control of the licensee.¹⁹ EarthWatch does not

¹² *EarthWatch Authorization Order*, 10 FCC Rcd at 10469 (para. 10), *citing* Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Non-Voice, Non-Geostationary Mobile-Satellite Service, CC Docket No. 92-76, *Report and Order*, 8 FCC Rcd 8450 (1993).

¹³ Orbital Communications Corporation, *Order and Authorization*, 13 FCC Rcd 10828, 10838-39 (paras. 23-24) (1998) (*Orbcomm Order*).

¹⁴ *EarthWatch Authorization Order*, 10 FCC Rcd at 10469 (para. 11) (it was not necessary to hold EarthWatch to any particular financial qualification showing, because further entry will be possible for several years).

¹⁵ EarthWatch 1999 Request at 1.

¹⁶ EarthWatch 1999 Request at 1.

¹⁷ EarthWatch 1999 Request at 1.

¹⁸ EarthWatch 1999 Request at 1.

¹⁹ 47 C.F.R. § 25.117(e)(1). *See also* MCI Communications Corporation, *Memorandum Opinion and Order*, 2 FCC Rcd 233 (1987) (*MCI Order*); Hughes Communications Galaxy, *Order and Authorization*, 5 FCC Rcd 3423, 3424 (Com. Car. Bur. 1990); National Exchange Satellite, Inc.,

explain why it needs to conduct "additional testing" on QuickBird-2, so we cannot determine whether the decision to conduct this testing is a business decision within the control of the licensee.²⁰ EarthWatch's desire to develop the market for services derived from QuickBird-1 before introducing the services of QuickBird-2²¹ is clearly a business decision that cannot justify a milestone extension.

9. Nevertheless, we find that waiving Section 25.117(e)(1) on our own motion is warranted in this particular case. The Bureau granted EarthWatch a similar waiver of Section 25.117(e)(1) in the *Second EarthWatch Modification Order*.²² Rules may be waived if there is "good cause" to do so.²³ Waiver is appropriate if special circumstances warrant a deviation from the general rule and such deviation would better serve the public interest than would strict adherence to the general rule.²⁴ Circumstances that would justify a waiver include "considerations of hardship, equity, or more effective implementation of overall policy."²⁵ Also, if the Commission grants waivers, it must identify and articulate reasonable standards that are predictable, workable, and not susceptible to discriminatory application.²⁶ Generally, the Commission may grant a waiver of its rules in a particular case only if the relief requested would not undermine the policy objective of the rule in question, and would otherwise serve the public interest.²⁷

10. EarthWatch's request merits a waiver of Section 25.117(e)(1) for two reasons. First, there is no evidence in the record before us that EarthWatch is "warehousing" its authorization. Although milestone extensions are generally granted only when the delay in implementation is due to circumstances beyond the control of the licensee, in every instance where the Commission has denied a milestone extension request, construction of the satellite either had not begun or was not continuing, thus raising questions regarding the licensee's intention to proceed.²⁸ In this case,

Memorandum Opinion and Order, 7 FCC Rcd 1990, 1991 (para. 8) (Com. Car. Bur. 1992); Columbia Communications Corporation Application for Amendment to Pending Application to Extend Milestones, *Memorandum Opinion and Order*, DA 00-702 (Int'l Bur., released Apr. 5, 2000) (*Columbia Milestone Order*).

²⁰ Economic business decisions cannot justify milestone extensions. *MCI Order*, 2 FCC Rcd at 234 (para. 7); *Columbia Milestone Order* at para. 10.

²¹ EarthWatch 1999 Request at 1.

²² *Second EarthWatch Modification Order*, 12 FCC Rcd at 19559 (para. 10).

²³ See Section 1.3 of the Commission's Rules, 47 C.F.R. § 1.3. See also *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969) (*WAIT Radio*); *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1166 (D.C. Cir. 1990) (*Northeast Cellular*).

²⁴ *Northeast Cellular*, 897 F.2d at 1166. See also *Comsat Corporation, Petition for Partial Relief from the Current Regulatory Treatment of Comsat World Systems' Switched Voice, Private Line, and Video and Audio Services*, Order, 11 FCC Rcd 9622, 9625 (para. 10) (1996); *Petition of General Communications, Inc. for a Partial Waiver of the Bush Earth Station Policy*, Memorandum Opinion and Order, 11 FCC Rcd 2535, 2536 (para. 4) (Int'l Bur. 1996).

²⁵ *WAIT Radio*, 418 F.2d at 1159.

²⁶ *Northeast Cellular*, 897 F.2d at 1166.

²⁷ *WAIT Radio*, 418 F.2d at 1157; *Dominion Video Satellite, Inc., Order and Authorization*, 14 FCC Rcd 8182, 8185 (para. 5) (Int'l Bur., 1999).

there is no basis for questioning whether EarthWatch intends to proceed with its remote-sensing satellite system. EarthWatch represents that it has commenced construction of both QuickBird-1 and QuickBird-2, and states that it will meet all its milestones for QuickBird-1.²⁹ In addition, waiving Section 25.117(e)(1) would further the public interest by allowing EarthWatch to complete its testing of QuickBird-2, and to tailor its remote-sensing service to the needs of its customers.³⁰ Accordingly, we find that granting EarthWatch's extension would not be contrary to the Commission's warehousing policy, for the same reasons the Commission reached that conclusion in the *AMSC Order*.³¹

11. Second, granting this waiver will not preclude new entrants from entering the remote-sensing satellite services market. The Bureau determined in the *EarthWatch Authorization Order* that additional entry in the commercial remote sensing satellite market is possible,³² and thus granting EarthWatch a waiver of Section 25.117(e)(1) will not preclude other remote-sensing satellite service providers from going forward with their business plans. Accordingly, we waive Section 25.117(e)(1) on our own motion and modify EarthWatch's construction completion and launch milestones for QuickBird-2.

12. We find that extending EarthWatch's construction completion milestone for six months, from June 2000 to December 2000, is reasonable.³³ However, EarthWatch has not explained why it needs an additional year after construction to launch QuickBird-2. Accordingly, EarthWatch is required to launch QuickBird-2 no more than four months after it has completed construction. EarthWatch is free to request another extension of its launch milestone for QuickBird-2, if it can demonstrate that it faces circumstances beyond its control that preclude it from launching QuickBird-2 by April 2001.

IV. ORDERING CLAUSES

13. Accordingly, IT IS ORDERED that Application File No. SAT-MOD-19990720-00074 IS GRANTED IN PART, and EarthWatch, Inc., IS AUTHORIZED to operate the satellite

²⁸ Application of AMSC Subsidiary Corporation for to Modify Space Station Authorizations in the Mobile Satellite Service, *Memorandum Opinion and Order*, File No. 33-DSS-EXT-92, 8 FCC Rcd 4040, 4042 (para. 13) (1993) (*AMSC Order*).

²⁹ EarthWatch 1999 Request at 1; *AMSC Order*, 8 FCC Rcd at 4042 (para. 14). *See also* Application of GE American Communications, Inc., for Orbital Reassignment and for Modification of Authorization to Construct and Launch the Satcom H-1 Domestic Fixed-Satellite, *Memorandum Opinion and Order*, 7 FCC Rcd 5169 (Com. Car. Bur. 1992); *Columbia Milestone Order* at para. 16 (once a licensee has met its construction commencement milestone, we can be more certain that it will proceed with its business plan).

³⁰ *See AMSC Order*, 8 FCC Rcd at 4042-43 (para. 14) (AMSC's extension was justified because it was continuing to construct its satellites, and because extension furthered the public interest by making new and needed mobile satellite services available, among other reasons).

³¹ *See AMSC Order*, 8 FCC Rcd at 4042-43 (para. 14).

³² *EarthWatch Authorization Order*, 10 FCC Rcd at 10469 (para. 11) (discussing financial qualification showing).

³³ In the *AMSC Order*, the Commission granted AMSC an 18-month extension of its construction completion milestone. *AMSC Order*, 8 FCC Rcd at 4042-43 (para. 14).

QuickBird-1 at an orbital inclination of 66° and the satellite QuickBird-2 at an orbital inclination of 98°.

14. IT IS FURTHER ORDERED that, pursuant to Section 1.3 of the Commission's Rules, 47 C.F.R. § 1.3, EarthWatch IS GRANTED a waiver of Section 25.117(e)(1) of the Commission's Rules, 47 C.F.R. § 25.117(e)(1), for purposes of rescheduling the construction completion and launch milestones of QuickBird-2 to December 2000 and April 2001.

15. IT IS FURTHER ORDERED that, unless extended by the Commission for good cause shown, this authorization shall become NULL AND VOID in the event the space stations are not launched and successfully placed into operation in accordance with this authorization by the following dates:

	<u>Complete Construction</u>	<u>Launch</u>
QuickBird-1	June 2000	August 2000
QuickBird-2	December 2000	February 2001

16. IT IS FURTHER ORDERED that Application File No. SAT-MOD-19990720-00074 IS DENIED, to the extent that EarthWatch seeks extension of the construction completion and launch milestones of QuickBird-2 to December 2000 and December 2001.

17. IT IS FURTHER ORDERED that, pursuant to Section 25.111 of the Commission's Rules, 47 C.F.R. § 25.111, EarthWatch, Inc. SHALL PROVIDE the Commission with all necessary information required for the notification of the modified QuickBird-1 and QuickBird-2 parameters pursuant to the international Radio Regulations.

18. IT IS FURTHER ORDERED that this Order is issued pursuant to Section 0.261 of the Commission's Rules, 47 C.F.R. § 0.261, and that this Order is effective upon the date of its release.

19. IT IS FURTHER ORDERED that, except as modified by this Order, the *EarthWatch Authorization Order*, 10 FCC Rcd 10467 (Int'l Bur. 1995), *First EarthWatch Modification Order*, 12 FCC Rcd 21637 (Int'l Bur. 1995), and *Second EarthWatch Modification Order*, 12 FCC Rcd 19556 (Int'l Bur. 1995), remain in full force and effect.

FEDERAL COMMUNICATIONS COMMISSION

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