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OPERATIONAL TEST  
AND EVALUATION

INFO MEMO

JAN 08 2016

FOR: SECRETARY OF DEFENSE

FROM: J. Michael Gilmore, Director,  Operational Test and Evaluation

SUBJECT: Risk to Global Positioning System (GPS) Capability

- I am writing to call your attention to significant unmitigated risks to our nation's GPS capability. GPS is critical to U.S. national security, civil and commercial transportation safety, and the world's economic infrastructure. Due to satellite control segment acquisition delays and insufficient focus on gap-filling capabilities, our ability to continuously provide worldwide GPS signal access may be in greater jeopardy in the near future than at any time since GPS achieved initial operational capability in 1993.
- The Air Force predicts it will need to begin replacing aging Block II-variant GPS satellites with modernized GPS III satellites in September 2019 to sustain the minimum 24-satellite operational constellation. The Air Force currently plans to launch the first GPS III satellite in late 2017, but the Air Force cannot operationally employ the GPS III satellites with the current GPS Operational Control Segment (OCS) ground control system. The Air Force is developing the modernized GPS Next Generation Operational Control System (OCX) to replace OCS and control GPS III satellites and their modernized capabilities, but severe development problems have delayed OCX far beyond its required availability date.
- Those problems and the expectation of a three year OCX delay to 2019 warranted Congress' 2016 National Defense Authorization Act (NDAA) direction for quarterly Air Force reports on OCX to the Comptroller General, and a Comptroller General briefing to Congressional Defense Committees. Since the NDAA was signed into law, Air Force predictions for the OCX delivery schedule have significantly worsened. Although the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) December 22, 2015 acquisition decision memorandum directed a 24-month extension to complete the first block delivery of OCX, the Air Force's estimate at the December 4, 2015 "OCX Deep Dive" acquisition review was that they will require 47 additional months, rather than the 24 additional months directed by USD (AT&L).
- More importantly, in addition to delaying modernization, OCX delays create a significant risk to our ability to provide continuous worldwide access to legacy GPS signals, since OCX cannot be available by 2019 to control GPS III satellites as required to sustain the GPS constellation. The Air Force plans to start a new program called GPS III Contingency Operations (COps), as a "bridge capability" to employ GPS III satellites with only legacy signals until the first OCX block delivery is available. However, COps may already be at risk:



- COps is not yet on contract and its development is nascent.
  - Air Force program office resources are spread thinly between six different current and prospective GPS control segments in sustainment or development.
  - The proposed COps acquisition schedule is grossly optimistic and unrealistic.
  - The program office's own internal assessment is that COps acquisition is high risk in comparison to other DoD programs
  - The Air Force's recent history of on-time satellite control segment delivery is abysmal.
- This requires our urgent attention, and I have placed COps under oversight for operational test and evaluation, but I am concerned that DOD leadership appears to be more focused on the foundering OCX than on the now-critical COps. I recommend that you direct the Air Force to prioritize resources to ensure successful COps execution, and that you require COps progress reporting in the quarterly OCX reports to the Comptroller General, to facilitate active monitoring by your staff and ensure the preservation of our GPS capability.

COORDINATION: None

cc:

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