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STATEMENT

BY

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COMMANDING GENERAL, ARMY TEST AND EVALUATION COMMAND

BEFORE THE

HOUSE ARMED SERVICES COMMITTEE

SUBCOMMITTEE ON STRATEGIC FORCES

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Before the
House Armed Services Committee
Subcommittee on Strategic Forces
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Madame Chairman, Ranking Member Turner, distinguished Members of the Committee, thank you for the opportunity to appear before you this afternoon. In my invitation to appear before the committee, three questions were asked concerning assessments of missile defense programs to date as well as my thoughts as to what future actions are needed to occur for the missile defense program to work in an effective, suitable, and survivable manner.

Ballistic Missile Defense System Operational Test Agency Team and role in Ballistic Missile Defense System Test and Evaluation

This response to the subcommittee's questions provide the view of the multi-service Operational Test Agencies that comprise the Ballistic Missile Defense System Operational Test Agency team. This team is an independent organization, funded and supported by Missile Defense Agency to provide Operational Assessments of the Ballistic Missile Defense System. It is involved in all facets of the test program for the Ballistic Missile Defense System block development. Early operational tester involvement during this developmental program provides significant feedback to the developer, the supported military commands, and the Director, Operational Test and Evaluation.

Question 1: Assessment of Ballistic Missile Defense testing program

Our assessment of the test program to date will examine test planning/execution, increased operational realism in test venues, and the successful support of models and simulations and threat representative targets to provide valid sources of assessment data. Our comments on these facets of the test program follow.

Test design/planning/coordination/execution

Collocation of our test planners with their program counterparts allows for increased collaboration in test planning, coordination, and execution. Future test design efforts will be significantly improved as a result of the emphasis on data needs, identified as part of the ongoing systematic three-phased review of test planning. This effort is fully supported by the Service operational test and evaluation organizations and it will result in a comprehensive test program.

Operational realism

Flight and ground tests in 2008 showed increased operational realism across all programs.

Ground-based Midcourse Defense flight tests included: operational sensors, next fielding block software and portions of the operational

communications architecture. Contractors were involved with some aspects of the flight tests that will in the future be operated by military personnel. For the first time, Warfighters controlled a live intercept test from the Battalion node at Fort Greely, Alaska.

Both the Aegis Ballistic Missile Defense and Terminal High Altitude Area Defense flight test programs also showed increased operational realism. For Aegis Ballistic Missile Defense, trained fleet sailors used fielded interceptors and other system hardware with some limitations. The Terminal High Altitude Area Defense flight test program incorporated for the first time final configurations for the interceptor and launcher, and improved the process of keeping knowledge of the launch time from the Warfighters. The testing included increased use of operational tactics, techniques, and procedures; and added more communication links to the test architecture. The final Terminal High Altitude Area operational fielding configuration will be included in future testing.

To fully assess the capability of an integrated Ballistic Missile Defense System, operational doctrine for simultaneous theater, regional, and homeland defense must mature. Wargames and improved test architectures are needed to support Warfighter doctrine and tactics, techniques, and procedures development.

Integration of Models and Simulations in the test program

We concur with the Missile Defense Agency plan to place increased emphasis on the development and implementation of validated system level hardware-in-the-loop and digital models that can be used to assess regional, theater, and strategic operational performance. The quality of element and component verification and validation products improved over the past two years. However, work is still needed in providing adequate verification and validation data/documentation to increase confidence in the Models and Simulations representations. This includes an increased emphasis on environmental simulations and codes and threat representations, to ensure these standards are applied properly in system performance simulations.

Target development/deployment

Target limitations related to both availability and performance continues to impact the value of flight test data. Both Aegis and Terminal High Altitude Area Defense require advanced targets to engage stressing threats and beyond short-range ballistic missiles. We will assist in the prioritization of the target needs.

Question 2: Assessment of on-going three-phase review of the Ballistic Missile Defense System test program

The three-phased review of the test program is a progressive technical effort to drive future test design and resource requirements. The Operational Test Agency team supports this review and is working closely with the Missile Defense Agency to achieve success in all phases. We believe that this comprehensive review will support a meaningful assessment of effectiveness, suitability and survivability.

Question 3: Thoughts about current status of Ballistic Missile Defense System capabilities and future actions needed to ensure Effectiveness, Suitability, and Survivability

Current Status

As discussed by Missile Defense Agency and Director, Operational Test and Evaluation, missile defense testing in 2008 supported increased understanding of the currently fielded and developing Ballistic Missile Defense System capability and limitations. Missile Defense Agency and the Operational Test Agency team are committed to sharing data from all Ballistic Missile Defense System integrated system, element, and component level flight tests, ground tests, wargames, exercises, models and simulations, and lethality test and analysis, as well as data supporting assessment of reliability, availability, maintainability, interoperability, survivability, and supportability. The Missile Defense Agency has continued its emphasis on planning and conducting combined developmental and operational testing to the maximum extent possible during both flight and

ground tests. Additionally, as a part of the focus to support model validation, the Missile Defense Agency has established a process to conduct timely element and system Post Flight Reconstruction.

The Ballistic Missile Defense System Operational Test Agency Operational Assessment Report, 15 Jan 2009, documents the capabilities and limitations of the Ballistic Missile Defense System based on test events conducted in 2008, and provides the current status of system Effectiveness, Suitability, and Survivability. The system has demonstrated a limited capability to defend against simple, long-range threats launched from Northeast Asia. The Aegis Ballistic Missile Defense demonstrated capabilities to detect, track, and engage simple short and medium range targets, while the Terminal High Altitude Area Defense demonstrated capability to detect, track, and engage both short-range non-separating and simple separating targets. These demonstrations of capabilities significantly enhance the current regional/theater defense provided by the Patriot system. The Command, Control, Battle Management Communications Element demonstrated capability to provide situational awareness to Warfighters worldwide and to control the AN/TPY-2 radar in a forward-based sensor mode. Current data shortfalls, which resulted in low confidence in the assessment conclusions, include limited number of flight tests, maturity of the system, unaccredited models and simulations, limitations in operational realism including participation by trained military crews, incomplete suitability and survivability data, and threat representation.

Future Needs

A synchronized set of flight and ground tests, linked with verified, validated, and accredited models and simulations are required to adequately assess the operational effectiveness, suitability and survivability of the Ballistic Missile Defense System and its elements. The thorough examination of the entire test program will address identified data limitations. When the three-phase test review is complete, we will be able to determine when we can assess all elements of effectiveness, suitability, and survivability with medium to high confidence. Accredited models will generate data to predict performance across the entire mission battlespace against multiple/varying threats, defended areas, scenarios, and manmade/natural environments. Increased focus on regional/theater ballistic missile defense testing will provide credible information about these developing mission capabilities. As operational realism is enhanced, test results will provide increased confidence that assessment results will reflect system operation in the hands of the Warfighter.

Summary

Currently, the Missile Defense Agency's test program is undergoing a comprehensive review, initiated by the Missile Defense Agency Director. When that process is completed and executed, the resulting verified, validated, and accredited models and simulations, when combined with other test and analysis

information, will provide quality data upon which to base a comprehensive independent assessment of the Ballistic Missile Defense System.

This concludes my remarks and I look forward to answering your questions.