U.S. Plans a Massive New Plutonium “Nuclear Facility” for Expanded Nuclear Weapons Production

President Obama’s April 2010 Nuclear Posture Review (NPR) claims that the “Chemistry and Metallurgy Research Replacement (CMRR) Project” at the Los Alamos National Laboratory (LANL) in northern New Mexico is essential for maintaining the safety and reliability of U.S. nuclear weapons. Even before that, the President doubled proposed FY 2011 funding for plans to expand the Lab’s plutonium bomb-making infrastructure. That was largely in response to a December 2009 letter by 40 Republican Senators plus one independent demanding “modernization” of the nuclear stockpile and its research and production complex in exchange for ratification of the “New START” arms control treaty with Russia. The main purpose of the CMRR is to create an expanded plutonium pit production complex at LANL capable of quadrupling the currently approved production level of 20 pits per year to 80.

The Costs for the CMRR Nuclear Facility Are Exorbitant and Still Unknown

When first submitted as a budget line item in FY 2004, the National Nuclear Security Administration (NNSA), the Department of Energy’s semi-autonomous nuclear weapons agency, told Congress that total CMRR costs would be $660 million. The FY 2011 Congressional Budget Request now pegs its at $4.5 billion, but final costs are still literally labeled as “TBD” [To Be Determined]. In other words, even after $250 million already spent on design, NNSA still doesn’t know what the real costs are, even as the U.S. faces painful economic recovery and escalating federal deficits.

The stated justification for the CMRR Project is to replace a 50-year old facility, but it will be far from a mere replacement. It is planned to be 42,000 square feet larger than the old CMR Building, despite the Lab’s initial claim that plutonium operations would be downsized. The CMRR “Nuclear Facility” is still under design, but the Project’s first phase, the 185,000 square-feet “Radiological Laboratory, Utility and Office Building,” was completed in September 2009, costing $400 million (including equipment). The combination of LANL’s existing but upgraded plutonium facility and these two new CMRR facilities will provide a total of 800,000 square feet of floor space for plutonium operations, primarily dedicated to pit production. [Pits are the nuclear-critical-capable cores that upon detonation trigger the immense destruction of modern thermonuclear weapons.] The central mission of the CMRR-Nuclear Facility is to directly support expanded pit production through “materials characterization” and “analytical chemistry” that confirms that plutonium is weapon-grade before production and acts as ongoing quality control during and after production.

Following a NukeWatch request, the Senate Armed Services Committee inserted language into the FY 2011 budget process to prevent NNSA plans to start construction before the total project cost estimate is complete. NNSA planned to segment the CMRR Project construction process into smaller subprojects with their own separate critical decisions, costs and start dates. These smaller activities, while still huge, include large-scale site utilities and infrastructure construction and excavation. NNSA planned to have them done -- including 225,000 cubic yards of poured concrete to mitigate seismic concerns -- before it had final Project estimates completed out in 2014. Therefore substantial irretrievable funding, perhaps billions, would have already been spent before NNSA made Congress aware of total costs.

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The CMRR-Nuclear Facility Is for Expanded Pit Production

• In the recent past, proposed expanded plutonium pit production was all about producing new-design nuclear weapons, the so-called Reliable Replacement Warheads (RRWs). Congress decisively rejected RRWs, and we argue that no RRWs equals no need for the CMRR-Nuclear Facility. However, the U.S. nuclear weapons labs are still pushing for new “replacement” components, including plutonium pits that could be heavily modified from originally tested designs. This too should be avoided because it would inherently undermine confidence in the extensively tested reliable stockpile. It therefore follows that the CMRR-Nuclear Facility is still not needed.

• After reestablishing pit production in 2007, LANL produced eleven pits of the existing W88 warhead design, just six in 2008, and is projected to produce just six W88 pits in 2009 through 2011. Obviously, LANL has been producing pits under the currently sanctioned 20 per year limit without the Nuclear Facility, further demonstrating that it is not necessary.

• Los Alamos National Security, LLC, the for-profit corporation that runs Los Alamos, has already been paid for installing additional equipment in PF-4, LANL’s existing plutonium facility. Those upgrades, in conjunction with the future CMRR-Nuclear Facility, will explicitly expand plutonium pit production capability from the currently sanctioned 20 pits per year to up to 80. (Source: FY 2008 Performance Evaluation Report for Los Alamos National Security, NNSA, p. 9.)

• NNSA’s FY 2010 Supplemental Stockpile Stewardship Plan echoes that. Under “Key Recent Accomplishments” the agency boasts of “New equipment installed as scheduled for gradual capacity increases to 80 pits per year potential by scheduled operational date for the [CMRR]-Nuclear Facility.” (Source: FY 2010 – 2014 Supplement to the Stockpile Stewardship Plan, NNSA, p. 14.)

What Are Appropriate National and International Priorities?

This CMRR-Nuclear Facility should not be built because it is oversized, over budget, over sold, and simply not needed other than for the production of new-design or heavily modified nuclear weapons. The plutonium Nuclear Facility is ultimately about future mission diversification (or not) at LANL.

Los Alamos should be diversifying its missions rather than further investing in the shrinking nuclear weapons business. Then perhaps the Lab could help better meet today’s national security challenges, such as nuclear weapons proliferation, global climate change and energy dependence. In contrast, building the Nuclear Facility will further entrench the Lab’s future in the receding nuclear weapons industry. Yet more seriously, the Nuclear Facility will seriously conflict with the stated goal of a nuclear weapons-free world, especially given its projected half-century lifetime of operations.

LANL’s Technical Area-55 with the plutonium pit production facility “PF-4” on the right and CMRR “Rad Lab” on the left, with the excavation for the future “Nuclear Facility” behind it. Photo: Scott Kovac, Nuclear Watch New Mexico July 2010