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March 13, 2026

The Honorable Tom Cole
Chairman
Committee on Appropriations
H-305, the Capitol
Washington, D.C. 20515

The Honorable Rosa DeLauro
Ranking Member
Committee on Appropriations
1036 Longworth HOB
Washington, D.C. 20515

Dear Chairman Cole and Ranking Member DeLauro:

I am requesting funding for Texas A&M Space Institute Robotic Sample Curation in Fiscal Year 2027. The entity to receive funding for this project is The Texas A&M Engineering Experiment Station, located at 1111 RELLIS Parkway, Suite 5226, Bryan, Texas 77807. The funding would be used for a robot arm compatible with glovebox portals used in critical handling glovebox installations nationwide, enabling remote handling of precious astromaterials at NASA. The proposed robot arm will be compatible with glovebox standards and allow NASA JSC to update handling technology from the manual approach developed for Apollo. Unlike the many 10s of kilograms of lunar materials, the comet, asteroid, and future Mars samples will be at the gram level. Updating the facility with a modern robotic approach will enable higher standards for cleanliness, sample integrity, and sample documentation. The technology will then be available for other applications, where gloveboxes have become ubiquitous in industry, medicine, and national security. NASA stores humanity's most valuable astromaterials in gloveboxes and cleanrooms at NASA Johnson Space Center (JSC). These facilities were first developed for the Apollo program and received the moon rocks brought home by astronauts, and more recently, samples from comets and asteroids returned by robotic exploration. These are the same gloveboxes used by physicists to handle radioactive materials at the Los Alamos National Lab, and biologists handling dangerous toxins at the Galveston National Lab. Now outdated, these 1960s gloveboxes are still used by scientists and engineers, who stick their hands into rubber gloves and manually handle high-consequence materials.

Since the 1960's, the technology for handling specimens has improved, including robotic manipulation. This approach has enabled higher cleanliness standards, remote participation in tasks, and allowed operators to work in a safer, more comfortable setting than wearing cleanroom garb. While Apollo's regional investment made this NASA/JSC facility state-of-the-art, that is no longer the case. Depending on older and manual techniques, the NASA/JSC

position as the natural home for curation of future astromaterials could be lost to other, more modern facilities without this investment.

The project is an appropriate use of taxpayer funds because it will update decades-old technology, ensuring that NASA JSC and its partners in industry and academia are best prepared to assess and store astromaterials returned from the Moon and Mars. Updating the facility with a modern robotic approach will enable higher standards for cleanliness, sample integrity, and sample documentation. The technology will then be available for other applications, where gloveboxes have become ubiquitous in industry, medicine, and national security.

The project has a federal nexus because the funding provided is for purposes described in section 20102 of title 51, United States Code. [for NASA SSMS projects] I certify that I have no financial interest in this project, and neither does anyone in my immediate family.

Sincerely,

A handwritten signature in black ink, appearing to read "Brian Babin". The signature is written in a cursive style and is positioned to the left of a vertical line.

Brian Babin, D.D.S.
Member of Congress

