July 15, 2003

POLAR-ORBITING ENVIRONMENTAL SATELLITES

Project Risks Could Affect Weather Data Needed by Civilian and Military Users

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Highlights

Highlights of GAO-03-987T, a testimony before the Subcommittee on Environment, Technology, and Standards, Committee on Science, House of Representatives

Why GAO Did This Study

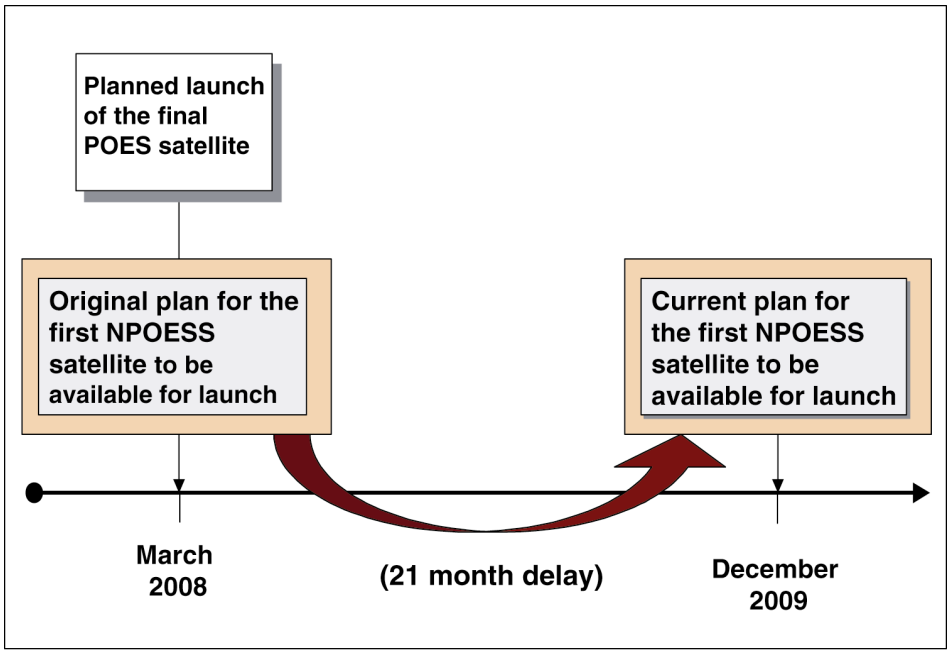
Polar-orbiting environmental satellites provide data and imagery that are used by weather forecasters, climatologists, and the military to map and monitor changes in weather, climate, the ocean, and the environment. The current polar satellite program is a complex infrastructure that includes two satellite systems, supporting ground stations, and four central data processing centers. In the future, the National Polar-orbiting Operational Environmental Satellite System (NPOESS) is to merge the two current satellite systems into a single state-of-the-art environment monitoring satellite system. This new $7 billion satellite system is considered critical to the United States' ability to maintain the continuity of data required for weather forecasting and global climate monitoring through the year 2018. In its testimony GAO was asked, among other topics, to discuss risks to the success of the NPOESS deployment.

What GAO Found

The NPOESS program faces key programmatic and technical risks that may affect the successful and timely deployment of the system. The original plan for NPOESS was that it would be available to serve as a backup to the March 2008 launch of the final satellite in one of the two current satellite programs—the Polar-orbiting Operational Environmental Satellite (POES) system. However, changing funding streams and revised schedules have delayed the expected launch date of the first NPOESS satellite by 21 months. Thus, the first NPOESS satellite will not be ready in time to back up the final POES satellite, resulting in a potential gap in satellite coverage should that satellite fail. Specifically, if the final POES launch fails and if existing satellites are unable to continue operations beyond their expected lifespans, the continuity of weather data needed for weather forecasts and climate monitoring will be put at risk. Moreover, concerns with the development of key NPOESS components, including critical sensors and the data processing system, may cause additional delays in the satellite launch date.

The program office is working to address the changes in funding levels and schedule, and to make plans for addressing specific risks. Further, it is working to develop a new cost and schedule baseline for the NPOESS program by August 2003.

Timeline of Delay in Launch Availability



Source: GAO.

www.gao.gov/cgi-bin/getrpt?GAO-03-987T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact David Powner at (202) 512-9286 or pownerd@gao.gov.