September 26, 2024

The Honorable Lloyd J. Austin III
Secretary of Defense
1000 Defense Pentagon
Washington, DC 20301-1000

Dear Secretary Austin,

Thank you for all you do every day ensuring our nation has military forces trained and equipped to ensure our national security. We write today to voice support for the Department of Defense's (DOD) continued development of hypersonic weapons and request a briefing by your staff on DOD's use of current and planned hypersonic ground test facilities.

The development of hypersonic missiles and the tools to defeat them is a top modernization priority for DOD. On March 12, 2024, Dr. Michael Horowitz testified to the House Armed Services Committee, stating that China "is fielding hypersonic weapons capable of ranging across the Western Pacific in the thousands with multi-mode seekers enabling the targeting of both mobile and fixed targets", "Russia continues to learn from its use of offensive hypersonic missiles in its war of aggression against Ukraine" and North Korea "continues to develop and flight test what it claims are hypersonic capabilities." The United States must develop and field hypersonic weapons to deter and defend against attacks on our forces, allies, and partners. However, as stated by Lieutenant General Heath Collins, the Director of the Missile Defense Agency, "a limited amount of adequate testing infrastructure has hindered overall development."

Operating hypersonic test facilities requires a blend of infrastructure and resources. Highly specialized equipment like wind tunnels is essential for recreating hypersonic conditions. Additionally, a skilled team of engineers, scientists, and technicians is needed to design experiments and collect data. While Congress and DOD are focused on pursuing the development and near-term deployment of hypersonic systems, we are concerned about how current hypersonic ground test facilities are being used and how DOD plans to integrate future facilities to maximize testing capabilities to rapidly test and field hypersonic weapons.

To maximize the efficiency and potential of its hypersonic ground test facilities, we request a briefing from DOD on current and planned hypersonic ground testing facilities to ensure the United States makes the best use of those facilities, advancing both defense capabilities and broader aerospace innovations.

1) Facility capabilities
   a. What are the capabilities of the United States' hypersonic ground testing facilities (e.g., Mach numbers, temperature ranges, shock wave behaviors) and how do they conduct testing in different aspects of hypersonic flight such as aerodynamics, heat resistance, propulsion, and materials testing?
   b. How is DOD ensuring the most relevant tests are conducted in the right location(s)?
   c. What are the gaps in current capabilities, including computational modeling advancements?
   d. What upgrades or expansions are planned/required?
2) Scheduling and Utilization
   a. What is the collaboration across military, governmental, academia, and commercial sectors to better utilization of these facilities?
   b. Given the limited number of facilities, how is DOD scheduling testing at each facility based on national defense priorities, technical readiness levels (TRL), and the urgency of the projects?
   c. Is priority given to critical defense initiatives such as hypersonic missiles or defense systems that require quick turnaround times?
   d. What is being done to ensure each test is carefully planned to maximize data collection, using the full range of diagnostics available at each facility?
   e. Is there a centralized data management system that tracks the results of all tests across facilities that can help all researchers and engineers gain insights more quickly, avoiding repetition and ensuring that lessons learned are broadly disseminated?
   f. Is there, or should there be, a central scheduling system or collaborative agreements to help avoid duplication of efforts and ensure that high-priority projects are given access?
3) Future Capacities
   a. Has DOD identified future hypersonic testing requirements?
   b. Is DOD planning to incorporate advanced automation and AI-based testing procedures to streamline test preparation, execution, and analysis?
   c. Is there an overall integrated plan to expand current testing capabilities to accommodate more tests simultaneously as well as increase the range of conditions that can be simulated?

Thank you for your continued support and we look forward to working together with you and your staff to address our current and future hypersonic ground test facility capabilities. If you have any questions, please contact 202-963-8775.

Sincerely,

Pat Fallon
Member of Congress

Don Bacon
Member of Congress

Vince Fong
Member of Congress

Doug Lamborn
Member of Congress