

Los Alamos
NATIONAL LABORATORY

The Inside Story

*by Sig Hecker**+ Stocktake in June 03*

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U.S. -- UK Stocktake

Last month I attended the 1997 United States-United Kingdom Stocktake Meeting in London. The two nations have been cooperating formally in the area of nuclear weapons since 1958, when formal relations were reestablished following a 13-year hiatus after the British mission returned home at the end of the Manhattan Project. The Stocktake meeting is held every 18 months to review our cooperation and take stock of the relationship. Participants include senior members of the U.S. Departments of Energy and Defense, the British Ministry of Defense, and the defense laboratories of each nation.

The British face a very interesting challenge. Their nuclear arsenal is much smaller than that of the United States, and they just made the decision to cut back to only one delivery system -- the Trident submarine-launched ballistic missiles. They are developing a stockpile stewardship plan. They have strong support from their government; including from the new Labor government. Their challenge is the same as ours: to keep their weapons safe and reliable without nuclear testing. They have not ruled out having to develop a new system in the future if deterrence requires one.



The British have always integrated their R&D with surveillance and production. They completed their new plutonium facility, A-90 (patterned after our TA-55 facility). They are in the midst of a major consolidation of the rest of their production sites. They are beginning to implement a science-based stockpile stewardship program. We have significant exchange with the British in many research areas.

I visited the Atomic Weapons Establishment (AWE) at Aldermaston following the meeting. I was very impressed with the A-90 plutonium facility. It is an integrated R&D and production facility with a production throughput capacity similar to what will be expected of our TA-55 in a few years. We will be able to learn a lot from the AWE operations as we prepare for limited plutonium pit production. AWE was run as a government-operated facility until this decade. The switch to a private contractor, Hunting -- BRAE, is now complete. Concurrently, AWE is moving to external regulations and licensing. They have had to adopt a much more formal system of operations and had to upgrade the buildings and infrastructure to be able to make the switch successfully. Again, we can learn from them because the Department of Energy decided last year to transition its facilities to external regulations over the next decade.


Over the years, the British nuclear program was able to attract first-rate scientists to AWE. That has become more difficult in the past decade. The new contractor is now trying to forge a science-based stockpile stewardship program. They are looking at a variety of ways to maintain the scientific vitality

of their staff. I expect the scientific dialog and cooperation between our two institutions to increase as we both face similar challenges; in fact, we are already working together on some experiments. Furthermore, two AWE members, Brian Thomas and Ian Deveraux, serve on the external review committees of P and ESH divisions, respectively.

I also spent one day at the Rutherford Appleton Laboratory near Oxford. It managed to survive an intense government review of the British scientific enterprise under the Tory government. It is designated as an official national laboratory with a mission of supporting high-quality scientific and engineering research, transferring technology and promoting public understanding of science, engineering and technology. It supports world-class research activities such as the ISIS pulsed neutron source, high-power lasers, and a synchrotron radiation source.

I was very impressed with the esprit de corps at the laboratory. They have recovered from downsizing and redirection. They have become much more competitive and customer focused. Close to 80 percent of their work is for the government (through what they call their Research Councils). The rest is done on a work-for-others basis with no restrictions. They are, in essence, self incorporated as a contractor to the British Government. Their facilities were impressive. ISIS is clearly the premier pulsed neutron source in the world. It is under the very able direction of Andrew Taylor whom many here remember from his days in the early 1980's at LAMPF (now LANSCE) as a visiting staff member as part of an interlab exchange agreement. The biggest concern is how to maintain the science base that allows them to fulfill their missions and serve external customers.

All in all, it was a very useful and informative trip. The social setting in the UK was also quite interesting. I was impressed at the great level of support that the new Prime Minister Tony Blair and his Labor government appear to have across the board. It was remarkable to me to find that one person can help to dramatically swing the mood of an entire nation. He follows in the footsteps of 17 years of Tory governments led by Margaret Thatcher and John Majors. My UK friends joked that you can't find anyone who admits to having voted Tory during the last election. In fact, they claim you can't find anyone who'll admit ever having voted Tory.



Highlights from the Director

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