Response to NASA OIG Report IG-24-016 pursuant to the James M. Inhofe National Defense Authorization Act for Fiscal Year 2023, Public Law 117-263, Section 5274

Section 5274 of Public Law 117-263, the James M. Inhofe National Defense Authorization Act for Fiscal Year 2023 requires Offices of Inspector General (OIG) to notify all non-governmental organizations or business entities that are specifically mentioned in an OIG report. Section 5274 further requires the OIG to attach any response received from a non-governmental organization or business entity to the report in which they are mentioned. Therefore, in accordance with Section 5274, attached is a response provided to the NASA OIG regarding the report on *NASA's Management of the Mobile Launcher 2 Project*, report number IG-24-016, issued August 27, 2024.

This response represents the views of Bechtel National Inc. NASA OIG did not evaluate this response and offers no comment and makes no representations, expressed or implied, of any nature with respect to the matters stated therein.

26046-TO-GAM-00003

September 26, 2024

Subject: **BNI Response to OIG Audit Report IG-24-016**

Bechtel National Inc. (BNI) understands that the NASA Office of Inspector General (OIG) is charged with issuing its view of NASA's and BNI's progress and appreciates the important role responsible oversight can play in effective organizations. BNI strongly disagrees, however, with substantial elements of the OIG's IG-24-016 Report ("Report"). The OIG's analysis is inaccurate, outdated, and fails to provide an accurate representation of the current status of the project.

NASA's Associate Administrator for Exploration Systems Development Mission Directorate (ESDMD) has expressed serious reservations about the Report, citing its limitations and flaws (Appendix D). We echo the ESDMD's concerns. The perspective of the two teams on the ground, closest to the project, is aligned.

The OIG did not seek BNI's review of the Report prior to publication. We appreciate this opportunity to provide additional context and address several of its factual inaccuracies. We will also note that while the Report contains a brief mention of methodology, it does not include adequate detail to determine how the OIG arrived at key conclusions upon which the assessment rests.

Our primary concerns fall into the following three different areas: cost and schedule predictability, BNI performance, and other factual errors:

I. Cost and Schedule

The Report characterizes the project's cost and schedule forecasts as unstable and plagued by cost increases and delays.

BNI's Response: The ML2 project team's forecasted completion date of 02-Nov-2026 is unchanged for the last two years. This forecast has been validated by NASA in the 2023 Integrated Baseline Review and again by BNI in the project's 2024 Comprehensive Estimate At Completion (CEAC) completed in September 2024. The forecast is based on a rigorous and detailed assessment of the contracted scope, proven execution methodologies, and a thorough analysis of contractor risks and duration uncertainty. Our analysis concludes with 80% confidence that we will meet this completion date. BNI's Nov 2026 forecast completion date includes over five months of schedule reserve - equivalent to approximately 25% of the planned duration for the remaining activities on the contract.

Our cost forecast has also remained consistent from the 2022 CEAC to the 2024 CEAC, rising by approximately 8%, or $107M. Importantly, however, this growth includes a significant number of changes to the contract (discussed below) that have impacted both the direct cost and the cost and schedule risk for the remaining contracted work. BNIs current estimate at completion include an estimated remaining cost risk exposure of $99.6M - equivalent to approximately 19% of the detailed estimated cost to complete the planned activities on contract.

- Certain risks fall outside the current contract and are not included in the BNI estimate. However, BNI understands that these risks are accounted for in NASA's Agency Baseline Commitment (ABC). These risks include changes to the Launch Induced Environment (LIE) design conditions or other operational lessons learned. BNI remains committed to collaborating with NASA to develop efficient solutions should those risks materialize.

II. BNI Performance

The Report repeatedly cites BNI's performance as the primary cause of "significant cost increases and schedule delays."

BNI Response: It is not accurate to attribute all $594 million of contract change to BNI performance.[1] The cost increases and schedule delays since the start of the ML2 project have been multi-faceted, resulting from changes to the contract – both directed and circumstantial (ex. COVID-19 impacts and weather-related delays) – as well as impacts related to BNI's performance.

Since the 2022 CEAC was developed, there have been 78 NASA directed changes, 29 of which have been fully negotiated into the contract value over that period. To date, BNI has been able to modify the project's detailed work plans to accommodate the direct impact of the negotiated changes on the execution schedule without impacting the contract completion date, and with only minor net impact on contract cost. Of the remaining directed changes that are not negotiated into the contract, the most significant include:

- Changes to the Launch Induced Environment (LIE) design criteria.
- Changes to the Government Furnished Design of the Tail Service Mast Umbilical and Vehicle Damper System, which BNI is procuring and installing on the ML2 structure.

The Report erroneously includes the cost and schedule impacts from changes such as COVID-19, Government funding limitations, and force majeure-type weather impacts in the total values and durations attributed to Bechtel performance. Further, including the impact of these events as a material contributor to future cost and schedule projections will affect the reliability of reported forecasts.

III. Other Factual Errors

We would also like to clarify certain items related to technical matters or project execution:

- BNI completed Schedule Milestone 2, "Ready to Jack and Set," on the early or "P0 Contract Need Date" of May 7, 2024, as formally acknowledged by NASA (see comments on Report page 17).
- Requests for Information (RFIs) from the supply chain are not indicative of poor design but are, rather, an indication of an engaged supply chain exhibiting a "right the first-time" quality approach that reduces risk and rework that might be required during the construction phase (see comments on Report page 18).
- ML2's design weight changes are a result of internal design evolution and external changes that were incorporated to ensure all operational requirements were met. The project partnered with NASA to proactively addressed weight challenges throughout the design phase, with two specific efforts conducted in February 2021 and January 2022, both of which addressed an accumulation of design changes from different sources. Weight estimates have stabilized since completion of the Integrated Critical Design Review in March 2023 (see comments on Report page 20).
- Contractual changes to the scope for procurement of several Government Furnished Design (GFD) umbilicals was jointly agreed upon between BNI and NASA. This was the most efficient and effective execution strategy for the project after early experience with the volume and complexity of changes to GFD. (see comments on Report pages 20-21).

BNI is honored to be part of this historic mission supporting NASA's human spaceflight program, and we're proud of what our ML2 team has achieved. We appreciate the opportunity to provide this additional context and correct several of the Report's factual inaccuracies. We remain committed to close collaboration with NASA in the safe and efficient execution of the Mobile Launcher 2 contract in support of the Artemis mission.

[1] While the Report does not provide the source for this number, it appears to be taken from the list of changes in the Contract Attachment J-12 Contract Cost (No Fee) table.