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**Safety**

**NUCLEAR WEAPON SYSTEM SAFETY  
STUDIES, OPERATIONAL SAFETY  
REVIEWS AND SAFETY RULES**

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This instruction implements Air Force Policy Directive (AFPD) 91-1, *Nuclear Weapons and Systems Surety*, and is consistent with AFPD 13-5, *Air Force Nuclear Mission*. It describes the functions, composition, and membership qualification requirements of the United States Air Force Nuclear Weapon System Surety Group; defines the procedures for conducting safety studies and operational safety reviews; outlines the development, approval, and publication processes for Nuclear Weapon System Surety Group Reports and Weapon System Safety Rules (WSSRs); and outlines the responsibilities of participating organizations. This publication applies to all civilian employees and uniformed members of the Regular Air Force, the Air Force Reserve, the Air National Guard, and those who are contractually obligated to comply with Department of the Air Force publications. This publication does not apply to the United States Space Force. Ensure all records generated as a result of processes prescribed in the publication adhere to Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using Department of the Air Force (DAF) Form 847, *Recommendation for Change of Publication*; route DAF Forms 847 from the field through the appropriate functional chain of command. The authorities to waive wing or unit level requirements in this publication are identified with a Tier (“T-0, T-1, T-2, T-3”) number following the compliance statement. See Department of Air Force Manual (DAFMAN) 90-161, *Publishing Processes and Procedures*, **Table A10.1** for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the publication OPR for non-tiered

compliance items. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the DAF. Compliance with attachments is mandatory.

## ***SUMMARY OF CHANGES***

This document is substantially revised to comply with Department of Defense Manual (DoDM) 3150.02, *DoD Nuclear Weapon System Safety Program Manual*. This revision incorporates and supersedes AFI91-102\_AFGM2020-01-*Nuclear Weapon System Safety Studies, Operational Safety Reviews and Safety Rules*, 28 August 2020, includes adding the purpose, timing, scope, distribution, and publication for safety studies. Clarification of Independent Technical Analysis Agency is more clearly defined. Handling of Air Force position when study results differ from the Nuclear Weapon System Surety Group (NWSSG) majority or minority position report and what is required within the Air Force Nuclear Weapons System Surety Report (AF NWSSR) along with processing of minority opinions associated with the AF NWSSR. Clarification of the meaning for voting within the NWSSG process was added. Administrative changes were made throughout.

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## Chapter 1

### GENERAL INFORMATION

**1.1. Terms and Definitions.** All relevant terms and definitions for the 91-series AF publications are located in the glossary of Department of the Air Force Instruction (DAFI) 91-101, *Air Force Nuclear Weapons Surety Program* and DoDM 3150.02.

**1.2. Department of Defense (DoD) Surety Standards.**

1.2.1. DoD Directive (DoDD) 3150.02, *DoD Nuclear Weapons Surety Program*, assigns responsibilities for DoD Nuclear Weapons Surety for the oversight of safety, security, and control of United States nuclear weapons and nuclear weapon systems in DoD custody. The four DoD nuclear weapon system surety standards provide positive measures to:

1.2.1.1. Prevent nuclear weapons involved in accidents or incidents, or jettisoned weapons, from producing a nuclear yield.

1.2.1.2. Prevent deliberate pre-arming, arming, launching, or releasing of nuclear weapons, except upon execution of emergency war orders or when directed by competent authority.

1.2.1.3. Prevent inadvertent pre-arming, arming, launching, or releasing of nuclear weapons in all normal and credible abnormal environments.

1.2.1.4. Ensure adequate security of nuclear weapons, as governed by DoDD 5210.41, *Security Policy for Protecting Nuclear Weapons*.

**1.3. Air Force Goals and Requirements.**

1.3.1. This instruction codifies the process whereby the Air Force (AF) implements DoDM 3150.02. The Air Force ensures adherence to safety standards by:

1.3.1.1. Convening the Nuclear Weapon System Surety Group (NWSSG) to evaluate nuclear weapon systems.

1.3.1.2. Proposing nuclear weapon system safety rules (WSSRs) for Under Secretary of Defense for Acquisition and Sustainment (USD(A&S)) approval.

1.3.2. Operational units must:

1.3.2.1. Not perform any nuclear operations without USD(A&S) approved safety rules. **(T-0)**

1.3.2.2. Use only equipment, software, facilities, and procedures certified according to DoDM 3150.02, AFI 63-125, *Nuclear Certification Program*, and DAFI 91-101. **(T-0)**

1.3.2.3. Conduct operations with war reserve nuclear weapons according to certified procedures and when authorized by the appropriate level of authority ((for exercises, typically the Major Command (MAJCOM) Commander)). **(T-0)**

## Chapter 2

### ROLES AND RESPONSIBILITIES

**2.1. Secretary of the Air Force.** Per Headquarters Air Force (HAF) Mission Directive 1-46, *Chief of Safety*, the Secretary of the Air Force delegates to the Air Force Chief of Safety authority to formulate safety and surety policy for all nuclear weapons systems for which the Secretary of the Air Force has DoD life-cycle management responsibility.

**2.2. Department of the Air Force Chief of Safety (AF/SE).**

2.2.1. Oversees the Air Force Nuclear Weapons Surety Program.

2.2.2. Manages the safety evaluation process.

2.2.3. Appoints personnel in the grade of O-6 or civilian equivalent with nuclear weapon experience necessary to meet the NWSSG Chair responsibilities.

2.2.4. Approves the Military Department NWSSG report and coordinates final Air Force Nuclear Weapon System Surety Report (AF NWSSR) with Air Force Deputy Chief of Staff, Strategic Deterrence and Nuclear Integration (AF/A10) and Air Force Deputy Chief of Staff, Logistics, Engineering and Force Protection (AF/A4).

2.2.5. Approves the Military Department Safety Rules Packages and coordinates with AF/A10 and AF/A4. **Note:** For the Department of Air Force, the safety rules package is called the Air Force Safety Rules Package.

2.2.6. Signs and publishes the USD(A&S) approved WSSRs in the appropriate AFI 91 – series.

**2.3. Air Force Safety Center (AFSEC) Chief of Weapons Safety (AFSEC/SEW).**

2.3.1. Serves as the NWSSG Chair and represents NWSSG interests when the group is not convened. If not able to fulfill this position, provides an NWSSG Chairperson that meets the DoDM 3150.02 grade requirements and represent NWSSG interests.

2.3.2. Formally tasks the MAJCOM or agency points of contact with the requirements for the study or review.

2.3.3. Provides the NWSSG Executive Support Staff.

2.3.4. Reviews weapon system modifications, changes in operational procedures, or proposed tests to determine if nuclear surety is affected.

2.3.5. Serves as the Air Force focal point for Department of Energy (DOE) field reviews of nuclear WSSRs.

2.3.6. Assigns an Air Force member to nuclear surety studies or Operational Safety Reviews (OSR) conducted by other military services if the Air Force also uses the weapon system under evaluation.

2.3.7. Prepares, or tasks an organization to prepare the safety review/evaluation/analysis and serve as an independent technical analysis agency to provide a Technical Nuclear Safety Analysis (TNSA) via a request for support memorandum based on available data to support the NWSSG study.

2.3.8. Directs / Approves voting members request to conduct a Special Safety Study (SSS) when appropriate.

#### **2.4. Deputy Chief of Staff, Strategic Deterrence and Nuclear Integration (AF/A10).**

2.4.1. Designates a NWSSG voting member to represent AF/A10 interest during studies or reviews.

2.4.2. Coordinates all HAF and MAJCOM DoD personnel access to DOE Sigma information for required studies.

2.4.3. Reviews and provides coordination of the Operational Plan Data Document (OPDD) with HAF to ensure consistency of system Concept of Operations (CONOPS), operational conditions, Stockpile-to-Target Sequence (STS) or performance of safety features are incorporated into the weapon system. Coordination provides Air Staff position to the Air Force data package (**Paragraph 8.1**).

2.4.4. Coordinate on stake holder MAJCOM operational risk assessments and overall NWSSG findings; provide operational position to AF/SE for inclusion in the Air Force Nuclear Weapon System Surety Report (AFNWSSR)..

2.4.5. Coordinates final AF NWSSR with AF/A4 and AF/SE.

#### **2.5. Air Force Director of Logistics (AF/A4).**

2.5.1. Designates a NWSSG voting member to represent Directorate of Security Forces (AF/A4S) interest during studies or reviews.

2.5.2. Coordinates final AF NWSSR with AF/A10 and AF/SE.

#### **2.6. Combatant Command (CCMD), MAJCOM and Agency Commanders.**

2.6.1. Designate a representative to serve as a NWSSG voting member (Refer to **para 3.2.2.4**) consistent with guidance in this Instruction.

2.6.2. Ensure that CCMD or MAJCOM-developed procedures comply with approved nuclear WSSRs and follow Air Force-approved operational and technical procedures.

2.6.3. Evaluate proposed modifications, procedural changes, tests, or other activities involving nuclear weapon systems and coordinate appropriate nuclear certification with Air Force Nuclear Weapons Center (AFNWC).

2.6.4. Review or revise the MAJCOM's OPDD and send to AF/A10 for coordination as described in **Chapter 8**.

2.6.5. Coordinate the Certification Requirements Plan (CRP) "RULES NEED DATE" with the NWSSG Executive Support Staff to facilitate NWSSG scheduling.

2.6.6. Provide the independent technical analysis agency (if required), the technical support, and data needed to prepare the Technical Nuclear Safety Analysis.

2.6.7. Provide required support to the NWSSG Executive Support Staff and their designated NWSSG voting member.

2.6.8. Host and coordinate with NWSSG Executive Support Staff NWSSG field demonstrations at MAJCOM/Agency units to validate operational procedures meet the four-DoD nuclear surety standards.

2.6.9. Implement recommendations included in the approved AF NWSSR.

2.6.10. Request a SSS when appropriate.

## **2.7. NWSSG Executive Support Staff.**

2.7.1. Serves as the point of contact for NWSSG members regarding the timing and conduct of the scheduled studies and reviews.

2.7.2. Reviews the WSSR Development certification in the Nuclear Certification Impact Statement and signs to support the Nuclear Certification Impact Statement implementation.

2.7.3. Reviews the WSSR certification task in the CRP and signs to support the CRP implementation.

2.7.4. Distributes support request for studies and reviews on behalf of the NWSSG Chair, when required.

2.7.5. Schedules NWSSG evaluations and coordinates support, security clearance requirements and locations with appropriate agencies.

2.7.6. Publishes a five-year forecast of proposed studies and reviews annually with semiannual updates 15 May and 15 November. Refer to [Attachment 3](#).

2.7.7. Prepares and distributes the Air Force data package to NWSSG voting members.

2.7.8. Prepares the NWSSG Report for NWSSG review and signature. Refer to **Chapter 5** for more information on phases.

2.7.9. Prepares the AF NWSSR and coordinates with AF/A10 and AF/A4 for AF/SE review and signature.

2.7.10. Identifies, as necessary, through an in-house health physicist, potential Surgeon General/Medical issues.

2.7.11. Manages and tracks the status of:

2.7.11.1. NWSSG Report.

2.7.11.2. AF NWSSR.

2.7.11.3. Safety rules package.

2.7.11.4. Open recommendations and closure requests. **NOTE:** The NWSSG Report and the AF NWSSR are separate and distinct documents. Refer to [Chapter 7](#) for more information.



## Chapter 3

### NWSSG FUNCTIONS AND COMPOSITION

#### 3.1. Functions.

3.1.1. Reviews nuclear weapon system designs and operations, including the OPDD and CONOPS to determine if they meet the DoD Nuclear Weapon System Surety Standards in accordance with DoDD 3150.02. **Note:** A NWSSG study/review is part of the overall nuclear certification process and includes review and recommendation of hardware and software items for nuclear critical component status; however, it does not constitute nuclear safety design certification of nuclear hardware, software, facilities, or procedures studied by the NWSSG. Reference DAFI 91-101 for details regarding the Air Force Nuclear Safety Design Certification Program.

3.1.2. Conducts safety studies and reviews as scheduled by the NWSSG Chair.

3.1.3. Proposes new WSSRs and recommends changes or additions to existing safety rules to maximize nuclear weapon system surety commensurate with operational requirements.

3.1.4. Convenes and remains in session until the NWSSG Report for the weapons system under review is approved by the voting members.

3.1.5. Reviews Unauthorized Launch Studies prepared for the weapon system under study, if applicable. Considers recommended corrective actions and ways to mitigate credible unauthorized launch scenarios.

#### 3.2. Composition.

3.2.1. Organizations of permanent and additional voting membership appoint a voting member with the appropriate security accesses for all applicable NWSSG proceedings. Permanent and additional voting membership organizations cannot change the voting member except as described in [paragraph 3.2.4](#) The voting member is any individual within their organization that represents the organization's mission focus.

##### 3.2.2. Permanent Voting Membership:

3.2.2.1. Voting members will be authorized to speak on behalf of their agency, vote and sign NWSSG reports. **(T-1)**

3.2.2.2. NWSSG Chair from AFSEC/SEW. The NWSSG Chair will only vote to break a tie.

3.2.2.3. Agencies appoint permanent members to serve in the NWSSG.

3.2.2.4. Appoint in writing one primary and alternate member from the following organizations: Air Force Material Command (AFMC); Air Force Global Strike Command (AFGSC); Defense Threat Reduction Agency (DTRA); DOE; AF/A4S; and AF/A10.

##### 3.2.3. Additional Voting Membership:

3.2.3.1. One member from each of the following organizations: Air Mobility Command, Air Combat Command, United States European Command, United States Air Forces Europe, Supreme Headquarters Allied Powers Europe, United States Strategic Command, United States Navy, and the National Security Agency when the group address topics in their organization's area of responsibility.

3.2.3.2. A member(s) from another Air Force organization or other military service operating or maintaining the weapon system under study or review.

3.2.3.3. The NWSSG Chair identifies or approves the additional voting members needed for each study or review.

3.2.3.4. Voting members will be authorized to speak on behalf of their agency, vote and sign NWSSG reports. **(T-1)**

3.2.4. Voting by Proxy. Voting members arrange for a proxy anytime they are unable to attend a NWSSG study. Proxy members are authorized to speak on behalf of the agency they represent, vote and sign the NWSSG report. Proxy members must meet qualifications in [paragraph 4.3](#).

3.2.4.1. If a voting member is unable to attend a study or review due to an unexpected circumstance, they may proxy their vote to an existing voting member with approval from the appointing agency and NWSSG Chair.

3.2.4.2. If a voting member is unable to attend a study or review due to another commitment that cannot be rescheduled, the appointing agency may proxy their vote to an existing voting member or designate a replacement voting member to act as their proxy. If they choose to designate a replacement voting member, the appointing agency submits a memorandum designating the replacement voting member to the NWSSG Chair no later than 30 calendar days prior to the start of a study.

3.2.5. Technical Advisors. Engineers, technical experts, and contractors may attend any phase of the NWSSG study or review when requested by the NWSSG Chair, the NWSSG Executive Officer, or a voting member. The NWSSG Chair limits how many technical advisors attend studies or reviews. Limitations are identified as early as possible. Technical Advisors do not vote.

3.2.6. NWSSG Executive Support Staff. The Executive Support Staff includes the NWSSG executive officer and project officers.

3.2.6.1. Executive Officer: Officer from AFSEC/SEW who provides administrative support to the NWSSG. The Executive Officer does not vote.

3.2.6.2. Project Officer: Personnel from AFSEC/SEW who provides working draft documents for voting member consideration and other support as determined by the NWSSG Chair and Executive Officer. The project officer also serves as the lead for periodic system reviews, in coordination with AFNWC and weapon system program office (SPO). The project officer does not vote.

## Chapter 4

### NWSSG DUTIES AND QUALIFICATIONS

#### 4.1. NWSSG Voting Members Responsibilities. NWSSG voting members must:

- 4.1.1. Represent the interests and position of their appointing organization (e.g., HAF Directorate, MAJCOM, or agency) while remaining consistent to Air Force policies.
- 4.1.2. Evaluate whether nuclear weapon systems for which the Air Force has responsibility meet the four DoD Nuclear Weapon System Surety Standards.
- 4.1.3. Independently formulate their judgements when assessing whether the nuclear weapon system under review meets the nuclear weapon system surety policies and standards.
- 4.1.4. Identify, analyze, and provide independent assessments of pertinent nuclear weapon system safety-related information. Assessment will strive to optimize nuclear surety with operational requirements and constraints to meet the nuclear weapon system safety/surety policies and standards.
- 4.1.5. Have full understanding of their agency's plans and responsibilities for the nuclear weapon system that the NWSSG is reviewing and be able to convey the unique operational requirements and responsibilities of their organization.
- 4.1.6. Act as the focal point for exchanging information between their agencies and the NWSSG.
- 4.1.7. Prepare for all safety studies and operational safety reviews by reviewing background material (Air Force data package, TNSA, OPDD and other support documents) before the meetings.
- 4.1.8. Attend all NWSSG study or review phases, actively and knowledgeably participate in NWSSG studies and reviews.

#### 4.2. NWSSG Voting Member Duties.

- 4.2.1. Act as representatives for their agencies in arranging NWSSG field trips and briefings in support of safety studies and OSRs.
- 4.2.2. Implement, report status, and seek closure on approved recommendations in accordance with [Chapter 9](#) of this instruction.
- 4.2.3. Vote during NWSSG meetings and sign the NWSSG report.
- 4.2.4. Participate in the full duration of the study or review. (T-0)
- 4.2.5. Provide security clearance information to host unit or agency for all supporting participants. The member updates their information to AFSEC annually or as required.
- 4.2.6. Member(s) with a minority opinion:
  - 4.2.6.1. Must inform the NWSSG Chair of a minority opinion before the NWSSG study or review is concluded. (T-1)

4.2.6.2. Submit signed minority opinions to the NWSSG Executive Officer within five workdays after the study or review is concluded. The minority opinion is signed by all members in concurrence with the minority opinion.

4.2.7. Approve all additional participants (i.e., technical advisors, observers) attending from within the agency to support the Nuclear Weapons System Surety event. Additional participants must have valid reasoning for attending the study/review and must meet the requirement in **paragraph 4.5** (T-0)

4.2.7.1. Provide a list of their advisors (i.e., technical advisors, observers), including contractor representatives, to the NWSSG Executive Officer not less than five working days or as requested before the NWSSG study or review commences. The list contains identification and security clearance information. Submit clearances via the Defense Information System for Security (DISS) or Joint Access Database Environment (JADE) as appropriate.

4.2.7.2. The list contains identification and security clearance information as directed by NWSSG Announcement and paragraph 4.7..

4.2.8. Request advisory support from their agencies (to include essential contractor representatives) as required to support NWSSG activities.

### **4.3. Voting Member General Qualifications.**

4.3.1. NWSSG Chair must be a minimum the grade O-6 or civilian equivalent with nuclear weapon experience necessary to meet the NWSSG Chair responsibilities. **(T-0)**

4.3.2. DoD military and DoD civilian voting members must be a minimum grade O-5 or civilian equivalent. **(T-0)**. DOE and other non-DoD agency voting members must meet this sufficient grade as closely as possible. If an organization does not have a member of sufficient grade, submit a one-time waiver in accordance with this instruction **(T-1)**. This waiver is permanent until the organization submits a voting member with sufficient grade requirements. **Note:** If an organization has a member that meets the grade requirements but chooses to send someone who does not, they must submit a waiver request for each event that member will be attending. **(T-1)**

4.3.3. Military and civilian members must have extensive operational or technical expertise with nuclear weapons or nuclear weapon systems to include experience or training in evaluation techniques applicable to the DoD Nuclear Weapon System Surety Standards. **(T-0)**

4.3.4. Military and civilian members must be knowledgeable of nuclear safety policies and procedures. **(T-1)**

4.3.5. Military and civilian members must have no direct responsibility for designing, developing, or producing the nuclear weapon system being reviewed. **(T-0)**

### **4.4. Voting Member Waivers and Proxy.**

4.4.1. Waivers will not be accepted for grades less than O-4, GS-13, or non-DoD equivalent. Organizations with a member that meets the qualification requirements but is unable to attend the whole duration of the study or review, will submit a waiver stating the circumstance for the absence and provide a stand-in member with experience level in memorandum format. **(T-0)**

4.4.2. Organizations without a member that meets the qualification requirements, will:

4.4.2.1. Submit a waiver stating the inability to meet grade qualifications and provide the stand-in member's experience level in memorandum format. **(T-1)**

4.4.2.2. Send a member once the qualifications of this instruction are met or submit a waiver request with valid reasoning for each study or review that member will be attending. **(T-1)**

4.4.2.3. The NWSSG Chair is the waiver approval authority. **(T-0)**

#### **4.5. Additional Participants to Nuclear Weapon System Surety Group Proceedings.**

4.5.1. Voting members or Executive Support Staff may approve technical advisors and official observers to participate in safety studies and reviews. Participants to NWSSG proceedings should be kept to a minimum. The NWSSG Chair can limit the number of participants at the study or review.

4.5.2. Technical advisors:

4.5.2.1. Are representatives of headquarters, development, engineering, using, or support agencies (and their contractors) when requested by the NWSSG Chair, Executive Officer, or a voting member to advise and support the NWSSG.

4.5.2.2. Will have relevant technical knowledge of nuclear weapon systems or specific technical knowledge or operational experience with the design, development, production, or operation of the nuclear weapon system. **(T-0)**

4.5.2.3. Will support the sponsoring member through expert contributions to briefings, discussions and deliberations concerning issues raised in NWSSG discussions. **(T-1)**

4.5.2.4. Will submit security clearance verification documentation to the host unit or agency at least five business days or as requested prior to the start of the study or review. **(T-0)**

4.5.2.5. Will provide, if attending regularly, security clearance information to the host unit or agency and update their information with AFSEC annually or as required. **(T-0)**

4.5.3. Official Observers:

4.5.3.1. Will coordinate their request to attend through the appointed voting member representing their agency. Observers from voting member agencies cannot submit their request directly to the NWSSG Chair or NWSSG Executive Support Staff. **(T-0)**

4.5.3.2. May be invited by the NWSSG Chair from non-member agencies, if deemed necessary.

4.5.3.3. Upon approval, must submit the following to their respective voting member: **Note:** If the NWSSG Chair or Executive Support Staff invites an observer from a non-member agency then submit the following to the NWSSG Executive Support Staff. **(T-0)**

4.5.3.3.1. Full name and rank or civilian grade.

4.5.3.3.2. Organization with address.

4.5.3.3.3. Security clearance access level and any special access caveats (e.g., Special Access Program, North Atlantic Treaty Organization (NATO), Restricted Data, Formerly Restricted Data or Critical Nuclear Weapon Design Information)

4.5.3.3.4. Attending dates and specific NWSSG participation.

4.5.3.3.5. Justification for visit.

4.5.3.3.6. Telephone number (Defense Switched Network, if available) of the office that can verify the security clearance and special access.

**4.6. Member Training.** NWSSG members are encouraged to complete training on nuclear weapons provided by agencies such as Joint Service Nuclear Weapons School, Sandia National Laboratories, and DOE. Review DoDM 3150.02, AFI 63-125, or contact NWSSG Executive Support Staff for a list of recommended courses and their availability.

**4.7. Security Clearance Validation Requirements.**

4.7.1. All voting members and participants are required to hold the appropriate clearance for the study or review. It is up to the voting member and participant to acquire the appropriate access prior to the suspense date for the specific study or review.

4.7.2. For DoD personnel, send visit requests via DISS or JADE as appropriate. Permanent Voting Members, and support personnel, submit an annual security clearance request.

4.7.3. For non-DoD personnel, send visit requests via DOE Form 5631.20, *Request for Visit or Access Approval* (or similar organization-specific visit request), to host unit or agency. Include the following information:

4.7.3.1. Full name and rank or civilian grade.

4.7.3.2. Organization.

4.7.3.3. Security clearance access level and any special access, such as NATO, Restricted Data, Formerly Restricted Data or Critical Nuclear Weapon Design Information.

4.7.3.4. Visit dates and specific NWSSG activities.

4.7.3.5. Justification for visit.

4.7.3.6. Telephone number (Defense Switched Network, if available) of the office that can verify the security clearance and special access.

4.7.4. Foreign Visitors must provide visit requests through their Embassy to Air Force International Affairs (SAF/IAPD) and must also provide the following information to the NWSSG Group Executive Support Staff. (T-1) Reference DAFMAN 16-201, *Department of the Air Force Foreign Disclosure and Technology Transfer Program*, for foreign visit information:

4.7.4.1. Full name, rank, or civilian grade.

4.7.4.2. Organization.

4.7.4.3. Security clearance access level and any special access, such as NATO or Cosmic Top Secret Atomal.

4.7.4.4. Justification for visit.

## Chapter 5

### SCHEDULING THE STUDY/REVIEW AND PROCESSING REPORTS

**5.1. Types of Studies and Reviews.** DoDM 3150.02 describes the types of studies and reviews the Air Force must conduct at a minimum, as well as provides the minimum requirements as to what will be reviewed by the NWSSG. **(T-0)**. The types of safety studies and reviews include Initial Safety Study (ISS), Preliminary Safety Study (PSS), Interim Safety Study (INSS), Pre-Operational Safety Study (POSS), Special Safety Study (SSS), Operational Safety Review (OSR). AF/SE will conduct Periodic Safety Reviews (PSR) to document progress made between safety studies as described in [Paragraph 5.8](#). **(T-1)** The studies and reviews, when conducted, are normally performed in relation to specific phases of the joint DoD and DOE life-cycle process. [Figure A2.1 \(Attachment 2\)](#) illustrates the recommended acquisition phase for each safety study. The specific scope of each study or review is determined by the NWSSG Chair. The NWSSG is disbanded when the NWSSG Chair accepts and signs the NWSSG Report.

#### **5.2. Initial Safety Study (ISS).**

5.2.1. The ISS will examine design features and aspects of the proposed CONOPS (if available) that will affect the safety of the nuclear weapon system. **(T-0)** The ISS will address the safety themes and identify safety-related concerns so that changes, if necessary, can be made to the nuclear weapon system design in a timely and cost-efficient manner. **(T-0)**

5.2.2. Timing: The ISS will be conducted following completion of the joint DoD and DOE design, definition, and cost study (Phase 2A). **(T-0)**. The ISS is conducted before the start of the joint DoD and DOE full-scale engineering development phase (Phase 3) and the production engineering phase (Phase 4). **(T-0)**. The NWSSG Chair determines the need and timing for the study and coordinates with the applicable MAJCOM(s) and SPO. The NWSSG typically conducts the ISS during the Technology Maturation and Risk Reduction phase of the acquisition process, when the design concept is firm and the Capability Development Document and System Requirements Documents are complete. It is usually near Milestone B. Refer to Department of the Air Force Pamphlet (DAFPAM) 63-128, *Integrated Life Cycle Management*, for more information on the phases and milestones of the acquisition process. The ISS for Weapon Generation Facilities (WGF) is conducted on the 35% design.

5.2.3. Scope: The NWSSG will review the joint DoD and DOE life-cycle process feasibility phase (Phase 2) and Phase 2A reports, draft military characteristics, draft stockpile-to-target sequence, safety design theme, and the system CONOPS. **(T-0)**. The ISS consists of an evaluation of the design concept to give as much nuclear surety guidance to the developer as early in the development cycle as possible. A site visit may be included in this phase of the study (at the discretion of the NWSSG Executive Support Staff) to allow the NWSSG to examine available prototype hardware. The developer provides detailed briefings on the design concept. The NWSSG will review any nuclear weapon system safety design criteria that are not met, have been waived, or are proposed to be waived. The ISS AF NWSSR will be made available to the preliminary Design Review and Acceptance Group (DRAAG), when applicable, and to the nuclear weapon system lead project officer (LPO) (or program manager, as applicable) for information. **(T-0)**

### 5.3. Preliminary Safety Study (PSS).

5.3.1. The PSS will examine design features, hardware, procedures, and aspects of the CONOPS affecting the safety of the nuclear weapon system. **(T-0)**. The PSS will identify safety-related concerns and deficiencies in the nuclear weapon and nuclear weapon system so that corrections may be made in Phase 3 of the development process in a timely and cost-efficient manner. **(T-0)**

5.3.2. Timing: NWSSG Chair determines the need and timing for this study and is coordinated with the applicable MAJCOM(s) and SPO. Normally the PSS follows the completion of the preliminary DRAAG review. In the acquisition timeline, the PSS is conducted during the Engineering, Manufacturing and Development (EMD) phase when the system design is ready for a critical design review, but before it occurs. The PSS for WGFs is conducted on the 65% design.

5.3.3. Scope: The NWSSG will review the preliminary DRAAG report and ISS AF NWSSR to identify any nuclear weapon system safety design criteria that are not met or have been waived. In addition, the NWSSG will examine proposed storage, maintenance, and transportation concepts for relevant elements of the nuclear weapon system. **(T-0)** The PSS evaluates the system design and operational concept. A site visit is included in this phase of the study to allow the NWSSG to examine available hardware (whether preproduction or final design). The developer provides detailed briefings on the actual design. The using command prepares a preliminary OPDD and gives a briefing on the concepts and procedures addressed in the OPDD. The NWSSG will review any nuclear weapon system safety design criteria that are not met, have been waived, or are proposed to be waived. The PSS AF NWSSR will be made available to the interim DRAAG and the nuclear weapon system LPO (or program managers, as applicable) for information. **(T-0)**

### 5.4. Interim Safety Study (INSS).

5.4.1. The INSS will examine changes to the design features, hardware, procedures and aspects of the CONOPS that affect the safety of the nuclear weapon system to determine if the DoD nuclear weapon system surety standards are attainable. **(T-0)**

5.4.2. Timing: NWSSG Chair determines the need and timing for this study and coordinates with the applicable MAJCOM(s) and Program Office. The INSS may be conducted following completion of the preliminary or interim DRAAG, as applicable, if significant changes have occurred in the nuclear weapon system's proposed design and operations. During the acquisition process, the INSS is typically conducted during the EMD phase around the time of the Production Readiness Review. The NWSSG will review the preliminary or interim DRAAG report and any ISS or PSS reports, as applicable. **(T-0)** The NWSSG will identify any nuclear weapon system safety design criteria that are not met or that have been waived. **(T-0)** The NWSSG will examine proposed storage, maintenance, and transportation concepts for relevant elements of the nuclear weapon system. **(T-0)** The INSS for WGFs is conducted on the 95% and/or design, one time only production or construction does not start until after 100% design.



5.4.3. Scope: If conducted following the completion of the preliminary DRAAG review, it will identify safety-related concerns and deficiencies in the nuclear weapon and nuclear weapon system, so that corrections may be made in Phase 3 of the development process in a timely and cost-efficient manner. Identify any nuclear weapon system safety design criteria that are not met or that have been waived. **(T-0)** The INSS AF NWSSR, if conducted, will be made available for the final DRAAG, and to the nuclear weapon system LPO (or program manager, as applicable) for information. **(T-0)**

## **5.5. Pre-Operational Safety Study (POSS).**

5.5.1. A POSS will examine safety procedures for new and modified systems. **(T-0)**. The POSS examines the nuclear weapon system design safety features, security features, and CONOPS to determine if the four DoD nuclear weapon surety standards are met. The NWSSG will recommend draft WSSRs for the new nuclear weapon system. **(T-0)**

5.5.2. Timing: The POSS will be conducted in such time that specific system safety rules can be coordinated, approved, distributed, and implemented 60 days before initial operational capability (IOC) or first assets delivered (FAD). **(T-0)** The POSS should be scheduled at least 24 months in advance of IOC to permit timely scheduling of the study and to accomplish preparatory actions. The operational MAJCOM or SPO provides the approved “RULES NEED DATE” in writing to the NWSSG Executive Support Staff. The study is scheduled such that the OSD(A&S) WSSRs approval letter is received no later than 225 days after the conclusion of the POSS for the new nuclear weapons system. The PSS is typically conducted during the Production and Deployment phase of the acquisition process, and usually lines up prior to Low-Rate Initial Production.

5.5.3. Specific requirements are required to conduct a POSS. Specific requirements are identified in the Certification Requirements Plan. They include, but are not limited to:

5.5.3.1. Verified Technical Orders. **(T-0)**

5.5.3.2. Final TNSA. **(T-0)**

5.5.3.3. The Final DRAAG report and the Major Assembly Release (MAR) stating any MAR exceptions. **(T-0)**

5.5.3.4. Specific requirements are required in a Pre-Operational Safety Study. Specific requirements are identified in DODM 3150.02. They include, but are not limited to:

5.5.3.5. Previous NWSSG reports. **(T-0)**

5.5.3.6. Examine the system CONOPS. **(T-0)**

5.5.3.7. Review unauthorized launch analysis (ULA) and inadvertent launch analysis (ILA), if applicable. **(T-0)**

5.5.3.8. Identify any nuclear weapon safety design criteria that are not met or that have been waived. **(T-0)**

5.5.3.9. Develop draft safety rules. **(T-0)**

5.5.4. Scope: The NWSSG evaluates the adequacy of the design safety and security features of the nuclear weapon system during all operations in the stockpile-to-target sequence to ensure the system meets the DoD Nuclear Weapon System Surety Standards. It examines all applicable material, manuals, procedures, recurring test, and operational concepts to include demilitarization concepts for nuclear surety related components existing at the time of the study that could affect nuclear surety.

5.5.5. The group conducts a site visit to assess OPDD, proposed storage, maintenance activities, transportation operations (including unit support of logistics movements), contingency plans, loading, and operations crew procedures using training weapons with actual delivery and support equipment. Observations include unit-level command post/crew operations and unit-level command and control procedures (as trained at the unit) to ensure nuclear control orders and emergency action messages are processed properly and translated into appropriate authorized actions. Facsimile training materials (in lieu of actual command and control documents, authenticators, etc.) may be used for demonstration purposes during this assessment. The actual sequence of events and unit responses to higher headquarters' directions must be adequately demonstrated in the proper sequences. Nuclear delivery procedures used by aircrews are addressed for aircraft units.

## **5.6. Operational Safety Review (OSR).**

5.6.1. The NWSSG conducts OSR to reexamine the adequacy and suitability of the nuclear weapon system's design safety and security features; nuclear WSSRs; and technical and operational procedures based on the experience gained from actual operations. As part of the OSR, problems identified by field units and other agencies are analyzed. Safety rules and/or operational procedures may be changed as a result of the review. Note: An OSR is not an inspection.

5.6.1.1. Timing: An OSR will be conducted during the second year after initial approval of safety rules or no later than the second year after FAD for the nuclear weapon system. (T-0) Additionally, an OSR will be repeated, as required, based on weapon system design, procedural or operational concept changes, and experience with the weapon system and the system's safety rules. (T-0) Each nuclear weapon system will receive an OSR at least every 5 years from the start of each preceding OSR. (T-0) If a SSS is scheduled at the approximate time as an operational safety review would normally be required, the NWSSG Executive Support Staff expands the scope of the study to include the requirements of an OSR. MAJCOMs recommend dates for an OSR, but the NWSSG Executive Support Staff determines the exact dates.

5.6.2. Scope: Generally Operational Safety Reviews consist of three phases:

5.6.2.1. Phase I of the study or review includes:

5.6.2.1.1. Review of the Air Force data package.

5.6.2.1.2. Review the status of relevant findings, recommendations, and open corrective actions from previous AF Nuclear Weapons System Surety Reports.

5.6.2.1.3. Technical and operational briefings on the weapon system under study.

- 5.6.2.1.4. Results and recommendations of available ILAs and ULAs as outlined in AFI 91-106, *Unauthorized Launch, Threat Mitigation, and Launch Action Studies* and related software and physical security analyses.
- 5.6.2.1.5. Review all relevant studies, after actions reports and major exercises.
- 5.6.2.2. Phase II of the study or review includes technical briefings and demonstrations of nuclear weapon-related operations with applicable support equipment in a representative sample of operational environments and in substantially unique operational environments. Demonstrations are normally conducted in the actual work areas/facilities. Areas of interest with respect to the weapons stockpile-to-target sequence include, but are not limited to:
- 5.6.2.2.1. Storage, maintenance, transportation (to include convoy operations), and employment operations.
  - 5.6.2.2.2. Potential hazards in normal and abnormal environments for impact on safety.
  - 5.6.2.2.3. Authentication and execution procedures of nuclear control orders at the delivery unit level.
  - 5.6.2.2.4. Surety-related use control matters in the context of the second DoD safety standards.
  - 5.6.2.2.5. Surety-related aspects of authoritative nuclear security guidance as outlined by DoDD 3150.02 and the fourth nuclear surety standard.
- 5.6.2.3. Phase III of the study or review determines if the nuclear weapon system is being operated in a manner that meets the DoD nuclear weapon system surety policy and standards. Phase III includes:
- 5.6.2.3.1. Discussions and deliberations on findings and items of interest raised during Phase I or Phase II.
  - 5.6.2.3.2. Preparing safety rules for new weapon systems or recommending changes to existing safety rules that ensure the weapon system meets the DoD nuclear weapon system surety standards or recommends improvements to operations in accordance with DoDM 3150.02.
  - 5.6.2.3.3. NWSSG Executive Support Staff mandates the systems the NWSSG will observe for the OSR. The applicable MAJCOM/SEW makes every effort to vary the Phase II locations of studies for multi-unit weapon systems, based upon operational availability.

## **5.7. Special Safety Study (SSS).**

- 5.7.1. A SSS investigates unsafe conditions revealed by operational experience; accidents and or incidents; modifications, tests, or retrofits involving nuclear safety; significant changes in the CONOPS or STS; additional new equipment and or weapons; proposed changes to nuclear weapon system safety rules; or storage of inactive nuclear weapons. A voting member or NWSSG Chair provides the scope of the study in the official request to initiate a SSS.

5.7.2. Timing: A SSS will be conducted for a nuclear weapon system when deemed necessary by the United States Air Force or when requested by the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs (ASD(NCB)). (T-0) DOE and DTRA may request, through the ASD(NCB), that an SSS be conducted. An SSS may be conducted with an OSR, if desired. A SSS may be requested by the NWSSG Chair or any NWSSG voting member or organization at any time. The member will provide the request in writing to the NWSSG Chair for final determination and scheduling. (T-1) The request must contain the rationale and scope, urgency, and specific issue the SSS is being requested to investigate for compliance with the four DoD surety standards. (T-1)

5.7.3. MAJCOMs must provide any planned changes to approved operational CONOPS to the NWSSG Chair for determination if a SSS is required. (T-1)

5.7.4. The Special Safety Study is conducted to evaluate one or more of the following:

- 5.7.4.1. Potentially unsafe or insecure conditions revealed through operational experience, studies, or analyses.
- 5.7.4.2. Modifications (including software), alterations, retrofits, or the addition of weapon system capabilities affecting nuclear surety.
- 5.7.4.3. Tests affecting nuclear surety.
- 5.7.4.4. Significant changes in the operational concept affecting nuclear surety (e.g., any significant change to planned operations with nuclear weapon).
- 5.7.4.5. Proposed changes to approved nuclear WSSRs.
- 5.7.4.6. Significant changes to procedures which current nuclear WSSRs are based upon or which affect nuclear surety.
- 5.7.4.7. Accidents and/or incidents.
- 5.7.4.8. Storage of inactive nuclear weapons.
- 5.7.4.9. Any condition which the NWSSG Chair determines could adversely affect nuclear surety.

## **5.8. Periodic System Review (PSR).**

5.8.1. PSRs document progress made between Safety Studies, receive updates on remaining open action items, and issue guidance to correct deficiencies.

5.8.2. Timing: NWSSG Project Officer conducts PSRs informally in coordination with an acquisition program and AFNWC on a quarterly basis, as needed.

5.8.3. Scope: PSRs look at the whole system or a targeted portion of the system to document progress made since the last review, any open items and guidance issued to correct deficiencies identified. These reviews are not performed by the NWSSG, but by the NWSSG Project Officer in coordination with AFNWC personnel, and acquisition program action officers as well as affected NWSSG voting members technical advisors, as needed.

5.8.4. Reports: The results of the PSR will be briefed to the NWSSG Chair by the NWSSG Project Officer at the conclusion of the review. The results will then be published in a report or minutes format that can be presented to the NWSSG by the NWSSG Chair. (T-1)

## Chapter 6

### NUCLEAR WEAPON SYSTEM SURETY GROUP STUDY/REVIEW PROCESS

**6.1. General Information.** The NWSSG Executive Support Staff publishes the approved NWSSG Schedule which includes the two and five-year OSRs and forecasted (planned) safety studies. This approved schedule is forwarded to the Office of the Assistant Secretary of Defense for Nuclear, Chemical and Biological/Nuclear Matters (OASD(NCB/NM)).

**6.2. Pre-Nuclear Weapon System Surety Group Study/Review Timelines.**

6.2.1. DoDM 3150.02 requires prompt report processing. See DoDM 3150.02 for detailed timelines.

6.2.2. Nine months prior to the study (12 months for United States Air Forces Europe), the NWSSG Chair formally tasks the necessary NWSSG voting member(s) with necessary actions required for the scheduled safety study.

6.2.3. Six months prior to the study or review, the operational MAJCOM submits its OPDD and CONOPs to the NWSSG Executive Support Staff. The NWSSG Chair determines if a TNSA is required. The Program Office provides required design documentation (e.g., Nuclear Safety Analysis Report).

6.2.4. Four months prior to the study or review (18 months for NATO operations), the NWSSG Executive Support Staff notifies NWSSG members of dates and location(s) of the study or review.

6.2.5. Three months prior to the study or review (12 months for NATO operations), the NWSSG Executive Support Staff presents the draft agenda to the MAJCOM and the NWSSG Voting Members, and requests briefings/demonstrations for Phase I and Phase II. This includes tasking the independent technical analysis agency to write a TNSA, if required.

6.2.6. Prior to the study or review for NATO visits, the NWSSG Executive Support Staff submits country specific guidelines stipulated in the DOD Foreign Cleared Guide.

6.2.7. Thirty days prior to study, independent technical analysis agency provides the TNSA to NWSSG Chair (as required). The NWSSG Executive Support Staff distributes an Air Force data package to NWSSG members and confirms clearances/installation access of all attendees. The MAJCOM/Agencies provide approved briefings electronically to the NWSSG Executive Support Staff.

6.2.8. Two weeks prior to the study or review, the NWSSG Executive Support Staff distributes current agenda to NWSSG members.

6.2.9. One week prior to the study or review, the NWSSG Executive Support Staff confirms clearances and installation access of NWSSG participants.

## Chapter 7

### SAFETY RULES PROCESSING

**7.1. DoDM Guidance.** Refer to DoDM 3150.02 for safety rules processing and report requirements. All studies or reviews will produce a NWSSG Report. **(T-0)** The NWSSG Report is forwarded to HAF 2-letter for notification of NWSSG findings, recommendations and completion of a study. **Note:** Only a SSS, POSS, and OSR can draft safety rules or propose changes to existing safety rules.

#### **7.2. Nuclear Weapon System Surety Group Report (NWSSG Report).**

7.2.1. The NWSSG report is prepared by the Executive Support Staff in accordance with DoDM 3150.02. **(T-0)** NWSSG report includes an executive summary, study overview, observations, findings and recommendations, draft safety rules, and an addendum of minority opinions. **Note:** Not all studies have proposed safety rules or will have minority opinion.

7.2.2. The NWSSG report is disseminated for comments, review and edits to voting members at the study.

7.2.3. If agreement is not reached by the NWSSG through discussion and deliberation, voting member(s) submit a Minority Opinion. Dissenting voters must inform the NWSSG Chair of a minority opinion before the NWSSG study or review is concluded. **(T-1)** A Minority Opinion is included as an Addendum in the NWSSG Report and is signed by each voting member supporting the minority opinion.

7.2.4. Once all voting members sign this report and all outstanding issues for the study are resolved, the NWSSG report cannot be changed except to correct minor administrative errors. At this point, the NWSSG Chair considers the study complete.

#### **7.3. Air Force Nuclear Weapon System Surety Report (AF NWSSR).**

7.3.1. The AF NWSSR includes an executive summary, assessment, findings, recommendations, and corrective actions, and the NWSSG report as an enclosure.

7.3.2. AFSEC/SEW adjudicates all comments from the dissemination of the NWSSG report.

7.3.3. The AF NWSSR must be completed within 2 weeks following the study or review in accordance with DODM 3150.02. **(T-0)**

7.3.4. AF/SE is the signature authority as delegated by the Secretary of the Air Force. Once coordinated through AF/A10 and AF/A4 and signed by AF/SE, this becomes the Military Department NWSSR for the study.

7.3.5. AF/SE distributes the AF NWSSR to appropriate agencies and, if required, the Air Force Safety Rules Package.

#### **7.4. Air Force Safety Rules Package.**

7.4.1. When the NWSSG report includes draft safety rules or changes to existing safety rules, the NWSSG Executive Support Staff will, simultaneously with the preparation of the AF NWSSR, prepare the Air Force safety rules package for separate coordination and approval. **(T-0)** The format for the Air Force safety rules package is in [paragraph 8.4](#).

7.4.2. If no Safety Rules Package is required, AF/SE notifies OASD (NCB/NM) certifying the current rules are sufficient. A courtesy copy of the memorandum is also sent to Chairman of the Joint Chiefs of Staff.

7.4.3. If a Safety Rules Package is required, AF/SE signs and distributes the Air Force Safety Rules Package to OASD (NCB/NM), voting members, OPRs for approved recommendations, and the NWSSG technical advisors. OASD (NCB/NM) coordinates with DTRA, Chairman of the Joint Chiefs of Staff, and DOE/National Nuclear Security Administration (NNSA), as described in DoDM 3150.02.

7.4.4. AF/SE may elect, through the NWSSG Chair, to reconvene the NWSSG to address unresolved issues.

## 7.5. Weapons System Safety Rule Publication.

7.5.1. If the NWSSG proposes draft safety rules for new or modified systems, or proposes changes to current rules, the AF NWSSR and Safety Rules Package with a draft rewrite, interim change, or guidance memorandum to the appropriate AFI 91-11X series is sent to OSD (NCB/NM) for approval. (See [Attachment 4](#)).

7.5.2. Simultaneously, the draft rewrite, interim change or guidance memorandum to the AFI with the proposed safety rules is submitted to the select HAF 2-ltr and MAJCOMs with the requirements for AFI publication (e.g., DAF Form 673, *Department of the Air Force Publication/Form Action Request*) for coordination in accordance with DAFMAN 90-161. Additionally, the AFI draft rewrite, interim change or guidance memorandum is sent to mandatory organizations for AF Form 673 requirements except for Air Force Judge Advocate General (AF/JA). Wait to submit DAFI 90-160, *Publications and Forms Management*, requirements and draft AFI to AF/JA until after USD(A&S) approval letter. Notify the NWSSG Executive Support Staff as soon as possible for any identified “Critical Comment” during the staffing process. NWSSG Executive Support Staff will assess the nature of the “Critical Comment” and determine if the “Critical Comment” violates the nuclear weapons system standards. **(T-0)**. NWSSG Chair notifies the NWSSG members, as appropriate.

7.5.2.1. Select HAF 2-ltr is defined as Air Force Deputy Chief of Staff, Operations (AF/A3), AF/A4, and AF/A10.

7.5.2.2. Select MAJCOM is defined by the NWSSG voting members. NWSSG Voting Members determine if their MAJCOM requires AFI coordination.

7.5.3. Once USD(A&S) has approved the weapon system safety rules, NWSSG Executive Support Staff adjudicates the administrative comments from mandatory DAFMAN 90-161 organizations and select HAF 2-ltr and MAJCOMs.

7.5.4. After administrative comments are adjudicated, NWSSG Executive Support Staff, coordinates approved WSSRs in the appropriate AFI 91-11X series to AF/JA.

7.5.5. After AF/JA coordination, AF/SE publishes the approved rules in accordance with DAFI 90-160 guidance for publication and notifies all appropriate agencies (responsible MAJCOM safety offices and SPOs) directing immediate implementation.

7.5.6. If circumstances necessitate, NWSSG requests interim approval of WSSRs from USD(A&S) according to the procedures in DoDM 3150.02. Interim WSSR approval is effective for six months. Interim approved WSSRs must be published in the appropriate AFI 91-11X series within the six months period that interim safety rules are approved or AFSEC/SEW requests an extension from OASD (NCB/NM). **(T-0)**



## Chapter 8

### SUPPORTING DOCUMENTS AND BRIEFINGS

#### 8.1. Air Force Data Package.

8.1.1. The Air Force data package consists of the materials provided to NWSSG member organizations at least 30 days prior to the start of the study or review. NWSSG members use the Air Force data package for their preparation and use during the study or review. The Package includes:

8.1.1.1. TAB A: Technical description and CONOPS for the weapon system. Examples include:

8.1.1.1.1. OPDD /CONOP as applicable (MAJCOM).

8.1.1.1.2. TNSA for studies and certain reviews (Independent Technical Analysis Agency).

8.1.1.1.3. Technical description of the weapon system and its system safety features, when not included in the TNSA (AFMC, MAJCOM).

8.1.1.2. TAB B: Description of the safety features incorporated into the nuclear weapon system.

8.1.1.3. TAB C: Draft or current safety rules located in the appropriate weapon system 91-series AFI (AFSEC/SEW).

8.1.1.4. TAB D: Supplemental Documents: **Note:** TAB D is not required in the AF data package.

8.1.1.4.1. Trends within safety reports (i.e., Mishaps or Deficiencies). (AFSEC/SEWN)

8.1.1.4.2. Submitted publication requests. (AFSEC/SEWN)

8.1.1.4.3. Approved Nuclear Surety and Security Deviations. (Operational MAJCOM)

8.1.1.4.4. Identified trends within exercises and inspections.

8.1.1.4.5. Security Forces exercises above the MAJCOM level. (AF/A4S)

8.1.1.4.6. Nuclear Surety Inspections. (Air Force Inspection Agency)

#### 8.2. Nuclear Weapon System Surety Group Report.

8.2.1. A NWSSG Report is a summary of NWSSG proceedings. It is not a technical or engineering source document. The NWSSG Report title is descriptive and includes the name of the study under review. The report follows the format contained in DoDM 3150.02, and contains the following:

8.2.2. An Executive Summary summarizing the study results and includes an appraisal statement as to whether or not the weapon system meets DoD nuclear weapon system safety policy and standards, when operated in accordance with prescribed technical and operational procedures, in the system CONOPS, and with proposed or existing safety rules and other positive measures. Additionally, the Executive Summary includes a synopsis of the findings and recommendations and minority opinion, as applicable, and comments on limitations that affect the conduct of the study (e.g., proxy of votes, absent members, missing data, etc.)

8.2.3. A Study Overview summarizing the study's scope, background, purpose, describes the assessments conducted by the NWSSG and lists any assumptions that were necessary to complete the study. Part of the Study Overview includes the following documents in the Appendices of the NWSSG Report: Systems CONOPS, Current Safety Rules, System Functional Description (including safety technologies incorporated into the system), and Safety Feature Description.

8.2.4. Findings and Recommendations. Findings state facts or conclusions regarding the nuclear safety of the weapon system and recommendations enhance safety following the requirements within DoDM 3150.02. Each recommendation includes an OPR, Office of Coordinating Responsibility, Action, and Time suspension.

8.2.4.1. A finding or recommendation must be approved by a majority of the NWSSG voting members to be included in the NWSSG recommendations. **(T-1) Note:** A NWSSG vote is not to approve a recommendation per se but a tabulation, so the majority opinion is captured as recommendation with the smaller, minority opinion, to be included as a Minority Opinion as described in [para 7.2.2](#).

8.2.4.2. Reiterate applicable recommendations for the weapon system made during previous studies or reviews for which corrective actions have not been completed.

8.2.4.3. Priority assignments for NWSSG recommendation Actions:

8.2.4.3.1. Immediate Action. (USE OF THE NUCLEAR WEAPON SYSTEM IS IMMEDIATELY RESTRICTED UNTIL RECOMMENDED ACTIONS ARE COMPLETED.) Reserved for recommendations made to correct deficiencies that prevent the weapon system from meeting one or more of the DoD Nuclear Weapon System Surety Standards. It either restricts certain operations of the nuclear weapon system or completely prohibits use of the system until approved recommendations are in compliance.

8.2.4.3.2. Urgent Action. (USE OF THE NUCLEAR WEAPON SYSTEM MAY BE RESTRICTED IF APPROVED RECOMMENDATIONS ARE NOT COMPLIED WITH BY THE SUSPENSE DATE.) Reserved for those recommendations which conclude that, while the system currently meets required surety standards, prompt corrective actions are required to ensure no violation of any of the DoD nuclear weapon system surety standards occurs in the future. Peacetime restriction of the weapon system may be warranted if approved recommendations are not complied with by the suspense date or if an approved extension to the suspense date is not granted.

- 8.2.4.3.3. Time Compliance. (USE OF THE WEAPON SYSTEM IS NOT RESTRICTED.) Reserved for recommendations that simply enhance nuclear surety. These recommendations are intended to make the system better and do not imply any failure to meet existing safety standards. The weapon system may be operated while action is being taken to comply with an approved recommendation. Failure to comply by the stated suspense date will not restrict use of the weapon system.
- 8.2.5. Draft Safety Rules for new systems or proposed changes to existing rules. These are NWSSG recommendations for safe operations of the weapon system, based upon NWSSG findings during the study/review.
- 8.2.5.1. A new or changed safety rule must be approved by a majority of the NWSSG voting members. **NOTE:** A NWSSG vote is not to approve a Weapon System Safety Rule per se but a tabulation, so the majority opinion is captured as a proposed rule (or rule change) with the smaller, minority opinion, to be included as a Minority Opinion as described in [para 7.2.2](#).
- 8.2.6. Observations are non-binding statements made by the NWSSG on areas not normally covered in the scope of the study, but which are felt to warrant documentation in the report.
- 8.2.7. A Minority Opinion(s) is included as an addendum if agreement is not reached by the NWSSG through discussion and deliberation and those in the minority deem such an addendum is appropriate. **(T-0)** The format is the same as the findings and recommendations of the basic report and signed by each member supporting the minority position. The Minority Opinion will be submitted for inclusion into the NWSSG Report and will be made available for all members to review. **(T-0)**

### **8.3. Air Force Nuclear Weapon System Surety Report.**

- 8.3.1. The AF NWSSR presents the Air Force assessment of whether the weapon system meets the four DoD surety standards. The NWSSG Report is the basis for the AF NWSSR; once voting members sign the NWSSG Report, and it completes select MAJCOM and HAF 2-letter coordination, it is signed by AF/SE. The AF NWSSR consists of the following:
- 8.3.1.1. The Executive Summary summarizes the Air Force position on the study results and includes an appraisal statement that assesses whether or not the weapon system meets DoD nuclear weapon system surety policy and standards. If there are differences in any portion of the AF NWSSR and the NWSSG Report, the Executive Summary notes the differences and rationale for disagreement.
- 8.3.1.2. The Assessment Section includes evaluations and analyses to support the Air Force appraisal statement in the Executive Summary.
- 8.3.1.3. The Findings, Recommendations, and Corrective Actions Section:
- 8.3.1.3.1. Lists NWSSG findings, recommendations, and Minority Opinions, and indicates approval or disapproval of each recommendation with rationale.
- 8.3.1.3.2. Lists corrective actions with a timeline that the Air Force will implement approved recommendations.
- 8.3.1.3.3. Provides recommendations on the retention, modification, or retirement of the system.

8.3.1.4. Includes the NWSSG Report as an enclosure to the AF NWSSR.

8.3.1.5. The NWSSG report will not be changed following the signature of the NWSSG members other than to correct administrative errors. However, if unresolved issues between the AF NWSSR and NWSSG report arise during HAF 2-letter coordination they will be addressed using one of the following methods:

8.3.1.5.1. The AF may elect, through the NWSSG Chair, to reconvene the NWSSG to address unresolved issues.

8.3.1.5.2. If the AF position on the study results differs from the NWSSG (majority or minority), report assessment of compliance with the DoD surety standards, those differences will be noted in the executive summary, along with the rationale for the disagreement.

#### **8.4. Air Force Safety Rules Package.**

8.4.1. The Air Force Safety Rules Package includes the AF position in the executive summary of the study. The Safety Rules package is sent to OSD for coordination and reviewed by OSD, Joint Staff, DTRA & DOE NNSA. USD(A&S) will approve or disapprove WSSRs and return the package to the NWSSG. DoDM 3150.02 contains the Safety Rules coordination process and staffing time standards. The AF Safety Rules package includes:

8.4.2. Executive Summary: An appraisal of whether or not the weapon system meets the DoD weapon system safety policy and standards; differences between the NWSSG Report and the AF NWSSR and a synopsis of the proposed safety rules or changes to current rules.

8.4.3. Part A: Technical Description of the weapon system and Concepts of Operations.

8.4.4. Part B: Safety Features incorporated in the weapon system.

8.4.5. Part C: Proposed Safety Rules.

#### **8.5. Operational Plan Data Document.**

8.5.1. The OPDD is the operating command's statement of how the command operates and maintains (or, if applicable, for a new or significantly modified weapon system, how the command plans to operate and maintain) the nuclear weapon system that the NWSSG is studying. In addition, the OPDD serves as a source document for the TNSA. The OPDD is not intended to be a planning document or an operational plan; therefore, it should not include a detailed operational plan. The intent is to summarize each operation and refer to appropriate documents (e.g., AF instructions, technical orders) with enough detail to ensure no operational capability is omitted. USD(A&S) approval of the WSSRs is given contingent upon the operations described within the OPDD remaining substantively unchanged. Note: Facilities use a Facility Description and CONOPs in lieu of an OPDD and CONOPs. Once the facility becomes operationally certified, the CONOPs will roll up into the overall weapons system OPDD and CONOPs.

8.5.2. Operating commands provide a proposed OPDD for new or modified nuclear weapon systems when requested by the NWSSG Chair for the applicable study. However, the OPDD is required for a POSS and OSR. **(T-0)** The OPDD is due to the NWSSG Executive Support Staff six months prior to the NWSSG study or review. New or modified OPDD must be reviewed by the NWSSG prior to implementation. **(T-1)**

8.5.3. The OPDD is a complete document that:

8.5.3.1. Describes the nuclear weapon system, its mission, and the force structure.

8.5.3.2. Describes the concept of operations with the nuclear weapon system, specifying general operations (i.e., operations commonly performed regardless of geographical location). Describes any significant weapon system operational differences peculiar to geographic location in an appendix to the basic OPDD.

8.5.3.3. Describes normal operations in the stockpile-to-target sequence (e.g., storage, maintenance, convoy, loading, contingency plans, alert, and recurring tests) during peace time, wartime, including operations envisioned under contingency plans, and periods of increased tensions and hostilities, which may be included as appendix to the OPDD.

8.5.3.4. Defines and, when appropriate, describes the operational terms used within the OPDD.

8.5.3.5. Describes responses to different readiness conditions: significant variations to general operations and operations conducted under contingency plans.

8.5.3.6. Describes unit-level command and control procedures.

8.5.3.7. Describes security and specific procedural safeguards used during nuclear weapon operations. Emphasize physical security procedures and compliance with nuclear security requirements DoD S 5210.41-M\_AFMAN 31-108 V1-S, *The Nuclear Weapon System Manual*, and AFI 91-101.

8.5.3.8. Describes the nuclear weapon configurations.

8.5.4. The MAJCOM summarizes operations, refers to applicable source documents for greater detail, and includes all desired operational and system capabilities in the OPDD. The NWSSG does not authorize operations not included in the OPDD until reviewed/approved. MAJCOMs cannot add or significantly change operational capabilities or plans after the USD(A&S) approves the safety rules without a NWSSG study/review.

## 8.6. Technical Nuclear Safety Analysis.

8.6.1. AFSEC/SEW designates, or serves as, an independent technical analysis agency in accordance with this document and DAFI 91-101 to prepare the safety review/evaluation/analysis. **(T-1)**

8.6.2. Personnel who prepare the TNSA must be managerially, financially, and technically independent from organizations directly responsible for designing, developing, producing, maintaining, operating, or providing logistics for the weapon system under evaluation. **(T-1)**

8.6.3. The TNSA:

8.6.3.1. Describes the weapon system in depth.

8.6.3.2. Contains a safety and security compliance matrix that shows how weapon system features meet the DoD Nuclear Weapon System Surety Standards.

8.6.3.3. Contains a comprehensive engineering analysis of the weapon system design.

8.6.3.4. States how the weapon system complies with or violates the DoD Nuclear Weapon System Surety Standards in both normal and credible abnormal environments.

8.6.3.5. Identifies deficiencies and recommended corrective actions for the weapon system to comply with DAFI 91-101, DAFMAN 91-118, *Safety Design and Evaluation Criteria for Nuclear Weapon Systems*, DAFMAN 91-119, *Safety Design and Evaluation Criteria for Nuclear Weapon Systems Software*, and DoD S 5210.41-M\_AFMAN 31-108 V1-S.

8.6.3.6. Assesses physical security features planned for the weapon system. If appropriate, includes an examination of security measures for non-fixed site operations, identify security deficiencies, and propose necessary corrective actions.

8.6.3.7. Includes a qualitative risk assessment of the weapon's likelihood of violating any of the DoD nuclear weapon system surety standards or causing plutonium scatter (i.e., contamination).

8.6.4. Prepare a preliminary TNSA for an ISS. Prepare a final TNSA for a POSS. **Note:** An abbreviated TNSA may be used for a SSS, an INSS, a PSS or as required by the NWSSG Chair. It is limited in scope and only covers the specific study topic.

8.6.5. Provide a TNSA, as required or per the NWSSG Chair's tasking, no later than 30 days before the first NWSSG meeting.

## 8.7. Support Briefings.

8.7.1. DoDM 3150.02 describes the types of studies and reviews the Air Force must conduct at a minimum, as well as provides the minimum requirements as to what will be reviewed by the NWSSG.

8.7.2. The operational command, development agency, TNSA authors, subject matter experts, and contractors brief the NWSSG.

8.7.3. NWSSG Executive Support Staff will notify what topics they must cover in the briefing. **(T-1)**

8.7.4. Briefing topics should include, but are not limited to:

8.7.4.1. History of safety studies, OSRs, and safety rules.

8.7.4.2. NWSSG recommendations disapproved by HAF.

8.7.4.3. Deficiency report history.

8.7.4.4. Nuclear surety inspection findings since last review.

8.7.4.5. Weapons system safety assessments and/or Technical Nuclear Safety Analysis.

8.7.4.6. Unauthorized Launch/Access Analysis.

8.7.4.7. Weapon safety data applicable to the weapon system.

8.7.4.8. Status of nuclear certification actions.

8.7.4.9. Nuclear certified configuration issues.

8.7.4.10. Weapon modifications.

8.7.4.11. Use control.

8.7.4.12. Pending changes to nuclear surety features and procedures affecting nuclear surety.

- 8.7.4.13. Review of current technical data (including review of any problems with compatibility of technical data with nuclear WSSRs).
- 8.7.4.14. Nuclear surety concerns.
  - 8.7.4.14.1. Review of any unresolved problems relating to nuclear surety.
  - 8.7.4.14.2. Demilitarization concepts for nuclear surety related components.
- 8.7.4.15. Weapon system safety features technical description, function, and purpose.
- 8.7.4.16. Weapon system support equipment technical description, function, purpose, and history.
- 8.7.4.17. Weapon system modification program and pending logistical factors affecting nuclear surety.
- 8.7.4.18. A summary of relevant mishaps and incidents that could adversely affect nuclear surety.
- 8.7.4.19. Weapon system operations briefings.
  - 8.7.4.19.1. Safety features.
  - 8.7.4.19.2. Operational capabilities
  - 8.7.4.19.3. Special preparations for nuclear missions.
  - 8.7.4.19.4. Unit locations, capabilities, command and control
  - 8.7.4.19.5. Security procedures.
  - 8.7.4.19.6. Explosive Ordnance Disposal procedures
  - 8.7.4.19.7. Accident history
  - 8.7.4.19.8. Personnel certification
  - 8.7.4.19.9. Unique country and service requirements.
  - 8.7.4.19.10. Contingency and emergency plan.
  - 8.7.4.19.11. Configuration and load limits.
  - 8.7.4.19.12. Nuclear surety concerns.
  - 8.7.4.19.13. Flying restrictions.
  - 8.7.4.19.14. Maintenance requirements.
  - 8.7.4.19.15. All deviations to nuclear safety/security instructions and directives currently in effect for the weapon system.
  - 8.7.4.19.16. Review of relevant studies after-action reports and major exercises during OSRs.

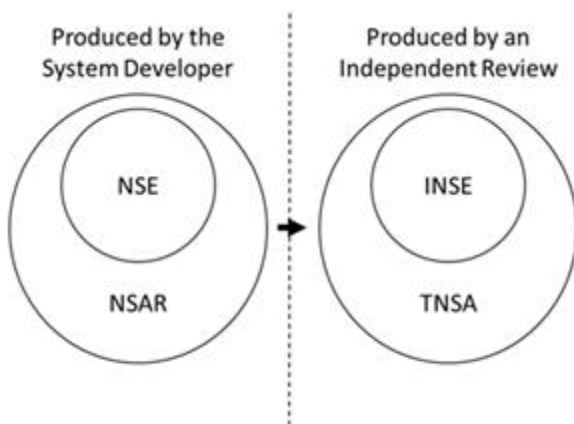
## 8.8. Nuclear Safety Analysis Report (NSAR).

8.8.1. A NSAR evaluates how a nuclear weapon system meets DoD surety standards, including safety design compliance. The NSAR evaluates additional information on aspects of the nuclear weapon system, such as security, OPDD, CONOPS, etc. **Note:** The NSAR is a different document than a Nuclear Surety Evaluation (NSE), which AFSEC/SEWN uses to evaluate compliance of nuclear safety design certification requirements. An NSE evaluates how the nuclear weapon system meets the criteria of DAFI 91-101, DAFMAN 91-118, and DAFMAN 91-119 identified in the CRP.

8.8.2. An NSAR can act in place of an NSE provided the NSAR addresses compliance with nuclear safety design criteria. **Note:** An Independent NSE (INSE) is an independent review of an NSE. AFSEC/SEWN does not always require an INSE for nuclear safety design certification but may perform the analysis without the independent review that an INSE provides. **Figure 8.1** illustrates the relationship between an NSAR and NSE.

8.8.3. The program office must deliver the NSAR at least 90 days prior to the start of the study. (T-1)

**Figure 8.1. Relationship between NSAR and NSE.**



Safety Study (may include Safety Design) -> NSAR/TNSA

Safety Design Only -> NSE/INSE



## Chapter 9

### ACTIONS REQUIRED ON NUCLEAR WEAPON SYSTEM SURETY GROUP RECOMMENDATIONS APPROVED BY HAF

#### 9.1. Implementing HAF-Approved Recommendations.

9.1.1. NWSSG Executive Support Staff and NWSSG members and action agency must work together throughout the year in order to implement, report status, and seek closure of all NWSSG findings and recommendations approved by the HAF. **(T-1)**

9.1.2. NWSSG Executive Support Staff:

9.1.2.1. Sends the HAF-approved AF NWSSR containing open recommendations to the applicable NWSSG members for action.

9.1.2.2. Tracks open recommendations and collects semi-annual status reports and closure requests submitted by NWSSG members.

9.1.2.3. Obtains coordination from NWSSG on any closure requests submitted to the NWSSG Executive Support Staff. Sends a signed indorsement memorandum to the NWSSG member indicating the recommendation has been formally closed by the NWSSG Chair.

9.1.2.4. Conducts a periodic review to document progress made since the last reporting period, identifies any outstanding open recommendations, and reviews guidance issued to correct deficiencies. These periodic reviews are performed by the NWSSG Project Officer in coordination with the NWSSG voting members.

9.1.2.5. Briefs the results of the periodic review to the NWSSG Chair. Publishes an annual safety report, due to OASD (NCB/NM) by 1 July each year, describing the status of open corrective actions for each NWSSG finding and recommendation. **(T-0)** A copy of the report will be provided to all NWSSG members and the Joint Staff. **(T-1)**

9.1.3. NWSSG Members:

9.1.3.1. Tasks applicable organizations within their agency to begin implementation of open recommendations immediately upon receipt of a HAF-approved AF NWSSR. **(T-1)**

9.1.3.2. Sends NWSSG Executive Support Staff a semiannual status report of open recommendations no later than 15 May and 15 November of each year. The agency will begin reporting after receiving the AF NWSSR and include a schedule for completing each action item identified in each recommendation. **(T-1)**

9.1.3.3. Submits an indorsement memorandum to the NWSSG Executive Support Staff requesting closure of an open recommendation. The memorandum must contain sufficient justification for closure. All corrective actions must be approved by a NWSSG majority vote before closure can be granted by the NWSSG Chair. **(T-1)** A recommendation is not closed until NWSSG Executive Support Staff notifies the NWSSG member by returning a signed indorsement memorandum.

9.1.3.4. During a study/review, NWSSG members may seek voting member approval to close open recommendations assigned to their organization by a majority vote but must provide NWSSG Executive Support Staff with substantiating information prior to meeting.  
(T-1)

JEANNIE M. LEAVITT  
Major General, USAF  
Chief of Safety

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

DoDD 3150.02, *DoD Nuclear Weapons Surety Program*, 24 April 2013

DoDM 3150.02, *DoD Nuclear Weapon System Safety Program Manual*, 31 January 2014

DoDD 5210.41, *Security Policy for Protecting Nuclear Weapons*, 22 Jan 2015

DoD S 5210.41-M\_AFMAN 31-108 V1-S, *The Air Force Nuclear Weapon Security Manual*, 20 May 2019

HAFMD 1-46, *Chief of Safety*, 9 November 2021

AFI 33-322, *Records Management and Information Governance Program*, 23 March 2020

AFI 63-125, *Nuclear Certification Program*, 16 January 2020

AFI 91-106, *Unauthorized Launch, Threat Mitigation, and Launch Action Studies*, 28 August 2019

AFPD 13-5, *Air Force Nuclear Mission*, 17 July 2018

AFPD 91-1, *Nuclear Weapons and Systems Surety*, 24 October 2019

DAFI 90-160, *Publications and Forms Management*, 14 April 2022

DAFI 91-101, *Air Force Nuclear Weapons Surety Program*, 26 March 2020

DAFMAN 16-201, *Department of the Air Force Foreign Disclosure and Technology Transfer Program*, 19 January 2021

DAFMAN 90-161, *Publishing Processes and Procedures*, 15 April 2022

DAFMAN 91-118, *Safety Design and Evaluation Criteria for Nuclear Weapon Systems*, 13 March 2020

DAFMAN 91-119, *Safety Design and Evaluation Criteria for Nuclear Weapon Systems Software*, 11 March 2020

DAFPAM 63-128, *Integrated Life Cycle Management*, 2 February 2021

***Adopted Forms***

DAF Form 673, *Department of the Air Force Publication/Form Action Request*

DAF Form 847, *Recommendation for Change of Publication*

DOE Form 5631.20, *Request for Visit or Access Approval*

***Abbreviations and Acronyms***

**AF**—Air Force

**AFGSC**—Air Force Global Strike Command

**AFI**—Air Force Instruction

**AFMC**—Air Force Material Command  
**AFNWC**—Air Force Nuclear Weapons Center  
**AF NWSSR**—Air Force Nuclear Weapon System Surety Report  
**AFPD**—Air Force Policy Directive  
**AFSEC**—Air Force Safety Center  
**CCMD**—Combatant Command  
**CONOPS**—Concept of Operations  
**CRP**—Certification Requirements Plan  
**DAF**—Department of the Air Force  
**DAFI**—Department of the Air Force Instruction  
**DAFMAN**—Department of the Air Force Manual  
**DAFPAM**—Department of the Air Force Pamphlet  
**DISS**—Defense Information System for Security  
**DoD**—Department of Defense  
**DoDD**—Department of Defense Directive  
**DoDM**—Department of Defense Manual  
**DOE**—Department of Energy  
**DRAAG**—Design Review and Acceptance Group  
**DTRA**—Defense Threat Reduction Agency  
**EMD**—Engineering, Manufacturing and Development  
**FAD**—First Assets Delivered  
**HAF**—Headquarters Air Force  
**ILA**—Inadvertent Launch Analysis  
**INSE**—Independent Nuclear Surety Evaluation  
**INSS**—Interim Safety Study  
**IOC**—Initial Operational Capability  
**ISS**—Initial Safety Study  
**JADE**—Joint Access Database Environment  
**LPO**—Lead Project Officer  
**MAJCOM**—Major Command  
**MAR**—Major Assembly Release  
**NATO**—North Atlantic Treaty Organization

**NNSA**—National Nuclear Security Administration

**NSAR**—Nuclear Safety Analysis Report

**NSE**—Nuclear Surety Evaluation

**NWSSG**—Nuclear Weapon System Surety Group

**OPDD**—Operational Plan Data Document

**OPR**—Office of Primary Responsibility

**OSR**—Operational Safety Review

**POSS**—Pre-Operational Safety Study

**PSR**—Periodic System Review

**PSS**—Preliminary Safety Study

**SSS**—Special Safety Study

**STS**—Stockpile-to-Target Sequence

**TNSA**—Technical Nuclear Safety Analysis

**ULA**—Unauthorized Launch Analysis

**WGF**—Weapon Generation Facility

**WSSR**—Weapon System Safety Rule

*Office Symbols*

**AF/A3**—Air Force Deputy Chief of Staff, Operations

**AF/A4**—Air Force Deputy Chief of Staff, Logistics, Engineering and Force Protection

**AF/A4S**—Air Force Directorate of Security Forces

**AF/A10**—Air Force Deputy Chief of Staff, Strategic Deterrence and Nuclear Integration

**AF/JA**—Air Force Judge Advocate General

**AF/SE**—Air Force Chief of Safety

**AFSEC/SEW**—Air Force Safety Center, Chief of Weapons Safety

**AFSEC/SEWN**—Air Force Safety Center, Nuclear Weapons Safety Branch

**ASD(NCB)**—Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs

**SAF/IAPD**—Air Force International Affairs

**OASD(NCB/NM)**—Office of the Assistant Secretary of Defense for Nuclear, Chemical and Biological/Nuclear Matters

**USD(A&S)**—Under Secretary of Defense for Acquisition and Sustainment

*Terms*

**All relevant terms and definitions for the 91**—series AF publications are located in the glossary of Department of the Air Force Instruction (DAFI) 91-101, *Air Force Nuclear Weapons Surety Program* and DoDM 3150.02.

## Attachment 2

**SUGGESTED SCHEDULING MATRIX FOR SAFETY STUDIES IN THE  
ACQUISITION PROCESS**

**Table A2.1. Recommended Acquisition Phase for Each Safety Study.**

| Acquisition Phase   | Type of Safety Study |             |         |                |
|---|----------------------|-------------|---------|----------------|
|   | Initial              | Preliminary | Interim | Preoperational |
| Technical Maturation and Risk Reduction: Design Concept Firm (Capability Development Document and System Requirements Documents Complete) | X                    |             |         |                |
| EMD: When design is ready for critical design review, but before it occurs  |                      | X           |         |                |
| EMD: Around the Production Readiness Review   |                      |             | X       |                |
| Production and Deployment: Around Low-Rate Initial Production   |                      |             |         | X              |

## Attachment 3

## REVIEW OF SUSPENSES

Table A3.1. Review of Suspense Dates.

| Suspense Date            | Description   |
|--------------------------|---|
| 15 May of Each Year      | <ol style="list-style-type: none"> <li>1. NWSSG Members sends NWSSG Executive Support Staff a semiannual status report of open recommendations</li> <li>2. Executive Support Staff provides NWSSG Members a semiannual five year forecast of proposed studies</li> </ol>  |
| 1 July of Each Year      | <ol style="list-style-type: none"> <li>1. Executive Support Staff provides OASD(NCB/NM) an annual status report of open recommendations</li> </ol>  |
| 15 November of Each Year | <ol style="list-style-type: none"> <li>1. NWSSG Members sends NWSSG Executive Support Staff a semiannual status report of open recommendations</li> <li>2. Executive Support Staff provides NWSSG Members a semiannual five year forecast of proposed studies.</li> </ol> |



Attachment 4

WEAPON SYSTEM SAFETY RULES PUBLICATION PROCESS

Figure A4.1. Normal Weapon System Safety Rules Publication Process.

