Advance Policy Questions for Lisa Gordon-Hagerty
Nominee for Under Secretary for Nuclear Security, Department of Energy

Duties and Qualifications

What background and experience do you possess that qualify you to perform the duties of the Under Secretary for Nuclear Security and Administrator of the National Nuclear Security Administration (NNSA)?

I have spent more than 30 years dedicated to supporting and enhancing our national security. The majority of that work has focused on nuclear security, including nuclear weapons surety and radiological and nuclear emergency response.

I began my career at the Department of Energy while I was a graduate student studying radiological health at the Savannah River Plant. Upon completion of graduate school, I began my professional career as a Health Physicist at Lawrence Livermore National Laboratory in the Health and Safety Division supporting Chemistry and Materials Science, Tritium and Plutonium Facilities. My work continued at the Department of Energy supporting radiological and nuclear emergency response programs, ultimately becoming the Director of the Office of Emergency Response, Office of Military Application, Defense Programs. While serving in that capacity, I was dual-hatted as the Acting Director of the Office of Nuclear Weapons Surety. Based partly on this expertise, I was offered the opportunity to become a member of the White House National Security Council staff as Director, Office of Combating Terrorism, Weapons of Mass Destruction Preparedness, and among other responsibilities, supporting national level crisis management programs. I have also held other leadership and management positions that I believe make me qualified to perform the duties of Administrator of the NNSA and Under Secretary for Nuclear Security at the Department of Energy. Most importantly, I firmly believe that my most unique qualification is having served as both a federal official and as an employee at a National Laboratory. These perspectives instilled in me an understanding of the important roles both the federal and technical experts throughout the nuclear security enterprise play in executing the missions of NNSA and the imperative to ensure there is a shared responsibility brought about by a "One Team" approach.

Finally, I believe, if confirmed, the extensive policy experience I gained from my tenure on the House Energy and Commerce Committee will aid me in my leadership of NNSA. While on the Committee staff, I focused on the Department of Energy's Defense Programs and other technical issues and provided technical expertise to members of the Committee.

Do you believe that there are any steps that you need to take to enhance your expertise to perform the duties of the Under Secretary for Nuclear Security?

I believe that any challenges I will face, if confirmed as NNSA Administrator, will be minimized by ensuring that I have fully-qualified and dedicated technical, operational and administrative staff at Headquarters, in the field and throughout the National

Laboratories and production sites. Moreover, with such a dedicated workforce with mission focus there is nothing we cannot accomplish to ensure that the United States' nuclear deterrent is safe, secure, and reliable now and in the future.

Major Challenges and Priorities

What are the major challenges confronting the Under Secretary for Nuclear Security and Administrator of NNSA?

More than half of NNSA's facilities are over 40 years old, and nearly 30 percent date back to the Manhattan Project era. I will work closely with Congress to meet the long-term challenges of modernizing NNSA's infrastructure. In addition, even with a modernization plan, no institution can operate without a qualified workforce. I will ensure that the nuclear security enterprise continues to employ the brightest and the best by recruiting, retaining, and growing the highly skilled workforce needed for maintaining the U.S. nuclear stockpile, from our incredibly dedicated federal employees to our partners throughout the national security enterprise.

If confirmed, how would you address these challenges?

I will work with Congress to meet the long-term challenges of modernizing NNSA's infrastructure. In addition, I will promote the nuclear security enterprise so that it continues to recruit, retain, and grow the highly skilled workforce needed for maintaining the U.S. nuclear weapons stockpile, from our incredibly dedicated federal employees to our partners throughout the national security enterprise.

If confirmed, what would be your main priorities for NNSA?

If confirmed, my top priorities will be the effective execution of the enduring national security missions maintaining a modern and appropriately tailored nuclear deterrent in an ever-changing geopolitical environment. To ensure that our premier workforce has the tools needed to accomplish its mission, I will be focused on several top priorities, in particular, infrastructure modernization. If confirmed, I will ensure that NNSA delivers on its commitments to its stakeholders, primarily the Department of Defense, and accomplishes its vital missions.

Relations with Congress

What are your views on the state of the relationship between the Under Secretary for Nuclear Security and the Senate Armed Services Committee in particular, and with Congress in general?

I understand the Senate Armed Services Committee's oversight and authorization responsibilities and believe communication is important. If confirmed, I will make it a priority to ensure there are good communications between NNSA and Congress, and in particular, Members and staff of the Senate Armed Services Committee.

If confirmed, what actions would you take to sustain a productive and mutually beneficial relationship between Congress and the Under Secretary for Nuclear Security?

Communication is the foundation of any healthy relationship. If confirmed, I am committed to ensuring regular communications with the Committee, at all levels of the organization.

Nuclear Weapons Mission and Security Environment

The Trump Administration is currently conducting, and will soon release, a new Nuclear Posture Review (NPR). The last NPR, conducted in 2010 by the Obama Administration, emphasized reducing the role of nuclear weapons in U.S. national security and prioritized the prevention of proliferation and nuclear terrorism over the strength and effectiveness of the existing U.S. nuclear weapons stockpile. The international security environment has changed dramatically since 2010, with widespread recognition of the return of great power competition, in addition to the emergence of a viable nuclear weapons capability in North Korea and continued advances in ballistic missile technology in Iran. While the Secretary of Defense is the primary cabinet official responsible for policymaking regarding nuclear weapons, the support of the Secretary of Energy and the Administrator of NNSA are absolutely crucial for the successful conduct of the nuclear mission.

If the NPR recommends any changes in the U.S. nuclear posture, do you commit, if confirmed, to providing the full and timely support of NNSA to the work required to implement those changes?

Yes. If confirmed, I will execute the critical work of the nuclear security enterprise as laid out by the President, translated into action by the Nuclear Weapons Council, and funded by Congress.

If the NPR were to call for the development of capability changes of any kind, would you support those changes and ensure, if confirmed, that NNSA supported the requirement and the accompanying Administration policy completely?

Yes. If confirmed, I will execute the critical work of the nuclear security enterprise as directed by the President, translated into action by the Nuclear Weapons Council, and funded by Congress.

Do you agree with former President Obama that the goal of eliminating all nuclear weapons should be "a central element in our nuclear policy"?

I agree with President Trump that our first priority is to protect the United States, its allies, and its partners. I further agree that both the long-term goal of eliminating nuclear weapons and the requirement that the United States have modern, flexible, and resilient nuclear deterrent that is safe and secure until such a time as nuclear weapons can prudently be eliminated from the world.

I agree with President Trump that this is a long-term goal, and I also agree with him that the United States now faces a more diverse and unstable geopolitical environment than ever before.

Do you agree with the 2010 NPR that "our most urgent priorities [are] preventing nuclear terrorism and nuclear proliferation," instead of maintaining a credible U.S. nuclear stockpile?

Preventing adversary nuclear attacks of any scale is the highest priority of the United States, whether that is a nation-state, rogue-state, or non-state actor. Maintaining the stockpile and preventing nuclear proliferation are complementary tasks that are stronger when performed in concert with each other.

Do you believe the United States should ratify the Comprehensive Test Ban Treaty?

As I understand it, the United States remains committed to a moratorium on nuclear testing, while continuing to review the Comprehensive Test Ban Treaty. I believe the United States should continue to call on all states possessing nuclear weapons to declare or maintain a moratorium.

Overall Management

The NNSA Act of 2000, as amended, establishes that the Administrator "… shall be subject to the authority, direction, and control of the Secretary [of Energy]. Such authority, direction, and control may be delegated only to the Deputy Secretary of Energy, without redelegation."

What is your view on the relationship between the Secretary of Energy and the Administrator of NNSA in statute and in recent practice?

While semi-autonomous in nature, NNSA is "subject to the authority, direction, and control of the Secretary" according to the NNSA Act. Therefore, it is both critical and necessary for DOE and NNSA to maintain a strong and healthy relationship. I believe that the nuclear security mission is a key priority for both Secretary Perry and Deputy Secretary Brouillette, and, if confirmed, I will work closely with them and with Under Secretary Dabbar and Under Secretary Menezes to build a strategic, collaborative, and well-integrated department.

How is the "semi-autonomous" nature as established by the NNSA Act reflected in NNSA's organizational structure? What makes NNSA different from the other under secretaries at the Department of Energy (DOE) in practice?

The NNSA Act designates NNSA as a semi-autonomous organization under the Department of Energy whereas the organizations led by the other two DOE Under Secretaries – the Under Secretary for Science and the Under Secretary of Energy – are not semi-autonomous. As such, the NNSA Act does give the Administrator authority over functions that also reside in DOE, such as personnel, procurement, legal matters, legislative affairs, and public affairs. This is a unique authority and differs from the other DOE Under Secretaries. As I noted above, I will work closely with DOE leadership to continue to build a stronger, more collaborative, and more mission-focused culture.

Would you recommend any changes to the organizational structure in NNSA to improve management and operations?

A strong governance and management structure is critical for NNSA's continuing success in delivering on our national security commitments. I understand NNSA has taken major steps to improve the overall governance and management of the nuclear security enterprise. Nonetheless, there is always room for improvement to ensure safe, secure, and efficiently deliver mission outcomes. Governance should begin with a strong relationship with NNSA internal and external stakeholders. This includes improving the relationship with management and operating (M&O) partners as well as strengthening our standing and relationships within the interagency. I believe communication is key to this effort as is clearly defining roles and responsibilities amongst NNSA headquarters, NNSA field offices, and the M&O community.

Relationship with the Department of Defense

If confirmed, you will be a member of the Nuclear Weapons Council, along with the Under Secretaries of Defense for Policy and Acquisition and Sustainment, the Vice Chairman of the Joint Chiefs of Staff, and the Commander of U.S. Strategic Command. The Council sets requirements for nuclear forces, which form the basis of the core mission of NNSA. The Department of Defense is, in a sense, NNSA's primary customer.

How would you assess the relationship between NNSA and the Department of Defense, at senior levels as well as at working levels?

I understand that relations could be improved and it is my intention to ensure that NNSA's primary customer, the Department of Defense, receives the necessary support to execute its vitally important national security missions.

What steps would you recommend to improve this relationship?

As stated previously, I believe communication is the foundation of any healthy relationship. If confirmed I am committed to ensuring regular communication with the Department of Defense at all levels.

Do you believe that NNSA is adequately responsive to the requirements set by the Department of Defense?

I have no reason to believe NNSA is not responsive to the requirements by the Department of Defense. However, communications is key especially on technical issues and budgetary realities. I commit to this Committee that, should I be confirmed, I will work to improve, where necessary, the responsiveness of NNSA to its customer.

Defense Programs

The Stockpile Stewardship Program has supported the annual nuclear weapons certification effort for the last 20 years.

Do you believe that we currently have the capabilities to ensure that the stockpile is safe, secure, and reliable without nuclear weapons testing?

I do, and it reassures me that we have over two decades of experience in this task.

The Nuclear Weapons Council has laid out a schedule for the next 20 years that includes the completion of four life extension programs (LEPs), as well as multiple refurbishment programs, the interoperable warheads, and the maintenance of the existing stockpile.

Do you have any concerns with this ambitious schedule?

If confirmed, it will be my priority to ensure that these critical programs are delivered on time and on budget in support of our Nation's nuclear deterrent.

Congress has authorized the Stockpile Responsiveness Program for the last several years in order to exercise design and engineering skills in support of the nuclear weapons mission, but this authority has not been fully utilized by NNSA.

Would you support the Stockpile Responsiveness Program and make full use of the authorities it provides NNSA?

Across the nuclear enterprise, it is imperative to make investments in personnel, programs, and technologies that strengthen our ability to respond to emerging challenges. If confirmed, and with the support of Congress, I would fully support the Stockpile

Responsiveness Program and its goal to expand opportunities for young scientists and engineers to advance warhead design, development, and production skills.

What are your long-term plans for the National Ignition Facility if it continues to fail to achieve sustained ignition?

I believe the National Ignition Facility (NIF) is an essential and enduring experimental capability for understanding the physical properties and characteristics of nuclear weapons performance. While I understand laboratory ignition remains a long-term goal for NNSA, the utility of NIF for stockpile stewardship extends far beyond ignition.

NNSA Budget

In 2015, then-Secretary of Energy Ernest Moniz wrote in a letter to the Director of the Office of Management and Budget (OMB) regarding NNSA's budget allocation for the next five years that "an additional $5.2 billion over FY 2018-2021 [was] needed to establish a viable and sustainable program portfolio" and that "[f]ailure to address these requirements in the near term will put the NNSA budget in an untenable position beginning in FY 2018." He added that, uncorrected, the budget proposal would "lack credibility." Because this Administration's Fiscal Year 2018 Budget Request did not include projections for fiscal years 2019-2021, it is impossible to tell whether Secretary Moniz's recommended $5.2 billion addition in the out-years has been budgeted, but the fiscal year 2018 request did not appear to contain the recommended increases.

Do you agree with Secretary Moniz's assessment of the passback that NNSA received from OMB for the fiscal year 2016 budget request?

While I do not have access to the confidential information available to then-Secretary Moniz until I am confirmed, I have no reason to doubt his assessment of NNSA's needs. If confirmed, I look forward to working with Secretary Perry to address these issues.

Was the fiscal year 2017 budget for NNSA, as enacted, sufficient to carry out the mission? Is the fiscal year 2018 budget as requested sufficient?

I am confident that NNSA's FY 2018 budget request will meet national nuclear security requirements. I understand, in FY 2018, the Administration budget request for Weapons Activities was a $999 million increase over the FY 2017 enacted budget. I view that request as recognition by this Administration of NNSA's needs.

If confirmed, would you recommend increases for NNSA above the Obama Administration's proposals for the out-years?

If confirmed, I will work to request budgets that provide the resources necessary for NNSA to meet program delivery objectives, not only for warhead manufacturing, but also

to address aging infrastructure, research and development, and standing up new processing facilities for strategic materials, as highlights of critical program needs.

Is NNSA mission executable under the current funding profile, while the Budget Control Act remains in place?

I believe the President's FY18 budget request will allow NNSA to execute its mission. However, NNSA must have stable and predictable funding levels to ensure it continues to execute the program requirements set forth by the President.

Personnel

Do you believe that NNSA has the appropriate number of civilian employees to perform its mission?

It is my understanding that NNSA's FY18 budget request supports a federal staff level of 1,715 FTEs. If confirmed, I will look closely at staffing across NNSA to ensure adequate staffing, the appropriate skills mix, and structure so that NNSA continues to meet its mission in an effective manner.

If not, what would be the appropriate size of the civilian staff and what would the additional personnel be able to accomplish that NNSA is not able to accomplish today? Which components would you recommend growing?

I understand NNSA and OPM are conducting an assessment of staffing requirements to determine the appropriate size and mix of NNSA's workforce. If confirmed, I look forward reviewing the conclusions of the assessment and working to ensure the most effective and efficient workforce for NNSA.

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

If confirmed, maintaining the core competency of the workforce across the enterprise would be my priority for NNSA, as a significant portion of the workforce, specifically scientists, engineers and technicians, are approaching retirement in the next five years. To retain critical nuclear weapons expertise, and cross train the workforce, I will work to ensure that the nuclear security enterprise continues to employ the brightest and the best by recruiting, retaining and growing the highly skilled workforce needed to maintain the U.S. nuclear weapons stockpile.

Construction and Project Management

NNSA has been plagued by cost overruns, schedule delays, and project cancellations related to the construction of nuclear facilities, including the Uranium Processing Facility,

the Chemistry and Metallurgy Research Replacement project, the Mixed Oxide Fuel Fabrication Facility, and others.

In your opinion, what are the primary causes of these repeated failures in project management?

Over the past six years, structural improvements in policy, process, and personnel have generated a remarkable turnaround in NNSA project delivery. In my opinion, the root causes of the old way of doing business that have been corrected include:

- Ill-defined project requirements;
- Lack of proper estimating;
- Starting a project before proper sufficient design and technology development is completed;
- Not planning a project to meet a required delivery date; and
- Contractual incentives failed to attract top talent and incentivize performance

Are the changes in NNSA project management practices in the last few years sufficient to address these problems?

I understand NNSA created the Office of Acquisition and Project Management (NA-APM) in 2011 to bring discipline to NNSA's acquisition and project management, and address the longstanding project management challenges identified by internal and external stakeholders. I believe the changes are sufficient, but if confirmed, I will always look for ways to improve.

What steps will you take, if confirmed, to ensure they are not repeated in the future? Would you recommend any additional changes in practice, organization, or regulation?

If confirmed, I will review the program and its processes to ensure that my team continues to review our acquisitions for lessons learned as they develop acquisition plans, continues to perform the necessary critical evaluation of a project's cost estimating, design and technical maturity, requirements definition, and change control for the Program Offices and Under Secretary for Nuclear Security/Administrator of NNSA. If confirmed, I will review the current efforts implemented below to continue what has generated positive results over the past several years while challenging my team to continue to improve performance on the high cost, high risk nuclear projects that are so vital to NNSA's mission.

In 2014, Congress mandated the creation of the Office of Cost Estimation and Program Evaluation (CEPE), modeled off the Department of Defense's Office of Cost Assessment and Program Evaluation (CAPE), largely in response to the recent history of large project management failures.

Is CEPE sufficiently staffed (in terms of billets allocated and billets filled) to provide independent cost estimates and other additional costing and project management advice within NNSA?

CEPE balances its staffing targets to fulfill statutory requirements within the NNSA's Federal Full Time Equivalent cap. CEPE currently has 13 federal staff. If confirmed, I intend to further review if CEPE is sufficiently staffed.

Does CEPE have sufficient authority and access to serve its purpose?

I understand that, to provide the Administrator with independent, data driven analysis, CEPE has institutionalized a number of policies and procedures for cost estimating, program evaluation, and technology readiness assessments that give CEPE the authority to execute its mission.

If confirmed, will you support CEPE in budget, personnel, and independence, as a critically important capability to build and maintain NNSA's ability to accomplish its mission while being a responsible steward of taxpayer dollars?

Yes.

Plutonium Strategy

The capacity for plutonium pit production is essential for maintaining U.S. nuclear capabilities, as well as for the Stockpile Stewardship Program. The entire pit production capacity in the United States currently resides at Plutonium Facility 4 (PF-4) at Los Alamos National Laboratory, which is aging and too small to support the pit production milestones established by the Nuclear Weapons Council and codified by section 4219 of the Atomic Energy Defense Act (50 U.S.C. 2538a). Over the last 20 years, NNSA has started and stopped multiple projects intended to recapitalize this capacity, including the Modern Pit Facility and the Chemistry and Metallurgy Research Replacement Nuclear Facility (CMRR-NF) project. After CMRR-NF was cancelled in 2014 following more than $400 million of design work, the Defense Department's CAPE conducted a business case analysis that pointed to modular buildings as a promising way forward for pit production. Yet the Plutonium Modular Approach Analysis of Alternatives (AoA) conducted by NNSA over the last two years did not give full consideration to modules as an alternative.

Are you concerned that NNSA may be unable, under any of the fully analyzed alternatives, to meet the pit production milestones set by the Nuclear Weapons Council?

If confirmed, I will ensure NNSA works to meet the NWC's pit production requirements. The ability to produce components for the nuclear weapons stockpile is essential to the Nation's deterrent, and the ability to produce plutonium pits is critical.

What steps would you recommend to mitigate this risk?

If confirmed, I would certainly make it a top priority to review NNSA's current status and to direct mitigation actions, as required.

What steps would you recommend to help recruit and retain the extremely specialized personnel that will be required to meet the plutonium mission as NNSA ramps up production capability throughout the 2020s at PF-4 and prepares to staff the preferred alternative by 2030?

If confirmed, recruiting and retaining highly skilled personnel throughout the nuclear security enterprise will be one of my top priorities. Ensuring personnel understand the value of the mission to the Nation's security will be fundamental to recruiting and retaining the best available talent. As previously stated, I can assure the Committee that this will be one of my highest priorities.

Section 3141 of the National Defense Authorization Act for Fiscal Year 2018 requires the Chairman of the Nuclear Weapons Council to certify to the congressional defense committees that the recommended alternative proposed by NNSA meets the requirements of the Secretary of Defense for plutonium pit production capacity as well as certain other requirements. If the Chairman has not done so by mid-May of 2018, section 3141(d) requires NNSA to carry out the modular building strategy as defined in section 3114(c)(3) of the National Defense Authorization Act for Fiscal Year 2013 and supported by the CAPE business case analysis.

If confirmed, do you commit to complying with the law, as enacted in section 3141 of the National Defense Authorization Act for Fiscal Year 2018?

Yes.

If confirmed, do you commit to maintaining full and open communication with the relevant congressional committees and with the Department of Defense regarding the AoA, the follow-on Engineering Analysis, and the selection of the preferred alternative?

Yes.

<u>Uranium Strategy and Tritium Production</u>

NNSA currently meets national security requirements for tritium production by providing low-enriched uranium (LEU) to the Tennessee Valley Authority (TVA) to irradiate in the Watts-Bar 1 Reactor. DOE has maintained as policy that only unobligated LEU can be used for national security purposes, meaning that neither the uranium nor the technology used to enrich it carries an "obligation" from a foreign country requiring that the material only be used for non-weapons purposes. Since USEC ceased enrichment operations in 2013, DOE has relied upon downblending recycled high-enriched uranium (HEU) to meet requirements for unobligated LEU, but the available supply of recycled

HEU for downblending is finite. NNSA has previously discussed plans to re-establish a domestic uranium enrichment capability, but has not issued a Mission Need Statement in accordance with DOE Order 413.3B and therefore has not defined the need for a future supply of enriched uranium.

Do you believe the United States should re-establish a domestic uranium enrichment capability?

The capability to produce tritium is essential to the maintenance of a reliable nuclear weapons stockpile. If confirmed, I intend to carefully consider the most effective way to ensure a reliable source of tritium.

If confirmed, would you instruct Defense Programs to do the required analysis to define the need for a future supply of enriched uranium, and issue a Critical Decision 0 if necessary?

I understand from the Fiscal Year 2018 Stockpile and Stewardship Management Plan, NNSA approved the mission need (CD-0) for this capability in December 2016. If confirmed, I intend to fully support the continuation of this effort.

A GAO report in 2014 entitled "Interagency Review Needed to Update U.S. Position on Enriched Uranium That Can Be Used for Tritium Production" concluded that the DOE's policy on identification of obligated uranium was based on three international agreements and a series of policy decisions. Of the three agreements, GAO concluded that only one explicitly addressed tritium production, but that State Department policy has previously been to interpret the other two agreements as resulting in peaceful use restrictions on LEU for tritium production.

Do you believe this reading of all three agreements remains consistent with U.S. policy goals?

Ensuring the continued supply of nuclear materials to meet NNSA's enduring nonproliferation and national security programmatic needs is critical to the success of NNSA's mission. If confirmed, I intend to assess the means available to satisfy these enduring needs.

If confirmed, would you recommend an inter-agency review of this issue?

As indicated above, ensuring the continued supply of nuclear materials to meet NNSA's enduring nonproliferation and national security programmatic needs is critical to the success of NNSA's mission. If confirmed, I intend to assess the means available to satisfy these enduring needs.

Fissile Materials Disposition

The United States and Russia committed to the disposition of 34 metric tons (MT) of weapons grade plutonium under the Plutonium Management and Disposition Agreement (PMDA) in 2000. The United States decided to construct the Mixed Oxide Fuel (MOX) facility at the Savannah River Site for disposition of the plutonium. At the end of 2016, Russia backed out of this agreement, stating that the United States had not made enough progress on the MOX facility to demonstrate the U.S. commitment of plutonium disposition covered under the agreement.

NNSA has struggled to keep this project on schedule and within budget for many years. GAO recently estimated that the MOX construction cost will reach $17.2 billion, and the project will not be completed until 2048. $5 billion has already been spent on 10 years of construction.

Do you believe NNSA should continue funding and constructing the MOX facility? If not, how should NNSA dispose of the 34 MT of weapons-grade plutonium in accordance with the terms of the PMDA? If yes, how does NNSA plan to mitigate the mismanagement of schedule, cost, and operations for the MOX program?

I am aware that the Administration proposes to terminate the MOX project. I believe the dilute and dispose approach is a proven, less costly, alternative to the MOX facility. If confirmed, I am committed to ensuring that the 34 MT is disposed of and that NNSA meets its obligations.

NNSA has proposed an alternative for disposition of the 34 MT of weapons-grade plutonium that was originally meant for MOX. This alternative, dilute and dispose, is not considered a viable option for disposal under the PMDA, as it does not completely transform the weapons-grade plutonium.

How do you view this dilemma? Should NNSA attempt to reconcile this option for disposal under the PMDA?

It is my understanding that Russia has suspended the PMDA and placed unreasonable requirements on its resumption, including: 1) reduction of military infrastructure and manpower in certain NATO countries; 2) repeal of the Magnitsky Act and Ukraine Freedom Support Act; 3) cancellation of all sanctions; and 4) compensation of all damages incurred as a result of sanctions. It is also my understanding that the PMDA allows for alternative approaches if agreed to by the Parties in writing.

If Congress authorizes the requested termination of the MOX project, what do you think should happen to the partially-constructed MOX facility?

I believe the Savannah River Site is a vital component of the nuclear security enterprise. If the MOX project is terminated, I will work with the Secretary Perry, Congress and other stakeholders to evaluate all options for the use of the facility.

What do you think are the five greatest lessons learned for NNSA from the mismanagement of the MOX project? What changes have been made to rectify these identified problems?

In my view, the five lessons learned from the MOX project are:

1. Full requirements should be identified before starting construction.
2. Designs were not sufficiently complete before committing to a budget.
3. Independent cost estimates were insufficiently rigorous and did not follow NNSA new protocols.
4. Dedicated acquisition, project management, and oversight that aligns contract incentives with taxpayer interests was lacking.
5. Clear lines of authority and accountability for federal and contractor personnel were never established resulting in a lack of leadership.

It is my understanding that NNSA's Office of Acquisition and Project Management, policies and procedures have been implemented to facilitate safe quality construction on budget via timely, best value acquisition solutions. Among these include:

- Strengthening rigorous and well-justified alternative assessments and evaluations;
- Strengthening cost estimating;
- Providing independent dedicated acquisition, project management, and oversight that align contract incentives with taxpayer interests;
- Providing clear lines of authority and accountability for federal and contractor personnel; and
- Managing assigned projects within the original scope and cost baselines, ensuring completed projects meet mission requirements.

How do you believe NNSA should implement these changes in future and ongoing projects?

I believe policies and procedures should be codified to promote project reform initiatives, including independent cost estimates, analysis of alternatives and project reviews. There must be clear lines, to perform, at a minimum, the following:

- Develop policies for independent cost estimates, analyses of alternatives, project reviews.
- Codify roles, responsibilities, authorities, and accountabilities in project delivery.
- Establish appropriate incentives to maximize performance.
- Establish dedicated Project Management Offices for Major System Acquisition projects.
- Ensure qualified project managers and contractors with relevant experience.

Nuclear Safety and Security

NNSA was created partially in response to security lapses at the Los Alamos National Laboratory, but security lapses have still occurred periodically, such as in 2012 at the Y-12 facility.

To what extent have the conditions that allowed such lapses to occur been fixed?

The 2012 security incident at Y-12 was unacceptable. I understand the incursion was examined by security experts from across the NNSA and the Department as well as by external independent experts. They identified problems with the security culture, divided security responsibilities and degraded equipment, among other factors. Following the incursion, NNSA made changes to the structure of its contracts, ensuring that the primary security functions were integrated. Changes were also made to the organization of and processes for its federal oversight. A comprehensive review and assessment of security infrastructure across the enterprise led to the development of a ten year plan for infrastructure updates and replacements. The security organization has developed the NNSA Security Roadmap (NSR) to provide a vision, a strategy, and a path forward to drive continuous improvement of its nuclear security program, both in the near and long term and is actively engaged in a security culture campaign, to emphasize the importance of every individual being aware of and responsive to security requirements.

If confirmed, would you recommend any further changes to reduce the frequency of security issues at NNSA facilities?

An important lesson drawn from the Y-12 incident is that individuals perform their duties within the context of organizational systems and processes. Those systems and processes must ensure that degraded mission performance in one functional area is not obscured by focus on performance in another area. While human performance was clearly a major factor in the Y-12 incursion, we also need to be careful to not set up organizational constructs with built-in gaps and management systems that are not effective in overseeing essential aspects of security performance. If confirmed, I will fully engage on all initiatives underway to improve security at NNSA facilities to ensure continued improvement in governance and management of the nuclear security enterprise. I believe successful mission accomplishment will rely upon highly motivated and trained individuals carrying out assigned tasks within supportive organizational structures and processes.

The Defense Nuclear Facilities Safety Board and NNSA's Office of Enterprise Assessments have reported a number of accidents at the national laboratories in recent years that put both personnel and mission at risk, including explosions, exposure to radiation, and one incident identified as a near criticality accident that led to the partial shutdown of the plutonium facility at Los Alamos National Laboratory for several years. Yet, while personnel safety is critically important, the nuclear mission by definition involves some of the most hazardous materials with which we work in this country, and

risk cannot be eliminated completely at the labs while continuing to accomplish the mission.

How should we balance safety, risk, and mission at the national laboratories?

NNSA needs sustained safety performance in order to achieve its important national security mission. NNSA and its Management & Operating partners use an Integrated Safety Management system to evaluate the scope of our mission, understand the hazards, develop appropriate controls and reliably implement those controls. The measure of success is that the mission gets accomplished and that it is performed safely. Achieving either part without the other is not sustainable. The key, I believe to continued success is to emphasize that high safety achievement and mission success are compatible, not a trade-off. The same teamwork, discipline, focus and attention to detail that is required to complete NNSA's demanding mission contributes to a well-controlled safety environment. If confirmed, as Administrator, I will continue the teaming between NNSA and the labs and plants and emphasize continuous improvement to continue to improve NNSA's record of mission accomplishment and safety.

What steps would you recommend to improve safety culture at the labs while still meeting mission requirements?

My background is in health and safety and I will make it a priority to find the right balance between it and executing the mission. Improving safety culture requires a sustained effort over a long term, along with continual monitoring to demonstrate improvement. The key attributes are strong leadership, employee engagement, and organizational learning to ultimately achieve excellence in both safety and mission performance. If confirmed, I will engage and empower employees so that each individual is encouraged to notice, report, and resolve safety issues. NNSA will follow the principles of operating our facilities and conducting work activities in a manner that protects our employees, the public and the environment; striving to ensure that each NNSA, lab or plant employee understands his or her role and responsibility for safety and health; and fostering a Safety Conscious Work environment across all NNSA operations. I note that a strong culture with safe operations leads to predictable, reliable, and sustained operations. That consistency and productivity will be crucial to completing the growing scope of mission work facing NNSA.

Defense Nuclear Nonproliferation

What do you see as the highest priorities of the nuclear nonproliferation programs at NNSA?

In his speech at the Department of Energy last June, President Trump highlighted the importance that civil nuclear energy plays in the U.S. domestic energy sector, serving both as a major source for U.S. jobs as well as U.S. exports, and its importance to U.S. national security. A major priority for nuclear nonproliferation programs at NNSA, and

in support of the President's objectives, is achieving and maintaining a balance between the promotion of legitimate nuclear commerce and controlling the spread of weapons usable material, equipment, technology, and expertise. NNSA's nuclear nonproliferation programs play a critical role in helping ensure that such exports take place in accordance with the highest nonproliferation standards.

I believe that increasing this global reach is among the highest priorities for NNSA. Through NNSA's support to the negotiation of 123 Agreements, export licensing, and multilateral export control regimes such as the Nuclear Suppliers Group, NNSA ensure that U.S. nonproliferation standards are mirrored by our partners and other suppliers globally.

Just as important, NNSA must continue to prioritize the security of nuclear and radiological (N/R) materials. The consequences of a terrorist group using those materials in an improvised nuclear device (IND) or radiological dispersion device (RDD) against the United States or its interests abroad would be grave. Terrorist groups have demonstrated interest in obtaining nuclear and radiological materials and the expertise needed to weaponize them, and the use of chemical weapons by ISIS indicates a willingness to employ WMD against civilian populations. As recently as 2015, ISIS surveillance of a Belgian nuclear security official drew concern that ISIS might attempt to acquire radioactive material from Belgian facilities for use in a weapon and there have been numerous open source reports of deliberate attempts to acquire radioactive material. If confirmed, I will ensure that the security of these materials remains our top priority.

The United States no longer holds a bilateral agreement with Russia for joint nuclear nonproliferation activities. However, a number of nonproliferation programs are focused on countries in that region.

Do you believe there are additional opportunities for cooperation with states outside of the former Soviet Union, particularly in the Middle East and North Africa? If confirmed, what would be your priorities in these areas?

Yes. First, nuclear and radioactive materials are found worldwide, and as more countries harness the benefits of peaceful nuclear technologies and seek to grow their capabilities, the need for regulatory capacity increases. As a depositary state of the Nuclear Non-Proliferation Treaty, the United States has long held that peaceful nuclear technology can and should be shared for the benefit of mankind. NNSA has a significant role to play in prioritizing that support and assistance in a manner that compels our partners to meet high nonproliferation standards and opens new markets for U.S. technology and expertise to flourish.

Second, NNSA will continue to work with partners outside of the former Soviet Union to remove or confirm the disposition of excess highly enriched uranium (HEU) and separated plutonium.

Finally, the rise of ungoverned spaces in the Middle East and North Africa increases the concern that nuclear and radioactive materials could be more easily obtained by malevolent actors. NNSA should continue working with our partners in these regions to strengthen their capacity to combat smuggling and to secure materials.

What challenges has the new relationship between the United States and Russia posed in nuclear nonproliferation programs?

Because of the vastness and complexity of the Russian nuclear complex, the security of Russian nuclear material will remain a long-term security interest of the United States. The United States and Russia possess the vast majority of the world's nuclear weapons and weapons-usable material and have a shared interest and responsibility to ensure the highest possible standards of security for their nuclear complexes. Economic, political, and social conditions in Russia lead to the concern that Russia may not be devoting sufficient resources to maintaining robust security, which the United States worked for nearly twenty-five years to help improve. Also, the lack of cooperation with Russia has halted joint U.S.-Russian efforts to convert civilian research reactors to low enriched uranium fuel. DOE/NNSA should continue to look for opportunities to engage Russia on topics of mutual interest within the constraints of the existing legal restrictions.

What do you believe are the greatest challenges in nuclear nonproliferation programs with countries other than Russia?

The United States faces profound proliferation challenges beyond just those presented by Russia. The United States faces no greater security challenge than the weapons of mass destruction and ballistic missile proliferation activities of the DPRK. In addition, the United States and its international partners must continue to address the proliferation challenges presented by Iran. Moreover, the danger of nuclear proliferation in South Asia continues to present proliferation risks. Another challenge for NNSA is the lack of infrastructure and resources in many partner countries.

NNSA plays an important role in providing technical and policy solutions to these challenges and, if confirmed, I look forward to building upon NNSA's past successes to enhance U.S. national security, consistent with the President's goals.

In your view, what are the three greatest unmet nuclear nonproliferation needs? How would you propose to address these needs if confirmed? What resources or cooperation would you need to meet such needs?

The United States has long been a leader in the global effort to combat nuclear proliferation and has led in the development of a wide array of policy tools to address such challenges.

For one, several countries retain high-priority inventories of excess highly enriched uranium (HEU) and separated plutonium, which we are unable to remove or confirm the disposition of due to lack of a political path forward. Two, there is an ongoing need to

secure nuclear and radiological materials, and our partner countries have an ongoing need for the infrastructure and resources to help keep those materials secure. Third, there is an ongoing need to confront the threats posed by Iran and DPRK.

The United States has led efforts to secure nuclear material around the world, build international partnerships to raise barriers against the illicit transfer of proliferation sensitive technologies or materials, and address the increasing risk that terrorists acquire weapons of mass destruction. Nevertheless, more can be done. If confirmed, I look forward to reviewing all NNSA programs to determine those areas in which NNSA's work can be improved to better secure the United States, and look forward to working with Congress to discuss the results of this review, including the resources that may be required to better address the proliferation challenges we face.

Nonproliferation Research and Development (R&D)

NNSA has responsibility for a broad range of R&D efforts.

If confirmed, what would be your nonproliferation R&D priorities?

If confirmed, I will ensure that NNSA continues to prioritize research and development that supports implementation of the President's nuclear security priorities consistent with the findings of the Nuclear Posture Review. This includes developing and further strengthening technical capabilities to detect foreign nuclear weapons development, nuclear detonations, movement or diversion of special nuclear materials, and to monitor and verify compliance with nuclear arms control and nonproliferation agreements.

If confirmed, I will also focus U.S. capabilities to detect nuclear proliferation activities earlier in the weapons development cycle. With earlier detection, the application of diplomatic, intelligence, military, and economic efforts to prevent progress are much more effective and generally more options are available. Through DOE/NNSA's excellent national laboratories, nonproliferation R&D provides advances in key technology enablers towards earlier detection leveraged across the United States government. As recommended by the 2014 Defense Science Board report, the current model of NNSA national test beds is proving effective at developing new technologies for early detection and providing opportunities for other government agencies to validate their sensors and methods.

Do you believe that there are R&D areas that need more attention or funding?

I appreciate the great support that Congress has provided to DOE/NNSA's nonproliferation R&D. This funding directly contributes to the technical capabilities at our national laboratories, which are leveraged through the Strategic Partnership Program process by Departments and Agencies across the United States government. If confirmed, I will conduct a review of NNSA's R&D funding areas and make a determination whether more attention or funding is required. I firmly believe it is

important to protect long-term R&D budgets so that the United States remains prepared to face uncertain futures and emerging nonproliferation challenges.

Regulation and Oversight

Staff at NNSA's national laboratories often complain that they are overburdened by regulation and oversight, both internal and external, and that this contributes to the challenges in staying under cost and on schedule for major projects.

Do you believe that environmental, safety, and construction regulations are properly applied to NNSA projects and operations? Do you believe these regulations serve the labs well?

If confirmed, I will be committed to the safe operation of NNSA facilities and to the protection of workers who work in them and the people who reside in the surrounding communities. I will be actively engaged in ensuring that safety is incorporated into the design and construction of NNSA nuclear facilities. Key elements would clearly include the selection of qualified nuclear design and construction firms to lead these projects, as well as a properly staffed and technically-capable federal project team. Ensuring that appropriate safety systems and controls are identified early in the design process and are validated throughout construction is also critical to reducing rework and controlling costs during design and construction.

I believe NNSA understands it can be challenging to meet the demanding safety expectations that are inherently part of the hazardous work NNSA performs. DOE directives have been developed based on decades of experience with DOE/NNSA nuclear operations but they can always be improved and we are always learning and developing best practices. Within the last year, NNSA has streamlined its directives requiring general industry standards where applicable. I will continue to look to best practices across industry to improve our performance both in setting requirements and in implementing those requirements. While safety must be an integral part of every program within DOE, we must strive to find the right balance between ensuring a safe work environment and executing our missions.

Do you believe the labs are subject to the appropriate level of oversight from the NNSA, DOE, the Defense Nuclear Facilities Safety Board, GAO, and/or Congress?

I recognize that NNSA is somewhat unique in that it is a regulatory agency and owner of facilities and sites that the management & operating (M&O) contractors operate on its behalf. I believe that NNSA provides effective oversight of the M&O contractor. However, some external independent oversight at the right level is useful as well. Understanding concerns from external organizations allows NNSA to benefit from their insights on NNSA, its mission, and its issues and helps ensure that issues are resolved in a timely and effective manner.

That said, several reports (Mies-Augustine, CRENEL, GAO) highlighted the need for NNSA to improve and make more effective its oversight. Based on insights from external organizations and lessons learned from within the Department and other relevant organizations, NNSA has improved its Site Governance model to ensure mission objectives are met; workers, the public, and the environment are protected; and operations are effectively accomplished in compliance with contract requirements. The improved Site Governance model relies on the relationship among the parties (the Federal team, M&O contractor, and corporate parent) to provide insight to mission performance. Paramount to the relationship is timely, transparent, and open communications. The level of federal involvement will be driven by the degree and impact of issues an M&O contractor is having relative to delivering the mission, magnitude of the risks, site hazards, and work complexity. I will, however, make it as one of my priorities to find the proper balance between effective oversight and mission execution.

If confirmed, are there any changes in regulatory or oversight structures that you would recommend?

The Administration has provided strategic objectives for regulatory reform that could lead to gains in efficiencies. DOE is implementing regulatory reform and NNSA supports the DOE-wide effort. It is important to keep the existing processes stable. If confirmed, I will become more familiar with existing regulatory and oversight structures to assess if any changes may be required. I would make the current systems more effective by working on the efficiency of the processes in the system.

Notification of Congress

If confirmed, would you commit to promptly notifying Congress of any significant issues in the safety, security, or reliability of the nuclear weapons stockpile?

Yes.

Congressional Oversight

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

Do you agree, if confirmed, to appear before this Committee and other appropriate committees of 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 Under Secretary for Nuclear Security?

Yes.

Congress has worked with NNSA to reduce and streamline reporting requirements. However, in 2016 and 2017, NNSA submitted almost none of its required reports to Congress on time. More often than not, reports are many months or over a year late, and NNSA has generally become less responsive to this Committee over the last several years.

Do you commit, if confirmed, to improving this record?

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 in a timely manner?

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 this Committee regarding the basis for any good faith delay or denial in providing such documents?

Yes.

Do you agree to answer letters and requests for information from individual Senators who are members of this Committee?

Yes**.**

If confirmed, do you agree to provide to this Committee relevant information within the jurisdictional oversight of the Committee when requested by the Committee, even in the absence of the formality of a letter from the Chairman?

Yes.