

Advance Policy Questions for Donald L. Cook
Nominee to be Deputy Administrator for Defense Programs,
National Nuclear Security Administration

Duties and Qualifications

What is your understanding of the duties and functions of the Deputy Administrator for Defense Programs?

The Deputy Administrator for Defense Programs is primarily responsible for maintaining a safe, secure and effective nuclear weapons stockpile. This is accomplished by ensuring the safe and efficient operations of the nuclear weapons complex, and preparing Defense Programs for the future, to include necessary changes in both the nuclear weapons complex and nuclear weapons stockpile in order to meet the challenges of the 21st century.

What background and experience do you possess that you believe qualify you to perform these duties?

My undergraduate training in Nuclear Engineering at the University of Michigan and graduate training in Plasma Physics at MIT gave me an understanding and an appreciation for both the science and the engineering involved in the nuclear weapon program. My entire career has been dedicated to either the US or the UK nuclear deterrent programs. Up until my most recent assignment, this covered areas of small science, big science, engineering development, major construction projects, infrastructure projects and security investments required to meet an increased threat. From 2006 to 2009, I served as Managing Director and CEO of the Atomic Weapons Establishment in the UK. That assignment gave me a good understanding of manufacturing processes for special material components, qualification for weapon use, assembly, transport, support in service including surveillance, and finally decommissioning, dismantlement, disassembly, and disposal. Communication and productive interaction with the Ministry of Defence (MOD), the local community, nuclear regulatory authorities, and the AWE workforce of employees and contractors was important to success. I believe my experience in both the US and UK qualifies me to perform the duties and functions of the Deputy Administrator for Defense Programs.

Do you believe that there are any steps that you need to take to enhance your expertise to perform the duties of the Deputy Administrator for Defense Programs?

I trust that my background and experience show me to be appropriately qualified to be the Deputy Administrator for Defense Programs, and I hope the Senate will agree. To enhance my knowledge of the current issues facing Defense Programs, if confirmed, I plan to immediately engage with those people who can help me better understand the complexities and challenges before Defense Programs. This will include meeting with staff and managers in key parts of the program, both at Headquarters and in the field,

along with NNSA and DOE management, key partners such as the Department of Defense, Defense Nuclear Facilities Safety Board, and Congress. I realize that if I am confirmed, I will be leading an organization with a long history of scientific and technical accomplishments — my immediate challenge will be to learn how I can continue to lead this exceptional group and to help build upon activities and processes that can make the organization even more productive than it is today.

Assuming you are confirmed, what additional or new duties and functions, if any, do you expect that the Administrator of the National Nuclear Security Administration (NNSA) would prescribe for you other than those described above?

I am unaware of any additional duties and functions that the NNSA Administrator would prescribe for me. If confirmed, I will work with the Administrator to clarify his expectations and strive to be a valued part of the team.

Relationships

If confirmed, how will you work with the following officials in carrying out your duties:

The Secretary of Energy
- Dr. Steven Chu

I have great respect for Secretary Chu and look forward to working with him through the NNSA Administrator on Defense Programs issues. The NNSA is fortunate to have a Cabinet Secretary representing us in the Administration who can understand the technical complexities of nuclear weapons and who can work with the Secretaries of Defense, State, and Homeland Security on cross-cutting interagency issues and policies concerning the nation's security.

The Deputy Secretary of Energy
- Dr. Daniel Poneman

The Deputy Secretary serves as the Department's Chief Operating Officer and I expect to have regular interaction on issues that affect both NNSA and other organizations within the Department. From major construction projects to cyber security to pension policies to DOE Orders, there are many issues in which the Deputy Secretary plays a key role. I will also expect to work closely with the Undersecretary of Energy for Science on scientific matters that cross over from NNSA to other parts of the DOE.

The Other Deputy Administrators of the NNSA
- NA-20 not nominated; Mr. Ken Baker acting
- NA-30 ADM Kirkland Donald, USN

The Deputy Administrators for Defense Nuclear Nonproliferation and Naval Reactors would be my peers if confirmed. In my role at the Atomic Weapons Establishment, I had

accountability for working in partnership with UK government authorities in response to radiological and nuclear threats to the UK, and for producing the uranium oxide fuel stock for UK Trident submarines, so these areas are not unfamiliar to me. I plan to meet with the Deputies and Associate Administrators to better familiarize myself with the individuals and their specific program responsibilities if confirmed.

The Assistant Secretary of Energy for Environmental Management

- **Dr. Inés R. Triay**

The Deputy Administrator for Defense Programs needs to have a special working relationship with the Assistant Secretary for Environmental Management (EM) in ensuring that NNSA supports and facilitates the cleanup of legacy waste and contamination at NNSA sites. As we move towards a smaller stockpile, decrease the number of sites with special nuclear materials, and consolidate these materials across the complex we will need to work hand-in-hand as one Department to meet our goals.

The other relevant Assistant Secretaries of the Department of Energy

- **Patricia Hoffman, Office of Electricity Delivery & Energy Reliability (Acting)**
- **Cathy Zoi, Office of Energy Efficiency & Renewable Energy**
- **Dr. James Markowsky, Office of Fossil Energy**
- **Dr. Warren F. Miller, Jr., Office of Nuclear Energy**
- **Betty Nolan, Office of Congressional and Intergovernmental Affairs (Acting)**
- **David Sandalow, Office of Policy and International Affairs**

I look forward to working with the other Assistant Secretaries within the Department of Energy, if confirmed. The Department of Energy is a unique place with many talented leaders in both NNSA and other DOE organizations. In order to be most effective there must be close collaboration. As we move towards further diversification at our National Laboratories, I see myself working with the Office of Science in particular for the greater good of NNSA, the Office of Science, and the nation.

The Under Secretary of Defense for Acquisition, Technology and Logistics

- **Dr. Ashton (Ash) Carter**

The Under Secretary of Defense for Acquisition, Technology and Logistics (AT&L) is the Chairman of the Nuclear Weapons Council (NWC) – focal point for the relationship between the Department of Energy (DOE) and the Department of Defense (DoD). My role would be to support the NWC collectively by dealing directly with the Under Secretary of Defense (AT&L), the NNSA Administrator (as DOE's voting member to the NWC), and the distinguished members from U.S. Strategic Command, the Office of the Under Secretary of Defense (Policy), and the Vice Chairman of the Joint Chiefs of Staff on all NNSA-specific matters relevant to the NWC. Specifically, I would work with the Under Secretary of Defense (AT&L) by attending NWC meetings and being heavily involved in all NWC matters.

The Under Secretary of Defense for Policy

- **Ms. Michele Flourney**

The Under Secretary of Defense for Policy is a member of the NWC - focal point for the relationship between the DOE and DoD. While the NNSA Administrator serves as the NWC voting member for DOE and would most likely deal directly with the Under Secretary of Defense (Policy), the Deputy Administrator manages all NNSA issues relating to Defense Programs. Specifically, I would deal directly with the Under Secretary of Defense for Policy on nuclear weapons policy matters, in coordination with the NNSA Administrator.

The Secretaries of the Navy and the Air Force

- **SECNAV - Raymond Edwin (Ray) Mabus**
- **SECAF – Mr. Michael (Mike) Donaly**

Strong partnerships with the Secretaries of the Navy and the Air Force are of vital importance when dealing with issues related to nuclear security and Defense Programs. If confirmed as the Deputy Administrator, I would seek to further cooperative relations with the Secretaries of the Navy and the Air Force to help fulfill the NNSA mission.

The Commander of U.S. Strategic Command

- **GEN Kevin (Chili) Chilton**

The Commander of U.S. Strategic Command is a member of the Nuclear Weapons Council. The NNSA Administrator and I would deal directly with Gen. Chilton, the Commander of U.S. Strategic Command. The Deputy Administrator is fundamentally important to the Strategic Command relationship for all nuclear weapon program activities. One of the Commander's most important duties related to NNSA is providing the Annual Assessment Report to the President – a candid report on the safety, effectiveness and expected performance of the nuclear weapons stockpile, based on information from Defense Program advisors and the national laboratories. Since the STRATCOM Commander is responsible for deploying the nuclear weapons stockpile Defense Programs and Strategic Command must have a close relationship at many levels. I expect that, if confirmed as the Deputy Administrator for Defense Programs, I would spend a significant amount of time working with the Commander and his staff, particularly during the present period of stockpile changes.

The Assistant Secretary of Defense for Special Operations and Low Intensity Conflict

- **Mr. Michael G. (Mike) Vickers**
- **USSOCOM - ADM Eric T. Olson, USN**

Special Operations and Low Intensity Conflict are included in NNSA's overall support to and coordination with the DoD in a number of areas. As part of NNSA's support, Defense Programs provided a full-time resident liaison to Special Operations Command to facilitate its access to the unique capabilities of DOE's national laboratories and to

enhance the already close working relationship with DOE and NNSA. If confirmed by the Senate, I will ensure DOE's unique nuclear capabilities, skills and assets are properly available to the Department of Defense and other federal entities.

The Assistant to the Secretary of Defense for Nuclear, Chemical and Biological Defense Programs

- **Mr. Andrew (Andy) Weber**

The Deputy Administrator for Defense Programs deals with the Assistant to the Secretary of Defense for Nuclear, Chemical and Biological Defense Programs on a regular basis. The Assistant to the Secretary is the Chairman of the Nuclear Weapons Council (NWC) Standing and Safety Committee, the flag officer or Senior Executive Service “working level” group in the Nuclear Weapons Council system. In this capacity, I would expect to spend time working with the Assistant to the Secretary, particularly during the present period of stockpile changes.

The Director of the Defense Threat Reduction Agency

- **Mr. Kenneth A. Myers III**

The Defense Threat Reduction Agency (DTRA) works with the NNSA’s Offices of Defense Programs, Defense Nuclear Nonproliferation, and Emergency Operations on a number of issues, ranging from individual weapon system Project Officer Groups to hosting DTRA-sponsored work at NNSA sites and collaborating on nonproliferation issues. If confirmed, I would work directly with the Director of DTRA to further our common goals.

Officials in the Intelligence Community

The Department of Energy is a member of the Intelligence Community. Within DOE, the Director of the Office of Intelligence and Counterintelligence has primary responsibility for Departmental interactions with the Director of National Intelligence and other Intelligence Community components. I am committed to continuing to revitalize our national laboratories and production plants into a leaner and more cost-effective Nuclear Security Enterprise. However, I am mindful that our design laboratories and production facilities are national assets that support a large number of defense, security, and intelligence activities. As the role of nuclear weapons in our Nation’s defense evolves and the threats to national security continue to grow, the focus of this enterprise must also change and place its tremendous intellectual capacity and unique facilities in the service of addressing other challenges related to national defense. We are taking steps to move in this direction, including functioning as a national science, technology, and systems engineering resource to other agencies with national security responsibilities. Each of the NNSA national laboratories maintains a Field Intelligence Element, responsible for conducting analysis and technical work to fulfill DOE’s intelligence responsibilities. The strong collaborative relationship with other elements of the intelligence community, which is already good, will be deepened further by improving access to advanced computational capabilities and special purpose, low-volume manufacturing capabilities existing in NNSA. If confirmed, I will give my strong support to this cooperation and

ensure that the Intelligence Community continues to have excellent access to the national security laboratories and other assets of the Office of Defense Programs.

Major Challenges and Problems

In your view, what are the major challenges and problems confronting the Deputy Administrator for Defense Programs?

In my view, the major challenges confronting the Deputy Administrator for Defense Programs are the changes required in the nuclear weapons stockpile and nuclear weapons complex as both continue to age. While Defense Programs has made significant improvements in meeting near-term commitments, relief on legacy stockpile requirements has not been provided. At the same time, modernization of many nuclear facilities is necessary due to aging of the facilities, the evolution of modern safety standards and the increasing concerns about security of nuclear material. Being requirements driven, NNSA needs to articulate and refine its plans to change the complex in order to support the required stockpile changes, both in the near term of 5-10 years and the longer term of 10-30 years, even when the details of the future requirements are not known precisely.

What are the operational challenges and problems, including challenges and problems related to safety and security?

The operational challenges, in my view, stem from the intersection of a lack of detailed knowledge of future requirements and the fact that dealing with anything nuclear involves long time-scales and substantial costs. Therefore there must be a balance between risk, cost, and benefit rather than focusing strictly on the lowest risk path. Without this balance, over time, this leads to risk avoidance, which proves to be very costly, time-consuming, and unproductive. In my view, the major challenges confronting the Deputy Administrator for Defense Programs are how best to deal with a large set of interconnected cost-benefit-risk tradeoffs across a complex that is large, expensive, and old – and in a time when the outputs of the complex are required to change. At the very least, these changes include (1) progressing to a smaller stockpile, (2) applying recognized – but as yet undeployed – means of improving the safety, security, and effectiveness of warheads without changing military requirements and without recourse to underground nuclear testing, and (3) doing the first and second with a workforce that is nearly completely different from the workforce that put the complex and the stockpile in place. Safety and security must be an intrinsic part of “the job”, not add-ons. It is my view that giving the directors of the labs and plants accountability for the “whats” – the outputs, including good safety and security as an inherent part of the job, without instructing them on the “hows” – the process of doing it – i.e., via DOE orders, would improve not only productive work outputs, but also safety and security. This viewpoint is based on personal experience in the US and the UK.

Does the fact that production facilities are embedded in the national security laboratories impact your approach for sustaining safety and security?

No. I believe that the consequences of failure to manage safety and security may be higher in areas that deal with production of special nuclear material components than in Research and Development, but the consequence of loss of classified information may well be higher in R&D areas than in manufacturing operations. Additionally, the hazards implicit in some R&D operations are just as high as in some manufacturing operations. At AWE, I found it interesting that there were fewer mistakes made in safety in high hazard manufacturing or R&D operations than in lesser hazard manufacturing or R&D operations. Those in the high hazard operations recognized they had to be trained and aware of the consequences, or they would not be able to make it home at the end of the day.

If confirmed, what plans do you have for addressing these challenges and problems?

If confirmed, I plan to meet the challenges of combining near-term deliverable requirements with longer-term changes to the complex and the stockpile by articulating the common elements of planning scenarios, by setting clear expectations, and through consistent personal communications. In my years at AWE, neither I nor my executive board had the luxury of “dodging” hard choices because we were accountable for the outputs to MOD in both the near and far terms. If confirmed, I would also continue to strengthen the notion of an integrated nuclear weapons complex where everyone has accomplishment metrics, is rewarded for success, and accountability is clear.

If confirmed, what management actions and time lines would you establish to address these challenges and problems?

If confirmed, I will commit my personal involvement and that of Defense Programs management to work aggressively with the national security laboratories, production sites, and other interested parties such as Congress, the Department of Defense, and the Defense Nuclear Facilities Safety Board to deal with the issues involving managing benefit, risk, and cost across the nuclear weapons complex. I do not yet have a specific timeline in mind with regard to management actions, but I will develop one as soon as I am confident I understand the specific challenges we face collectively and in the individual programs.

If confirmed, what broad priorities would you establish to address the issues that would confront the Deputy Administrator for Defense Programs?

My highest priorities would be the same as my predecessors have had – to maintain the safety, security and effectiveness of the nuclear weapons stockpile while positioning the complex for future changes. NNSA must continue to meet its near-term deliverables to the Department of Defense while looking to the future. I believe NNSA can adequately do both - and must in order to fulfill its responsibilities to the nation.

In your previous capacity for the United Kingdom Atomic Weapons Establishment you were responsible for managing the nuclear weapons complex. What aspects of this experience do you believe you could apply to address the challenges and problems facing the NNSA complex, including challenges and problems relating to operating safety?

My role as Managing Director and CEO of the Atomic Weapons Establishment in the UK from 2006 to 2009 gave me a good understanding of manufacturing processes for special material components, qualification for weapon use, assembly, transport, support in service including surveillance, and finally decommissioning, dismantlement, disassembly, and disposal. Communication and productive interaction with the MOD, the local community, nuclear regulatory authorities, and the AWE workforce of employees and contractors was important to success. While there are important differences between the US and UK programs, (8 sites vice 2; 8 site offices vice 1, and 1000s of warheads vice hundreds), as the contractor, I had full accountability for the operations from R&D through dismantlement, I had a single executive board reporting to me, and although I had two strongly regulated Nuclear Licensed sites, I was not instructed how to do the job in detail or through prescriptive orders. The latter was a tremendous benefit. Over the course of three years, I developed – with the MOD customer – an “eyes-on, hands-off” relationship that proved highly productive. That is, the MOD managed the contract rather than the contractor which allowed me to better do my job. If confirmed I would apply appropriate parts of this learning to the US complex, and work with the structure as it exists to perform as one integrated complex where possible.

Overall Management

Do you believe that there are any organizational or structural issues in the NNSA that should be addressed to improve management and operations of the Office of the Deputy Administrator for Defense Programs, or that you would address if confirmed? If so, what are these issues and how would you address them, if confirmed?

Continuous improvement requires innovative thinking and fresh ideas. I do not believe in changing just for the sake of change, but if there are ideas to improve an area that is not performing or functioning adequately well, then I believe the benefit of making a change is worth the cost and risk to put it in place. At present, I have a concern about two areas. The first is the reporting level for the Defense Programs Site Offices. At one time, they reported to the head of Defense Programs. Later, when NNSA was formed, they reported to the Administrator, but this caused a decoupling of safety and security from mission deliverables and it did not work well. Today, the site offices report two levels below the Deputy Administrator for Defense Programs. I sense that it may be better to have the sites and the site offices to report into the same level – the Deputy Administrator level. The second concern is the visibility of science within Defense Programs. The nuclear deterrent program is inherently a complex, high-technology program. The quality of

understanding of the underlying science of weapon performance in an aging stockpile, including safety and security, is extremely important. In the event that a CTBT is brought forward for consideration, whether ultimately ratified or not, a hard examination of the scientific underpinning of warhead knowledge will be essential. If confirmed, I will assess the organizational structure of Defense Programs and make recommendations to the Administrator and Principal Deputy Administrator. I will seek their thoughts on potentially improved ways of doing business – if prospective changes are viewed to be beneficial, cost effective, and managed.

Do you believe that the expertise of Department of Energy personnel serving outside the NNSA can be helpful to you if confirmed?

I strongly believe this to be true and very beneficial. If confirmed, I will work with the entire Department of Energy and make full use of the resources available within and outside of NNSA. Not only is it required that we cooperate in many areas with other parts of the Department, but I know there are many personnel that can provide assistance and advice helpful to Defense Programs. In particular, I know and look forward to working closely with Dr. William Brinkman, Director of the Office of Science, Dr. Steven Koonin, Undersecretary for Science, and Dr. Ines Triay, Assistant Secretary of Energy for Environmental Management.

If so, what expertise do you believe would be helpful and how would you utilize this expertise if you are confirmed?

If confirmed, I will make it a high priority to understand the full scope of the Department of Energy's available resources. I understand that Defense Programs works closely with many offices, such as the Office of Engineering and Construction Management; the Office of Health, Safety and Security; the Chief Financial Officer; the Office of Environmental Management; and DOE's Chief Information Officer. These offices, and others within the Department, have expertise that can contribute to the success of the missions of the Office of Defense Programs and NNSA.

Are you aware of any limitations on the authority of the Deputy Administrator for Defense Programs to draw on that expertise?

There are no limits that I am aware of to drawing on the expertise of other offices in the Department of Energy. I view these other offices, such as the Office of Engineering and Construction Management, the Office of Science, and the Office of Health, Safety and Security as important assets to the NNSA and Defense Programs. For example, these Offices provide valuable external reviews and recommendations regarding our activities and facilities.

What is your view of the extent to which the NNSA is bound by the existing rules, regulations, and directives of the Department of Energy and what flexibility, if any, do you believe you would have in implementing such rules, regulations, and

directives that would pertain to the Office of the Deputy Administrator for Defense Programs?

My understanding is that NNSA must comply with rules, regulations, and directives issued by the Secretary of Energy and the Deputy Secretary. The NNSA Administrator is responsible for ensuring that NNSA and its contractors comply with these requirements, and that responsibility flows down to the Deputy Administrator for Defense Programs. Some rules and regulations provide specific exemption procedures that NNSA can invoke if the NNSA Administrator concludes an exemption is warranted. In addition, the DOE Departmental Directives Program Manual provides a general exemption procedure that allows NNSA to deviate from DOE directives. This manual also permits Departmental elements, including NNSA, to issue “supplemental directives” that may be used to implement requirements in directives, assign responsibilities and establish procedures within a particular Departmental element. Finally, under the NNSA Act, the NNSA Administrator has authority to issue NNSA-specific policies, “unless disapproved by the Secretary.”

NNSA, in large measure, was created in response to security lapses at the Los Alamos National Laboratory. However, security lapses, particularly at Los Alamos, have continued to occur. Section 3212(b) (10) of the FY 2000 National Defense Authorization Act provides that the Administrator has authority over, and is responsible for all programs and activities of the Administration, including “administration of contracts, including the management and operations of the nuclear weapons production facilities and the national security laboratories.”

If confirmed, how would you plan to assist the Administrator of the NNSA to prevent security lapses at NNSA facilities?

Security of nuclear weapons, nuclear material and design information is an extremely important challenge of paramount importance to national security. I have a good understanding of the nuclear weapon program and the likely impact that a loss of classified information or material could have on the US. My knowledge and emphasis on nuclear security will help the Administrator, the Chief of Defense Nuclear Security, the Associate Administrator for Defense Nuclear Security, and the Site Office Managers focus appropriately on the importance of security at our sites and while nuclear material is on the road in the control of the Office of Secure Transportation. Any breach in security could bring grave consequences to our nation. If confirmed, I will do everything in my power to ensure that the complex remains safe and secure, and we will take immediate actions to remedy any marginal system. Practically speaking, some initiatives such as leveraging technology to the fullest extent possible and consolidating nuclear materials to fewer locations will take time and funding, but they will have a large and positive impact. I commit to being a strong advocate for security within the nuclear weapons complex. Although the record is not unblemished, I understand that NNSA has made progress in this area by holding M&O contractors accountable for lapses and by improving federal oversight of cyber security and the protection of classified information.

A personal sense of accountability by each worker within the nuclear weapons complex is important. At AWE, we focused on intensive training of all new recruits as part of their new employee training program. Periodic refreshers for existing workers and quantitative case studies were useful, but instilling a sense of personal accountability is an important goal. If confirmed, I will support actions that are improving the current posture.

The Deputy Administrator for Defense Programs is responsible for activities occurring at NNSA laboratories and production sites across the country, including “directing, managing and overseeing the nuclear weapons production facilities and the national security laboratories.”

What are your views on the appropriate roles and responsibilities of field managers relative to those of Defense Programs Headquarters managers in carrying out these responsibilities?

If confirmed, I look forward to gaining a thorough understanding of the perspectives of both field and Headquarters managers. There is generally close cooperation between field and Headquarters managers in Defense Programs, with Headquarters setting expectations through a number of program and contract mechanisms, while field managers provide daily oversight of the contracts and the M&O contractors perform the duties. Trust and communication are vital to success and essential to productivity and smooth operations.

What is your view of Defense Programs’ organizational structure?

I do not have a clear view at this time. If confirmed, I will take a hard look at the structure, the reporting relationships, and the clarity of accountabilities. I think it very important that I understand why the structure is what it is, how the current structure operates and what potential improvements might be effective before recommending any change.

In your view, is there a well-delineated and consistent chain of command and reporting structure from the field staff to headquarters staff and from the contractors to federal officials?

From what I have learned to date, I believe there is an established chain of command and reporting structure in place at NNSA, but to remain strong and effective with new personnel, it needs to be constantly utilized and reinforced. If confirmed, I will take a close look at the reporting structure, assess its strengths and weaknesses, and recommend any changes for improvement that are merited.

What changes, if any, would you recommend in the Defense Programs organization or structure or in the overall National Nuclear Security Administration organization or structure?

At this time, it is my feeling that I do not understand adequately the strengths and weaknesses of the current organization aside from the two concerns detailed in an answer to a previous question. If confirmed, I will take a close look at the DP organization and reporting structure and, when completed, recommend any changes for improvement that are merited. The review would include, but not be limited to, perspectives from Headquarters, Federal Site Offices, and NNSA laboratories and plants.

Weapons Programs Personnel

If confirmed, what specific steps would you take to retain critical nuclear weapons expertise in both the NNSA and the contractor workforce and to attract new expertise?

If confirmed, working to retain and develop critical nuclear weapons expertise in both the NNSA and the contractor workforce will be a high priority of mine. Throughout my own career, I have given selected people highly demanding technical and administrative challenges because I knew they could accomplish them, and in doing so, would grow to become capable of even greater challenges. The most advanced experimental and computational facilities, or advanced manufacturing facilities, are not worth much without the right people to use them. I am impressed with programs such as NNSA's Stockpile Stewardship Academic Alliances and Future Leaders Program, and want to continue support for them. I support efforts such as mentoring young weapon designers, most of whom have never participated in a nuclear test, with real work. I believe that some of the best people are drawn to the hardest problems. Articulating those problems clearly, so that they can be undertaken and solved, will be one of my objectives. In addition, if confirmed, I would pursue effective contract mechanisms that support cultivation of critical skills at all contractor sites.

Do you support retaining the capability to re-manufacture every component expected to be found in the stockpile in the near term?

First and foremost, I support maintaining the safety, security and effectiveness of the nuclear weapons stockpile without a return to underground testing. This often requires the re-manufacture of components, but sometimes that is not the most prudent approach. Planning for stockpile changes and for changes to the nuclear weapon complex may eliminate the need to retain the capability to re-manufacture every component expected to be found in the present stockpile. Many components cannot be reproduced because the materials are no longer available due to prohibitions on their use by regulation or to loss of the tech base that provided them. I have no simple prescription to offer. Looking at each weapon system, and at each component in each system, is required. As aging continues, the need for a more robust surveillance program increases to avoid surprises. The Phase 6.X process for assessing weapon system life extension requirements is rigorous and comprehensive. Recommendations from life extension studies are presented to the President at appropriate stages. The President and Congress ultimately make the

final decisions regarding appropriate steps to take to extend the life of any particular nuclear weapon system.

What do you see as the most pressing re-manufacturing needs?

In discussions with Defense Programs staff, the most pressing re-manufacturing needs appear to involve secondaries made at the Y-12 National Security Complex, plutonium primaries, and the material that sits between the two. These are extremely intricate nuclear components that need to be made in quantities high enough to satisfy the projected needs of USSTRATCOM and the military services, especially if a problem develops in the stockpile. If confirmed, I look forward to learning more about these and related issues and contributing to a solution.

In addition to or in lieu of remanufacturing each component of a nuclear weapon, what in your view are the activities that can sustain nuclear weapons expertise at the national laboratories and the manufacturing facilities?

I have a view that important capabilities are ultimately retained and sharpened by using them. In the work done at the national security laboratories for customers outside NNSA, there is the opportunity to do engineering development and manufacturing of specialty items and precision components, at low volumes, usually with much shorter delivery times than are required in the nuclear weapon program. Across government, the threat reduction program has challenges and needs that can help NNSA keep parts of its nuclear weapons expertise sharp. I have personal experience in this area from AWE, but it is also the case in the US.

Stockpile Stewardship Program

The Stockpile Stewardship program has successfully supported the annual nuclear weapons certification effort for the last 17 years. Many new, experimental facilities, including the National Ignition Facility and the Dual Axis Radiographic Hydrodynamic Test facility (DARHT) are coming on line and have started to be used for experimentation.

In your view, what other capabilities, if any, would be needed to ensure that the stockpile is safe, secure and reliable without nuclear weapons testing?

In my view, the Stockpile Stewardship Program (SSP) has been successful and is on an appropriate path for continued success. Due to the highly integrated nature of the SSP and constrained budgets, Defense Programs has not planned for much redundancy in capabilities in the future. The National Ignition Facility and the Dual Axis Radiographic Hydrodynamic Test Facility, and other high profile facilities and capabilities, each play a complementary role in the SSP. Together, they provide increased confidence in the safety, security and effectiveness of the stockpile as their technical capabilities are developed. This confidence is subjective and not “pass/fail”. I trust the ingenuity and

resourcefulness of the people who make up the SSP will meet the challenge to continue to support the stockpile. If confirmed, I will work to provide the most appropriate tools for them to do so.

In your view is the Stockpile Stewardship program fully coordinated with the Department of Defense, and if not what would you plan to do if confirmed to improve the coordination?

In my view, the Stockpile Stewardship Program appears to be well coordinated with the Department of Defense (DoD). There is good communication between the Department of Energy and DoD at many levels, ranging from routine tasks such as warhead maintenance and surveillance to more policy-oriented issues such as stockpile and complex changes. If confirmed, I commit to fostering good communications between the Departments.

The NNSA previously supported an effort to develop a new nuclear warhead to be a replacement for an existing warhead, without nuclear weapons testing.

In your view what approach would you recommend to maintaining or sustaining the stockpile in the future?

I believe that the Stockpile Stewardship Program is capable of meeting the challenge of making changes to the nuclear weapons stockpile in a number of ways, without either changing the military requirements or resorting to underground nuclear testing. There is a suite of Life Extension approaches, ranging from incremental changes of components to replacement of subsystems that could work effectively to extend the US nuclear deterrent for decades. At the component level, technologies may change without altering fit, form, or function. At the subsystem level, technologies and units may change, but without altering military requirements. Because there is a “test pedigree” associated with subsystems, changes may be undertaken with confidence without resorting to underground testing. It is my view that one of the least desirable approaches to stockpile maintenance is having a weapon system that ages in place, while less surveillance is done, and no changes are even considered because doing so may be seen as politically incorrect. I do not mean to say this is happening, but I do mean to say that if it happened, this would be unacceptable. In Richard Feynman’s words after the Challenger explosion, “For a successful technology, reality must take precedence over public relations, for nature cannot be fooled.” By undertaking a range of life extension approaches -- not just one -- Defense Programs has an opportunity, in concert with the DoD and Congress to 1) reduce the numbers of currently stockpiled weapons, 2) incorporate advanced safety and security features to maintain positive assurances against theft, loss, and/or misuse of these replacement warheads; and 3) improve confidence in the effectiveness of the nuclear weapons stockpile through better scientific understanding to reduce uncertainties, while making modest changes to increase performance margins.

Have you had the opportunity to review both the classified and unclassified summary of the recent JASON report on the stockpile life extension program?

I have read the unclassified summary of the report but have not yet read the classified version.

If so, what is your view of the report? Are there significant aspects of the report with which you disagree?

The unclassified summary provides insufficient detail for a technical judgment. I intend to read the classified report as soon as one is provided to me.

Complex Revitalization

If confirmed you will play a key role in the steps to modernize and downsize the nuclear weapons complex.

Do you agree that there should be a net reduction in the footprint of the nuclear weapons complex?

I do agree, based on an expectation that the footprint, reduced appropriately over time, should have the expected return of cost savings without losing productivity or the ability of Defense Programs to meet mission requirements and deliverables. Requirements include not just weapon parts, but capabilities as well. The challenge that is with us today is determining how best to reduce the footprint over the next several years without regretting the decisions a decade or two from now. Achievement of this objective will require improved clarity of future mission requirements and the best set of integrated planning tools we can muster.

If, confirmed, what will be your highest priorities in ensuring the modernization of the complex?

If confirmed, Complex Revitalization will be a key initiative that I will pursue as Deputy Administrator. I also understand that NNSA has followed the well-established National Environmental Policy Act process for informing its decisions on Complex Revitalization and that several important decisions have been made in the past two years. I will continue to work with our interagency partners as we revitalize the nuclear weapons complex to support present and future requirements as those requirements become clearer.

Third-Party Financing

If confirmed, will you review all proposals for third-party financing and ensure that no such proposal will be implemented unless it is cost effective and consistent with applicable Department of Energy, Office of Management and Budget and General Services Administration rules and regulations?

Yes. If confirmed, I would carefully review all proposals for third-party financing of Defense Programs facilities and confer with all concerned parties, including our congressional committees, to ensure that before implementation, any third-party financing proposal is cost-effective and consistent with all applicable rules and regulations.

Facilities and Infrastructure

The Facilities and Infrastructure Recapitalization Program (FIRP) was established to address long-deferred maintenance backlogs in the nuclear weapons complex, particularly at the manufacturing facilities.

Do you believe that this program has been successful?

Yes, in large part. I saw first-hand the dedication of NNSA employees both at Headquarters and in the Site Offices, as well as the dedication of employees at the NNSA sites. Many achievements were made in reducing the backlog of deferred maintenance and several key reductions in footprint were made across the complex as part of the program.

When the FIRP program expires, what in your view is needed to ensure that buildings are adequately maintained in the future?

I have not been able to have the breadth of discussions yet to form an opinion. If confirmed, I will take the time to have the required discussions, form a view, and make recommendations to the Administrator. We know, however, that maintaining our infrastructure suffers from competing priorities in a severely constrained fiscal environment. If confirmed, my goal will be to establish a stable funding base which we can then manage against as we assess our infrastructure needs and priorities.

The Readiness in the Technical Base and Facilities program (RTBF) is responsible for construction and operation of facilities.

If confirmed, what steps will you take to ensure that surplus buildings are torn down or transferred so that they will not need long-term maintenance?

If confirmed, Complex Revitalization will be a key initiative that I will pursue as Deputy Administrator. A central part of Complex Revitalization is ensuring that surplus buildings are either torn down so that they will not need long-term maintenance or transferred to other programs that need them and are committed to supporting their proper maintenance. I expect to work closely with the Offices of Infrastructure and Environment within the NNSA and Environmental Management in DOE (and other organizations) to achieve these objectives. I understand that both of these Offices have well-established programs for dealing with excess facilities. As the former Managing Director and Chief Executive Officer of the Atomic Weapons Establishment I am familiar with these issues and I will pay close attention to these concerns.

If confirmed, will you support including the cost of tearing down those buildings that are being replaced within the total project cost of any new construction?

If confirmed, I would support steps to minimize financial liabilities on the Weapons Activities account by including the cost of decommissioning, dismantlement, and demolition of buildings that are being replaced within the total project cost of any new construction. This was achieved in the Microsystems and Engineering Sciences Applications (MESA) project, an area for which I had personal accountability while I was still at Sandia National Laboratories, and it worked well. To portray the full scope of projects, we must present the full scope and cost of new construction, to include demolition of old buildings.

DOE and NNSA often build one of a kind or first of a kind buildings. Some of the past construction have a history of being over budget and behind schedule and many have run into technical difficulties. In addition, new operational facilities must meet the operational safety standards of the Department of Energy.

If confirmed, what steps will you take to ensure that NNSA construction projects are managed to be completed within budget and on time?

If confirmed, one of my highest priorities will be to demand accountability across the nuclear weapons complex, in both the Federal and contractor workforce. We must keep commitments to achievement of key milestones for cost and schedule on construction projects. I understand that improving project management is one of the six “Focus Areas” that is already being emphasized by NNSA. I expect to learn more about this and the other focus areas, and ask fundamental questions such as: 1) do we have the right people in place to do the job; 2) are we using all available appropriate resources within NNSA, within DOE, and even outside DOE; and 3) are the commitments we have made still reasonable (have circumstances or requirements changed, and if so, how are they being managed)? If confirmed, I will work with the Federal Project Directors within NNSA and seek help from all available sources. I recognize that project management skills are critical to the success of NNSA construction projects. If confirmed, I intend to leverage my 30 years of experience working with many outstanding people in the nuclear weapons complex to develop and improve Defense Programs’ capability in construction management. Today, there are proven quantitative methodologies, such as Earned Value Management systems, that can identify problematic cost and schedule “trajectories” at an earlier stage. I look forward to meeting with staff from the Office of Facility and Infrastructure Acquisition and Operations and the Office of Infrastructure and Environment to discuss both general project management within NNSA and to review progress on specific high-profile projects.

What additional costing, project management and design skills do you believe are needed in the federal staff of the Office of Defense Programs or in the NNSA?

I am not yet in a position to say what additional costing, project management and design skills are needed in the Federal staff of Defense Programs or NNSA, but I understand this is an area of emphasis within NNSA. Because this is such an important area to the success of Complex Revitalization and the very future of the nuclear weapons complex, I will ensure that good project management within Defense Programs remains a high priority and I will set clear expectations and provide support for Federal and contractor staff to obtain the skills that are necessary for success. I also believe there needs to be a forum where all parties can bring suggestions forward to both arrive at the right conclusion, and to ensure the needed buy-in and cooperation that will garner broad support.

At what point in the Critical Decision time line do you believe an independent cost estimate should be performed for a construction project, and why?

Based on my understanding of the Critical Decision timeline, I believe an Independent Cost Estimate should be performed for complex and high cost projects prior to setting the project baseline at Critical Decision 2 (Approve Performance Baseline), 60-70% design complete. This is early enough in the process to make an impact and correct issues, but far enough along that there is appropriate fidelity in the estimated project design, scope, and schedule.

If confirmed, will you work to ensure that all design issues impacting operational safety requirements are fully resolved before Critical Decision 3?

If confirmed, I will work to ensure that all design issues impacting operational safety requirements are fully resolved well before Critical Decision 3 (Approve Start of Construction). Due to the importance of operational safety requirements, they should be resolved as soon as possible in the design process, and certainly before construction begins. This is also consistent with the Department's standard, DOE Standard 1189-2008, *Integration of Safety into the Design Process*.

If confirmed, what steps will you take to ensure that nuclear and other operational safety issues are fully addressed in the design of new NNSA buildings?

If confirmed, I intend to have Defense Programs follow the Department's standard, DOE Standard 1189-2008, *Integration of Safety into the Design Process*. This new standard requires early identification of Safety Class systems and other safety related requirements early in the project life cycle, just after approval of Mission Need. These measures ensure that all safety requirements are articulated, validated and understood early in the project life cycle.

What in your view are the construction and maintenance priorities for the NNSA?

I have not had the opportunity to have the in-depth discussions with NNSA staff to form a view, but if confirmed, I will work to form an accurate view quickly. On the basis of my current understanding, two important, albeit expensive, construction priorities are the

Uranium Processing Facility (UPF) at the Y-12 National Security Complex and the Chemistry and Metallurgy Research Replacement facility (CMRR) at Los Alamos National Laboratory.

Stockpile Management/Life Extension Programs

If confirmed, you will be responsible for managing the stockpile including the life extension programs for existing nuclear warheads.

What is your general assessment of the effectiveness of the ongoing and planned life extension programs?

I believe the Life Extension Programs (LEP) are highly effective for extending the near-term life of warheads in the nuclear weapons stockpile. I am familiar with the LEPs for the W87 (Intercontinental Ballistic Missile warhead) and the B61-7/11 (strategic bombs). I understand there are production challenges with restarting a unique component needed for the W76 (Submarine Launched Ballistic Missile warhead) LEP, but that is being appropriately addressed. I understand that defects continue to be discovered in the legacy stockpile. The process of significant finding investigations (SFI) is used in the way intended to draw conclusions based upon facts uncovered in detailed exploration of such defects. The SFI process works and provides information that helps guide refurbishment schedules. As you know, the NPR is scheduled for delivery to Congress February 1, 2010 and this will also help guide refurbishment schedules. If confirmed, I am committed to finding effective ways to support the NPR policy.

How well, in your view, does the nuclear weapons complex -- encompassing the laboratories and the production sites -- function as an integrated complex and, externally, with the Department of Defense in executing the life extension programs?

My impression is that the nuclear weapons complex, including all the sites, works relatively well together and with the Department of Defense. I understand that there is a strong emphasis on complex-wide milestones and that some of the performance fees at the sites are inter-related. That is a very strong motivator for integrated success, and one that I would plan to continue, if confirmed.

Do you believe the efficiency with which NNSA manages the execution of the life extension programs can be improved, and if so, how?

I am yet not aware of a specific way to improve the management of the Life Extension Programs (LEP), but because of their importance to Defense Programs and the continued health of the nuclear weapons stockpile, I expect to personally review the execution of the LEPs, if confirmed.

What in your view will be the challenges facing the NNSA if it is determined that any individual weapon will require a modification, such as a new component for example, to meet safety security or reliability requirements?

If confirmed, my approach to resolving challenges with weapon systems will be to first articulate the challenge facing the NNSA, clearly communicate that problem to all stakeholders, including our congressional committees and explain the projected way ahead. I will then seek support from both the congressional authorizing and appropriating committees in an effort to efficiently resolve the problem. Parallel to these efforts, I will work to ensure we have the human capital and specialized skills necessary to perform the work so risk is properly managed.

Comprehensive Test Ban Treaty

From a technical perspective do you believe that the stockpile can be maintained without the need for a resumption of explosive nuclear weapons testing?

Yes, in large part due to the increased understanding and successes brought about by the Stockpile Stewardship Program and attention given to training people in design, development, manufacturing, and qualification in an era where nuclear testing has not been done since September 1992.

In your view what are the essential capabilities that must be in place to sustain the stockpile without nuclear weapons testing?

The essential capabilities are those that are already supported by the Stockpile Stewardship Program which evolve as greater understanding of the current stockpile improves.

If confirmed, I am willing to discuss this further in a closed session.

Safety and Security of the Nuclear Weapons Stockpile

The Deputy Administrator for Defense Programs is responsible for assuring the safety and security of nuclear weapons from a design perspective.

If confirmed, will you work with the Department of Defense to identify necessary options to improve the safety and security of nuclear weapons from a design perspective?

Absolutely. If confirmed, I expect to work closely with all of our interagency partners, specifically Gen Chilton, Commander USSTRATCOM, as well as the military services. I expect to work in partnership with these entities to satisfy the requirements set by the military services. If confirmed, this will be an important part of the work that I do as Deputy Administrator for Defense Programs.

Role of the NNSA complex in meeting other national security challenges

The nuclear weapons complex, as a result of the billions spent on expanding capabilities to sustain nuclear weapons, including the advance computing capabilities, supports many aspects of national security research and development including the Department of Defense and the Intelligence Community.

Do you believe that this work in support of others should be sustained?

Yes. Not only is the work valuable, it is essential to attracting people, sustaining skills, and building capabilities to support NNSA's mission. I believe strongly in the work done by the NNSA national security laboratories for government departments outside the NNSA.

In your view does this work allow the nuclear weapons complex to maintain its nuclear skills?

Yes. Because the work required by other government departments is often associated with strong technical challenge and demanding time-scales, it helps sharpen the abilities of those who do the work to respond both accurately and quickly.

Do you believe that there should be any changes or improvements to the work for others program such as those identified in the recent report of the DOE Inspector General?

I have not yet been able to read the report by the DOE Inspector General, but I commit to doing this and recommending any changes or improvements to the work for others program that I see in addition to those in the DOE Inspector General's report.

Regulation, Standards, and Oversight

Concern over what is often deemed excessive or burdensome regulations, standards, and oversight, is often expressed with respect to the nuclear weapons complex.

If confirmed will you review the applicable regulations, standards, and internal oversight activities and make any necessary changes to ensure that the complex is managed safely, securely, and in a cost efficient manner?

Yes. Based on my experience in both the UK and the US nuclear weapons enterprises we must find a more practical way to accomplish work safely, securely, and efficiently with due respect to our environment in order to achieve required program outputs in less costly ways.

Defense Nuclear Facilities Safety Board

If confirmed will you ensure that the Defense Nuclear Facilities Safety Board (DNFSB) is provided full and complete information on a timely basis to ensure that it can execute its statutory responsibilities?

Yes. If confirmed, I plan to foster a strong relationship and frequent communication with the DNFSB. On a personal note, I, and the executive board that reported to me at AWE, worked closely with the Nuclear Installations Inspectorate (NII), the key UK regulatory body for nuclear licensed sites. This rigorous and respectful interaction was enabled by mandatory in-depth technical training of all NII employees so that peer-to-peer technical discussions and debates were possible.

If confirmed will you work with the DNFSB to resolve any technical issues promptly?

Yes. It would be unreasonable, though, for me to imply that this could be done without consideration of available financial and human resources to achieve this objective.

Notification of Congress

If confirmed, will you notify Congress promptly of any significant issues in the safety, security or reliability of the nuclear weapons stockpile?

Yes. If confirmed, I would promptly notify Congress of any issues affecting the nuclear weapons stockpile and nuclear weapons complex. I understand that the officials in the Office of Defense Programs often brief Congressional members and their staffs about the state of the stockpile and complex. I would continue that practice, whether or not there are emerging issues. Good, accurate communication is to everyone's advantage. I pledge to make myself available to address issues of concern.

Congressional Oversight

In order to exercise its legislative and oversight responsibilities, it is important that this Committee and other appropriate committees of the Congress are able to receive testimony, briefings, and other communications of information.

Do you agree, if confirmed for this high position, to appear before this Committee and other appropriate committees of the Congress?

Yes.

Do you agree, if confirmed, to appear before this Committee, or designated members of this Committee, and provide information, subject to appropriate and necessary security protection, with respect to your responsibilities as the Deputy Administrator for Defense Programs?

Yes.

Do you agree to ensure that testimony, briefings and other communications of information are provided to this Committee and its staff and other appropriate Committees?

Yes.

Do you agree to provide documents, including copies of electronic forms of communication, in a timely manner when requested by a duly constituted Committee, or to consult with the Committee regarding the basis for any good faith delay or denial in providing such documents?

Yes.