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[H.A.S.C. No. 113–94]

INTERIM REPORT OF THE ADVISORY PANEL ON THE GOVERNANCE OF THE NUCLEAR SECURITY ENTERPRISE

HEARING

BEFORE THE

SUBCOMMITTEE ON STRATEGIC FORCES

OF THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRTEENTH CONGRESS

SECOND SESSION

HEARING HELD
MARCH 26, 2014

U.S. GOVERNMENT PUBLISHING OFFICE
87–857 WASHINGTON : 2015

For sale by the Superintendent of Documents, U.S. Government Publishing Office
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INTERIM REPORT OF THE ADVISORY PANEL ON THE GOVERNANCE OF THE NUCLEAR SECURITY ENTERPRISE

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON STRATEGIC FORCES,
Washington, DC, Wednesday, March 26, 2014.

The subcommittee met, pursuant to call, at 10:04 a.m., in room 2118, Rayburn House Office Building, Hon. Mike Rogers (chairman of the subcommittee) presiding.

OPENING STATEMENT OF HON. MIKE ROGERS, A REPRESENTATIVE FROM ALABAMA, CHAIRMAN, SUBCOMMITTEE ON STRATEGIC FORCES

Mr. ROGERS. This hearing of the Strategic Forces Subcommittee of the House Armed Services Committee will come to order.

I want to thank everybody for being here and say hello to our witnesses. Appreciate you being here and taking the time to prepare for this hearing. I know this takes a lot of time, but it matters to us, it makes a big difference, and we appreciate you.

Today's topic—well, our hearing is a topic that is very familiar to those who have followed the subcommittee's work over the past several years: governance and management problems at the Department of Energy [DOE] and specifically the National Nuclear Security Administration [NNSA]. Today we will hear about the ongoing work of the Advisory Panel on the Governance of the Nuclear Security Enterprise. This advisory panel was created by the fiscal year 2013 National Defense Authorization Act [NDAA] to take a look at the long-standing problems within our nuclear system—nuclear security enterprise's system of management and oversight.

Our witnesses today are the distinguished cochairs of that panel, Admiral Richard Mies, U.S. Navy (retired), and Mr. Norman Augustine, former chairman and CEO of Lockheed Martin. I want to thank you both for your service and for being here. I understand that your testimony will focus on the panel's fact-finding efforts to date and provide us with a comprehensive illustration of the challenges we are facing.

This subcommittee has been looking into these problems for quite a long time, but I believe you will help us clarify and assess the problems and why efforts to remedy them have failed.

In creating this advisory panel, Congress highlighted that, quote, "There is a widespread recognition that the current system for governance, management, and oversight of the nuclear security enterprise is broken," close quote. As the fiscal year 2013 NDAA conferees stated, Congress believes, quote, "the status quo is not work-

ing and must not be continued," close quote, and that changes on the margins are not a solution.

Recognizing that the nuclear security enterprise is broken and that previous efforts for the reform have failed, Congress looks to your panel's final report for innovative solutions to these longstanding problems. Importantly, such solutions must not be dependent upon personalities or individuals to be successful and must not repeat the mistakes of the past.

For this hearing, let's ensure we all leave here with a full, clear understanding of the magnitude and complexity of the issues facing the enterprise as well as the national security imperative of getting this right.

Thank you again to the witnesses, I look forward to your discussion.

[The prepared statement of Mr. Rogers can be found in the Appendix on page 31.]

Mr. ROGERS. And with that, I would like to turn over the microphone to the ranking member, my friend from Tennessee, Mr. Cooper.

STATEMENT OF HON. JIM COOPER, A REPRESENTATIVE FROM TENNESSEE, RANKING MEMBER, SUBCOMMITTEE ON STRATEGIC FORCES

Mr. COOPER. Thank you so much, Mr. Chairman. I too would like to welcome our distinguished witnesses today. I appreciate their long service to our Nation and in particular their chairing of this very important commission to figure out how to improve the work of the NNSA.

I have no opening statement, Mr. Chairman, but I would like to ask unanimous consent that I insert some background material for the hearing record.

Mr. ROGERS. Without objection, so ordered.

[The information referred to can be found in the Appendix beginning on page 51.]

Mr. COOPER. Thank you, appreciate it. Thank you, Mr. Chairman.

Mr. ROGERS. I would now ask each of our witnesses to make an opening statement. We will start with Admiral Mies. Oh, with Mr. Augustine. The microphone is yours, sir.

STATEMENT OF NORMAN AUGUSTINE, COCHAIRMAN, ADVISORY PANEL ON THE GOVERNANCE OF THE NUCLEAR SECURITY ENTERPRISE

Mr. AUGUSTINE. Thank you, Mr. Chairman. I have an opening statement that runs about 8 or 9 minutes. If the 5-minute rule is in place, I can shorten it.

Mr. ROGERS. Go ahead, deliver the whole thing if you would like to.

Mr. AUGUSTINE. Thank you very much, Mr. Chairman and ranking member.

Mr. ROGERS. Your microphone is not on.

Mr. AUGUSTINE. I never was good at engineering.

Thank you very much for the opportunity to present the findings to date of the Congressional Advisory Committee on the Govern-

ance of the Nuclear Security Enterprise. And, as you know, Admiral Rich Mies and I have served as the cochairmen. And Congress tasked our panel, to broadly examine the performance of the nuclear security enterprise and to consider alternatives.

Let us state at the outset that the current viability of our nuclear deterrent is not in question. At the same time, the existing governance structures and practices are most certainly inefficient and in some instances ineffective, putting the entire enterprise at risk over the longer term.

During the past 5 months the panel has focused attention on the National Nuclear Security Administration, or NNSA as we know it, both in the headquarters and the field, including the laboratories and production plants and the Nevada National Security Site. We have also examined the current situation from the perspective of the national leadership in the legislative and executive branches and from the perspective of customers such as the NNSA, the DOD [Department of Defense], State, Intelligence Community, Department of Homeland Security. We have benchmarked NNSA against proven management approaches used by high-performing, high-technology organizations, both in the private sector and in government.

The panel's work has relied on our 12 members' decades of experience of a broad scope, dealing with nuclear enterprise issues. We have reviewed thousands of pages of previous studies, we have conducted on-site visits to numerous installations, and we have benefited from the testimony of dozens of expert witnesses, and we particularly appreciate the engagement of our colleagues on the panel as well as the candor of those that we have interviewed.

Today we will summarize our panel's findings on the current health of the NNSA and the root cause of the challenges we will cite. We are only now beginning to formulate our recommendations that we will provide in our final report. Unfortunately, the unmistakable conclusion of our fact-finding is that, as implemented, the NNSA experiment involving creation of a semi-autonomous organization has failed. The current DOE–NNSA structure has not established the effective operational system that Congress appears to have intended. This needs to be fixed as a matter of priority, and these fixes will not be simple or quick, and they need to recognize the systemic nature of the problem.

Despite the flaws that we have found, there are numerous examples of successes in NNSA's endeavors. To date Science-Based Stockpile Stewardship has succeeded in sustaining confidence in our nuclear deterrent. Unmatched technological innovation on the part of NNSA's scientists and engineers has produced a dramatically increased understanding of our aging nuclear weapons stockpile. The labs and plants are providing solid support to nonproliferation efforts and unique expertise to the Intelligence Community. NNSA's Naval Reactors organization continues to provide world-class performance in the development and the support of the most capable naval nuclear propulsion systems to be found in the world.

But, NNSA as a whole continues to struggle to meet fundamental commitments. To the point, it has lost credibility and the trust of the national leadership and customers in DOD that it can deliver

weapons and critical nuclear facilities on schedule and on budget. Simply stated, there is no plan for success with available resources. NNSA is on a trajectory towards crisis unless strong leadership arrests the current course and reorients its governance to better focus on mission priorities and deliverables.

At the root of the challenges are complacency and a loss of focus of the nuclear mission by the Nation and its leadership following the end of the Cold War, and although the national leadership has provided strong policy statements and substantial sums of money to the enterprise, it is evident that follow-through has been insufficient. The Congress' current focus on the issue is a welcome development.

Over the decades this changed situation has translated into the absence of a widely accepted understanding of and appreciation for, the role of nuclear weapons and nuclear technology in the 21st century, with the resultant well-documented and atrophied conditions of plants and plans for our strategic deterrent future. That is it with DOD as well as in DOE. Within the nuclear enterprise, this has been reflected as a lack of urgency and a respect for the compelling mission that it faces.

As earlier reviews have concluded and this panel endorses, this is no time for complacency about the nuclear deterrent. America's deterrent forces remain of the utmost importance. They provide the ultimate guarantee against major war and coercion. Further, our allies depend on these forces and capabilities for extended deterrence and could well pursue their own nuclear capabilities if they perceive that the U.S. commitment or competency is waning.

Other countries carefully measure U.S. resolve and technological might, in making their own decisions about proliferation and nuclear force sizing. U.S. leadership in nuclear science is something we cannot afford to lose. We, along with our allies, are in a complex nuclear age, with several nuclear powers modernizing their arsenals, new nuclear technologies emerging, the potential new actors as well as regional challenges raising significant concerns. This would be a dangerous time to stumble.

Furthermore, reform will be required to shape an enterprise that meets all of the Nation's needs and rebuilds the essential infrastructure that is required. But while the technical work is rocket science, the management and cultural issues are not. In the case of the latter, however, the situation is not easily rectified. What is needed, is to issue clear plans and provide sufficient resources for success, assign and align responsibility along with the necessary authority and consequences and provide strong, accountable leadership and management at all levels focused on the mission. The panel believes such reform is possible, but it will demand determined and sustained high-level leadership.

The changes we will recommend undoubtedly will be difficult to implement, regardless of where the enterprise is located within the government structure, since the fundamental problems are cultural more than organizational. Organizational change, while not unimportant, is only a small portion, the easy portion of the revisions that must be made. Previous efforts to reform and previous studies calling for action have largely failed due to the lack of leadership follow-through, the lack of accountability for enacting change and,

we might add, the lack of effective sustained top-level demand for change from the national leadership.

The Department of Energy by itself would be challenged to oversee the radical steps that will be needed. Success is imaginable only with a strong and active engagement of a knowledgeable Secretary, supported by the White House and the Congress and a structure that removes impediments and that aligns to mission priority. The panel believes that the enterprise today benefits immensely from the political leadership of an engaged Secretary of Energy and the strong science and engineering of the national laboratory system.

Each successive administration since that of President Eisenhower has reaffirmed the need to maintain a credible nuclear deterrent that is safe, secure, and reliable, but sustained national commitment and focus on the entirety of the mission of the enterprise charged with its execution has been lacking since the end of the Cold War, as evidenced by the condition in which the enterprise finds itself today.

DOE and the NNSA have failed to act with a sense of urgency at obvious signs of decline in key areas. Five systemic disorders have taken root that we found to be at the heart of the program—problem.

And with your permission, Mr. Chairman and members of the committee, Admiral Mies will briefly outline these issues.

[The joint prepared statement of Mr. Augustine and Admiral Mies can be found in the Appendix on page 33.]

Mr. ROGERS. Thank you, Mr. Augustine.

Admiral Mies, you are recognized.

STATEMENT OF ADM RICHARD W. MIES, USN (RET.), COCHAIRMAN, ADVISORY PANEL ON THE GOVERNANCE OF THE NUCLEAR SECURITY ENTERPRISE

Admiral MIES. Chairman Rogers and Ranking Member Cooper, let me add my thanks as well for being here today.

My remarks are intended to provide some specifics on the panel's findings within the context of my cochair's overall characterization of the health surrounding the enterprise.

Our panel has identified five systemic disorders which result from the fundamental causes outlined in Norm's preceding testimony. The causes and the disorders are inseparable. Most, if not all, of these disorders can be traced back to national complacency, the lack of a compelling national narrative and a widely accepted understanding regarding the role of our nuclear deterrent in this century.

Today I would like to offer a synopsis of our panel's key findings, specifically focusing on the five systemic disorders we have identified.

First, a loss of sustained national leadership focus. Since the end of the Cold War we have experienced significant erosion in our abilities to sustain our nuclear deterrent capabilities for the long term. The atrophy of our capabilities has been well documented in numerous reports over the past decade. The fundamental underlying cause of this erosion has been a lack of attention to nuclear

weapon issues by senior leadership, both civilian and military, across both past and present administrations and Congresses.

This lack of attention has resulted in public confusion, congressional distrust, and a serious erosion of advocacy, expertise, and proficiency, in the sustainment of these capabilities. Absent strong national leadership, NNSA as well as the whole national security enterprise has been allowed to muddle through. First and foremost, we must consolidate and focus national level support.

Second, a flawed DOE–NNSA governance model. The current NNSA governance model of semi-autonomy is fundamentally flawed. NNSA has not established effective leadership, policy, culture, or integrated decisionmaking. Indeed, the design and implementation of NNSA governance has led to numerous redundancies, confused authorities, and weakened accountability.

Third, a lack of sound management principles. NNSA and the associated policy-setting and oversight organizations within DOE reflect few of the characteristics of successful organizations. An entrenched risk-averse bureaucracy lacks a shared vision for and unified commitment to mission accomplishment, and hence they don't act as a team. Both DOE and NNSA lack clearly defined and disciplined exercise of roles, responsibilities, authorities, and accountability aligned to NNSA's mission deliverables.

Too many people can stop mission essential work for a host of reasons, and those who are responsible for getting the work done often find their decisions ignored or overturned. Chains of command are not well defined, and resources are micromanaged. Personnel management and development programs, issue resolution processes, and deliverable aligned budgets are deficient. Shortfalls in project management and cost estimating are well documented and acute.

Fourth, there is a dysfunctional relationship between NNSA, the Federal workforce, and their management and operations [M&O] partners. The trusted partnership that historically existed between the laboratories and DOE–NNSA headquarters has eroded over the past two decades to an arm's length customer-to-contractor adversarial relationship leading to a significant loss in the benefits of the federally funded research and development centers, the FFRDC model. The trust factor essential to this model and underscored by a recent National Academies study results from unclear accountability for risk, a fee structure and contract approach that invites detailed transactional compliance-based oversight rather than a more strategic approach with performance-based standards.

Additionally, atomized budget and reporting lines also confound effective and efficient programmatic management and further erode any sense of trust, and additionally there is no enterprise-wide approach. While there are examples where the relationship has improved, such as the Kansas City Plant, overall, this government-to-M&O "partnership" remains highly inefficient and in many cases, severely fractured.

Fifth and finally, there is uneven collaboration with NNSA customers. NNSA's relationship—this issue deals primarily with issues we have identified mainly with the DOD weapons customers. There is no affordable, executable joint DOD–DOE vision, plan, or program for the future of nuclear weapons capabilities.

This is at once a cultural and communications divide, but there is also a fundamental lack of mechanisms to ensure that requisite collaboration and consensus to address core mission requirements. Other customers appear to be satisfied, but here too a more strategic approach could strengthen capabilities and the services that NNSA provides.

In conclusion, lasting reform requires aggressive action and sustained implementation in all five of these areas, but national leadership engagement is really the common theme. Improvement is possible, but it will demand strong leadership and proactive implementation of the panel's recommendations by the President, the Congress, and an engaged Department of Energy Secretary.

Thank you for your time, and we look forward to your questions.

[The joint prepared statement of Admiral Mies and Mr. Augustine can be found in the Appendix on page 33.]

Mr. ROGERS. Thank you both for those remarks.

Admiral, did you and your staff get the impression when they were interacting with folks at the various levels, that they have a morale problem? I get the impression that they have, they are cognizant that they have got problems, but has it affected morale in, in a serious way?

Admiral MIES. Well, I think across the complex you see a number of morale problems, and that is reflected not just within NNSA and the M&O contractors, but you also see it on the DOD side in many cases. You are witnessing a, a number of investigations associated with morale problems within the ICBM [intercontinental ballistic missile] force.

That clearly was not part of our charter, but, yes, I think certainly there are morale issues. We did receive a copy of a recent cultural study that was done within DOE and NNSA, and again that identified a number of morale and cultural issues that I think affect performance of the organization.

Mr. ROGERS. Mr. Augustine, you were the CEO of a very large corporation. If you were to give some advice to or if you were to take the reins of NNSA, what sort of initial actions should that new administrator employ, to demonstrate the seriousness of his or her approach to this new endeavor, that would send the message up and down the food chain within an organization that you are serious about changing the culture, which is what I am hearing from you all is it is really a cultural problem there. So give us an organizational lesson.

Mr. AUGUSTINE. Well, Mr. Chairman, having spent 10 years in the government, let me say that it is much, much more difficult to manage in the government than it is the private sector, and nonetheless the same basic principles of management in my experience apply.

People also watch the people at the top and how they behave. It is terribly important that the people at the top set an example of what is expected, they walk the talk. I think the first thing that needs to be done is to gather people and say, times have changed, things are different, and there will be some people who will view that as an opportunity, an exciting challenge, there will be those that say that we can live with that, and there will be those who will resist it, and somehow those people who resist it either have

to find new work that they can deal with or be put aside so they don't interfere.

And so I think that there need to be examples set very quickly that accountability is expected, and that were I to start out, I would have a conversation like that with the organization. I would travel the field for a few weeks. I would then make clear what our goals were, what our expectations were. I would do my very best to have our resources match those expectations. If there were people who weren't up to the job, they need to find something new to do.

Mr. ROGERS. Let me ask this, speaking about that, because I think you are exactly right: Do you think that whoever takes the reins at NNSA, assuming the Senate will soon confirm somebody, has the latitude to make those corrective changes in leadership personnel? For example, I was listening to Admiral Mies' five points, and he made the observation that the bureaucracy was risk averse, and a lot of the folks in middle management either don't want to make decisions or if they do, they are overruled by somebody.

I am wondering how difficult it is to take a middle management person and replace them with somebody who is not risk averse. Did you even look at that or do you know?

Mr. AUGUSTINE. We have looked at it. We have both experienced it, and many of the members of our group have served in government. And as you know very well, the civil service was set up to protect employees from political pressures. In so doing I think it in my view has leaned too far to make it difficult to remove people who are not up to their job.

And I worked with many very, very capable people in government, particularly people in uniform. At the same time, I have encountered situations where people directly reporting to me were really not suited for the job they were in, and it is very, very difficult to do anything about that.

Mr. ROGERS. In the government sector?

Mr. AUGUSTINE. In government, yes; I should have been clearer but——

Mr. ROGERS. Well, we just saw that in Y–12, you know, we have had that incident up there, and to my knowledge to this day nobody has been terminated.

Mr. AUGUSTINE. Well, as you are aware—well, I know you are aware—I was one of three people the Secretary asked to do an investigation of Y–12, an independent investigation, and it is very hard to find out what actually happened to the government employees after that. We have tried very hard. But what is clear is that the three intruders went to jail.

Mr. ROGERS. Yeah.

Mr. AUGUSTINE. The people working for the contractors—the contractor was fired, the contractor employees, some were fired, some were transferred, apparently laterally, and as best as I know, the people in government service were transferred laterally or no action was taken, and I qualify that with saying as best as we have been able to find out.

Mr. ROGERS. Yeah well, the head of their security did not get any—did not shoulder any responsibility for that, that is the thing I find most amazing.

I do want to ask you all both, we heard your five systematic disorders. Would you both please provide some specific examples, if you can, of where we have seen the erosion of senior leadership attention to nuclear weapons issues and what impact that has had. Just if you can think of one or two specifics. If you can't, that is fine.

Admiral MIES. Well, I would say at the height of the Cold War we had a very robust infrastructure that was capable of producing nuclear weapons in significant volumes, significant quantities. Today we are dealing with a very obsolescent footprint within the NNSA complex, 54 percent or somewhere around there of the infrastructure is over 40 years old. Much of it is a legacy of the Cold War, and there is a need to streamline it and modernize it. We are struggling right now with the lack of any significant pit production capability because we don't have two major facilities, a Chemical and Metallurgy Research Replacement [CMRR] Facility and a Uranium Processing Facility [UPF], which have been troubled, as you well know, by poor project management and deficient cost estimating. So, again, that is one significant example of an erosion of our infrastructure capabilities.

Mr. AUGUSTINE. I will cite two quick examples. There are many. One is when the Nuclear Weapons Council met to approve what is known as the "3+2" plan, within a month of the time that was approved and widely agreed upon at a very high level, the NNSA came back and said we can't carry that out, and the system basically stopped at that point in terms of proceeding as planned at the higher levels.

The second example is the facilities have been allowed to age. Even though the people working in them are well aware of that at the highest levels, there has been no action in many cases. Today, over 50 percent of the facilities within the NNSA are over 40 years old, over 25 percent are over 60 years old, and not only does some of that raise a safety issue, it certainly impacts morale that you asked about.

Mr. ROGERS. Thank you very much.

The chair now recognizes the ranking member for any questions he may have.

Mr. COOPER. I thank my good friend, the chairman of the subcommittee, and I most of all thank the witnesses for being here, for their long period of government and public sector service, and also for their expertise in leading this very important panel.

I want to compliment members of the subcommittee here, not only on my side but across the aisle. It is great to have a senior member like Mr. Thornberry here who is even willing to sit below the salt in the subcommittee hearing to find out about the governance of the nuclear security enterprise, and this is, we should point out, probably one of the few hearings in which actually the attendance of the subcommittee compares very favorably with the attendance in the audience because the public has not tuned in to these issues as they should, and Congress, as you gentlemen point out,

has not focused on these issues as we should, so hopefully this is the process that starts the correction.

I know that this is just a preliminary report on your findings on the governance of the national security enterprise. Are you on track to deliver the final report sometime this summer?

Admiral MIES. I believe we are, and we look forward to delivering a full and comprehensive report.

Mr. COOPER. When I went through your testimony, I was struck because you can view things usually as a glass half full or glass half empty, and I would like for each of you to look at your testimony and for Mr. Augustine, for example, he starts off by saying the current viability of our nuclear deterrent is not in question, glass half full, and of course points out some qualifying things, we can improve existing governance structures because they are inefficient or ineffective, you know. We are not going to die from that. But later on in the testimony it is sharper. It says, quote, "The NNSA experiment has failed." It needs to be fixed as a matter of priority, presumably national priority.

And I thought Admiral Mies' testimony had a similar glass half full or glass half empty look at things. Admiral Mies starts off by saying there has been a significant erosion in our capabilities to sustain our nuclear deterrent capabilities, a lack of attention to weapons issues by senior leadership, both civilian and military.

Again, we are not going to die from that. But later in your testimony I thought if there were to be a headline for this hearing, it would be this, a single sentence: Quote, "there is no affordable, executable joint DOD–DOE vision, plan, or program for the future of nuclear weapons capabilities." Wow. That is a big sentence. That is a devastating sentence. So that would be in the glass half empty category.

Now, I know you are just at the preliminary level, you have done fact-finding, the commission hasn't been able to formulate recommendations, but as we go through our hearings and we learn that just, you know, to sustain current capabilities is probably $355 billion, and that is assuming no further cost overruns or delays or erosion of scientific talent or bad relationships with contractors, whatever, and we are in an environment of sequestration. Like how are we going to do all this?

So, this is a central challenge not only for Congress but for the Nation. Nuclear issues are not necessarily in fashion. It is easy to just dismiss them, or—but I hope that, as I say, this is the beginning of a process where we can focus in a mature way on sustaining and possibly even enhancing our capability because as the only great Nation on this Earth, that is our obligation.

I also think it is important to put this in historical perspective because there has never been, you know, a perfect period for managing all this. If you read the history of the nuclear enterprise, there always are controversies and problems, and so the path has never been smooth. There is not one glory age, one Camelot, but hopefully we can do better than the NNSA has been doing because I agree with Mr. Augustine, the NNSA experiment has failed, and I look forward to your panel's recommendations on the fixes.

Thank you, Mr. Chairman.

Mr. ROGERS. I thank the ranking member.

The chair now recognizes my friend and colleague from Texas, Mac Thornberry, for any questions he may have.

Mr. THORNBERRY. Well, thank you, Mr. Chairman, and thank you for letting me sit in.

There is some advantage to having been involved in this issue for 20 years because one does see a progression of reports that largely reach the same conclusion you all do. There wasn't anything that you said this morning, I don't believe, that is new, and we have been grappling with it literally for 20 years. But I have got to say at the same time, I recently, as soon as Secretary Moniz was confirmed, I sent him a letter that said I have never been more concerned about the nuclear complex than I am now.

And part of it is the morale, part of it is the lack of leadership at the top, part of it is the continued aging and deterioration of our weapons which we are not addressing, just a host of things. So I guess all that is a long way of saying I appreciate the efforts that you all are putting into this.

I guess one question that keeps coming up in my mind is to what extent any recommendations are going to affect the culture and the basic leadership issues that you all identify. When we created the NNSA basically we took a report from some very distinguished people and the President's Foreign Intelligence Advisory Board and took the more conservative option. We didn't create an autonomous agency like the Nuclear Regulatory Commission. We tried to do the semi-autonomous. But even if you had an autonomous agency, if you don't have attention from the President, from the Secretary of Defense, I don't know, would it matter? How do you legislate cultural leadership focus, the number one issue that Admiral Mies identified?

Mr. AUGUSTINE. Do you want to start on that one?

Admiral MIES. I don't know where to start.

Well, first, to the minority Member's concern about half full or half empty, I certainly think at the present time the glass is half full, but I think as we look to the longer term in the future, if dramatic action is not taken, then the concern is more a half empty view.

I think you have to appreciate that there have been numerous studies, as you well know, that have done, that have preceded our panel. We have inherited about 50 past studies focused on the Department of Energy and to some degree NNSA, and all of those studies have reached similar findings regarding the cultural, personnel, organizational, policy, and procedural challenges that those organizations face right now, that exists within DOE and NNSA, and so many of our panel's findings I don't think are going to be necessarily new or original. But I think you have to appreciate that many of these problems existed before NNSA was created, and NNSA was created out of recognition that some of these problems existed and, frankly, the semi-autonomous model has not succeeded, and in a sense we view it as a failed experiment.

From that standpoint I guess the change, the creation of NNSA was basically an organizational change, but organizational changes, as Norm indicated, are not the solution, the main solution to the problem. The main solution is cultural, not organizational, and you have to approach it from a DOE-wide basis, not just an NNSA

basis, and I think we are very fortunate to have Secretary Moniz, who is very engaged, who has a passion and an understanding of the mission and clearly is committed to making some cultural changes. The challenge that I think he will face and we will all face is can you institutionalize those changes so that they endure long beyond his tenure.

Mr. AUGUSTINE. Mr. Chairman, might I comment on Mr. Thornberry's question?

First of all, I would strongly agree, you can't legislate culture, and even in a corporation you can't dictate changes by putting out memos. I think that what is required is to set an example of what the new culture is and to be totally intolerant of deviations from that. The firm I happened to work for, we've combined 17 different firms in 7 years—5 years to make it, to build it, and we had 17, sometimes I thought we had 18 different cultures, and it came together very well because we were very intolerant of individuals who just couldn't deal with the new way of doing business.

And I think as the Admiral says, we are fortunate today to have a Secretary of Energy that understands this. The chairman, Mr. Chairman, you mentioned at the outset that we need solutions that aren't personnel, human dependent, but we have got to have Secretaries of Energy who understand something about the nuclear enterprise, about management, and I think that is where it starts.

Mr. THORNBERRY. Thank you, Mr. Chairman.

Mr. ROGERS. I thank the gentleman.

The chair now recognizes the gentlelady from California, Ms. Sanchez. Is she still here?

Mr. COOPER. She stepped out.

Mr. ROGERS. The gentleman from Georgia, Mr. Johnson, is recognized.

Mr. JOHNSON. Thank you.

I am just sitting here thinking. I am listening to you all, and I was preparing what I was going to ask and say, and let me first say that I appreciate the study that you all have conducted, and it is indeed sobering to think of all of that nuclear power that is in a dangerous state of maintenance and management.

And so our nuclear enterprise has been eroded from years and years of lack of focus and a lack of sustained leadership is what you have said from both civilian and military sources, and it has taken place over quite a period of time, since the end of the Cold War, and I think that the erosion of this nuclear enterprise is illustrative of the morass that Congress finds itself in. We are still doing business the same way that we have done for centuries, and right now this body is not functioning, this body needs a study that would provide us with some guidance in terms of where we are and what we need to do to move forward. I would submit that this Congress, while it is great that we are looking at our deficiencies right now, I also think that we need to be looking at what our future direction should be. It is not to be assumed that we should go back and correct everything to sustain what we had.

I think the discussion should be what do we need as we move forward. So in my mind the President having—and this President, like previous Presidents having worked on nuclear disarmament treaties and such, we would be, this Congress would be well ad-

vised, I think, to I don't want to say follow, but we should explore this disarmament issue.

Of course, we can't unilaterally disarm, but the goal should be to have a world without nuclear weapons, and so if we start out from that premise and then work from that, I think we would do ourselves a whole lot of justice. $355 billion to get us back to where we need to be is unrealistic. I don't think that is going to happen, and so how much will it take for us to get where we need to be in order to continue our efforts to eradicate nuclear weapons from the face of the globe? I think that should be our, that should be something that Congress, through its committees and subcommittees, should be about, and we need to be about it quickly because we can't afford the status quo both from a security standpoint, especially from a security standpoint.

So as we make sure that we don't allow other nations to acquire nuclear weapons, we need to be about this kind of study, but Admiral Mies, you in your statement, you said that several nuclear powers are modernizing their arsenals. Which ones are those? And what is—how much money are they spending to do that?

Admiral MIES. Well, let me say that very clearly both Russia and China are modernizing their nuclear arsenals, and we have good indications of that. They are developing new capabilities. I do want to go back and reassure you, though, that despite our testimony and our comments about erosion in the enterprise, I want to reassure the subcommittee that because of the strength of the Stockpile Stewardship Program and the great science that is going on in our national laboratories, we still have a safe, secure, and reliable stockpile.

That is not an issue today. It might be an issue for the future if we don't continue to invest and pay attention to those issues, but I think for the foreseeable future we have a safe, secure, and reliable stockpile, and I don't want to create the impression that that is a concern.

Mr. ROGERS. The gentleman's time has expired.

The chair now recognizes the gentleman from Florida, Mr. Nugent.

Mr. NUGENT. Thank you, Mr. Chairman, and I appreciate this panel and what you are saying.

It is a sobering thought because, you know, deterrence is about our ability to project force, and our adversaries, while I know in a perfect world we would love that we didn't have any, and that, you know, everybody loved each other and there would be no need for deterrence, but that is not the real world. We live in a place that is becoming actually more dangerous, not less dangerous.

We see the actions of China and Russia, and particularly what we have just seen with Russia's incursion into the Ukraine, much less what they did in Georgia, and they are still there. So while it would be great to live in this fantasy world, what bothers me the most is the fact that one of the last sentences in your testimony was lasting reform requires aggressive action, sustained implementation of all five of these areas that were mentioned in the report, but national leadership engagement is the common theme.

"Improvement is possible, but it will demand strong leadership and proactive implementation of the panel's recommendations by

the President, the Congress, and engaged DOE Secretary." I think that you have—at least from the Congress' standpoint, we have shown leadership, and we are trying to give direction, but everything that we have talked about here is about interpersonal skills, about the ability for management to make sure that people stay on task, and that starts at the highest level, you know.

Evidently, you know, this has been going on for years. I have been here for 3 years, and it disturbs me the fact that we can't get administrators to actually do their job, and they are not held accountable, because in reading through all your testimony it is about accountability, and Mr. Augustine, you know, I was a sheriff and we had 500 employees, and I will tell you that we held people accountable. We had civil service, and there were ways to deal with those within the civil service system, but you had to hold people accountable, and you had to let people know what your mission was and what you would not tolerate.

And in this particular endeavor, nuclear deterrence and the safety of the nuclear force that we have and the modernization really falls to those folks. You know, there is a whole bunch of other things going on, but that is their only mission. Their mission is very central.

You mentioned that that takes rocket scientists to do this, but it takes managers and people to actually manage the systems. I don't have to know much about how to construct a nuclear weapon, but I do have to know about how do I construct a management team to get us across the goal line. I guess I am just 3 years up here, I am still baffled by the fact that we can have studies and commissions, and we do all the stuff, and it doesn't seem to get better.

What does it really take? Does it take the President saying to you that, you know, DOE Secretary, you know, this is unacceptable, you have got to get this done? I mean, does it start there or where does it start?

Mr. AUGUSTINE. I think you have said it exactly right. The President obviously is the principal person to provide leadership in this regard, the administration. Strong support from the Congress is required, and probably the most important individual is the, under today's organization is the Secretary of Energy, who in many cases in the past did not have a background at all within this arena.

As you spoke, I was thinking that I had tried to figure out how I would summarize in one sentence what at least I think I have learned, and my sentence would be that with regard to the NNSA or the nuclear enterprise that the whole is less than the sum of the parts. There is some very, very capable people, some capable organizations, but the leadership to bring them together, to set goals, and you referred to the focus should be very clear what their job is.

We went to one national, one of the laboratories within the nuclear enterprise where the contractor that runs the facility, they have an award fee; 80 percent of the award fee had nothing to do with the primary mission. It had to do with peripheral issues. Very important peripheral issues, I would emphasize that, but 20 percent had to do with producing nuclear weapons and maintaining the stockpile and so on.

Mr. NUGENT. As a citizen of the United States, people should be concerned. I think the message is that we expect our leaders to actually lead, not just hope things get better and hope that processes improve. We can have all the commissions that we want, but until there is actual leadership to force the issue, I don't see how this, Mr. Chairman, ever gets better.

And I yield back.

Thank you so very much.

Mr. ROGERS. I thank the gentleman, and I understand his concern, and I hope he is wrong.

The lady from California, Ms. Sanchez, is now recognized for 5 minutes.

Ms. SANCHEZ. Thank you, Mr. Chairman, and thank you gentlemen for—I really enjoyed reading your testimony, and as Mr. Cooper said, some real pearls of wisdom in there and also some real arrows at some very difficult problems that we need to solve.

Of the 18 years that I have been here on this—in this Congress and in this full committee, 16 of those years have been spent on this committee, this subcommittee here, and I have seen a lot of interest and I have seen a lot of waning interest, not just, quite frankly, by people in the administration with respect to this issue, but also by members on this subcommittee over time, and so first of all I am really thrilled that so many have shown up today.

Gentlemen, during the markup and conference of the fiscal year 2013 and fiscal year 2014 NDAA, the House bill, we considered several legislative provisions related to NNSA and its related authorities and oversights, and some of these provisions included significantly limiting the authority of the Secretary of Energy, changing health and safety oversight by the NNSA, and the independent Defense Nuclear Safety Board even as the Department of Labor paid over $10 billion in compensation to workers or to their families because they were either killed or injured by exposure to radiation or toxic materials by when they were working at the Department of Energy at their nuclear sites.

These legislative provisions led to significant concern about weakening oversight at a time when the NNSA is overseeing an ambitious nuclear weapons modernization and sustainment plan and also building, of course, some of our facilities, one-of-a-kind new facilities to handle plutonium and uranium operations. Considering that backdrop, do you see a role for independent oversight of safety and security and where would this come from? Who would we look to for that? And when the NNSA talks about priority missions, does this include—in your opinion does this include a serious commitment to safety and security?

Mr. AUGUSTINE. Why don't you start and I will follow up.

Admiral MIES. Let me try and answer your question in a number of ways.

First of all, with respect to oversight, I don't think anybody on the panel wants to reduce the effectiveness of oversight, but I would say that in our review of the performance of the oversight function within NNSA and DOE, despite a large number of people at each of the field offices, we have really evolved over time into a transactional, compliance checklist-based kind of culture which, frankly, is both inefficient and not very effective, and so the issue

is not more oversight or less oversight in terms of bodies as much as it is better oversight, and are there better ways to do oversight, and really——

Ms. SANCHEZ. I guess that would be my question——

Admiral MIES. And really——

Ms. SANCHEZ. How would we go about really getting to the oversight that we need?

Admiral MIES. Well, to some degree I think if you look at the current performance elements today, a lot of the laboratories and the sites are graded on nonmission-related functions.

Norm previously mentioned that one organization had 80 percent of their award fee associated with nonmission-related issues. Again, there has to be a greater, stronger focus on mission. I would just give you one example to illustrate the point, Y–12. We have approximately 100 people at Y–12 doing oversight, and yet for whatever reason despite that large number of people doing oversight, the problem with the high level of frequency of false and nuisance alarms at the facility, the complacency that ultimately set in with the guard force over a long period of time, which ultimately contributed to the lack of a very effective and efficient response when the nun and her accomplices actually tripped some alarms.

To me you have to ask yourself, with that many people doing oversight, why wasn't there a recognition that this culture of complacency had kind of set in because of the large number of false and nuisance alarms and why wasn't there attention given to fix it and address it? And, again, preceding the Y–12 incident, Y–12 had received an inspection with respect to their safety and security, and they were held up as——

Ms. SANCHEZ. An example.

Admiral MIES [continuing]. An exemplar of good security, so you have to ask yourself is the current type of oversight that we are doing really successful in achieving what you really want from a mission standpoint.

Now, there is, has been one prototype test within the Department of Energy, within NNSA, the Kansas City model, where Kansas City transitioned to really exemption from a large number of DOE orders and regulations, and they were allowed to move toward industrial standards, accepted industrial standards, and ISO certifications, and that enabled Kansas City to reduce the number of Federal overseers, and at the same time significantly reduce the cost, but improve performance as well.

Now, Kansas City is unique in that it doesn't have a lot of nuclear functions, and so you can't just transplant that model to some of the other elements of the site, but I certainly think it is a good example that we ought to look hard at, particularly for nonnuclear functions that are performed across the complex to see if there are opportunities where you can move to independent oversight or change the oversight model in a way that provides much more effective oversight.

Mr. ROGERS. The lady's time has expired.

Ms. SANCHEZ. Thank you, Mr. Chairman.

I have some other questions that I would like to submit for the record, and if Mr. Augustine has any comments, I would like to

have them submitted from him also. I think this is an incredibly important topic that we have been struggling with.

Thank you.

[The information referred to can be found in the Appendix on page 81.]

Mr. ROGERS. I agree.

The chair now recognizes the gentleman from Arizona, Mr. Franks, for any questions he may have.

Mr. FRANKS. Thank you, Mr. Chairman.

Thank you gentlemen both for being here.

Mr. Augustine, for your commitment to the administration.

And Admiral Mies, I want you to know I was impressed by the candor of your opening statement, and I think you are a credit for your uniform, or the one you used to wear, and am grateful to people like you that make it possible for all of us to sit here and have a peaceful conversation.

I am convinced that our nuclear deterrent, our nuclear capabilities, are one of our most important elements of our entire arsenal of freedom. And yet it is important to remember that that deterrent is—essentially has its substance in two things, and that is the capacity that we are really here talking about today is our ability to know that we have a reliable capability, that capacity, and also intent.

Now, I apologize for—ask you for diplomatic immunity. I don't know of anybody but God that could figure out the intent of this administration. Okay? But the capacity here is what we are talking about today, and I am beginning to be concerned that there is some questions about that. And I think that is extremely dangerous in the kind of world that we live in if an enemy somehow feels like maybe our capacity or our intent is not up to par that it may potentially drag us into something that would be very scary.

So with that, Mr. Augustine, I will turn and ask you the tough question, if I can do that. And you are—I'm still under diplomatic immunity here, if you don't mind.

Plutonium facility in New Mexico, around a billion dollars spent. Nothing built with no intention to ever to build it. The uranium facility in Tennessee, over $1.2 billion spent, with nothing built. NNSA is studying alternatives and is unlikely to build the design that has cost them $1.2 billion so far.

The mixed oxide facility in South Carolina, over $3 billion spent. The concrete structure complete, but the NNSA has announced that with their fiscal year 2015 budget request that it is putting the project in, quote, "cold standby." The W76 LEP [life extension program] is delayed 2 years. The B61 LEP delayed 3 years. The IW–1 LEP is delayed 5 years. And, you know, I will try to cut this short here. But it is not a really a positive situation.

And the testimony here about the loss of sustained national leadership focus I think is spot-on, and I could not agree with you more, and find the administration's lack of leadership and care for this nuclear deterrent that we have been talking about, I would call it shameful, but it is more terrifying than that. And I think those delays highlight that.

This committee has been pulling in its—is pulling its collective hair out, really, trying to get the White House and the Office of

Management and Budget to put attention on the nuclear security enterprise. And I know you folks would like to see that as well without, you know, putting any of my own commentary in your mouth. We passed packages of reforms out of the House the last 2 years in the NDAA, only to see the administration, quote, "strongly object" or even threaten to veto them. But the administration has offered no real reforms of its own. Nothing, no answer to these problems.

And so I guess I have to ask you, and I will make it to both of you. Mr. Augustine, I will let you go first, if you don't mind. Has the White House engaged with your advisory panel and do you think—I shouldn't say that. Does it understand the major problems that exist in the nuclear security enterprise? And do you think the President understands it, the gravity of it?

Mr. AUGUSTINE. That is a difficult question——

Mr. FRANKS. It sure is.

Mr. AUGUSTINE [continuing]. Mr. Franks, for us to answer. Clearly, as a nation, not just this administration, but over a period of years we have gradually let our nuclear capability degrade. I would come back to your initial remarks that deterrence is in the eye of beholder, as you know, and when other nations come to the conclusion whether our deterrent is not what we say it is, then we are in great danger. And one of the worst things we could do of course, is to state we have plans that we don't provide the resources and the management capability to carry them out. If we can't afford more, then we need to change the plan. But to have plans that don't match the resources is probably the worst of all worlds.

Once again, as we—we have visited in great detail the programs you have cited. There are a lot of examples of poor management. It has less to do with in this case the capability of the people in the system; most of the people we talk to are very capable, and very dedicated, and I might add, very frustrated. They know the problems. Probably better than we do. It comes down to leadership at all levels. I'm trying to be as candid as I can.

Mr. FRANKS. I couldn't agree with you more, Mr. Augustine. I don't want to cut you short, but I am out of time and I wonder if we could give Admiral Mies—but I certainly appreciate your candor and your response.

Admiral MIES. Separate from the White House and Congress and national-level leadership, I think there is a lot that the Department of Energy can do within itself. You spoke about several projects that have—we have already expended a significant amount of national treasure on, and we have yet to see a facility. A lot of that stems from a number of cultural issues and technical competence within the Department of Energy itself. There is a need for stronger cost-estimating capability, a much more rigorous analysis of alternatives up-front before you commit to a certain program, and also real strong, robust program management expertise.

And I think those three elements to a certain degree are lacking within NNSA, have historically been lacking within NNSA. You don't need the White House or Congress to fix those things. I think the Secretary has the ability to take on some cultural reforms to really make the organization more efficient to better utilize the resources that have already been given to the organization.

Mr. ROGERS. Gentleman's time has expired.

I do want to thank the Admiral for his comment. But I would say that Secretary Moniz, who I agree is a good man and prepared for that job, has his hands tied, to an extent, that we, going back to Thornberry's question, we could legislate loosening up his hands a little.

Jim. I got my thought process going over there. Mr. Langevin is recognized for 5 minutes.

Mr. LANGEVIN. Thank you, Mr. Chairman. I would thank our witnesses for being here today. I have a couple specific questions I would like to ask, but first of all let me start off more broadly.

Is the NNSA and the nuclear security enterprise under the current construct fixable or do we need to move in a totally new direction? If it is fixable, where would you start? If it is not, what would you do?

Mr. AUGUSTINE. Well, under the current structure, at least as it is being carried out, it is clear that it doesn't work, and is probably going to be very difficult to fix.

What new structure one needs as a starting point is something that the committee is very much involved in trying to decide. The list of options is not great.

You want to add anything to that, Admiral?

Admiral MIES. Again I think organizational change is needed, but it is the lesser fix in the sense that cultural reform is, is far, far the greater priority. And you can move the organizational boxes around all you want, but if you don't fix the cultural problem, those organizational shifts will be meaningless. So you really have to address some of these cultural issues, and that is the Secretary's challenge.

Mr. LANGEVIN. Well, I concur that changing an organizational culture is very difficult to do and in many ways is very—it is two specific things: A, you either have to incentivize and get buy-in from the people there to change the culture and have them be a part of the solution, or you just got to start all over, and that is a very daunting prospect if that is what it comes to.

Let me just turn to a couple of specific questions. President Obama made clear in his Prague 2009 speech and the Nuclear Posture Review identified, the priority of strengthening nonproliferation, making progress on nuclear arms control, and sustaining a strong deterrent. Is there adequate national leadership below the President and above the NSA—NNSA level, to focus political support on these priorities?

Mr. AUGUSTINE. In my mind, the part of the government you pointed at is the head of the Department of Energy. And I think today that is true, there is that capability. But the capability will need strong backing because there is always resistance to change. If one gets into various management levels within the Department of Energy, I think there are some cases that one would question whether we have got people in the job that are up to it. On the other hand, there are a lot of people there that are very good. This is a case-by-case issue.

Mr. LANGEVIN. Admiral.

Admiral MIES. I would only add that you can't really separate the nonproliferation mission entirely from the nuclear weapons

stockpile surveillance and maintenance mission. The two are inextricably linked in that a large volume of our expertise in our weapons program is what contributes to our understanding and knowledge of what other countries are doing and how they are developing, and all that plays into our nonproliferation initiative. So I think they are inextricably tied together and both very critical.

Mr. LANGEVIN. Thank you, Admiral.

Let me move to this. After the disastrous Y–12 security incident, the Department of Energy Inspector General and the Government Accountability Office have stated that NNSA had an eyes-on, hands-off approach to oversight. It appears that NNSA officials did not have or use the authority to second-guess the contractor practices on security. Has this major deficiency been addressed within NNSA? And, more generally, does NNSA have the necessary expertise to evaluate performance and proposals from the M&O contractors?

Mr. AUGUSTINE. Yeah, I think with regard to the first part of your question, the answer is, no, the capability doesn't exist today.

One of the things that has happened is that the responsibility for carrying out a mission, the mission within NNSA, has been separated from many other important supportive functions. The person in charge of producing a weapon should also have as part of their job, produce the weapon, but do it safely, do it environmentally responsibly, and so on. Securely.

But today the staff functions have taken over those latter issues. And that should be embraced by the person who has the line-management responsibility and the authority. So today you have a separately—a separation of responsibilities, and that leads to great bureaucracy, delay, and ineffectiveness.

Admiral MIES. I would only add that although we haven't seen significant changes in the way oversight is done in that it is still pretty much a transactional compliance base, there is a major initiative underway to reduce the number of performance element factors that the fees are awarded upon and focus more on mission elements rather than nonmission-related elements. I think it is too early to say how successful that initiative will be. But clearly there is initiative to change the performance elements standards.

Mr. ROGERS. Gentleman's time has expired.

Mr. LANGEVIN. Thank you, Mr. Chairman.

I thank our witnesses for their testimony. We obviously have a daunting task ahead of us, and I appreciate your work and look forward to continuing to work with you.

Thank you. I yield back, Mr. Chairman.

Mr. ROGERS. I thank the gentleman.

Chair now recognizes Mr. Wilson from South Carolina for 5 minutes.

Mr. WILSON. Thank you, Mr. Chairman, and thank you for having this hearing, and thank you for your commitment to our country. And I look forward to reading the report and any way that we can be helpful.

And, in fact, the issues that we are dealing with, even going back 14 years ago, there was a report by the House Armed Services Committee Special Oversight Panel in regard to the Department of Energy reorganization, and it was ably chaired by soon-to-be chair-

man Mac Thornberry. And in this report, he said that the central purpose of the new organization, the National Nuclear Security Administration, NNSA, is to correct the confused lines of authority and responsibility within the DOE nuclear weapons complex that contributed to the mismanagement and security problems at the Department and to provide a clear mission focus and accountability for DOE personnel involved in the nuclear weapons program.

It also said there was the intended effect is to provide a substantial degree of independence but not total independence from the Department of Energy.

And, Admiral, you have already touched on this. But with the 2012 break-in at the Y–12 facility, do we still have confused levels of authority? And, additionally, for each of you, that would be one question. The other: Do you think that your recommendations would resolve the confused lines of authority?

Admiral MIES. Well, separate from the Y–12 incident, I think just the fact that you have a semi-autonomous NNSA has created the growth of a number of redundant organizations within DOE and NNSA which have duplicative functions and hence there are conflicting and confused lines of authority. I think in many ways the creation of a semi-autonomous organization may have worsened the problem, not helped it.

So that is why I think we think it is a—we consider at this point a failed experiment.

Norm, do you want to——

Mr. AUGUSTINE. I would just add that, as implemented, the semi-autonomous approach has clearly not worked. One of the things that leads to that, you touched on it, is the line management has been balkanized such that responsibility for many important functions, such as safety, security, health, environmental responsibility, and so on, is separate. It has major power of the organization such that at the lower levels of management decisions take forever to get up to the top between the staff and the line management. Somebody has to be put in charge and held responsible, and that just hasn't happened.

Admiral MIES. I would only add that this goes back to what we said earlier about basic successful management organizations that clearly define roles, responsibilities, authority, and accountability in many cases are lacking. And because of that, you find instances where too many people appear to be—believe they are authorized to say no and prevent actions from going forward.

And to some degree a lot of that decisionmaking is not embedded in line management, who should be in the best position to make a risk-informed decision. Again to accomplish the mission safely, securely, and environmentally safe.

Mr. WILSON. Well both of you have such experience. So I—we appreciate your insight.

The mixed oxide fuel fabrication facility, the MOX facility in South Carolina, this is in accordance with the nuclear nonproliferation agreement that we have with the Russian Federation to process high-level weapons-grade plutonium, convert it to be used in nuclear reactors, and the cost overruns or cost growth has been gruesome. But it is 61 percent completed.

And, Mr. Augustine, as you were talking about capable and dedicated personnel, they are right there and making every effort to complete this facility. But it is being put on cold standby. It concerns me, obviously, having weapons-grade plutonium in our State. Is there any alternative to the existent to this?

Mr. AUGUSTINE. I think there is no alternative to producing a facility that can do what we have committed to do. Whether there is an alternative to specific design or not, I am not in a position to say.

Mr. WILSON. Thank you very much.

Thank both of you.

Mr. ROGERS. I thank the gentleman.

Mr. Augustine, earlier you made a reference to the fact that you were in an organization where you took 17 smaller organizations and had to put them together and get them to act like one. And that one of the reasons you were successful is that you were very intolerant of folks who weren't on the team.

And, obviously, in the private sector, you had the ability to help somebody get on the road to finding something else to do if they didn't want to be on the team.

And I know, Admiral Mies, when he was in service, if he had a senior officer, even a junior officer that wasn't on the team, he could help them find something else to do.

I am not sure Secretary Moniz has that. And my question is if we were—could we go back to Mr. Thornberry's comment about could we legislate. The only thing I think we could legislate that would help Secretary Moniz would be, give him termination authority, at least within NNSA. Maybe not throughout the Department of Energy. But at least within NNSA. So that if he does have some people in his organizational effort, or the new administrator, that need to either get on the team or move on, do you think that would be a significant piece of legislative authority that we could implement? Or would it really not be critical?

Mr. AUGUSTINE. As a preface, I should say that what you alluded to in industry, I didn't do alone; I had a terrific leadership team, and that, that is essential.

I think what you suggested to give the Secretary termination authority would be a very useful step. I think it would also be very useful to give him greater authority in terms of hiring. It would be useful to give him the opportunity to have people who stay for a specific number of years, to put people in a job long enough to be responsible.

I can remember years ago testifying beside Dave Packard at the Defense Department about this very topic, and people come and go so fast that really nobody is accountable. So I think those would be very useful steps. Obviously, they would be very difficult steps.

Mr. ROGERS. Let me ask you, it has been 16 months, we have had a series of acting administrators, as you know, General Klotz has been waiting for months now for action by the Senate. How important—and so in your review so far—is it that we get somebody confirmed by the Senate in the position as a permanent administrator?

Mr. AUGUSTINE. In my opinion, it is very important.

Admiral MIES. Mine as well. I think one of the concerns we have seen, and it's not just with the director, but it's a lack of leadership stability and continuity at the senior leadership levels within NNSA. It is vitally important if you want to make cultural changes and move on.

I would just like to go back to your question. I think it is important, as Norm I think said, that you can't legislate cultural reform, which I think is the biggest issue. And if you are going to legislate certain initiatives, I would just encourage you work very, very closely with the Secretary to ensure there is close alignment there.

One of the issues that we are looking at, and we haven't reached any conclusion on it, is, is the issue of exempted service positions within NNSA, whether there might be value in that or not. And we haven't come to any conclusion. But again, how do you develop that technical competence, people with professional qualifications and certifications to really effectively manage the enterprise?

Mr. ROGERS. Well, to that point, Mr. Cooper and I have been meeting with Secretary Moniz and asking him specifically what we could do to be helpful. We have got to get our colleagues to help us, outside of just me and Mr. Cooper.

Lastly, you all made very various thought-provoking comments. But another one you made a little while ago was talking about how Secretary Moniz is the right guy, right now, because he has experience in the subject matter and there have been historically a lot of people in that position who didn't.

What do we do—Secretary Moniz is a good guy and he has got the right background, but nothing is to say that the person that follows him is going to have competence in the subject matter area.

What would you all recommend—and you all may want to put it in your report, I don't know but—that Congress do to try to make sure that we at least urge a certain type of person be viewed for that position? Or do you think that is even necessary for Congress to address?

Mr. AUGUSTINE. We are acutely aware of that issue and spent a good deal of time discussing it and don't really have a recommendation. We have a few, a few thoughts. But I think one thing, Congress does confirm people to Secretarial positions, and the Congress has a great deal of authority in seeing what kind of qualifications an individual has.

And, this is particularly difficult job because it goes all the way from windmills to photocells on the one hand, to nuclear deterrence on the other. But there are people who have that mantle. Secretary Moniz happens to be one.

I think one of the most important thing Congress could do is to be sure successive leaders, whatever organization one happens to choose, are qualified to deal with this issue.

Mr. ROGERS. Okay. Thank you very much.

Chair now recognizes Mr. Cooper for any comments he wants to make.

Mr. COOPER Thank you, Mr. Chairman. Thank the witnesses again for an excellent hearing.

Anybody in Congress should hesitate about giving anyone else management advice, because Lord knows this institution is not run properly.

But it worries me, two things that have come out in this hearing. One is the universal tendency of anybody in Congress to blame the administration, and Congress has been blaming the administration ever since George Washington was President. And last I checked, you don't get a magic wand or halo any time you are elected to office, in either to the executive or the legislative branch. So it is important to realize that—and I think you have it in your testimony, it is not highlighted as perhaps it should be.

There is something remarkable going on even within the NNSA today. In fact, there are several remarkable things. One of those is the Naval Reactors program, which has been largely exempt from any publicity or scrutiny because they do a darn good job. So you don't have to blame the administration about that. And they have been able to survive different kinds of administrations.

And another common thing has been, well, you can't legislate culture, and that is probably true. But you can legislate an environment in which it is easier to create a good culture.

And somehow Naval Reactors [NR] has been able to do that. Their ability, for example, to actually have contracting officers who know what they are talking about. You know, imagine that. Their scrutiny of expenditures, anything over $10 million, as opposed to the usual $100 million threshold. They know what is going on. Wouldn't that be nice?

So, to me, when we are looking for bright spots here, and we need to find some bright spots, extending that culture would be a very valuable thing. And, but part of it is avoiding the limelight, avoiding the publicity, avoiding the political back and forth so they can do their jobs.

So, I worry that this institution has a tendency to do the usual thing, press conferences, publicities, express outrage. We have got to do better than that. And, so as you look at new models, there is a pretty good one right there at your fingertips, and I know the admiral is extremely familiar with this already.

But thank you for your service. Thank you. We look forward to this report, and look forward to even more than that, to progress.

Admiral MIES. I would just comment that we certainly have formed a benchmarking team to go out and look at what we thought were very successful examples of high performance organizations, and NR was clearly one of those. And we have certainly looked at a lot of the attributes that Naval Reactors has to try and see if those can be adopted by NNSA.

Mr. ROGERS. Thank the gentleman.

Chair now recognizes the gentleman from Texas, Mr. Thornberry.

Mr. THORNBERRY. Thank you, Mr. Chairman, and I again appreciate you and Mr. Cooper allowing me to sit in.

The only thought I would offer on Naval Reactors is they have had their own problems here recently with some cheating on—down in their school, and somewhat similar to what we see with the ICBM force. And maybe it is an isolated incident, maybe it is not a bigger problem. But you do worry that the problems that we have been talking about here are, are extending.

The other thought is, for Naval Reactors, in a way, they report both to DOE and DOD. It is a unique sort of institution, started

by an admiral who had a very strong culture, that has been able to be continued over the years, and has been able to maintain largely that culture over time.

I am not sure what that tells us. It was exactly, as the gentleman suggested, one of the things we looked at in creating NNSA is to look at Naval Reactors and why they are successful and what we can, we can duplicate. I think there are still more lessons there. I agree. But there are some worrisome signs.

Admiral Mies, the only other thought is, as you were talking, talking about duplicative organizations within DOE and NNSA. Partly, that is by design. Because what happened before was everybody in DOE wanted a piece of NNSA. I don't know if—I can't remember the number.

What percentage of DOE's budget is NNSA right now? Do you know off the top of your head? Isn't it about 40 percent.

Mr. ROGERS. 40 percent.

Mr. AUGUSTINE. 40 percent is about right.

Mr. THORNBERRY. So you have got 40 percent of the budget. That means everybody at DOE wants a piece of it. And that goes back to what you were talking about earlier, the people responsible for getting the weapons out, were second-guessed by all these folks who wanted to justify their existence in DOE by getting a piece of it. So the idea was, you do separate, insulate NNSA from all those other people except the Secretary. He can do whatever he wants to.

And, the last thought is, if the Secretary is the answer, and setting aside the increased authorities that the chairman was talking about, but if he is the answer, why hasn't he been doing it? I had the exact same high hopes that everybody else had. But there hasn't been much happening now. He is waiting on a confirmee from the Senate, I realize.

I guess that is just a long way of saying, we have got to remember the problems that this was intended to create—to fix. I completely agree. It has not fixed them. But I don't want to go backwards to those days either. Because it was a, quote, "dysfunctional bureaucracy, incapable of reforming itself." I am not sure it is much better, but I don't want to go back and be worse.

So, any comments, I would welcome. But I appreciate you all letting me harangue.

Mr. AUGUSTINE. I would be very brief. I think that future Secretaries of Energy, or whomever this organization reports to, have got to be qualified at the subject at hand, and have got to be strongly committed. And without that, I don't think anything we propose is going to matter.

Admiral MIES. Beyond duplicative functions, I do think the semi-autonomy has created a bureaucratic seam between NNSA and other elements of the Department of Energy, particularly the Office of Science and the other DOE science labs, and when you look at those laboratories, there really is a need for close collaboration between the NNSA labs and the Office of Science labs because many of them work on nonproliferation issues, and have nuclear expertise and nuclear forensics in other areas.

So, so again to some degree the semi-autonomy has created an impediment to hinder closer collaboration than you maybe would

desire, and so, it just isn't the duplicative functions, but it is also the issue associated with collaboration.

I would only add too that we have had several meetings with the Secretary, and he has moved out and is making a number of DOE-wide organizational changes to address what I perceive are some of the cultural issues that he recognizes.

Mr. ROGERS. I thank the gentleman.

Mr. Garamendi, did you have anything you wanted to ask before we close it up?

Mr. GARAMENDI. First of all, my apologies, we have a Coast Guard hearing, and being a ranking member, I was tied up there.

I want to thank the witnesses and the commission for their work.

I will catch most of the testimony and from the staff.

I understand that one issue that was not covered—perhaps this is correct, from the 30-second briefing—is the issue of the Savannah River MOX facility. Did the commission look at this issue at all? And, if so, what did you determine?

Admiral MIES. We haven't looked at it in great detail. It clearly falls in the same example as the UPF facility in Tennessee and the CMRR, the plutonium facility in New Mexico. And in our analysis, in general, of those facilities and some of the other major projects within NNSA and the Department of Energy, is that they suffered from three elements that I talked earlier about: A lack of robust, real strong program management; a lack of a real rigorous analysis of alternatives up front, before you decide to embark on a path; and a lack of a, again a robust cost-estimating capability to really understand how much resources will be required to complete some of these major projects. And I think those three elements have contributed to the situation we find ourselves in today.

Mr. GARAMENDI. I really want to apologize to the committee and the witnesses for not being here. Those issues are of great interest to me, and I really want to get into it, but it is not really appropriate now. I will circle back around at some point. I want to take this up in the NDAA, particularly with the Savannah River, and try to meet some of the issues there.

Mr. ROGERS. Very important. Thank you, sir.

And I want to thank the witnesses. I very much want to remind you, and I know you are cognizant of it, when your advisory panel was established the specific report request was that, quote, "conferrees believe changes at the margins are not a solution," close quote, and I know you all realize that. So be bold.

We appreciate you. We look forward to getting your report this summer and hopefully having you come back this fall with some final thoughts. With that, we are adjourned.

[Whereupon, at 11:35 a.m., the subcommittee was adjourned.]

A P P E N D I X

March 26, 2014

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

MARCH 26, 2014

Opening Remarks – As Prepared for Delivery

The Honorable Mike Rogers
Chairman, Subcommittee on Strategic Forces
House Armed Services Committee

Hearing on the "Interim Report of the Advisory Panel on the Governance of the Nuclear Security Enterprise"

March 26, 2014

Good morning. The subcommittee will come to order.

Welcome to our hearing on a topic that is very familiar to those who have followed the subcommittee's work over the past several years—governance and management problems at the Department of Energy (DOE) and the National Nuclear Security Administration (NNSA). Today, we'll hear about the ongoing work of the Advisory Panel on the Governance of the Nuclear Security Enterprise.

This advisory panel was created by the Fiscal Year 2013 National Defense Authorization Act to take a close look at the longstanding problems within our nuclear security enterprise's system of management and oversight.

Our witnesses today are the distinguished co-chairs of that panel:

- **Admiral Richard W. Mies, U.S. Navy (ret.)**
  Co-Chairman
  Congressional Advisory Panel on the Governance of the Nuclear Security Enterprise

- **Mr. Norman R. Augustine**
  Co-Chairman
  Congressional Advisory Panel on the Governance of the Nuclear Security Enterprise

Thank you for your service, gentlemen, and thank you for appearing before us today.

I understand that your testimony will focus on the panel's fact-finding efforts to date and provide us with a comprehensive illustration of the challenges we're facing. This subcommittee has been looking into these problems for quite a long time, but I believe you will help us clarify and assess the problems and why previous efforts to remedy them have failed.

In creating this advisory panel, Congress highlighted that, "there is widespread recognition that the current system for governance, management, and oversight of the nuclear security enterprise is broken."

As the FY13 NDAA conferees stated, Congress believes, "the status quo is not working and must not be continued," and that, "changes on the margins are not a solution."

Recognizing that the nuclear security enterprise is broken and that previous efforts for reform have failed, Congress looks to your panel's final report for innovative solutions to these longstanding problems. Importantly, such solutions must not be dependent upon personalities or individuals to be successful and must not repeat the mistakes of the past.

For this hearing, let's ensure we all leave here with a full and clear understanding of the magnitude and complexity of the issues facing the enterprise—as well as the national security imperative of getting this right.

Thank you again to our witnesses—I look forward to the discussion.

With that, let me turn to our ranking member for any statement he would like to make.

Interim Report of the Congressional Advisory Panel on the Governance of the Nuclear Security Enterprise

Prepared Statements by the Co-Chairmen, Mr. Norman Augustine

and

Admiral Richard Mies, U.S. Navy (Retired)

Mr. Augustine:

Mr Chairman and Ranking Member Cooper, thank you for the opportunity to present the findings to date of the Congressional Advisory Panel on the Governance of the Nuclear Security Enterprise. As you know, Admiral Rich Mies and I serve as its co-chairmen.[1]

Congress tasked our Panel to broadly examine the performance of the Nuclear Security Enterprise and to consider alternatives.

Let us state at the outset: The current viability of our nuclear deterrent is not in question. At the same time, the existing governance structures and practices are most certainly inefficient and in some instances ineffective, putting the entire Enterprise at risk over the long term.

During the past five months, the Panel has focused attention on the National Nuclear Security Administration (NNSA) – both headquarters and field, including the laboratories, production plants, and Nevada National Security Site. We have also examined the current situation from the perspective of the national leadership in the Legislative and Executive branches and from the perspective of customers of the NNSA in DOD, State, the intelligence community, and the Department of Homeland Security. We have benchmarked NNSA against proven management approaches used by other high-performing, high-technology organizations both in the private sector and in government.

The Panel's work has relied on our twelve members' decades of experience of a broad scope dealing with Nuclear Enterprise issues; we have reviewed thousands of pages of previous studies; we have conducted on-site visits to numerous installations; and we have benefitted from the views of dozens of

[1] The other Panel members are: Dr. Michael Anastasio, Admiral Kirkland Donald, U.S. Navy (ret.), Mr. T.J. Glauthier, The Honorable David Hobson, Dr. Gregory Jaczko, Dr. Franklin Miller, Dr. William Schneider, Jr., The Honorable John Spratt, Jr., The Honorable Ellen Tauscher, and The Honorable Heather Wilson.

expert witnesses. We appreciate the active engagement of our colleagues on the Panel and the candor of those we have interviewed.

Today we will summarize our Panel's findings on the current health of the NNSA and the root causes of its challenges. We are only now beginning to formulate the recommendations that we will provide in our final report.

Unfortunately, the unmistakable conclusion of our fact-finding is that, as implemented, the "NNSA experiment" involving creation of a semi-autonomous organization has failed. The current DOE-NNSA structure has not established the effective operational system that Congress intended. This needs to be fixed as a matter of priority, and these fixes will not be simple or quick, and they need to recognize the systemic nature of the problem.

Despite the flaws, we have found examples of success in NNSA's endeavors. To date, Science-Based Stockpile Stewardship has succeeded in sustaining confidence in our nuclear deterrent. Unmatched technical innovation on the part of NNSA's scientists and engineers has produced dramatically increased understanding of our aging nuclear weapon stockpile. The labs and plants are providing solid support to non-proliferation efforts and unique expertise to the Intelligence Community. NNSA's Naval Reactors organization continues to provide world class performance in the development and support of the most advanced naval nuclear propulsion systems in the world.

But, NNSA as a whole continues to struggle to meet fundamental commitments. To the point: it has lost credibility and the trust of the national leadership and customers in DOD that it can deliver needed weapons and critical nuclear facilities on schedule and on budget. Simply stated, there is no plan for success with available resources. NNSA is on a trajectory towards crisis unless strong leadership arrests the current course and reorients its governance to better focus on mission priorities and deliverables.

At the root of the challenges are complacency and the loss of focus on the nuclear mission by the Nation and its leadership following the end of the Cold War. Although the national leadership has provided strong policy statements and substantial sums of money to the Enterprise, it is evident that follow-through has been insufficient. The Congress' current focus on the issue is a welcome development.

Over the decades this changed situation has translated into the absence of a widely accepted understanding of, and appreciation for, the role of nuclear weapons and nuclear technology in the 21st century, with the resultant well-documented and atrophied conditions of plans for our strategic deterrent's future —in DOD as well as in DOE. Within the Nuclear Enterprise this has been reflected as a lack of urgency and need for a compelling mission focus.

As earlier reviews have concluded, and this Panel endorses: this is no time for complacency about the nuclear deterrent. America's deterrent forces remain of utmost importance; they provide the ultimate guarantee against major war and coercion. Further, our allies depend on these forces and capabilities for extended deterrence and could well pursue their own nuclear weapon capabilities if they perceive the US commitment or competency to be weakening. Other countries carefully measure US resolve and technological might in making their own decisions about proliferation and nuclear force sizing. US leadership in nuclear science is something we cannot afford to lose. We, along with our allies, are in a complex nuclear age; with several nuclear powers modernizing their arsenals, new nuclear technologies emerging, and potential new actors—as well as regional challenges—raising significant concerns. This would be a dangerous time to stumble.

Fundamental reform will be required to shape an Enterprise that meets all of the Nation's needs and rebuilds the essential infrastructure that is required. But while the technical work is rocket science, the management and cultural issues are not as complex—albeit, in the case of the latter, not easily rectified. What is needed is to issue clear plans and provide sufficient resources for success; assign and align responsibility, along with the necessary authority; and provide strong, accountable leadership and management at all levels to execute the mission. The Panel believes such reform is possible, but it will demand determined and sustained high-level leadership.

The changes we will recommend undoubtedly will be difficult to implement regardless of where the Enterprise is located within the government's structure, since the fundamental problems are cultural more than organizational. Organizational change, while not unimportant, is only a small portion—the easy portion—of the revisions that must be made. Previous efforts to reform and previous studies calling for action have largely failed due to lack of leadership follow-through, a lack of accountability for enacting change, and, we might add, the lack of effective, sustained top-level demand for change from the national leadership.

The Department of Energy by itself would be challenged to oversee the radical steps that will be needed. Success is imaginable only with the strong and active engagement of a knowledgeable Secretary, supported by the White House and Congress, and a structure that removes impediments and that aligns to mission priority. The Panel believes the Enterprise today benefits immensely from the political leadership of an engaged Secretary of Energy and the strong science and engineering of the national laboratory system.

Each successive administration since that of President Eisenhower has reaffirmed the need to sustain a credible nuclear deterrent that is safe, secure and reliable. But sustained national commitment and focus on the entirety of the mission and the Enterprise charged with its execution has been lacking since the end of the Cold War, as evidenced by the condition in which the Enterprise finds itself today. DOE and the NNSA have failed to act with a sense of urgency at obvious signs of decline in key areas. Five systemic disorders have taken root that we found to be at the heart of the problem. With your permission, Admiral Mies will briefly outline those issues.

Thank you.

Admiral Richard Mies:

Mr Chairman and Ranking Member Cooper, let me add my thanks as well for being here today. My remarks are intended to provide some specifics on the Panel's findings within the context of my Co-Chair's overall characterization of health surrounding the Enterprise.

The Panel has identified five "systemic disorders" which result from the fundamental causes outlined in the preceding testimony. The causes and the disorders are inseparable. Most, if not all, of these disorders can be traced back to national complacency –the lack of a compelling national narrative and a widely accepted understanding– regarding the role of our nuclear deterrent in this century.

Today I would like to offer a synopsis of the Panel's key findings, specifically focusing on the five "systemic disorders" we have identified.

Loss of Sustained National Leadership Focus. Since the end of the Cold War, we have experienced significant erosion in our abilities to sustain our nuclear deterrent capabilities for the long term. The atrophy of our capabilities has been well documented in numerous reports over the past decade. The fundamental underlying cause of this erosion has been a lack of attention to nuclear weapon issues by senior leadership—both civilian and military — across both past and present Administrations and Congresses. This lack of attention has resulted in public confusion, Congressional distrust, and a serious erosion of advocacy, expertise, and proficiency in the sustainment of these capabilities. Absent strong national leadership, NNSA (as well as the whole Nuclear Security Enterprise) has been allowed to "muddle through." First and foremost, we must consolidate and focus national-level support.

A Flawed DOE/NNSA Governance Model. Second, the current NNSA governance model is fundamentally flawed. NNSA has not established effective leadership, policy, culture or integrated decision-making. Indeed, the design and implementation of NNSA has led to redundancies, confused authorities, and weakened accountability.

Sound Management Principles are Lacking. Third, NNSA, and the associated policy-setting and oversight organizations in DOE, reflect few of the characteristics of a successful organization. An entrenched bureaucracy lacks a shared vision for, and unified commitment to, mission accomplishment

and hence they do not act as a team. Both DOE and NNSA lack clearly defined and disciplined exercise of roles, responsibilities, authorities, and accountability aligned to NNSA's mission deliverables. Too many people can stop mission essential work for a host of reasons and those who are responsible for getting the work done often find their decisions ignored or overturned. Chains of command are not well defined. Resources are micromanaged. Personnel management and development programs, issue resolution processes, and deliverable aligned budgets are deficient. Shortfalls in project management and cost-estimating are well-documented and acute.

Dysfunctional M&O Relationship. Fourth, the trusted partnership that historically existed between the laboratories and DOE/NNSA headquarters has eroded over the past two decades to an arm's length, customer-to-contractor adversarial relationship, leading to a significant loss in the benefits of the federally funded research and development centers (FFRDC) model. The "trust" factor essential to this model -- and underscored by the National Academy's study[2] -- results from unclear accountability for risk, a fee structure and contract approach that invites detailed transactional compliance-based oversight rather than a more strategic approach with performance-based standards. Atomized budget and reporting lines also confound effective and efficient programmatic management and further erode any sense of trust.

Additionally, there is no Enterprise-wide approach. While there are examples where the relationship has improved (such as at the Kansas City Plant), overall this government-M&O "partnership" remains highly inefficient and in many cases, severely fractured.

Uneven Collaboration with Customers. The fifth and final issue is NNSA's relationship with customers. The issues we have identified are mainly with the DOD weapons customers. There is no affordable, executable joint DOD-DOE vision, plan, or program for the future of nuclear weapons capabilities. This is, at once, a cultural and communications divide. But there is also a fundamental lack of mechanisms to ensure requisite collaboration and consensus to address core mission requirements. Other customers say they are satisfied. But here, too, a more strategic approach could strengthen capabilities and the services provided.

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[2] Charles Shank and C Kumar Patel, et al., *Managing for High Quality Science and Engineering at the NNSA National Security Laboratories*, The National Academies Press, 2013.

Lasting reform requires aggressive action and sustained implementation in all five of these areas. But, national leadership engagement is the common theme. Improvement is possible, but it will demand strong leadership and proactive implementation of the Panel's recommendations by The President, the Congress, and an engaged DOE Secretary.

Thank you for your time and we look forward to your questions.

Mr. Norman R. Augustine

Norman R. Augustine, retired chairman & CEO of Lockheed Martin, has held positions in government, industry, academia, and the nonprofit sector. He has served as undersecretary and acting secretary of the Army, chairman and CEO of Martin Marietta, and lecturer with the rank of Professor at Princeton University. He has been chairman of the National Academy of Engineering and was a 16-year member of the President's Council of Advisors on Science and Technology.

Mr Augustine chaired the Congressionally-mandated National Academies' committee that produced the Gathering Storm report on education and competitiveness, and is a Regent of the University System of Maryland, a former trustee of MIT and Princeton, a trustee emeritus of Johns Hopkins, and holds 30 honorary degrees. He has been a member of the Department of Energy Advisory Board, chairman of the Lawrence Berkley National Laboratory Advisory Board, and a member of the Y-12 Incident Investigation Group.

Admiral Richard W. Mies, U. S. Navy (Retired)

Admiral Mies is the CEO of The Mies Group, Ltd. and provides strategic planning and risk assessment advice and assistance to clients on international security, energy, defense, and maritime issues.

A distinguished graduate of the Naval Academy, Admiral Mies completed a 35-year career as a nuclear submariner in the US Navy and commanded US Strategic Command for four years prior to retirement in 2002.

Admiral Mies served as a Senior Vice President of Science Applications International Corporation and as the President and Chief Executive Officer of Hicks and Associates, Inc, a subsidiary of SAIC from 2002-2007. He also served as the Chairman of the Department of Defense Threat Reduction Advisory Committee from 2004-2010 and as the Chairman of the Board of the Navy Mutual Aid Association from 2003-2011. He presently serves as the Chairman of the Strategic Advisory Group of US Strategic Command and Chairman of the Naval Submarine League. He is a member of the Committee on International Security and Arms Control of the National Academy of Sciences, a member of the Boards of Governors of Los Alamos National Laboratory and Lawrence Livermore National Laboratory, and a member of the Board of Directors of Mutual of Omaha, Babcock and Wilcox, Exelon, and the US Naval Academy Foundation. He also serves on numerous advisory boards.

Admiral Mies completed post-graduate education at Oxford University, the Fletcher School of Law and Diplomacy, and Harvard University. He holds a Masters degree in government administration and international relations.

March 24, 2014

Neither Mr. Norman Augustine nor ADM (Ret) Richard Mies have had federal grants, sub-grants, contracts or sub-contracts with the federal government over the last three fiscal years.

David Graham, on behalf of the Panel Co-Chairmen
Director, NSE Panel Support Staff

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DISCLOSURE FORM FOR WITNESSES
CONCERNING FEDERAL CONTRACT AND GRANT INFORMATION

INSTRUCTION TO WITNESSES: Rule 11, clause 2(g)(5), of the Rules of the U.S. House of Representatives for the 113th Congress requires nongovernmental witnesses appearing before House committees to include in their written statements a curriculum vitae and a disclosure of the amount and source of any federal contracts or grants (including subcontracts and subgrants) received during the current and two previous fiscal years either by the witness or by an entity represented by the witness. This form is intended to assist witnesses appearing before the House Committee on Armed Services in complying with the House rule. Please note that a copy of these statements, with appropriate redactions to protect the witness's personal privacy (including home address and phone number) will be made publicly available in electronic form not later than one day after the witness's appearance before the committee.

Witness name: Norm Augustine

Capacity in which appearing: (check one)

__X_Individual

___Representative

If appearing in a representative capacity, name of the company, association or other entity being represented:

FISCAL YEAR 2014

federal grant(s) / contracts	federal agency	dollar value	subject(s) of contract or grant
None			

FISCAL YEAR 2013

federal grant(s) / contracts	federal agency	dollar value	subject(s) of contract or grant
None			

FISCAL YEAR 2012

Federal grant(s) / contracts	federal agency	dollar value	subject(s) of contract or grant
None			

Federal Contract Information: If you or the entity you represent before the Committee on Armed Services has contracts (including subcontracts) with the federal government, please provide the following information:

Number of contracts (including subcontracts) with the federal government:

Current fiscal year (2014):_____NONE_____;
Fiscal year 2013:_____NONE_____;
Fiscal year 2012:_____NONE_____.

Federal agencies with which federal contracts are held:

Current fiscal year (2014):_____;
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List of subjects of federal contract(s) (for example, ship construction, aircraft parts manufacturing, software design, force structure consultant, architecture & engineering services, etc.):

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List of subjects of federal grants(s) (for example, materials research, sociological study, software design, etc.):

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Witness name: Richard Mies

Capacity in which appearing: (check one)

__X_Individual

___Representative

If appearing in a representative capacity, name of the company, association or other entity being represented:

FISCAL YEAR 2014

federal grant(s) / contracts	federal agency	dollar value	subject(s) of contract or grant
None			

FISCAL YEAR 2013

federal grant(s) / contracts	federal agency	dollar value	subject(s) of contract or grant
None			

FISCAL YEAR 2012

Federal grant(s) / contracts	federal agency	dollar value	subject(s) of contract or grant
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DOCUMENTS SUBMITTED FOR THE RECORD

MARCH 26, 2014

AMERICAN FEDERATION OF LABOR AND CONGRESS OF INDUSTRIAL ORGANIZATIONS

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LEGISLATIVE**ALERT**

EXECUTIVE COUNCIL

RICHARD L. TRUMKA
PRESIDENT

ELIZABETH H. SHULER
SECRETARY-TREASURER

ARLENE HOLT BAKER
EXECUTIVE VICE PRESIDENT

June 13, 2013

Dear Representative:

On behalf of the AFL-CIO, I am writing to express our strong opposition to Rigell Amendments # 67 and 68 to the FY 2014 National Defense Authorization Act.

Rigell Amendment #67 would strike requirements in Section 803 that the DOD cut spending on contracts for inherently governmental functions and service contracts for the performance of closely associated with inherently governmental functions. The DOD also opposes this amendment.

Rigell Amendment #68 would strike the existing moratorium on the OMB Circular A-76 contracting out process, which was suspended years ago because it wastes taxpayer dollars and is unfair to civilian federal employees. Both the Office of Management and Budget and the Department of Defense have acknowledged that A-76 is flawed and oppose its reinstatement.

We are also concerned about sections of the bill that would affect worker and public safety at Department of Energy nuclear weapons facilities. Though no amendments were made in order to address our concerns, we hope the following provisions will be substantially altered before the bill becomes law.

Specifically, we oppose Section 3120, which would expand the pilot program at the Kansas City nuclear laboratory to other labs. Decades of neglect and lax oversight at DOE weapons facilities during and after the Cold War resulted in widespread disease and the death of thousands of workers. Over the years, Congress and DOE strengthened workers safety and health protections at these facilities. We believe that the Kansas City pilot program established in last year's NDAA will result in weakened protections for workers and should not be expanded. In any case, it is inappropriate to expand these pilots while the Congressional Advisory Panel on the Governance of the Nuclear Security Enterprise, established in last year's NDAA, is considering these issues.

Section 3202 would require the Defense Nuclear Facilities Safety Board to conduct cost-benefit analyses before making recommendations. This change would transform the DNFSB from an investigative agency that makes findings of deficiencies and recommends improvements to a regulatory agency that must consider costs and benefits before issuing regulations. This new requirement would impose a huge burden on the DNFSB, making it much more difficult to issue recommendations in a timely manner. Without additional resources and staff it would be impossible to comply without eroding the board's ability to carry out its mission, and leaving major public and worker safety and security risks unaddressed.

Finally, Section 3245 would permit the Secretary of Energy to terminate employees without adequate due process. While we agree the DOE Secretary should have the authority to remove employees who endanger security, due process rights must be included to ensure that the termination is justified.

Sincerely,

William Samuel, Director
GOVERNMENT AFFAIRS DEPARTMENT

FRED UPTON, MICHIGAN
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA
RANKING MEMBER

ONE HUNDRED TWELFTH CONGRESS

Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515–6115

Majority (202) 225-2927
Minority (202) 225-3641

November 15, 2012

The Honorable Carl Levin
Chairman
Senate Committee on Armed Services
228 Russell Senate Office Building
Washington, D.C. 20510

The Honorable John McCain
Ranking Member
Senate Committee on Armed Services
228 Russell Senate Office Building
Washington, D.C. 20510

The Honorable Howard P. "Buck" McKeon
Chairman
House Committee on Armed Services
2120 Rayburn House Office Building
Washington, D.C. 20515

The Honorable Adam Smith
Ranking Member
House Committee on Armed Services
2120 Rayburn House Office Building
Washington, D.C. 20515

Dear Sirs:

We write to express our strong opposition to certain provisions relating to the Department of Energy's nuclear defense and related programs in the House-passed national defense authorization bill. We believe these provisions, if enacted into law, would decrease accountability to the President, through the Secretary of Energy, for the safety, security, and management of the nuclear weapons complex, and would reduce essential oversight of these facilities. The provisions would undermine Cabinet-level management of the operations and the safety and security of the nuclear weapons complex and related nuclear programs that are an integral part of the Department of Energy.

A key tenet of U.S. national security policy has been to maintain civilian control of nuclear weapons and related research, development, and stockpile stewardship through a Cabinet-level agency. Stemming from its origins in the Manhattan Project and the development of nuclear weapons, the Department of Energy's (DOE) nuclear defense programs, run by its National Nuclear Security Administration (NNSA), provide this critical civilian control for the nation.

This DOE national security mission is threatened by provisions in Title 31 of H.R. 4310, the House-passed defense authorization bill. The provisions make sweeping changes to restrict the

Secretary's ability to ensure the safe, secure, and efficient operations of the nuclear weapons complex and related nuclear programs and activities of NNSA that are entwined with DOE. For example, Section 3133 would severely limit Secretarial authority, direction, and control over NNSA by prohibiting the Secretary from disapproving any action, policy, regulation or rule of the NNSA Administrator except in limited circumstances where the Secretary submits a justification for the disapproval to congressional defense committees and a period of 15 days has elapsed. Section 3133 further provides that except in such circumstances, "the Administrator shall have complete authority to establish and conduct oversight of policies, activities, and procedures of the [NNSA] without direction or oversight by the Secretary of Energy." This would significantly hinder oversight of nuclear facilities by DOE's Health, Safety, and Security Office. In light of the repeated safety and security incidents at NNSA nuclear sites, including recently at the Y-12 National Security Complex, it is inappropriate to reduce oversight of the nuclear weapons complex.

Section 3133 would also transfer existing authorities and responsibilities currently vested by statute in the Secretary of Energy to the NNSA Administrator, including responsibilities relating to stockpile stewardship and reporting; stockpile management; nuclear test ban readiness; manufacturing infrastructure; nuclear materials protection, control, and accounting; research and development; and other matters, effectively breaking the chain of accountability to the Cabinet. The section would separate the NNSA budget from the DOE budget, effectively preventing the Secretary of Energy from overseeing what is currently over 40 percent of the Department's budget.

Sections 3113, 3114, and 3115 address contractor accountability policy; create Secretarial obligations with respect to a new contractor advisory council; and revise safety, health and security standard-setting. The implications of section 3132(b) for the identification of functions performed by NNSA are unclear. These sections directly impact the Secretary's management and Cabinet-level responsibilities to ensure safe and secure nuclear-related operations. The implications of these provisions have not been fully examined by the House, including by the Committee on Energy and Commerce, which has primary jurisdiction over DOE management. We have serious concerns about the impact of these provisions on the management of the nuclear weapons complex.

These above referenced provisions in Title 31 would effectively block the Secretary's staff office from independently examining NNSA contractors' adherence to DOE safety and security policy. The Secretary of Energy must have his own independent assessment capability to conduct oversight of safety performance and security, independent of line management, and to ensure that DOE health, safety, and security policies are integrated across the Department, including the NNSA. The recent security breakdown at the Y-12 National Security Complex and ongoing safety and security challenges at NNSA facilities underscore the need for NNSA to remain fully accountable to the Secretary.

The nuclear weapons complex requires strong oversight. Every two years, the Government Accountability Office (GAO) provides Congress with an update on its High-Risk Programs, highlighting major programs at risk of waste, fraud, abuse, mismanagement or in need of broad reform. GAO has designated contract management for NNSA nuclear activities as a "high-risk" area since GAO began providing these reports in 1990.

During the past 15 years, the Committee on Energy and Commerce has held over 20 hearings to address issues or concerns relating to nuclear issues and the national laboratories. These hearings uncovered or highlighted serious safety and security issues within the nuclear complex. As recently as this past August, several individuals, including an 82-year-old nun, were able to gain access to a secure area next to a sensitive nuclear facility at Y-12, in part because NNSA took a hands-off approach to contractor oversight. This long-standing history of problems within the complex suggests that strong oversight of Federal contractors and NNSA officials is needed. Accordingly, any effort to reduce by statute the oversight and accountability of NNSA and its contractors to the Secretary is exactly the wrong approach.

Further, cleaving NNSA from DOE Secretarial oversight and policymaking, as envisioned in Title 31, would also create additional regulatory uncertainty. The House version of the bill gives NNSA authority to promulgate safety and security standards, separate from DOE's standard setting. A regime of duplicative or contradictory rules and regulations from DOE and NNSA would undermine the clear and consistent safety and security regulations necessary to ensure safe and secure operations across DOE facilities.

Finally, weakening Secretarial oversight of safety, security, and taxpayer spending on nuclear weapons and related activities will not address specific management problems at NNSA and will not enhance the important national security mission of DOE. These provisions will isolate NNSA management from accountability to the Secretary and the President. These provisions will weaken the execution of DOE's national security mission.

In light of the serious risks to sound management of the Department, and the safety and security of DOE's nuclear weapons and related operations, we oppose including the above-referenced sections of Title 31 in conference.

Sincerely,

Fred Upton
Chairman

Henry A. Waxman
Ranking Member

JEFF BINGAMAN, New Mexico, Chairman
RON WYDEN, Oregon
TIM JOHNSON, South Dakota
MARY L. LANDRIEU, Louisiana
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United States Senate

COMMITTEE ON
ENERGY AND NATURAL RESOURCES
WASHINGTON, DC 20510-6150

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SENATE ARMED SERVICES

November 30, 2012

The Honorable Carl Levin
Chairman
Committee on Armed Services
U.S. Senate
Washington, D.C. 20510-6050

The Honorable John McCain
Ranking Member
Committee on Armed Services
U.S. Senate
Washington, D.C. 20510-6050

Dear Senator Levin and Senator McCain:

We are writing to urge you to resist the so-called "improvements" to the National Nuclear Security Administration and the Defense Nuclear Facilities Safety Board proposed in the National Defense Authorization Act for Fiscal Year 2013 passed by the House of Representatives (H.R. 4310). We believe that these changes threaten the safety of our nation's nuclear weapons program.

As you recall, the National Nuclear Security Administration was created in 1999 to make the Department of Energy's nuclear weapons complex more "secure." Proponents of the NNSA thought they could make the complex more secure by putting it in what they called a "stovepipe," isolating it from the rest of the Department, and weakening the Secretary of Energy's ability to manage and control it. Secretary Richardson warned us at the time that creating the NNSA would move the defense programs in the wrong direction, and so it has.

Not surprisingly, the Administration has not been a great success. A number of reports have been written in recent years saying it has failed. The House Armed Services Committee cites these reports as grounds for making further "improvements." Unfortunately, the "improvements" the House has proposed would take us further in the wrong direction by further weakening the Secretary's authority over the management and direction of the Department's defense programs. We commend you for not making the same mistake in the bill you have reported from your Committee (S. 3254) and urge you to hold firm against the House provisions in conference.

We recognize, of course, that the problems in the NNSA will still need to be addressed. But we think that establishing an advisory committee to study the problem and make recommendations to Congress makes more sense than enacting an ill-considered solution at this time. We would hope that any such panel would be appointed with "membership ... fairly balanced in terms of the points of view represented," in accordance with the Federal Advisory Committee Act. Moreover, we would hope that the panel not be directed to recommend a

solution that allows the NNSA "to operate more ... independently of the Department of Energy," since we believe that cordoning off the defense programs from the rest of the Department may be part of the problem rather than the solution.

We are also concerned by the House's proposed "improvements" to the Defense Nuclear Facilities Safety Board. The Safety Board was created nearly a quarter of a century ago, in the words of the Armed Services Committee, "to improve oversight and to promote the safety of the Department of Energy's nuclear facilities." We believe the Board has served the nation well and are concerned that the House's amendments to its organic act may, in fact, weaken it. They would weaken it in several ways.

To begin with, the House bill redefines the statutory standard pursuant to which the Board makes recommendations it "determines necessary to ensure the adequate protection of public health and safety." When Congress directed the Board "to recommend measures to ensure that public health and safety are adequately protected," it was not creating a new standard or invoking an unknown one. As the Armed Services Committee reported in 1987, "'Adequate protection' is the level of safety required of commercially licensed nuclear reactors," under the Atomic Energy Act of 1954. Although not defined by statute, the term "adequate protection" has acquired meaning through subsequent case law over the past 58 years. Indeed, the Armed Services Committee's report on the bill establishing the Board quoted from a contemporaneous court decision to explain what "adequate protection" means.

The House bill alters the time-honored "adequate protection" standard in two ways. First, it adds a new requirement that the Board's recommendations must "be based upon risk whenever sufficient data exists" and that the Board "specifically assess risk (whenever sufficient data exists)." How this new requirement would change the standard is unclear. The "adequate protection" standard *is* a "risk-based" standard. The Atomic Energy Commission equated "adequate protection" with no undue risk 57 years ago, and the Supreme Court upheld the Commission's doing so in 1960. But statutorily modifying "adequate protection" by also requiring an additional "risk" analysis "whenever sufficient data exists" will, at best, cloud the meaning of the existing standard and may substantively weaken it.

Second, the House bill alters the "adequate protection" standard by requiring the Board, in making recommendations, to consider "the costs and benefits, and the practicability" of implementing those recommendations. Under current law, the Board must "consider the technical and economic feasibility of implementing" its recommendations, but it is not required to conduct a cost-benefit analysis in order to make recommendations it "determines are necessary to ensure adequate protection of the public health and safety."

Congress's decision to not require the Safety Board to weigh the cost and benefits of its recommendations is in keeping with the established meaning of "adequate protection." The courts have held that "adequate protection" must be determined "without reference to economic costs." The Secretary of Energy is, of course, free to reject a recommendation that he determines

"is impracticable because of budgetary considerations" or because "implementation would affect the Secretary's ability to meet the annual nuclear weapons stockpile requirements...." But the Board should not be required to trim its health and safety recommendations in anticipation of the Secretary's cost concerns.

Moreover, the House bill would weaken the Board's independence and public credibility. According to the Armed Services Committee's 1987 report, the Safety Board was established to ensure "and enhance the safety of operations of DOE's nuclear facilities and to restore public confidence that these facilities are operated without undue risk to public health and safety." It made the Board independent of the Department of Energy. Although the Board can only make recommendations to the Secretary and cannot compel the Secretary to implement them, its recommendations are not subject to the Secretary's prior approval. Under current law, the Board must "promptly ... make such recommendations available to the public" after submitting them to the Secretary.

The House bill would fundamentally alter the Board's relationship to the Department of Energy by requiring it to "submit to the Secretary of Energy a draft of any recommendations" it proposes to make. The bill would then give the Secretary up to 75 days in which to "submit comments to the Board," with a view to persuading the Board to revise its recommendations "based on the comments of the Secretary," before the Board may publish its recommendations. We believe these changes would compromise the Board's independence, enable the Department to press the Board to change its recommendations out of the public eye, and erode public confidence in the Board's objectivity.

We believe the Safety Board serves the nation well. It is not in need of the "improvements" the House proposes. We fear they would harm rather than improve the Board, and they would jeopardize the nuclear weapons complex.

Sincerely,

Jeff Bingaman

Ron Wyden

United States Senate

WASHINGTON, DC 20510

December 5, 2012

The Honorable Carl Levin
Chairman
Armed Services Committee
United States Senate
Washington, D.C. 20510

The Honorable John McCain
Ranking Member
Armed Services Committee
United States Senate
Washington, D.C. 20510

Dear Chairman Levin and Ranking Member McCain:

As you begin considering conference negotiations of the FY13 National Defense Authorization Act, we are writing to reaffirm the positions of the Strategic Forces Subcommittee, and ask that you take into consideration our concerns during conference committee negotiations.

Our Subcommittee had a very good mark that puts the National Security interests of our country regarding Missile Defense, Space, and Nuclear concerns in a good position. Our oversight during this year's deliberations resulted in key, bipartisan legislative positions that empower the Department of Defense to meet our National Security aims. We remain troubled that the Administration is not adequately resourcing nuclear weapons modernization, and we propose solutions for ensuring the long term readiness of our nuclear forces.

We are concerned that the House is heading in a different direction regarding the costs and overall governance of our nuclear enterprise. The significant amount of changes to existing law proposed by the House is not necessary. Existing law provides the proper framework for the Defense Department and Department of Energy, through the Nuclear Weapons Council, to ensure the future viability of the nuclear enterprise. We believe our provisions along with continued oversight will accomplish this.

Given the National Nuclear Security Administration's well documented poor performance, we assert that it is unwise to give the NNSA further independence that the House proposes. Our provisions that empower the Nuclear Weapons Council will result in our warfighters getting the right capability, and the Defense Department ensuring better adherence to its requirements. More specifically, our Subcommittee unanimously approved a provision that caps the cost of nuclear facilities, and requires that the Nuclear Weapons Council review the possibilities of consolidation of nuclear facilities prior to authorizing funds on new facilities. We remain firm that this consolidation study be completed prior to breaking ground on additional facilities. Finally, our provision requiring the Nuclear Weapons Council to certify budget requirements empowers military commanders in the role they play in ensuring we meet warfighting requirements.

We appreciate the unanimous, bipartisan markup and passage of the Defense Authorization Act. Our provisions strengthen oversight, promote efficiency and cost savings, and provide the right flexibility for the Defense Department. Most importantly, we believe our legislation provides the best military readiness to our Nation.

Very truly yours,

Ben Nelson
Chairman
Strategic Forces Subcommittee

Jeff Sessions
Ranking Member
Strategic Forces Subcommittee

JS: ff

SOCIETY OF PROFESSIONALS, SCIENTISTS AND ENGINEERS

LOCAL 11
UNIVERSITY PROFESSIONAL AND TECHNICAL EMPLOYEES
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February 29, 2012

Representative Loretta Sanchez
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Washington DC 20515-0547

Dear Representative Sanchez:

UPTE response to the National Academies' Labs Management Report and Congressional Hearing

On 15 February 2012 the National Academies (NAS) National Research Council released a congressionally mandated Report on their study of the management of the nation's national security laboratories: Los Alamos National Laboratory (LANL), Lawrence Livermore National Laboratory (LLNL), and Sandia National Laboratories (SNL). A subcommittee of House Armed Services (HASC) held a hearing on the topic less than 24 hours after the NAS Report was released. Motivating the study was the 2006-2007 transition of LANL and LLNL to private, for-profit monopoly management by Los Alamos National Security, LLC and Lawrence Livermore National Security, LLC (LLNS&LANS for brevity).
A quick Summary of the NAS report is as follows:

1. Neither scientific productivity, nor operational efficiency, nor employee morale has improved since LLNS&LANS was given a for-profit monopoly. In fact, they have gotten worse. The reasons are debatable, but the NAS Report says things are worse – and we agree.

2. The LLNS&LANS for-profit monopoly costs more. The exact amount of the increased cost is arguable --- the Report gives a range of numbers between ~$210 million and more than $300 million per year --- but in any case it is greater than the salary of thousands of average Americans, a number large enough to support an entire ongoing nuclear weapon refurbishment each year. Astonishingly, the NAS Report is dismissive of the increased cost, stating that it is "a small fraction of the total operating budget of the Labs".

3. Summing up [1] and [2] means LLNS&LANS management of the Labs is a poor investment for the taxpayers. The NAS Report does not emphasize this fundamental conclusion, but it also does not refute this fact. At the HASC hearing, former LLNL Director Dr. George Miller stated that "we cannot waste a single precious dollar on bureaucracy". Subcommittee Chairman Turner stated that "we cannot afford such inefficiency and waste" referring to "many hundreds of millions of dollars each year". Both were referring to the inferred dollars wasted due to excess NNSA oversight. But the direct cost of subsidizing the LLNS&LANS for-profit monopoly is an equal amount of money, and this cost does not have to be inferred – it is documented.

4. The NAS Report puts the focus on excessive government oversight, and the troubles with the National Nuclear Security Administration (NNSA)-Labs relationship as the main cause of the problems at the Labs.

In our opinion, the NAS Report failed to recognize many issues, but they also noted several important things. The two main points NAS missed were addressed in our Letter for the Record to House Armed Services. We noted in our letter a [1] deleterious mutation of the scientific method from hypothesis-driven to "Performance Based Incentive" (PBI)-driven (what we have referred to as "milestone-driven") science, and [2] the fact that a for-profit government funded monopoly, with no competition, is doomed to failure in numerous ways. Both can be easily fixed.

Should there be less oversight? Sure, we agree with that, but as even the NAS Report and testimony admitted, that takes more trust and trust has to be earned over time.

We agree with the NAS Report that the excessive formalities, checklists, and oversight put science, and experimental science in particular, in jeopardy. Of course, this does not mean that the lab employees should just show up every day and work without any documented goals or milestones. We, the people of these labs, know we are spending tax dollars – billions of them. We know the taxpayers deserve to see results, and to know whether we meet milestones or are late with a credible scientific explanation. We believe, however, that it is the new *profit-driven PBI* process that *skews these milestones* into those that are scientifically either reckless or meaningless, more akin to checking boxes to make easy PBI's.

In other words, the NAS report attributes the decline of science at the Labs solely to excessive oversight by NNSA, and misses the connection between excessive oversights and the PBI/ for-profit governance structure.

This destructive pattern of PBI-driven milestones must change. It has been suggested that we revisit the maximum "for-profit" award fee. It is not clear what cutting the maximum award fee would do. It might reduce the incentive for greed and PBI-based milestones. It might not. In any case, we won't find out for another six years (until 2018 when the re-bid process is done) and by that time it will be too late to avoid permanent damage to the Labs and their important science and national security missions. We need a solution right now, to help set the Labs on the right course and make sure that we spend tax dollars wisely.

We believe strongly that the Labs' management contracts should be re-bid now, and Labs management returned to some appropriate non-profit entity and governed in such a way as to return their focus to their science and national security missions. We recognize, however, that in the current political climate there is little possibility of accomplishing such a large change all at once and in one large step.

In the interim, we suggest that Congress begin the process in small steps. In its legislation for FY2013, Congress should mandate the formation of at least two small "Mini-Labs", one on each of the taxpayer-owned Lab sites in Los Alamos and Livermore. These Mini-Labs could serve as a pilot program to chart the way to return the Labs to non-profit, public operation, and as a pilot program to show the benefits of rescuing our Labs from a stagnant for-profit monopoly. The evolution of these Mini-Labs over the next few years will help the nation and Congress decide the proper course of these Labs as a whole. Hopefully, by the time of re-bidding circa 2017 at the latest, we will have discovered how to permanently fix the problems identified in the NAS Report.

To start, the first two of these small (couple dozen people) Mini-Labs could be organized to compete against the giant LLNS&LANS for-profit monopoly in its core mission of "Annual Certification" of the nuclear stockpile. Funds to do this are already available from NNSA's massive "Advanced Certification" campaign and other sources. This would accomplish three things:

1. Establish a test case for an entity with a mission of nuclear stockpile Annual Assessment, but one that exists outside of NNSA/DOE as suggested during the 16 February 2012 House Armed Services Hearing.

2. Provide some competition to the stagnant LLNS&LANS monopoly during the next six long years until a fresh entity takes over after rebidding, and meanwhile provide a desperately needed and substantive independent analysis of the needs and future course for the required annual certification of the nuclear stockpile.

3. Provide the beginnings of an alternative for employees of LLNS&LANS. Until now, Lab employees have had only the choice to quit LLNS&LANS, and in so doing their expertise is typically lost to the nation. The Mini-Labs can provide a solution to this staff retention problem that works "The American Way" – providing some employees a choice to not just quit, but to quit and join the competition.

We are not the only ones to have drawn attention to the connection between the problems at the Labs and the for-profit management structure. Former LANL Director Sig Hecker told the NAS study committee in his presentation to them in July 2011 that the Labs are doing "an inherently government mission" and the transition to for-profit management was a mistake. The NAS Report, sadly, makes no mention of Hecker's views. Hecker was even more explicit in his written testimony submitted to the 16 February 2012 HASC hearing, in which he says the following: "The deliberate change to for-profit contractors at LLNL and LANL have exacerbated the problems rather than fixed them".

In conclusion, now that the NAS has fulfilled its charge and documented the problems standing in the way of the Labs effectively carrying out their science and national security missions, it is time now for Congress to act.

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Jelger Kalmijn/UPTE (619) 370-3753

Communications Workers of America
Legislative Department
Shane Larson, Director

December 3rd, 2012

Via Fax

The Honorable Carl Levin
Chairman
Committee on Armed Services
228 Russell Senate Office Building
Washington, DC 20510

The Honorable John McCain
Ranking Member
Committee on Armed Services
228 Russell Senate Office Building
Washington, DC 20510

Dear Chairman Levin and Ranking Member McCain:

On behalf of the Communications Workers of America (CWA), especially our members represented through the University Professional and Technical Employees (UPTE-CWA), I strongly urge you to oppose certain provisions in H.R. 4310, the House-passed 2013 National Defense Authorization Act (NDAA). The House-passed version includes various dangerous sections that would seriously weaken worker and nuclear safety protections at Department of Energy (DOE) nuclear weapons complexes. We urge you to reject the inclusion of these provisions in any conference report on this legislation.

Decades of neglect, secrecy and lax oversight at DOE weapons facilities during and after the cold war resulted in high worker exposures to radiation, beryllium and toxic chemicals that caused death and disease to thousands of workers. Over the years, unions have worked with Congress and DOE to change these practices and to strengthen worker safety and health protections and oversight at these facilities. In 2002, major advancements were made when Congress, in the Defense Authorization Act, directed DOE to adopt regulations requiring comprehensive safety and health programs at DOE contractor facilities and provided for increased oversight and penalties for violations.

Today, UPTE-CWA workers at Lawrence Livermore National Laboratory (LLNL), Lawrence Berkeley National Laboratory (LBNL), and Los Alamos National Laboratory (LANL) work with these same radioactive and toxic materials. Many work operations at these facilities are unique to the DOE, and as a result have led to the issuance of specific worker safety orders setting requirements for contractors to follow and providing guidance in helping workers to understand proper workplace protections. These regulations – Worker Safety and Health Programs (10 CFR Part 851) – and rules on beryllium and radiation, coupled with enhanced DOE oversight have significantly improved conditions at DOE contractor facilities.

Highlighting the need for the continuation of DOE safety and health protections is a case in which UPTE-CWA and other workers employed by the Lawrence Livermore National Laboratory (LLNL) have been exposed to life-threatening beryllium, a hazardous metal used in the research and development of nuclear weapons. Beryllium is machined into specific parts for use in LLNL experiments. This process releases fine particles of beryllium dust into the air which upon inhalation can lead to serious, life-threatening lung conditions including beryllium

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sensitivity, incurable and fatal Chronic Beryllium Disease, and/or lung cancer. As a result of the long history of beryllium use at LLNL and the risks associated with worker exposure, the lab was required by DOE to develop and implement a comprehensive Chronic Beryllium Disease Program.

LLNL did not comply with federal law. However, this only came to light as a result of an investigation conducted by the DOE Office of Health, Safety and Security that identified widespread LLNL violations of the DOE legally-required program to minimize worker exposure to beryllium. Tragically, these deficiencies led to multiple, uncontrolled worker exposures to beryllium between 2007- 2010 and, subsequently, medically-diagnosed cases of life-threatening beryllium diseases.

The above investigative action came about as a result the requirements of DOE Order 850 and the related work of DOE's Office of Health, Safety and Security. These efforts led to the identification and characterization of worker beryllium use and exposure as well as steps to eliminate such exposure.

The House bill would wipe out this type of successful work, thereby weakening worker protections leading to a return to the days of "self-regulation" with little or no oversight at the nuclear weapons facilities.

If enacted, HR 4310 would result in a drastic shift in the entire safety and health structure to a performance-based oversight system. Such performance-based oversight will effectively eliminate the current DOE-specific safety and health standards and adequate worker protections and remove the enforcement mechanisms vital to ensuring worker and public safety. This change represents a dramatic shift towards contractor self-regulation and all but eliminates the government's role in ensuring the protection of workers and members of the public.

Specifically, Section 3115 of the bill would strip the authority of the Secretary of Energy to oversee and enforce regulations to protect the health and safety of workers at DOE nuclear weapons facilities, transferring these responsibilities from the DOE's Office of Health, Safety and Security (HSS) to the quasi-independent National Nuclear Security Administration (NNSA). Meaningful DOE enforcement of specific safety and health standards would be replaced with "performance-based oversight" by the NNSA, which has no expertise or competence in this area.

The House bill would also weaken the level of protection afforded to workers. Worker safety standards could be no more protective than those issued under Section 6 of the Occupational Safety and Health Act. The bill would eliminate the more protective specific safety and health standards that have been put in place at DOE facilities to address the ultra-hazardous nature of the work performed at these facilities, including the congressionally mandated requirements for comprehensive safety and health programs. Workers would be stripped of the right to be protected from retaliation for raising safety and health concerns, and the right to be involved in workplace inspections. The provisions also eliminate any requirements for employers to record and report injuries and illnesses.

The House bill also erodes nuclear safety and public health protections. It significantly weakens the authority of the Defense Nuclear Facilities Safety Board, which provides the only independent nuclear oversight at the national labs, and hinders the board's ability to provide findings and recommendations for addressing threats to worker and public safety.

The past failures at DOE weapons facilities have caused massive disease, death and contamination which have cost the government and taxpayers billions of dollars for environmental remediation and compensation. The adoption of the House-passed worker safety and health and nuclear safety provisions would turn back the clock and allow for a return to conditions and practices that caused these disasters. Protection of workers and the public should not be weakened or compromised.

Again, CWA strongly urges Members to reject these provisions in any conference agreement on the National Defense Authorization Act for Fiscal 2013.

Sincerely,

Shane Larson
Legislative Director
Communications Workers of America

CC: Members of the Senate Committee on Armed Services

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DEFENSE NUCLEAR FACILITIES SAFETY BOARD

Peter S. Winokur, Chairman

Washington, DC 20004-2901

May 7, 2012

The Honorable Loretta Sanchez
Ranking Member
Subcommittee on Strategic Forces
Committee on Armed Services
U.S. House of Representatives
2120 Rayburn House Office Building
Washington, D.C. 20515

Dear Congresswoman Sanchez:

Thank you for the opportunity to provide input and comments on HR4310, the FY 2013 National Defense Authorization bill, particularly with regard to the sections in Title 32 that affect nuclear safety, and the Board's oversight mission, operations and budget capacity. I'm convinced that the legislation, if enacted, will weaken current independent nuclear safety oversight and enforcement at DOE's defense nuclear facilities. I have spent my entire career spanning more than 40 years supporting the national security programs of the United States. Nothing would sadden me more than seeing that mission compromised by threats to public and worker safety resulting from lapses in safety.

As you know, I presently serve as Chairman of the Defense Nuclear Facilities Safety Board (Board), having been appointed by President Bush to the Board in 2006 and later reappointed as its Chairman by President Obama in 2010. I have 43 years of experience as a scientist and engineer in the field of radiation effects science, technology, and hardness assurance in support of military and space systems. I was elected a Fellow of the Institute of Electrical and Electronic Engineers and the American Physical Society, and was selected as one of the most highly cited researchers in Engineering by the Institute for Scientific Information, which lists the 250 most highly cited researchers in the world in given scientific fields. I have been honored with the 2000 IEEE Millennium Medal, IEEE Nuclear & Plasma Sciences Merit and Shea Award, R&D 100 Awards, Industry Week's Top 25 Technologies of Year, and Discover Award, and many prize-winning papers. I have authored 140 publications in the open refereed literature, including more than 30 invited papers, book chapters, and presentations.

The Board provides the *only independent* safety oversight at DOE's defense nuclear facilities. As Chairman of the Board I am proud of the safety record of the DOE and the role that the Board has played over the last 23 years. There is no question that the defense nuclear facilities complex is in a safer posture now than when the Board commenced operations in the late 1980's. However, we cannot ignore the current and emerging challenges that will define the future of DOE's defense nuclear facilities, the need for federal stewardship of this enterprise, and the federal commitment to protect the health and safety of the workers and the public. Today's challenges of aged infrastructure, design and construction of new and replacement facilities, and

the undertaking of a wide variety of new activities in defense nuclear facilities coupled with ongoing mission support activities require continued vigilance in safety oversight to assure public and worker protection. A nuclear safety incident cannot be tolerated and would do irreparable harm to the stockpile stewardship and legacy waste missions of the Department of Energy.

This legislation contains significant changes to the National Nuclear Security Administration (NNSA) Act and the Board's Enabling Statute that would put NNSA and DOE's national security mission in jeopardy. The proposed changes, if enacted, would amount to Congress concluding that NNSA does not need independent safety oversight. It would all but erase the Board's independence and authority with respect to safety oversight of NNSA defense nuclear facilities and activities. Changes to the Atomic Energy Act would lower the standard used to ensure adequate protection of public safety. The legislation endorses a strong shift toward contractor self-regulation, which is not justified based on the present maturity of contractor assurance systems but, even more importantly, neuters the inherent responsibility of the government to ensure public and worker safety. This responsibility cannot be delegated by NNSA to its contractors. Finally, the President's ability to direct NNSA's operations through the Secretary of Energy would also be much reduced. Let me address a few of these concerns in more detail.

Section 3113 of the bill gives the NNSA Administrator complete authority to establish and conduct oversight of NNSA activities outside of that already established by the Secretary of Energy. The Administrator develops a system of governance, management, and *oversight*, of covered contractors and ensures that any and all Federal Agencies comply with this system. Clearly, this vacates the notion of independent oversight, which should be of grave concern to the Congress. Other agencies that presently provide oversight include the Board, Nuclear Regulatory Commission (NRC), Environmental Protection Agency, Department of Transportation, and the Occupational and Safety Health Agency (OSHA). Some examples of undesirable consequences of the proposed language include:

- The Board will be unable to provide effective safety oversight.
- The NRC will be precluded from conducting license-related oversight activities associated with operation of the MOX facility.
- NNSA itself will be precluded from conducting Operational Readiness Reviews, Integrated Safety Management System Verifications, and Nuclear Explosive Safety Studies.

Section 3113 of the Bill further directs the NNSA Administrator to "conduct oversight based on outcomes and performance-based standards rather than transactional oversight." I am convinced this model is inappropriate for oversight of complex, high-hazard nuclear operations at defense nuclear facilities. NNSA defines "transactional oversight" as activities that assess contractor performance through evaluating contractor activities at the work, task, or facility level; direct interaction with personnel at any level within the contractor organization; and direct independent Federal staff evaluation of activities, physical conditions, and contractor documentation. [NA-1 SD 226.1A, *NNSA Line Oversight and Contractor Assurance System Supplemental Directive*] Clearly, transactional oversight is essential at the Pantex Plant where

nuclear weapons are assembled, disassembled, and undergo surveillance. It is also essential for plutonium operations at the Los Alamos Plutonium Facility, highly-enriched uranium operations at the Y-12 National Security Complex, and for complex, high-hazard nuclear operations at the Nevada National Security Site, Lawrence Livermore National Laboratory, and Sandia National Laboratories. For these activities, anything other than transactional oversight is irresponsible and will jeopardize the NNSA mission. The government cannot delegate its responsibility to ensure public and worker safety to its contractors.

I think it is important to understand that a system based on "outcomes" is inappropriate in safety space. The Nuclear Regulatory Commission uses performance-based regulation to improve effectiveness and efficiency, but not where failure to meet a performance criterion can result in an immediate safety concern. For safety, a system of "leading indicators" to prevent accidents is required. For complex, high-hazard nuclear operations, a performance-based outcome approach may appear successful on the surface, but underlying weaknesses in processes can eventually lead to serious accidents and unwanted results. A significant body of information on this subject is available in both the commercial and academic sectors; it was also explored in the series of public meetings and hearings that led to issuance of the Board's Recommendation 2004-1, *Oversight of Complex, High-Hazard Nuclear Operations.*

The Board has devoted considerable resources in the past few years to understand activity-level work planning and control. We have teamed with the Department and NNSA to understand the challenges of writing and implementing procedures that account for hazards in the workplace and the controls necessary to mitigate those hazards. There are many challenges to implementing those procedures that must account for a wide range of human factors. The inescapable conclusion is that the key to worker safety is the ability to faithfully and repeatedly execute procedures. A procedure is only the starting point. A system of transactional oversight is the only way to ensure the safe execution of work through the effective implementation of procedures.

I believe one of the contributing factors that lead the House Armed Services Strategic Forces Subcommittee to propose this legislation was a basic misunderstanding of the testimony it received at the its February 16, 2012 hearing on "Governance, Oversight, and Management of the Nuclear Security Enterprise." At that hearing, Dr. Shank, Co-Chair of the *Committee to Review the Quality of the Management and of the Science and Engineering Research at the Department of Energy's National Security Laboratories*, testified about the scope of this review and its conclusions. One concern and associated conclusion is embodied in this legislation, i.e., the need to "conduct oversight based on outcomes and performance-based standards rather than transactional oversight." However, when the Board subsequently met with Dr. Shank, it became clear that his review committee did not look at defense nuclear facilities at any of the laboratories. Dr. Shank explained that the committee focused on management of science, not safety, and not production facilities. The review was focused on the need for the laboratories to do research more efficiently and effectively, and improve morale at the laboratories. The committee did not review complex, high-hazard nuclear operations or any high-consequence operations. In my opinion, this testimony should not be used as the basis to argue against the need for independent oversight or eliminate transactional oversight at defense nuclear facilities.

For the record, the Board's staff asked about the significance of Appendix 3 to the Committee's report, "Review of Relevant Studies and Reports 1995–2010." Appendix 3 is the only part of the report that discusses the Board. Dr. Shank characterized Appendix 3 as an add-on and not part of the report. The Board's staff followed up with Mr. Shaw, Project Director, on April 20, 2012, to understand this distinction. Mr. Shaw explained that he and his staff of research assistants prepared Appendix 3 as background material for the committee. The appendices are a compilation of lines of inquiry or questions that the Committee members raised as the study progressed, and items for which Mr. Shaw and his staff thought they needed to provide more background information to the Committee members to understand what had been presented. He informed the Board's staff that, to comply with the Federal Advisory Committee Act, that information along with all other such material provided to the committee were included as appendices to the report. However, he reiterated that they should not be viewed as the work of the committee or representative of the Committee's conclusions.

The proposed legislation requires the Board and NNSA to use a new health and safety standard. More specifically, Sections 3115 and 3202 of the legislation establish a new lower standard for protection of the public in proximity to DOE's defense nuclear facilities. (As discussed below, Section 3202 of the bill deals with "Improvements to the Defense Nuclear Facilities Safety Board.") The new standard "ensures that risks to … the health and safety of the general public … are as low as practicable and that adequate protection is provided." (Please note that in Section 3115 the risks are "as low as practical," while in Section 3202 the risks are as low as *reasonably* practical.") This standard lowers the protections presently provided to the public by the NRC for commercial nuclear power and by the Board in making recommendations to the Secretary of Energy, which is to "ensure adequate protection of the public." The legislation proposes the Secretary or Administrator can perform a cost-benefit analysis to determine the need to provide adequate protection of the public. The Atomic Energy Act of 1954, as amended, has always been clear that the Secretary must provide adequate protection to the public and that cost is not an element of adequate protection. However, cost can be considered in determining the need for safety margin or defense in depth, i.e., additional protections beyond the need for adequate protection. The application of the "as low as [reasonably] practicable" standard is unclear. It has been used in British and European law as a modified cost-benefit analysis, but has no standing in U.S. law. It is also unclear why the public safety should be subjected to considerations by the Secretary or Administrator of whether risks are as low as [reasonably] practical.

The Board provides the *only independent* safety oversight at DOE's defense nuclear facilities. In addition, the Board has unique responsibilities under its statute to address "severe or imminent" threats to the public. I would now like to comment on Section 3202 of the bill: "Improvements to the Defense Nuclear Facilities Safety Board." Let me say categorically that these are not improvements. I believe these provisions in the bill arise from a total misunderstanding of the operation of the Board. I feel strongly that these "improvements" to the Board's Enabling Statute will degrade nuclear safety at DOE's defense nuclear facilities. Let me once again detail my concerns.

To begin with, the Board is a collegial body composed of five members appointed by the President and confirmed by the Senate who are respected experts in the field of nuclear safety.

Since the Board's inception nearly 23 years ago, every Board letter or recommendation has been voted on and approved by each and every Board Member. Those familiar with the scientific discipline will readily understand that this involves a great deal of respect and camaraderie among the Board members to enable them to unravel complex technical issues and forcefully act on safety concerns. One aspect of these bill's improvements is to allow Board members "to employ at least one technical advisor." This is unnecessary on two counts. The first is that Board members have full access to all the Board's staff. Board members already have 80 technical advisors. The second is that Board members are technical experts who are able to independently weigh technical evidence and make decisions important to safety at DOE's defense nuclear facilities. A system of advisors will simply place an unnecessary burden on Board resources and create dissension.

A provision in Section 3202 requires that all Board members "have full, simultaneous access to all information relating to the performance of the Board's functions, powers and mission." This provision is simply unworkable and argues against the public interest and trust. For example, the Technical Director must inform the Board Chairman about a serious accident at a defense nuclear facility, even if other Board members are not immediately available. The Board always strives to share all available information with all Board members. The Board members are always collectively briefed by DOE and Board staff, but Board members sometimes have conflicting schedules and aren't available for the "simultaneous" exchange of information . The origins of this provision suggest a serious lack of knowledge about the operation of the Board.

Under this legislation, the Board "shall consider and specifically assess the technical and economic feasibility, the cost and benefits, and the practicability of implementing [its Recommendations]." Under its existing statute, the Board must consider the technical and economic feasibility of implementing its recommended measures. The Secretary of Energy may "accept" a Board recommendation but make a determination that its implementation is impracticable because of budgetary considerations or because the implementation would affect the Secretary's ability to meet the annual nuclear weapons stockpile requirements. The Secretary must report any such decision to the President and Congress. The Secretary of Energy has never made a determination that a Board Recommendation cannot be implemented due to budget impracticability. I believe this is strong evidence that we have executed our statute in a faithful and responsible manner.

Issues of cost and benefit have historically been the purview of the Secretary of Energy and should remain so. It is important to note that the Board nominally identifies the problem, but leaves selection of the solution to the Secretary. In order to provide a cost-benefit analysis, the Board would need to define a solution, which is inappropriate and would hamper the Secretary's flexibilities to respond to a Board recommendation. Mr. Gene Aloise, Director of Natural Resources and Environment, U.S. Government Accountability Office, testified at the Committee's February 16, 2012, hearing on Governance, Oversight, and Management of the Nuclear Security Enterprise. He said, "NNSA currently lacks the basic financial information on the total costs to operate and maintain its essential facilities and infrastructure, leaving it unable to identify return on investment or opportunities for cost savings." If NNSA isn't capable of performing cost-benefit analyses, it's unreasonable to expect the Board to produce valid

estimates of those costs. Needless to say, the Board would require a significant increase in budget and manpower to perform any meaningful cost-benefit analysis.

The Board is very mindful of the need for efficient and cost-effective solutions to safety problems at defense nuclear facilities. In evaluating the proper course of action for existing facilities that do not meet modern industry standards and design requirements, both the Board and DOE consider the entire suite of options for mitigating hazards as well as factors such as the remaining life of the facilities, schedules for replacing them, and means to mitigate disruptions to ongoing operations that may result from recommended safety improvements. However, the Board has no authority to specify a particular solution; that authority is the Secretary's.

The proposed legislation also weakens the arm's length relationship between the Board and Department of Energy necessary for the Board to provide independent oversight by requiring the Board to obtain DOE review and comments on Board recommendations. This proposed requirement will enable the Secretary to provide comments to Board recommendations prior to their issuance. Board recommendations are fully vetted by intense staff-level discussions that typically take place over months and sometimes years. The Board shapes its recommendation already fully taking into account the feedback it has received from the Department. In the final analysis, the Secretary has the power to accept or reject a Board recommendation. This provision to require comments from the Secretary will delay needed safety improvements to ensure adequate protection of the public at DOE's defense nuclear facilities and erode public confidence that the Board is faithfully executing its mission to provide truly independent oversight.

Under its existing statute, the Board's jurisdiction is limited to the Department of Energy's defense nuclear facilities. "Defense Nuclear Facilities" are defined to include production or utilization facilities, and certain types of storage facilities <u>under the control or jurisdiction of the Secretary of Energy</u>. Unless this element is met, the Board's jurisdiction, authority, powers or duties are not triggered. It does not allow the Board to write Recommendations to the NNSA Administrator. Under this legislation, NNSA may become a separate entity. An NNSA independent from the Department of Energy, where the Secretary of Energy would have no authority over NNSA, would defeat (1) the Board's recommendation jurisdiction, (2) the Board's jurisdiction and duty to report to the President in the case of imminent or severe threats issuing from defense nuclear facilities, and (3) the Board's information gathering jurisdiction. Essentially, the NNSA would have no independent safety oversight body.

The Department of Energy has a well-established regulatory structure, with a significant body of rules, orders, manuals, and standards. These would have no standing in an independent NNSA. The set of safety standards to be used in NNSA would have to be reconstituted. Based on recent experience, I am concerned that many standards necessary to safely perform complex, high-hazard nuclear operations would be automatically deleted as a part of standing up this newly independent organization. It must be understood that the Board evaluates safety at defense nuclear facilities based on DOE's requirements and standards. The Board does not have separate requirements. Lack of an adequate set of safety standards would rapidly degrade safety at defense nuclear facilities.

In summary, I am deeply concerned that the proposed legislation will diminish both the effectiveness of the Board and safety at DOE's defense nuclear facilities. The proposed changes, if enacted, would all but erase the Board's oversight independence and authority with respect to NNSA's facilities and activities. NNSA would become essentially self-regulating without any significant oversight from the Secretary of Energy, the Board, or any other Federal entity. Additional provisions in the legislation encourage the NNSA in large part to delegate its inherent responsibility to protect public and worker safety to its contractors.

If I can answer any question or provide additional insights, please don't hesitate to call. Once again, I appreciate the opportunity to provide my views on this legislation.

Sincerely,

Peter S. Winokur, Ph.D.
Chairman
Defense Nuclear Facilities Safety Board

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

John E. Mansfield, Board Member

Washington, DC 20004-2901

May 7, 2012

The Honorable Loretta Sanchez
Ranking Member
Subcommittee on Strategic Forces
Committee on Armed Services
U.S. House of Representatives
2120 Rayburn House Office Building
Washington, D.C. 20515

Dear Congresswoman Sanchez:

Thank you for the opportunity to meet with you on April 17 to discuss proposed changes to the Board's enabling statute. If enacted, these changes to Title 32 of the House bill would effectively and irrevocably put an end to twenty-three years of successful independent oversight of NNSA, and would leave NNSA in the position, probably unique in the Government, of being its own regulator and its sole oversight as well.

Although I believe my views are in accord with my fellow Board members, I stress that the following are my own views.

The Board's enabling statute [42 USC 2286] was a necessary remedy to a runaway situation in 1988 that resulted in the public and Congress losing nearly all confidence in DOE's ability to govern itself. More than twenty New York Times articles, many on page one above the fold, chronicled an agency out of control due to the absence of independent oversight. This situation resulted in widespread replacement of Management and Operations contractors, long interruptions in stockpile work, an eventual total shutdown of Rocky Flats and K reactor tritium production. A strong coalition of anti-nuclear activists pressured Congress to place DOE under full regulation by NRC, with all new activities subject to open adversarial hearings at administrative law, and a requirement for NRC to license defense nuclear facilities.

Eventually a bipartisan group, led by Senators Nunn, Warner, and Thurmond, and supported by Senator Glenn, chose a middle road that has proven effective: action-forcing authority by an independent oversight group that would require the Secretary of Energy, and now NNSA, to answer publicly Board recommendations to protect public health and safety.

All this will be lost if the Committee language amending the Board's statute and the NNSA act is enacted.

It is sad to witness that all these years of successful bipartisan effort on a good government measure is now under attack because it is inconvenient to the DOE laboratory

directors. DOE does not publish its mistakes; the Board uncovers them. Every nuclear community in the country has come to rely on the Board for information on DOE's problems.

--Amendments to 42 USC 2286a(a), the mission and functions of the Board, introduce a completely novel concept, totally absent in law and regulation and with no legislative history: that the risk to the worker and public shall be "as low as reasonably practicable." This overturns decades of settled law that DOE must provide "adequate protection" no matter what the "practicability." This novel concept appears to be based on British regulatory practice that I believe would never be accepted in the U.S.

--New language at 42 USC 2286a(b)(5) would require the Board, rather than the Secretary, perform an analysis of the "costs, benefits, and practicality of implementing the recommended measures." The Board can certainly analyze the benefits and practicality of potential implementation plans by the Secretary, but it would be unheard of, in my opinion, for one executive agency to do a cost analysis for another. It would be more proper to authorize the Board to require DOE to do such an analysis. The existing statute enables the Secretary in 42 USC 2286d(b) to reject a recommendation if he believes the cost is too high for the benefit achieved; he has only to publish his rejection in the Federal Register and communicate it to Congress. His decision is subject only to the settled law that cost cannot be a justification for failing to provide adequate protection.

--Amendments to 42 USC 2286b(a)(1) would prevent individual members, acting at the direction of the Board, from holding hearings, including closed hearings to take evidence as part of an authorized investigation. This has been done in the interest of urgency and practicality, and to protect the confidentiality of witnesses, which would be in danger if the full Board would have to announce a closed hearing under the Sunshine Act.

--Amendments to 42 USC 2286b(b)(3) are, in my opinion, completely unnecessary and damaging to the collegiality of the Board. No Board member needs a technical advisor to do his duties. All Board members, according to 42 USC2286 (b)(1) are nominated " by the President, by and with the advice and consent of the Senate, from among United States citizens who are respected experts in the field of nuclear safety with a demonstrated competence and knowledge relevant to the independent investigative and oversight functions of the Board." If any Board member wishes technical assistance on any matter, he is completely free to consult with the Board's remarkable technical staff.

--Amendments to 42 USC 2286 (d) (a) would require the Board to provide a draft of any Recommendation to the Secretary before formal issuance. I believe that this is completely unnecessary. The Board's staff is in continual daily contact with the relevant DOE staff; the DOE Departmental representative knows ahead of time all the details of the recommendation and notifies the Secretary and Deputy Secretary. I cannot see the purpose of this: does the Committee wish the Secretary and Board to have a private argument so that he can attempt to convince the Board not to send the recommendation? I believe any such misunderstanding should be explained by public documents, as has always been the Board's practice. The proposed language stipulates that if, after up to 165 days, the Secretary accepts or rejects the recommendation, he

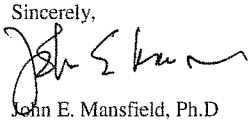
must publish his decision in the Federal Register and notify the Board, but is not required to notify Congress.

--An amendment to 42 USC 2286e(a) would require the Board to submit an annual report to "the House of Representatives", omitting the time-honored custom that such communications go to the Speaker.

--New language after 42 USC 2286i would add Section 322, to require the Board to procure inspector general services. I completely agree. The Board has for some months been pursuing an appropriate agreement. It is my opinion, based on practice and other small agencies, that the proper size of such an effort should be on the order of one full-time equivalent or less; an expenditure on the order of $1 million per year seems to me to be grossly inflated.

I appreciate the opportunity to communicate these views, with my apology at the length of this letter. I await the opportunity to provide any other information you wish.

Sincerely,



John E. Mansfield, Ph.D
Board Member

DEFENSE NUCLEAR FACILITIES SAFETY BOARD
Washington, DC 20004-2901

Jessie H. Roberson, Vice Chair

May 7, 2012

The Honorable Loretta Sanchez
Ranking Member
Subcommittee on Strategic Forces
Committee on Armed Services
U.S. House of Representatives
2120 Rayburn House Office Building
Washington, DC 20515

Dear Congresswoman Sanchez:

Thank you for your letter. Your openness and consideration of comments and insights on changes to Title 32 of HR4310, the FY 2013 National Defense Authorization Bill, is very much appreciated.

I have enjoyed more than 30 years of professional experience in the nuclear safety sector. This includes more than a decade performing technical and operations management at the Savannah River Site and the former Rocky Flats site as a technical federal manager. Another decade as a technical executive working for Management and Operations (M&O) Contractors in the DOE complex (including executing nuclear projects at Savannah River, Rocky Flats, Idaho, Hanford, Oak Ridge and various other smaller operations) and the UK (Dounreay and Windscale). And finally, I worked for two commercial nuclear utilities, and I am fulfilling my second tour on the Defense Nuclear Facilities Safety Board. I am a member of the DNFSB because of my career experience and the expertise acquired over more than thirty years of executing technical projects, performing nuclear safety oversight activities and managing organizations overseeing diverse management and operations contractors in the nuclear industry. My comments are a reflection of both my experience on the DNFSB (2000-2001, 2010-present) and my experience working for the DOE, M&O Contractors, and commercial nuclear utilities.

This Bill introduces the use of a lower standard for public and worker safety. The current safety standard was developed over many years, through collaboration with other federal agencies including NRC, EPA, and states; and its application has been the foundation of DOE's safety record. The safety standard proposed in this Bill creates technical uncertainty and will serve to unravel the legal and regulatory framework established in the Atomic Energy Act. DOE's Nuclear Safety Policy defines two quantitative criteria utilized to ensure adequate protection of the public:

1. The risk to an average individual in the vicinity of a DOE nuclear facility for prompt fatalities that might result from accidents should not exceed one-tenth of one percent (0.1%) of the sum of prompt fatality risks resulting from other accidents to which members of the population are generally exposed. For evaluation purposes, individuals are assumed to be located within one mile of the site boundary.

2. The risk to the population in the area of a DOE nuclear facility for cancer fatalities that might result from operations should not exceed one-tenth of one percent (0.1%) of the sum of all cancer fatality risks resulting from all other causes. For evaluation purposes, individuals are assumed to be located within 10 miles of the site boundary.

These criteria are satisfied by the determination of engineered and operational controls that prevent or mitigate the consequences of potential accidents. This approach is consistent across the nuclear industry and has proven to be reliable in achieving and maintaining adequate protection of the public and workers at DOE defense nuclear facilities. The introduction of new phraseology ("as low as reasonably practicable") and cost benefit determinations will result in a lower safety standard for public protection.

This Bill proposes changes that would preclude independent nuclear safety oversight of DOE's and NNSA's defense nuclear missions. The safety challenges to DOE's defense nuclear missions continue to exist and grow due to expanding diversity of operational activities and aged facilities and infrastructure. The application of robust safety standards and demanding oversight and enforcement are the building blocks for assuring nuclear safety in the federal and commercial nuclear sectors.

This Bill requires that the DNFSB conduct a cost benefit analysis before making recommendations necessary to ensure adequate protection of the public and the worker. This has always been the purview of the Secretary of Energy. The Board's enabling statute affords the Secretary the right to decide not to implement a Board recommendation due to budgetary constraints even if the recommendation rightfully includes actions necessary to assure public protection.

This Bill imposes a performance based oversight management system. Performance based regulation or oversight for complex, high-hazard nuclear operations is not an appropriate tool for assuring the safety of the public and workers. It is not an industry standard or best practice for assuring safety or protecting nuclear safety margins.

This Bill includes a number of provisions that significantly disrupt the collegiality and cost effectiveness of Board operations. These provisions would serve to obstruct Board operation, at best. By statute, each Board member must be a recognized nuclear safety expert to be considered for appointment. A nuclear safety expert does not require an interpreter to advise them on the safety implications of the nuclear work they must understand to even be considered for membership on the Board.

Neither during my earlier membership on the Board (2000-2001), nor during the current term have I ever experienced a situation in which I was unable do my job or restricted from information. I work freely with the staff to gather information, and my insights and experience are respected by my peers and have shaped all Board actions. I have worked under several Board Chairmen, and the approach utilized to administer Board business, including hiring, budgeting and

traveling, has been consistent. I interview every potential new hire and vote for or against based on my views of their contribution. I have never been hindered in my ability to shape Board business or recommendations. The mandated operational changes in the subject Bill would only serve to establish an adversarial working environment and increased resource requirements.

Congress carefully constructed the Board's enabling statute based on an extensive legislative record, and the weighing of many opposing views and interests. The statute resulting from that effort follows a middle course between excessive and costly regulation on the one hand and inadequate safety oversight on the other. The resulting statute also followed a middle course between creating a strong independent oversight organization and maintaining, even enhancing, the Secretary of Energy's responsibilities and abilities to determine actions and fulfill his national security responsibilities. I recommend an objective and comprehensive inquiry be undertaken before enacting changes to Title 32.

Thank you again for the opportunity to share my concerns on proposed changes to Title 32 of HR4310, the FY 2013 National Defense Authorization Bill, for your consideration.

Sincerely,

Jessie H. Roberson
Vice Chair

WITNESS RESPONSES TO QUESTIONS ASKED DURING THE HEARING

MARCH 26, 2014

RESPONSE TO QUESTION SUBMITTED BY MS. SANCHEZ

Mr. AUGUSTINE. Lasting reform will require aggressive action and sustained implementation across the federal government. The changes needed undoubtedly will be difficult to implement regardless of where the enterprise is located within the government's structure, since the fundamental problems are cultural more than organizational. Organizational change, while not unimportant, is only a small portion—the easy portion—of the revisions that must be made to facilitate success. Previous efforts to reform and previous studies calling for action have largely failed due to lack of leadership follow-through, a lack of accountability for enacting change, and the lack of effective, sustained top-level demand for change from national leadership. The Department of Energy by itself would be challenged to oversee the radical steps that will be needed. Success is imaginable only with the strong and active engagement of a knowledgeable Secretary, supported by the White House and Congress, and a structure that removes impediments and that aligns to mission priorities.

Previous efforts to reform and previous studies calling for action have largely failed due to lack of leadership follow-through, a lack of accountability for enacting change, and the lack of effective, sustained top-level demand for change from national leadership. [See page 17.]

QUESTIONS SUBMITTED BY MEMBERS POST HEARING

MARCH 26, 2014

QUESTIONS SUBMITTED BY MR. ROGERS

Mr. ROGERS. Mr. Augustine and Admiral Mies, from your testimony and the dozens of reports over the past decades on problems at DOE and NNSA it is obvious that the problems facing the nuclear security enterprise are as complex as they are numerous. Many of them are cultural, and we all know that cultures don't change easily. And I think you've hit the nail on the head when you call the problems "systemic." Leadership will be key to fixing these problems, and leadership is always about individuals and personalities. But I'm concerned about relying too much upon individual personalities, because the term of any senior leader in government is, inherently, limited. To provide the sustained leadership and effectively see-through cultural and other difficult reforms, don't we need buy-in across multiple administrations, multiple leadership teams? How do we address this?

Mr. AUGUSTINE and Admiral MIES. Lasting reform will require aggressive action and sustained implementation across the federal government. The changes needed undoubtedly will be difficult to implement regardless of where the enterprise is located within the government's structure, since the fundamental problems are cultural more than organizational. Organizational change, while not unimportant, is only a small portion—the easy portion—of the revisions that must be made to facilitate success. Previous efforts to reform and previous studies calling for action have largely failed due to lack of leadership follow-through, a lack of accountability for enacting change, and the lack of effective, sustained top-level demand for change from national leadership. The Department of Energy by itself would be challenged to oversee the radical steps that will be needed. Success is imaginable only with the strong and active engagement of a knowledgeable Secretary, supported by the White House and Congress, and a structure that removes impediments and that aligns to mission priorities. [Question #1, for cross-reference.]

Mr. ROGERS. Admiral Mies and Mr. Augustine, in 2009 the bipartisan Strategic Posture Commission devoted a chapter of its final report to the challenges within the nuclear security enterprise system. In your opinion, why did this report, and the dozens of others like it, have no effect? Why have we seen little or no action to fix these longstanding problems?

Mr. AUGUSTINE and Admiral MIES. Previous efforts to reform and previous studies calling for action have largely failed due to lack of leadership follow-through, a lack of accountability for enacting change, and the lack of effective, sustained top-level demand for change from national leadership.

In addition, robust, formal mechanisms to evaluate findings, assess underlying root causes, analyze alternative courses of action, formulate appropriate corrective action, gain approval, and effectively implement and institutionalize change are weak to non-existent within DOE/NNSA.

Mr. ROGERS. Admiral Mies and Mr. Augustine, ultimately, the 2009 Strategic Posture Commission recommended creating an independent agency to take on NNSA's responsibilities and mission. I won't ask whether you or the panel agree with this or any other recommendation because your panel hasn't gotten there yet, but I'd like you to comment on some of the findings. These include: "The NNSA was formed to improve management of the weapons program and to shelter that program from what was perceived as a welter of confusing and contradictory DOE directives, policies, and procedures. Despite some success, the NNSA has failed to meet the hopes of its founders. Indeed, it may have become part of the problem, adopting the same micromanagement and unnecessary and obtrusive oversight that it was created to eliminate." Do you agree? Why or why not?

a. Another finding from the Strategic Posture Commission: "NNSA's problems will not vanish simply by implementing a new reporting structure. A major driver of micromanagement and excessive regulation is the attitude of the Federal workforce reflected in both unreasonable regulations and excessive oversight in implementing them." Do you agree? Why or why not?

Mr. AUGUSTINE and Admiral MIES. As implemented, the NNSA Act has actually been counter-productive. The problems fall into three main areas.

- Overlapping DOE Headquarters and NNSA Staff Responsibilities

The parallel DOE headquarters and NNSA staff structures increase bureaucracy, cloud decision-making authority, and add to the number of people without clear authority and accountability who can stop or delay decisions. As one field representa-

tive put it, "We suffer in a regulatory framework where there are no clear lines of appeal or decision-making and no integrated place for the cost-benefit analysis to be done. For example, regarding facility safety and operational infrastructure, I get direction from the Office of Acquisition and Project Management, the Defense Programs leadership, the leadership for infrastructure management, DOE headquarters, and the Defense Nuclear Facilities Safety Board. How am I to do my job when getting direction from five different organizations?"

• A Deepened Divide between Line Management and Mission-Support Responsibilities

Under the existing parallel staff structure, DOE headquarters staffs continue to exercise their mission-support oversight of NNSA, but they do not have the countervailing pressures to accomplish the mission. This structure skews incentives at the DOE headquarters level. These factors create strong and counter-productive incentives to eliminate all risks—large and small—rather than seeking to effectively manage the most important ones. Because many officials in the DOE headquarters have lacked a compelling interest in mission execution (as many outside observers have noted), the staff conservatism is not challenged by the department's leadership.

• Ineffective and Inefficient DOE Orders, Directives, and Rulemaking Processes

Because of the diversity of DOE operations, orders are often written broadly to apply to both non-nuclear and nuclear activities even though the latter may demand special considerations. Consequently, DOE orders for ES&H and security often lack the precision, consistency, and clear implementing guidance necessary to translate the order's intent into practice. Not all sites have the same version of DOE orders for ES&H and security policy reflected in their contract. Indeed, there are sites that have both NNSA and DOE orders in their contract covering the exact same ES&H topic; although these orders may be similar, they can contain subtle, but crucial, differences.

a. As noted in the second bullet above:

Under the existing parallel staff structure, DOE headquarters staffs continue to exercise their mission-support oversight of NNSA, but they do not have the countervailing pressures to accomplish the mission. This structure skews incentives at the DOE headquarters level. These factors create strong and counter-productive incentives to eliminate all risks—large and small—rather than seeking to effectively manage the most important ones. Because many officials in the DOE headquarters have lacked a compelling interest in mission execution (as many outside observers have noted), the staff conservatism is not challenged by the department's leadership. [Question #3, for cross-reference.]

Mr. ROGERS. Admiral Mies and Mr. Augustine, is the mission of the nuclear security enterprise likely to succeed in the long-term under the current governance structure?

Mr. AUGUSTINE and Admiral MIES. The current viability of the U.S. nuclear deterrent is not in question. The panel finds, however, that the existing governance structures and practices are most certainly inefficient, and in some instances ineffective, putting the entire enterprise at risk over the long term.

Mr. ROGERS. Admiral Mies and Mr. Augustine, with hindsight, what are the strengths and weaknesses of the NNSA Act?

a. Was the intent of the "separately organized" and "semi-autonomous" nature of NNSA clear?

b. Do you believe there was agreement from all stakeholders—particularly within DOE and NNSA—regarding what these terms should mean and how they should be implemented?

c. The 2009 Strategic Posture Commission stated that "NNSA was formed to improve management of the weapons program and to shelter that program from what was perceived as a welter of confusing and contradictory DOE directives, policies, and procedures." Do you believe this intent was achieved?

d. Do you believe the letter and spirit of the NNSA Act has actually been implemented?

Mr. AUGUSTINE and Admiral MIES. One unmistakable conclusion of the panel's fact finding is that, as implemented, the "NNSA experiment" in governance reform has failed. The current DOE/NNSA structure of "semi-autonomy" within DOE has not established the effective operational system that Congress intended.

Despite the intent of the NNSA Act to create a separately organized NNSA within DOE, the NNSA has not established autonomous leadership authorities, a policy framework, distinct culture, or integrated decision-making mechanisms.

Except for Naval Reactors, the NNSA Act does not provide a blanket exemption of NNSA from DOE orders and directives. NNSA decisions and initiatives remain subject to DOE headquarters staffing processes prior to consideration for Secretarial

approval. For instance, the department's directive program (DOE O 251.1C) requires policies, orders, notices, guides, and technical standards to be reviewed by a Directives Review Board chaired by the Director of the Office of Management.[1] Senior representatives from the three Under Secretarial offices, the Office of General Counsel, and the Office of Health, Safety and Security all serve as members whose concurrence is needed before final issuance. Should the review board be unable to reach consensus, the Deputy Secretary decides whether to overturn the position of the directive's originating office.

DOE's implementation of the NNSA Act has produced parallel, intertwined NNSA and DOE headquarters staffs in many functional areas, rather than truly separate or independent DOE and NNSA staff offices. Parallel staffs exist in areas such as General Counsel, Human Capital Office, Public Affairs, Legislative Liaison, Chief Financial Officer, Environmental, Safety and Health (ES&H), Security, and Chief Information Office. Members of both the DOE headquarters and NNSA staffs point to the inefficiencies this creates. [Question #5, for cross-reference.]

Mr. ROGERS. The 1999 Rudman Report, which in many ways Congress used as a guide for the NNSA Act, recommended that Congress create either: (1) a new, completely independent agency with sole responsibility for the nuclear weapons program; or (2) what it termed a "semi-autonomous" agency within DOE in which the bureaucratic interactions between the new agency and broader DOE would be minimized. The Rudman Report explained that this term, "semi-autonomous," would mean that the agency would be "strictly segregated from the rest of the department"—which would be "accomplished by having the agency director report only to the Secretary." The Rudman Report said that DOE was "a dysfunctional bureaucracy incapable of reforming itself." Has this definition of the term "semi-autonomous", as described by the Rudman Report, been put into practice at DOE/NNSA? Could a "separately organized" and "semi-autonomous" NNSA, if implemented well, be effective and efficient?

Mr. AUGUSTINE and Admiral MIES. As noted in the answer to question 5:

Despite the intent of the NNSA Act to create a separately organized NNSA within DOE, the NNSA has not established autonomous leadership authorities, a policy framework, distinct culture, or integrated decision-making mechanisms. (page 11)

Except for Naval Reactors, the NNSA Act does not provide a blanket exemption of NNSA from DOE orders and directives. NNSA decisions and initiatives remain subject to DOE headquarters staffing processes prior to consideration for Secretarial approval. For instance, the department's directive program (DOE O 251.1C) requires policies, orders, notices, guides, and technical standards to be reviewed by a Directives Review Board chaired by the Director of the Office of Management.[2] Senior representatives from the three Under Secretarial offices, the Office of General Counsel, and the Office of Health, Safety and Security all serve as members whose concurrence is needed before final issuance. Should the review board be unable to reach consensus, the Deputy Secretary decides whether to overturn the position of the directive's originating office.

DOE's implementation of the NNSA Act has produced parallel, intertwined NNSA and DOE headquarters staffs in many functional areas, rather than truly separate or independent DOE and NNSA staff offices. Parallel staffs exist in areas such as General Counsel, Human Capital Office, Public Affairs, Legislative Liaison, Chief Financial Officer, Environmental, Safety and Health (ES&H), Security, and Chief Information Office. Members of both the DOE headquarters and NNSA staffs point to the inefficiencies this creates.

Could a "separately organized" and "semi-autonomous" NNSA, if implemented well, be effective and efficient?

The panel's interim report is critical of the "separately organized" structure as implemented:

Despite the intent of the NNSA Act to create a separately organized NNSA within DOE, the NNSA has not established autonomous leadership authorities, a policy framework, distinct culture, or integrated decision-making mechanisms.[3] The panel

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[1] U.S. Department of Energy, *Departmental Directives Program,* DOE O 251.1C (Washington, DC: Office of Management, January 15, 2009).

[2] U.S. Department of Energy, *Departmental Directives Program,* DOE O 251.1C (Washington, DC: Office of Management, January 15, 2009).

[3] "... NNSA and DOE have not fully agreed on how NNSA should function within the department as a separately organized agency. This lack of agreement has resulted in organizational conflicts that have inhibited effective operations." Government Accountability Office (GAO), *National Nuclear Security Administration: Additional Actions Needed to Improve Management of the Nation's Nuclear Programs* (Washington DC: GAO, 2007).

concludes that the relationships among NNSA, the Secretary of Energy, and the DOE headquarters staffs are fundamentally broken and must change.

The panel's interim report does not provide a judgment on the relative efficacy of the organizational alternatives, including whether a well implemented structure within DOE could work well. The report's observations on this subject are provided in the conclusion:

The panel's interim findings indicate that fundamental reform will be required to reshape an enterprise that is capable of meeting all of the nation's needs. The changes will be difficult regardless of where the enterprise is located within the government, since the fundamental problems are cultural more than organizational. Organizational change, while not unimportant, is only a small portion of the changes that must be made. The panel believes lasting improvements are possible, but they will demand strong and sustained leadership and proactive support from Congress, the White House, and engaged Departmental Secretaries.

Mr. ROGERS. Admiral Mies and Mr. Augustine, several reports have noted that semi-autonomous agencies in other cabinet departments have met with considerable success. For instance, the FBI in the Justice Department, and the NRO in the DOD. The Rudman Panel suggested the NRO is a small, agile, "semi-autonomous" organization that has had significant (but not unblemished) success in managing very large contracts to build and operate surveillance satellites. What, if anything, can we learn from this and other semi-autonomous agencies that might apply to NNSA?

Mr. AUGUSTINE and Admiral MIES. The panel's benchmarking activities identified a number of proven management characteristics common to successful high-risk, high technology operations. (See Table 2.) Prominent among these are a shared vision and mission priorities to chart the path ahead; the clear definition and disciplined exercise of roles, responsibilities, authorities, and accountability aligned to mission priorities; a technically competent workforce with the right skill mix and capabilities; clear plans with careful analysis of the resources needed to succeed; structured decision-making processes, with an emphasis on timely resolution of issues; and a structure and budget aligned to focus on customer deliverables.

Table 2. Criteria for Success in High Reliability, High Tech Organizations

General	• Universally understood and accepted purpose • Effective culture developed over many years by transformative leadership and maintained by indoctrinating carefully selected personnel • Adequate visibility with external stakeholders
Structure	• Clearly established, codified, and reinforced lines of authority, responsibility, and accountability • Formal, inclusive, decisive, prompt, and documented decision-making processes • Deliberative body, such as a Board of Directors or Management Council, which obliges the organization to collectively engage in risk-based resource allocation decisions to accomplish mission • Separation of program/mission functions from institutional/support functions
Personnel	• Long-tenured director and/or senior leadership with extensive experience • Technically proficient and accomplished staff • Exceptional candidates recruited early to instill and sustain culture • Professional development programs emphasizing problem identification/solving, continuous learning, leadership, and the socialization of best practices
Communications	• Mission priorities aligned with purpose and frequently communicated by senior leadership • Information flows freely and quickly up and down the organization, and decisions are made at the appropriate levels • Few if any obstacles (people or processes) prevent bad news from moving up the chain of command • Mechanisms exist for field oversight offices and site managers to communicate regularly and directly with the head of the organization
Planning and Budget	• Single strategic planning reference document guides all decisions • Unwavering adherence to a disciplined planning and budget process, which is comprehensive and detailed
Program Management	• In a government operation, government program managers oversee efforts, but contractors execute the work within established policies

Table 2. Criteria for Success in High Reliability, High Tech Organizations—Continued

	• Lean and authoritative site offices have sufficient technical and operational expertise to effectively oversee the work • Stakeholders are included early in project life cycle and strive to understand all requirements and regulations upfront • Technical and financial elements of programs are scrutinized in order to validate efforts and control costs • The more hazardous the operation, the more safety is considered part and parcel of mission performance • Specialized ES&H and security standards are used only when more generally accepted standards (e.g., industrial standards, OSHA standards) are shown to be inadequate or unclear
Contracts	• Contracts focused and evaluated on costs and mission performance, not award fees related to aspects other than meeting the mission • Contracts consolidated where appropriate to achieve economies of scale • Contracts competed Cost Plus Fixed Fee (very low) with no incentive/bonus awards or Fixed Price Incentive (based on mission performance), depending on the work being done

Mr. ROGERS. Admiral Mies and Mr. Augustine, in a 2007 report, GAO said "management problems continue, in part, because NNSA and DOE have not fully agreed on how NNSA should function within the department as a separately organized agency. This lack of agreement has resulted in organizational conflicts that have inhibited effective operations." What were some of the organizational conflicts? How did they inhibit effective and efficient operations? Do you believe this problem has been resolved?

Mr. AUGUSTINE and Admiral MIES. The panel's observations are consistent with those of the GAO study, and in fact, that study is cited in the panel's interim report:

Despite the intent of the NNSA Act to create a separately organized NNSA within DOE, the NNSA has not established autonomous leadership authorities, a policy framework, distinct culture, or integrated decision-making mechanisms.[4]

The answer to question 3 describes three major factors that inhibit effective and efficient operations. In summary these factors are:

- Overlapping DOE Headquarters and NNSA Staff Responsibilities
- A Deepened Divide between Line Management and Mission-Support Responsibilities
- Ineffective and Inefficient DOE Orders, Directives, and Rulemaking Processes

Mr. ROGERS. Admiral Mies and Mr. Augustine, many studies and reports over the past ten years, including the 2009 Strategic Posture Commission, recommend eliminating duplicative NNSA and DOE regulation of any lab functions that are already regulated by external bodies—such as health and occupational safety by the Occupational Health and Safety Administration (OSHA)—and letting these external bodies regulate and oversee those regulations. Do you agree? What cost savings might be realized by such a move?

Mr. AUGUSTINE and Admiral MIES. Beginning in 2005, DOE exempted the Kansas City Plant from DOE orders in areas where there were relevant commercial or industrial standards. The reforms moved the Kansas City Plant under industrial best practice standards (e.g., International Organization for Standardization (ISO) standards) with validation from external expert bodies. Kansas City Plant officials estimate that this initiative reduced the DOE-specific regulatory requirements on the facility by about 55 percent. These changes, coupled with internal business process improvements, have generated steady increases in workplace performance along with reduced mission-support costs. The plant reports that its safety record has improved under the reformed regulatory regime, and is about six times better than U.S. industry averages.[5] A 2008 independent audit following the reforms estimated

[4] "... NNSA and DOE have not fully agreed on how NNSA should function within the department as a separately organized agency. This lack of agreement has resulted in organizational conflicts that have inhibited effective operations." Government Accountability Office (GAO), *National Nuclear Security Administration: Additional Actions Needed to Improve Management of the Nation's Nuclear Programs* (Washington DC: GAO, 2007).

[5] In 2012, the total reportable cases of workplace injuries for the Kansas City Plant were .4, for the weapons complex .9, and for U.S. industry 2.4. (Total reportable case rate = cases per 100 full-time employee work years (200,000 work hours)).

an overall personnel savings of about 12 percent.[6] In parallel, the NNSA site office was able to reduce its staff by 20 percent, from fifty to forty staff.

An internal NNSA Enterprise Re-Engineering Team concluded that the "Kansas City model" of relying on applicable industrial standards could be much more widely applied for non-nuclear functions within the enterprise, and targeted an initial expansion for Sandia and the Nevada National Security Site. However, initiatives to adopt elements of the "Kansas City model" at these sites have thus far been denied by DOE/NNSA headquarters staff. Nonetheless, this remains a significant governance reform opportunity. [Question #9, for cross-reference.]

Mr. ROGERS. Admiral Mies and Mr. Augustine, many agencies with national security functions operate outside the bounds of the general civil service system. All Federal positions in these agencies are "excepted service". Has the advisory panel explored this concept? What benefits might result from applying it to this problem? Would this be a way to ensure NNSA Federal employees have the appropriate skills and quality needed to govern and oversee the nuclear security enterprise?

Mr. AUGUSTINE and Admiral MIES. The NNSA has not taken the steps necessary to build a cohesive culture that instills accountability for customer deliverables, nor has it instituted the personnel programs needed to build a workforce with the necessary technical and managerial skills for operations. The purposeful development of leaders, managers, and staffs is essential to any governance system. The effective organizations benchmarked for this study focus on personnel management to create a reinforcing virtuous cycle: proven leaders emerge from careful selection and decades of experience involving careful development and screening. Such leaders make a system work well. They also attract and inspire other high-caliber people to join and stay in their organizations.[7] As one example, the current Director of Navy Strategic Systems Programs (SSP) started his career within that organization as a junior officer, and almost all of his subsequent assignments have been in the command. In addition to deep familiarity resulting from a long career with the same organization, long command tours provide needed continuity and allow the Director to promulgate and sustain the desired culture. Recently, the tenure of the SSP's Director was extended from about four years to eight years to strengthen this benefit.

A key staffing issue for the NNSA is the lack of operational experience in headquarters. In the peak years of the nuclear weapons program, the operational core of the nuclear enterprise was located in the Albuquerque Operations Office. Albuquerque synchronized the cycle of design-test-build throughout the Cold War, until 1992, when the production of new weapons was suspended. Albuquerque was officially disbanded ten years later, in 2002. NNSA headquarters assumed Albuquerque's operating functions (which were greatly diminished by then since the U.S. had ceased producing warheads), and decades of operational experience, knowledge, and technical expertise within the Albuquerque staff was lost in the reorganization.

Now, as the United States embarks on an intensive series of warhead life extension programs covering the entire stockpile, a leadership team with deep experience and continuity (such as the team in the Albuquerque Operations Office) would be an enormously valuable asset for governing the enterprise. Creating and sustaining a personnel management system to build the needed culture, skills, and experience is a vital component of governance reform.

The panel has also noted that greater use of excepted service positions is a potential tool for building a more technically and professionally competent workforce. [Question #10, for cross-reference.]

Mr. ROGERS. Admiral Mies and Mr. Augustine, the NNSA labs are operated as federally funded research and development corporations (FFRDCs). The FFRDC construct was created to allow the Federal Government to broadly determine "what" work needed to be done while the FFRDC determines "how" to accomplish the work. Do you believe NNSA's current management and governance model for the labs operates in the spirit and intent of the FFRDC model? Why or why not?

a. Is it appropriate, under the Federal Acquisition Rules governing FFRDCs, for NNSA to have a long-term relationship and contract with an entity managing and operating one of its labs? Under what circumstances should NNSA seek to recompete such a contract?

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[6] J.W. Bibler and Associates, "Kansas City Site Office Oversight Plan: Assessment of Implementation Cost Savings" (January 2008). More recently, the plant management reported to the panel that the headcount of ES&H specialists in the M&O was reduced by 81 percent (between 1995 and 2012).

[7] At benchmark organizations, the new entrants are carefully screened and selected, in part based on suitability for long-term careers within the organization. Employees tend to spend long careers within the organization. Promotion to the most senior levels (other than a political appointee) is usually from within, and these organizations favor those with broad-based career experience within the organization.

Mr. AUGUSTINE and Admiral MIES. The FFRDC model for the NNSA labs has been [seriously impaired]. Historically, the Federally Funded Research and Development Centers the laboratories have played a key strategic role as trusted advisors in informing the government regarding effective execution of the mission. The historic, statutorily-defined relationship between the FFRDC and its sponsor includes[8]

- Comprehensive knowledge of sponsor needs—the mission, culture, expertise, and institutional memory regarding issues of enduring concern to the sponsor
- Adaptability—the ability to respond to emerging needs of their sponsors and anticipate future critical issues
- Objectivity—the ability to produce thorough, independent analyses to address complex technical and analytical problems
- Freedom from conflicts of interest and dedication to the public interest—independence from commercial, shareholder, political, or other associations
- Long-term continuity—uninterrupted, consistent support based on a continuing relationship
- Broad access to sensitive government and commercial proprietary information—absence of institutional interests that could lead to misuse of information or cause contractor reluctance to provide such information
- Quick response capability—the ability to offer short-term assistance to help sponsors meet urgent and high-priority requirements

[Misguided contract requirements] reinforce the transactional nature of the relationship and undermine the FFRDC partnership with the NNSA laboratories. Significant award fees combined with mission-support-oriented performance evaluation criteria are troublesome in that they reinforce DOE/NNSA's emphasis both at headquarters and in the field on functional compliance and not mission performance.

. . . performance evaluation criteria that focus incentives on compliance do little to encourage building a strong M&O leadership team. The recent transition to Strategic Performance Evaluation Plans could help catalyze the shift away from transactional oversight, but this transition will require a sweeping cultural change at NNSA and its Field Offices and a redesign of the weighting of the performance objectives to better capture M&O contributions to mission priorities.

The benefit of the FFRDC relationship is that an FFRDC can function as an independent, long term trusted advisor and honest broker. Any decision to re-compete an FFRDC contract should be based upon contractor performance and weighed against the value of continuity and a long standing relationship.

Mr. ROGERS. Admiral Mies and Mr. Augustine, NNSA conducted a pilot program at its Kansas City Plant to determine if near-total elimination of normal NNSA and DOE oversight policies and practices could be replaced with higher level contractor assurance systems—while still ensuring mission effectiveness. The pilot study was assessed by an outside consultant and found it lead to major cost savings, and the Strategic Posture Commission recommended it be expanded across the full nuclear security enterprise. Has the advisory panel examined this study? Do you believe it was successful? What should we learn from this pilot program?

Mr. AUGUSTINE and Admiral MIES. The panel has reviewed the Bibler study, and cites the findings of that external review in the panel's interim report, as described in the answer to question 9. As noted in that answer, the panel's interim report finds that

. . . this [the KC Plant model] remains a significant governance reform opportunity.

Mr. ROGERS. Admiral Mies and Mr. Augustine, has DOD's closer-engagement with NNSA and its budget and programs in the past few years been beneficial for ensuring NNSA focuses on and executes the parts of its mission that are critical to the military?

Mr. AUGUSTINE and Admiral MIES. Although there is currently some agreement between DOD and DOE/NNSA on the long-term ["3 plus 2 concept"] for modernizing the stockpile, they have not converged on a long-term resource plan, nor have they converged on near-term mission and budget priorities. There remain fundamental differences in views on the appropriate composition of the weapon life extension program and the timing of deliverables. Additionally, coordination suffers from the departments' differing resource management systems, the lack of joint program reviews, and the lack of coordination in the timing of their budget submissions. Lastly, their coordination mechanism the Nuclear Weapons Council lacks enforcement authority for the agreements reached within its deliberations. There are also significant process issues that need to be addressed. The Nuclear Weapons Council process has been unable to achieve the integrated teamwork and staffing required before decisions are prepared for Council meetings, despite many attempts at establishing

[8] Source: Defense Acquisition University.

disciplined staff processes and follow up. Representatives of customer organizations designated to facilitate communication with the NNSA testify that they often are unable to obtain consistent answers from their NNSA counterparts, prior to briefings at the Nuclear Weapons Council.

Mr. ROGERS. Admiral Mies and Mr. Augustine, in the course of many hearings and briefings over the past three years, this subcommittee has discussed the dozens of reports from the 1980s and 1990s that led to creation of NNSA. They all offer clear descriptions of the problems at DOE, including recurring security problems and gross mismanagement. Senior DOE leadership even embarked on several reform initiatives in the 1990s—but none were effective. Why was senior DOE leadership unable to reform the organization? Why did it require Congress to step in and try to fix a problem (by creating NNSA) that was so widely recognized?

Mr. AUGUSTINE and Admiral MIES. The panel's interim report notes that successful reform will require a government-wide effort. As noted in the answer to question 1:

Lasting reform will require aggressive action and sustained implementation across the federal government. The changes needed undoubtedly will be difficult to implement regardless of where the enterprise is located within the government's structure, since the fundamental problems are cultural more than organizational. Organizational change, while not unimportant, is only a small portion—the easy portion—of the revisions that must be made to facilitate success. Previous efforts to reform and previous studies calling for action have largely failed due to lack of leadership follow-through, a lack of accountability for enacting change, and the lack of effective, sustained top-level demand for change from national leadership. The Department of Energy by itself would be challenged to oversee the radical steps that will be needed. Success is imaginable only with the strong and active engagement of a knowledgeable Secretary, supported by the White House and Congress, and a structure that removes impediments and that aligns to mission priorities.

Mr. ROGERS. Admiral Mies and Mr. Augustine, I sincerely hope that the final report and recommendations of this panel are not left on a shelf and ignored, as so many previous reports on this topic. Can you assure the subcommittee that you and your fellow panel members will take the time and effort to advocate for changes to both Congress and the administration, after your final report is released? We need your knowledge and advocacy to move our government to finally address these critical problems.

Mr. AUGUSTINE and Admiral MIES. As noted in the panel's interim report, reform will not be easy. As the co-chairmen, we are committed to providing recommendations that are actionable and following through to ensure our recommendations are known to and understood by the responsible parties. As noted in the interim report, the real focus of the reform effort must be within the federal government:

The panel believes lasting improvements are possible, but they will demand strong and sustained leadership and proactive support from Congress, the White House, and engaged Departmental Secretaries.

Mr. ROGERS. Admiral Mies and Mr. Augustine, do you believe contractor assurance systems, if appropriately implemented and overseen, can be used effectively in the governance of the nuclear security enterprise?

Mr. AUGUSTINE and Admiral MIES. Contractor assurance systems were not specifically addressed in the panel's interim report. But based on our professional experience, yes, if appropriately designed and implemented. Relevant to the purpose and design of contractor assurance systems, the panel's interim report notes that the focus of the relationship should be on the safe, secure execution of the mission, not on detailed compliance checklists or data. The panel found that:

Contract incentives reinforce the transactional nature of the relationship and undermine the FFRDC partnership with the NNSA laboratories. Significant award fees combined with mission-support-oriented performance evaluation criteria are troublesome in that they reinforce DOE/NNSA's emphasis both at headquarters and in the field on functional compliance and not mission performance.

Witnesses note that the focus on compliance checklists can actually divert attention from the substance of safe and secure mission performance.

Excessive and uncoordinated inspections, audits and data calls fuel inefficiencies and generate little value added; in fact, they may detract from the desired safety or security outcome

Mr. ROGERS. Admiral Mies and Mr. Augustine, how do we strike the correct balance between appropriate oversight without micromanaging the management and operating contractors of the NNSA labs and plants?

Mr. AUGUSTINE and Admiral MIES. The interim report does not provide recommended solutions. The situation, as observed in the panel's interim report, identifies the issues in the relationship that need to be addressed.

In effective organizations, the government sponsor decides what is needed and the M&O partner, in particular the Federally Funded Research and Development Center, decides how to meet that need. . . . Put in the simplest terms, the government should identify the work to be done; identify the best performer to do the work; provide adequate resources; and hold the performer accountable. Under this construct, a competent M&O partner is relied upon to provide the expertise, corporate culture and leadership sufficient to execute the work, and meet the government's operating standards.

Over the decades, the changes in mission priorities from design and production to stewardship, and heightened regulatory oversight, overturned accepted priorities within the nuclear weapons program and radically altered the well-understood relationships between line managers and mission-support functions within the government as well as between the government and the M&O contractors.

The resulting tension in defining the roles of the M&O contractors and the Federal mission-support officials has created significant friction in the government-M&O relationships, especially at the laboratories. DOE/NNSA has increasingly moved toward detailed direction and regulation of the M&Os. . . . A 2012 National Resource Council of the National Academies study concluded there is little trust in the relationship between the laboratories and NNSA. NNSA has lost confidence in the ability of the laboratories to "maintain operation goals such as safety, security, environmental responsibility and fiscal integrity."[9] The panel finds that this lack of trust is manifested in three ways: NNSA's use of increasingly inflexible budgets and milestones to control work at the operating sites, the continued reliance on transactional regulation and oversight to enforce behavior, and the exclusion of M&O executives from NNSA headquarters deliberations in setting strategic direction. This management approach is costly, unwieldy, and counterproductive as further discussed in sub-section D. It creates a high degree of management complexity, puts detailed decisions in the hands of headquarters personnel who lack a complete understanding of field operations or technical requirements, undermines accountability, creates incentives to focus attention on administrative matters over program substance, and incurs excessive costs in administering the relationship.

QUESTIONS SUBMITTED BY MR. COOPER

Mr. COOPER. Do you believe that NNSA has been successful in setting clear requirements?

Mr. AUGUSTINE and Admiral MIES. One form in which requirements may be set is by establishing a clear long-term plan for the enterprise. As noted in the panel's interim report:

Lacking strong leadership that unifies priorities, there has been no mechanism for the NNSA, its customers, and the national leadership to converge on a credible resource-loaded plan to chart the path ahead. The President's annual Nuclear Weapons Stockpile Memorandum and the Nuclear Weapons Council evolving "baseline" plan, for instance, provide important direction, but they do not provide programmatic guidance. As discussed in Section 5 on NNSA's collaboration with its customers, the Nuclear Weapons Council and the Mission Executive Council for interagency customer coordination continue to struggle in setting priorities, defining the enterprise's needs, and identifying resources to support those needs. And, of course, planning efforts have been seriously undermined by the turbulent national budget environment as well as by NNSA's inability to accurately estimate costs.

At the level of the government-industry relationship, the panel's interim report observes:

In effective organizations, the government sponsor decides what is needed and the M&O partner, in particular the Federally Funded Research and Development Center, decides how to meet that need. . . . Put in the simplest terms, the government should identify the work to be done; identify the best performer to do the work; provide adequate resources; and hold the performer accountable. Under this construct, a competent M&O partner is relied upon to provide the expertise, corporate culture and leadership sufficient to execute the work, and meet the government's operating standards.

Over the decades, the changes in mission priorities from design and production to stewardship, and heightened regulatory oversight, overturned accepted priorities within the nuclear weapons program and radically altered the well-understood rela-

[9] National Research Council, *Managing for High-Quality Science and Engineering at the NNSA National Security Laboratories,* 5.

tionships between line managers and mission-support functions within the government as well as between the government and the M&O contractors.

The resulting tension in defining the roles of the M&O contractors and the Federal mission-support officials has created significant friction in the government-M&O relationships, especially at the laboratories. DOE/NNSA has increasingly moved toward detailed direction and regulation of the M&Os. . . . A 2012 National Resource Council of the National Academies study concluded there is little trust in the relationship between the laboratories and NNSA. NNSA has lost confidence in the ability of the laboratories to "maintain operation goals such as safety, security, environmental responsibility and fiscal integrity."[10] The panel finds that this lack of trust is manifested in three ways: NNSA's use of increasingly inflexible budgets and milestones to control work at the operating sites, the continued reliance on transactional regulation and oversight to enforce behavior, and the exclusion of M&O executives from NNSA headquarters deliberations in setting strategic direction. This management approach is costly, unwieldy, and counterproductive as further discussed in sub-section D. It creates a high degree of management complexity, puts detailed decisions in the hands of headquarters personnel who lack a complete understanding of field operations or technical requirements, undermines accountability, creates incentives to focus attention on administrative matters over program substance, and incurs excessive costs in administering the relationship.

Mr. COOPER. Does NNSA have the necessary expertise to evaluate performance and proposals from the M&O contractors?

Mr. AUGUSTINE and Admiral MIES. The NNSA has not taken the steps necessary to build a cohesive culture that instills accountability for customer deliverables, nor has it instituted the personnel programs needed to build a workforce with the necessary technical and managerial skills for operations. The purposeful development of leaders, managers, and staffs is essential to any governance system. The effective organizations benchmarked for this study focus on personnel management to create a reinforcing virtuous cycle: proven leaders emerge from careful selection and decades of experience involving careful development and screening. Such leaders make a system work well. They also attract and inspire other high-caliber people to join and stay in their organizations.[11] As one example, the current Director of Navy Strategic Systems Programs (SSP) started his career within that organization as a junior officer, and almost all of his subsequent assignments have been in the command. In addition to deep familiarity resulting from a long career with the same organization, long command tours provide needed continuity and allow the Director to promulgate and sustain the desired culture. Recently, the tenure of the SSP's Director was extended from about four years to eight years to strengthen this benefit.

A key staffing issue for the NNSA is the lack of operational experience in headquarters. In the peak years of the nuclear weapons program, the operational core of the nuclear enterprise was located in the Albuquerque Operations Office. Albuquerque synchronized the cycle of design-test-build throughout the Cold War, until 1992, when the production of new weapons was suspended. Albuquerque was officially disbanded ten years later, in 2002. NNSA headquarters assumed Albuquerque's operating functions (which were greatly diminished by then since the U.S. had ceased producing warheads), and decades of operational experience, knowledge, and technical expertise within the Albuquerque staff was lost in the reorganization.

Now, as the United States embarks on an intensive series of warhead life extension programs covering the entire stockpile, a leadership team with deep experience and continuity (such as the team in the Albuquerque Operations Office) would be an enormously valuable asset for governing the enterprise. Creating and sustaining a personnel management system to build the needed culture, skills, and experience is a vital component of governance reform.

Mr. COOPER. Have the customers of NNSA services and products been satisfied with the FY15 budget request for nuclear weapons sustainment and non-proliferation programs?

Mr. AUGUSTINE and Admiral MIES. The panel's interim report did not specifically evaluate the FY15 budget proposal, nor did the panel solicit the customers' views on the proposal. However, there are two relevant observations from the panel's interim report:

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[10] National Research Council, *Managing for High-Quality Science and Engineering at the NNSA National Security Laboratories,* 5.

[11] At benchmark organizations, the new entrants are carefully screened and selected, in part based on suitability for long-term careers within the organization. Employees tend to spend long careers within the organization. Promotion to the most senior levels (other than a political appointee) is usually from within, and these organizations favor those with broad-based career experience within the organization.

A rough estimate, based on assessments by DOD's Cost Assessment and Program Evaluation Office and the Congressional Budget Office, is that the aggregate NNSA program, as was structured in its 2014 Stockpile Stewardship and Management Plan, was at least $10 billion under-funded over the coming decade.[12] The recently released 2015 Stockpile Stewardship and Management Plan reduces projected funding over the next decade and proposes significant delays in the delivery of several major life extension programs and nuclear facilities.[13] Without commitment to an executable plan, NNSA has reacted and adjusted to funding as it is doled out year-to-year, or month-to-month. Large construction projects, Life Extension Programs (LEP), and infrastructure modernization investments are managed with incremental funding. This creates significant inefficiency. In each area the enterprise routinely incurs program slips, delivery delays, program suspensions, and accumulations of deferred maintenance—all leading to increased long-term costs.

In addition, some specific observations touch on the DOD–DOE relationship: First, a general finding:

There is a lack of effective joint planning and budget coordination because of a fundamental lack of mechanisms to ensure requisite collaboration and consensus to address core mission requirements. As a consequence, DOD customers lack trust in NNSA's ability to modernize facilities and execute warhead life extension programs.

Second, a finding on recent working relationships:

NNSA and DOD staffs spent much of 2012 working to achieve a common resource plan for the enterprise that would be geared to meeting DOD's needs. This effort led to a tentative agreement in early 2013 on an NNSA program and budget that would be in line with the "3+2 Concept," and DOD agreed to contribute additional funding to execute the program in FY14. In total, DOD has agreed to transfers of nearly $12 billion over multiple years in budget authority to DOE.

During this period, a series of NNSA budget shortfalls were reported. These resulted most significantly from significant cost growth in the DOE programs. Other contributing factors included reductions in the overall NNSA budget due to Continuing Resolutions, congressional marks, the Budget Control Act, and the effects of sequestration.

DOD has been frustrated by these continuing shortfalls, delays in agreed-upon programs, and requests for additional funding. DOD officials also have been frustrated by the limited budget and cost information provided by DOE/NNSA, and they have pressed for information on budgeting and program management processes in order to track the execution of the transferred funds. A satisfactory degree of visibility has not been achieved. Although these transfers were included in the President's Budget, visibility of the funds was lost during the Congressional appropriations process. It appears the net effect of the transfer is that DOE budgets have increased by less than the amount by which DOD budgets have decreased.

The cycle of DOD–NNSA engagement continues through the Nuclear Weapons Council, with additional attempts to reach convergence on realistic program and infrastructure plans that can guide NNSA budgets. There remain significant procedural issues that will need to be resolved to repair this relationship. Considerable work remains to be done: the Nuclear Weapons Council has a central role to play in creating an executable plan for the future stockpile agreed on by the two departments. This responsibility will require an orderly process for the Nuclear Weapons Council's working groups to serve its principals and greater transparency between the two departments.

Mr. COOPER. When NNSA talks about priority mission, does this include a serious commitment to safety and security?

Mr. AUGUSTINE and Admiral MIES. The panel's main focus has been on the efficacy of the governance mechanisms for achieving safe, secure operations. The interim report's findings focus on how an improved governance system might achieve equal or better safety with practices that have proven effective in successful organizations. As implemented in NNSA, transactional oversight has proven to be expensive and counterproductive. More oversight does not necessarily equate to better oversight—or improved performance. Some specific observations include:

Transactional oversight is expensive and counterproductive.

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[12] OSD Office of Cost Assessment and Program Evaluation, "NNSA Governance Discussions: Briefing to the Advisory Panel" (Washington, DC: DOD, December, 2013); Congressional Budget Office (CBO), *Projected Cost of U.S. Nuclear Forces, 2014 to 2023* (Washington, DC: CBO, December 2013).

[13] U.S. Department of Energy (DOE), *FY2015 Stockpile Stewardship and Management Plan* (Washington, DC: DOE, April 2014).

Excessive and uncoordinated inspections, audits and data calls fuel inefficiencies and generate little value added; in fact, they may detract from the desired safety or security outcome.

Witnesses note that the focus on compliance checklists can actually divert attention from the substance of safe and secure mission performance.

Mr. COOPER. Has the NNSA Stockpile Stewardship and Management Plan been helpful to NNSA's planning process and setting requirements?

Mr. AUGUSTINE and Admiral MIES. Although there is currently some agreement between DOD and DOE/NNSA on the long-term concept for modernizing the stockpile, they have not converged on a long-term resource plan, nor have they converged on near-term mission and budget priorities. There remain fundamental differences in views on the appropriate composition of the weapon life extension program and the timing of deliverables.

. . . Lacking strong leadership that unifies priorities, there has been no mechanism for the NNSA, its customers, and the national leadership to converge on a credible resource-loaded plan to chart the path ahead. The President's annual Nuclear Weapons Stockpile Memorandum and the Nuclear Weapons Council evolving "baseline" plan, for instance, provide important direction, but they do not provide programmatic guidance. As discussed in Section 5 on NNSA's collaboration with its customers, the Nuclear Weapons Council and the Mission Executive Council for interagency customer coordination continue to struggle in setting priorities, defining the enterprise's needs, and identifying resources to support those needs. And, of course, planning efforts have been seriously undermined by the turbulent national budget environment as well as by NNSA's inability to accurately estimate costs.

Mr. COOPER. In FY14 NNSA achieved $80 million of efficiencies, $240 million short of its $320M goal. NNSA has not identified any efficiencies goals in FY15. Do you believe NNSA adequately taking a close look at efficiencies?

Mr. AUGUSTINE and Admiral MIES. The panel's interim report does not address the specific NNSA efficiency initiatives. However, the panel's discussion of the inefficiencies of transactional oversight described in the answer to question 38, and the discussion of the potential benefits of adopting the Kansas City model for employing industrial standards, where feasible, suggests areas where potential improvements are evident.

In addition, the panel notes that substantial improvements in the execution of programs for customer deliverables, and major construction projects are needed. These, too, may represent important targets for efficiency improvements. Some relevant observations from the interim report include:

Program and project management is not supported at the staffing and funding levels that the private sector and other agencies have demonstrated are necessary to assure success, especially in the field, for the duration of major projects. Funding levels for reserves and contingencies are not even close to levels that have been demonstrated as necessary for major projects, especially recognizing the unique technical nature of many of the NNSA's projects. When projects or programs proceed from design stages to production stages, there is not adequate configuration control of designs and too many unnecessary subsequent changes are allowed.

The management practices for infrastructure upgrades and major facilities construction are also problematic. DOE's guidance for such projects is contained in DOE Order 413, which aligns with the management practices prescribed in OMB Circular A–11 for Capital Acquisition projects.[14] However, Order 413 is offered and viewed as guidance and not as required practice, so adherence and enforcement are weak. For instance, rigorous planning processes at the front end of a project, such as Analyses of Alternatives, are lacking. Circular A–11 covers everything from roles and functions to legal framework to the actual transmission of White House policy in the budgeting process. OMB requires agencies to establish a disciplined capital programming process that addresses project prioritization between new assets and maintenance of existing assets; risk management and cost estimating to improve the accuracy of cost, schedule and performance provided to management; and the other difficult challenges posed by asset management and acquisition. In establishing its Acquisition and Project Management Office, NNSA is trying to bring such discipline to NNSA project management.

Mr. COOPER. GAO has issued reports overseeing NNSA management and programs since 1995. In a February 2012, providing another independent perspective, GAO stated that: "Laboratory and other officials have raised concerns that federal oversight of the laboratories' activities has been excessive. With NNSA proposing to spend tens of billions of dollars to modernize the nuclear security enterprise, it is

[14] Office of Management and Budget (OMB), *Preparation, Submission, and Execution of the Budget,* Circular A–11 (Washington, DC: Executive Office of the President, July 2013).

important to ensure scarce resources are spent in an effective and efficient manner" and that "In many cases, NNSA has made improvements to resolve these safety and security concerns, but better oversight is needed to ensure that improvements are fully implemented and sustained. GAO agrees that excessive oversight and micromanagement of contractors' activities are not an efficient use of scarce federal resources, but that NNSA's problems are not caused by excessive oversight but instead result from ineffective departmental oversight."

In a 2013 testimony before the Strategic Forces Subcommittee of the House Armed Services Committee, GAO stated that:

"NNSA continues to experience major cost and schedule overruns on its projects, such as research and production facilities and nuclear weapons refurbishments, principally because of ineffective oversight and poor contractor management (. . .) GAO continues to believe, as it concluded in its January 2007 report, that drastic organizational change to increase independence is unnecessary and questions whether such change would solve the agency's remaining management problems." Do you agree?

Mr. AUGUSTINE and Admiral MIES. A capability for independent cost estimates for major acquisition programs, coupled with a disciplined cost reporting system, is essential to effective program scoping and initiation, resource planning, source selection, and contract oversight and management. NNSA lacks expertise, data, and tools for independent costing, requirements evaluation, and program planning. Initial cost estimates for major NNSA programs have been found to be off not by 20–30 percent but by factors of nearly two to six:

- B61 LEP: An initial estimate (2010) assumed that the cost would be comparable to that of the W76 LEP in the range of $4 billion. However, lab experts, when engaged by NNSA, concluded that the B61 LEP would be much more complex than the W76. When the final B61 LEP cost report was completed, the estimate rose to $8 billion.
- Los Alamos CMRR facility (the Chemistry and Metallurgy Research Replacement): An initial estimate (2005) placed the ceiling at $975 million; by 2010 this ceiling had risen to $5.8 billion, with a three to seven year delay. Now, the project is being deferred five years, and the design is being reconsidered.
- Y–12 highly enriched uranium processing facility (UPF): An initial estimate (2004) placed the maximum at $1.1 billion; this was raised to $3.5 billion (2007), and then to $6.5 billion (2010). An independent review by the Army Corps of Engineers placed the maximum cost at $7.5 billion (2011). Recently discovered design flaws (the ceiling is too low) add an additional $0.5 billion. Now, the project is being delayed and the design is being reconsidered.
- Savannah River plutonium disposition facility (the Mixed-Oxide Fuel Fabrication Facility, or MOX): DOE approved a cost estimate of $4.8 billion (2007) and start of operations in September 2016. Although construction began in August 2007, NNSA subsequently increased the estimate to $7.7 billion (2012) with the start of operations delayed to November 2019. Now the project is in a strategic pause as DOE evaluates other options for plutonium disposition.

NNSA's poor track record of planning for and estimating the costs of these and other major projects is a major source of dissatisfaction among the national leadership and customers, and further undermines NNSA's credibility. Both NNSA and DOE are engaged in initiatives to create needed independent cost estimating capabilities, including the development of the requisite staffs, tools, and data. Success with these initiatives will help repair its damaged credibility, and will be an essential precondition for NNSA to regain trust with its critics.

Mr. COOPER. What would you recommend to improve contractor accountability?

Mr. AUGUSTINE and Admiral MIES. The panel's interim report has focused primarily on diagnosing the current situation. Our recommendations will come in the final report. The interim report observes that current contracting arrangements place too little emphasis on mission performance, and too much emphasis on complying with administrative requirements. The major findings in the interim report are as follows:

A. Misguided Contract [Requirements]

[Misguided contract requirements] reinforce the transactional nature of the relationship and undermine the FFRDC partnership with the NNSA laboratories. Significant award fees combined with mission-support-oriented performance evaluation criteria are troublesome in that they reinforce DOE/NNSA's emphasis both at headquarters and in the field on functional compliance and not mission performance.

Contractual arrangements also can limit the contributions of the M&O contractor parent organizations. At some sites, the parent organization is exerting a strong influence: the Kansas City Plant offers an example in which the parent company is aggressively driving a proven corporate culture into the workplace. However, several

issues that have hindered the broader realization of these objectives need to be considered in clarifying future roles....

Last, and most important, performance evaluation criteria that focus incentives on compliance do little to encourage building a strong M&O leadership team. The recent transition to Strategic Performance Evaluation Plans could help catalyze the shift away from transactional oversight, but this transition will require a sweeping cultural change at NNSA and its Field Offices and a redesign of the weighting of the performance objectives to better capture M&O contributions to mission priorities.

Mr. COOPER. Have you found the Department of Energy needs new or additional hiring or firing authorities, or authority to influence contractor employee hiring or firing?

Mr. AUGUSTINE and Admiral MIES. The panel's interim report does not provide recommendations, but the panel will address this question in its final report. The panel's findings suggest significant action is needed to address skill needs. The panel's findings (as also noted in the answer to question 10) are as follows:

The NNSA has not taken the steps necessary to build a cohesive culture that instills accountability for customer deliverables, nor has it instituted the personnel programs needed to build a workforce with the necessary technical and managerial skills for operations. The purposeful development of leaders, managers, and staffs is essential to any governance system. The effective organizations benchmarked for this study focus on personnel management to create a reinforcing virtuous cycle: proven leaders emerge from careful selection and decades of experience involving careful development and screening. Such leaders make a system work well. They also attract and inspire other high-caliber people to join and stay in their organizations.[15] As one example, the current Director of Navy Strategic Systems Programs (SSP) started his career within that organization as a junior officer, and almost all of his subsequent assignments have been in the command. In addition to deep familiarity resulting from a long career with the same organization, long command tours provide needed continuity and allow the Director to promulgate and sustain the desired culture. Recently, the tenure of the SSP's Director was extended from about four years to eight years to strengthen this benefit.

A key staffing issue for the NNSA is the lack of operational experience in headquarters. In the peak years of the nuclear weapons program, the operational core of the nuclear enterprise was located in the Albuquerque Operations Office. Albuquerque synchronized the cycle of design-test-build throughout the Cold War, until 1992, when the production of new weapons was suspended. Albuquerque was officially disbanded ten years later, in 2002. NNSA headquarters assumed Albuquerque's operating functions (which were greatly diminished by then since the U.S. had ceased producing warheads), and decades of operational experience, knowledge, and technical expertise within the Albuquerque staff was lost in the reorganization.

Now, as the United States embarks on an intensive series of warhead life extension programs covering the entire stockpile, a leadership team with deep experience and continuity (such as the team in the Albuquerque Operations Office) would be an enormously valuable asset for governing the enterprise. Creating and sustaining a personnel management system to build the needed culture, skills, and experience is a vital component of governance reform.

QUESTIONS SUBMITTED BY MS. SANCHEZ

Ms. SANCHEZ. Independent Safety oversight: Has independent safety oversight helped maintain safety as a priority across the nuclear enterprise?

Mr. AUGUSTINE and Admiral MIES. The panel's interim report does not address the independent role of the DNFSB. The report did find:

The internal weaknesses in DOE's regulatory apparatus also have significantly weakened the DOE/NNSA's ability to engage effectively with the Defense Nuclear Facilities Safety Board. Congress chartered the DNFSB to provide independent oversight, by identifying safety concerns and raising issues with respect to the DOE's implementation of its own orders. At the same time Congress has recently stated that, "it is incumbent upon the Secretary to reject or request modifications to DNFSB recommendations if the costs of implementing the recommendations are

[15] At benchmark organizations, the new entrants are carefully screened and selected, in part based on suitability for long-term careers within the organization. Employees tend to spend long careers within the organization. Promotion to the most senior levels (other than a political appointee) is usually from within, and these organizations favor those with broad-based career experience within the organization.

not commensurate with the safety benefits gained."[16] Given the statutory role of the DNFSB as an independent oversight arm for public safety, and the lack of a DOE analytical capability to effectively evaluate options to respond to its recommendations, the DNFSB exerts a dominant influence over DOE's risk management in nuclear safety policies and programs, which at times leads to actions that do not reflect prudent risk management or safety concerns.

Ms. SANCHEZ. Cost estimates: Concern about the effectiveness of NNSA governance of the nuclear security enterprise has been increasing, in the context of several failures. These failures include all major NNSA projects significantly increasing in cost and incurring delays, including billion dollar increases in the cost estimates for the B61 life extension program, the uranium facility at Y–12 (Tennessee), the plutonium facility (at Los Alamos), and the MOX facility (at the Savannah River Site, SC).

Is NNSA equipped with the expertise and processes to provide accurate cost estimates? Are they taking advantage of DOD CAPE Office which has significant experience in this area?

Mr. AUGUSTINE and Admiral MIES. The Panel met with CAPE officials as well as the NNSA official responsible for establishing cost estimating and resource analysis capabilities in NNSA. CAPE was heavily involved in the joint activities of 2012 cited in the panel's interim report. It appears this involvement has ceased. The relevant interim report findings are as follows:

NNSA's unreliable planning and cost estimating, combined with its lack of openness, has engendered significant distrust within the DOD. Beginning in 2010, the DOD has worked with DOE/NNSA to transfer funds from DOD's proposed budget to the NNSA account for weapons activities essential for sustaining deterrence capabilities—including LEPs, stockpile surveillance, Chemical and Metallurgy Research Replacement (CMRR), and UPF.

NNSA and DOD staffs spent much of 2012 working to achieve a common resource plan for the enterprise that would be geared to meeting DOD's needs. This effort led to a tentative agreement in early 2013 on an NNSA program and budget that would be in line with the "3+2 Strategy," and DOD agreed to contribute additional funding to execute the program in FY14. In total, DOD has agreed to transfers of nearly $12 billion over multiple years in budget authority to DOE.

During this period, a series of NNSA budget shortfalls were reported. These resulted most significantly from significant cost growth in the DOE programs. Other contributing factors included reductions in the overall NNSA budget due to Continuing Resolutions, congressional marks, the Budget Control Act, and the effects of sequestration.

DOD has been frustrated by these continuing shortfalls, delays in agreed-upon programs, and requests for additional funding. DOD officials also have been frustrated by the limited budget and cost information provided by DOE/NNSA, and they have pressed for information on budgeting and program management processes in order to track the execution of the transferred funds. A satisfactory degree of visibility has not been achieved. Although these transfers were included in the President's Budget, visibility of the funds was lost during the Congressional appropriations process. It appears the net effect of the transfer is that DOE budgets have increased by less than the amount by which DOD budgets have decreased.

The cycle of DOD–NNSA engagement continues through the Nuclear Weapons Council, with additional attempts to reach convergence on realistic program and infrastructure plans that can guide NNSA budgets. There remain significant procedural issues that will need to be resolved to repair this relationship. Considerable work remains to be done: the Nuclear Weapons Council has a central role to play in creating an executable plan for the future stockpile agreed on by the two departments. This responsibility will require an orderly process for the Nuclear Weapons Council's working groups to serve its principals and greater transparency between the two departments.

Ms. SANCHEZ. Non-proliferation: There is significant pressure on NNSA to deliver nuclear weapons sustainment programs on time and on budget. Do you see the same pressure to prioritize nuclear non-proliferation?

Mr. AUGUSTINE and Admiral MIES. The interim report did not address the priorities for the non-proliferation program. The panel's findings relating to non-proliferation and other mission areas are as follows:

Given the overall success of the interagency projects, the panel did not focus deeply on the enterprise's relationships with its interagency customers. Nevertheless, experts identified several issues for the panel's consideration. One is the tactical ap-

[16] "Joint Explanatory Statement to Accompany the National Defense Authorization Act for Fiscal Year 2014," *Congressional Record* 159: 176 (December 12, 2013), H7968.

proach taken by many customers: much of this work for external sponsors is accomplished using annual task orders with no long-term commitment. There is also a range of areas where working relationships could be simplified and improved:

- Interagency tasks are typically quite small and each laboratory manages hundreds of such tasks. (For example, LLNL reported it manages about 800 interagency tasks, many providing a few tens of thousands of dollars in support.)
- Approval processes are needlessly cumbersome. Tasks are reviewed and approved individually. Even small, routine contracts require multiple levels of approval and can take weeks.
- Delays are not uncommon in the movement of funds from sponsors to the labs. In some cases, technical efforts may be put on hold pending arrival of funds.
- Year-to-year uncertainty in funding makes it difficult to forecast demand and manage professional staffs.
- Recapitalization of scientific and other physical capital is not addressed. While external funding covers the overhead costs immediately associated with the work being accomplished, it does not cover the cost of refurbishing and replacing the unique lab capital equipment and facilities used in some tasks.

Some customers have found ways to resolve some of these challenges by employing interagency agreements with DOE/NNSA in which the external funding organization makes a standing commitment to funding support at a specified level of effort.[17] While necessarily subject to the availability of annual appropriations, this eliminates most of the uncertainty, enabling the nuclear weapon labs to better align and manage professional staffs and plan and conduct technical work. Capital investments to develop needed capabilities for interagency customers are a more difficult challenge, but they too have been overcome in limited cases. NNSA has had to approach this challenge on a facility-by-facility basis.

Ms. SANCHEZ. Please provide for the record a list of those who have testified or made presentations before the full panel, and those that the panel subcommittees have met with.

Mr. AUGUSTINE and Admiral MIES. The attached list, which is an annex to the interim report, identifies the individuals and organizations consulted by the panel. The general approach is outlined in the interim report as follows:

Recognizing that there has already been extensive examination of the enterprise, the panel reviewed thousands of pages produced by studies and reviews conducted both before and since the creation of the NNSA. The members heard from many experts, both inside and outside of the enterprise.[18] This included past and present senior leadership in the Department of Energy (DOE), NNSA, and Department of Defense (DOD), Field Office managers, Management and Operating (M&O) executives and a cross-section of personnel at each site, Laboratory Directors, chairmen of previous studies of the enterprise, Congressional staff, representatives from the customer communities (DOD, Intelligence Community, the Federal Bureau of Investigation, Department of State, Department of Homeland Security), the Defense Nuclear Facilities Safety Board (DNFSB), the Government Accountability Office, and the British nuclear weapons program.

The panel divided its field investigative work into four fact-finding groups as follows:

- The *National Leadership* group focused on the perspectives of the Executive branch (National Security Council Staff, Office of Management and Budget (OMB), and Office of Science and Technology Policy); the Legislative branch (both the Senate and the House of Representatives, and both the appropriations and authorization committees); Department of Energy headquarters; and the Nuclear Regulatory Commission, the DNFSB and other national-level stakeholders such as the Occupational Safety and Health Administration (OSHA) and the American Federation of Labor and Congress of Industrial Organizations (AFL–CIO).
- The *NNSA* group interviewed leadership personnel within NNSA headquarters and also conducted site visits to the three laboratories (Los Alamos National Laboratory (LANL), Lawrence Livermore National Laboratory (LLNL), and Sandia National Laboratory (SNL)), the four production plants (Kansas City

[17] Homeland Security Act of 2002, Sec. 309, authorizes DHS use of DOE national laboratories and sites via joint sponsorship, direct contract, or "work for others." Labs and sites perform such work on an equal basis to other missions at the laboratory and not just on a noninterference basis. DHS does not pay costs of DOE or its contractors in excess of the amount that the DOE pays. DHS' position is that it strongly prefers using authorities given it in law to allow it to work across the DOE complex in response to proposals.

[18] A full list of those who provided not-for-attribution testimony to the panel may be found in Appendix A.

Plant, Pantex, Savannah River Site, and Y–12 National Security Complex), and the Nevada National Security Site (NNSS). These visits incorporated discussions with the Field Offices (including the Albuquerque Complex) and the M&O contractor leadership as well as tours of some of each site's important facilities.

- The *Customer* group obtained perspectives of the clients of the enterprise to include DOD, the Intelligence Community, Department of State, Department of Homeland Security, the Federal Bureau of Investigation, and the British nuclear weapons program.
- The *Benchmarking* group examined successful high-risk, high technology organizations to identify potential processes and structures that might be adopted by the enterprise. Among these organizations were Naval Reactors, Navy Strategic Systems Programs, National Aeronautics and Space Administration (NASA), representatives from the civil nuclear power industry, DOE's Office of Science, the Centers for Disease Control, the Federal Aviation Administration, and the British nuclear weapons program.

Ms. SANCHEZ. Do the M&O contractors have the correct incentives to support NNSA's mission and deliver products on time and on budget? The Sandia National Laboratory contract has been extended at least two years, after a previous 2-year extension, while other contracts are going on 10 years. Is there adequate competition? Has the promise of added competition and cost savings, which was the goal of privatizing the nuclear enterprise, materialized? Has this model worked?

Mr. AUGUSTINE and Admiral MIES. Contract incentives reinforce the transactional nature of the relationship and undermine the FFRDC partnership with the NNSA laboratories. Significant award fees combined with mission-support-oriented performance evaluation criteria are troublesome in that they reinforce DOE/NNSA's emphasis both at headquarters and in the field on functional compliance and not mission performance.

. . . performance evaluation criteria that focus incentives on compliance do little to encourage building a strong M&O leadership team. The recent transition to Strategic Performance Evaluation Plans could help catalyze the shift away from transactional oversight, but this transition will require a sweeping cultural change at NNSA and its Field Offices and a redesign of the weighting of the performance objectives to better capture M&O contributions to mission priorities.

It is clear that the recent acting NNSA Administrator recognized the problems with the government-M&O relationships. He has been working to clarify roles and responsibilities, focusing on the relationships among the NNSA Administrator, the Field Office Managers, and the M&O executives. In the field, there is evidence of improved communication and collaboration between the M&Os and the NNSA Field Offices, especially at the plants. They have demonstrated a willingness to share information and otherwise communicate and collaborate, embracing the concept that they are a team ultimately working toward the same purpose. Much more attention to clarifying and managing these relationships will be needed.

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