

# Why I quit my job at LLNL: the truth about the Stockpile Stewardship Program

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Note: all of the information referenced and contained in this document is unclassified and publicly available.

On March 3, 2001, I quit my \$85,000/year position at Lawrence Livermore National Laboratory (LLNL) to find work that does not contribute to the further development of nuclear arms.

I am a mathematician and computer scientist by training. After graduating from the University of California, Davis in 1999, I earned a Masters of Science in Applied Mathematics at Brown University. From there, I took a job as a visiting researcher in the Aeronautical/Astronautical Engineering Department's Fluid Dynamics Research Laboratory at MIT.

In October 2000, I was recruited by Livermore Laboratory shortly after my position at MIT had come to an end. LLNL hired me as a Computer Scientist and Mathematical Programmer to do visualization research and development in the Visual Interactive Environment for Weapon Simulation (VIEWS) group, part of the Accelerated Strategic Computing Initiative (ASCI) of the Department of Energy's Stockpile Stewardship Program (SSP).

During the interview at LLNL I asked about the nature of "Stockpile Stewardship" activities, how it connected with the Comprehensive Test Ban Treaty and so forth. The pair of interviewers who fielded this question told me that the SSP's purpose is to maintain the "safety and reliability" of America's existing stockpile. I was assured that no new weapon development was taking place. The mention of "safety" suggested that I would be helping to keep the nuclear weapons from accidentally detonating or polluting the environment with radioactive material.

As I later found out, Livermore Lab deceived me, both during the interview

and afterwards. I believe that my case is not unique and that others have been similarly misled. Therefore, I would like to mention a few things that may come as a surprise to people working at Livermore or considering employment there.

Five months after the interview, I found out that the “Stockpile Stewardship” Program was – and still is – much more aggressive than I had been lead to believe by LLNL.

One day, I did a Google search for LLNL and found some pages on the web sites of “watchdog” groups claiming that Livermore and the other weapons labs had been adding militarily significant enhancements to the US nuclear arsenal under the guise of “Stockpile Stewardship.” Surprised and worried, I told one of my LLNL mentors with full security clearance about what I had found. He flatly denied that LLNL was involved in building new weapons or enhancing existing ones as part of its SSP activities. He went on to say that he would know if this was happening, and that the claims being made by the “watchdog” groups were false propaganda distributed by politically motivated organizations. To assuage my concerns, he even said that he would quit if these allegations were true.

Immediately afterward, I went to meet Marylia Kelley, Executive Director of the Livermore-based non-profit organization Tri-Valley CAREs (Communities Against a Radioactive Environment) to see if she could substantiate the claims I had found on the watchdog sites. She copied documents the group had received under the Freedom of Information Act, and also referred me to the Department of Energy (DOE) Fiscal Year 2001 Budget Request on the web. Also, she mentioned the names of several weapons that had been or were being modified in the SSP, including the B61 nuclear bomb (alteration 11 in particular, hence B61-11).

Although I found the DOE budget vague and opaque, I did find that the SSP involved some suspicious things like “New Heights of Burst” for alteration 752 of the B83 nuclear bomb [2](p. 67) and “modifications” to meet “changed military requirements” [2](p. 22).

To discover exactly what these things meant, I pressed on until I found the following quote on a US State Department web page by doing a Google search for ‘B61-11 site:gov’

The Stockpile Stewardship Program is providing valuable tools today and will continue to yield results in development and certification efforts to meet changing requirements. ...

#### **B61-11 Modification**

By applying high speed computers and existing experimental capabilities (lasers and pulse power), DOE successfully delivered a modified B61-11 to meet military requirements.

The B61-11 development effort demonstrated a full range of Stockpile Stewardship capabilities. The program to develop the B61-11 with earth penetrating capabilities was accomplished in a minimum amount of time to allow replacement of the aging B53 warhead with a weapon having modern safety features. The effort included the design of an external case that protects the B61-7 bomb from the severe impact associated with earth penetration and still allow the bomb to work in its intended fashion.

The certification effort took advantage of Accelerated Strategic Computing Initiative (ASCI) capabilities by running models of the B61-11 on the new massively-parallel computer. This allowed analysis of the forces and environments experienced by an earth penetrating weapon and greatly assisted in the design and certification process necessary to put this modified weapon in the active inventory. [1]

I had found a “smoking gun” along with several other pieces of strong evidence that the watchdog groups were right. The B61-11 modification had been performed as recently as 1996 [8] as part of the SSP. Furthermore, I had incontrovertible evidence that the ASCI program in which I was working had played an important role in enhancing the B61. I had been misled during the hiring process.

Having ample reason to think that further alterations of this sort would be performed in the future (such as the mentions of making “modifications” to “meet changed military requirements” in the DOE Budget Request), I resigned two days later, giving notice on February 23, 2001. It was impossible for me to rationalize helping America, the only country that has ever used nuclear weapons in war, to enhance its over-stocked nuclear arsenal [9].

Last year, a chemist named Dr. Andreas Toupadakis left a permanent classified position at LLNL for reasons similar to mine. During his interview for that position, due to the classified nature of his new work, he could not get specific answers to his questions about exactly what he would be doing. However, he was told that if it turned out that he did not like the work he would be doing, he could later find a different position at LLNL very easily, which eventually turned out not to be true.

Understanding that weapons labs such as LLNL have a vested interest in not telling people about potentially disturbing aspects of their programs, it may be wise for current and prospective employees of LLNL and other weapons labs to get promises about their work duties in writing, in the form of a legally binding contract. Even with such a precaution, it is safest not go to work for a weapons lab unless you want to help maintain, enhance, design, and build weapons of mass destruction (WMD). For myself, I plan to avoid working for any institution or program that contributes to nuclear arms or other WMD.

I ask you to make an effort to understand the consequences of your work and keep your colleagues informed about these important issues. Let's put our money where our mouths are and put an end to nuclear weapons before they put an end to us.

Sincerely,

Issac Trotts

## References

- [1] The Stockpile Stewardship Program, Fact Sheet released by the Bureau of Arms Control, U.S. Department of State, Washington, DC, October 8, 1999

[http://www.state.gov/www/global/arms/factsheets/wmd/nuclear/ctbt/fs\\_991008\\_stockpile.html](http://www.state.gov/www/global/arms/factsheets/wmd/nuclear/ctbt/fs_991008_stockpile.html)

- [2] DOE fiscal year 2001 budget report, weapons operation and maintenance section:

<http://www.cfo.doe.gov/budget/01budget/weapons/weapons1.pdf>

- [3] DOE fiscal year 2001 budget report, weapons construction section:

<http://www.cfo.doe.gov/budget/01budget/weapons/construc.pdf>

- [4] "The stewardship of conscience," Nature, 29 January 1998, p. 2.

- [5] "Problems with stockpile stewardship," Ray Kidder, *Nature*, 17 April 1997, pp. 645-647.
- [6] Fiscal year 1997 stockpile stewardship and management plan, US Department of Energy Office of Defense Programs, February 29, 1996. This is a declassified (some parts redacted), formerly classified document obtained under the FOIA (Freedom Of Information Act). Copies can be obtained from the author, Tri-Valley CAREs, LASG, or (with possibly more difficulty) the DOE.
- [7] Open letter from former LLNL scientist Andreas Toupadakis to Bruce Tarter, Director of LLNL, about the reasons for his resignation:
- <http://www.globalcomment.com/articles/currentaffairs/andreas/resignation.htm>
- [8] B61-11 Concerns and Background, Greg Mello, Los Alamos Study Group (LASG), February 10, 1997:
- [http://www.lasg.org/b61\\_11\\_a.html](http://www.lasg.org/b61_11_a.html)
- [9] 50 Facts About U.S. Nuclear Weapons:
- <http://www.brook.edu/FP/PROJECTS/NUCWCOST/50.HTM>