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United States Senate

COMMITTEE ON ENERGY AND NATURAL RESOURCES

WASHINGTON, DC 20510–6150

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March 25, 2025

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Dr. Thom Mason
Director
Los Alamos National Laboratory
P.O. Box 1663
Los Alamos, NM 87545

Dear Dr. Mason,

I write to express serious concerns regarding a recent report detailing how researchers at Los Alamos National Laboratory (LANL) have engaged in research collaborations leveraging PRC-based supercomputing resources.[1] These activities are particularly concerning in light of the 2015 U.S. sanctions on China's National Supercomputing Centers (NSCCs) and their inclusion on the Department of Commerce's Entity List due to their affiliations with Chinese military and strategic weapons programs.[2]

The report's analysis of DOE-funded research from 2016 to 2024 highlights multiple instances in which LANL researchers have conducted studies utilizing PRC supercomputing resources, including those at the NSCCs in Guangzhou and Tianjin. These collaborations extend into sensitive research areas with national security implications, including quantum computing, materials science, and astrophysics. Below is a notable example from the report that raises concerns:

- **"Improved Boundary Conditions for Coupled Geospace Models: An Application in Modeling Spacecraft Surface Charging Environment" (2022)** – In this study, a LANL researcher collaborated with Beihang University, which is one of the "Seven Sons" of China's defense sector. Additionally, the collaboration involved the Key Laboratory of Space Environment Monitoring and Information Processing, which is under the Ministry of Industry and Information Technology (MIIT). MIIT plays a key role in advancing China's military-civil fusion initiatives. The study refines simulations to predict spacecraft charging conditions, which are vital for both defense and commercial aerospace systems. This work relies on the TianHe-2 supercomputer at the National Supercomputer Center in Guangzhou and exemplifies the dual-use nature of space-plasma modeling, where advanced scientific research benefits both military capabilities and civilian satellite operations.[3]

This study, as well as other LANL-affiliated studies listed in the report, indicates a pattern of collaboration that raises serious national security concerns, particularly with regard to China's military-civil fusion policy, which funnels civilian research to the Chinese military to support

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[1] Eads, LJ. *The Supercomputer Entanglement: Ongoing Use of PRC-Sanctioned Supercomputers by the Department of Defense and U.S. National Laboratories.* March 2025.
[2] Bureau of Industry and Security, U.S. Department of Commerce. "Addition of Certain Persons to the Entity List; and Removal of Person from the Entity List Based on a Removal Request." *Federal Register*, vol. 80, no. 32, 18 Feb. 2015, pp. 8502-8509.
[3] Eads, *The Supercomputer Entanglement*, 9-10.

and enhance its capabilities. In her written testimony to the Senate Committee on Energy and Natural Resources on February 20th, Anna Puglisi, a prominent research security analyst, noted China's military-civil fusion policy has "deep implications for the DOE complex."[4] She stated, "China takes a holistic approach to [science and technology] development, blurring what is civilian, what is military, what is private and what is public… To the Chinese leadership, every civilian use is also a potential military use."[5] Therefore, the involvement of LANL researchers in utilizing PRC-based supercomputing resources for studies with clear defense applications necessitates increased scrutiny.

Additionally, the use of PRC supercomputers introduces cybersecurity risks, including potential interception or exfiltration of sensitive U.S. research data by Chinese state-backed actors. The report specifically highlights concerns over LANL researchers' use of virtual private networks (VPNs) and Secure Shell (SSH) access to connect to PRC supercomputers. Such connections may expose sensitive U.S. research data to surveillance or cyber espionage, potentially allowing unauthorized access or malware insertion into LANL's and broader U.S. research networks.[6]

To better understand LANL's oversight and compliance regarding this issue, I request that you provide answers to the following questions no later than April 8, 2025:

1. Does LANL currently require researchers to disclose their use of foreign supercomputing resources, particularly those tied to PRC-based institutions on the U.S. Entity List?
2. Has LANL conducted any internal reviews to assess whether federally funded research has violated U.S. export control laws or sanctions? If so, what were the findings?
3. What steps has LANL taken to prevent its researchers from engaging in collaborations with PRC-based supercomputing centers, or to prevent inadvertently contributing to China's military advancements?
4. Will LANL commit to implementing mandatory disclosure requirements for all research utilizing foreign supercomputing resources?

Given the serious national security implications of these activities, I urge LANL to take immediate steps to implement enforcement mechanisms, conduct internal audits, and establish clear reporting requirements for any use of foreign computational resources in taxpayer-funded research. I appreciate your prompt attention to this matter and look forward to your response.

Sincerely,

Mike Lee
Chairman

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[4] Puglisi, Anna B. *Testimony Before the Senate Committee on Energy and Natural Resources on "Examining Research Security Risks Posed by Foreign Nationals from Countries of Risk Working at the DOE's National Laboratories and Necessary Mitigation Steps."* U.S. Senate, 20 Feb. 2025, www.energy.senate.gov/services/files/4FB0285A-55E1-4C2B-88E2-CC475C69FAD5.

[5] Id.

[6] Eads, *The Supercomputer Entanglement*, 10.