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"DOE's Nuclear Weapons Complex: Challenges to Safety, Security, and Taxpayer Stewardship"

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Mr. Chairman and Members of the Subcommittee, I am pleased to be here at your request to testify on matters relating to the Department of Energy's oversight of the nuclear weapons complex.¹

The National Nuclear Security Administration (NNSA) was established under the National Defense Authorization Act of 2000 as a separately organized agency within the Department of Energy. This action was intended to allow NNSA to concentrate on its defense-related mission, free from other Departmental operations. Its creation was, in large measure, a reaction to highly publicized concerns about the management of the weapons complex.

With an annual budget of nearly \$12 billion, NNSA is charged with critically important national security missions relating to nuclear weapons refurbishment and storage, nuclear non-proliferation, and science and technology research. NNSA manages a number of major facilities, including three prominent national security laboratories: Los Alamos National Laboratory, Lawrence Livermore National Laboratory, and Sandia National Laboratories. In addition, major weapons-related efforts are carried out at Department facilities, including the Y-12 National Security Complex, the Pantex Plant, and the Kansas City Plant. Using a business model initiated in the late 1940's as part of the Manhattan Project, virtually all of NNSA's operations are conducted by contract using a fairly unique management and operating contractor arrangement, which includes special provisions regarding contractor indemnification (Price-Anderson Amendments Act of 1988).

¹ The Office of Inspector General uses the term "oversight" in this testimony; however, we prefer to make the distinction between "oversight," clearly the prerogative of the Congress, for example, and "contract administration," which describes the Department of Energy's responsibilities to administer the laboratory contracts in all respects.

The Los Alamos, Livermore, and Sandia laboratories are designated as Federally Funded Research and Development Centers (FFRDC). In addition to their primary weapons responsibilities, over the years they have advanced research and development in a number of disciplines. These include discoveries involving medical diagnostics and treatments, supercomputing, and combating terrorism. The national laboratories have a recognized track record of achievements that includes a significant number of prestigious awards, including 12 R&D 100 Awards in 2012, which recognize and celebrate the top 100 technology products of the year. Other vital NNSA facilities focus on weapons construction, testing, dismantlement, and inventories of nuclear and non-nuclear weapon materials and components.

In spite of notable successes, the directors of the national security laboratories and other independent review groups have expressed concern that the Department and NNSA have micromanaged the laboratories, thereby, adversely impacting the effectiveness and efficiency of their operations. The heart of these assertions is that oversight of contractors has been excessive, overly prescriptive, and burdensome. The intensity of oversight in the areas of safety and security was cited as being of special concern. The findings of one external review, apparently based, at least in part, on the testimony of current and former contractor officials and Federal executives, used terms like "dysfunctional" and "a lack of trust" to describe the working relationship among the Department, NNSA, and the national laboratories that manage and operate elements of the nuclear weapons complex. The laboratory directors and others have

recommended changes in the relationship between the parties, with the most radical recommendation being to take NNSA outside of the Department's purview entirely.²

Office of Inspector General Activities

Given that NNSA operations represent nearly 40 percent of the Department's budget and include some of the Department's most sensitive, high-profile missions, the Office of Inspector General (OIG) regards NNSA activities as a priority. Thus, the OIG has developed an extensive body of work identifying opportunities to improve the effectiveness, economy, and efficiency of various aspects of NNSA's functions, including its management of the national security laboratories and other weapons facilities. I want to provide the Subcommittee with a brief synopsis of several recent reports concerning issues across the weapons complex. Most prominently, the OIG recently issued a special inquiry report on the security breach at the Y-12 National Security Complex in Oak Ridge, Tennessee.

Security Breach at the Y-12 National Security Complex: In response to the July 28, 2012, security breach at NNSA's Y-12 National Security Complex, the Office of Inspector General effectuated the arrest of the alleged trespassers and is currently working with the U.S. Attorney's Office on this matter. Separately, on August 29, 2012, we issued a report on the Y-12 security incident, which identified multiple system failures on several levels. We found troubling breakdowns in responding to alarms, failures to maintain critical security equipment, over reliance on compensatory measures, misunderstanding of security protocols, poor

² In contrast, our November 2011 Department of Energy Management Challenges Report recommended that the Department consider consolidating a number of currently separate Department of Energy and NNSA functions.

communications, and weaknesses in contract and resource management. Especially important in light of the purpose of today's hearing, contractor governance and Federal oversight failed to identify and correct early indicators of the breakdowns. These issues directly contributed to an atmosphere in which trespassers could gain access to the protected security area directly adjacent to one of the Nation's most critically important and highly secured weapons-related facilities (*Inquiry into the Security Breach at the National Nuclear Security Administration's Y-12 National Security Complex*, DOE/IG-0868, available at: http://energy.gov/sites/prod/files/IG-0868_0.pdf).

Management of Worker Disability and Return to Work Programs: In June 2012, we reported that NNSA contractors had not always managed their worker disability programs effectively, efficiently, and in the Department's best interest. For example, we found that in purchasing its guaranteed cost workers' compensation insurance, Livermore incurred and charged NNSA \$1.26 million in insurance broker compensation, even though NNSA's contracting officer had specifically advised Livermore, in writing, that broker fees would not be reimbursable. We noted that by improving oversight of contractor disability programs, NNSA could save more than \$3.3 million annually in contractor disability compensation programs. (*The National Nuclear Security Administration Contractors' Disability Compensation and Return-to-Work Programs*, DOE/IG-0867, available at: <http://energy.gov/sites/prod/files/DOE-IG-0867.pdf>).

Worker Safety in the Nuclear Weapons Complex: We reported in May 2012 that Sandia had not fully addressed the root causes of long-standing weaknesses in implementing its Integrated

Safety Management (ISM) system – a system designed to prevent and/or reduce occupational injuries, illnesses, and accidents. We determined that Sandia had not always effectively managed line supervisors by holding them accountable for implementing ISM. Sandia's problems in implementing ISM were exacerbated by NNSA's failure to establish effective goals to monitor and/or evaluate the efficacy of Sandia's corrective actions. (*Integrated Safety Management at Sandia National Laboratories*, DOE/IG-0866, available at: <http://energy.gov/sites/prod/files/DOE%20IG-0866.pdf>).

The OIG has also issued a number of reports on contractor controls over beryllium – a metal essential to nuclear operations, but one that can cause serious disease among those exposed to it. While the Department established a prevention program to reduce exposures, we concluded that ineffective oversight allowed the failure to identify and alert workers to the presence of beryllium in certain areas to persist at Livermore. We also found weaknesses in NNSA's Y-12 National Security Complex Beryllium Prevention Program. Potentially endangering workers, these weaknesses were caused, at least in part, by a lack of Department standards over surface contamination found outside of confirmed beryllium areas. (*Implementation of Beryllium Controls at Lawrence Livermore National Laboratory*, DOE/IG-0851, available at: <http://energy.gov/sites/prod/files/igprod/documents/IG-0851.pdf>; and *Beryllium Surface Contamination at the Y-12 National Security Complex*, DOE/IG-0783, available at: <http://energy.gov/sites/prod/files/igprod/documents/IG-0783.pdf>).

Information Technology Data Centers: We found that NNSA had not fully satisfied its responsibilities under a government-wide effort to consolidate data centers. The data centers use

massive amounts of energy and are very costly to operate. In May 2012, we reported that NNSA lacked visibility over the number of data centers it funded at contractor sites and that it had not fully developed and implemented plans to identify and consolidate data centers. At just the four sites we visited, NNSA contractors maintained data centers occupying 160,000 square feet, 14 percent of which was unused or not used for its intended purpose. A lack of coordination among and between organizations also contributed to poor progress in minimizing duplicative infrastructure. As a result, NNSA missed opportunities to consolidate data centers and reduce overall costs and energy use. (*Efforts by the Department of Energy to Ensure Energy-Efficient Management of its Data Centers*, DOE/IG-0865, available at: <http://energy.gov/sites/prod/files/IG-0865.pdf>).

National Security Information: Problems with the management of national security information also persisted because of insufficient performance monitoring by Department and NNSA officials. In April 2011, we found that the risk of compromise of national security information at Livermore could be reduced by improving security planning and policies. We found that NNSA had not always performed sufficient monitoring of activities involving national security information at Livermore. (*Security Planning for National Security Information Systems at Lawrence Livermore National Laboratory*, OAS-M-11-03, available at: <http://energy.gov/sites/prod/files/igprod/documents/OAS-M-11-03.pdf>).

Contract Oversight Principles

The issues that have been raised most recently concerning contract oversight in the NNSA laboratory management model are not new. They have been topics of discussion for many years.

We recognize that it is difficult to strike the right balance between the contractors' stated desire to use their management expertise without undue oversight and the Government's need to proactively ensure that the taxpayers' interests in the operation of the laboratories is protected. In seeking the necessary equilibrium, we believe that there are several basic principles upon which virtually all parties would likely agree:

1. Government oversight should be neither overly prescriptive nor unnecessarily burdensome;
2. Oversight mechanisms should be targeted to avoid duplication, redundancy, and overlap;
3. Oversight efforts should be cost-effective and risk-based; and
4. The oversight regime should encourage intelligent risk tolerance, which is especially important in a research and development setting.

This having been said, a primary principle remains: The Department, NNSA, and all responsible Federal representatives have an overriding obligation to U.S. taxpayers to ensure that the terms and conditions of the various NNSA contracts are satisfied in all material respects, national security mission goals are met, and the weapons complex is operated in an effective, efficient, safe, and secure manner. These are not insignificant tasks, especially given the fact that the contracts for the three NNSA laboratories alone are valued at about \$5 billion per year. Moreover, NNSA missions and functions are highly complex and include a number of inherently risky operations.

Observations

The Office of Inspector General devotes a substantial portion of its time and resources to matters relating to NNSA operations and, by definition, the administration of NNSA's prime contracts. A routine part of our audit and inspection tradecraft is to conduct root cause analyses of the concerns we have identified. As it relates to the subject of this hearing, we have developed no evidence, empirical or otherwise, to suggest that what some characterize as overly burdensome oversight on the part of the Department and/or NNSA has had a causal relationship to the problems identified in our reviews. In fact, in many cases, we found that the Department and NNSA have not been as thorough as we felt was necessary in exercising their contract administration responsibilities. The most recent incident at Y-12 makes this point. Despite recent positive reports provided by the contractor and endorsements from Federal site managers, there were actually a number of known security-related problems at Y-12. Given the exposure to risk in this area and the reality of the recent situation, we concluded that more intensive, effective oversight was and is necessary.

Further, NNSA and the Department are currently dealing with a number of major project management issues. These include, for example, concerns with the \$3.5 billion National Ignition Facility (NIF) operated by Livermore – specifically, the ability of NIF to meet certain essential program goals; project cost and schedule concerns regarding the Chemistry and Metallurgy Research Replacement – Nuclear Facility, managed by Los Alamos that could cost over \$5 billion; and, delays and cost overruns associated with completion of the \$5 billion Mixed Oxide Fuel Fabrication Facility at the Department's Savannah River Site. The cost and complexity of

such projects, as we have seen, require robust Federal oversight to ensure that taxpayer dollars are well spent and that national security is protected.

In addition, the unique contractor indemnification provisions of the management and operating contracts place special burdens on the Federal management team. The Department/NNSA bears ultimate financial responsibility for nuclear-related contractor activities. The practical reality of this situation argues for effective Federal oversight of contractor operations.

The governance concerns that have been raised are serious and should be addressed.

Improvement is always possible. However, the laboratories consistently describe their performance in such glowing terms, which includes a demonstrated record of successful outcomes, that we found it difficult to reconcile the fairly dire descriptions of these governance concerns with the successes the laboratories report with understandable pride.

Proposed Changes to NNSA Governance Model

Any decision to materially change Department/NNSA/contractor relationships should be founded on analytically-based research and facts. There are a number of threshold questions which, to the best of our knowledge, have not been answered with specificity and empirical support. For example, has the current oversight model hindered mission accomplishments and, if so, to what extent; how would a new model lead to tangible improvements in the quality and quantity of scientific and technological advancements; and, how would a new model improve accountability and transparency to better protect the interests of the taxpayers. Should a decision be reached to modify the NNSA weapons complex governance model, it is important to ensure

that: (1) historic safety and security concerns regarding weapons complex management are treated as a priority; (2) the synergies that result from the numerous collaborations between the national security laboratories, the Department's 13 other FFRDC's and other energy functions are not impeded; (3) expectations of the contractors are as clear and precise as possible; (4) metrics are in place to provide a sound basis for evaluating contractor/program performance, including the effectiveness of any new governance model; (5) any new operating formulation established as part of this process will be lean and mean, reflecting current budget realities; and, (6) contractors have a fully functioning internal governance system in place.³

Path Forward

The question of how to provide the most effective contractor oversight is of vital importance, especially given the degree to which NNSA relies on contractor support to accomplish its national security missions. We support efforts to find better ways to serve the taxpayers' interests. However, based on currently available information, we concluded that a "scalpel rather than a cleaver" approach ought to guide this effort. Further, the Government needs to be sure that before action is taken the problem is well-defined, the remedy is cost-effective, and the core mission is not harmed.

This concludes my testimony and I look forward to your questions.

³ The Office of Inspector General is currently reviewing NNSA's implementation and execution of its Contractor Assurance System.