

**Testimony of Marylia Kelley, Executive Director, Tri-Valley CAREs,
before the House Armed Services Subcommittee on Strategic Forces,
regarding modernization of the nuclear weapons complex, 7/17/08**

Thank you Madam Chairperson, Mr. Everett and subcommittee members for inviting me to testify before you today. I am Marylia Kelley, Executive Director of the Livermore, CA-based Tri-Valley CAREs, a non-profit organization founded in 1983 to monitor the U.S. nuclear weapons complex and its Lawrence Livermore National Laboratory. I represent the group's staff, board, technical advisors and 5,600 members who comprise a cross-section of our community including current and retired scientists and engineers.

My testimony will focus on three areas that are central to the subcommittee's interests and to this hearing: (1) The Dept. of Energy (DOE) National Nuclear Security Administration's (NNSA) preferred alternative for "Complex Transformation"; (2) A stockpile management alternative that will better assure the safety and reliability of the existing nuclear weapons arsenal at lower cost, reduced scientific risk and superior nonproliferation benefit; and (3) Specific alternatives for the future of nuclear materials and sites in the nuclear weapons complex.

THE COMPLEX TRANSFORMATION PLAN IS FLAWED

The NNSA has stated that Complex Transformation is the agency's "vision for a smaller, safer, more secure and less expensive nuclear weapons complex..." Let's take a closer look.

First, the "vision." Beneath the rhetoric, Complex Transformation calls for a significant revitalization of the nuclear weapons complex. The weapons complex of today consists of 8 major sites. After Complex Transformation is fully implemented, the weapons complex of the future will consist of the same 8 sites. The plan's centerpieces include a new, larger plutonium complex at the Los Alamos Lab in NM, capable of producing 80 new plutonium bomb cores per year, and a new Uranium Processing Facility at Y-12 in TN. According to the 2008 draft PEIS, Complex Transformation is based on the 2001 Nuclear Posture Review. Yet, Congress has already mandated that the next administration prepare a new Nuclear Posture Review. Thus, NNSA's plan will be dead on arrival; based on yesterday's policy, not forward-looking vision.

The NNSA touts its plan as a "smaller" nuclear weapons complex. Here, NNSA takes credit for proposing to demolish old buildings that, in many cases, are already in the queue to be torn down and decontaminated. As those activities will happen independently, their removal is not an achievement of Complex Transformation. The NNSA says its plan will reduce the square footage of buildings and structures supporting nuclear weapons missions from 35 million square feet today to about 26 million square feet. My organization and others *reject* the notion that a 26 million square foot complex refurbished with new capabilities and facilities in order to more efficiently develop and produce new nuclear weapons represents the major change in direction that is so sorely needed for the weapons complex infrastructure – and for nuclear weapons policy.

The NNSA calls its Complex Transformation plan "more secure," but, as I will discuss in the Livermore Lab section that follows, this plan keeps thousands of pounds of plutonium and highly enriched uranium in a vulnerable, untenable situation at Livermore Lab until 2012. Then, NNSA proposes to move the plutonium twice in service of Complex Transformation. This is not a plan that appropriately prioritizes the security of nuclear materials. Finally, NNSA insists the plan will be "less expensive," but fails to provide cost estimates in its draft PEIS. In 2006, the Government

Accountability Office offered an initial estimate of \$150 billion over 20 years. Others suggest that Complex Transformation will exceed the \$150 billion mark.

The NNSA promoted this plan in 2006 with vu-graphs stating that the Reliable Replacement Warhead (RRW) program “will be the ‘enabler’ for stockpile and infrastructure transformation.” Since Congress has prudently cut the RRW budget since then, the NNSA has begun submerging the role of RRW in Complex Transformation. Make no mistake, however. The development of new and/or significantly modified nuclear weapons remains at the heart of the Complex Transformation approach, whether through RRW or a successor design program. The plan locks the nuclear weapons complex into a path that entrenches current nuclear weapons policy, preempts a full policy debate, and end runs both the commission that this subcommittee was instrumental in enabling through the National Defense Authorization Act of 2008 and the aforementioned new Nuclear Posture Review.

The NNSA has received between 115,000 and 120,000 verbal testimonies and written letters, cards, emails and petitions opposing the plan. Add the 33,000 who spoke or wrote in opposition during the initial “scoping” process, delete the duplicates, and the number approaches 150,000. This outpouring of comment represents a public referendum against the NNSA plan.

In sum, Complex Transformation is **wrong policy**, enabling new nuclear weapons programs that run counter to U.S. nonproliferation aims, **wrong direction**, building unneeded weapons facilities, **wrong priorities**, costing \$150 billion or more and failing to quickly secure the nation’s most vulnerable nuclear materials, and **wrong timing**, putting the “cart” of new bomb-building capabilities before the “horse” of the new policy and posture reviews. The public has roundly rejected the plan, the Congress has cut funds for some of its key elements, and the NNSA tells me it will release the final PEIS and execute a Record of Decision codifying the plan this Fall.

In so doing, the NNSA willfully ignores an alternative approach to managing the nuclear weapons stockpile that is technically, politically, environmentally and fiscally superior to the agency’s “preferred alternative” outlined in the Complex Transformation PEIS.

SUPERIOR ALTERNATIVES EXIST: THE CURATORSHIP APPROACH

“Curatorship” is a far superior approach to maintaining the full safety and reliability of the existing nuclear weapons stockpile. Curatorship focuses on careful surveillance, analysis and refurbishment of the actual weapons in the arsenal rather than on pushing the envelope of new research and development, as is the case with the present “Stockpile Stewardship” program and, to an even greater extent, the proposed RRW path.

The NNSA’s Stockpile Stewardship approach “emphasizes development and application of greatly improved scientific and technical capabilities to assess the safety, security and reliability of existing nuclear warheads...” In contrast, Curatorship is an inherently more conservative, less scientifically risky approach to that job. Under Curatorship, only if NNSA’s surveillance activities demonstrated compelling evidence that a component had degraded, or would soon degrade, and further analysis indicated that such degradation could cause a significant loss of safety or reliability, would NNSA replace the affected part. The replacement would be remanufactured as close to the original design as possible.

Compared to Stockpile Stewardship, changes to weapons would be minimized using the Curatorship approach. One significant outcome of Curatorship is that less uncertainty would be introduced into the stockpile over time than is the case with the present program, which allows (and even encourages) major modifications. Likewise, Curatorship is a more certain approach to stockpile maintenance than the research, development, testing, engineering and production of what would be, in essential aspects, new warheads under the RRW program.

Instead of relying on a massive R & D enterprise geared more to the desires of a few individuals than to the needs of the weapons, Curatorship relies on the agency's extensive historical testing and certification activities, which have demonstrated that the existing stockpile is safe and secure. Under Curatorship, NNSA would need skilled engineers and physicists, with good judgment, to examine warheads and to determine when components must be replaced. The NNSA would continue to operate state-of-the-art testing and engineering facilities to examine components. It would retain sufficient capability to apply analytical models to questions of weapon safety and reliability. That said, NNSA would have no requirement for many of its Stockpile Stewardship facilities, which are primarily useful to design and certify new and/or significantly modified weapons and components.

The Curatorship approach will reduce the NNSA's environmental footprint and its operating costs. Under Curatorship, NNSA would close numerous facilities that use high explosives, tritium (radioactive hydrogen) and other hazardous materials beyond the NNSA's Complex Transformation plan. Moreover, under Curatorship, new facilities such as the Chemistry and Metallurgy Research buildings Replacement (CMRR) at Los Alamos Lab and the Uranium Processing Facility at Y-12 would not be built or operated, resulting in an environmental benefit. Curatorship would rein in costs. The NNSA currently spends about 50% of the Weapons Activities budget each year on nuclear weapons R & D. Under Curatorship, R & D would be directed primarily toward improving surveillance and testing, to understanding how materials in existing weapons age and to further validating codes and models to historical test results. Such R & D is estimated to amount to less than 20 % of the current budget.

Let me say a word here about Curatorship and nuclear disarmament, which my organization also advocates. Curatorship is not disarmament. Curatorship will fully maintain the safety and reliability of the existing U.S. nuclear weapons stockpile, which was extensively tested full-scale in Nevada, until such time as the weapons are dismantled. That said, the U.S. is committed to nuclear disarmament under Article VI of the Non-Proliferation Treaty (NPT), to which it is a signatory. Curatorship is more compatible with the NPT, and, more broadly, with U.S. nonproliferation aims, than either the present Stockpile Stewardship or the proposed RRW path.

Here is one example: The New Agenda Coalition, an influential group of signatory states to the NPT, has warned that any "plans or intentions to develop new types of weapons or rationalization for their use stand in marked contradiction to the NPT, and undermine the international community's efforts towards improving the security of all states." Curatorship avoids putting new military capabilities into the arsenal. By foregoing further "vertical proliferation," Curatorship will enhance the stature and effectiveness of the U.S. as we seek to work with our allies to address the rising pressures of the "horizontal proliferation" of nuclear weapons to new states. In so doing, Curatorship will reduce the nuclear dangers and make the U.S. and the world safer.

The Curatorship approach to managing the nuclear weapons stockpile builds on an impressive lineage. It stands on basic concepts advocated by Norris Bradbury, Los Alamos Lab director from 1945-1970, J. Carson Mark, former head of the Los Alamos's Theoretical Division, Richard Garwin, former nuclear weapon designer and current JASON, Ray Kidder, senior staff scientist and former weapons designer at Livermore Lab and others. In 2000, Tri-Valley CAREs contracted with Robert Civiak, a physicist and Budget Examiner for DOE weapons programs at the Office of Management and Budget from 1988-1999. Dr. Civiak undertook the analysis necessary to put the flesh on the bones of the Curatorship option. Much appreciation is also due recent and present weapons scientists for their evaluation of the Curatorship approach; in particular, to Roger Logan, a recent nuclear weapon design and certification retiree from Livermore Lab, who had served as head of the Lab's Directed Stockpile Work.

Tri-Valley CAREs provides a detailed analysis of Curatorship - and a list of facilities that would be available for closure or remissioning under this alternative - in its 2008 comments on the draft Complex Transformation PEIS, which I ask be included in its entirety in the hearing record.

SAMPLER OF ALTERNATIVE APPROACHES NEEDED AT THREE NNSA SITES

Livermore Lab: The main site sits on little more than one square mile with homes and apartments built up by its fence line. Suburban neighborhoods lie only about 800 yards from the Lab's "Superblock" and thousands of pounds of plutonium and highly enriched uranium. Tri-Valley CAREs has long-held concerns regarding the security of nuclear materials at Livermore Lab. This spring, DOE undertook a series of security drills, including a force-on-force test, in which a tactical security team played the role of an attacking force in order to see how the Lab's protective forces would respond. According to reports, the mock terrorist team's objective was to get to the nuclear material and hold the ground long enough to construct an Improvised Nuclear Device (capable of producing a nuclear explosion). A second scenario involved would be attackers stealing plutonium for use at a later date. While NNSA has yet to respond to Tri-Valley CAREs' Freedom of Information Act request for unclassified records regarding the security drill, the information we have gathered to date is that the mock terrorists succeeded in both of those objectives.

NNSA and Livermore Lab have attempted to downplay the significance of the security failures, claiming that the exercise was not realistic. However, the conditions favored the Lab's protective forces not the would-be attackers. The Lab was given extensive advance notice of the drill, which eliminated the element of surprise. The mock attack was conducted at night, when few of the Lab's thousands of employees were present. Further, because NNSA had given Livermore Lab a waiver from having to demonstrate compliance with the 2005 Design Basis Threat (DBT), the drill was conducted to the less rigorous specifications of the 2003 DBT. (The DBT is based on the Postulated Threat, which in turn is developed jointly by the DIA, FBI, CIA, DOE and DoD.)

Tri-Valley CAREs concludes the plutonium and highly enriched uranium at Livermore Lab is not secure, nor can it be made secure due to the compactness of the site, its 600 buildings cheek to jowl and the close proximity of densely populated neighborhoods, including my own. Tri-Valley CAREs is opposed to the NNSA proposal to leave these materials at Livermore Lab through 2012, as outlined in the draft Complex Transformation PEIS. I would also point to a 2007 GAO report, "DOE Has Made Little Progress Consolidating and Disposing of Special Nuclear Material." GAO stated that it will cost nearly half a billion dollars just to keep Livermore's plutonium in place for 7 years. GAO also noted the lack of any actual, detailed plan for its removal.

In addition to removing special nuclear material from the Lab, any forward-looking plan for the future of the complex would conclude that there is no “need” to maintain two full service nuclear weapon design labs. It is entirely feasible to transition Livermore Lab to new missions. Under this scenario, nuclear weapons design activities would cease. Nonproliferation, research on global climate change, non-polluting, renewable energy technologies and other science in the national interest would replace weapons R & D. Livermore Lab would maintain a small weapons footprint with about two dozen select staff supporting Curatorship and about the same number teamed to accomplish Certification tasks. The security costs at the site would plummet, a necessary step in making Livermore Lab competitive in attracting research projects. This idea, whose time has more than arrived, has a lineage that includes the late Rep. George Brown, former Chair of the Science Committee, and the recommendation of the DOE’s “Galvin commission” among others.

Los Alamos & Sandia Labs: Many of the functions necessary for Curatorship would take place at Los Alamos. With the emphasis shifted from weapons design to maintenance, however, this could be accomplished without increasing the nuclear weapons footprint there. Tri-Valley CAREs opposes Complex Transformation’s proposal to expand plutonium pit production at Los Alamos from its current 20 pits per year capacity to up to 80 bomb cores/year. In this regard, we note the proposed CMRR Nuclear Facility should not be built. We note also that under Tri-Valley CAREs’ plan, Sandia, Albuquerque would retain the centrally important stockpile management program responsible for disassembling eleven warheads of each design each year to examine and test the components to determine if there are any “actionable” fixes to be carried out.

The Kansas City Plant: The NNSA is poised to privatize a key part of the nuclear weapons complex, which will circumvent the ability of Congress to authorize and appropriate funds. The plan is to build and operate a new Kansas City Plant eight miles from its present location under a lease back arrangement. This is occurring outside of the Complex Transformation PEIS or an Environmental Impact Statement. It is being pursued on the basis of a flimsy environmental assessment. Alternatives were given short shrift. NNSA and the General Services Administration have undertaken actions that appear to support a predetermined outcome, a violation of law. The plan violates Office of Management and Budget anti-deficiency guidelines. Tri-Valley CAREs advocates that Congress ask the GAO to investigate the lease arrangement and agency actions.

CONCLUSION: EMERGING POLICY TRENDS AND NEXT STEPS

2008 began with George Shultz, William Perry, Henry Kissinger and Sam Nunn renewing their efforts “Toward a Nuclear-Free World.” Amb. James Goodby published an essay calling for 1,000 or fewer U.S. nuclear weapons by 2012. This is a trend line long-coming and worthy of further Congressional consideration. Too, NGOs will continue to contribute analyses. For example, Tri-Valley CAREs, other groups at NNSA sites and two of our DC colleagues, Natural Resources Defense Council and Project on Government Oversight, are undertaking an analysis of the “right sized” complex to support a stockpile of 500 warheads. Networks, like the Alliance for Nuclear Accountability, will continue to share perspectives from communities around DOE sites. My list could go on; notable activities abound. ***My conclusion is: The NNSA plan is flawed, the reality is that U.S. nuclear policy is at a crossroad, Curatorship is a sensible path forward, nuclear materials must be secured, scientific talent and funds need to be freed to address pressing priorities, the NGO community has ideas to share, and Congress has a uniquely important role to play in delegitimizing nuclear weapons and making the U.S. and the world safer.***