

Advance Questions for Everet Beckner
Nominee for the Position of Deputy Administrator for Defense Programs,
National Nuclear Security Administration

Duties

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

The fundamental responsibility of the Deputy Administrator for Defense Programs (DADP) is to enhance the U.S. national security by assuring the safety, security and reliability of the existing nuclear stockpile and by maintaining the capability to design, develop, analyze, produce and test (if required) nuclear weapons now and in the future. In the broadest sense, the DADP must work with the Administration and the Congress to maintain and strengthen the nuclear weapons complex, consisting of its labs, plants and, most importantly, its people. He/she also must maintain successful interfaces and working relations with two especially important customers, the military end users and the regulators.

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

My scientific training is as a nuclear physicist. My career has advanced from research, to management of research, to management of development and manufacturing programs in an orderly fashion over the past 35 years. I have now been directly associated with the nuclear weapons program for over 20 years, with the last 15 years spent in senior management positions in both the U.S. and U.K. nuclear weapons programs. In that regard, I was Vice President for Weapons at Sandia National Laboratories in the late 1980's during the development of several of the weapons systems which are now mainstays of the stockpile. I was then Principal Deputy Assistant Secretary for Defense Programs at the Department of Energy from 1990 through 1995, the period when the Stockpile Stewardship concept had to be turned into a workable program to replace underground testing. More recently, I have been Deputy Chief Executive at the U.K. Atomic Weapons Establishment, which has the responsibility for design, development, production and maintenance of the U.K. nuclear weapons program.

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

Yes. I need to build strong relationships with my counterparts in other agencies,

particularly the DoD and the Defense Nuclear Facilities Safety Board, as well as with members of Congress and key staffers who I will need to work with effectively to assure the success of this element of the NNSA program.

Assuming you are confirmed, what duties and functions do you expect that the Administrator of the National Nuclear Security Administration would prescribe for you?

In addition to the duties associated with my position, the Administrator will expect me to work with the other Deputy and Associate Administrators through his newly established Management Council to enhance the efficiency and respect of the organization.

If confirmed, how would you work with the following:

A. Other deputies in the NNSA.

If confirmed, I see several important interactions requiring my attention with the Deputy Administrator for Nuclear Nonproliferation and the Assistant Administrators. In the case of the Deputy Administrator for Nuclear Nonproliferation, there are important synergies between the Nuclear Weapons programs and those of Nuclear Nonproliferation which we need to cause to occur more effectively and efficiently, to the benefit of both programs. Much of DP and NN work is common to the three principal DP laboratories, Los Alamos, Lawrence Livermore and Sandia National Laboratories and effective coordination of programs at Headquarters level can make for smoother operations at the labs, in terms of both manpower and facilities utilization. Technical ideas and innovation can also be shared between the programs so that we do not develop things twice for slightly different reasons. In the case of the interactions with the Assistant Administrators (AA), the interactions with the AA for Facilities and Operations will be crucial to the NNSA thrust for more efficiency in operations, for reductions in layers of oversight, and for proper stewardship of the critical facilities at both the labs and the plants.

B. The Assistant Secretary for Environmental Management.

If confirmed, interactions with the Assistant Secretary for Environmental Management will be primarily in assuring a smooth transition of old and unused buildings and land at DP sites to an agreed, funded plan for decommissioning, decontamination and restoration of land.

C. Other Assistant Secretaries of the Department of Energy.

If confirmed, interactions with other Assistant Secretaries will certainly occur on technical matters involving utilization of special facilities and capabilities at other DOE laboratories, in peer reviews of DP programs, in sharing of special capabilities at NNSA laboratories, and in development of DP staff through assignments (both short-term and long-term) into other areas of relevant DOE work as a part of their career development programs.

Major Challenges and Problems

In your view, what are the major challenges that will confront the Deputy Administrator for Defense Programs?

The major challenges that will confront the Deputy Administrator for Defense Programs will be in the installation of the new management strategies of NNSA, and in maintaining program focus so that planned goals and milestones are the right ones and are achieved on time and on budget. There is a general view that NNSA presently has too many overlapping functions and assigned personnel at the Headquarters and Field levels, leading to reduced efficiency in the labs and plants. The Administrator has committed to Congress to establish clear roles and responsibilities in all the NNSA activities, and, if confirmed, there will be a major role for me in making the new operational strategy work. The program planning and management tasks are critically tied to knowing what to do, when to do it, and to making clear assignments for the work. That planning function will be centered at Headquarters, with execution in the Field. There appears to be a major challenge in clarifying roles and responsibilities for both the planning function and the execution function, with far too much overlap in responsibilities (either assigned or assumed) at the present.

Assuming you are confirmed, what plans do you have for addressing these challenges?

If confirmed, I will review the planning activity to establish the validity and priority of present program plans, and to search for better ways for the research programs to address stockpile problems and find the most cost-effective solutions. In some cases, that will be to do nothing, if our collective judgement assures us that leaving a weapon system alone is better and safer than embarking on a modification and remanufacture program. Another payoff from a thorough planning activity is to optimize task loading of both the plants and the labs. It appears that DP is presently confronted with plans which will stretch or exceed several of the plant capacities unless better overall solutions are found. In some cases, DP will need support from the DoD and the

services, to help deal with the reality that every weapon system cannot be the top priority. Finally, through proper planning, DP must bring some order and control to the requirements for future R&D and production construction projects.

What do you consider to be the most serious problems in the performance of the functions of the Deputy Administrator for Defense Programs?

The most serious management problems in the performance of the functions of the Deputy Administrator for Defense Programs are those of establishing a better understanding of roles and responsibilities between Headquarters and Field and getting them to work together. This originates from a program plan which is too detailed at Headquarters level and which encourages the labs and plants to spend too much time staking out program territory and too little time accepting responsibility for producing results which they know to be the right thing to do.

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

If confirmed, I will lead the planning effort and the effort to establish proper roles and responsibilities such that within the first year we will have substantive results in the form of a new program planning strategy, probably some changes in the top-level program plan, and a new working relationship between the Headquarters, Field Offices, labs and plants, in terms of roles and responsibilities for program planning and execution. In its simplest form, the Headquarters will be responsible for the master plan, reconciled with the budget, and the field offices will be responsible for contracting for the execution of that plan and for oversight of the execution of work in the labs and plants.

Priorities

If confirmed, what broad priorities would you establish in terms of issues which must be addressed by the Deputy Administrator for Defense Programs?

If confirmed, the priorities which I would establish in terms of issues which must be addressed would center around planning and program execution against customer expectations. This means that DP must work with its customers first to establish the proper expectations, and then with the Administration and Congress to obtain funding to deliver against those expectations. The critical next step is to establish program plans and work authorizations to deliver those program requirements, with the final step being oversight and tracking of progress against program goals in the work conducted by the labs and plants.

Relationships

Please describe your understanding of the relationship of the Deputy Administrator for Defense Programs with the following Officials:

- A. The Administrator of the National Nuclear Security Administration.
- B. The Secretary of Energy.
- C. The Under Secretary of Defense for Acquisition and Technology.
- D. The Assistant to the Secretary of Defense for Nuclear Chemical and Biological Matters.
- E. The Commander in Chief of the Strategic Command.
- F. The Deputy Administrator for Nonproliferation.
- G. Associate Administrator for Facilities and Operations.
- H. Associate Administrator for Management and Administration.

My understanding of the relationship of the Deputy Administrator for Defense Programs with other Officials is as follows:

- A. The Administrator. I report directly to the Administrator, assisting him in developing overall NNSA policy and plans, and in assuring that the DP labs and plants deliver against the agreed plans.
- B. The Secretary of Energy. I also report to the Secretary, through the NNSA Administrator.
- C. The Under Secretary of Defense Acquisition and Technology. In addition to his other duties within the Department of Defense, the Under Secretary is also the Chairman of the Nuclear Weapons Council (NWC). The NWC was established by the Congress as the joint DoD/DOE organization responsible for the safety, security, reliability, and control of the U.S. nuclear stockpile. The Administrator of the National Nuclear Security Administration is the DOE member of the NWC. My role as Deputy Administrator for Defense Programs will be to support the Council and ensure that important issues requiring NWC attention are brought to the Council through our representative.
- D. The Assistant Secretary of Defense for Nuclear Chemical and Biological Matters. In addition to his other duties within the Department of Defense, the Assistant Secretary for Nuclear, Chemical and Biological Matters acts as the Executive Secretariat for the Nuclear Weapons Council and Chairs the subordinate committee to the NWC, known as the Standing and Safety Committee. This committee reviews issues and makes recommendations to the Nuclear Weapons Council. I expect to work closely with this committee to ensure important issues and sound recommendations are brought to the attention of the NWC.

- E. The Commander in Chief of the Strategic Command. This is the central customer at the DoD for the work of the National Nuclear Security Administration. The CINCSTRATCOM is also charged with rendering his judgment annually on the certification of the U.S. stockpile along with the Nuclear Weapons Council, and the Directors of the three Nuclear Weapons Laboratories. I expect that there will be numerous interactions with the CINCSTRATCOM regarding military requirements, and other discussions to address issues that may arise in our nuclear weapons stockpile.**
- F. The Deputy Administrator for Nonproliferation. This was answered in question A on page 2.**
- G. Associate Administrator for Facilities and Operations. This is the office which will be the steward for the Administrator of all NNSA facilities, in terms of operational readiness, compliance oversight of regulatory matters, and establishing priorities to satisfy future requirements. It will be important that the DADP and the AA for Facilities and Operations work smoothly together to optimize operational efficiency and readiness, to assure compliance of operations, and to acquire future facilities to upgrade the complex in a timely and cost-effective manner.**
- H. The Associate Administrator for Management and Administration (M&A). This is the NNSA office with responsibility for future years planning and for budget control in the current year. The Planning Programming Budgeting and Evaluation (PPBE) Process is being installed by the AA for M&A, and Defense Programs will be using that system in its planning activities, as well as in its current year budget control activities.**

The National Nuclear Security Administration (NNSA) has proposed legislation regarding the contractor National Laboratory Directors and contractor Weapons Plant managers and to whom they report. This legislation, if enacted, would eliminate the hierarchical reporting requirement of these officials to the Deputy Administrator for Defense Program and instead allow these same officials to report directly to the Administrator of the NNSA.

If this legislation is enacted in the FY02 National Defense Authorization Bill, will the National Laboratory Directors and Weapons Plant Managers have any residual reporting requirements to the Deputy Administrator for Defense Programs?

This question and the one which follows are central to the Administrator's plan to clarify roles and responsibilities in the NNSA. If the reference legislation is enacted, the contractual connection between the labs and the plants will be directly through the contracting officers to the Administrator. At the same time, progress in program activities will flow upwards from the labs and plants through the field offices and into

the Headquarters of Defense Programs. These relationships will be different depending on the time frame under consideration. The primary DP Headquarters concerns will be with formulation and specification of planning and budget requirements, and for that the labs and plants (in some cases the lab directors and plant managers themselves) will provide both technical and financial input. Similarly, when DP is working with the Congress on budget and program input, information for this will often be provided by the DP labs and plants. For ongoing work at the labs and plants, only on extraordinary occasions would it be necessary to have direct communication from the lab directors or plant managers. So, you might say that, while the lab directors and plant managers report directly to the Administrator, the programs from their institutions normally report into DP Headquarters.

If this legislation is enacted, what steps would you anticipate the NNSA would take to ensure there is no confusion about to whom NNSA officials, National Laboratory Directors, Weapons Plant Managers, and other relevant officials and contractors would report?

The steps taken by NNSA to ensure there is no confusion about the reporting chain for NNSA officials, lab directors, plant managers and other relevant officials and contractors will be a high priority management task for all of NNSA in the coming year. The most important tool for guiding all DP elements in developing these new processes and driving the necessary change will be the DP planning processes, both long term and short term, and the PPBE process that requires the output from these plans. This will establish the reporting processes within the program planning and execution structure.

Stockpile Stewardship Program

One of the purposes of the stockpile stewardship program is to identify potential problems with nuclear weapons, fix the item before it rises to a problem, and then ensure that the fix is adequate and has not introduced a new problem. As a result, the weapons are being scrutinized more closely than in the past and with better science-based capabilities. In addition, greater scrutiny is being given to matters that were not well understood in the past. What to do with this new level of knowledge is also presenting a challenge.

In your view, how do you balance newly discovered issues that have existed from manufacture and changes that have occurred since manufacture?

The criteria for balancing newly discovered issues from those that have occurred since manufacture is more properly a matter of deciding the priority of all stockpile issues. A starting premise for nuclear weapons is, indeed, that generally the best thing to do is leave them in their “as built” condition until there is clear evidence that something

needs to be fixed.

Should life extension programs improve systems or maintain them?

As to the question of whether life extension programs should improve systems or maintain them, it is again important first to assess the contemplated action within the context of the entire stockpile and the present-day military requirements. Only then can we expect to make decisions as to what needs to be improved and what needs only to be maintained.

With budget challenges, what is the best way for determining how to make these tradeoffs?

As to the relationship of budget challenges to these aforementioned considerations, the answer is clear. The decisions must be based on cost-benefit criteria in every case.

Plutonium Pits

One of the most significant challenges facing the Office of Defense Programs is regaining the capability to manufacture and certify a pit.

Have you had an opportunity to review the current plan to certify a pit?

If so, do you believe that the approach is correct?

If you have not had the opportunity to review the current plan, would you please do so and inform the committee as soon as possible after your confirmation, if confirmed, of your view on the plan and report your findings to the committee?

I have not had an opportunity to receive a detailed review of the current LANL plan to certify a pit. If confirmed, I will inform the committee of my views as soon as possible after my confirmation, given the importance of reestablishing this important national security capability.

The Foster Panel Report, also known as the *FY2000 Report to Congress of the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile*, found that it could take 15 years from the point of developing a conceptual design for a pit production facility until the final construction of the facility is completed. If it is determined through the science-based Stockpile Stewardship Program that one or more of our existing pit designs is no longer reliable, and therefore is not certifiable, our nuclear stockpile would, in effect, be unilaterally downsized below a level which could maintain a strong nuclear deterrence.

What progress has NNSA made towards a conceptual design for a pit production facility?

How confident are you that NNSA will be able to successfully deliver a new pit production facility, if required, within the next 10 to 15 years?

What is the requirement, both in production capacity and schedule, that a new facility would meet?

While I have not been briefed in detail on a modern pit facility, there are several issues that must be addressed before proceeding with this costly, new facility. First, the Administration must complete the Nuclear Posture Review, which will tell us the size of the stockpile that we will need to support in the future. Second, studies on pit life need to be completed. Third, contingency requirements need better definition. With these facts in hand, we will be able to properly size and design a modern pit facility to meet the needs of the stockpile into the 21st Century.

Nuclear Testing

In your view, will the United States need to resume underground nuclear testing in the foreseeable future in order to ensure the reliability, safety, and security of the United States strategic nuclear forces?

I believe the President has recently reported on this subject to the Congress. At this time, I know of no reason to change the views expressed in that report.

The Foster Panel Report also reported DOE's view that it would take 24-36 months to conduct an underground nuclear test, if so directed by the President.

Do you agree with the Foster Panel that it would take 24-36 months to conduct a test?

In your view, should NNSA reduce the time it would take to perform an underground nuclear test to less than 24 months?

What type of test would be required that would have to be conducted in less than 24 months?

These questions on the report of the Foster Panel are similar to those on the Pit Production Facility. Given the importance of this issue, I need to be extensively briefed by the DP staff before I would be comfortable providing an answer.

I will say this, however, that neither testing nor any other element of the DP weapons programs should be analyzed in isolation. In each and every case, since availability of resources is always central to the question of what gets done and what does not, a thorough cost-benefit analysis must be done of all the program priorities in order to make such decisions. I recognize that such analyses are always fraught with uncertainties, but decisions based on the best available information will always be my preferred approach to such issues, if confirmed.

Maintenance of the Stockpile

Are you confident in our ability to identify and fix potential problems in all weapons expected to be included in the enduring stockpile?

I am confident that with the continued support of the Administration and Congress the highly skilled men and women of the weapons complex will be able to ensure the continued safety, security and reliability of the U.S. nuclear deterrent.

What do you believe to be our biggest challenges in maintaining the nuclear weapons expected to be in the enduring stockpile?

The biggest challenges in maintaining the nuclear weapons expected to be in the enduring stockpile will be one of confidence in the answers, in the absence of full scale test data. In the final analysis, when confidence is low, it will be necessary to take immediate action, either in the form of manufacturing a more predictable solution, if possible, withdrawing the weapon from the stockpile, or recommending a return to testing to solve the problem.

What specific criteria should the NNSA apply to the new facilities and infrastructure initiative to ensure the maintenance and repair backlogs are eliminated using the most efficient and least expensive plan?

The criteria for NNSA to apply to the new facilities and infrastructure initiative is that which I have put forward previously—the most cost-effective solution, in light of an analysis of the entire set of problems requiring attention. The “cost” part of the analysis can generally be made using “more or less” standard engineering techniques. The “effective” part of the analysis requires participation by both NNSA and its customers, since there will be priorities to be weighed which are outside the decision-making space of NNSA.

How can the NNSA avoid these types of maintenance and repair backlogs in the future?

NNSA can avoid these types of maintenance and repair backlogs in the future by maintaining a thorough long-range program plan which Congress can support, by getting input from its customers on their priorities so that not everything has to be done immediately, and by making hard choices which almost certainly will not please all the people all the time.

Is the NNSA taking such action to avoid backlogs?

Under the NNSA Administrator's reorganization, the responsibility for facilities and infrastructure has been assigned to the Assistant Administrator for Facilities and Operations (AAFO). If confirmed as Deputy Administrator for Defense Programs, my deputies and I will work with the AAFO to ensure the existing backlog is worked off and that plans are in place to avoid future backlogs.

Limited Life Components

How confident are you in the Department of Energy's ability to manufacture limited life components for the enduring stockpile?

My confidence in the NNSA's ability to manufacture limited life components for the enduring stockpile is quite high, with the exception of the requirements for radiation hardness which are in place for certain components. To date, I believe such problems have been solved to the satisfaction of the labs and the services. However, trade-offs may have to be made in the future in which the hardness specifications of existing military requirements have to be weighed against the cost of obtaining high-confidence solutions.

Project and Construction Management

DOE and the NNSA have made significant efforts to improve their construction and project management. One element of these improvements is strict oversight and formalized reviews of the various programs.

If you are confirmed, will you keep these activities in place?

Yes, although I will want to be comfortable with the details of the oversight and reviews.

NASA faces significant challenges to modernize its facilities and reduce the overall square footage of the facilities, and reduce its maintenance expenses.

Will you maintain the requirement that any new construction must have as part of the project the funds to tear down the old facilities that are being replaced or otherwise ensure a reduction in the size of facilities at a particular site?

I am not at this time familiar with the requirement that any new construction must have funds to tear down the old facilities or otherwise ensure reduction in the size of the facilities. It sounds reasonable, but I would want to understand the full scope of that requirement before committing to it.

Advanced Supercomputing Initiative

Do you support moving to a 100 teraops computer as the next computer purchased or would you advocate an interim computer or computers? If you support the interim approach, what capacity should these interim machines have in your view and when would you see a need for 100 teraops or beyond?

I understand that the laboratories currently have 3 Teraop machines at Sandia and LANL and a 12 Teraop machine at Lawrence. I further understand that a 30 Teraop machine is scheduled for installation at Los Alamos. The ASCI program, as it is currently structured, is scheduled to accept a 100 Teraops machine in 2005. I have not been briefed in detail by the program office on the sequence of steps to achieve 100 Teraops.

National Ignition Facility

The funds for the National Ignition Facility (NIF) were budgeted to accommodate annual budget projections and developed to finish the project as quickly and as cheaply as possible.

Would you support restructuring the NIF budget to reduce the overall cost of the project and complete the project sooner than the current schedule would allow?

I have not yet received detailed briefings which would allow me to answer this question with confidence. My personal view is that the answer is no, based on a personal philosophy that to do something right is generally preferable to doing it quickest.

In your view, will the scientific information sought from the NIF have enough value to justify its cost as part of the Stockpile Stewardship Program if the NIF does not reach ignition?

I believe that decision has already been made. It is my understanding that the project is well past the point where such analyses and decisions should be made. On the assumption that the project will be even moderately successful, my personal views are that stopping the project at this late date would be imprudent if not downright foolish. Obviously, ignition is an important goal of the project. Based on my present understanding of the physics of the processes and the program expectations, I know of no evidence to suggest that ignition is unachievable on NIF. That said, I am fully aware that this goal has been before us for a long, long time, and that a community of nay-sayers is crowding around the arena just waiting for the first evidence of trouble.

In your view, if the NIF fails to reach ignition, does that preclude us from being able to certify a nuclear weapon, without underground testing in the distant future?

At this time, I know of no weapon certification problem which is uniquely dependent on “ignition conditions in NIF for solution. The ignition environment in NIF is indisputably an important environment for obtaining understanding will assist us in continuing to certify weapons, in the absence of full scale testing. The further we look into the future, the more important this capability becomes, for a variety of reasons.

In your opinion, could the National Ignition Facility meet its goal of ignition with a reduced number of lasers below the 192-laser design?

I am not adequately informed at this time to provide an opinion on the importance of 192 laser beams in meeting the ignition goal. I do believe that the more power and energy available, the higher the probability of success.

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 in a timely manner?

Yes.