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SECRETARY OF THE AIR FORCE

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Acquisition

THE SEEK EAGLE PROGRAM

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Air Force Policy Directive (AFPD) 63-1, *Capability-Based Acquisition System,* and introduces the SEEK EAGLE (SE) Program and the Aircraft-store Compatibility Enterprise (ACE) concept. The SE Program is the standard for the aircraft-stores certification process of the US Air Force. The SE program can also be used in support of aircraft-stores certification of US and foreign-origin weapons and stores acquired via Foreign Military Sales or Direct Commercial Sales (FMS or DCS, respectively), for use on foreign-owned or leased US-origin aircraft. This program assures aircraft-store compatibility [store loading, safe carriage, separation, safe escape, electromagnetic compatibility/electromagnetic interference (EMC/EMI)], and weapon delivery accuracy verification. It includes engineering analyses, computer simulations, wind tunnel tests, and flight tests to obtain the data needed to verify accuracy of and/or update Operational Flight Programs and Technical Orders (TO). It applies to all Active, Air National Guard (ANG), and US Air Force Reserve operational units; USAF aircraft leased to foreign air forces; and, foreign-owned aircraft (whether acquired FMS or DCS) when these customers request SE support in the aircraft-stores certification processes. Ensure that all records created as a result of this AFI are maintained in accordance with AFPD 37-1, *Information Management,* and AFMAN 37-123, *Management of Records,* and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at **https://webrims.amc.af.mil**. The ACE concept includes all organizations that contribute to successful execution of the SE mission. This AFI does not adopt or prescribe the use of any forms.

SUMMARY OF REVISIONS

This revision reorganizes text; updates material to reflect Department of Defense Instruction (DODI) 5000.2, *Operation of the Defense Acquisition System*, terminology; includes changes introduced by AFPD 63-1; clarifies SE decertification procedure (Para **3.6.**); revises the current procedure regarding funding responsibility (**Attachment 3**) and changes the table format; amends the glossary of references and supporting information; updates organizational changes; and adds nuclear certification terminology and process references in accordance with AFI 63-125, *Nuclear Certification Program*, and outlines responsibilities for the ACE.

Chapter 1

PROGRAM DESCRIPTION

1.1. SE Certification. SE certification will be accomplished on all weapons (conventional and nuclear), deployable countermeasures (chaff, flares, towed decoys, etc.) suspension equipment, tanks, and pods carried externally or internally. The process includes safe load and unload procedures; flight limits for safe carriage, employment, jettison, safe escape, and ballistic accuracy verification. 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 as identified in paragraphs **A2.2.** and **A2.3.**. SE certification forms part of the USAF airworthiness certification process (in accordance with AFPD 62-6, *USAF Aircraft Airworthiness Certification*, and MIL-HDBK-516A, *Airworthiness Certification Criteria*), which is also part of assuring compliance with Operational Safety, Suitability and Effectiveness (OSS&E) as directed by AFI 63-1201, *Assurance of Operational Safety, Suitability and Effectiveness.*

1.1.1. SE certification does *not* include:

1.1.1.1. Nuclear safety certification described in AFI 91-103, *Air Force Nuclear Safety Certification Program,* the nuclear certification process in accordance with AFI 63-125, or the certification required before the Non-Nuclear Munitions Safety Board (NNMSB).

1.1.1.2. Avionics, electrical, and mechanical integration of the operational interfaces between an aircraft and a store.

1.1.1.3. Development or modification of aircraft or stores to achieve the aircraft-store configurations certified under SE.

1.1.1.4. Certification/Accreditation or Information Assurance Verification of weapons or stores that connect to classified or unclassified aircraft data buses, either for USAF aircraft or foreign-possessed aircraft of US origin—a flight clearance granted under the SE program does not necessarily permit use of stores with unlimited data bus connectivity unless steps have been taken to verify information assurance.

1.1.2. See **Attachment 2**, *Criteria for Aircraft-Store Certification*, for details.

1.2. Types of Certifications. There are four types of certifications: quick reaction certifications, routine certifications, limited certifications, and flight clearances.

1.3. The Process. During the Concept Refinement, Technology Development and System Development and Demonstration (SDD) phases, the using commands identify initial aircraft-store configuration requirements in the Initial Capability Document (ICD), Capability Production Document (CPD) and the Capability Development Document (CDD) in accordance with the established capabilities based requirements process. After SDD, a new phase begins with a user request, referred to as a SEEK EAGLE Request (SER), and ends with the publication of TOs and verification of ballistic inputs to operational flight programs (OFP) (Exception: operational test flight clearance SERs are not published in TOs). The Air Force SEEK EAGLE Office (AFSEO) manages all certification activities after SDD and provides compatibility advice during SDD. In accordance with the OSS&E specifications of AFI 63-1201, the aircraft Program Manager (PM) is the final certification authority for aircraft and store configurations. See **Chapter 3**, for details of the process.

1.4. SE and Systems Acquisition.

1.4.1. Program managers must initiate SE planning prior to Milestone B for both aircraft and weapon/store programs and develop a SE Certification Plan, which includes:

1.4.1.1. Aircraft-store compatibility issues addressed during SDD trade-off studies.

1.4.1.2. The SE test activities planned during SDD.

1.4.1.3. The plan to develop and sustain an organic Air Force store certification capability for the weapon system (exit criteria for the Milestone C Air Force review).

1.4.2. The Milestone B Air Force review requires completion of a SE Certification Plan with AFSEO coordination. The applicable operational command must submit a SER by Milestone B to identify the threshold aircraft-store configurations required for certification before initial operational capability (IOC).

1.5. SE Funding:

1.5.1. AFMC establishes responsibility for SE funding. Inventory stores and developmental or modified inventory stores on inventory aircraft is per **Attachment 3** and in line with current AFMC guidance.

1.5.2. Threshold configuration requirements on developmental aircraft and store programs are the responsibility of the developing program office.

1.5.3. Developmental stores that are threshold configuration requirements on developmental aircraft are according to program office agreements.

1.5.4. Funding for SE support of activities associated with foreign aircraft-stores certification (US or foreign-origin weapons/stores on US-origin aircraft) can be obtained by including a line written into an FMS aircraft sale Letter of Offer and Acceptance (LOA) or by establishing an FMS case purely to support an aircraft-stores certification effort. SAF/IA, through the Air Force Security Assistance Center (AFSAC), is responsible for identifying funding sources available for SE efforts aimed at foreign customers.

1.6. Aircraft-store Compatibility Enterprise (ACE):

1.6.1. The ACE includes all organizations that contribute to the successful execution of the SE mission. This includes: SAF/AQP, SAF/IA, HQ USAF/XOR, AFSEO, aircraft and store PMs, AAC/NW, AFMC test centers, operational commands, National Aeronautics and Space Administration (NASA), defense contractors, educational institutions, and many other organizations tasked with aircraft/stores compatibility issues.

1.6.2. The purpose of the ACE is to tie national capabilities into a seamless process to complete aircraft-stores certification. The ACE develops and delivers warfighting capability through a collaborative spirit and reduces parochial focus among participants. It minimizes duplication of effort and maximizes the pay-off of capital investments made by enterprise members as embodied in the following mission statement.

1.6.3. The mission of the ACE is to provide timely and accurate aircraft/store compatibility decisions to meet the needs of our nation's warfighters through open dialog and sharing of horizontally integrated national resources and knowledge.

Chapter 2

RESPONSIBILITIES

2.1. ACE:

2.1.1. The ACE enabled by the leadership of the AFSEO will:

2.1.1.1. Establish program policy (SAF/AQP).

2.1.1.2. Develop an integrated Air Force SE priority list [all user Major Commands (MAJCOMs) and SAF/IA].

2.1.1.3. Execute this policy and complete certifications (AFSEO and aircraft/store program offices).

2.1.2. For the ACE to function, member organizations must meet their responsibilities as listed below. In the course of business there are bound to be situations where responsibilities overlap or even transfer. The list of responsibilities is in no way totally inclusive and should never stop or delay the initiative needed to deliver to the warfighter the capability they require to accomplish the mission.

2.2. SAF/AQP:

2.2.1. Integrates aircraft, store, and SE Program Management Directives (PMD) to provide consistent direction to meet user requirements and need dates.

2.2.2. Serves as the final authority for SE prioritization issues as forwarded by MAJCOM/DOs (Directors of Operations) and SAF/IA.

2.2.3. Reviews aircraft and store program requirements documents, such as the ICD and CDD, to include draft documents, and Test and Evaluation Master Plans (TEMPs) for SE requirements.

2.3. SAF/IA:

2.3.1. Validates and negotiates foreign SERs to establish funding lines or FMS cases as required. Validation includes verification that the foreign requestor possesses or will possess the requested aircraft-store combination, and that information assurance concerns (primarily related to foreign-origin weapons or stores) are addressed prior to issuance of any SE clearance.

2.3.2. Submits SERs to the ACC focal point for negotiated and validated FMS or DCS international programs, providing funding through AFSAC for any required FMS efforts. See **Attachment 4**.

2.3.3. Coordinates integration of FMS SERs into the Air Force SE priority list.

2.3.4. Includes the SER and Project Plan as part of the Planning and Review (P&R) and Pricing and Availability (P&A) process.

2.3.5. Provides a certification data package (CDP) and storage handling instructions to include explosive safety data as required by AFMAN 91-201, *Explosive Safety Standards* to AFSEO in support of test and analysis for certification of foreign-origin stores, not in US inventory, on US-origin aircraft. See **Attachment 5.**

2.4. HQ USAF:

2.4.1. HQ USAF/XOR:

2.4.1.1. Consults with SAF/IA before decertifying an inventory weapon/store.

2.4.1.2. Approves decertification requests and directs HQ ACC/DR/DO/LG to take permanent decertification action via memorandum.

2.4.2. HQ USAF/XORW/ILPR: Provides the stocks of conventional munitions identified as needed for SE certification.

2.5. Air Force Materiel Command (AFMC):

2.5.1. Maintains an organic capability for the SE process; provides wind tunnel, ground test, and flight test support for store certifications and ballistic accuracy verification for mission planning systems and aircraft OFP updates. Provides programmatic and policy guidance as required.

2.5.2. AFMC Test Centers will:

2.5.2.1. Support aircraft and store SPDs/PMs, Nuclear Weapons Directorate, other test centers and the AFSEO as required with aircraft and store ground test model development, application of modeling and simulation (M&S), and test planning and execution.

2.5.2.2. Develop, in conjunction with the AFSEO, M&S tools that seamlessly support store certification for the entire ACE.

2.5.2.3. Facilitate transfer or access to data, information, knowledge and M&S tools gained during developmental or test programs to participants in the ACE.

2.5.3. AFMC/LGMW will forecast for SE munitions requirements for USAF SE efforts and manage allocations as directed by AFI 21-201, *Management and Maintenance of Non-nuclear Munitions*, and policy issued by the Ogden Air Logistics Center, Air-to-Surface Munitions Directorate (OO-ALC/WM).

2.6. AFSEO :

2.6.1. Leads the ACE as the key enabler of all Air Force aircraft-store compatibility efforts.

2.6.2. Helps ensure availability of M&S for each weapon system throughout their full acquisition life cycle.

2.6.3. Enables transfer of data, information, knowledge and M&S tools gained during developmental or operational test programs to appropriate participants in the ACE.

2.6.4. Manages all SE activities for inventory aircraft and stores using the SE Management Support System (SEMSS) in partnership with the aircraft and store program offices.

2.6.5. Provides certification and flight clearance recommendations for aircraft-store configurations to the Aircraft PM (as per AFI 63-125 for nuclear certification requirements).

2.6.6. Obtains using command acceptance of results for configurations requiring ballistics accuracy verification.

2.6.7. Plans, programs, and budgets for SE activities. See **Attachment 3**.

2.6.8. Compiles store procurement and expenditure forecasts required for SE and submit them through MAJCOMs according to AFI 21-201, *Management and Maintenance of Non-Nuclear Munitions*.

2.6.9. Controls the use of SE-allocated stores.

2.6.10. Coordinates on all SE activities for developmental aircraft and stores or developmental aircraft/store combinations (i.e. first-time integration of foreign-origin weapons on US-origin aircraft).

2.6.11. Reports on all aircraft/nuclear store compatibility and aircraft/conventional store certification efforts to the weapon/store PM, aircraft PM, and SAF/AQP as requested.

2.6.12. Reports funding requirements to HQ ACC and SAF/AQP.

2.6.13. Coordinates SE process sustainability requirements through US Air Force programs such as Investment and Modernization (I&M) and Test Investment Plans and Programs (TIPP) and through the Office of the Secretary of Defense (OSD) programs such as Central Test & Evaluation Investment Program (CTEIP) and through aircraft and weapon/store PM.

2.6.14. Sustains and ensures future viability of the Air Force SE process.

2.6.15. Convenes and chairs SE Working Group (SEWG) meetings.

2.6.16. Works with the Integrated Test Team (ITT) lead as established under AFI 99-103, *Capabilities Based Test and Evaluation*, for the planning and execution of all SE testing.

2.6.17. Supports aircraft and store PMs, Nuclear Weapons Directorate, and test centers as required with: M&S tool development, aircraft and store model development, and ground and flight test planning and support.

2.6.18. Requests, from SAF/IA, any data (including CDPs, ICDs) necessary for aircraft-store certification of foreign-origin stores on foreign-owned, US-origin aircraft.

2.7. Aircraft SPD/PM:

2.7.1. Serves as the final certification authority for operational use of aircraft-store configurations. (**Attachment 6** or **Attachment 7**)

2.7.2. Ensures SE activities and requirements are stated and planned as early as possible during the acquisition process, preferably during the Technology Development phase.

2.7.3. Provides requested time, resources and cost estimates for AFSEO Project Plans.

2.7.4. Plans, programs, and budgets, with the AFSEO and store program offices, for the certification requirements directed in the aircraft PMDs, to include initial operational configurations and Required Assets Available (RAA) configurations.

2.7.5. Tasks prime contractors (with AFSEO requirements) for dedicated SE activities requiring their support.

2.7.6. Coordinate nuclear store compatibility plans and aircraft compatibility certification requirements as described in AFI 63-125 with the AAC/NW and the AFSEO.

2.7.7. Notifies the AFSEO and using command of potential configuration changes that may require recertification.

2.7.8. Supports the ITT lead for all SE testing.

2.7.9. Facilitates transfer or access to data, information, knowledge and M&S tools gained during developmental or operational test programs to the AFSEO.

2.8. Store Program Offices:

2.8.1. Provide a current CDP for the store to the AFSEO (**Attachment 5**).

2.8.2. Support the AFSEO in the development of the SE Project Plan (including initial operational configurations and RAA configurations).

2.8.3. Plan for SE efforts in the store acquisition program.

2.8.4. Notify the using command, aircraft program offices, and AFSEO of potential store characteristic changes that require recertification.

2.8.5. Support the ITT lead for all SE testing.

2.8.6. Facilitate transfer or access to data, information, knowledge and M&S tools gained early in a developmental or operational test program to all participants in the ACE.

2.9. AAC/NW:

2.9.1. Manages applicable nuclear weapons loading and delivery technical orders.

2.9.2. Provides a Chairperson or member for the aircraft nuclear weapon systems project officer groups, and identifies requirements for SE certification.

2.9.3. Develops and manages nuclear safe escape data for all nuclear capable aircraft and incorporates the information in weapons delivery technical orders.

2.10. ACC:

2.10.1. Serves as the Air Force focal point for all SE requirements, to include foreign military SERs, and provides the coordination and leadership required to resolve prioritization issues.

2.10.2. Combines MAJCOM and SAF/IA requirements to optimize resources.

2.10.3. Develops and executes a process to prioritize Air Force and foreign military SE requirements with MAJCOMs and SAF/AQP.

2.10.4. Notifies SAF/IA when USAF SE requirements cause delays in foreign SER processing.

2.10.5. Chairs the Air Force SE priority list review at the SEWG meetings.

2.10.6. Submits the integrated SE Program Objective Memorandum (POM) to SAF/AQPW.

2.11. ACC, AETC, USAFE, PACAF, AMC, AFOTEC, and AFSOC:

2.11.1. Maintain a command focal point for all SE activities.

2.11.2. AETC, USAFE, PACAF and AFOTEC submit SERs to the ACC focal point for consolidation and prioritization (**Attachment 4**).

2.11.3. Due to infrequency, AMC and AFSOC should contact and submit SERs directly to the AFSEO.

2.11.4. Approve or reject the project plans provided by the AFSEO in response to SERs within 30 calendar days.

2.11.5. Determine acceptability of ballistics accuracy from verification test results. Provide formal response to AFSEO within 45 calendar days of receipt.

2.11.6. Identify projected requirements in time to enter the appropriate phase of the Planning, Programming, and Budgeting Execution (PPBE) cycle.

2.12. Air National Guard (ANG) and Air Force Reserve Command (AFRC). The ANG and the AFRC will submit all SE requirements to the gaining MAJCOM SE focal point.

Chapter 3

PROCEDURES

3.1. Quick-Reaction Certification (QRC). Submit SERs for QRC, including total ballistics weapon system accuracy verification, for urgent and mission essential, worldwide aircraft-store certification requirements. QRCs take precedence over all previously submitted routine certification requirements. QRCs are intended to support actual contingency or warfighting requirements.

3.2. Routine Certification. Submit SERs for routine certification for non-urgent, worldwide aircraft-store certification requirements. Limited certification may be requested as a part of this routine certification. See **Attachment 1** for definition of limited certification. AFSEO executes according to the Air Force SE priority list.

3.3. Flight Clearance. Submit SERs for flight clearances for specific, limited operational or test purposes. Since a flight clearance is a limited authorization to specific units, valid only for a specified duration, configuration requirements based on wartime plans should be planned for and requested as a routine certification or QRC. Flight clearances will be worked on a priority basis.

3.4. Integrated Air Force Priority List. In conjunction with the SEWG meetings, representatives from all Air Force user commands will update the integrated Air Force SE priority list. This list integrates all user requirements into a single priority list and establishes the precedence the AFSEO will use to conduct certifications. The Combat Air Forces (CAF), excluding the HQ AFSOC and HQ AMC portion, and foreign air force efforts will be aligned with ACC's SE priority list.

3.5. SE Request :

3.5.1. The user submits a SER to the MAJCOM SE focal point. See **Attachment 4**.

3.5.2. Each MAJCOM focal point (SAF/IA for FMS cases) approves the SER and forwards the SER (with MAJCOM priority) to HQ ACC/DRP for integration into the Air Force SE priority list.

3.5.3. HQ AFSOC and HQ AMC submit QRCs direct to AFSEO with information copy to HQ ACC/DRP.

3.5.4. After prioritization, HQ ACC/DRP submits SERs to the AFSEO, applicable aircraft and store program offices and cognizant MAJCOM, with user need date, if applicable. Use **Attachment 8**.

3.5.4.1. For developmental aircraft, HQ ACC/DRP submits a SER to the AFSEO, applicable aircraft program office and cognizant MAJCOM during SDD phase to ensure the AFSEO budgets for necessary tools and stores. The SER will direct the aircraft program office and the AFSEO to coordinate a Memorandum of Agreement (MOA) to define store certification responsibilities NLT SDD phase. Use **Attachment 8.**

3.5.5. AFSEO develops a project plan (**Attachment 9**) based on the Air Force SE priority list and forwards it to the requesting MAJCOM, HQ ACC/DRP, and SAF/AQP; and, to SAF/IA if requested. Project plans are not required if estimated costs are less than $25K.

3.5.5.1. A project plan will include the following:

3.5.5.1.1. An estimate of resources required, by fiscal year, to complete certification including the cost of each task of certification (such as engineering analysis and ground tests, wind tunnel tests, electromagnetic tests and analysis, flight tests, technical and source data development, and technical order update costs), aircraft hardware or software costs, and number and costs of all test stores required, by fiscal year, for safe carriage and separation and ballistics accuracy verification.

3.5.5.1.2. An estimate of time to complete each task.

3.5.5.1.3. An estimate of when required resources (funding, stores, etc.) are needed to support the user's need date, whether these resources are available or programmed in the period required, and the impact of any funding or other resource shortfalls.

3.5.5.1.4. Total fiscal year funding breakout by Program Element according to **Attachment 3**.

3.5.5.1.5. Test stores required by fiscal year broken out by source, e.g., War Reserve Material assets, in production and procured with SE funding, and in production and procured through other funding like FMS or another service.

3.5.5.1.6. Cost-schedule-performance tradeoffs for user consideration in refining requirements.

3.5.5.1.7. Pertinent aircraft and store program data such as OFP and TO input cutoff dates and modification or integration costs and schedule.

3.5.6. AFSOC, AMC, and SAF/IA may submit priority reclama issues to SAF/AQP for resolution.

3.5.7. HQ ACC/DRP and the requesting MAJCOM must validate the project plan within 30 calendar days.

3.5.8. AFSEO executes a project plan upon MAJCOM acceptance, or 30 calendar days after MAJCOM receipt, unless SAF/AQP directs otherwise.

3.5.9. AFSEO and the applicable aircraft SPD end the process by:

3.5.9.1. Distributing TO Manuals and verified OFPs.

3.5.9.2. Transmitting a certification completion notification (**Attachment 6** or **Attachment 7**) after satisfying the SER.

3.5.9.3. Providing AAC/NW statement of compatibility for nuclear weapons in TO 11N-50-7.

3.6. SE Decertification. There are two decertification actions: temporary and permanent.

3.6.1. Temporary Decertification. Any MAJCOM and/or Aircraft/Weapons/Missile System Program Office can submit munitions/missiles for Temporary Decertification. Contact HQ ACC/DRP for required temporary decertification actions.

3.6.2. Permanent Decertification. This action includes removal of the weapon from active USAF inventory. The following procedures apply:

3.6.2.1. Any MAJCOM and/or Aircraft/Weapons/Missile System Program Office can submit munitions/missiles for Permanent Decertification. For missiles, a memo from the Missile SPO, identifying non-compliance of Operational, Safety, Suitability, & Effectiveness (OSS&E) in accordance with AFPD 63-12 will begin the decertification of a missile from operational use.

Conventional weapons not used in the Non-Nuclear Consumables Annual Analysis (NCAA) model for two or more consecutive years shall make that weapon/munition a candidate for decertification.

3.6.2.2. All permanent decertification submissions (including rationale) will be submitted in memorandum format to: HQ ACC/DRP, 204 Dodd Blvd., Suite 226, Langley AFB, VA 23665-2777, or by e-mail to **mailto:acc.drp@langley.af.mil** (request a courtesy copy to **mailto:acc.drpt@langley.af.mil**).

3.6.2.3. HQ ACC/DRP will coordinate the proposed permanent decertification request with MAJCOM/DO/XP/LG. Permanent decertification of stores that have been exported to foreign customers must be coordinated with SAF/IA.

3.6.2.4. After HQ ACC/DR completes the coordination process, a permanent decertification request will be forwarded to AF/XOR for approval/signature. The AF/XOR signed memorandum directing the permanent decertification action will be forwarded to HQ ACC/DR/DO/LG for action.

3.6.2.5. HQ ACC/DRPT will initiate and staff-coordinate a Permanent Decertification SEEK EAGLE Request (PDSER) according to AFI 63-104, **Attachment 8** format.

3.6.2.6. AF/XORW will notify HQ AFMC/LGMW to initiate actions to remove the weapon/munitions from the active AF inventory. HQ AFMC/LGMW will notify OO-ALC/WM to remove the weapon/munitions from current catalogs, Complete Round Code (CRC) dictionary, aircraft and maintenance Technical Orders, etc. AF/XORW will consult with SAF/IA prior to removal of weapons/munitions that have been exported to foreign customers.

3.7. Capturing SE Data on Test and Evaluation (T&E) Flights. In order to provide data for SE evaluation during T&E flights, all test agencies should use the configurations in the weapon delivery portion of the OFP as much as practical unless they jeopardize T&E objectives. The Quick Reference List, maintained by the AFSEO, provides these configurations.

3.8. Ballistics Accuracy Criteria. When applicable, include ballistics accuracy verification criteria for each aircraft-store configuration in a SER to guide SE aircraft and store program activities. Develop these criteria in coordination with the aircraft program office and AFSEO. Incorporate ballistics accuracy requirements for aircraft under development in the appropriate capabilities document and system specification.

3.9. Improving the Process. Submit proposals to: AFSEO Commander, 205 West D Avenue, Suite 348, Eglin AFB FL 32542-6865.

MARVIN R. SAMBUR
Assistant Secretary of the Air Force (Acquisition)

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 21-201	Management and Maintenance of Non-Nuclear Munitions
AFI 63-125	Nuclear Certification Program
AFI 63-1201	Assurance of Operational Safety, Suitability and Effectiveness
AFI 91-103	Air Force Nuclear Safety Certification Program
AFI 91-202	The US Air Force Mishap Prevention Program
AFI 99-103	Capabilities Based Test and Evaluation
AFMAN 37-123	Management of Records
AFMAN 63-126	Nuclear Certification Process
AFMAN 91-201	Explosives Safety Standards
AFPD 37-1	Information Management
AFPD 62-6	USAF Aircraft Airworthiness Certification
AFPD 63-1	Capability-Based Acquisition System
DODI 5000.2	Operation of the Defense Acquisition System
MIL-A-8591	Airborne Stores, Suspension Equipment and Aircraft-Store Interface (Carriage Phase); General Design Criteria for
MIL-HDBK 244A	Guides to Aircraft Stores Compatibility
MIL-HDBK-516A	Airworthiness Certification Criteria
MIL-HDBK-1512	Electroexplosive Subsystems, Electrically Initiated, Design Requirements and Test Methods
MIL-HDBK-1763	Aircraft-Stores Certification Procedures
MIL-PRF-9977	Manuals, Technical and Checklists: Munitions/Weapons Loading Procedures, Non-Nuclear and Nuclear Packages, Standard Data: Munitions Loading Procedures, Non-Nuclear, Preparation of
MIL-PRF-38384	Manuals, Technical and Checklists: Weapon Delivery and Aircrew Procedures, Nuclear and Non-Nuclear, Preparation of
MIL-STD-461	Requirements for the Control of Electromagnetic Interference Characteristics of Sub systems and Equipment
MIL-STD-464	Electromagnetic Environmental Effects Requirements for Systems
MIL-STD-810	Environmental Engineering Considerations and Laboratory Tests
MIL-STD-882	DOD Standard Practice for System Safety

MIL-STD-38784	Standard Practice for Manuals, Technical: General Style and Format Requirements
TO 00-11N-16	U.S. Nuclear Certified Equipment and Software
TO 00-5-3	Tech Manual Acquisition Procedures
TO 11N-50-7	Major Assembly Releases for War Reserve Weapons

Abbreviations and Acronyms

AAC/NW—Air Armament Center Nuclear Weapons Directorate

ACC—Air Combat Command

ACC/DRP—Air Combat Command, Directorate of Requirements, Policy and Resources Division

ACC/DRPT—Air Combat Command, Directorate of Requirements, Policy and Resources Division, Test and Evaluation Management Branch

ACE—Aircraft-store Compatibility Enterprise

AETC—Air Education and Training Command

AEDC—Arnold Engineering Development Center

AFI—Air Force Instruction

AFMC—Air Force Materiel Command

AFOTEC—Air Force Operational Test and Evaluation Center

AFRC—Air Force Reserve Command

AFSAC—Air Force Security Assistance Command

AFSEO—Air Force SEEK EAGLE Office

AFSOC—Air Force Special Operations Command

AMC—Air Mobility Command

ANG—Air National Guard

CAD—computer assisted design

CAF—Combat Air Forces

CDD—Capability Development Document

CDP—certification data package

CPD—Capability Production Document

CRC—Complete Round Code

CTEIP—Central Test and Evaluation Investment Program

CWDS—Combat Weapons Delivery Software

DCS—Direct Commercial Sale

DO—Director of Operations

DOD—Department of Defense

DODI—Department of Defense Instruction

DOE—Department of Energy

DSN—Defense Switched Network

EDA—Escape Distance Actual

ECM—electronic counter-measures

EDP—Engineering Data Package

EMC—electromagnetic compatibility

EMD—Engineering and Manufacturing Development

EMI—electromagnetic interference

FC—flight clearance

FMS—Foreign Military Sale

HQ USAF—Headquarters, United States Air Force

I&M—Investment and Modernization

ICD—Initial Capabilities Document

ICD—Interface Control Drawing

IOC—initial operational capability

ITT—Integrated Test Team

JMEM—Joint Munitions Effectiveness Manual

MAJCOM—Major Command

MNCL—Master Nuclear Certification List

NASA—National Aeronautics and Space Administration

NNMSB—Non-Nuclear Munitions Safety Board

OFP—Operational Flight Program

OO-ALC/WM—Ogden Air Logistics Center, Air-to-Surface Munitions Directorate

OSD—Office of the Secretary of Defense

OSS&E—Operational Safety, Suitability and Effectiveness

P&A—Pricing and Availability

P&R—Planning and Review

PACAF—Pacific Air Forces

PDSER—Permanent Decertification SEEK EAGLE Request

PEO—Program Executive Officer

PM—Program Manager

PMD—Program Management Directive

POM—Program Objective Memorandum

PPBE—Planning, Programming, Budgeting and Execution

QRC—quick-reaction certification

RAA—Required Assets Available

RDS—Records Disposition Schedule

RFC—recommended flight clearances

SAF/AQ—Office of the Secretary of the Air Force (Acquisition)

SAF/AQP—Directorate of Global Power Programs

SAF/AQPW—Directorate of Global Power Programs, Weapons Division

SAF/IA—Deputy Under Secretary of the Air Force, International Affairs

SDD—System Development and Demonstration

SE—SEEK EAGLE

SEMSS—SEEK EAGLE Management Support System

SER—SEEK EAGLE Request

SEWG—SEEK EAGLE Working Group

SPO—System Program Office

SPD—System Program Director

SSDP—Standard Source Data Package

T&E—Test and Evaluation

TAMP—Tactical Air Missile Program

TEMP—Test and Evaluation Master Plan

TIPP—Test Investment Plans and Programs

TMP—Theater Munitions Program

TO—Technical Order

USAFE—United States Air Forces Europe

USAF/ILPR—Headquarters, United States Air Force, Installation and Logistics, Directorate of Resources, Combat Support Division

USAF/ILMW—Headquarters, United States Air Force, Installation and Logistics, Directorate of Maintenance, Division of Munitions, Missiles & Space Plans & Policy

USAF/XOR—Headquarters, United States Air Force, Deputy Chief of Staff Air and Space Operations, Directorate of Requirements

USAF/XORW—Headquarters, United States Air Force, Deputy Chief of Staff Air and Space Operations, Directorate of Requirements, Weapons Division

WSDP—Weapon Source Data Package

Terms

Aircraft-store Compatibility Enterprise (ACE)—The ACE includes all organizations that contribute to successful execution of the SE mission. Its purpose is to tie national capabilities into a seamless process to complete aircraft-stores certification. The ACE develops and delivers warfighting capability through a collaborative spirit and reduces parochial focus among participants. It minimizes duplication of effort and maximizes the pay-off of capital investments made by the enterprise members.

Aircraft Systems Program Director (SPD)/Program Manager (PM)—The single face to the customer for a system or product group. The PM directs one or more programs and is accountable to the Program Executive Officer (PEO). The PM is vested with full authority, responsibility, and resources to execute a program on behalf of the Air Force. The PM is also responsible for Operational Safety, Suitability and Effectiveness (OSS&E) of the weapon system as directed by AFI 63-1201.

Ballistics Accuracy Verification— The determination of the accuracy of the weapon digital data program used with the trajectory model contained in the aircraft Operational Flight Program (OFP) and the ballistics tables/weapons delivery technical order, through testing and analysis. Verification confirms the capability of the aircraft and store combination to meet user accuracy and bias requirements. The aircraft weapons delivery OFP and updated TO ballistics are fielded after verification testing. Additionally, a ballistics accuracy verification report compares weapon delivery results with user accuracy criteria.

Certification data package (CDP)—A CDP for a store is the primary data package used to ensure stores are physically, mechanically, electromagnetically, environmentally, structurally, and aerodynamically compatible with Air Force aircraft systems. It also ensures that the required data is present to produce the necessary TOs. The CDP is composed of the Engineering Data Package, Weapon Source Data Package, and Standard Source Data Package (**Attachment 5**).

Compatibility of aircraft and stores—The ability of an aircraft to carry and release the store and related suspension equipment without unacceptable effects upon the aerodynamic, electromagnetic (excluding high-altitude electromagnetic pulse), structural, or functional characteristics of either the aircraft or store under expected flight and ground conditions. MIL-HDBK 244A, *Guide to Aircraft Stores Compatibility*, contains basic guidelines for evaluating aircraft-store compatibility and specifies an acceptable separation must meet pertinent weapon operational criteria. MIL-HDBK-1763, *Aircraft-Stores Certification Procedures*, establishes DOD (Department of Defense) standardized procedures for the certification (safe carriage and safe/acceptable separation) of stores on aircraft.

Compatibility certification (for Nuclear Certified Weapon Systems)— Compatibility Certification is the process of certifying that the equipment item or weapon system meets design and evaluation requirements for the mechanical, electrical, and aerodynamic interface between the delivery vehicle or equipment item and the nuclear weapon.

Flight clearance—A formal flight authorization for a specific limited test or operational purpose such as Operational Test and Evaluation or a specific operational requirement. The AFSEO issues the FC after testing and analysis has been made on an aircraft-store configuration to ensure the configuration does not pose an unacceptable risk. The flight clearance identifies, as appropriate, the aircraft loading

configuration, carriage, jettison and employment limitations, information needed to make drag and stability computations, cartridge and orifice combinations or settings, reference to loading procedures and delivery information, store mass and physical properties, and any other information that affects personnel or flight safety or mission accomplishment. Recommended Flight Clearances (RFC) for operational units will be sent to the appropriate aircraft SPD.

Limited certification—Provided at the request of the using command to have a capability in the field while a routine certification and ballistics accuracy verification tasks are being accomplished. May consist of a limited employment envelope (not flight tested), unverified Operational Flight Program, or manual ballistics only. Publication of technical data is required, for example, message flight clearance, operational supplements, and preliminary technical orders.

Nuclear certification—Occurs when a determination is made by the applicable Service that procedures, personnel, equipment, facilities, and organizations are capable of performing assigned nuclear weapon functions and missions. Nuclear certification is part of Operational Safety, Suitability, and Effectiveness (OSS&E), as directed by AFI 63-1201, *Assurance of OSS&E*. The Air Force Nuclear Certification Program has two major components: Design Certification and Operational Certification. Refer to AFI 63-125 for details.

Project plan—The Project Plan contains the resource and time estimate for the SER. Project Plans are not required for projects that have an estimated cost less than $25K. Project Plans (**Attachment 9**)

Quick-reaction certification (QRC)—Requires the completion of all activities required to certify the requested aircraft-store configuration. This is an accelerated certification and includes ballistics accuracy verification, if required. When an urgent operational need date for combat capability exists and the normal SE certification process will not meet the need, a QRC should be submitted.

Routine certification—Requires the completion of all activities required to certify the aircraft-store configurations requested in the SER. These activities include planning; analysis; tests; documentation; development; publication and fielding of pertinent technical manuals applicable to loading, carriage, and employment, which include the verified ballistics data in the -34 and -25 technical orders; and the incorporation of the appropriate software changes, resulting from ballistics accuracy verification of the OFP.

SEEK EAGLE (SE)—The Air Force certification process for determining safe carriage, employment and jettison limits, safe escape, and ballistics accuracy, when applicable, for all stores in specified loading configurations on Air Force and FMS aircraft. The SE certification process includes compatibility analyses for fit, function, electromagnetic compatibility, electromagnetic interference, flutter, loads, stability and control, and separation; stores loading procedures; ground and wind tunnel tests; and flight tests. The SE certification process does not include Certification/Accreditation or Information Assurance verification/validation of stores that connect to classified or unclassified aircraft data buses. The end product is source data for flight, delivery, and loading manuals, and the weapon ballistics portion of the aircraft OFP.

SEEK EAGLE Management Support System (SEMSS)—A computer-based system to assist the entire SE community in planning, coordinating, executing, controlling, and reporting on the SE program.

SEEK EAGLE Request (SER)—A request for certification of aircraft-store configurations, flight clearances, technical orders, or other SE data (**Attachment 4** or **Attachment 8**).

Stores—Any device intended for internal or external carriage, mounted on aircraft suspension and release

equipment, which may or may not intend to be separated in flight from the aircraft. Stores include missiles, rockets, bombs, nuclear weapons, mines, fuel and spray tanks, torpedoes, detachable fuel and spray tanks, dispensers, pods, targets, chaff and flares, decoys, and suspension equipment. In this instruction, guns mounted internally to the structure of an aircraft are not considered stores for SE purposes, but chaff, flare, and towed decoy dispensers are considered aircraft suspension and release equipment whether mounted internally or externally. A SE store for annual stores forecasting purposes is any store as described above that is used for dedicated SE testing.

User need date—The date HQ ACC or SAF/IA requires all SE certification activities to be completed, to include the delivery of all technical orders to support implementation, together with OFP ballistics updates. The user need date will normally be six months before IOC for developmental or major modified aircraft and stores to permit lead-time for training and evaluation before implementation. For inventory stores and aircraft, the user need date is a balance between operational and threat requirement and the practical capability to meet that requirement.

Attachment 2

CRITERIA FOR AIRCRAFT-STORE CERTIFICATION

A2.1. New aircraft or weapon development programs, including:

A2.1.1. New aircraft development.

A2.1.2. New weapon development.

A2.1.3. New aircraft-store configurations on operational aircraft, even if of limited duration (a flight clearance).

A2.1.4. New tactics requiring new carriage, employment, or jettison limits, or new safe separation or ballistics data.

A2.2. Significant aircraft characteristic changes, including:

A2.2.1. Weapon delivery portion of the OFP or input parameters to the weapon algorithms, which could impact accuracy for ballistics weapons.

A2.2.2. Analysis of aircraft loads, flutter, stability, and control which show unacceptable impact on the aircraft due to stores changes in center of gravity, store weight, or pitch or yaw moments of inertia.

A2.2.3. Addition of a computer weapon delivery capability to an aircraft with a manual delivery system or modification of an existing computer weapon delivery system.

A2.2.4. Modification of the aircraft or change in carriage location or type that impacts the safe carriage and separation or ballistics accuracy of previously certified aircraft-store configurations.

A2.3. Significant store characteristic changes, including:

A2.3.1. External aerodynamic shape.

A2.3.2. Changes to store's autopilot that occur in the vicinity of the aircraft.

A2.3.3. Arming wire or lanyard routing system.

A2.3.4. Electromagnetic radiation environment.

A2.3.5. Suspension lug location.

A2.3.6. Electrical or electronic connectors or characteristics.

A2.3.7. Safing or arming design.

A2.3.8. Nomenclature changes which affect loading/aircrew inspection procedures.

A2.3.9. Basic structural characteristics.

A2.3.10. Environmental tolerance.

A2.3.11. Function.

A2.3.12. Ballistics or propulsion.

A2.3.13. Fragmentation pattern.

A2.3.14. A change to the production specification for store center of gravity location tolerance or a center of gravity shift greater than 1/2" (12.7mm) for stores without a specified tolerance.

A2.3.15. A change to the production specification for store weight tolerance or a weight change greater than 5% for stores without a specified tolerance.

A2.3.16. A change to the production specification for store pitch or yaw moments of inertia tolerance or a moment of inertia change greater than 10% for stores without a specified tolerance.

A2.3.17. Multiple changes within the limits of center of gravity, store weight, or pitch or yaw moments of inertia (less than the aforementioned limits), which constitute a significant store characteristic change.

Attachment 3

SEEK EAGLE MANAGEMENT FUNDING RESPONSIBILITY

Table A3.1. Inventory Stores on Inventory Aircraft.

LINE	A	B	C
	Item or Task	**Conventional**	**Nuclear**
1	Certification Data Package	Store Manager	Dept of Energy (DOE)
2	Store Integration-Aircraft Modification	Aircraft Manager	Aircraft Mgr
3	Stores in Production*	AFSEO	DOE
4	Stores Out of Production	Drawn from inventory	Drawn from inventory
5	Safe Carriage and Separation Engineering Analysis & Testing	AFSEO	AFSEO
6	Ballistics Accuracy Verification Testing & Analysis	AFSEO	AFSEO
7	Ballistics Data for Aircraft TOs, OFPs, and Combat Weapons Delivery Software (CWDS)	AFSEO	AAC/NW
8	Safe Escape Data for CWDS (EDA for Nuclear)	AFSEO	AFSEO
9	Preliminary Loading & Aircrew Procedures	AFSEO	AAC/NW
10	OFP Updates	Aircraft Manager	Aircraft Mgr
11	Aircraft Tech Order Publications for Stores, Loading and Delivery	Aircraft Manager	AAC/NW
12	Freestream Ballistics and Pattern Determination Testing and Analysis	Store Manager	DOE
13	Arena Test and Analysis	Store Manager	N/A
14	Guidance Algorithm (Guided weapons only) for CWDS	Store Manager	N/A

*AFSEO performs PPBE; Store Manager receives Budget Authorization and procures stores for AFSEO

Table A3.2. Developmental or Modified Stores on Inventory Aircraft.

LINE	A	B	C
	Item or Task	**Conventional**	**Nuclear**
1	Store Development	Store Manager	Store Manager
2	Certification Data Package	Store Manager	AAC/NW
3	Store Integration/Aircraft Modification	Aircraft/Store Manager	Aircraft/Store Manager
4	Stores for Certification Testing (Threshold Aircraft)	Store Manager	DOE
5	Safe Carriage & Separation Engineering Analysis & Testing (Threshold)	Store Manager	AAC/NW
6	Freestream Ballistics & Pattern Determination Testing & Analysis	Store Manager	Store Manager
7	Ballistic Accuracy Verification Testing & Analysis (Threshold Aircraft)	Store Manager	Store Manager
8	Ballistic Data for TOs & OFPs	AFSEO	AAC/NW
9	Safe Escape Data for CWDS, -34, -44, -25 (EDA for Nuclear)	AFSEO	AFSEO
10	Preliminary Loading & Aircrew Procedures TOs (Threshold Aircraft)	Store Manager	AAC/NW
11	OFP Updates	Aircraft/Store Manager	Aircraft/Store Manager
12	Aircraft TO Publications for Store Loading and Delivery	Aircraft Manager	AAC/NW
13	Arena Test and Analysis	Store Manager	N/A

Attachment 4

FORMAT FOR SEEK EAGLE REQUEST (SER) AND DECERTIFICATION REQUEST (MAJCOM)

FROM:MAJCOM Focal Point or SAF/IARW (As applicable)

TO: HQ ACC LANGLEY AFB VA//DRP

INFO: SAF WASH DC//AQP//
AAC/NW KAFB NM//NW (AWB/ENSTA) (For Nuclear Stores)
AFSEO EGLIN AFB FL//SKW
Aircraft SPD/PM
Store Program Office

SUBJ: SEEK EAGLE REQUEST (Store) on (Aircraft)

1. All requests, except the decertification request, must include the following information:

a. Type of request (QRC, Routine, Limited, or Flight Clearance Certification as described in **Chapter 3**).

b. Configuration information. Describe details of each requested configuration, including:

(1) Type of aircraft (for example, F-16C/D Block 40).

(2) Carriage, release and jettison airspeeds, and load factors.

(3) Weapon and function options (for example, MK-84 AIR, fuzing, arming options).

(4) Dive angles and release intervals.

(5) For ballistics stores (full scale or training stores) state which configuration the aircraft OFP will optimize, the accuracy criteria, the release parameters, and the delivery modes for accuracy verification testing. If OFP verification is not required, identify the primary wartime configuration, or primary training configuration, required for certification prior to IOC. In the case of objective certification, specify the primary wartime configuration.

(6) Safe escape maneuvering parameters and profiles.

(7) Threshold and objective requirements (if applicable).

c. User need date. In addition to operational realities, this requested date takes into account resource availability, software lead times, system maturity, complexity of requested certification actions, and other programmatic considerations affecting aircraft-store certifications. Include justification for requested date and impacts if date is not met.

d. User point of contact.

2. The decertification request must include the following information as appropriate:

a. Decertification. Indicate the requested decertification by aircraft-store combination and TO line number. Include rationale for decertification.

b. Remarks. Include command action office symbol, action officer, and DSN telephone number.

c. Required completion date. State the earliest practical completion date considering TO development and update cycles and other related aspects of aircraft program schedules.

Attachment 5

CERTIFICATION DATA PACKAGE (CDP)

A5.1. About CDP. The data listed in this attachment ensures that both munition and non-munition type stores developed, procured from others, or modified are physically, mechanically, electromagnetically, environmentally, structurally, and aerodynamically compatible with United States Air Force aircraft systems. The CDP is a collection of data used to generate flight clearances and support the publication of aircraft TOs. The program office, with management responsibility for the weapon, obtains and maintains a current CDP. Store Program Offices will provide all current CDP data to the AFSEO designated agency upon request.

A5.2. The CDP. The CDP consists of an Engineering Data Package (EDP), a Weapon Source Data package (WSDP), and a Standard Source Data Package (SSDP).

A5.2.1. **The EDP.** The EDP is used to determine if a flight clearance or certification can be granted, if it is applicable to both munition and non-munition type stores. In addition, the EDP is used to obtain the specific engineering data, test data, and computer simulation programs needed to provide inputs to the WSDP. An EDP is composed of the following:

A5.2.1.1. **Physical Description.** Drawings and documentation (CAD model) to establish external dimensions and location of pertinent parts, such as, attaching hardware, fluid or electrical connections, fuze installations, arming wire guides, and access covers.

A5.2.1.2. **Mass Properties.** Includes average weights; centers of gravity; pitch, yaw, and roll moments of inertia; and variations of these figures due to manufacturing processes, fuzing options, or hysteresis (slosh). Each parameter requires specific tolerances. Provide information on AFMC Form 4694, *Store Technical and Mass Property Sheet*.

A5.2.1.3. **Functional Description.** Includes operational description and sequence, safing and arming actions, control surface actuation or deployment, motor performance, submunition employment, autopilot activation, guidance and control activation, and anticipated actions by the launch aircraft before and after store separation. Provides systems mathematical models when their existence relates to aircraft compatibility.

A5.2.1.4. **Interface Control Drawings (ICD).** Includes electrical, mechanical, hydraulic, pneumatic, or fuel interface, schematics, connector descriptions and locations, pin functions, electrical loads, and arming wire or lanyard routing. The EDP uses either aperture card or magnetic media (tapes, discs, etc.) format.

A5.2.1.5. **Aerodynamic Data.** Includes freestream, near aircraft, and installed aerodynamic force and moment coefficients; and drag counts of store, suspension equipment, and combinations of aircraft, suspension equipment, and store. Includes parameters and assumptions used in their generation. If applicable, aerodynamic control surface force and moment data, control system laws/model, and thrust/mass flow time histories will be included if functional within 5 seconds of release.

A5.2.1.6. **Electromagnetic Compatibility Interference Data.** Detailed operational description for each store electronic system or subsystem (including electro-explosive devices) and the test

data and reports generated during development and qualification testing according to MIL-STD-461, MIL-STD-464, and MIL-HDBK-1512.

A5.2.1.6.1. **Transmitting and Receiving Systems.** For each system or subsystem, identifies operating frequencies, minimum sensitivity, dynamic range, half-power bandwidth, shape factor, interference rejection circuitry, and antenna type, location, orientation, frequency response, and reception pattern.

A5.2.1.7. **Structural Analysis.** Contains a stress analysis based on loads according to MIL-A-8591 and special reaction loads due to store functions. Includes store influence coefficients and associated mass matrix with certain stores.

A5.2.1.8. **Environmental Analyses and Qualification Test.** Includes vibration tests conducted according to MIL-STD-810, static loads tests; discusses components known or hypothesized to be sensitive to high or low temperature, aerodynamic heating, rain, ice, or hail, or other environments to the extent that safety of flight or mission accomplishment is compromised in a basic structural or functional sense.

A5.2.1.9. **System Safety Data.** Detailed assessment/analysis of the safety and operations risks associated with each store. Document risk decisions made, design changes incorporated to reduce or eliminate hazards and any residual risks and hazards left in the system. Residual hazards and risk accepted and signed off by the appropriate authorities should be thoroughly documented and periodically reviewed by the using and developing Commands. Refer to AFI 63-1201, AFI 91-102 and MIL-STD-882.

A5.2.2. **The Weapon Source Data Package** (WSDP) is the primary resource used to develop ballistics and safe escape data for non-nuclear, munition type stores. The -34 TO uses the WSDP as the source data. WSDP content is described in MIL-PRF-38384. The WSDP can be a complex, expensive data package and requires a considerable amount of analysis and testing (both ground and flight). A WSDP is composed of the following:

A5.2.2.1. **Front Matter.** The front matter will include a title page, an explanation of each of the sections, definition of notes, statements concerning procedures, definitions or directions to crew members, glossary, list of illustrations, and a list of abbreviations.

A5.2.2.2. **Description.** Contains a description of the various delivery modes for all applicable non-nuclear weapons. Includes the aircraft weapon release systems and controls, weapon suspension systems, non-nuclear weapons unique to the aircraft and not already covered in the standard volume, and the non-nuclear training weapons equipment definition.

A5.2.2.3. **Normal Aircrew Procedures.** Contains the normal procedures to be followed from the time the aircrew arrives at the aircraft until they depart from the aircraft. Consists of a command-response line for the steps in the checklist supplement. Provides a brief statement of the scope and preflight, inflight and post-flight procedures.

A5.2.2.4. **Emergency Aircrew Procedures.** Includes emergency release of non-nuclear stores and emergency jettison of non-nuclear stores and suspension equipment certified on a particular aircraft. Defines firefighting criterion.

A5.2.2.5. **Supplementary Data.** Includes error analysis, harmonization, safe escape and fuze arming time data, conversion values, appropriate ballistics equations, and automated systems error analysis.

A5.2.2.6. **Planning Procedures and Sample Problem.** Contains a description of the charts, tables, and assumptions to be used with respect to temperature, pressure, atmospheric density, and appropriate illustrations, and descriptions of the planning methods for each type of delivery mode. Includes safe escape charts, conversion tables, and other charts used in mission planning.

A5.2.2.7. **Planning Charts and Ballistics Tables/Digital Data Program.** Contains a description (when available) for safe escape charts, fuze arming time charts, angle-of-attack charts, sight-depression-angle charts, airspeed and altimeter position error charts (if applicable), dive recovery charts, conversion tables, and tables necessary for planning all types of releases.

A5.2.3. **The SSDP.** The SSDP for non-nuclear munition type stores is the primary resource used to develop loading procedures. The -33 TO uses the SSDP as source data. The SSDP process is governed by TO 00-5-3 and MIL-PRF-9977. It contains a description of the munition and how it functions and provides step-by-step instructions for munition preparation and loading. MIL-PRF-9977 specifies SSDP contents. An SSDP is composed of the following:

A5.2.3.1. **Munitions Description Data.** Describes and illustrates items, systems, or components of the munition. Includes (as applicable): weight, dimensions, components, suspension requirements, fuzing options, model differences, integral safety features, and functional description.

A5.2.3.2. **Support Equipment Description.** Describes and illustrates all special tools and specific items developed for handling, testing, and loading of equipment.

A5.2.3.3. **Bomb Fuzes.** Contains descriptive data on bomb fuzes, including a brief description and illustration of the fuze. Includes functional type, safety devices, arm and safe indications, type of fuze action, arming delays, and functioning delays.

A5.2.3.4. **Emergency Procedures.** Includes emergency procedures prefaced by a brief explanation of actions to be accomplished by the loading crew in case of fire or other emergency. Specifies the expected amount of time, once a munition is engulfed in flames, before an uncommanded energetic reaction, e.g., detonation, deflagration, burning. Marked according to MIL-STD-38784, which is in Standard Data Package number 37.

A5.2.3.5. **Specific Safety Requirements.** Provides all specific explosive safety data requirements pertaining to the storage and handling, preparation, loading, and unloading of the munition. Specifies the safety requirements contained in Standard Data Packages 40 and 37 when appropriate.

A5.2.3.6. **Munitions Preparation.** Includes steps applicable to a single munition, multiple rack, and preloaded accessories required to inspect and prepare each munition (including components). Contains the steps required to assemble and install authorized fuzes before munitions loading and procedures to verify the safety of each fuzed munition.

A5.2.3.7. **Loading.** Includes steps required to load the store.

A5.2.3.8. **Fuzing.** Includes steps required to check prefuzed munitions and install those fuzes that are not authorized to be installed before loading the munition.

A5.2.3.9. **Post Loading.** Provides steps required to ensure the compatibility and safety of the munitions.

A5.2.3.10. **Cartridge Installation.** Applies to impulse cartridges and contains descriptive data and inspection criteria according to Standard Data Package number 36.

A5.2.3.11. **Post Loading Inspection.** Includes steps required to ensure that required safety devices are installed, bombs and non-nuclear fuzes are installed properly, and non-nuclear fuze safety devices have been removed or installed as required.

A5.2.3.12. **Delayed Flight or Alert.** Includes procedural steps required for safing of aircraft accessories, munitions, and impulse cartridges.

A5.2.3.13. **Unloading Procedures.** Includes safing, unloading, fuze removal, and the step-by-step procedures for downloading a munition.

A5.2.4. **The SSDP** for non-munition type stores (pods, fuel tanks, etc.) is the primary resource used to develop installation/removal procedures. It is used as information for the job guides and the -35 series and related TOs. It contains a description of the store and how it functions. An SSDP is typically composed of the following:

A5.2.4.1. **Store Description Data.** Describes and illustrates items, systems, or components of the store. Includes (as applicable): weight, dimensions, components suspension requirements, model differences, integral safety features, and functional description.

A5.2.4.2. **Support Equipment Description.** Describes and illustrates all special tools and specific items developed for handling, testing, loading of equipment.

A5.2.4.3. **Emergency Procedures.** Includes emergency procedures prefaced by a brief explanation of actions to be accomplished by the loading/installing crew in case of fire or other emergency. Marked according to the requirements pertaining to the preparation, loading, and unloading of the store.

A5.2.4.4. **Specific Safety Requirements.** Provides all specific safety requirements pertaining to the preparation, loading, and unloading of the store.

A5.2.4.5. **Store Preparation.** Includes steps required to inspect and prepare each store (including components).

A5.2.4.6. **Loading.** Includes steps required to load the store.

A5.2.4.7. **Post Loading Inspection.** Includes steps required to ensure required safety devices are removed or installed as required.

A5.2.4.8. **Delayed Flight or Alert.** Includes procedural steps required for safing aircraft accessories.

A5.2.4.9. **Unloading Procedures.** Includes safing, pre-unloading, and the step-by-step procedures for downloading a store.

Attachment 6

RECOMMENDED FORMAT FOR CERTIFICATION COMPLETION NOTIFICATION (CONVENTIONAL)

(Issue within 2 weeks of completion)

FROM:Aircraft SPD/PM

TO: AFSEO EGLIN AFB FL//SKP//
Requesting MAJCOM or SAF WASH DC//IAR

INFO: ACC LANGLEY AFB VA//DRP//
SAF WASH DC//AQP//
All MAJCOMs
OO-ALC Hill AFB UT//WMN (Bomb Assembly)
WR-ALC Warner Robins AFB GA//LKG// (Munition Delivery)
Store Program Office

SUBJ: Certification Completion Notification, SEEK EAGLE Request X-XX, (Store) on (Aircraft)

1. The aircraft-store combination listed in SEMSS, Priority No xxx, MCL line number xxx, was certified for operational use on (DD, MM, YY).

a. Certification testing complete, or date of Certification Recommendation.

b. Accuracy verification testing complete: Date (or not required).

c. Requester (ACC, AMC, AFSOC, SAF/IAR) accepted accuracy verification results: Date.

d. Verified weapon delivery OFP tape No (XX) fielded: Date:

e. Aircraft flight manual, -1 fielded: Date. (Last book to get updated.)

f. Weapon delivery manual, -34, with verified ballistics accuracy data incorporated in OFP block No (XX) in D above. Fielded: Date.
(Last book to get updated.)

g. Aircraft loading manual, -33/35, Job Guide. Fielded: Date.

h. Munition assembly/delivery, -63/-38 and Item Technical Orders. Fielded: Date.

i. Other pertinent technical data. Fielded: Date.

2. SPO point of contact, office symbol, and telephone number.

Attachment 7

RECOMMENDED FORMAT FOR CERTIFICATION COMPLETION NOTIFICATION (NUCLEAR)

(Issue within 2 weeks of completion)

FROM:Aircraft SPD/PM

TO: Requesting MAJCOM or SAF WASH DC//IAR
AFSEO EGLIN AFB FL//SKP//

INFO: ACC LANGLEY AFB VA//DRP//
All MAJCOMs
SAF WASH DC//AQP/AQQS//
US Air Force Safety enter/SEW//
AAC/NW KAFB NM//NWIS (AWB/ENSTA) (For Nuclear Stores)
ASC WPAFB OH//EMSV//
AF NWCA KIRTLAND AFB NM//CC//

SUBJ: Certification Completion Notification, SEEK EAGLE Request X-XX, (Store) on (Aircraft)

1. The aircraft-store combination listed in SEMSS, Priority No XXX, and Aircraft PMD XXXX, was certified with a nuclear capability for operational use on (DD, MM, YY).

a. Weapon System Safety Rules Approval by the SECDEF: Date.

b. SA-ALC/NWI Statement of Capability Release: Date.

c. Nuclear Safety Certified Support/Test Equipment listed in Master Nuclear Certification List (MNCL) and Fielded: Date.

d. Verified Aircraft Loading Manuals (-16). Fielded: Date.

e. Verified Weapon Delivery Manuals (-25, -30). Fielded: Date.

f. Flight and Maintenance Crews Training Completion (Initial Complement required to execute nuclear mission): Date.

g. Nuclear Safety Certified Weapon Delivery OFP tape no. XX. Fielded: Date.

h. Nuclear Surety Inspection satisfactorily passed by operational unit: Date passed.

i. Aircraft Flight Manual (-1 series). Date.

2. System Program Office (SPO) point of contact, office symbol, and telephone number.

Attachment 8

FORMAT FOR SEEK EAGLE REQUEST (SER) AND DECERTIFICATION REQUEST (ACC)

FROM:HQ ACC/DRP

TO: AFSEO EGLIN AFB FL//SKW
Aircraft SPD/PM
Store Program Office

INFO: MAJCOM Focal Points
SAF WASH DC//AQP//
SAF/IARW (As applicable)
AAC/NW KAFB NM//NW (AWB/ENSTA) (For Nuclear Stores)

SUBJ: SEEK EAGLE REQUEST NO. XX-XX, (Store) on (Aircraft)

1. All requests, except the decertification request, must include the following information:

a. Type of request (QRC, Routine, Limited, or Flight Clearance Certification as described in **Chapter 3**).

b. Configuration information. Describe details of each requested configuration, including:

(1) Type of aircraft (for example, F-16C/D Block 40).

(2) Carriage, release and jettison airspeeds, and load factors.

(3) Weapon and function options (for example, MK-84 AIR, fuzing, arming options).

(4) Dive angles and release intervals.

(5) For ballistics stores (full scale or training stores) state which configuration the aircraft OFP will optimize, the accuracy criteria, the release parameters, and the delivery modes for accuracy verification testing. If OFP verification is not required, identify the primary wartime configuration, or primary training configuration, required for certification prior to IOC. In the case of objective certification, specify the primary wartime configuration.

(6) Safe escape maneuvering parameters and profiles.

(7) Threshold and objective requirements (if applicable).

c. User need date. In addition to operational realities, this requested date takes into account resource availability, software lead times, system maturity, complexity of requested certification actions, and other programmatic considerations affecting aircraft-store certifications. Include justification for requested date and impacts if date is not met.

d. Recommended precedence and proposed PMD priority.

e. User point of contact.

2. The decertification request must include the following information as appropriate:

a. Decertification. Indicate the requested decertification by aircraft-store combination and TO line number. Include rationale for decertification.

b. Remarks. Include command action office symbol, action officer, and DSN telephone number.

c. Required completion date. State the earliest practical completion date considering TO development and update cycles and other related aspects of aircraft program schedules.

Attachment 9

FORMAT FOR TYPICAL PROJECT PLAN

The AFSEO provides a Project Plan to the requesting command and HQ ACC or SAF/IAR to support a go-ahead decision. The Project Plan contains schedules, cost, requirements, and availability information for stores and ground and flight test support. The Project Plan includes cost-schedule-performance tradeoff options and impacts on other SE efforts, if appropriate. The AFSEO formulates and issues all Project Plans, with SE participant support, within 90 calendar days of the SER date. The Project Plan contains information in the format below. The using command's written response to the Project Plan is due within 30 calendar days of receipt of the Project Plan, and confirms or modifies the original requirements or cancels the SER.

FROM:AFSEO/CC
205 W D Ave, Suite 348
Eglin AFB FL 32542-6865

TO: Requesting Command or SAF WASH DC//IAR

INFO: ACC LANGLEY AFB VA//DRP//
Aircraft Program Office
Store Program Office
SAF WASH DC//AQP

SUBJ: Project Plan for Using Command SER X-XX Store on Aircraft

Ref: Using Command or SAF/IAR SER X-XX, (date), (subject)

1. Cost Breakout:

	FYZZ+1	FYZZ+2	TOTAL
Test Aircraft Mod costs			
Stores Required			
Stores Cost			
Engineering Analysis/ Ground Test Cost			
Flight Test Hours			
Flight Test Cost			
Ballistic OFP Activity Cost			
TO Update Cost			
Other Cost			
TOTAL COST			

2. Cost and Store Summary:

	FYZZ+1	FYZZ+2	TOTAL
Certification			
Cost			
Attachment 4			
Stores (total #)			
Verification			
Cost			
Stores (total #)			
Total Cost			
Total Cost Breakout			
SE PE 27590			
PE XXXXXXXX			
PE XXXXXXXX			
Total Store Breakout			
WRM			
SE PE			
Other PE			
Total Stores			

3. Program Resources and Project Plan Impacts. State whether the required resources (funding, stores, etc.) are available or programmed in the time period specified to support the user need date, and the impact of the SER on the certifications in the directed SEEK EAGLE program.

4. Other Pertinent Details:

a. Planned start date: DD, MM, YY

b. Planned completion date: DD, MM, YY

c. Schedule constraints:

(1) First available OFP (Designation/Name) and freeze date: DD, MM, YY; OFP Fielding Date: DD, MM, YY

(2) Second available OFP (Designation/Name) and freeze date: DD, MM, YY; OFP Fielding Date: DD, MM, YY

(3) First available TO input cutoff date: DD, MM, YY; Fielding Date: DD, MM, YY

(4) Second available TO input cutoff date: DD, MM, YY; Fielding Date: DD, MM, YY

(5) SE test store availability date: DD, MM, YY

(6) Special test aircraft availability date: DD, MM, YY - DD, MM, YY

(7) Certification Data Package availability date: DD, MM, YY

(8) Additional stores required to support testing: List stores such as tanks, ECM pods, pylons, launchers, and other stores required to complete the standard configuration loads identified in the SER. Identify the fiscal year in which the stores are physically required to support testing.