



April 8, 2013

The Honorable Howard P. "Buck" McKeon
Chairman
Committee on Armed Services
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

Thank you for your letter dated October 1, 2012, in response to the Department of Energy's (DOE) notice to the Committee on Armed Services of the proposed \$120 million reprogramming of funds from the Chemistry and Metallurgy Research Replacement (CMRR) - Nuclear Facility (NF) Project (04-D-125) to maintain and strengthen needed plutonium capabilities at the Los Alamos National Laboratory (LANL).

We understand the Committee's concerns about our plutonium strategy and supporting infrastructure. Enduring plutonium capabilities are needed to (1) support future warhead life extension programs (LEPs), and (2) provide some ability to respond to technical failure in the stockpile or geopolitical reversals. Our long-term requirement for pit manufacturing is to produce 50-80 newly manufactured pits per year. We have a resourced plan to grow capacity to 30 pits per year by 2021, provided that capabilities for analytical chemistry, materials characterization and associated quality control processes in support of pit production are sustained. The National Nuclear Security Administration (NNSA)-developed approach plan to provide plutonium support capabilities and support planned production requirements using existing infrastructure includes pit reuse supplemented by a capability to manufacture existing insensitive high explosive pit designs at a rate of 30 per year by 2021. The \$120 million reprogramming request is critical to achieving this interim capability while avoiding greater risks to the stockpile. We seek your support.

The NNSA decision to defer CMRR-NF, a facility that would support higher pit production levels, by at least five years was driven by budget realities and the fact that higher production rates would not be needed until 2030. Deferral frees up funds to place the UPF construction project at Y-12 on a more optimal funding profile, resulting in reduced life cycle cost and reduced risk to ongoing highly enriched uranium operations at antiquated existing facilities. At the same time, it provides flexibility to advance critical warhead LEPs for the W76-1, the B61-12 bomb, and the W78/88-1 interoperable warhead.

A deferral of CMRR-NF provides an opportunity to reassess the future of plutonium activities at Los Alamos. Because the acquisition timeline for CMRR-NF now overlaps the timeline to recapitalize the PF-4 facility, which is also aging, NNSA is exploring an integrated approach to moving forward on the suite of support capabilities planned for CMRR-NF and to manage long-term pit manufacture. The enclosed paper answers your questions and lays out the basic elements of the NNSA's plutonium strategy including plans to explore a modular concept

to move the higher operational risk capabilities in PF-4 into modern, modular underground space adjacent to PF-4.

We request that you approve the reprogramming of the \$120 million required to make progress on the critical-path items listed in the attachment. Over the next two months the NNSA will work with the Nuclear Weapons Council and DoD's CAPE organization to conduct a comparative analysis to further flesh out the modular acquisition of CMR-replacement capabilities. This analysis will address the risks and benefits, pros and cons, and seek initial insights into the cost and schedule of modular acquisition. We commit to providing a report on this comparative analysis and a preliminary plan for the plutonium strategy within two months of reprogramming approval.

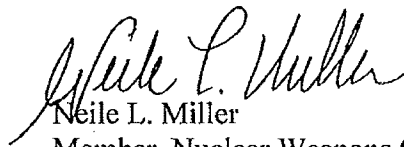
We will expedite, through the reprogrammed funds as requested, the implementation of capabilities for plutonium pit manufacturing and qualification that are required in all strategies under consideration. As further work on alternative plutonium capabilities is completed over the spring and summer, we expect to be able to provide a more detailed business case analysis for consideration of future funding requirements not later than November 2013.

We understand the Committee's concerns for further information. As the business case analysis proceeds, we will develop complete answers to the questions you pose in your letter. Our joint work will inform the Stockpile Stewardship and Management Plan and the DoD/DOE Section 1043 Report, both of which will be submitted after the President's FY 2014 budget request is released.

We remain committed to a modern responsive nuclear weapons infrastructure and to a plutonium strategy that will help to ensure that we can achieve the President's goal of a safe, secure, and effective nuclear deterrent for as long as nuclear weapons are needed.



Frank Kendall
Chairman, Nuclear Weapons Council
Under Secretary of Defense for
Acquisition, Technology and Logistics
Department of Defense



Neile L. Miller
Member, Nuclear Weapons Council
Acting Under Secretary for
Nuclear Security
Department of Energy

Background Information: Plutonium Strategy

An enduring pit production capacity is needed to (1) support future warhead life extension programs (LEPs), and (2) provide some ability to respond to technical failure in the stockpile or geopolitical reversals. An enduring capacity of 50-80 newly manufactured pits per year was endorsed by the Nuclear Weapons Council in 2008. We have a resourced plan to grow capacity to manufacture 10 pits per year by 2019, 20 pits per year by 2020, and 30 pits per year by 2021, provided that capabilities for analytical chemistry, materials characterization and associated quality control processes in support of pit production are sustained. CMRR-NF would have replaced the aging, unsupportable CMR facility that currently provides those capabilities.

Given recent budget realities including rising cost estimates for key LEPs and infrastructure, we reviewed requirements, priorities and options and decided to defer CMRR construction for at least 5 years. CMRR-NF deferral delays, from 2023 to at least 2028, initial operations of a long term plutonium infrastructure with needed analytical support capabilities. This presents some increased risk in sustaining the stockpile at current levels, responding to a major geopolitical reversal or responding to an unforeseen problem with existing pits.

On the other hand, deferral frees up funds to place the UPF construction project at Y-12 on a more optimal funding profile, resulting in reduced life cycle cost and reduced risk to ongoing HEU operations at antiquated existing facilities. It also provides flexibility to advance critical warhead LEPs for the W76-1, the B61-12 bomb, the LRSO warhead, and the W78/88-1 interoperable warhead. A five-year deferral provides another opportunity. Because the acquisition timeline for CMRR now overlaps the timeline to recapitalize the PF-4 facility, which is also aging, we have flexibility to explore an integrated and potentially more responsive approach to moving forward on the suite of support capabilities planned for CMRR-NF and to managing long-term pit manufacturing and related infrastructure.

To secure the fiscal benefits and manage the risks of a 5-year deferral, we are advancing a plutonium strategy with two key components. First, we are exploring a concept that would provide the essential capabilities planned for CMRR, and also address PF-4 aging issues, with a phased, more responsive, and more readily implementable approach. The so-called "modular concept" entails construction of a series of smaller (than CMRR-NF), single-purpose (e.g., plutonium casting) modules linked together through secure tunnels with PF-4 and the existing plutonium radiological/analytical facility (RLUOB). The concept would provide means to transfer higher operational risk activities out of PF-4, thereby extending PF-4 operational lifetime while enabling production capacity enhancements and sufficient analytical support to production. Over the next two months, the NWC, with support from DoD's CAPE organization, will work with Los Alamos to carry out a business case analysis of the concept, address risks and benefits, pros and cons, and seek some initial insights into feasibility of delivery of key capabilities earlier than planned for CMRR-NF. At its conclusion, NNSA would report back its assessment to the NWC and key Congressional committees. If the concept is assessed feasible, NNSA would describe its plan to move forward on engineering development and construction. About \$4-6 million of NNSA's FY12 \$120 million reprogramming request, if approved by Congress, would fund assessment of the modular concept.

Second, to manage the risk of deferral, we must develop means, in the near term, to respond more rapidly to technical or geopolitical challenges pending the coming on line of planned

enduring production capacity. The approach includes pit reuse in ongoing LEPs supplemented by a capability to manufacture existing IHE pit designs at a rate of 30 per year by 2021. To achieve this interim goal, existing facilities will be exploited with some modifications. Specifically, our strategy will:

- Plan for the LANL Radiological Laboratory Utility Office Building (RLUOB) to take on a larger role in small-sample analytical chemistry (AC) activities that support pit production at LANL PF-4 and accomplish this before phase out of the CMR facility in 2019;
- Reconfigure larger-sample materials characterization (MC) activities within PF-4;
- Explore other lab facilities (e.g., LLNL Superblock) to augment, if necessary, MC and AC activities at LANL;
- Reduce the amount of plutonium parts and waste residue in the PF-4 vault to free up space for the manufacturing mission; this may involve transport of program material for staging at the DAF facility at NTS;
- Develop secure below-ground means to move plutonium samples from PF-4 to RLUOB, using above-ground transport in the interim;
- Install equipment to increase pit manufacturing capacity and associated AC/MC support;
- Ramp up the expert workforce to sustain increased production rates.

To begin to implement this strategy requires Congressional approval of NNSA's request to reprogram \$120M in FY12 funds to:

- Accelerate readiness and operational start up activities for RLUOB,
- Buy AC equipment for RLUOB to support increased utilization of lab space,
- Begin safety assessment work to support increased material-at-risk levels in RLUOB,
- Accelerate relocation of plutonium sample management/prep from CMR to PF-4,
- Relocate MC equipment from CMR to PF-4,
- Evaluate design options for a material transfer tunnel.

The \$120 million reprogramming request is critical to achieving this interim capability while avoiding greater risks to the stockpile. Funding, in addition to the \$120 million, will be required in coming years to fully implement these capabilities.

The scope of work identified in the reprogramming request would need to be carried out irrespective of the decision on CMRR-NF deferral. But investments must begin now if we are to achieve a capacity to produce 30 pits per year beginning in 2021 and thereby reduce the risk to near-term stockpile needs.

Other Requested Information

Q: Cost figures and timelines for immediately reassembling the CMRR-NF team in FY 2013, if directed to do so.

A: When the NWC agreed to the 5-year deferral, the original CMRR-NF design team was disassembled, and the NNSA has not developed an estimated cost to reassemble the design team, although it is estimated that 12–18 months would be required to reassemble a similar project team. Additionally, the DoD Office of Cost Assessment and Program Evaluation (CAPE) has worked closely with NNSA over the past year to study options and costs for the FY 2014–2018 Future Years Nuclear Security Plan (FYNSP) across the enterprise, including plutonium capability needs.

Q: Detailed site splits for NNSA during the FY13 continuing resolution, including funding across the complex for the alternative plutonium strategy and plutonium sustainment activities.

A: To meet near-term requirements, NNSA plans to execute ongoing plutonium sustainment activities, including approximately \$135 million during the FY 2013 continuing resolution for activities conducted at:

- Kansas City Plant (\$3.9 million);
- Los Alamos National Laboratory (\$119 million)
- Lawrence Livermore National Laboratory (\$6 million); and
- Remaining funding held in program management reserve pending outcome of the 2013 budget.

Q: Funding required for the W76 life extension program in FY 2013, including sources of funding and whether a reprogramming request is expected.

A: Regarding a W76-1 LEP reprogramming and receipt of the President's anomaly request for NNSA's Weapons Activities account (including the 301C exemptions) under the current FY 2013 Continuing Resolution (CR), NNSA has the necessary flexibility to ensure resources are sufficient to meet DoD requirements. Should the CR continue beyond the second quarter of FY 2013 and Weapons Activities continues with the current anomaly, NNSA will continue to meet DoD's current requirements.

Q: Status and timeframe for providing the committee the FY13 Stockpile Stewardship and Management Plan (SSMP), submission of which was statutorily required by February 2012; FY 13–FY 17 Future Years Nuclear Security Program (FYNSP), submission of which was statutorily required by February 2012; and the report required by section 1043 of Public Law 112-81, submission of which was statutorily required by February 2012.

A: Due to the on-going, pre-decisional analytical work between the NNSA, the DoD and the DoD's Cost Assessment and Program Evaluation teams on the future resource needs across the nuclear security enterprise, the FY 2013 SSMP, the FY 2013–2017 FYNSP, and the report required by section 1043 of Public Law 112-81 will not be provided this year. The FY 2014 SSMP, FY 2014–2018 SSMP, and the FY 2014 report required by section 1043 of Public Law 112-81 will be provided following release of the FY 2014 President's Budget.