

**BY ORDER OF THE
SECRETARY OF THE AIR FORCE**

AIR FORCE INSTRUCTION 91-106

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Safety

**UNAUTHORIZED LAUNCH, THREAT
MITIGATION, AND LAUNCH ACTION
STUDIES**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This Instruction implements Air Force Policy Directive (AFPD) 91-1, *Nuclear Weapons and Systems Surety*. This publication is consistent with AFPD 13-5, *Air Force Nuclear Enterprise*. It provides guidance for conducting an Unauthorized Launch Study (ULS), a Threat Mitigation Program (TMP), and a Launch Action Study (LAS); preparing, distributing, controlling, and using ULS, TMP, and LAS reports; and imposes assignment limitations on military personnel who had access to the reports or data. This Air Force Instruction (AFI) applies to all personnel in organizations that design, develop, modify, test, evaluate, or operate Air Force nuclear weapon systems. This Instruction also applies to the Air Force Reserve and Air National Guard performing nuclear duties. The reporting requirements in this publication (Paragraphs 13.4 and 14.7) are exempt from licensing in accordance with Paragraph 2.3 of AFI 33-324, *The Air Force Information Collections and Reports Management Program*. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management Systems (AFRIMS) Records Disposition Schedule (RDS). Send major command (MAJCOM) supplements to this Instruction to Headquarters Air Force Safety Center, Weapons Safety Division (AFSEC/SEW), 9700 G Avenue SE, Kirtland AFB NM 87117-5670, prior to publication. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847s from the field through the appropriate functional chain of command. This publication requires the collection and/or maintenance of information protected by Title 5 United States Code (USC) Section 552a, *The Privacy Act of 1974*. The authorities to collect and/or maintain the records prescribed in this

publication are 10 USC § 8013, *Secretary of the Air Force*; Title 32, Code of Federal Regulations, Part 293, *Personnel Records*; Executive Order 9397, *Numbering System for Federal Accounts Relating to Individual Persons*, as amended; AFI 36-2101, *Classifying Military Personnel (Officer and Enlisted)*; and AFI 36-114, *Guide to Personnel Recordkeeping*. The applicable System of Record Notices (SORNs), F036 AF PC C, *Military Personnel Records System*, and F036 AF PC Q, *Personnel Data System (PDS)*, are at: <http://dpcl.d.defense.gov/Privacy/SORNsSearchResults/tabid/7541/Category/277/Default.aspx>. The authorities to waive wing/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 AFI 33-360, *Publications and Forms Management*, 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.

SUMMARY OF CHANGES

This document has been completely rewritten and must be reviewed in its entirety. The language has been changed throughout to clarify application to all nuclear weapon systems. The document has also been updated to reflect changes to key agencies; including the addition of new agencies, agency responsibilities, group memberships, the assignment limitation code process as well as applicable references, acronyms and definitions. Finally, the Air Force Safety Center acronym has been updated to AFSEC throughout this document.

Section A—General Information	3
1. Terms and Definitions.	3
2. Air Force Goal.	3
3. Purpose.	3
Section B—General Responsibilities	4
4. Air Force Chief of Safety (AF/SE).	4
5. AF Safety Center, Chief of Weapons Safety (AFSEC/SEW).	4
6. Nuclear Weapon System Surety Group (NWSSG).	5
7. Operational Commands and Affected Agencies.	6
8. Implementing Command.	6
9. UL Senior Steering Committee (ULSSC).	7
10. Unauthorized Launch Working Group (ULWG).	7
11. ULS and TMP Study Team.	7
12. Director Air Force Personnel Center, Nuclear Integration (AFPC/CDN).	8
Section C—Conducting Studies and Preparing Reports	8
13. Conducting an Unauthorized Launch Study.	8

14. Conducting a TMP.	9
Section D—Study Report Controls	11
15. Information Controls and Safeguards.	11
Section E—Access Responsibility and Authority	11
16. Management Responsibility.	11
17. Access Authority.	11
Section F—Assignment Limitations	12
18. Extent of Limitations.	12
19. Notification Responsibilities.	12
Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION	14
Attachment 2—SAMPLE ACCEPTANCE LETTER	20

Section A—General Information

1. Terms and Definitions.

1.1. In addition to the terms and definitions found in Attachment 1; AFI 91-101, *Air Force Nuclear Weapons Surety Program*, defines other terms used in this Instruction.

2. Air Force Goal.

2.1. The Air Force goal with respect to Unauthorized Launch, Threat Mitigation, and Launch Action Studies is to ensure compliance with Department of Defense (DoD) nuclear weapon system surety standards. The Air Force studies each nuclear weapon system to determine vulnerabilities to an Unauthorized Launch (UL) and to pinpoint countermeasures to UL threats. These measures implement the DoD nuclear weapon System surety standard requiring each military service to provide positive measures to prevent the deliberate UL of a nuclear weapon.

3. Purpose.

3.1. Unauthorized Launch Studies (ULS). Unauthorized Launch Studies are conducted to identify vulnerable areas in a system that an agent or agents could exploit in a covert or overt fashion, with or without authorized access, and to bypass the nuclear safety and security features of a nuclear weapon system. These vulnerabilities could allow the UL of a missile using its own propulsion and guidance subsystems or the UL of a nuclear loaded aircraft and the unauthorized release/launch of a nuclear weapon. The ULS report becomes a source document that can be used to develop a technical nuclear safety analysis (TNSA), and to assess the adequacy of the system safety design, system modification, or system security features. The TNSA supports safety studies and helps develop nuclear weapon system safety rules according to AFI 91-102, *Nuclear Weapon System Safety Studies, Operational Safety Reviews, and Safety Rules*. Failure to prepare a satisfactory ULS report may delay weapon

system deployment or modification or may allow nuclear weapon system vulnerabilities to remain unmitigated.

3.2. **Launch Activation Path (LAP).** The LAP is a system model that describes actions and processes associated with weapon system authorization and launch functions, including the flow of energy and information to affect a launch/release. Many such descriptions may be needed for a single ULS or TMP. LAPs are examined to determine the relationship between weapon system authorization and launch/release critical functions, and weapon system components. Based on the LAP, identify weapon system components that are likely targets for attack. LAP findings are used to determine if a LAS should be completed.

3.3. **Life Cycle Flow.** The life cycle flow is a system model that illustrates the flow of equipment through its life cycle phases. Each item of equipment that appears in a LAP should have a life cycle flow prepared. Examine all life cycle flows to identify likely locations and times for attack.

3.4. **Threat Mitigation Program (TMP).** The goals of a TMP are to identify potential mitigators and determine which potential mitigators most effectively reduce the overall risk to nuclear surety due to the identified vulnerabilities. This effort can support the development of recommended Operational Certification (OPCERT) and Decertification (DECERT) procedures for recommended operational critical components. This effort can also support the Nuclear Weapons System Surety Group's (NWSSG) recommendations for new Weapon System Safety Rules (WSSR), technical or operational modifications to the nuclear weapons system.

3.5. **Launch Action Study (LAS).** A LAS is a limited-scope study or series of studies that a full-scale development (FSD) contractor or Air Force agency completes. The LAS identifies how vulnerabilities that FSD systems or components introduced into weapon systems could be exploited. The study analyzes these threats without adding or relying on mitigating external factors of the analyzed component. It also identifies a potential list of critical components requiring certification.

3.6. **Launch Action Basic Event (LABE).** A LABE is a unique attack against a specific weapon system component or subsystem component or subsystem that contributes to an UL. It is the lowest level at which technical feasibility (including development, integration, and implementation) and completion without intervention can be assessed.

Section B—General Responsibilities

4. Air Force Chief of Safety (AF/SE). AF/SE is responsible for the overall supervision of all matters pertaining to Air Force safety and nuclear surety policy, plans and programs as directed in HAF Mission Directive 1-46, *Chief of Safety*. AF/SE is also responsible for the implementation of safety and nuclear surety policy.

5. AF Safety Center, Chief of Weapons Safety (AFSEC/SEW). AFSEC/SEW is delegated by AF/SE as the lead on Nuclear Weapon System Surety and will:

5.1. Make Nuclear Surety recommendations to AF/SE.

5.2. Update applicable 91-series AFIs.

- 5.3. Identify components for operational critical component consideration, as defined in paragraph 3.5 of this AFI and AFI 91-105, *Critical Components*.
- 5.4. Approve OPCERT/DECERT and procedures for operational critical components.
- 5.5. Coordinate and chair the NWSSG.
- 5.6. OPR for UL Studies Procedures Guide.
- 5.7. Consider recommended ways to mitigate credible UL scenarios.
 - 5.7.1. Approve credible UL scenarios and mitigation requirements when a safety study, conducted according to AFI 91-102, is unnecessary, i.e., minor modifications, special briefings.
- 5.8. Co-chair Unauthorized Launch Senior Steering Committee (ULSSC) with appropriate nuclear weapon system Program Manager (PM).
- 5.9. Manage the ULS/TMP/LAS process.
 - 5.9.1. Keep a master file identifying all ULSs and TMPs.
 - 5.9.2. Review ULS, TMP, and LAS documentations.
 - 5.9.3. Determine when a basic ULS and TMP report is outdated and requires revision.
 - 5.9.4. Determine if a weapon system modification warrants a ULS, TMP, or LAS.
 - 5.9.5. After identifying a ULS, TMP, or LAS requirement, update master ULS and TMP reports as appropriate.
 - 5.9.6. Determine and control distribution for all ULS, TMP, and LAS documentations IAW applicable Security Classification Guides (SCG), DoD security guidance, and Air Force security guidance.
 - 5.9.7. Control ULS, TMP, and LAS report transfer, reproduction and destruction IAW applicable Security Classification Guides (SCG), DoD security guidance, and Air Force security guidance.
- 5.10. Keep the master source file for service member assignment limitations and use to verify/validate assignment limitation codes (M Codes) with Air Force Personnel Center (AFPC) semiannually. This listing also serves as a record of all civilians and contractors that have had access to the UL program.
- 5.11. Ensure a UL Program Manager attends Operational Safety Reviews (OSR) and Special Safety Studies (SSS), when deemed necessary.
 - 5.11.1. UL Program Manager will capture meeting minutes/discussions on UL topics of interest to document discussions/deliberations and findings for future reference.
 - 5.11.2. Maintain, store, and archive all OSR/SSS UL meeting minutes IAW JAFAN Manual 6/0 requirements.

6. Nuclear Weapon System Surety Group (NWSSG). The NWSSG is a multi-agency group chartered under the provisions of DoD Directive 3150.02, *DoD Nuclear Weapons Surety Program*, and AFI 91-102 and chaired by AFSEC/SEW IAW AFI 91-102. The NWSSG reviews applicable DoD and Department of Energy (DOE) nuclear weapon system designs and

operations to determine if they meet the DoD Nuclear Weapon System Surety Standards. It proposes safety rules and recommends changes to improve nuclear weapon system surety. Specifically, the NWSSG: (T-1)

- 6.1. Reviews ULS and TMP reports prepared for the weapon system under study, if applicable.
- 6.2. Assists in identifying components for operational critical component consideration, as requested by AFSEC, defined in AFI 91-105.
- 6.3. Considers recommended corrective actions and ways to mitigate credible UL scenarios.
- 6.4. Reviews and, if required, develops and updates weapon system safety rules. (T-0)

7. Operational Commands and Affected Agencies.

- 7.1. Control ULS, TMP, and LAS documentation in their possession, according to this instruction, applicable Security Classification Guides (SCG), DoD security guidance, and Air Force security guidance. (T-1)
- 7.2. Limit access to ULS and TMP reports and data to essential personnel to avoid imposing excessive assignment limitations or exposure to any documented weaknesses or vulnerabilities of the nuclear surety of a weapon system. (T-1). See paragraph 15.2.1 for additional guidance. (T-1)
- 7.3. Notify personnel (using Attachment 2 template) of assignment limitations before exposure to ULS and TMP information. For further information on the notification procedures, reference paragraph 19 of this instruction. (T-0)

8. Implementing Command. The Implementing Command's designated PM is responsible for procuring or modifying a nuclear weapon system and must:

- 8.1. Notify AFSEC/SEW of weapon system modifications that impact current operational critical components or are relevant ULS or TMP candidates. (T-1)
- 8.2. Conduct ULSs, TMPs, LASs, addendum ULSs, addendum TMPs, and addendum LASs and publish reports for weapon systems under its responsibility. (T-1)
- 8.3. Maintain the master copy for each ULS and TMP report that the command publishes. (T-1)
- 8.4. Ensures that the ULS/TMP contractor complies with the assumptions, ground rules, and rating guidelines described in AFSEC/SEW UL Studies Procedures Guide.
- 8.5. Control ULS, TMP, and LAS documentations in their possession according to this instruction, applicable Security Classification Guides (SCG), DoD security guidance, and Air Force security guidance. (T-0)
- 8.6. Limit access to ULS and TMP reports and data to essential personnel to avoid imposing excessive assignment limitations or exposure to any documented weaknesses or vulnerabilities of the nuclear surety of a weapon system. (T-0)
- 8.7. Notify personnel (using Attachment 2 template) of assignment limitations before exposure to ULS and TMP information. For further information on the notification procedures, reference paragraph 19 of this instruction. (T-0)

8.8. Co-chairs the ULS and TMP Senior Steering Committee (SSC) with AFSEC/SEW. (T-1)

9. UL Senior Steering Committee (ULSSC). The designated weapon system PM and AFSEC/SEW co-chair this committee. The committee:

9.1. Includes representatives from Air Combat Command (ACC), Air Force Materiel Command (AFMC), Air Mobility Command (AMC), Air Force Global Strike Command (AFGSC), United States Air Forces Europe (USAFE), Office of the Secretary of Defense (OSD), Joint Staff, US Navy, Deputy Chief of Staff, Strategic Deterrence & Nuclear Integration (HAF/A10), AFSEC/SEW, Air Force Global Strike Command, Weapons Safety Division (AFGSC/SEW), AF Nuclear Weapons Center (AFNWC), Director of Security Forces, Deputy Chief of Staff for Logistics, Installations and Mission Support (HAF/A4SN), Defense Threat Reduction Agency (DTRA), Department of Energy National Nuclear Security Administration (DOE/NNSA) and the National Security Agency (NSA), and others as directed by the committee co-chairs.

9.2. Provides guidance to the ULS/TMP study team and endorses its findings.

9.3. Helps establish the technology and threat baseline for the ULS/TMP.

9.4. Adjusts scenario information that the working group may not have considered, such as planned deployment guidance and tactics used by the operational command.

9.5. Provides recommendations to NWSSG.

9.6. Directs the Unauthorized Launch Working Group (ULWG) to conduct UL Studies and directs other work effort, as required.

10. Unauthorized Launch Working Group (ULWG). The ULWG works directly for the ULSSC and are the technical experts responsible for all aspects of the nuclear weapon system.

10.1. The ULWG will include members from AFSEC, AFNWC, implementing command, using command, and other agencies as required (e.g. HAF/A10, DOE/NNSA, NSA, national laboratories, United States Strategic Command (USSTRATCOM), DTRA, HAF/A4SN, etc.).

11. ULS and TMP Study Team.

11.1. For new systems or major modifications, the implementing command will establish a system engineering analysis team to participate in a UL study, under the direction of the UL Working Group. (T-1)

11.2. Include experts in all the disciplines affected by the system development or modification, such as hardware, software, systems security engineering, systems integration, safety, and physical, computer, and communications security. The size and composition of the team depends on the extent of the project and expertise needed.

11.3. If required, extend an invitation for experts from outside agencies (National Security Agency, other engineering agencies, operational commands, contractors, laboratories, or other agencies with unique capabilities) to participate as part of the ULS or TMP team.

11.4. Operational commands must participate to ensure the study considers planned operations and maintenance procedures and to alert the command to potential threats and impacts to the weapon system.

12. Director Air Force Personnel Center, Nuclear Integration (AFPC/CDN).

12.1. Ensure the Assignment Limitation Code "M" is updated into the Military Personnel Data System; the acceptance letter (Attachment 2) is scanned and filed in the member's electronic master personnel record (Automated Record Management System, or ARMS); and the applicable assignment authority is notified of the assignment limitation. (T-1)

12.2. Ensure only AFPC may add/remove an assignment limitation code "M" from personnel records. (T-1)

Note: Add/remove Assignment Limitation Codes only after coordinating with AFSEC/SEW.

12.3. Perform a semiannual validation, with AFSEC/SEW, of the master UL personnel file to ensure "M" codes have been placed on appropriate personnel. (T-1)

Section C—Conducting Studies and Preparing Reports

13. Conducting an Unauthorized Launch Study.

13.1. **Assessing Vulnerabilities.** The ULS requires an analysis and a report. The analysis must be conducted in parallel with the design and development effort to recognize and minimize the vulnerability to UL before weapon system production or modification. Use the LASs as the starting point of the analysis. Begin no later than the preliminary design review to provide sufficient information to the ULS team for early UL vulnerability assessment. For both hardware and software modifications, the final ULS report must arrive in time to support the engineering evaluation according to AFI 91-103, *Air Force Nuclear Safety Design Certification Program*, or the TNSA according to AFI 91-102. Apply the access guidelines outlined in Paragraph 17 of this instruction.

13.2. Contracting for Preparation, Conduct and Reporting of Studies.

13.2.1. The implementing command can contract for a ULS or TMP, including a LAS. If contracted, a ULWG must provide technical oversight and incremental review of the ULS and TMP work products. The contracting agency can serve as technical advisors to the ULWG.

13.2.2. The implementing command will not divulge previous ULSs, TMPs, analyses, or data to prospective bidders. When soliciting for a contractor to perform the study, the prime contractor and the major subcontractors or suppliers of a system, subsystem or component that will be the subject of or implicated in or by a study cannot serve as a contractor, subcontractor or consultant with respect to the study IAW AFSEC/SEW direction.

13.2.3. After being awarded the contract, the contractor can usually access and use existing ULSs and TMPs in performance of the contract. When restrictions on access and use to such ULSs and TMPs are imposed by the government, or are a result of a third party's proprietary information, a contractor's access and use shall be subject to appropriate nondisclosure agreements and other appropriate restrictions to protect against their unauthorized use and disclosure.

13.2.4. The contractor must comply with all classification, access, and control requirements IAW this instruction, applicable Security Classification Guides (SCG), DoD security guidance, and Air Force security guidance. (T-0)

13.2.5. The implementing command ensures that the ULS, TMP, and LAS meet the applicable requirements of this instruction and that contracts are administered so that any ULS, TMP, or LAS prepared by a contractor does the same. (T-0)

13.2.6. If a contractor performs the ULS or TMP, a team of Air Force civilian and military personnel will provide current operations and maintenance expertise to the contractor team.

13.3. Preparing a ULS Report. Use the following outline to prepare the final ULS report:

13.3.1. Introduction. Identify the ULS scope and purpose, including assumptions, ground rules, methodologies, limitations, and applicable documents.

13.3.2. Executive Summary. Provide a top-level description of background, methodology, findings, conclusions and recommendations.

13.3.3. Weapon System Description. Provide a limited description that is complete and accurate enough to support the ULS being conducted. For an addendum report, further limit the description to the specific portion of the weapon system being modified or analyzed.

13.3.4. Analysis. Provide UL scenarios, applicable procedures, and security requirements.

13.4. Report Development and Production Timeline.

13.4.1. Provide completed preliminary/final ULS reports to AFSEC/SEW.

13.4.2. Provide ULS reports within AFSEC/SEW established timelines to support the development of TNSAs for NWSSG studies and/or to support certification need dates. Certification need dates which drive timelines are established in applicable Certification Requirements Plans as delineated in AFI 63-125, *Nuclear Certification*.

14. Conducting a TMP.

14.1. Purpose of the TMP. The TMP defines, develops, evaluates and applies potential ULS risk mitigation techniques, procedures and requirements against the vulnerabilities identified in the ULS.

14.2. The goal of the TMP is to reduce the overall risk of any UL category. When the calculated UL risk is high enough for concern, the PM impacted (ICBM, B-52, B-2, F-15, F-16, F-35, or PA-200), using the assessment in the TMP, will recommend mitigators in the form of modifications to specific equipment and/or system procedural changes. Most of these mitigators are derived from the ULS recommendations. Determination of mitigator effects in the identified weapon system vulnerabilities supports the selection of the most cost-effective solutions for risk reduction. This is typically accomplished through a cost-benefit analysis.

14.3. The TMP approach for mitigator selection in evaluating mitigator effects, determining procedures, modifications, etc., to enact risk reduction is an optimization process using the

ULS results and database program to perform the necessary evaluations. Mitigation options are considered for risk reduction by evaluating their impact on a scenario's overall unmitigated risk value, and comparing that value to the mitigated risk value. Selecting the mitigators to use is a complex process, requiring consideration of the consequences, cost in resources (dollars and manpower), program impacts, etc. The TMP determines and arranges the mitigator selection data for use by program risk managers.

14.4. While total mitigation of a threat remains rarely feasible or economically reasonable, various means are developed for threat reduction. By developing and evaluating several such mitigation methods, risk managers can select mitigators based on their own set of parameters, such as cost-effectiveness, operational impact, etc. Supportive data from ULS updates allow the evaluation of more sophisticated nuclear certification procedures to further reduce the threat, and development of system design modification concepts to be considered during future modifications of the weapon system, support equipment, hardware, and software.

14.5. The nuclear certification process, as defined in AFI 63-125 and AFI 91-103, reviews and ensures each phase of a weapon system's life cycle is conducted to enhance the nuclear surety integrity of the weapon system. Addition of a new mitigator to the weapon system would impact the nuclear certification process, potentially requiring changes to the operational and nuclear certification procedures, test equipment, etc. Any changes must be assessed, evaluated, and integrated into the nuclear certification process so as not to degrade its overall weapon system nuclear surety. Recommended changes to any test equipment used to certify operational critical components must be documented and provided to the ULS/TMP Working Group and SSC members for coordination and approval.

14.6. Once a mitigator is selected, it must be designed, built and implemented into the weapon system. Decisions on which mitigator(s) to implement, actual implementation of mitigation techniques and nuclear certification procedure changes will be funded by a separate PM effort.

14.7. Preparing a TMP Report. Use the following outline to prepare the TMP final report.

14.7.1. Introduction. Identify the TMP scope and purpose, including assumptions, ground rules, terms, methodologies, limitations, and applicable source and reference documents.

14.7.2. Executive Summary. Present a top-level view of the entire TMP. Include a discussion on how the TMP is related to the ULS final report findings, conclusions, and recommendations.

14.7.3. Methodology. Discuss the approach used to identify potential mitigators and to analyze their benefits, effectiveness, and costs.

14.7.4. Mitigation Concepts. Describe each potential mitigator that was analyzed during the TMP.

14.7.5. Benefit, Effectiveness, and Cost. Present an analysis of each potential mitigator's contribution to increased weapon system nuclear surety.

14.7.5.1. Make an estimate of financial and personnel costs.

14.7.5.2. Make adjustments to the technical feasibility (TF) and completion without intervention (CWI) factors for the relevant scenarios and then re-rank the scenarios.

14.7.6. Recommendations. Present a prioritized list of the most effective and efficient mitigators, including an updated list of candidate operational critical components. Recommend measures, such as system redesign or procedural changes.

14.8. Report Development and Production Timelines will be completed as directed by AFSEC/SEW.

14.9. Conduct TMP Studies in accordance with AFSEC/SEW UL Studies Procedures Guide.

Section D—Study Report Controls

15. Information Controls and Safeguards.

15.1. Classify all information in accordance with this instruction, applicable Security Classification Guides (SCG), DoD security guidance, and Air Force security guidance.

15.2. ULS, TMP, and LAS Final Documents.

15.2.1. AFSEC/SEW controls the distribution of ULS, TMP, and LAS documentation. All commands or agencies must obtain prior approval from AFSEC/SEW for document distribution; e.g. ULS or TMP reports, briefings, other source data.

15.2.2. The implementing command that performs or contracts for the LAS, ULS, or TMP maintains the master copy and all pertinent data; e.g., briefings, other source data. (T-1)

15.2.3. AFSEC/SEW determines the number of copies to produce and defines the agency distribution list.

Section E—Access Responsibility and Authority

16. Management Responsibility.

16.1. Sensitive Material. ULS and TMP reports are extremely sensitive, and because access to this data limits a service member's choice of assignments (see Section F), it must be managed responsibly. This is particularly important in operational MAJCOMs and combatant commands (CCMDs).

16.2. MAJCOM and CCMD Obligations. Operational commands:

16.2.1. Request personnel access to ULS and TMP information on a need-to-know basis, keeping in mind that access to requested materials will require an Assignment Limitation Code that will restrict future assignments due to the nature of the material being accessed.

16.2.2. If the need exists, ensure wing commanders or designated representatives (O-6 or above) receive a summary of UL risks. Limit the ULS and TMP information received to the information they need to understand the specific threats they must recognize, and the actions they must take to counter those threats.

17. Access Authority. Individuals who require access to ULS must be briefed into the Air Force Special Access Program (SAP) that protects the specific details of the studies.

17.1. SAF/AAZ has designated AFSEC/SEW as one Access Approving Authority by memorandum, dated 24 October 2011. HQ AFSEC/SEW will maintain a master list of personnel who have had access to UL information.

17.2. Approved access granting officials must inform the individual of future assignment limitations and have the individual sign the Assignment Limitation letter (Attachment 2), before access to information is granted. (T-1)

Section F—Assignment Limitations

18. Extent of Limitations.

18.1. Assignment Limitations. Assignment limitations apply to all military who have been briefed into or had access to the AF UL Special Access Program. To limit assignments:

18.1.1. Enter assignment limitation codes or statements in the personnel records of each military member according to Paragraph 19.1.3. (T-1)

18.1.2. Do not use this assignment limitation code for any other circumstances that require restrictions on duties with nuclear weapons systems. (T-0)

18.1.3. Keep a permanent record of their access to ensure that the assignment limitation remains for military members (T-1)

18.1.4. Prohibit anyone who accessed the AF UL Special Access Program (including government contract personnel) from being part of a Two-Person Concept team controlling, operating, or maintaining an assembled weapon system or an OPCERT component. This includes positive control (PC) document custodian or handler duties. (T-0)

18.1.5. Direct all questions on the applicability of assignment limitations to AFSEC/SEW or AFPC/CDN.

18.2. Permanency of Limitations. Assignment limitations are permanent. On a case-by-case basis, an individual can submit a waiver request to AFSEC/SEW through command channels.

18.3. Non-Precluding. A person having assignment limitations can perform supervisory duties over individuals in the identified positions if those supervisory duties do not include participating as a Two-Person Concept team member.

19. Notification Responsibilities.

19.1. Responsibilities of Access-Granting Officials.

19.1.1. Notify individuals of their assignment limitations before they are briefed into or are granted access to the AF UL Special Access Program. Individuals may choose to decline access, without prejudice, if they want certain duties that would otherwise be denied. Access is granted and limitations imposed when the individual accepts. (T-1)

19.1.2. Notify individuals in writing (see Attachment 2 for sample letter) of assignment limitations before they are granted initial access to the AF UL Special Access Program. When unsure whether or not an individual has an assignment limitation on file, contact AFSEC/SEW. The acceptance letter: (T-1)

19.1.2.1. Gives the individual's name, grade, and Social Security Number (SSN).

19.1.2.2. Refers to this Instruction as authority for the assignment limitation.

19.1.3. Access-Granting Official sends the final signed acceptance letter to AFSEC/SEW. For military personnel, AFSEC/SEW will provide AFPC/CDN the letter to ensure it is filed in ARMS and an Assignment Limitation Code "M" is updated in the Military Personnel Data System (MilPDS).

19.1.4. Inform individuals granted access to the AF UL Special Access Program they must stay in contact with their applicable assignment authority (AFPC, Deputy Chief of Staff, Manpower, Personnel & Services, General Officer Management (AF/DPG), Deputy Chief of Staff, Manpower, Personnel & Services, Colonel Management (AF/DPO), or Deputy Chief of Staff, Manpower, Personnel & Services, Chief Master Sergeant Management (AF/DPE)) to determine future assignment eligibility. (T-1)

19.1.5. Inform individual that to decline the permanent assignment limitation means access to UL information is not granted and the individual's supervisor will be notified immediately. (T-1)

KURT NEUBAUER
Major General, USAF
Chief of Safety

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

- AFI 16-501, *Control and Documentation of Air Force Programs*, 15 Aug 2006
- AFI 31-401, *Information Security Program Management*, 1 Nov 05, incorporating change 1, 19 Aug 2009
- AFI 33-324, *The Air Force Information Collections and Reports Management Program*, 6 Mar 2013
- AFI 33-332, *The Air Force Privacy and Civil Liberties Program*, 12 Jan 2015
- AFI 33-360, *Publications and Forms Management*, 25 Sep 2013
- AFI 36-114, *Guide to Personnel Recordkeeping*, 1 Nov 1997
- AFI 36-2101, *Classifying Military personnel (Officer and Enlisted)*, 25 Jun 2013
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Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

AF Form 971, *Supervisor's Employee Brief*

Abbreviations and Acronyms

ACC—Air Combat Command

AF—Air Force

AF/DPE—Deputy Chief of Staff, Manpower, Personnel & Services, Chief Master Sergeant Management

AF/DPG—Deputy Chief of Staff, Manpower, Personnel & Services, General Officer Management

AF/DPO—Deputy Chief of Staff, Manpower, Personnel & Services, Colonel Management

AFMAN—Air Force Manual

AFMC—Air Force Materiel Command

AFI—Air Force Instruction

AFGSC—Air Force Global Strike Command

AFPC—Air Force Personnel Center

AFPC/CDN—Air Force Personnel Center, Nuclear Integration

AFPD—Air Force Policy Directive
AFNWC—Air Force Nuclear Weapons Center
AF/SE—Air Force Chief of Safety
AFSEC—Headquarters, Air Force Safety Center
AFSEC/SEW—Air Force Safety Center, Weapons Safety Division
AFGSC/SEW—Air Force Global Strike Command, Weapons Safety Division
AMC—Air Mobility Command
ARMS—Automated Record Management System
CWI—Completion Without Intervention
CCMD—Combatant Command
DECERT—Decertification
DoD—Department of Defense
DOE—Department of Energy
DTRA—Defense Threat Reduction Agency
EO—Executive Order
FSD—Full-Scale Development
HAF/A10—Deputy Chief of Staff, Strategic Deterrence & Nuclear Integration
HAF/A4SN—Deputy Chief of Staff for Logistics, Installations and Mission Support
IAW—In Accordance With
ICBM—Intercontinental Ballistic Missile
JAFAN—Joint Air Force – Army – Navy
LABE—Launch Action Basic Event
LAP—Launch Activation Path
LAS—Launch Action Study
MAJCOM—Major commands
MilPDS—Military Personnel Data System
NNSA—National Nuclear Security Administration
NSA—National Security Agency
NWSSG—Nuclear Weapon System Surety Group
OPCERT—Operational certification
OPR—Office of Primary Responsibility
OSD—Office of the Secretary of Defense

OSR—Operational Safety Review
PA—Privacy Act
PC—Positive Control
PM—Program Manager
RDS—Records Disposition Schedule
SAP—Special Access Program
SSC—Senior Steering Committee
SSN—Social Security Number
SSS—Special Safety Study
TF—Technical Feasibility
TMP—Threat Mitigation Program
TNSA—Technical Nuclear Safety Analysis
UL—Unauthorized Launch
ULS—Unauthorized Launch Study
ULSCG—Unauthorized Launch Security Classification Guide
ULSSC—Unauthorized Launch Senior Steering Committee
ULWG—Unauthorized Launch Working Group
USAFE—United States Air Forces Europe
USSTRATCOM—United States Strategic Command
WSSR—Weapon System Safety Rules

Terms

Authorization—The critical function preventing unauthorized use of a nuclear weapon system. This function is executed by the weapon system operator's transmission of secure codes (released by National Command Authority direction) to the nuclear weapon system's authorization device or devices to allow prearming, arming, or launching of a nuclear weapon. (USAF)

Certified Critical Component—A critical component that has successfully completed operational certification according to approved technical order procedures. (USAF)

Code Component— Any device, assembly material, software, or information so designated by the National Security Agency. (USAF)

Contribute To—This term is applied when an unauthorized launch (UL) study team determines a component would play an important part in an UL scenario but could not alone cause a launch. (USAF)

Credible Threat or Scenario—A threat or scenario, fitting the assumptions and ground rules in AFI 91-106, *Unauthorized Launch and Launch Action Studies*, that a federal agency responsible

for establishing policy with regard to the type of vulnerability identified in the threat or scenario (i.e., National Security Agency when addressing code components) has determined to be credible. (USAF)

Critical—A term describing a function, circuit, or activity that directly controls the authorizing, prearming, arming, or launching or releasing of a nuclear weapon, or the targeting of a ground-launched nuclear weapon system. (USAF)

Critical Component—A component of a nuclear weapon system that if bypassed, activated, or tampered with could result in or contribute to deliberate or inadvertent authorizing, prearming, arming, or launch of a combat delivery vehicle carrying a nuclear weapon, or the targeting of a nuclear weapon to other than its planned target. HQ AFSEC/SEW designates critical components. (USAF)

Implementing Command—The command which is responsible for procuring or modifying a nuclear weapon system.

Launch Action Basic Event—A unique attack against a specific weapon system component or subsystem component or subsystem that contributes to an Unauthorized Launch. It is the lowest level at which technical feasibility (including development, integration, and implementation) and completion without intervention can be assessed. (USAF)

Launch Action Study—An analysis of a specific weapon system component to determine the actions necessary to cause the component to contribute to an unauthorized launch. (USAF)

Launch Action Threat— A description of how an individual component can be tampered with to achieve a specific unauthorized result. (USAF)

Launch Activation Path—The path by which information and energy flow to effect a launch or release of a nuclear weapon. (USAF)

Nuclear Component—A Major subassembly of a nuclear explosive that contains Special Nuclear Material (SNM) in quantities sufficient to fuel a nuclear explosion (e.g., pit or canned subassembly). Note that subassemblies containing tritium are not nuclear components.

Nuclear Weapon—A complete assembly (i.e., implosion type, gun type, or thermonuclear type) in its intended ultimate configuration which, upon completion of the prescribed arming, fusing, and firing sequence, is capable of producing the intended nuclear reaction and release of energy. (JP 1-02)

Nuclear Weapon System—A combat delivery vehicle with its nuclear weapon or weapons and associated support equipment, noncombat delivery vehicles, facilities, and services. (USAF)

Nuclear Weapons Surety—Policies, procedures, controls, and actions that encompass safety, security, and control measures, which ensure there will be no nuclear weapons accidents, incidents, unauthorized detonation, or degradation of weapon effectiveness during its Stockpile-to-Target Sequence (STS). (DoD)

Positive Measure—A design feature, procedure, safety rule, accident prevention or mitigation measure that works to reduce the likelihood, severity, or consequence of an accidental or deliberate threat involving a nuclear weapon or nuclear weapon system. An example of a specific positive measure would be a permissive action link designed to prohibit the arming of

the weapon, except when properly authorized. An example of a general positive measure would be the presence of a certified firefighting capability at an operational air base. (USAF)

Tamper—To knowingly perform an incorrect act or unauthorized procedure involving a nuclear weapon, nuclear weapon system, or certified critical component. (USAF)

Unauthorized Launch—Refers to deliberate launching or releasing of a nuclear missile or bomb (except jettisoning) before execution of an emergency war order. (DoD)

Attachment 2

SAMPLE ACCEPTANCE LETTER

(Refer to AFMAN 33-326, *Preparing Official Communications*, for correct format)

Date

MEMORANDUM FOR _____

FROM: _____
Name/Rank/SSN

SUBJECT: Acceptance of Assignment Limitation

1. This memorandum documents my understanding and acceptance of the permanent assignment limitations placed on me due to my access to unauthorized launch studies for nuclear weapon systems
2. Access to Unauthorized Launch Study information will limit my future assignments as outlined in AFI 91-106, *Unauthorized Launch, Threat Mitigation, and Launch Action Studies*. Furthermore, I understand that I will no longer serve on a Two-Person Concept team performing any duties associated with nuclear weapon systems operations, command, control, communications or maintenance on a nuclear weapon system or its components. An Assignment Limitation Code of "M" will be placed in my records permanently.
3. I understand that this code is permanent unless a waiver is granted. Waivers to this policy can be requested from Headquarters, Air Force Safety Center (AFSEC/SEW), 9700 G Ave SE, Kirtland AFB NM 87117-5670, through command channels. Personnel with this assignment limitation are authorized to perform supervisory duties over individuals if those duties do not include participating as a Two-Person Concept team member.

Signature

Printed Name/Rank

AUTHORITY: 10 U.S.C. 8013. PURPOSE: To obtain any comments you desire to submit (on a voluntary basis) for consideration concerning this action. ROUTINE USES: Provides you an opportunity to submit comments or documents for consideration. If provided, the comments and documents you submit become a part of the action. DISCLOSURE: Your written acknowledgment of receipt and signature are mandatory. Any other comment or document you provide is voluntary.