OBAMA SIGNS ENERGY APPROPRIATIONS, DEFENSE AUTHORIZATION BILLS INTO LAW

President Barack Obama last week signed into law the two annual bills that provide policy and funding guidance for the National Nuclear Security Administration's weapons and nuclear nonproliferation programs. Obama signed the Fiscal Year 2010 Energy and Water Appropriations Act Oct. 28, just days before a Continuing Resolution that has funded federal agencies at FY2009 levels since Oct. 1 was initially set to expire. The spending bill matches the Administration's request for the NNSA's weapons program and nonproliferation work, providing $6.38 billion for weapons work and $2.14 billion for nonproliferation activities. Notably, the bill provided $47.5 million for a refurbishment study on the non-nuclear portion of the B61 nuclear warhead. Of the funding for the B61, $15 million will be available only after the Nuclear Posture Review affirms that the warhead will be a part of the nation's nuclear stockpile into the future.

The bill also provides significant boosts for two NNSA construction projects: the Chemistry and Metallurgy Research Replacement-Nuclear Facility at Los Alamos National Laboratory and the Uranium Processing Facility at the Y-12 National Security Complex. The Obama Administration decided to slow work on the projects as it examines the appropriate size of the nation's nuclear weapons stockpile and complex as part of the ongoing Nuclear Posture Review, but the conference report includes $94 million for UPF and $97 million for CMRRNF, matching FY 2009 funding levels. The FY2010 Defense Authorization Act, which Obama also signed into law Oct. 28, matches the Administration's $54.7 million request for UPF and $55 million request for CMRR-NF. The difference between the bills created some uncertainty among NNSA and Congressional officials about the amount that can be spent on the projects, though Congressional authorizers are not expected to oppose the higher spending level.

The authorization bill provides $6.43 billion for the NNSA's weapons program and $2.18 billion for its nonproliferation work, and features several notable policy provisions, including the creation of the Stockpile Management Program, which would allow for modernization of the nation's nuclear weapons stockpile within a prescribed set of guidelines. It also would direct the National Academy of Sciences to study the quality of scientific research at Los Alamos, Lawrence Livermore and Sandia national laboratories, and would require the NNSA to submit a biennial plan on funding for the agency's modernization and stockpile refurbishment actions. The measure also contains provisions requiring DOE to outline the funding necessary to meet contractor pension obligations at NNSA sites.

—Todd Jacobson

DNFSB RAISES CONCERNS ABOUT LANL Pu FACILITY'S EARTHQUAKE PREPAREDNESS

Safety Strategy at PF-4 "Flawed," Defense Board Says

Los Alamos National Laboratory's main plutonium production facility is not adequately equipped to control the release of dangerous radiation during a major earthquake, the Defense Nuclear Facilities Safety Board said last week in a strongly worded letter to the Department of Energy. Calling the National Nuclear Security Administration's current safety strategy at the lab's Plutonium Facility "flawed" in its second formal recommendation of the year, the DNFSB said the potential radiation release from an earthquake-generated fire could be more than 100 times what is allowed by Department of Energy guidelines. The Board called on NNSA to take steps to decrease the impact of an accident and plan for major upgrades to the facility.

The Plutonium Facility, known as PF-4, was built in the late 1970s at the lab's Technical Area 55. When it was built, the facility met seismic standards, but recent studies revealed a significantly increased risk of major earthquakes at Los Alamos, which is built on an active fault line. Lab

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officials updated the seismic threat when it completed a Documented Safety Analysis of the facility in December of 2008, but in an Oct. 26 letter to Energy Secretary Steven Chu, the DNFSB said the upgrades planned as part of the analysis will take too long to implement and won't adequately prevent a major radiation leak at the facility. In an interview with *NW&M Monitor* last week, DNFSB Vice Chairman John Mansfield said the Board was surprised that the safety analysis was approved. "The estimates of the seismic threat are now quite a bit higher than the ones used to design the building thus there's no guarantee in this case that the fire suppression and ventilation systems will protect the public," Mansfield said. "The building will stand but there is no guarantee those systems will work."

Gloveboxes, Active Ventilation System a Concern

Specifically, the Board took issue with a plan to reinforce the support stands for some of the facility's "high-risk" gloveboxes because the ignition sources inside the gloveboxes, like furnaces, would not be secured under the plan. If the ignition sources were to fall over in an earthquake, a fire could still start, the Board said. Mansfield also said the ventilation system's ductwork attached to the gloveboxes could fall during an earthquake, something that has not been accounted for. "I'm not sure that preventing just the gloveboxes from falling will protect all that you want," Mansfield said. "You have to protect the ignition sources in the gloveboxes from falling and from setting off the stuff that's in the gloveboxes, and there is also the possibility the ductwork could fall. I'm not sure you can prove that protecting the gloveboxes from falling over will solve the whole problem."

The active confinement ventilation system that would filter air at the facility also would not withstand an earthquake, the Board said. The NNSA opposed some upgrades to the active conferment ventilation system at the facility earlier this summer, though the Board said the Los Alamos Site Office has altered its position, saying upgrades to the active confinement ventilation "may be desirable." The Site Office, however, doesn't expect to complete studies on the cost, scope and mitigation benefits of upgrades until mid-Fiscal Year 2011. "The Board believes that NNSA's current safety strategy is flawed and does not obviate the need for an active confinement ventilation system at its Plutonium Facility," the Board said in its letter.

Near-Term Restrictions Recommended

In the near-term, the Board recommended that the facility be operated with restrictions on at-risk material and that some material be removed from inventory or stored in robust containers. According to officials with knowledge of the discussions, the NNSA is on board with moving some material but favors a deliberate course of action that gives lab manager Los Alamos National Security, LLC, time to come up with a path forward rather than making quick decisions that could result in material being moved several times.

Part of the NNSA's opposition to the upgrades is believed to be centered around cost and the actual risks of not upgrading the active ventilation system, which has sparked a philosophical divide between the Board and the agency in recent years. NNSA officials declined to say how much the upgrades might cost but industry officials believe the pricetag could be in the hundreds of millions of dollars. Mansfield conceded that, "It could be a lot."

Lab Defends Actions

Lab officials declined to answer specific questions, but in a statement, lab spokesman Kevin Roark said the lab had completed many actions in 2009 to improve fire safety at the facility, repackaging high-activity plutonium into robust containers, replacing ventilation filters with ones that would work at high temperatures, developing a water supply model to help with improvements to the fire suppression system, implementing new controls for combustible material, adding manual fire extinguishers in critical areas, developing fire pre-plans to support firefighter response, replacing sprinkler heads, and relocating a forklift charging station away from important safety systems. "Protecting the health and safety of our employees, the public, and the environment while conducting operations all across the laboratory, particularly at the plutonium facility, TA-55, is our primary concern," Roark said.

Additionally, a two-phase construction project is planned to upgrade the facility, called the TA-55 Reinvestment Project. Construction began on the first phase of the project this summer and is estimated to cost $26.7 million; the second phase could cost between $77 and $99 million. Upgrades will be made to the heating ventilation and air conditioning system as well as electrical, safety, and utility systems, but the upgrades won't do enough to upgrade the active ventilation system, according to the Board. "How to fix it is going to take some time," Mansfield said. "They have to pore over designs to try to design changes they can put in there. It's not easy at all. We never thought it was easy, but we've got to get at it. Hopefully this will get them moving."

NNSA Asks for 'Wish List' from Lab

NW&M Monitor has learned that NNSA officials have asked the lab to come up with a "wish list" of mitigation measures if money was available, and NNSA representa-

tives met with officials from the White House Office of Management and Budget last week on the issue. NNSA officials are also asking the lab to come up with near-term actions to further address the problems. DNFSB officials are scheduled to meet with lab and NNSA officials Nov. 3 in Los Alamos for a briefing on the issues.

The possibility that a major earthquake could trigger a radiation release from PF-4 "could have permanent consequences for thousands of people, especially in Los Alamos County but also in Santa Fe County," according to Greg Mello, who heads up the Los Alamos Study Group in Albuquerque. Mello called on the NNSA to quickly address the issues raised by the DNFSB. "Whether NNSA wants to or not, the agency needs to dip into current operating funds, which are more than ample, to fix up PF-4," Mello said.

NNSA spokeswoman Jennifer Wagner said the agency was preparing a formal response to the Board, but she said the agency acknowledges that a more sophisticated analysis is needed for the facility. That will take place at the end of the year, *NW&M Monitor* has learned. "NNSA continues to implement its plans to improve the safety posture at the facility while evaluating additional opportunities for improvement," Wagner said in a statement. "We are working to ensure that needed improvements in both the analysis and the control strategy are made in a timely fashion."

—Todd Jacobson

NIF, SECURITY IMPROVEMENTS FOCUS OF FY2010 INCENTIVES AT LIVERMORE

The National Nuclear Security Administration is tying two of the main initiatives at Lawrence Livermore National Laboratory to Fiscal Year 2010 contract performance incentives for the Bechtel-led consortium that manages the lab for the agency. In order to receive a lucrative and sought-after one-year extension to its contract, lab contractor Lawrence Livermore National Security, LLC, will be expected to set the stage for fusion ignition at the multi-billion-dollar National Ignition Facility with a series of achievements in FY2010 as well as make progress on security improvements as the lab continues to remove almost all of its plutonium and highly enriched uranium by 2012, according to the lab's FY2010 Performance Evaluation Plan obtained by *NW&M Monitor*.

The two goals are among five award-term incentives outlined in the Performance Evaluation Plan. The lab contractor also must make progress on safety improvements at the laboratory, provide leadership in supporting future stockpile options, and support and participate in the agency's Business Management Advisory Council during FY2010. To qualify for the one-year contract extension, the lab contractor must meet four of the incentives while achieving an overall rating of "very good" when evaluated on a host of strategic performance objectives—the second highest rating that can be achieved, behind outstanding. "At this particular time in our history, there's really two major pillars here," Alice Williams, the manager of the NNSA's Livermore Site Office, told *NW&M Monitor* last week. "One of them is the de-inventory effort and the other one is where the National Ignition Campaign is going to take us. Then we have other things that tier off from that. As the Nuclear Posture Review finishes up, we are trying to make sure the laboratory is going to be in apposition of leadership to address those changes whatever they might be and take us down the path where the Administration wants us."

$42.5 Million in Fee Available

NNSA-related work makes up the bulk of the lab's portfolio, and LLNS can earn up to $42.5 million in FY2010 for that work. That includes $29.7 million that is considered "at-risk" fee—money that is earned for achieving various performance measures. The fixed fee that the lab is guaranteed to earn is approximately $12.8 million. The lab can also earn approximately $7.5 million for Work for Others activities done for other government agencies.

After taking over management of the lab in October of 2007, LLNS struggled in its first evaluation from NNSA, earning less than half of the at-risk fee available during FY2008 due to a variety of factors including a failed security exercise, poor performance on information security and problems with its Chronic Beryllium Prevention Program. The lab's FY2009 evaluation has not been released.

NIF Incentive New to Evaluation

Because the FY2008 review was the contractor's first evaluation period, award-term incentives were not included in that review, but they've been added to its last two evaluations. Livermore and Los Alamos both are eligible to receive up to 13 years worth of extensions through the use of award-term incentives in their contracts.

Officials from Los Alamos declined to release the lab's Performance Evaluation Plan because it is designated as "Official Use Only." But Livermore's evaluation guidelines include several departures from the FY2009 review. The National Ignition Facility, which is designed to help better understand the physics at the heart of a nuclear explosion but has also is expected to bring about scientific