Aerospace Independent Assessment
April 22, 2015

Background:
- In April 2014, DOE issued its preliminary analysis of plutonium disposition options, i.e. the Plutonium Working Group (PWG) April 2014 options analysis, which included five options.
- The Consolidated and Further Continuing Appropriations Act, 2015 requires DOE submit an independently verified lifecycle cost estimate of two of the five options to dispose of surplus plutonium: the MOX fuel option and the downblend and disposal option.
- DOE tasked Aerospace Corporation, a U.S. Air Force Federally Funded Research and Development Center (FFRDC), to perform the assessment.
- The following is a short summary of Aerospace’s approach and findings.

Approach Used by Aerospace:

**Summary of Aerospace Assessment:**
- The PWG April 2014 cost estimates developed for the program elements were done in a manner consistent with best practices for grass-roots and analogy-based cost estimating.
- The PWG’s individual program element cost estimates were appropriately integrated into the program/project estimate.
- The PWG underestimated program level contingency.

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<tr>
<td>Cost-to-Go FY14 Forward</td>
<td>+ Changes</td>
<td>600M RY$/yr Cap on Construction/Capital</td>
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<td>Option 1: MOX Fuel</td>
<td>25.1B RY$</td>
<td>47.5B RY$</td>
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<td>19.6B FY14S</td>
<td>~375M RY$/yr Cap on Construction/Capital</td>
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<td>Option 4: Downblend</td>
<td>10.3B RY$</td>
<td>17.2B RY$</td>
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<td>8.2B FY14S</td>
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(1) 500M RY$/yr cost cap on construction/capital is based on 2014 PWG estimate assumption on annual funding.

(2) 375M RY$/yr represents an estimate of the minimum annual funding required to complete MFFF construction.

Note: MOX Fuel Option: Costs for MFFF shutdown to a safe state at end of operations are included in this assessment; however, this study did not assess MFFF decommission, demolition (D&D) and return to green field.

Note: Differences leading up to the PWG numbers referenced by Aerospace
- Estimates on the chart are “To Go” estimates; MFFF prior year expenditure ~$4 B.
- Option 4 Downblend in PWG report listed at 8.78 B RY$ vs 10.3 B RY$ - PWG. Did not include MFFF and WSB suspension and shut down cost in the “Cost To Go” estimate but were included in the total LCC numbers of the PWG Report.