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Acquisition

**JOINT AIR FORCE-NATIONAL NUCLEAR
SECURITY ADMINISTRATION (AF-NNSA)
NUCLEAR WEAPONS LIFE CYCLE
MANAGEMENT**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This Air Force Instruction (AFI) implements Air Force Policy Directive (AFPD) 63-1, *Capability-Based Acquisition System* and AFPD 63-11, *Modification System*, as they relate to joint nuclear weapons life cycle program management; Department of Defense Directive (DoDD) 3150.1, *Joint DoD-DOE Nuclear Weapon Life-Cycle Activities*; and Department of Defense Instruction (DoDI) 5030.55, *DoD Procedures for Joint DoD-DOE Nuclear Weapons Life-Cycle Activities*. [Note: AFPD 63-1 and AFPD 63-11 along with AFPD 20-5, *Air Force Product Support Planning and Management*, will be consolidated in a revised joint AFPD 20-1/63-1, *Acquisition and Sustainment Life Cycle Management*, publication pending.] These directives outline the procedures and responsibilities for managing joint Department of Defense-Department of Energy (DoD and DOE respectively or DoD-DOE collectively) nuclear weapon life cycle management programs. The National Nuclear Security Administration (NNSA) is the DOE agency established by law to design, develop, produce, sustain, and ultimately dismantle nuclear weapons and their nuclear components for the DoD.

This instruction applies to joint DoD-DOE programs for the life cycle management of nuclear weapons for which the Air Force has been designated the Cognizant Military Department (referred to as the lead service hereafter in this instruction) by the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)). It also applies to the research, design, development, testing, acquisition, and modification of nuclear weapons and non-nuclear components, subsystems, and associated logistics support elements conducted jointly with the DOE. Non-nuclear components integral to a joint AF-NNSA nuclear weapon-related acquisition program for which the Air Force has sole acquisition responsibility will use DoD 5000 series publications, AFI 63-101, *Operations of Capabilities Based Acquisition System*, or AFI 63-1101, *Modification Management*, as well as AFI 10-601 and AFI 99-103, *Capabilities Based Test and Evaluation*. [Note: AFI 63-101 will be replaced by a revised AFI 63-101, *Acquisition and Sustainment Life Cycle Management*, publication pending.] In all cases, the designated Milestone Decision Authority (MDA) will determine the specific acquisition process to be followed and grant any waivers to the procedures proscribed herein. Consult cited policy directives, instructions, manuals, and their supplements for specific policies, procedures, and requirements. In case of conflict with DoD directives or

instructions, the DoD documents will prevail. **Attachment 1** contains a glossary of references and supporting information used in this publication. This instruction applies to the regular Air Force and the Air Force Reserve.

Send proposed supplements or recommended changes to the Director for Nuclear Operations, Plans & Requirements, HQ USAF/A3/5N, 1480 Air Force Pentagon, Washington D.C. 20330-1480, using the AF Information Management Tool (IMT) 847, *Recommendation for Change of Publication* or by e-mail to **AF/A3/5N Workflow**. Route AF IMT 847s from the field through Major Command (MAJCOM) publications/forms managers.

Ensure that all records created as a result of the processes prescribed in this publication are maintained in accordance with (IAW) AF Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW the AF Records Disposition Schedule at <https://afrims.amc.af.mil/>.

SUMMARY OF CHANGES

This is a complete revision to AFI 63-103, *Nuclear Weapons Program Management*, dated May 6, 1994, and must be reviewed in its entirety.

Significant changes include: realigning the roles and responsibilities for the management of joint Air Force-National Nuclear Security Administration (AF and NNSA respectively or AF-NNSA collectively) nuclear weapon acquisition activities under the Director of Nuclear Operations, Plans & Requirements (AF/A3/5N), Deputy Chief of Staff for Air, Space & Information Operations, Plans & Requirements (AF/A3/5) and with the Air Force Materiel Command (AFMC) through the Air Force Nuclear Weapons Center (AFNWC) as the executing agency. This instruction also defines the role of other MAJCOMs in the joint life cycle management process for nuclear weapons. The title has been changed to *Joint Air Force-National Nuclear Security Administration (AF-NNSA) Nuclear Weapons Life Cycle Management* to more accurately describe the scope of the instruction.

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Section A—Process Overview

1. Applicability and Scope. This instruction describes the Air Force role in, and provides procedures for all joint DoD-DOE nuclear weapons development, production, sustainment (and refurbishment), and retirement activities (including studies) for which the Air Force is the lead service.

1.1. For purposes of this instruction, the meaning of “sustainment” and “refurbishment” are as strictly defined in DoDI 5030.55.

1.2. This instruction *does not* apply to:

1.2.1. Routine stockpile activities as defined in DoDI 5030.55.

1.2.1.1. Routine stockpile activities are instead governed by applicable DoD instructions, Chairman of the Joint Chiefs of Staff instructions (CJCSI) and manuals (CJCSM), joint nuclear weapon publications, AF technical orders (T.O.), and AF instructions in the 20-, 21-, and 91-series.

1.2.1.2. However, if routine stockpile activities result in generation of a requirement for a previously unscheduled joint DoD-DOE change to a weapon, or changes to its Military Characteristics (MCs) or Stockpile-to-Target Sequence (STS), the resulting activity shall be considered a sustainment activity. In this case, Air Force actions shall be performed as described in this instruction. (MCs and STS are discussed in more detail in paragraphs [2.2.3.](#), [2.2.5.](#), and [2.2.6.2.](#))

1.2.2. Acquisition and sustainment of the nuclear weapons delivery systems and specific non-nuclear component/subsystems which the Air Force has life cycle management responsibility; these acquisitions will be conducted SAF/AQ or SAF/US (as appropriate) IAW the DoD-5000 series publications and implementing Air Force directives.

1.2.3. Life cycle management efforts associated with the storage, transportation, and security of nuclear weapons that are not designated a joint DoD-DOE activity by the Nuclear Weapons Council (NWC).

1.3. DoDI 5030.55 should be reviewed prior to the initiation of any activity related to the development, sustainment, or refurbishment of a nuclear weapon to insure it is carried out IAW the latest DoD guidance.

1.4. The Air Force and NNSA will enter into a specific joint memorandum of understanding (MOU) for each weapon acquisition program which will define their respective responsibilities.

1.4.1. The MOU will identify the specific components or subsystems that each party will be responsible for; however, all nuclear components/subsystems will be the NNSA’s responsibility. The Air Force will acquire only non-nuclear components or subsystems as agreed to.

1.4.2. AF/A3/5, and SAF/AQ or SAF/US (as appropriate) will jointly develop such guidance as needed to insure the AF-only program is fully integrated with the joint AF-NNSA program as specified in the weapon-specific joint AF-NNSA MOU.

2. Nuclear Weapons Life Cycle Management.

2.1. Life Cycle Management Approach. Nuclear weapons are developed, produced, entered into the stockpile, and ultimately retired and dismantled through a sequence of events known as the nuclear

weapons life cycle. The life cycle process details phases of a nuclear program from concept through production to retirement.

2.1.1. Although the DoD and DOE co-manage nuclear weapons through all system life cycle phases, each has specific responsibilities.

2.1.1.1. The DOE through the NNSA is responsible for designing, developing, building, sustaining, and dismantling all nuclear warheads.

2.1.1.2. The DoD through the service component is responsible for developing the requirements and specifications for nuclear warhead operational characteristics; the environments in which the warhead must perform or remain safe; the determination of design acceptability; and the military requirements for warhead quantities.

2.1.1.2.1. The DoD service component is also responsible for developing and acquiring the launch platform and delivery system associated with each particular nuclear warhead type as well as selected ancillary equipment (such as nuclear weapon trainers, support equipment, test and handling equipment, and spares).

2.1.1.2.2. The DoD service component may also be charged with acquiring some non-nuclear components necessary for warhead function. Components for which the Air Force has responsibility will be identified in the joint agreement with the NNSA delineating acquisition responsibilities between the two organizations.

2.1.1.3. **Attachment 2**, **Figure A2.1.**, summarizes the major responsibilities of the DoD and DOE as well as the shared responsibilities.

2.1.2. For nuclear weapon development, sustainment, and retirement, the phases are tailored to be consistent with the development/refurbishment phases used by DOE. DOE has historically labeled development phases for nuclear weapons as Phase 1 (Concept Study) through Phase 6 (Quantity Production/Stockpile Maintenance & Evaluation) with Phase 7 the Retirement and Dismantlement Phase. This process will hereafter be referred to as the Phase 1-7 Process.

2.1.2.1. During Stockpile Maintenance and Evaluation part of Phase 6, a weapon will undergo a series of routine stockpile activities that are part of the normal maintenance and upkeep of the weapon that are not generally considered acquisition projects. However, some sustainment projects will be of such complexity or importance, that the NWC will designate the effort as an acquisition effort.

2.1.2.2. These sustainment projects are conducted in phases tailored from the original new weapon development phases, and labeled Phase 6.1 (Concept Assessment) through Phase 6.6 (Full-Scale Production) hereafter referred to as the Phase 6.X Process.

2.1.2.3. A joint DoD-DOE nuclear weapon acquisition program is considered initiated following the decision to begin developmental engineering (*i.e.*, the Phase 3/6.3 Milestone Decision).

2.1.3. Although the governing publications provide clear delineation of the various functions to be performed in each phase, weapon development/modification programs may not precisely follow these phases or perform steps in the chronological order described. Specific phases may be merged, omitted, or deferred based on the recommendation of the POG and with the approval of the NWC as appropriate.

2.1.3.1. The Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) unless otherwise delegated is the MDA while the NWC is the milestone review board (MRB) for these acquisition programs.

2.1.3.2. The NWC determines which process (Phase 1-7 or Phase 6.X) will be used.

2.1.3.3. Both processes are shown in [Attachment 2, Figure A2.2.](#), and described in detail in DoDI 5030.55 and the *NWC DoD-DOE Procedural Guidelines For The Phase 6.X Process*.

2.1.4. Governing Publications. DoDD 3150.1, DoDI 5030.55, the *NWC DoD-DOE Procedural Guidelines For The Phase 6.X Process*, and this instruction provide the procedures for the management of joint DoD-DOE nuclear weapons development, production, sustainment, and retirement activities.

2.2. Nuclear Weapon Requirements.

2.2.1. All acquisition or sustainment programs are based on identified, documented, and validated capability needs. Capability needs result from on-going assessments of current and projected requirements for a new operational capability, to improve or sustain an existing capability, or to exploit opportunities to reduce costs or enhance performance.

2.2.2. The Joint Capabilities Integration and Development System (JCIDS) will be utilized to identify, assess, and prioritize new joint capability needs. Sustainment and refurbishment programs not originating from a new capability requirement are exempt from JCIDS requirements.

2.2.3. DoD requirements are provided to the DOE by the MCs and STS.

2.2.3.1. The MCs define the DoD requirements for a specific nuclear weapon. The MCs begin as a statement of desired DoD performance objectives and becomes design requirements after formal DOE acceptance.

2.2.3.2. The STS supplements the MCs by describing the logistical and operational concepts for the weapon, and the resulting physical environments that the nuclear weapon can encounter during its operational deployment. The STS is developed through an evolutionary process producing a “living” document that is reviewed continuously and revised as required throughout the life of a nuclear weapon.

2.2.4. The Joint Integrated Project Plan (JIPP) serves as the baseline control document for the development or refurbishment activity. The JIPP is normally initiated by the LPO and the POG during the Design Definition and Cost Study (Phase 2A) and is included in the request for entry into the development program. The JIPP is updated as necessary by the POG prior to each subsequent Milestone Decision. The plan provides:

2.2.4.1. Design status and objectives, new weapon or sustainment activity descriptions, proposed qualification activities, ancillary equipment requirements, project schedule, and the requisites for the production decision.

2.2.4.2. Description of the program management structure.

2.2.4.3. Proposed joint agreement (for a new weapon development only) between the Air Force and the DOE on the division of project responsibilities.

2.2.4.4. For sustainment projects, this plan shall be an addendum to the NNSA prepared Final Weapon Development Report.

2.2.5. The JIPP, MCs, STS, and other documentation specified in DoDI 5030.55 replaces the JCIDS documentation for supporting milestone decision points once a joint AF-NNSA nuclear weapon development effort is approved as an acquisition program by the MDA.

2.2.6. Governing Publications.

2.2.6.1. Current versions of the CJCSI 3170.01, *Joint Capabilities Integration and Development System*, and CJCSM 3170.01, *Operation of The Joint Capabilities Integration and Development System*, as implemented by AFI 10-601 and AFI 10-602, *Determining Mission Capability and Supportability Requirements*, provide detailed procedures for identifying, developing, validating, and documenting these requirements. [Note: AFI 10-602 will be consolidated with AFI 63-101 in a revised AFI 63-101, *Acquisition and Sustainment Life Cycle Management*, publication pending.]

2.2.6.2. Format and content of the MCs and STS will be IAW AF T.O. 11N-50-20, *Procedures for Preparation and Use of Military Characteristics and Stockpile-to-Target Sequences for Nuclear Weapons*, and Enclosure 8 to DoDI 5030.55.

2.3. Documentation Requirements.

2.3.1. Specific document requirements including their preparation and processing to support the milestone decision points for joint DoD-DOE nuclear weapon life cycle management programs are defined and described in the Governing Publications identified in paragraphs 2.1.4. and 2.2.6. above.

2.3.2. A program management directive may be warranted for specific joint DoD-DOE nuclear weapon life cycle management programs IAW Headquarters Operating Instruction (HOI) 63-1, *Headquarters Air Force Guidance For Preparing Program Management Directives*. The LPO shall provide a recommendation to the Director for Nuclear Operations, Plans & Requirements (AF/A3/5N) on the need for this directive.

3. Air Force Role in Nuclear Weapons Life Cycle Management. The Air Force's role in a joint DoD-DOE nuclear weapon life cycle management program for which it has been designated the lead service is described in Enclosure 4 to DoDI 5030.55 and [Attachment 3](#). Key features are summarized in [Attachment 2, Figure A2.3](#). The relationship between AF/A3/5N and the AFNWC in fulfilling the Air Force's role is described in the Memorandum of Agreement (MOA), *AF/A3/5-AFNWC Command Relations Concept of Operations*.

4. Project Officers Group (POG). The POG is a working level body that coordinates activities associated with a particular nuclear weapon. It provides the primary interface between the NNSA, DoD, and the services for the life of the nuclear weapon in the stockpile.

4.1. The POG normally functions as the integrated project team (IPT) in coordinating the activities associated with a nuclear weapon program. If the MDA determines a separate IPT is required, the MDA will provide a specific charter, mission, scope, and lifetime. Further, the guidance establishing the IPT will clearly delineate the division of responsibilities between and the relationship with the POG.

4.2. The POG may form subgroups to meet particular needs of a nuclear weapon program. Typical subgroups include maintenance and logistics, MCs and STS, joint test, surety and reliability, integra-

tion, safety (mandatory), and use control. POG subgroups report their findings to the POG for its consideration.

4.3. Specific responsibilities of and guidance for the management of the POG is provided in Enclosure 6 to DoDI 5030.55 and [Attachment 4](#).

5. Project Officers and Lead Project Officer (LPO).

5.1. Project officers act as points of contacts for their parent organizations in coordinating the development of nuclear weapons. They have the authority to carry out the assigned responsibilities of their parent organizations. The assignment of project officers does not alter the normal functions and responsibilities of the agencies or Service involved.

5.2. The LPO is selected by the lead service, coordinates the efforts of the other project officers, and serves as the chair for the POG.

5.3. Specific responsibilities and duties of the LPO and project officers are provided in Enclosure 6 to DoDI 5030.55 and [Attachment 4](#).

6. Design Review and Acceptance Group (DRAAG). The DRAAG provides an independent review of the proposed DOE nuclear weapon design to determine the design's compliance with the requirements specified in the MCs and STS. In conducting this review, the DRAAG is acting on behalf of the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs (ATSD(NCB)), the Military Departments, the MDA, and other interested DoD components. For Air Force nuclear weapons, the DRAAG will consist of a chairman appointed by the Director for Nuclear Operations, Plans & Requirements (AF/A3/5N), and three principal members (one from each Military Department). Further, representatives of the appropriate Combatant Commands and MAJCOMs may also attend as requested/approved by the Chairman.

6.1. Through the DRAAG, both DOE and DoD provide assurance to the users, program executive officers, the AFNWC Commander, and Air Force Air Logistics Center Commanders (as appropriate) that all requirements have been met.

6.2. As a project progresses through the nuclear weapon acquisition phases, the DRAAG will formally review the development reports published by the DOE with emphasis on the design's meeting the MCs. The review process leads to a MRB recommendation to the MDA for acceptance of the weapon design.

6.3. Specific responsibilities and procedures for the DRAAG are provided in Enclosure 7 to DoDI 5030.55.

7. Product Support Planning. As part of the joint DoD-DOE nuclear weapon life cycle management process, the Air Force is obligated to plan for identifying and effectively integrating the logistical support requirements associated with the acquisition of a new or the modernization/sustainment of an existing nuclear weapon. As such, the Air Force shall develop the necessary plans and life cycle costs in its areas of responsibility (such as flight and other testing, maintenance/logistics, trainer and handling gear procurement, or procurement of new DoD/Air Force components). These inputs will be coordinated through the POG. The POG shall incorporate DOE and Service planning inputs into the JIPP. More detailed guidance is provided in Enclosures 4 and 6 to DoDI 5030.55, and AFPD 20-5 and AFI 63-1201, *Life Cycle*

Systems Engineering. [Note: AFPD 20-5 will be consolidated with AFPDs 63-1 and 63-11 in a revised joint AFPD 20-1/63-1, *Acquisition and Sustainment Life Cycle Management*, publication pending.]

8. Nuclear Weapons Surety Program. This program incorporates and maintains nuclear surety of the nuclear weapons systems in the Air Force inventory, consistent with operational requirements, from system development to their retirement IAW DoDD 3150.2, *DoD Nuclear Weapon System Safety Program*. AFPD 91-1, *Nuclear Weapons and Systems Surety*, and AFI 91-101, *Air Force Nuclear Weapons Surety Program*, implement the Air Force program.

9. Nuclear Weapon System Certification Program. The Air Force certification program is designed to ensure that nuclear weapon systems are designed, built, and used in a safe manner. All procedures, personnel, equipment, facilities, hardware and software on delivery platforms, and organizations shall be certified before conducting any operations involving nuclear weapons. Nuclear weapon system certification supports operational safety, suitability, and effectiveness as described in AFI 63-1201. AFI 63-125, *Nuclear Certification Program*, outlines the procedures and responsibilities for managing the Air Force Nuclear Certification Program. Specifically, it defines the process for establishing and maintaining certification of Air Force nuclear weapon systems over their entire operational life.

10. SEEK EAGLE (SE) Program. The SE Program is the Air Force's standard aircraft-stores certification process. It assures aircraft-store compatibility to include store loading, safe carriage, separation, safe escape, electromagnetic compatibility and electromagnetic interference as well as weapon delivery accuracy verification. SE certification will be accomplished on all aircraft deployable nuclear weapons and associated suspension equipment whether carried externally or internally. Recertification is required for any change in hardware or software that alters the aerodynamic, structural, or electromagnetic characteristics of the aircraft or store, or the ejection characteristics of the suspension equipment. SE certification forms part of the Air Force's airworthiness certification process IAW AFPD 62-6, *USAF Aircraft Airworthiness Certification*, which is also part of assuring compliance with operational safety, suitability, and effectiveness characteristics as directed by AFI 63-1201. Specific procedures and policies for accomplishing the SE program are provided in AFI 63-104, *The SEEK EAGLE Program*.

11. Joint AF-NNSA Nuclear Weapons Stockpile Testing and Assessment. NNSA and the Air Force will conduct joint tests and evaluations of nuclear weapons under development and in the Air Force's stockpile to: (1) evaluate initial and continued compatibility of all interfaces between NNSA and Air Force subsystems, (2) provide continual assurance that stockpiled nuclear weapons are properly maintained and can satisfy operational requirements, (3) detect degradation trends which may impact weapon safety or reliability, and (4) evaluate Air Force delivery platform capabilities to provide the Air Force and United States Strategic Command with operational information for mission planning.

11.1. A Joint Test Working Group (JTWG), Joint Test Subgroup (JTSG) (if required), or equivalent will be established for each new weapon development program to coordinate and provide independent evaluation of the weapon testing activities. The JTWG develops, implements and maintains the approved Nuclear Weapon Subsystem Test Plan (NWSSTP), and conducts other evaluation activities required for conducting joint flight tests, and integrated and non-integrated laboratory testing of a specific NNSA weapon/Air Force delivery system. The JTSG works within the purview of the LPO to assist the JTWG in identifying testing requirements and resolving testing related issues. The Air Force and NNSA will designate members as appropriate. The JTWG will work with, while the JTSG will report to, the appropriate POG and will function as long as the weapon remains in the stockpile.

11.2. The NWSSTP (or equivalent plan) documents planned activities for the joint AF-NNSA test program for each nuclear weapon, and includes provisions for joint integrated and/or non-integrated AF-NNSA laboratory testing as well as joint flight testing to gather performance data under the most realistic environments possible.

11.3. Specific responsibilities and procedures are defined in the current *Memorandum Of Understanding Between The National Nuclear Security Administration And The Department Of The Air Force Regarding Joint Testing And Assessment Of The Nuclear Weapons Stockpile*. Basic Air Force test and evaluation principles, policies, procedures, definitions, and responsibilities are provided in AFI 99-103 for nuclear and non-nuclear components that require testing and nuclear certification throughout the system life cycle.

12. Nuclear Weapons Maintenance. AFI 21-204, *Nuclear Weapons Maintenance Procedures*, provides policy and procedures for routine stockpile activities of nuclear munitions and associated equipment. It also provides specific responsibilities for the logistics management of nuclear materials.

13. Treaty Compliance. New nuclear weapon concepts will be evaluated for compliance with existing international sovereignty regimes and arms control agreements, or with arms control agreements under negotiation, as described in DoDD 2060.1, *Implementation of, and Compliance With, Arms Control Agreements*, AFPD 16-6, *Arms Control Agreements*, and AFI 16-601, *Implementation of, and Compliance With, Arms Control Agreements*.

Section B—Roles and Responsibilities

14. The Assistant Secretary of the Air Force for Acquisition (SAF/AQ) oversees policy and executes AF-only non-nuclear component acquisition programs supporting a joint nuclear weapon life cycle management program as identified in the weapon specific joint AF-NNSA agreement (excluding intercontinental ballistic missile (ICBM) related programs).

15. The Under Secretary of the Air Force (SAF/US) oversees policy and executes AF-only ICBM-related non-nuclear component acquisition programs supporting a joint nuclear weapon life cycle management program as identified in the weapon specific joint AF-NNSA agreement.

16. The Deputy Chief of Staff for Air, Space & Information Operations, Plans & Requirements (AF/A3/5) will:

16.1. In conjunction with SAF/AQ and SAF/US, provide guidance for managing joint AF-NNSA nuclear weapon acquisition programs and insuring effective integration of joint DoD-DOE and DoD/AF-only programs (either non-ICBM or ICBM related) as applicable.

16.2. Oversee the planning for and execution of joint AF-NNSA nuclear weapon life cycle management programs.

16.3. Provide consolidated guidance concerning specific nuclear weapon requirements to the DOE through the MCs and STS process.

16.4. Designate the Air Force's official observer to the Nuclear Weapons Council (NWC), principal to the Nuclear Weapons Council Standing and Safety Committee (NWCSSC), and chair for the Air Force Nuclear General Officer Steering Group (AFNGOSG).

16.5. Through the Director of Nuclear Operations, Plans & Requirements (AF/A3/5N):

16.5.1. Develop guidance for managing joint AF-NNSA nuclear weapon system life cycle management programs.

16.5.1.1. Execute a weapon specific agreement with the NNSA on the division of acquisition responsibilities for new development/major sustainment projects for which the Air Force is the lead Military Department if required.

16.5.1.2. Establish formal project development agreements with other Services for joint projects as required.

16.5.1.3. Formalize the command relations and concept of operations between the HAF and AFNWC regarding nuclear weapon life cycle management with a MOA with AFNWC/CC.

16.5.2. Ensure the acceptability of the nuclear weapon under consideration by closely monitoring bomb/warhead development or modification, and evaluating the design for suitability and compliance with the MCs and STS.

16.5.3. Oversee the performance of all nuclear weapon acquisition-related studies in response to internal Headquarters Air Force (HAF) requirements, or combatant commands/MAJCOM requests. If this is a joint DoD-DOE study, assure the NWCSSC has been notified and approval obtained (if required) prior to their initiation.

16.5.3.1. Review and approve for the Air Force, all DoD/NNSA studies examining new weapon concepts and requirements, and requests for entry into specific nuclear weapon acquisition phases. Approve all Air Force prepared nuclear weapon acquisition-related study reports and authorize their release.

16.5.3.2. Following review of an acquisition phase study results, obtain NWCSSC approval to conduct additional joint AF-NNSA acquisition phase studies, to initiate a development program, or request entry into a specific acquisition phase as warranted.

16.5.3.3. Coordinate and forward the draft MCs and STS (and subsequent updates if required) to the NWCSSC.

16.5.3.4. Obtain a preliminary judgment on whether the nuclear weapon system complies with existing or anticipated arms control agreements before requesting Phase 3/6.3 approval from AF/A5XP.

16.5.3.5. Ensure the Office of the Judge Advocate General (AF/JA) conducts a legal review of the intended acquisition of or modifications to a potential nuclear weapon or weapon system to determine the effort is consistent with U.S. treaty obligations IAW AFI 51-402, *Weapons Review*.

16.5.4. Appoint Lead Project Officers (LPO) for each nuclear weapons for which the Air Force is the lead service.

16.5.5. Appoint the chairman for AF-led DRAAGs as required to support specific joint AF-NNSA acquisition phase decision points; appoint the AF principal member for other service led DRAAGs.

16.6. The Deputy Director for Plans and Policy (AF/A5XP) will evaluate proposed nuclear weapon concepts for compliance with existing international sovereignty regimes and arms control agreements,

or with arms control agreements under negotiation, as described in DoDD 2060.1, AFRD 16-6, and AFI 16-601. AF/A5XP will provide a copy of the evaluation to AF/A5R, SAF/AQX, and SAF/USA as appropriate.

17. The Deputy Chief of Staff for Logistics, Installations & Mission Support (AF/A4/7) through the Director of Maintenance, Munitions and Missile Maintenance Division (AF/A4MW) will establish maintenance policy and procedures to maintain nuclear weapon systems and their delivery systems IAW AFRD 21-2, *Munitions*.

18. The Air Force Chief of Safety (AF/SE) will provide oversight and management for the nuclear weapon surety program to include nuclear safety design certification, and establish the necessary safety policies and instructions IAW AFRD 91-1, AFI 91-101, and AFI 91-103, *Air Force Nuclear Safety Design Certification Program*.

18.1. The Air Force Safety Center (AFSC) will manage the Air Force nuclear surety program by providing nuclear safety design certification, executive oversight of the Nuclear Weapons System Safety Group (NWSSG), and nuclear weapons safety standards criteria.

18.2. The NWSSG will review the weapon system design to identify safety-related concerns and deficiencies to the POG so that corrective action may be made in a timely and cost efficient manner.

19. Air Force Materiel Command (AFMC) will:

19.1. Support and coordinate with other Service agencies on joint service nuclear warhead programs and provide field coordination as necessary on other Service programs.

19.2. Through AFMC's Air Force Nuclear Weapons Center (AFNWC), as the Air Force's Nuclear Center of Excellence and Nuclear Centralized Management Agency:

19.2.1. Ensure the acceptability of the nuclear weapon under consideration by closely monitoring bomb/warhead development or modification, and evaluating the design for suitability and compliance with the MCs and STS.

19.2.2. Provide nuclear weapons technical and programmatic expertise assistance and support to HAF action officers, program managers, program offices, and product group managers in the design, development, modification, procurement and support of certified nuclear capability for their weapons systems as outlined in the AF/A3/5-AFNWC MOA.

19.2.3. Execute nuclear weapons life cycle management policy and guidance through the Air Force POG process.

19.2.3.1. Establish and oversee the activities of the POGs and other required working groups necessary to support the life cycle management and sustainment of the nuclear weapons for which the Air Force has been designated lead service. Provide the HAF and POG with:

19.2.3.1.1. Engineering and program management support for Phase 1–7/Phase 6.X activities associated with weapon development and sustainment to include participating in planning, budgeting, and execution activities.

19.2.3.1.2. Scientific and engineering support for advanced technology development studies and analyses to include participating in planning, budgeting, and risk reduction activities.

19.2.3.1.3. Scientific and engineering assistance in evaluating warhead design and suitability.

19.2.3.2. Provide the Lead Project Officer (LPO) for the DoD-DOE nuclear weapon development POG for each program where the Air Force is the lead service.

19.2.3.3. Provide the chairperson or a project officer to all other nuclear weapon related POGs (e.g., Warhead POG, Weapon System POG, Aircraft Monitor and Control (AMAC) POG, and Use Control POG).

19.2.3.4. Approve the charter prepared by the LPO for each POG and provide a copy to the NWCSSC as requested; ensure that an LPO-approved charter is prepared for all of the POG subgroups.

19.2.4. Conduct pre-acquisition and other nuclear weapons acquisition-related studies for which AFMC has been designated lead; study results will be forwarded to AF/A3/5N for review and approval.

19.2.4.1. Study results will be coordinated with appropriate combatant commands and other involved MAJCOMs, and then forwarded to AF/A3/5N for review and approval. Review study reports prepared by other MAJCOMs prior to submission to AF/A3/5N for approval.

19.2.4.2. Coordinate studies, reports, and other documentation on AF-only nuclear weapon component acquisition programs with SAF/AQX (non-ICBM-related) or SAF/USA (ICBM-related) as appropriate prior to submitting to AF/A3/5N for approval.

19.2.4.3. Following completion of a specific nuclear weapon acquisition phase, provide a recommendation to AF/A3/5N concerning entry into the next phase if appropriate.

19.2.5. Establish a Center Test Authority (CTA) to coordinate all joint AF-NNSA development and operational tests.

19.2.5.1. Support operational MAJCOMs in planning and executing nuclear weapon system tests required by the joint flight test (JFT) program to include obtaining required test items, arranging for their transportation and security, and verifying with the JTWG and JTSG that approved procedures are available.

19.2.5.2. Support the JTWG and JTSG to plan and conduct joint flight-testing of NNSA developed joint test assemblies (JTA) and Developmental Joint Test Assemblies (DJTAs).

19.2.5.3. Support Air Combat Command (ACC), Air Force Space Command (AFSPC), and Air Force Materiel Command (AFMC) JTWG chairs in developing/updating the NWSSTP for weapon system/warhead testing.

19.2.5.4. Ensure Air Force responsibilities in support of the Non-Nuclear Assurance Program are documented IAW applicable joint instructions.

19.2.5.5. Collaborate with joint AF-NNSA warhead POGs to ensure alternative testing capabilities are explored to provide continuous weapon testing support.

19.2.5.6. Ensure nuclear weapon system test and evaluation requirements are considered in Air Force Test Investment Planning and Programming, and DoD Major Range Test Facility Base reviews.

19.2.6. Identify requirements for the DOE-designed, AF-procured nuclear weapon trainers, associated support equipment, and unique test equipment (to include components/parts) and provide to AF/A5R; accomplish acquisition of nuclear-related support equipment and unique nuclear test equipment.

19.2.7. Conduct independent reviews and evaluations as required supporting nuclear safety design certification recommendations to HQ AFSC/SEW IAW AFI 91-103.

19.2.8. Provide nuclear weapon munitions storage, maintenance, and sustainment capability.

19.2.9. Provide nuclear weapon logistics support to the other MAJCOMs to meet their nuclear mission requirements.

19.2.10. Serve as the Air Force office of primary responsibility (OPR) for the Air Force nuclear certification program as defined in AFI 63-125.

19.2.11. Provide a nuclear compatibility certification statement and a statement of certification completion from the system program manager to the Air Force Seek Eagle office.

20. Other Commands With or Supporting the Air Force Nuclear Mission (Air Combat Command (ACC), Air Mobility Command (AMC), Air Force Space Command (AFSPC), and United States Air Forces in Europe (USAFE)) will:

20.1. Identify operational capabilities for nuclear weapons to AF/A5R, AF/A3/5N, and AFNWC.

20.1.1. Develop requirements documentation in accordance with JCIDS for new nuclear weapon operational capabilities to include any DoD non-nuclear components necessary provide the desired capability. Ensure component acquisitions are identified in the MC/STS documentation and included in appropriate agreements with NNSA.

20.1.2. Participate in life cycle management studies and joint DoD-DOE nuclear weapon development projects through their designated project officers as requested by AF/A3/5N or AFNWC.

20.1.3. Coordinate on life cycle management studies and analyses, MCs, and STSs.

20.1.4. Assist the POG in evaluating warhead design and suitability.

20.2. Conduct pre-acquisition and other nuclear weapons acquisition-related studies for which the command has the lead; study results will be forwarded to AF/A3/5N through the AFNWC for review and approval.

20.3. Participate in the POG for applicable nuclear weapon and weapon delivery systems when requested by the LPO.

20.3.1. Designate individuals (referred to as Project Officers) to serve as their representative on the POG(s).

20.3.2. Designated individuals will be empowered to perform the duties outlined in paragraph **A3.2.** in **Attachment 4** and Enclosure 6 to DoDI 5030.55.

20.4. For assigned weapon delivery systems, support the JFT program to include, in conjunction with the AFNWC and the POG, establishing a JTWG and developing a NWSSTP with the AFNWC.

20.4.1. Provide a co-chair for the JTWG to assist in optimizing pretest planning and coordination when requested.

- 20.4.2. Conduct/support joint flight-testing of NNSA developed JTAs.
- 20.4.3. At appropriate time, assume responsibility for operational testing.
- 20.5. Support the NWSSG, transportation, and other special safety study group activities as requested.

Section C—Adopted Forms

21. AF IMT 847, *Recommendation for Change of Publication*

SUE C. PAYTON
Assistant Secretary of the Air Force (Acquisition)

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

DoDD 2060.1, *Implementation of, and Compliance With, Arms Control Agreements*, 9 January 2001 (Certified Current as of 24 November 2003)

DoDD 3150.1, *Joint DoD-DOE Nuclear Weapon Life-Cycle Activities*, 26 August 2002 (Certified Current as of 8 March 2004)

DoDD 3150.2, *DoD Nuclear Weapon System Safety Program*, 23 December 1996 (Certified Current as of 8 March 2004)

DoDI 5030.55, *DoD Procedures for Joint DoD-DOE Nuclear Weapon Life-Cycle Activities*, 25 January 2001

CJCSI 3170.01F, *Joint Capabilities Integration and Development System*, 1 May 2007

CJCSM 3170.01C, *Operation of the Joint Capabilities Integration and Development System*, 1 May 2007

AFPD 16-6, *Arms Control Agreements*, 25 February 2004

AFPD 20-1/63-1, *Acquisition and Sustainment Life Management*, publication pending [**Note:** Supercedes and consolidates AFPD 20-5 dated 10 April 2001, AFPD 63-1 dated 10 July 2003, and AFPD 63-11 dated 1 August 2001]

AFPD 20-5, *Air Force Product Support Planning and Management*, 10 April 2001

AFPD 21-2, *Munitions*, 20 September 2005

AFPD 62-6, *USAF Aircraft Airworthiness Certification*, 1 October 2000

AFPD 63-1, *Capability-Based Acquisition System*, 10 July 2003

AFPD 63-11, *Modification System*, 1 August 2000

AFPD 91-1, *Nuclear Weapons and Systems Surety*, 13 February 2007

AFI 10-601, *Capabilities Based Requirements Development*, 31 July 2006

AFI 10-602, *Determining Mission Capability and Supportability Requirements*, 18 March 2005

AFI 16-601, *Implementation of, and Compliance With, Arms Control Agreements*, 7 June 2004

AFI 21-204, *Nuclear Weapons Maintenance Procedures*, 17 January 2008 (Incorporating Change 1, 12 May 2008)

AFI 51-402, *Weapons Review*, 13 May 1994

AFI 63-101, *Operations of Capabilities Based Acquisition System*, 29 July 2005

AFI 63-101, *Acquisition and Sustainment Life Cycle Management*, publication pending [**Note:** Supercedes and consolidates AFI 10-602 dated 18 March 2005 and AFI 63-101 dated 29 July 2005]

AFI 63-104, *The SEEK EAGLE Program*, 21 January 2005

AFI 63-125, *Nuclear Certification Program*, 15 March 2004

AFI 63-1101, *Modification Management*, 17 July 2001

AFI 63-1201, *Life-Cycle Systems Engineering*, 23 July 2007

AFI 91-101, *Air Force Nuclear Weapons Surety Program*, 19 December 2005

AFI 91-103, *Air Force Nuclear Safety Design Certification Program*, 16 September 2005

AFI 99-103, *Capabilities-Based Test and Evaluation*, 26 February 2008 (Incorporating Change 1, 12 May 2008)

AFMAN 33-363, *Management of Records*, 1 March 2008

AF T.O. 11N-50-20, *Procedures for Preparation and Use of Military Characteristics and Stockpile-to-Target Sequences for Nuclear Weapons*, 30 March 2005

HOI 63-1, *Headquarters Air Force Guidance For Preparing Program Management Directives*, 20 November 2003

NWC DoD-DOE Procedural Guidelines for the 6.X Process, 19 April 2000 [Copy available from AFNWC]

MOU DE-GM04-94AL94738, *Memorandum Of Understanding Between The National Nuclear Security Administration And The Department Of The Air Force Regarding Joint Testing And Assessment Of The Nuclear Weapons Stockpile*, 16 February 2001 [**Note:** Undergoing revision and renegotiation – contact AFNWC for latest version]

Memorandum of Agreement, AF/A3/5-Air Force Nuclear Weapons Center (AFNWC) Command Relations Concept of Operations, 1 October 2007 [Copy available from either HQ USAF/A3/5N-R or AFNWC]

Abbreviations and Acronyms

ACC—Air Combat Command

AF—Air Force

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFMC—Air Force Materiel Command

AFNWC—Air Force Nuclear Weapons Center

AFNGOSG—Air Force Nuclear General Officer Steering Group

AFPD—Air Force Policy Directive

AFSC—Air Force Safety Center

AFSPC—Air Force Space Command

AMAC—Aircraft Monitor and Control

AMC—Air Mobility Command

CJCSI—Chairman of the Joint Chiefs of Staff Instruction

CJCSM—Chairman of the Joint Chiefs of Staff Manual

CTA—Center Test Authority
DoD—Department of Defense
DoDD—Department of Defense Directive
DoDI—Department of Defense Instruction
DOE—Department of Energy
DRAAG—Design Review and Acceptance Group
DTRA—Defense Threat Reduction Agency
HAF—Headquarters Air Force
HOI—Headquarters Operating Instruction
IAW—in accordance with
ICBM—Intercontinental Ballistic Missile
IOC—Initial Operational Capability
IMT—Information Management Tool
IPT—Integrated Product Team
JCIDS—Joint Capabilities Integration and Development System
JIPP—Joint Integrated Project Plan
JFT—Joint Flight Test
JTA—Joint Test Assembly
JTSG—Joint Test Subgroup
JTWG—Joint Test Working Group
LPO—Lead Project Officer
MAJCOM—Major Command
MCs—Military Characteristics
MDA—Milestone Decision Authority
MOA—Memorandum of Agreement
MOU—Memorandum of Understanding
MRB—Milestone Review Board
NNSA—National Nuclear Security Administration
NWC—Nuclear Weapons Council
NWCSSC—Nuclear Weapons Council Standing and Safety Committee
NWSSG—Nuclear Weapons System Safety Group
NWSSTP—Nuclear Weapon Subsystem Test Plan

OPR—Office of Primary Responsibility

PMD—Program Management Directive

POG—Project Officers Group

POM—Project Officers Meeting

SE—SEEK EAGLE

STS—Stockpile-to-Target Sequence

T.O.—Technical Order

USAFE—United States Air Forces in Europe

Terms

Air Force-only Component (or AF-only Component)—Those non-nuclear components of a nuclear weapon specified in the weapon specific joint AF-NNSA agreement for which the Air Force has acquisition responsibility.

Alteration—A material change to, or prescribed inspection of, a nuclear weapon or major assembly that does not alter its operational capability, yet is sufficiently important to the user, regarding assembly, maintenance, storage, or test operations, to require controlled application or identification. (See DoDI 5030.55.)

Certification—A determination by appropriate government agencies that a nuclear weapon system is safe for use with nuclear weapons; that the nuclear weapons are compatible with the nuclear weapon system; and whether any operational restrictions will be placed on the nuclear weapon system to ensure safety and compatibility. This determination is required before the nuclear weapon system achieves operational status.

Cognizant Military Department (or Lead Service)—The Military Department designated by the MDA to lead a nuclear weapon development or sustainment project for the DoD; referred to as the “lead service” in this instruction. (See DoDI 5030.55.)

Design Review and Acceptance Group (DRAAG)—A joint service group, independent of the POG, which reviews preliminary, interim, and final DOE-proposed nuclear weapon design for compliance with the requirements specified by the STS and MCs. The DRAAG findings on a new nuclear weapon design (or refurbishment design) are forwarded through the lead service to the NWCSSC for approval to enter into the next Phase. (See DoDI 5030.55.)

Joint Integrated Project Plan (JIPP)—The baseline control document for the weapon development or refurbishment activity. It is prepared and updated by the POG.

Joint Test Subgroup (JTSG)—Group with membership from the Air Force, NNSA, and other organizations as needed that provides independent coordination and evaluation of weapon system developmental testing activities.

Joint Test Working Group (JTWG)—Group with membership from the Air Force, NNSA, and other organizations as needed that provides independent coordination and evaluation of weapon system operational testing activities. The JTWG develops, implements, and maintains the NWSSTP.

Lead Project Officer (LPO)—The Project Officer responsible for coordinating the efforts of the Project Officers assigned to represent their respective organizations for nuclear weapons projects.

Lead Service—see Cognizant Military Department.

Milestone Decision Authority (MDA)—The individual authorized to approve entry of a nuclear weapon program into a subsequent phase. Unless otherwise delegated by USD(AT&L), the MDA for all activities covered by this instruction is USD(AT&L).

Milestone Review Board (MRB)—The body that provides management oversight and assists the MDA in reviewing nuclear weapons programs and provides advice to the MDA as to the program's progress towards meeting its established milestones. The MRB for all activities covered by this instruction is the NWC or its designee.

Military Characteristics (MCs)—Military Characteristics define the DoD requirements for a specific nuclear weapon/warhead. They describe required weapon yields and fuzing options; warhead operational, physical, functional, environmental, vulnerability, safety and reliability parameters; maintenance, monitoring, storage and handling considerations; and set forth the priority of design compliance in the event of conflicting design requirements. (See AF T.O. 11N-50-20.)

Modification—A design change to a major assembly that affects delivery (employment or utilization), fuzing, ballistics, or logistics. Because modifications affect operational capability, they require positive controls to ensure that the resulting operational capability is clearly defined. (See DoDI 5030.55.)

Nuclear Weapon—A complete assembly in its intended ultimate configuration which, upon completion of the prescribed arming, fuzing, and firing sequence, is capable of producing the intended nuclear reaction and release of energy. Generally, the weapon is delivered by NNSA as a complete round such as the case with gravity bombs. However, in some cases the Air Force may be charged with providing certain non-nuclear components that are essential to the weapon's proper functioning such as the aero shell and the arming, fuzing, and firing system for ICBM reentry vehicles.

Nuclear Weapon Delivery Vehicle—That portion of the nuclear weapon system which provides the means of delivery of a nuclear weapon to the target (*e.g.*, nuclear configured aircraft, cruise missiles, and ICBMs).

Nuclear Weapon System—A combination of one or more nuclear weapons with all related equipment, materials, services, personnel, and means of delivery and deployment.

Nuclear Weapons Council (NWC)—An advisory/approval body that provides high-level oversight, coordination, and guidance to nuclear weapons stockpile activities. It is chaired by USD(AT&L), with the Vice Chairman of the Joint Chiefs of Staff and a senior representative from the DOE as members.

Nuclear Weapons Council Standing and Safety Committee (NWCSSC)—The committee formed to support the NWC in handling day-to-day matters affecting the stockpile but not requiring the level of oversight of the NWC. It is chaired by the ATSD(NCB), who also serves as the Executive Secretary to the NWC.

Nuclear Weapons Subsystem Test Plan (NWSSTP)—The NWSSTP documents planned activities for the joint AF-NNSA test program for nuclear weapons. It includes provisions as required for (1) joint integrated and/or non-integrated AF-NNSA laboratory testing and (2) joint flight testing to gather performance data under the most realistic environments possible.

Nuclear Weapons Surety—Material, personnel, and procedures which contribute to the security, safety, and reliability of nuclear weapons and to the assurance that there will be no nuclear weapon accidents, incidents, unauthorized weapon detonations, or degradation of performance at the target.

Nuclear Weapons System Safety Group (NWSSG)—The NWSSG conducts all nuclear weapon system safety studies and operational safety reviews on Air Force nuclear weapon systems to evaluate and ensure the DoD Nuclear Weapon System Safety Standards are met in weapon system design and operations. The NWSSG is chaired by AFSC/SEW and consists of representatives from the applicable Air Force MAJCOM(s), Combatant Command(s), Air Force Security Forces Center, DOE, and Defense Threat Reduction Agency (DTRA).

Program Phase—All the tasks and activities needed to bring a development or sustainment program to the next major milestone occurs during one or more phases of the weapon program. Phases provide a logical means of progressively translating broadly stated mission needs into well-defined system-specific requirements, and ultimately into operationally effective, suitable, and survivable systems.

Project Officer—Person assigned by an organization to be a member of the Project Officers Group (POG) with responsibility to represent that organization in the development of nuclear weapons.

Project Officers Group (POG)—A working-level body that coordinates activities associated with a particular weapon. It is the primary forum between the NNSA and DoD for the life of the weapon and weapon system while in the nuclear stockpile.

Project Officers Meeting (POM)—A meeting of project officers to coordinate nuclear weapons projects. Representatives from other organizations with an interest in the project may attend to provide technical assistance and support.

Refurbishment—A generic term defined as all nuclear weapon alterations and modifications to include life extension, modernization, and revised military requirements. Refurbished weapons are assigned a new alteration or modification number for stockpile management purposes. (See DoDI 5030.55.)

Routine Stockpile Activities—Scheduled or planned activities associated with normal maintenance of stockpiled weapons (such as exchange of limited-life components, joint surveillance testing, *etc.*) and unscheduled activities that support routine maintenance programs (such as exploratory testing associated with significant finding investigations). (See DoDI 5030.55.)

Stockpile-to-Target Sequence (STS)—The STS defines the logistical and employment concepts, and related physical and nuclear environments, including vulnerability criteria, involved in the delivery of a nuclear weapon from the stockpile to the target. It may also define the logistical flow involved in moving nuclear weapons to and from the stockpile for quality assurance testing, modification and retrofit, and the recycling of limited life components. The STS supplements the MCs and provides technical detail primarily to the DOE design agency and secondarily to the DoD design agency. (See AF T.O. 11N-50-20.)

Sustainment—Any post-production, non-routine, change to a weapon or its MCs or STS. Studies of sustainment concepts or activities to implement such concepts are collectively defined to be Sustainment Projects/Programs. (See DoDI 5030.55.)

Attachment 2

FIGURES DESCRIBING JOINT AF-NNSA PROCESSES

Figure A2.1. DoD and DOE Responsibilities in the Joint AF-NNSA Acquisition Process For Nuclear Weapons

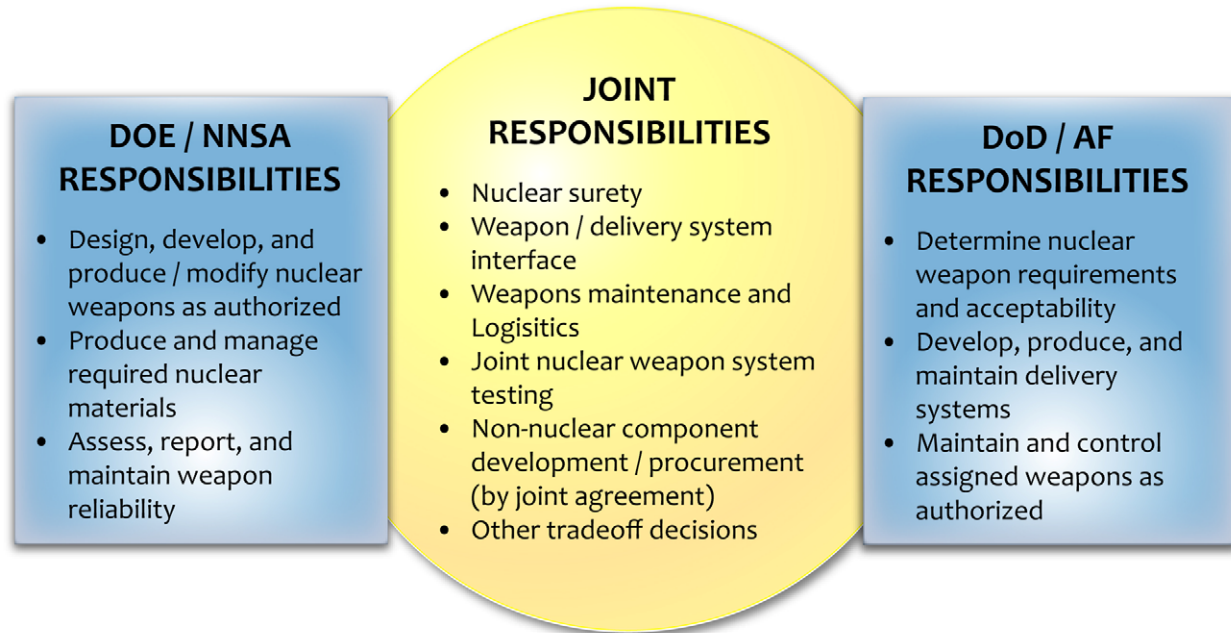


Figure A2.2. Joint DoD-DOE Nuclear Weapon Acquisition Processes.

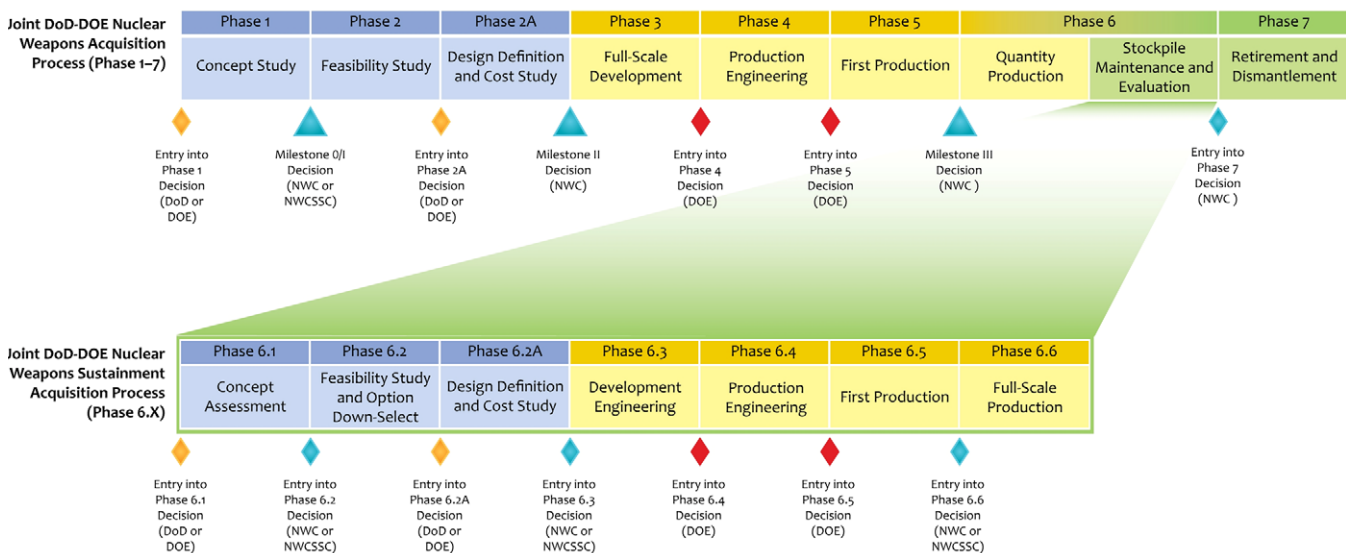
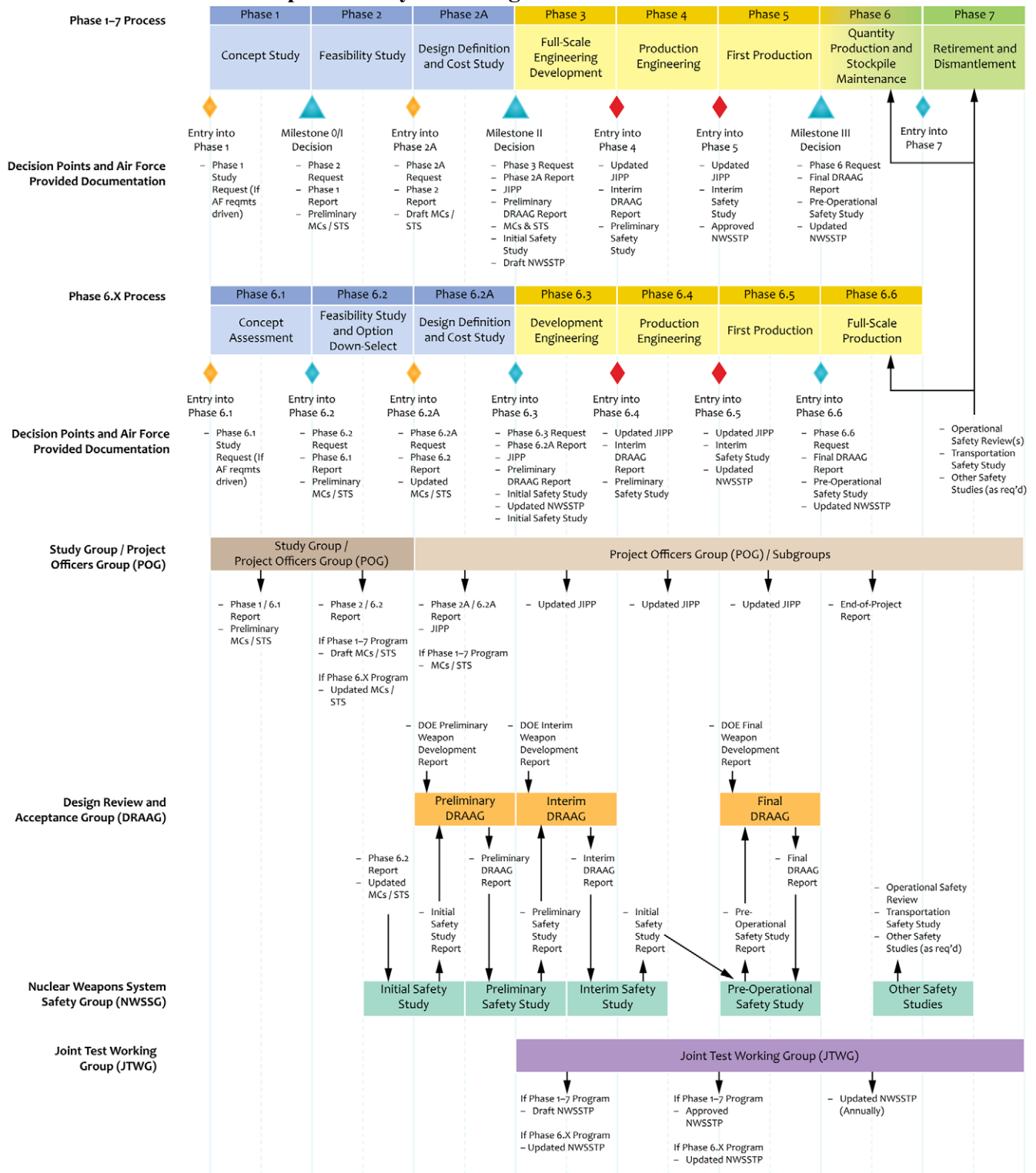


Figure A2.3. Integration of Key Requirements, Acquisition, Safety, and Test & Evaluation Elements into the Nuclear Weapon Life Cycle Management Processes.



Attachment 3

AIR FORCE RESPONSIBILITIES IN THE JOINT DOD-DOE NUCLEAR WEAPONS LIFE CYCLE PROCESS

A3.1. Lead Service Responsibilities. This attachment summarizes Air Force responsibilities in a joint DoD-DOE nuclear weapon acquisition program for which the Air Force is the lead service. A detailed description of the lead service's responsibilities is provided in Enclosure 4 and its attachments to DoDI 5030.55.

A3.2. Phase 1–Concept Study/Phase 6.1–Concept Assessment. The Air Force (with the cooperation of other DoD components and the DOE as appropriate) may conduct a Phase 1/6.1 study to define a new weapon or sustainment concept, and to help the Air Force and the MDA decide whether to proceed with a joint Phase 2/6.2 study. The Air Force will:

A3.2.1. Inform the NWCSSC in writing prior to the start of a Phase 1/6.1 activity to be conducted jointly by the DoD and the DOE.

A3.2.2. If the study foresees the modification of an existing nuclear weapon or the development of a new nuclear weapon, ask DOE to examine the practicability of the proposed modification or development effort.

A3.2.3. For each new weapon or when changes to an existing weapon require a change to the MCs or STS, draft the MCs/STS reflecting the new performance requirements and physical characteristics for weapon components that are the sole responsibility of the DOE to design, develop, certify, and produce.

A3.2.4. After completion of this phase, submit a recommendation to the NWCSSC to proceed into Phase 2/6.2 if warranted.

A3.3. Phase 2–Feasibility Study/Phase 6.2–Feasibility Study & Option Down-Select. This phase determines the technical feasibility, to include weapon/delivery system tradeoffs, of developing a nuclear weapon or sustainment concept to meet the requirements from the Phase 1/6.1 study. The Phase 2/6.2 study will include an in-depth review of fielded and planned support equipment (*e.g.*, handling gear, test gear, use control equipment, trainers, *etc.*) and technical publications to ensure logistics support programs for providing materials and support are in place. The Air Force will:

A3.3.1. Obtain NWCSSC approval for the study and submit a request for DOE participation in the joint Phase 2/6.2 study to the MDA (typically through the NWC).

A3.3.2. For new or revised weapon programs where the Air Force has been designated the lead service:

A3.3.2.1. Ensure distribution of the approved Phase 1/6.1 findings.

A3.3.2.2. Provide a chairman, usually the LPO if already designated, for all Phase 2/6.2 study meetings. The Phase 2/6.2 study team performs an in-depth analysis of each design option and at a minimum considers the following: nuclear safety; system design, trade-offs and technical risk analyses; life expectancy issues; research and development requirements and capabilities; qualification and certification requirements; production capabilities and capacities; life cycle maintenance.

nance and logistics issues; delivery system and platform issues; and rationale for replacing or not replacing components during the refurbishment.

A3.3.2.3. Coordinate ongoing Phase 2/6.2 activities with other interested DoD components; and prepare, publish, and distribute minutes of the formal meetings and the Phase 2/6.2 Report.

A3.3.2.4. Prepare and distribute draft MCs. For programs not requiring a change to the MCs or STS, prepare a letter to the MDA stating the existing MCs and STS documents will be used.

A3.3.2.5. Request a decision from the MDA to proceed with development of the weapon IAW current DoD acquisition policy if warranted by study results.

A3.3.2.6. Annually review all Phase 2/6.2 studies that have not progressed to Phase 2A/6.2A or Phase 3/6.3 and recommend to the MDA continuing, reopening, or canceling such studies; or entering them into Phase 2A/6.2A or Phase 3/6.3 as appropriate.

A3.4. Phase 2A/Phase 6.2A—Design Definition & Cost Study. After completion of the Phase 2/6.2 report but before a decision to request a Phase 3/6.3 project, the Air Force may request DOE join in conducting a joint Phase 2A/6.2A study. In this phase, the DoD and DOE gathers information on costs, production schedules, options, and tradeoffs leading to a design concept that meets the established requirements. The Air Force will:

A3.4.1. Provide a LPO and establish a POG, or assign coordination responsibility for new weapon activities to an existing POG if already established.

A3.4.2. Develop the necessary plans and life cycle costs in its area of responsibility (*e.g.*, flight and other testing, maintenance/logistics, trainer and handling gear procurement, use control equipment, and other AF-acquired components).

A3.4.3. Initiate a formal joint agreement with the DOE delineating the division of responsibilities between the participating agencies.

A3.4.4. Through the POG, incorporate DOE and DoD planning inputs into the JIPP and other documentation as appropriate.

A3.5. Phase 3—Full-Scale Engineering Development/Phase 6.3—Development Engineering. This phase, which primarily involves DOE, begins DOE's development or sustainment program. DOE translates the weapon specifications into a design ready to enter production engineering. At the end of Phase 3/6.3, the weapon design is demonstrated to be feasible in terms of safety, use control, performance, reliability and producibility. The Air Force will:

A3.5.1. Prepare a request for a Phase 3/6.3 project to the MDA based on the results of the Phase 2/6.2 or Phase 2A/6.2A studies.

A3.5.2. Conclude a formal joint agreement on division of responsibility with the DOE for new nuclear weapons development as soon as possible after the MDA approves entry into Phase 3/6.3.

A3.5.3. Design, develop, and refurbish or produce those weapon components specified as DoD's responsibility under terms of the negotiated specific agreement.

A3.5.3.1. Ensure that the characteristics and environments specified for DoD-produced weapon system components are compatible with similar guidance provided the DOE for DOE-produced components.

A3.5.3.2. Ensure progress of the DoD/DOE interface development activities.

A3.5.4. Convene a DRAAG to review the draft JIPP and publish the Preliminary DRAAG Report. This report shall include recommendations on the status of the project and be forwarded to the MRB for their acceptance.

A3.5.5. Plan for and perform test activities; update the JIPP and coordinate with DOE on updates to project documentation for which they are responsible.

A3.6. Phase 4/Phase 6.4–Production Engineering. This phase, again primarily a DOE effort, adapts the development or sustainment design into a design suitable for quantity production. At this point, the provisioning of spares also occurs in conjunction with the DoD. The Air Force will:

A3.6.1. Initiate actions to provide for spares, updates, and validate technical publications; update surveillance planning; develop, maintain, and update project documentation, such as the Interim DRAAG Report and the JIPP, as appropriate.

A3.6.2. Through the POG:

A3.6.2.1. Maintain liaison with appropriate DOE activities throughout this phase.

A3.6.2.2. Coordinate on and conduct joint testing of developmental prototypes with DOE as necessary.

A3.7. Phase 5/Phase 6.5–First Production. This phase comprises the delivery of the first new or refurbished weapon, DOE's and DoD's evaluation leading to DoD's acceptance of the design, and a full-scale production or modification decision. The first production unit milestone occurs when the first new or refurbished unit is produced and accepted by DoD. The Air Force will:

A3.7.1. Through the POG:

A3.7.1.1. Inform the NWCSSC that the program is ready to proceed to Initial Operational Capability (IOC) and full deployment.

A3.7.1.2. Request approval from the NWC to proceed to Phase 6/6.6.

A3.7.1.3. Update the JIPP.

A3.7.2. Through the NWSSG conduct a Pre-Operational Safety Study as necessary to insure specific weapon system safety rules are in place prior to IOC or first weapon delivery.

A3.7.3. Convene the DRAAG to determine final acceptability of the weapon prior to a decision to enter Phase 6/6.6. As part of its review, the DRAAG shall review the final draft of the appropriate DOE-generated documentation.

A3.8. Phase 6–Quantity Production/Stockpile Maintenance & Evaluation/Phase 6.6–Full Scale Production. During this phase, DOE undertakes quantity production of the new or refurbished weapon. This phase also covers full scale production of any sustainment/ refurbishment efforts required to support a deployed weapon until the decision to retire the system is made. The Air Force will:

A3.8.1. Send a request to enter Phase 6/6.6 to the MDA based on a favorable completion of Phase 5/6.5.

A3.8.2. Develop and implement procedures for DoD activities associated with routine stockpile activities to include surveillance.

A3.8.3. Through the POG prepare an End-of-Project Report for the MRB documenting the activities carried out during the weapon development or sustainment process.

A3.9. Phase 7–Retirement & Dismantlement. At the end of their useful life, the weapons must be demilitarized and disposed of.

A3.9.1. Warhead POGs will develop a prioritized retirement plan and submit to the NWCSSC.

A3.9.2. The Air Force will establish a Transition POG for managing activities associated with retired weapons remaining in Air Force custody pending their return to NNSA for dismantlement.

A3.9.3. The Air Force may be required to continue to store and maintain weapons in its custody following retirement until such weapons can be returned to DOE for disassembly and disposition. The Air Force shall ensure such materiel awaiting demilitarization is controlled and subsequent disposal is carried out in a way that minimizes Air Force's and DoD's responsibility for meeting environmental, safety, security, and health requirements.

Attachment 4

PROJECT OFFICERS GROUP PROCEDURES

A4.1. The Project Officers Group (POG) provides a forum for the mutual development and dissemination of information describing a new weapon or sustainment activity during the life cycle of that weapon. POGs are established and operate under the authority of Enclosure 6 to DoDI 5030.55. This instruction must be used in conjunction with DoDI 5030.55 to fully describe the authority and responsibilities of the POG and its membership.

A4.1.1. The POG is a joint DoD-DOE group created at the beginning of a weapon development program (normally not later than the start of Phase 3/6.3) or as directed by the NWC.

A4.1.1.1. The POG provides the forum for coordinating activities related to the development, sustainment, operational effectiveness, and overall management of nuclear weapons. The POG assures the weapon safety, security, reliability, and military operational readiness, as well as the compatibility of the weapon with its delivery system(s). Once established, the POG continues to meet on a regular basis throughout the life of the nuclear weapon. The POG presents weapon status information in response to taskings such as the POG annual assessments. The POG has “cradle-to-grave” responsibility for the weapon.

A4.1.1.2. The NWC provides the general authority and charter for the establishment and continuation of the POG.

A4.1.1.3. The Deputy Chief of Staff for Air, Space & Information Operations, Plans & Requirements (AF/A3/5) or the designated representative represents the Air Force for nuclear warhead matters and, through AF/A3/5N and the AFNWC, oversees the operation of Air Force POGs.

A4.1.1.4. Subgroups may be organized as necessary to meet particular needs of the project; however a Safety Subgroup shall be established for each project.

A4.1.1.5. The POG will maintain on file of currently approved charters for the POG and all of its subgroups. The NWC and AF/A3/5N will be provided a copy of the approved POG charter.

A4.1.2. Functions of Air Force nuclear weapon POGs:

A4.1.2.1. Coordinate the design, development, testing, weapon system integration, test and evaluation, and other life cycle activities performed by the Air Force and the NNSA on joint DoD-DOE nuclear weapons development or sustainment projects.

A4.1.2.2. Provide visibility to issues affecting safety, cost, performance, or other significant matters that cannot be promptly resolved at POG level.

A4.1.2.3. Make technological tradeoff decisions during the program that do not significantly change the MCs or acceptability of the weapon, do not exceed program limits as set by the DoD/Services and NNSA, and remain below threshold program guidance issued by ATSD(NCB).

A4.1.2.3.1. Any proposed change to a weapon resulting from any work authorized IAW Enclosure 6 (paragraph E6.1.3.4.2.3) to DoDI 5030.55, must be approved in accordance with guidelines issued by the ATSD(NCB) prior to making the change.

A4.1.2.3.2. The intent of these provisions is to provide for change control while freeing the POG to assess problems, analyze alternatives, eliminate unfeasible alternatives, prepare and

present a reasonable selection of viable alternatives, and make recommendations to the Milestone Review Board (MRB).

A4.1.2.4. The POG shall notify the HAF and the NWC through meeting minutes of interpretations of the MCs and of minor changes made to them as a result of POG decisions authorized by Enclosure 6 to DoDI 5030.55, and to recommend significant changes to the MCs for approval through the appropriate MDA to the appropriate MRB.

A4.1.2.5. Prepare the JIPP for submission to the MDA at the Phase 3/6.3 Milestone Decision; update as required at subsequent decision points.

A4.1.2.6. Prepare (or update) and coordinate the final MCs and STS.

A4.1.2.6.1. Notify the HAF staff and the NWC regarding interpretations of the MCs as a result of the trade-off decisions; recommend changes to the MCs to the NWC for approval through appropriate channels.

A4.1.2.6.2. Forward the MCs to AF/A3/5N for review and submission to the NWCSSC for approval; following approval forward to the Defense Threat Reduction Agency (DTRA) for publication.

A4.1.2.6.3. Forward the STS to AF/A3/5N for approval; publish the STS after approval.

A4.1.2.6.4. Subsequent changes or deviations to the approved MCs or STS will be similarly processed.

A4.1.3. POG Membership

A4.1.3.1. The POG charter designates the minimum organizational membership that will consist of project officers from both DoD and NNSA as appropriate.

A4.1.3.2. Project officer members have voting privileges on all matters brought before the POG.

A4.1.3.3. Designation of project officers and changes to these designations shall be made in writing by member organizations to the LPO.

A4.1.3.4. The LPO can add additional organizational members beyond those specified in the POG charter with consensus of the POG.

A4.1.3.5. The LPO designates official observers. Official observers represent organizations with a significant interest in the weapon program but are not members of the POG. Official observers may participate in POG meetings, and will receive meeting announcements and minutes; however, they will not have voting rights.

A4.2. Duties of Project Officers

A4.2.1. Project Officers act as points of contact for their agencies in coordinating the development and sustainment of nuclear weapons. They shall have authority vested in them by their parent organizations to carry out the assigned responsibilities of those organizations.

A4.2.2. Project officers shall:

A4.2.2.1. Represent their parent organization in POG and subgroup deliberations.

A4.2.2.2. Obtain and present their parent organization's position on issues pertaining to the needs of the nuclear weapon program. Specific responsibilities include, but are not limited to, coordinating POG positions within their command related to:

A4.2.2.2.1. Project development efforts to include providing their parent organization's official position on significant project issues.

A4.2.2.2.2. Joint efforts in AF-NNSA nuclear weapon program decisions to include interface issues between NNSA- and service-developed components/systems.

A4.2.2.2.3. Investigations concerning weapon/warhead design tradeoffs as they effect weapon capability, reliability, safety, security, use control, maintainability, vulnerability, testing, shipping and handling, and system and component costs.

A4.2.2.2.4. Joint development test programs.

A4.2.2.3. Coordinate POG position on issues with appropriate staff agencies in their parent organization, particularly on matters that involve the commitment of parent organization resources (funding, material, time, *etc.*).

A4.2.2.4. Be prepared to coordinate on and sign POG-prepared documentation for their parent organization when required.

A4.3. Duties of the Lead Project Officer (LPO)

A4.3.1. The LPO is responsible for coordinating the efforts of other project officers for nuclear weapons projects and to ensure the successful and effective operation of the POG. Specific responsibilities include:

A4.3.1.1. Chairing the POG and coordinating the efforts of the project officers representing organizations having responsibilities in the nuclear weapons program.

A4.3.1.2. Establishing subgroups and appointing subgroup chairs to meet the specific nuclear weapon program needs. Typical subgroups may include (but are not limited to) maintenance, logistics, joint test, surety, safety, reliability, integration, and use control. The only mandatory subgroup as established by the NWC is safety.

A4.3.1.3. Representing the POG at the NWC, and NWCSSC, and other decision-making bodies in a fair and equitable manner to include providing all dissenting views.

A4.3.1.3.1. Preparing and presenting weapon status assessments of the specific weapon of interest to the NWC and NWCSSC.

A4.3.1.3.2. Providing the required written POG position of support for all proposed product change proposals.

A4.3.1.3.3. Insuring all presentations to either the NWCSSC or NWC are coordinated with AFNWC and HAF prior to presentation.

A4.3.1.4. Ensuring the weapon complies with existing Air Force Safety Center and Air Force nuclear safety directives, regulations, and instructions.

A4.3.1.5. Chairing the weapon-specific configuration control board.

A4.3.2. Additionally, LPOs shall:

- A4.3.2.1. Request organizations designate project officers or representatives as appropriate.
- A4.3.2.2. Coordinate project development and sustainment efforts with participating organizations through the respective project officers.
- A4.3.2.3. Oversee the preparation and processing of the MCs, STS, JIPP, and other required or directed studies to include updates as appropriate.
- A4.3.2.4. Ensure that all member and observer organizations are advised of names of currently assigned project officers and official observers. Ensure all members have fair and equal voice at each meeting and on all POG decisions.
- A4.3.2.5. Provide an agenda to the member and observer organizations in sufficient time prior to a meeting so that project officers may obtain, prepare, and provide adequate parent organizational positions.
- A4.3.2.6. Act as, or designate, the Chairman of Project Officers Meetings (POMs).
- A4.3.2.7. Organize subgroups, special study, or ad hoc groups as required to meet short-term and dynamic needs of the POG or the particular needs of the weapon program.
 - A4.3.2.7.1. Appoint subgroup chairs with the exception of the JTWG. (The JTWG co-chairs are appointed by organizations identified in the current AF-NNSA MOU on joint testing.)
 - A4.3.2.7.2. All other subgroup chairs or co-chairs are selected by the LPO in the following manner:
 - A4.3.2.7.2.1. Seek the most qualified individual to perform the tasks and functions required to support the charter requirements.
 - A4.3.2.7.2.2. Seek input from the POG and other sources for the identification of suitable candidates.
 - A4.3.2.7.2.3. Once a qualified candidate is identified, the LPO will request through AFNWC that individual's organization make that individual available to serve as the subgroup chair. With agreement from the parent organization, the LPO will prepare a letter appointing the individual as the subgroup chair.
 - A4.3.2.7.2.4. Subgroup chairs do not need to be members of the subgroup prior to appointment.
 - A4.3.2.7.2.5. The chair term shall be no more than two years with an extension determined at the end of the term based on the needs of the POG and the ability of the organization to provide continued support.
 - A4.3.2.7.3. Provide a POG coordinated statement of scope to the subgroup chair and members as well as the overall format and specific requirements for the charter. The charter is considered official upon signature by the LPO.
 - A4.3.2.7.4. In conjunction with the POG, determine the minimum organizational membership required to support each subgroup.
 - A4.3.2.7.5. Direct the subgroup chair to call special meetings as required in support of the activities of the POG.
 - A4.3.2.7.6. Be a standing member of every subgroup.

A4.3.2.8. Subgroup Activities. Subgroups operate under the authority and general direction of the LPO. The subgroup chair will:

A4.3.2.8.1. Prepare the agenda, set date, time, and location for each subgroup meeting after coordination with subgroup members.

A4.3.2.8.2. Create and write specific charters for working groups under the subgroup, appoint working group leaders, and dissolve working groups as required to support the objectives of the charter.

A4.3.2.8.3. With concurrence of the LPO, add or remove members beyond the minimum organizational membership as required to support the subgroup responsibilities.

A4.3.2.8.4. Follow the subgroup charter directions and any specific instructions from the LPO.

A4.3.2.8.5. Insure all subgroup recommendations are fully documented, to include dissenting position(s), and presented to the POG for action.

A4.3.2.9. Be responsible for coordination of project development and sustainment efforts and ensuring all member organizations are provided an opportunity to state their positions.

A4.3.2.10. Forward recommended changes to the MCs through Service channels to the MDA to the MRB. Recommendations shall include the rationale behind the recommended changes (*e.g.*, tradeoff benefits, new information, *etc.*). Recommendations shall be made a matter of record in the proceedings of the POMs.

A4.3.2.11. Distribute records of proceedings of POMs within 20 days after each meeting. Distribution of the POM records shall be made to member and representative organizations, Service and NNSA headquarters, and the ATSD(NCB).

A4.4. Administrative Procedures

A4.4.1. The project officers assigned for a particular weapon project shall meet at the call of the LPO as required to discuss points of consideration that cannot be adequately addressed in day-to-day liaison. Member organizations may request the LPO call meetings as necessary.

A4.4.2. The project officers for a particular development/sustainment program shall, except as otherwise provided in DoDI 5030.55, establish operating procedures for the conduct of their meetings.

A4.4.3. The project officers assigned for a particular weapon project shall be collectively associated with that project by reference to them as the “[Weapon] Project Officers.”

A4.4.4. Project Officers Meeting (POM).

A4.4.4.1. POMs are typically held on a semi-annual basis and chaired by the LPO.

A4.4.4.2. All POG voting members and subgroup chairs are required to attend; the meeting is open to others with a need to know and with approval from LPO.

A4.4.4.3. Subgroup reports are presented as well as other specific topics as requested by the LPO.

A4.4.4.4. The LPO will prepare the agenda, set date, time, and location for each meeting after coordination with Project Officers and subgroup chairs.

A4.4.5. Executive Project Officers Meeting – voting members only (typically held in conjunction with POMs or as needed).

A4.4.5.1. This meeting provides a forum for sensitive POG discussions and decisions.

A4.4.5.2. All POG voting members are required to attend and is chaired by the LPO; the LPO must approve attendance of those who are not voting members or official observers.

A4.4.5.3. The LPO will prepare the agenda, set date, time, and location for each meeting.