

United States Government Accountability Office Washington, DC 20548

May 4, 2012

Congressional Committees

Subject: Nuclear Weapons: Evaluation of Report on Feasibility of Increasing Air Transportation of Nuclear Weapons, Components, and Materials

Transporting nuclear weapons, components, and materials represents a safety and security risk. House Report 110-652, which accompanied the National Defense Authorization Act for Fiscal Year 2009 (Pub. L. No. 110-417), directed the National Nuclear Security Administration (NNSA)¹ and the Air Force to conduct a feasibility study on increasing the use of aircraft to transport nuclear weapons, components, and materials and to report back to Congress by December 31, 2008.² In turn, House Report 112-78, which accompanied the National Defense Authorization Act for Fiscal Year 2012 (Pub. L. No. 112-81), directed us to conduct an independent evaluation of the air transportation study (ATS) jointly issued by the Administrator of NNSA and the Secretary of the Air Force in September 2009.³ The conclusions of the 2009 ATS report supported maintaining the current balance of air and ground transportation of nuclear weapons.⁴

We provided a classified briefing of our preliminary observations to staff of the Subcommittee on Strategic Forces, Committee on Armed Services, House of Representatives, on February 2, 2012. On March 13, 2012, we provided classified briefing slides to the House Armed Services Committee.

This report provides information on whether (1) acceptable methodologies were used in the ATS report to develop nuclear weapons transportation options that considered safety, security, and operational requirements, (2) acceptable methodologies were used in the report to develop cost estimates for nuclear weapons transportation options identified in the report, and (3) recent changes to

¹NNSA, a semi-autonomous agency within the Department of Energy, is responsible for the management and security of the nation's nuclear weapons programs.

² NNSA and the Air Force were directed to conduct the study in coordination with the joint Department of Defense/Department of Energy Nuclear Weapons Council.

³Specifically, GAO was directed to submit a report of our independent evaluation to the congressional defense committees.

⁴NNSA and the Air Force, *Report to Congress on the Feasibility of Increasing Air Transportation of Nuclear Weapons, Components, and Materials*, Sept. 3, 2009.

nuclear weapons transportation operations, technologies, or threat information might alter the conclusions reached in the report.

To conduct our work, among other things, we applied a GAO methodology for assessing evaluation designs using support from ATS documents and interviews with NNSA and Department of Defense (DOD) officials from cognizant organizations (stakeholders); applied accepted economic practices for conducting feasibility studies; and reviewed pertinent DOD and Department of Energy guidance on transporting nuclear weapons, as well as interviewed additional officials from the office of the Assistant Chief of Staff of the Air Force for Strategic Deterrence and Nuclear Integration, and Sandia National Laboratories about changes in operating procedures, technologies, or threat information since the issuance of the ATS report. In addition, we visited key NNSA and Air Force organizations, selected on the basis of their importance to the nuclear transportation mission, located at Kirtland Air Force Base in Albuquerque, New Mexico.

We conducted this work between November 2011 and May 2012 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In summary, we found the following:

- The ATS report was supported by generally acceptable methods for developing transportation options and evaluating safety, security, and operational requirements for these options. The assessment of safety risk from a possible airplane crash transporting nuclear weapons was the key factor supporting the report's conclusions to maintain the current balance of air and ground transportation of nuclear weapons. In addition, the majority of the nuclear weapons in the active nuclear stockpile require special DOD approval to be transported by air.
- The ATS report was supported by an acceptable methodology to develop relative costs among the different transportation options under review and included selected costs, such as per-weapon, per-mile operating costs for transportation of nuclear weapons via current air and ground approaches. However, it did not analyze all costs—for example life cycle costs—or for developing infrastructure, such as airfields, necessary to support some air transportation options.
- According to stakeholders, changes in operational requirements for transporting nuclear weapons, new technologies that have improved security and safety, or reassessments of potential threats of future attacks

since the report's completion in 2009 would probably not mitigate the safety risk of air transportation and would be unlikely to alter the report's conclusions.

For additional information on the results of our work, please see enclosure I, an unclassified version of the briefing slides that were delivered to the House Armed Services Committee. We are not making any recommendations for congressional consideration or agency action.

We requested comments from NNSA and the Air Force on a draft of the classified version of the briefing slides. NNSA officials provided their comments via e-mail on March 5, 2012, stating that the briefing accurately reflects the findings, results, and conclusions of the ATS report and that NNSA does not have any concerns or substantive comments. Air Force officials also provided oral comments on the draft briefing the same day, stating that they generally agreed with the information presented. They also provided technical comments, which we incorporated as appropriate.

We are sending copies of this report to the Secretary of Energy, Administrator of NNSA, Secretary of Defense, Secretary of the Air Force, Director of the Office of Management and Budget, Director of the Congressional Budget Office, and other appropriate congressional committees. This report is also available at no charge on GAO's website at http://www.gao.gov.

Should you or your staff have any questions concerning this report, please contact either Gene Aloise at (202) 512-3841 or aloisee@gao.gov or John Pendleton at (202) 512-3489 or pendletonj@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Key contributors to this report were Jonathan Gill (Assistant Director), Penney Harwell Caramia (Assistant Director), Thomas Baril Jr., David Keefer, Thomas Laetz, Sally Newman, and Kiki Theodoropoulos.

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Enclosures – I

List of Committees

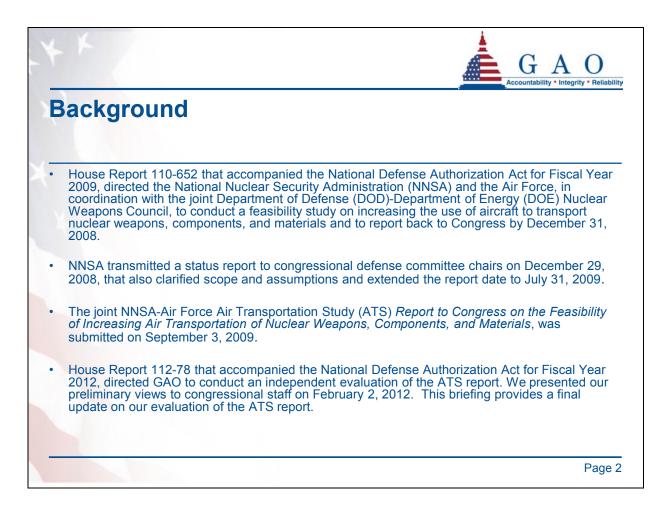
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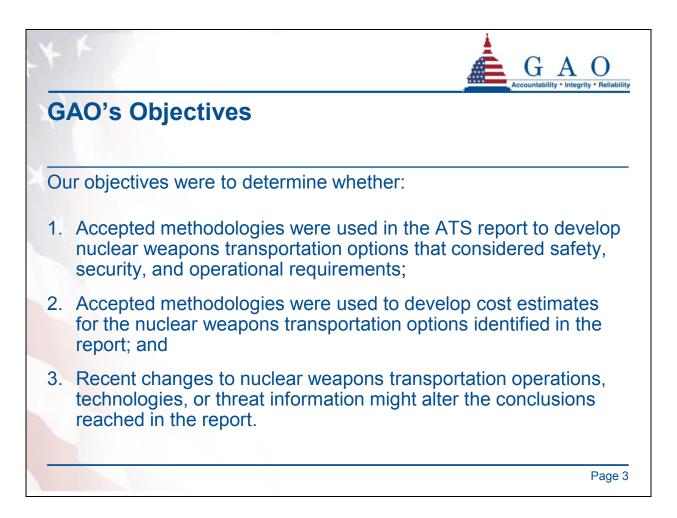
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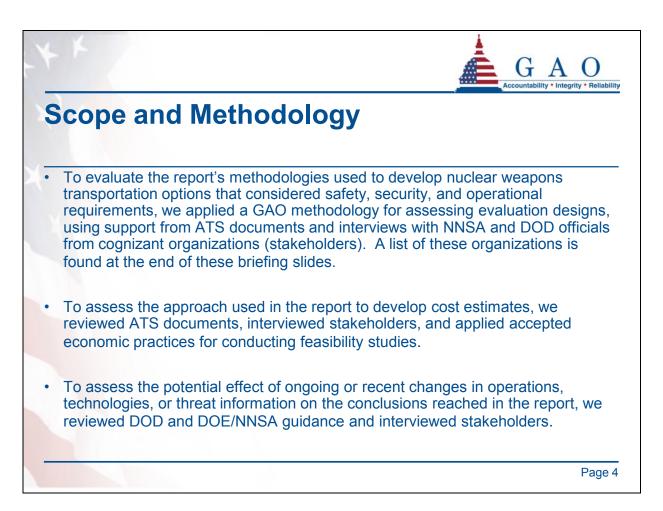
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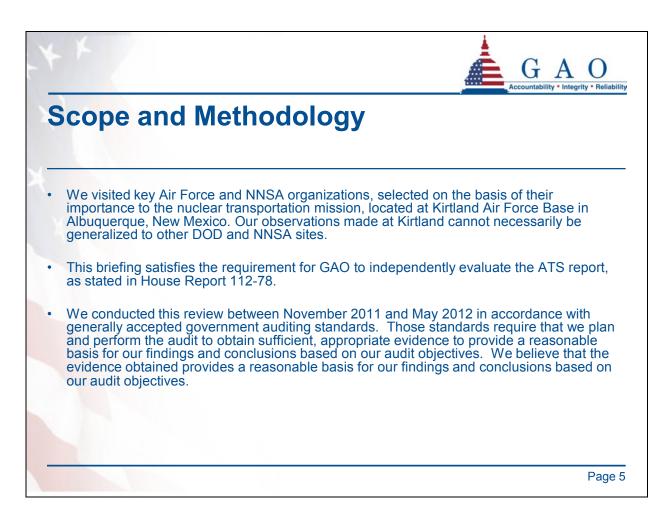
The Honorable C.W. Bill Young Chairman The Honorable Norman D. Dicks Ranking Member Subcommittee on Defense Committee on Appropriations House of Representatives **Unclassified Briefing on Air Transportation Study Report**

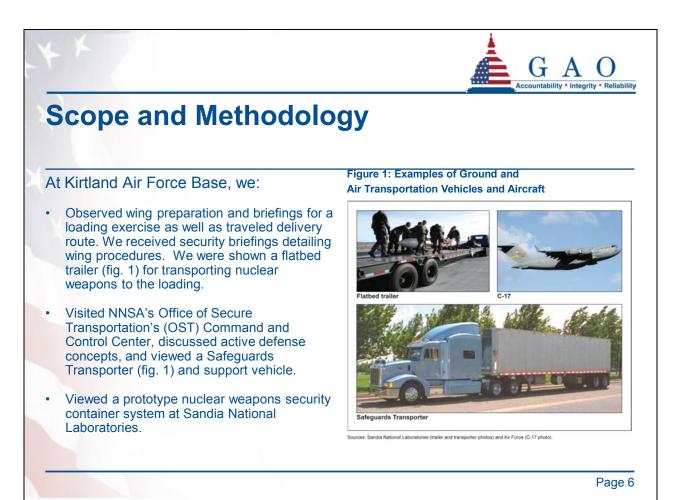


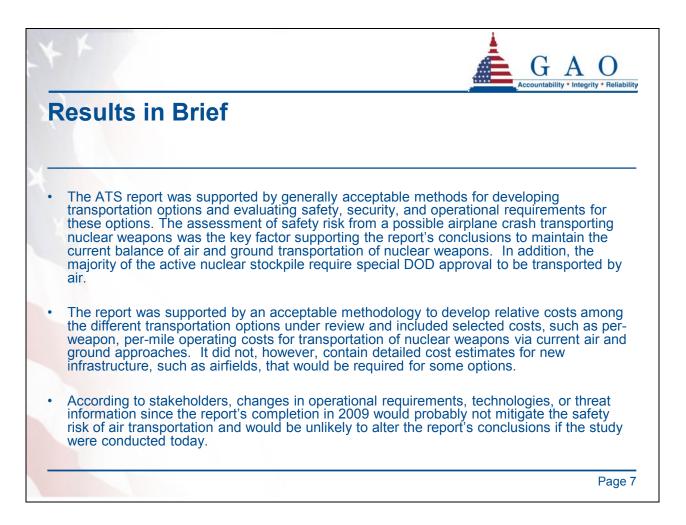


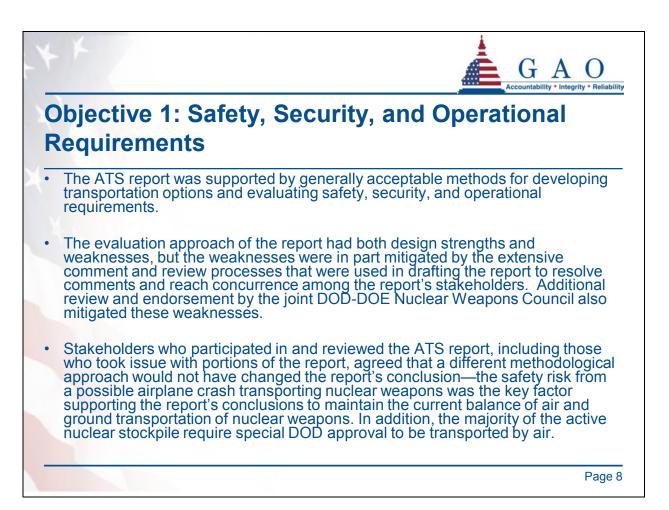




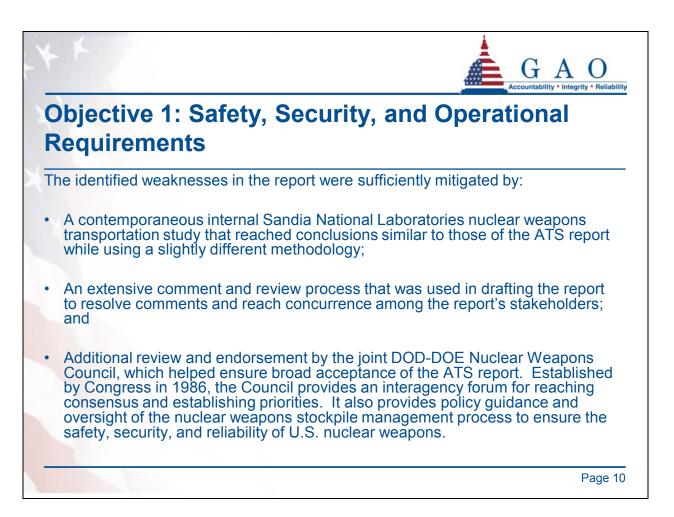


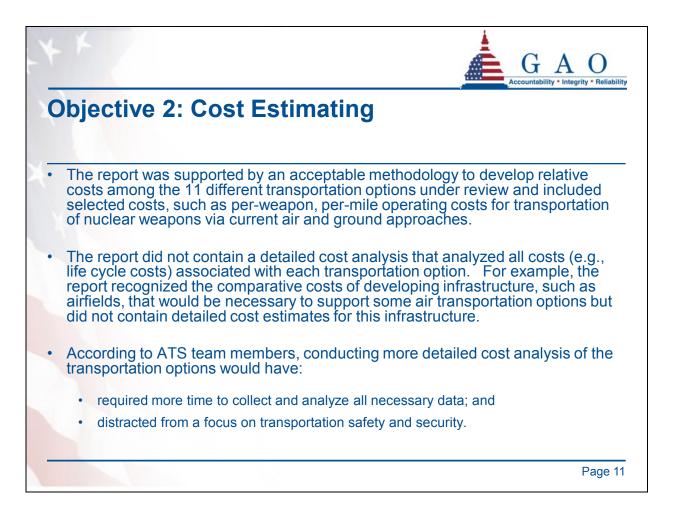


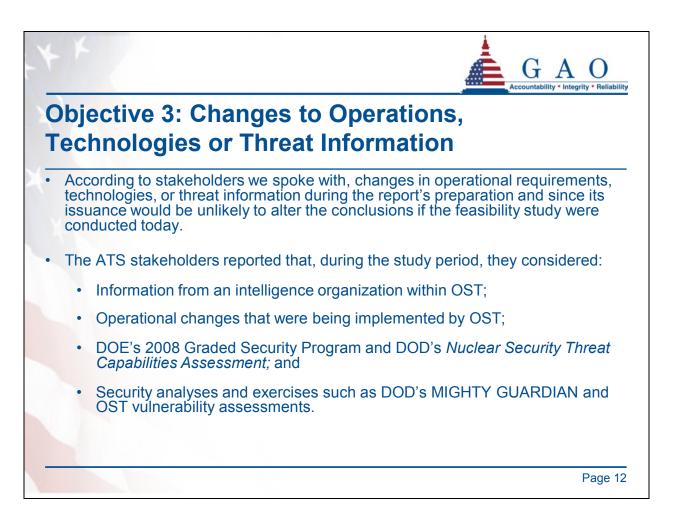




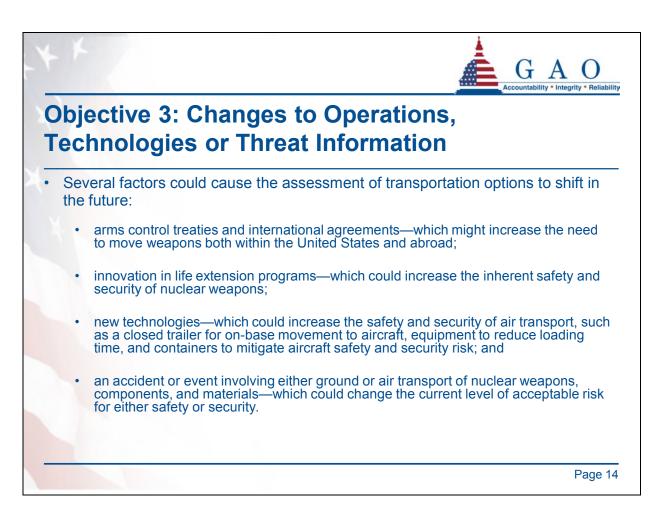


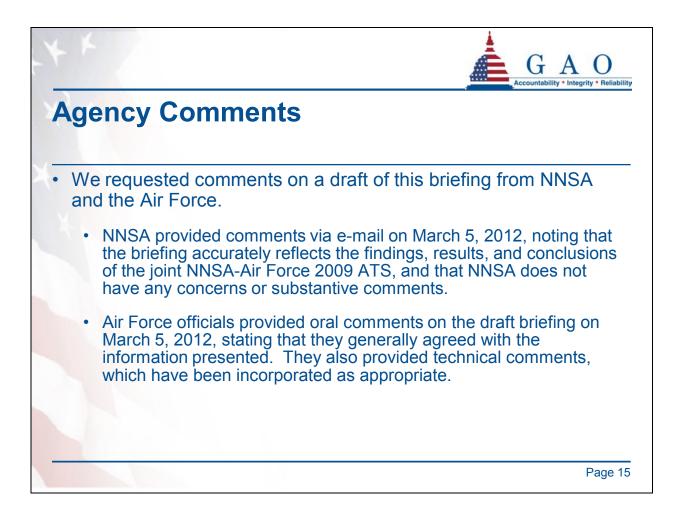
















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