

Security, the intelligence agencies, and others pay for research performed at Los Alamos, Lawrence Livermore, and Sandia national laboratories and at the Nevada Test Site are “short-term” and “piecemeal,” and they provide neither sufficient resources nor overarching missions for the labs, the panel said.

“Science on the cheap is no longer a viable model for the labs,” said Donald Kerrick, the task force cochair and a deputy national security adviser in the Clinton administration. David Overskei, a consultant and task force member, said that the amount of work that the labs perform for other agencies is considerable, second only to the weapons program itself, and “far exceeds” what they do for other DOE programs.

The Stimson report is the first of several analyses due to be completed this year that could have far-reaching implications for the NNSA. The Obama administration has ordered DOE and the DOD to weigh the costs and benefits of shifting control of the NNSA to the Pentagon. A congressional commission chaired by former defense secretary William Perry is expected to release its recommendations for a new weapons policy within weeks. And the DOD is preparing a revised policy that will spell out the role that it sees for nuclear weapons in the current strategic environment.

Two key lawmakers—Senator Jeff Bingaman (D-NM), who chairs the Senate Committee on Energy and Natural Resources, and Representative Ellen Tauscher (D-CA), who chairs the strategic forces subcommittee of the House Armed Services Committee—have announced their opposition to relocating the NNSA. Energy Secretary Steven Chu has on several occasions deflected questions about his views on the matter. But Chu does insist that the labs not be separated from the rest of the DOE weapons complex if any reorganization does occur. Historically, the weapons complex has deliberately been kept outside military control.

The Stimson panel, whose operation was partially funded by the NNSA, said that the NNSA never achieved the degree of autonomy lawmakers envisioned when it was formed in 2000 in the wake of the Wen Ho Lee affair and other security lapses at Los Alamos. As a result, the labs now must cope with two bureaucracies instead of one. Task force cochair Frances Fragos Townsend, former homeland security adviser to President George W. Bush, said she was “absolutely stunned by the hurdles the labs had to overcome” with the DOE

bureaucracy. The task force found that the labs have often circumvented the NNSA’s micromanagement by going straight to Congress.

For their part, DOE and the NNSA are increasingly squeezed by the budgetary requirements for maintaining the scientific skills and infrastructure necessary to meet nuclear weapons needs set by the Pentagon. The labs require both top-down coordination and a political consensus for their weapons mission, the report says, but their leadership has increasingly been stifled by the constraints and red tape that the NNSA has imposed.

Townsend said the panel quickly rejected the idea of moving the NNSA to the DOD for fear that the nuclear mission would receive less attention if it became entangled in the Pentagon bureaucracy. But the task force’s proposal to create a national security applications agency, which would manage the labs, could create an even more unwieldy governance structure for the labs. The task force recommended that each major user of the labs—including the Justice and State departments—contribute to core operations funding, and that the new agency be governed by a board comprising a senior official from each of the user agencies, to be chaired by Vice President

David Kramer

news notes

Lead standard for toys.

A new method has been created to detect lead in children’s toys

after a rash of recalls in recent years prompted the US Congress to tighten regulations. The Consumer Product Safety Improvement Act, passed in August 2008, slashes the surface lead concentration limit from 600 parts per million to 90 ppm and regulates, for the first time, bulk lead concentration levels; that limit will start at 600 ppm and go down to 100 ppm over three years. Now, ASTM International, an organization that develops technical standards for voluntary adoption by federal regulators, is proposing a method based on energy-dispersive x-ray fluorescence to nondestructively detect lead to below the new limits.

Lead can be detected in seconds with portable EDXRF spectrometers; when bombarded by incident x rays, elements in a sample emit multiple spectral lines that are characteristic of their atomic number. The location of lead—in the bulk or on the surface—can be determined by taking the ratio of two emission intensities. The x-ray measurement is more sensitive than the currently used chemical method, which is based on inductively coupled plasma mass spectroscopy. And ICP is not accurate if metal salts remain trapped when the sample does not completely dissolve, says Stanislaw Piorek, an ASTM committee member and a scientist at Massachusetts-based Thermo Niton Analyzers LLC. “A lot of information is missed when you just scrape one location on a few toys and assume they are all the same,” he says. JNAM ■

web watch

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<http://www.hivegroup.com/stimulus>

The American Recovery and Reinvestment Act of 2009, otherwise known as the Stimulus, provides nearly \$800 billion to revive the US economy. At 407 pages, the act itself is huge. To get a visual overview of where all the money will go, visit **Stimulus Spending Programs**, an interactive graphic created by the Hive Group, an information technology consulting firm.

<http://tinyurl.com/bp7xof>



Milton Abramowitz and Irene Stegun’s *Handbook of Mathematical Functions* made its debut in 1964 and has been serving physicists and other scientists ever since. As a US government publication, the book has always been in the public domain. Google has scanned the text and made it freely available. In case you’re wondering, the image shows $\Gamma(z)$.

<http://www.occca.org/2009-02.html>

The Orange County Center for Contemporary Art in Santa Ana, California, recently put on **The Art of Imaging**, an exhibition of works that use medical images as main components. MRI, ultrasound, and other imaging modalities were represented at the show, which you can still sample at the exhibition’s website.

