

**Congress of the United States**  
**Washington, DC 20515**

February 24, 2012

The Honorable Charles Bolden  
Administrator  
National Aeronautics and Space Administration  
300 E St. SW  
Washington, DC 20546-0001

Dear Administrator Bolden:

As you know on February 1, 2012, the National Research Council (NRC) released its "Space Technologies Roadmap and Priorities" report in which it outlined the most critical technological requirements for future space exploration. Out of the hundreds of technologies considered, Thermal Management Systems (TMS) was selected by the NRC as a high priority technology and deemed "*mission critical for all human and robotic missions that require planetary entry or re-entry.*" TMS technology has significant implications for all future space missions, both robotic and manned, commercial and NASA-driven.

We understand that, based on directives to reduce costs, NASA Headquarters (NASA HQ) conducted an agency-wide assessment of government-owned facilities and infrastructure for obsolete and redundant assets. This assessment resulted in the 2011 decision NASA made to close the Atmospheric Reentry Materials and Structures Evaluation Facility (arcjet) at the Johnson Space Center (JSC). However, this decision directly contradicts the recommendations made by the NRC regarding advanced research in TMS technology.

Arcjet facilities are used to develop and certify thermal protection materials and systems for re-entry spacecraft. This technology is required for the future development, certification and fabrication of space vehicle thermal protection systems for both human and robotic missions. The JSC arcjet facility is one of only two such facilities in the United States, with the other located at the Ames Research Center (Ames).

Safety is paramount. NASA's decision to close the JSC arcjet facility and rely solely on one facility for TMS testing not only ignores the findings of the NRC report, but potentially risks safety and mission assurance. Relying solely on one arcjet facility creates a risky, single-point failure for TMS research and testing. Should the Ames arcjet facility experience technical difficulties, as often occurs in these high-energy facilities, this will result in significant and costly delays in the development of space vehicles. Furthermore, the existing and future requirements for advanced TMS testing cannot be fulfilled by only one test center, and risking the programs to do so is short-sighted.

Currently, the JSC arcjet facility is being utilized for Orion/MPCV and commercial systems TMS testing. "Mothballing" this facility will consequently slow the pace of testing as well as increase development costs for NASA and the commercial providers. The NRC report noted that "*having multiple facilities spreads out the risk, while also allowing different physics to be investigated at different locations.*" With the variety of future space missions planned, from

commercial LEO to deep-space exploration, decreasing NASA's ability to perform thorough TMS testing and research increases risks associated with space exploration.

Looking beyond the safety, mission assurance, and capability concerns, the fiscal considerations to NASA's decision make little sense. While the JSC and Ames TMS test facilities provide different capabilities, information conveyed to us shows that the JSC arcjet facility costs significantly less to operate. Furthermore, NASA HQ funds approximately 45% of the operating costs to augment Ames' ability to retain this asset, while the JSC arcjet has been funded solely by the programs they support and/or reimbursable agreements. It makes no sense to close down the JSC arcjet facility which is more cost-effective to operate, particularly if the original goal is to reduce costs.

Additionally, it has come to our attention that the costs associated with shifting resources from the JSC arcjet facility to the Ames arcjet are being funded "out of plan" by NASA HQ in order to "fast-track" the decommissioning and demolition of this facility. The lack of a sound business case, coupled with the decision by NASA to accelerate the phase-out of the JSC facility, is *very* concerning.

In light of the aforementioned concerns, we believe NASA's decision to close the JSC arcjet facility is irresponsible and wrong; it is a decision which will result in a detrimental misstep in our efforts toward future space exploration. Therefore, we request that NASA reconsider this decision and immediately suspend any further actions to close or take the JSC arcjet facility offline until we have an opportunity to fully review the data gathered by your facilities assessment/evaluation team.

This situation requires prompt action, as we understand plans are in motion to begin dismantling the JSC arcjet within weeks. We would appreciate a meeting with you as soon as possible to discuss NASA's plans for the arcjet facility at JSC. Thank you for your consideration in this matter, and we look forward to your expedited reply.

Very respectfully,



Pete Olson (TX-22)  
Member of Congress



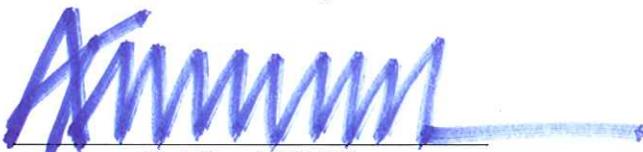
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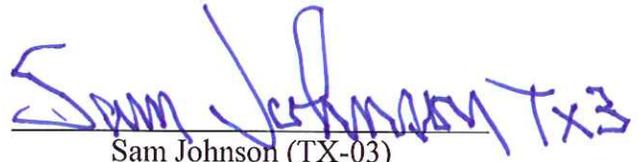


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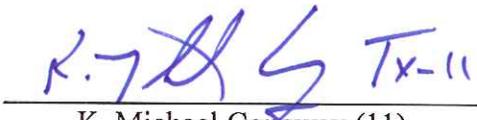
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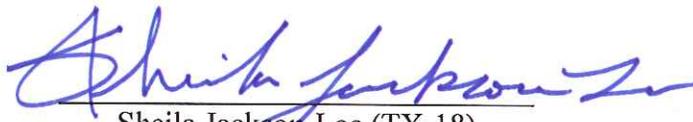
  
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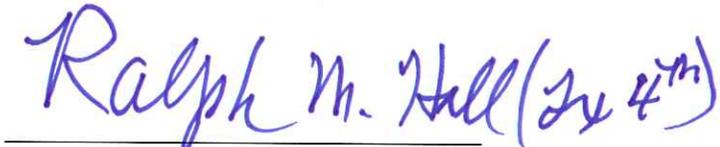
  
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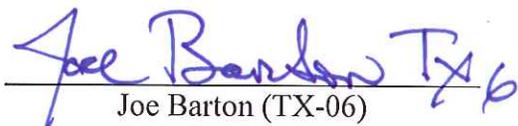
  
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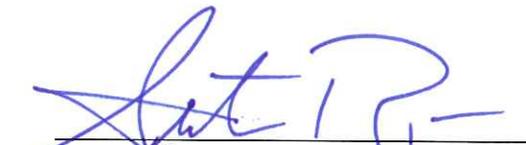
  
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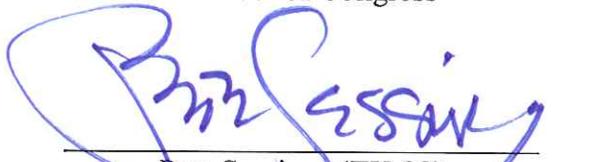
  
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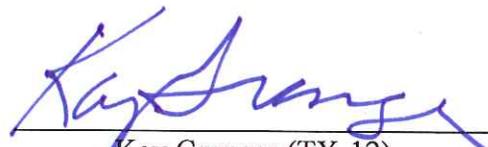
  
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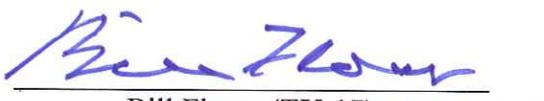
  
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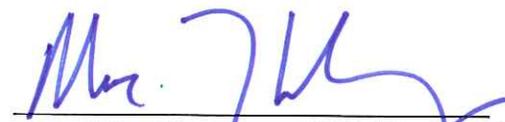
  
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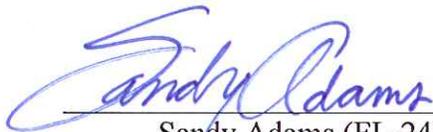
  
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Pete Sessions (TX-32)  
Member of Congress

  
Kay Granger (TX-12)  
Member of Congress

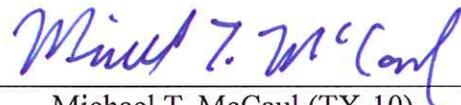
  
Bill Flores (TX-17)  
Member of Congress

  
Mac Thornberry (TX-13)  
Member of Congress



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Sandy Adams (FL-24)  
Member of Congress



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Michael T. McCaul (TX-10)  
Member of Congress



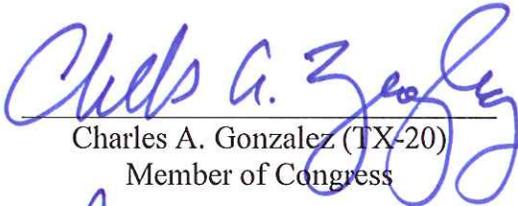
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John A. Culberson (TX-07)  
Member of Congress



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Rubén Hinojosa (TX-15)  
Member of Congress



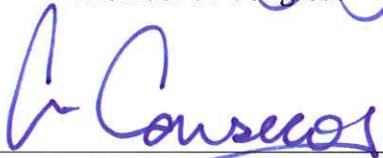
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Charles A. Gonzalez (TX-20)  
Member of Congress



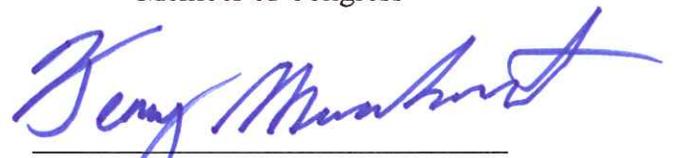
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Robert B. Aderholt (AL-04)  
Member of Congress



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Francisco "Quico" Canseco (TX-23)  
Member of Congress



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Kenny Marchant (TX-24)  
Member of Congress