



# Vision of the Future

*Strategic Management Retreat*

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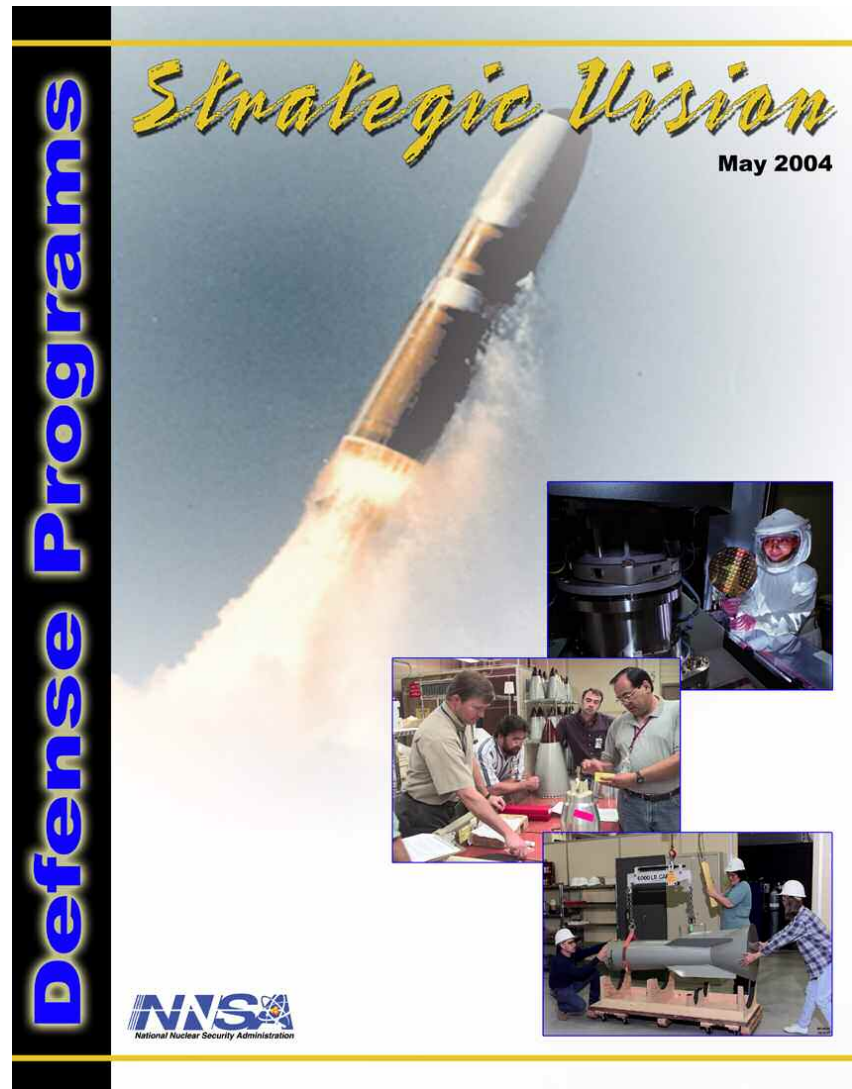
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# Initial DP Strategic Vision



- Issued in May
  - Represents the consensus of senior DP managers on the attributes/capabilities of the future Nuclear Weapons Complex and the stockpile it supports
  - First document of its type for DP
- This retreat seeks to broaden and refine this vision.
- Revised DP Strategic Vision will reflect our effort and provide a basis for planning within the nuclear weapons complex





# DP Vision



**Provide the Nation's nuclear weapons stockpile with an integrated nuclear security enterprise, consisting of R&D, engineering, test, transportation, and production facilities that operate a responsive, efficient, secure, and safe NNSA complex and that is recognized as preeminent in personnel, technical leadership, planning, and program management.**



# The 2030 Vision Planning Assumptions



# Planning Assumptions

(agreed with by Congress, generally)



- **The nation will maintain a deterrence posture second to none.**
- **The Complex will have the capability to produce all nuclear components.**
- **The stockpile will be optimized using post-Cold War parameters.**
- **Better warhead safety and use-control will be integrated into life extension and new designs to reduce risk from either accidents or malevolent events.**



# Planning Assumptions



(agreed with by Congress, generally)

- **An appropriate readiness posture for underground testing will be maintained.**
- **The planned life extension projects will be completed at lower numbers of refurbished weapons than originally envisioned.**
- **Development, certification and production tools will be established to realize desired stockpile attributes.**
- **The Science Campaign will focus on obtaining the data needed to certify modified warheads.**
- **Environmental, safety, and health regulations will become increasingly stringent, but manageable.**
- **Security will require increasing resources.**



# Planning Assumptions

(divergent views in Congress on whether we should plan for these)



- **Beginning around the 2015 timeframe, the stockpile will begin to be significantly transformed in comparison to the current stockpile.**
- **The capability to incorporate special features for special targets may be included in specific warheads to address emerging threats.**
- **New and modified warheads will include new technologies and will be designed for manufacturability, maintainability, increased performance margins, increased safety and use-control, improved longevity, and minimize the use of difficult to handle materials and processes that threaten the environment.**



# Planning Assumptions

(divergent views in Congress on whether we should plan for these)



- **Advanced concepts will be developed to and sustained in a production-ready state.**
- **The Science Campaign will focus on obtaining the data needed to certify new warheads.**
- **New or modified warheads can be fielded initially in small lots with continuous/sequential capability improvements made to subsequent lots.**
- **Dual-use (conventional and nuclear) delivery platforms will be an important driver in warhead modification and cost control.**





# The 2030 Vision



*Elements in the current DP Vision can be organized around the following facets:*

- **Stockpile**
- **Weapons Certification**
- **Complimentary Mission**
- **Complex**



# Stockpile



- **We will plan for the Complex to be able to support a total nuclear weapon stockpile of 2000-6000 warheads at any given time during the transition to the post-2030 stockpile.**
- **To the extent possible, the next generation of weapons that will begin entering the stockpile in 2015+ timeframe will be built around a set of common modular components. (Requires clear Congressional authorization)**



# Stockpile



- **Ease of manufacturing, inherent safety and use control, designed in longevity, and accelerated certification without underground nuclear testing are major design criteria for any future systems.**
- **Embedded safety and use-control will be inherent in the warhead and will not depend on delivery platform performance.**
- **Reducing the cost of design and production will be a major operating principle for the Complex.**



# Weapon Certification



- The Complex will have the capability to produce and qualify a *limited* number of *standardized* new pit and secondary designs in quantities necessary to support a future weapon stockpile. (Requires clear Congressional authorization)
- Robust manufacturing and performance margins will be a key design criterion for all future subsystems.



# Complimentary Mission



- **Enhanced relationships with other scientific organizations and institutions will be created to foster long-term synergistic ventures.**  
(Not agreed to by all)



# Complex



- **Activities will be performed at the eight existing locations for the next ten years, though the footprint will be downsized and existing facilities modernized or replaced. (Requires confirmation by upcoming Study of Complex Size)**
- **Inter- or intra-site consolidation of missions and functions will occur.**
- **Complex will be examined again to confirm details of requirements for R&D labs, a nuclear test site, and a manufacturing complex.**



# Complex



- **For the foreseeable future the U.S. will not produce any new plutonium or highly enriched uranium, but will retain the ability to process and machine both materials and will produce tritium as required.**
- **The NNSA will have a responsive infrastructure to provide rapid deployment of modified or new warheads to meet emerging threats. (Not yet fully endorsed by Congress.)**
- **The Complex will operate as a virtual corporation (multi-site/complex-wide) with information accessible to authorized users without regard to location.**



# Complex



- **To increase flexible manufacturing and to decrease costs of research and development activities, hazardous and special materials should be minimized or eliminated.**
- **The Complex will be able to support production of small numbers of special effects (enhanced neutron, x-rays, etc.) warheads and will have the capability to rapidly respond to the DoD's requirements to counter a broad spectrum of emerging threats. (Not yet fully endorsed by Congress.)**





# Complex



- **The workforce will be highly trained, flexible, mobile, and smaller, consisting of federal and contractor employees whose mix may change rapidly.**
- **Nuclear facilities will be maintained at or better than industry standards.**