

National Aeronautics and Space Administration

**Headquarters**

Washington, DC 20546-0001



November 5, 2014

Reply to Attn of:

OLIA/2014-00657f:RI:MDK:amb

The Honorable Lamar Smith  
Chairman  
Committee on Science, Space,  
and Technology  
U.S. House of Representatives  
Washington, DC 20515

Dear Mr. Chairman:

The Administrator asked that I respond to your letter of August 27, 2014, signed jointly with Chairman Palazzo, requesting information regarding NASA's Orion and Space Launch System (SLS) programs.

We are pleased to report that NASA continues to make strong progress on the SLS and Orion crew vehicle. NASA is focused on moving forward to accomplish the goals that have been established for us by the Congress and the Administration. As the Committee is aware, SLS and Ground Systems have completed critical design reviews and are now proceeding into development. A similar review for the Orion crew vehicle is planned for the coming months, and Exploration Flight Test-1 (EFT-1), the important initial test of Orion, is planned for December 4, 2014. In short, NASA is moving out on the priorities that the nation has set for us

Responses to your questions regarding Orion and SLS are provided below. Your letter also requests that the Agency produce records related to the budget request for SLS and planning associated with procurement of Orion long-lead items related to the budget request. Records responsive to this request concern budget formulation and constitute internal agency deliberations between NASA and the Administration. Release of documents concerning internal agency deliberations would compromise our ability to conduct internal deliberative evaluations to review a range of potential plans against a range of potential budgets.

**Question 1:**

Please explain the \$400 million risk being tracked by the SLS program, as indicated by GAO's most recent audit. Please provide historical assessments of this risk including when it was first identified, how it has shrunk or grown, and what the per annum amortized amounts would be through flight readiness in 2017.

**Answer 1:**

In August 2014, as part of the NASA life cycle review process, and in accordance with Agency policy, the Agency approved the Space Launch System (SLS) to proceed into the development phase (Phase C), and as part of completing the Key Decision Point-C (KDP-C)

milestone, approved the Agency Baseline Commitment for the SLS. This commitment establishes a no-later-than launch readiness date for SLS for the Exploration Mission 1 (EM-1) flight of November 2018 and a not-to-exceed development cost of \$7.0 billion, at a 70 percent joint cost and schedule confidence level, to attain the first launch vehicle capability of 70 metric tons to low Earth orbit.

As part of NASA's process for managing programs within the Agency's commitments, SLS maintains an integrated technical and programmatic risk management system. One of the discrete risks that SLS tracks in this system is Risk 11747, "SLS Vehicle Architecture Closing on Cost and Performance." The Program uses this risk to track the total potential funding risk to its EM-1 launch readiness date. This risk is intended to capture the total uncertainty around the Program receiving the level of funding required when it is needed. This risk is not intended to predict specific years when the Program may or may not receive funding consistent with program plans. Therefore, this risk is not phased by year in the risk system. Nor is this risk intended to be predictive of what mitigation steps the Program might undertake or propose if the risk were realized in a specific year (the reaction to which would be determined by the extent of the funding disconnect and how the Program might re-phase work and/or consider proposing a change to the launch readiness date).

**Question 2:**

Will NASA be able to fly the SLS for Exploration Mission – 1 in calendar year 2017? If it will not, please explain what has changed since your testimony on April 24, 2013 and whether, during your testimony on March 27, 2014, you were aware that this flight could be delayed beyond calendar year 2017.

**Answer 2:**

NASA's Space Launch System (SLS) has passed a number of significant milestones since the Administrator's testimony in early 2013, the most recent of which is Key Decision Point-C in August 2014. In NASA's program management process, KDP-C is the first point at which the Agency commits to specific cost and schedule milestones – prior to KDP-C the programs are still in formulation. For SLS, the Agency has made commitments to SLS development costs no greater than \$7.0 billion and a launch readiness date for EM-1 no later than November 2018. While this date represents the Agency's formal SLS launch readiness commitment, established after a thorough review process, SLS has been, and remains, at this time, on the internal planning readiness schedule that it has been executing to for three years. The appropriations that SLS has received to date have enabled the program to effectively manage risks to this internal planning date. We are continuing to evaluate schedule and budget availability against both this internal planning schedule and the formal SLS launch readiness commitment from KDP-C. The progress at the Michoud Assembly Facility is good and B-2 Test Stand modifications are on track. If we determine that it is in the best interest of the SLS program to modify the internal planning schedule, we will notify Committee staff. The Agency remains confident that it can continue to meet the commitment for an SLS launch readiness date no later than November 2018.

**Question 3:**

Do you stand by your testimony that stated "We have asked for...and stated over and over that this is the amount of money that we need to deliver the SLS on the date and time that we said, 2017 for the inaugural mission?" If you do not stand by this testimony, please explain

what has changed and how you would update this testimony to more accurately reflect the program's schedule.

**Answer 3:**

The Agency stands by the commitments it has made for SLS. Agency formal commitments were made following a process based on best practices starting early in Program formulation and culminating in Key Decision Point-C and approval to proceed into full development. KDP-C takes into account both Program and independent assessments of the risk posture of the Program, including both discrete risks and historical uncertainties. In its recent report, the Government Accountability Office (GAO) recognized that NASA was following this process and recommended that the Agency continue following best practices by making cost and schedule commitments for SLS consistent with a joint cost and schedule confidence level of 70 percent. NASA's KDP-C commitments for SLS in August 2014 reflect this recommendation. While KDP-C represents the Agency's formal external SLS launch readiness commitment, with a launch readiness date of November 2018, SLS remains, at this time, on the schedule it has been executing to for three years.

**Question 4:**

What is the total in termination liability for the SLS program and how would relief from NASA's new interpretation of termination liability obligations affect the SLS and Orion schedules?

**Answer 4:**

SLS carried \$134.6 million in potential termination liability in FY 2014, and the Orion Program carried \$226.4 million. Termination liability generally decreases over the period of performance of a contract as contracted work is completed, and ultimately decreases to zero (i.e., all funds allotted to the contract are ultimately used for contract performance). Termination liabilities for the SLS and Orion contracts for activities associated with Exploration Missions 1 and 2 (EM-1 and EM-2) will decrease through the launches of EM-1 and EM-2. These contracts include the standard Federal Acquisition Regulation (FAR) Limitation of Funds clause, under which it is the contractor's responsibility to anticipate and plan for any costs of termination within the total amount allotted to the contract by the Agency.

**Question 5:**

Why did the Administration choose to fund the SLS and Orion programs at the President's budget request rather than higher rates appropriated under continuing resolutions? Please provide all records (defined in attachment A) related to this guidance.

**Answer 5:**

NASA has funded SLS and Orion at the previous year's appropriated level for each of the Continuing Resolutions enacted in FY 2013 through FY 2015. NASA has not used the pending President's budget request levels to set funding levels for SLS and Orion during these Continuing Resolutions.

For FY 2013, NASA's budget request for SLS was \$1.340 billion and for Orion was \$1.025 billion. After taking account of the final enacted FY 2013 appropriation, the effects of sequester and rescissions, and some upward funding adjustments by NASA, the FY 2013 Operating Plan was \$1.415 billion for SLS and \$1.114 billion for Orion. NASA executed to these funding levels for the balance of FY 2013.

NASA's FY 2014 budget request for SLS was \$1.385 billion and for Orion was \$1.027 billion, as part of a balanced program in pursuit of the Nation's highest priorities in science, exploration, and aeronautics. The final FY 2014 appropriation was \$1.600 billion for SLS and \$1.197 billion for Orion. NASA funded the programs at these levels.

**Question 6:**

Had the Administration chosen to fund the Orion program at the rate of the continuing resolution rather than the rate of the President's budget request, would the Orion program have been able to purchase long-lead items? Please provide all records related to the planning associated with the procurement of Orion long-lead items in FY13.

**Answer 6:**

NASA has funded Orion at the previous year's appropriated level for each of the Continuing Resolutions enacted in FY 2013 through FY 2015. NASA has not used the pending President's budget request levels to set funding levels for Orion during these Continuing Resolutions. NASA funded the Orion program at the rate of the previous year's appropriation during the FY 2013 Continuing Resolution. After taking account of the enacted appropriation, and the effects of sequester and rescissions, NASA's FY 2013 Operating Plan was \$1.114 billion for Orion. Following enactment of the FY 2013 appropriation, the Orion program replanned and reprioritized the procurement of long-lead items and the performance of other design and testing activities, which reduced programmatic risk to the EM-1 mission.

We look forward to supporting the Committee in its oversight function and we are committed to keeping the Committee fully informed on SLS and Orion progress as we move out to execute this national priority.

Sincerely,



L. Seth Statler  
Associate Administrator  
for Legislative and Intergovernmental Affairs