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SECRETARY OF THE AIR FORCE

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Safety

UNAUTHORIZED LAUNCH, THREAT MITIGATION, AND LAUNCH ACTION STUDIES

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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 Mission*. It provides guidance for conducting an Unauthorized Launch Study (ULS), a Threat Mitigation Program (TMP), and a Launch Action Study (LAS), to include the preparation, distribution, use, and protection of ULS, TMP, and LAS reports. It also imposes assignment limitations on personnel who had access to ULS, TMP, and LAS reports or data. This instruction applies to all civilian employees and uniformed members of the Regular Air Force, Air Force Reserve, and Air National Guard. This instruction also applies to contractor personnel supporting Air Force nuclear weapon system programs. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Disposition Schedule located in the Air Force Records Information Management System. This publication may be supplemented by major commands (MAJCOMs), but all supplements must be routed 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 Forms 847 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 Title 10 USC § 8013, *Secretary of the Air Force*; Title 32, Code of Federal

Regulations, Part 293, *Personnel Records*; and Executive Order 9397, *Numbering System for Federal Accounts Relating to Individual Persons*. The applicable System of Record Notices (SORNs), F036 AFPC, *Military Personnel Records System*, and F036 AFPCQ, *Personnel Data System (PDS)*, are at **http://dpcld.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. Non-tiered items are waiverble by the Wing Commander/equivalent, but the HQ OPR for this publication must be provided a copy of such waivers for their situational awareness. For Tier waiver items, send an email to the publication OPR that includes a completed AF Form 679, *Air Force Publication Compliance Item Waiver Request/Approva*l, or other format with equivalent information will be accepted for situational awareness and process improvement considerations.

SUMMARY OF CHANGES

This revision clarified the assignment limitations for military, civilian, and contractor personnel who have had access to the Unauthorized Launch Program. Paragraphs 2.2, 2.9, 5.1, 6.1, and 6.3 have been rewritten to identify, document, and track personnel involved in this program. Additionally, administrative changes have been made throughout the document.

Chapter 1

GENERAL INFORMATION

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

1.2. Purpose. This Instruction establishes the process for planning, executing, safeguarding, and tracking Unauthorized Launch, Threat Mitigation, and Launch Action Studies in accordance with Department of Defense Directive (DoDD) 3150.02, *DoD Nuclear Weapons Surety Program*. The Air Force studies fielded nuclear weapon systems to determine vulnerabilities and identify countermeasures to evolving unauthorized launch (UL) threats to maximize nuclear surety.

1.3. 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 launch or release of a nuclear weapon. The ULS report becomes a source document that can be used to develop a Technical Nuclear Safety Analysis (TNSA), designating critical component status, 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 (WSSRs) 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.

1.4. Threat Mitigation Program (TMP). The goals of a TMP is 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 WSSRs, and technical or operational modifications to the nuclear weapons system.

1.5. 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 or 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 or release critical functions, and weapon system components. The LAP is used to identify weapon system components that are likely targets for attack. LAP findings are used to determine if a LAS should be completed.

1.6. Launch Action Study (LAS). A LAS is a limited-scope study or series of studies that an engineering and manufacturing development (EMD) contractor or Air Force agency completes. The LAS identifies possible ways to exploit system or component vulnerabilities introduced by EMD into weapon systems. 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.

1.7. 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 to enable identification of likely locations and times for attack.

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

Chapter 2

ROLES AND RESPONSIBILITIES

2.1. 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 (HAF MD) 1-46, *Chief of Safety*. AF/SE is also responsible for the implementation of safety and nuclear surety policy.

2.2. AF Safety Center, Chief of Weapons Safety (AFSEC/SEW). AFSEC/SEW is designated by AF/SE as the lead for UL activities.

2.2.1. Coordinate and co-chair Unauthorized Launch Senior Steering Committee (ULSSC).

2.2.2. Provides a UL Program Manager to manage the ULS/TMP/LAS process.

2.2.2.1. Maintain a master source file of all individuals who have had access to the UL program (similar to Department of Energy (DOE) Sigma 14), which includes military, civilian and contractor personnel.

2.2.2.1.1. For military personnel, ensure the Air Force Personnel Center (AFPC) assigns an assignment limitation code (M Code) to individuals with access to the UL program.

2.2.2.1.2. Primary tracking list for civilian and contractor personnel that have access to the UL and TMP programs.

2.2.2.2. Attend Operational Safety Reviews (OSR) and Special Safety Studies (SSS).

2.2.2.3. Maintain meeting minutes to document discussions/deliberations and findings for future reference.

2.2.2.4. Maintain the AFSEC/SEW UL Studies Procedures Guide.

2.3. Operational Commands and Affected Agencies.

2.3.1. Limit access to ULS and TMP reports and data to essential personnel to avoid imposing excessive assignment limitations or exposure to any documented vulnerabilities of the nuclear surety of a weapon system.

2.3.2. Notify personnel (using Attachment 2 template) of assignment limitations before exposure to ULS and TMP information. See paragraph 6.3 of this instruction for further information on the notification procedures.

2.3.3. Participate in ULS and TMP study teams.

2.3.3.1. Ensure current and planned operations and maintenance procedures are used.

2.3.3.2. Alert the command to potential threats and impacts to their weapon system(s).

2.4. Implementing Command.

2.4.1. Provides a weapon system PM that is responsible for procuring or modifying a nuclear weapon system.

2.4.1.1. Co-chair ULSSC.

2.4.1.2. Notify AFSEC/SEW of weapon system modifications that impact current operational critical components or are relevant ULS or TMP candidates.

2.4.1.3. Conduct ULS, TMP, LAS, addendum ULS, addendum TMP, and addendum LAS and publish reports for weapon systems under its responsibility.

2.4.1.4. Maintain the master copy for each ULS and TMP report the command publishes.

2.4.1.5. Ensure that the ULS/TMP contractor complies with the assumptions, ground rules, and rating guidelines described in AFSEC/SEW UL Studies Procedures Guide.

2.4.2. Limit access to ULS and TMP reports and data to essential personnel to avoid imposing excessive assignment limitations or exposure to any documented vulnerabilities of the nuclear surety of a weapon system.

2.4.3. Notify personnel (using Attachment 2 template) of assignment limitations before exposure to ULS and TMP information. See paragraph 6.3 of this instruction for further information on the notification procedures.

2.5. Nuclear Weapon System Surety Group (NWSSG). The NWSSG is a multi-agency group chartered under the provisions of DoDD 3150.02 and AFI 91-102, and chaired by AFSEC/SEW. The NWSSG reviews applicable DoD and DoE nuclear weapon system designs and operations to determine if they meet the DoD Nuclear Weapon System Surety Standards through UL and TMP activities. Based in part on UL and TMP findings, the NWSSG propose safety rules and recommends changes to improve nuclear weapon system surety.

2.5.1. Review ULS and TMP reports prepared for the weapon system under study, if applicable.

2.5.2. Evaluate recommended corrective actions and ways to mitigate credible UL scenarios.

2.5.3. Review and, if required, develop and update weapon system safety rules.

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

2.6.1. The committee includes:

2.6.1.1. Air Combat Command (ACC), Air Force Materiel Command (AFMC), Air Force Global Strike Command (AFGSC), Office of the Secretary of Defense (OSD), Joint Staff, US Navy, Deputy Chief of Staff, Strategic Deterrence & Nuclear Integration (AF/A10); AFSEC/SEW, AF Nuclear Weapons Center (AFNWC), Deputy Chief of Staff for Logistics, Engineering and Force Protection, Security Forces Directorate (AF/A4S), Defense Threat Reduction Agency (DTRA), Department of Energy National Nuclear Security Administration (DOE/NNSA), the National Security Agency (NSA), and United States Strategic Command (USSTRATCOM).

2.6.1.2. Representatives from Air Mobility Command (AMC), United States Air Forces Europe-Air Forces Africa (USAFE-AFAFRICA), Untied States European Command (USEUCOM), and others may attend as required by the committee co-chairs.

2.6.2. Manages and tracks UL activities.

2.6.2.1. Determine when a ULS or TMP report is outdated and requires revision.

2.6.2.2. Determine if a weapon system modification warrants a ULS, TMP, or LAS.

2.6.2.3. Directs the UL Working Group (ULWG) to conduct UL Studies and activities.

2.6.2.4. Adjusting ULWG scenario information to include factors the working group may not have considered (e.g., planned deployment guidance and tactics used by the operational command).

2.6.2.5. Approve credible UL scenarios and mitigation requirements when a safety study (as required by AFI 91-102), is necessary, such as minor modifications and special briefings. This includes helping to establish the technology and threat baseline for the ULS/TMP.

2.6.3. Provides recommendations to the NWSSG.

2.7. Unauthorized Launch Working Group (ULWG). The ULWG works directly for the ULSSC and consists of the technical experts responsible for all aspects of the nuclear weapon system. The ULWG includes members from AFSEC, implementing command, using command, and other agencies as required (e.g. AF/A10, DOE/NNSA, NSA, national laboratories, USSTRATCOM, DTRA, AF/A4SP, etc.).

2.8. ULS and TMP Study Team.

2.8.1. For new systems or major modifications, the implementing command establishes a system engineering analysis team to participate in a UL study under the direction of the ULWG.

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

2.8.3. If required, invite experts from outside agencies (NSA, other engineering agencies, operational commands, contractors, laboratories, or other agencies with unique capabilities) to participate as part of the ULS or TMP team.

2.9. Air Force Personnel Center, Assignments and Air and Space Expeditionary Force (AEF) Programs Division (AFPC/DP3A).

2.9.1. For military personnel, Assignment Limitations (M Code) are added to the Military Personnel Data System (MilPDS); the acceptance letter (Attachment 2) is scanned and filed in the member's electronic master personnel record (Automated Record Management System, or ARMS).

2.9.2. Coordinate with AFSEC/SEW to add/remove assignment limitation (M Code) from military personnel records.

2.9.3. Perform a semiannual validation, with AFSEC/SEW, of the master UL personnel file to ensure assignment limitations (M Code) have been placed on appropriate military personnel.

Chapter 3

CONDUCTING STUDIES AND PREPARING REPORTS

3.1. Conducting an Unauthorized Launch Study.

3.1.1. Assessing Vulnerabilities. The ULS requires analysis and a report. The analysis must be conducted concurrently with the design and development effort to recognize and minimize the vulnerability to UL before weapon system production or modification. Use the LAS as the starting point of the analysis. Begin as soon as system designs start to emerge, but 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 91-101, or the TNSA according to AFI 91-102. Apply the access guidelines outlined in Paragraph 5.2 of this instruction. **(T-0)**.

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

3.1.2.1. The implementing command may 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 may serve as technical advisors to the ULWG.

3.1.2.2. The implementing command will not provide previous ULSs, TMPs, analyses, or data to prospective bidders. **(T-0)**. When soliciting for a contractor to perform the study, the prime contractor, subcontractors, or suppliers of a system, subsystem or component included in the study shall not serve as a contractor, subcontractor or consultant with respect to the study. **(T-0)**.

3.1.2.3. After being awarded the study contract, the contractor may request access and use existing ULS and TMP to execute the contract. When restrictions on access and use of past data are imposed by the government, or are a result of a third party's proprietary information, a contractor's access and use are subject to appropriate nondisclosure agreements and other appropriate restrictions to protect against unauthorized use and disclosure of the material.

3.1.2.4. The contractor must comply with all classification, access, and control requirements in accordance with this instruction and applicable security classification guides. **(T-0)**.

3.1.2.5. The implementing command will ensure 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)**.

3.1.2.6. If a contractor performs the ULS or TMP, the operating command will make relevant current operations and maintenance expertise available to the contractor team. **(T-1)**.

3.1.3. Preparing a ULS Report. Use the following outline to prepare the final ULS report (Note: Reports are exempt from licensing in accordance with Paragraph 2.3 of AFI 33-324, *The Air Force Information Collections and Reports Management Program*):

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

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

3.1.3.3. 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.

3.1.3.4. Analysis. Provide UL scenarios, descriptions, conclusions, findings, risk determinations, and potential mitigators for risk reduction evaluation. Include the assessed technical feasibility (TF) and completion without intervention (CWI) factors in UL scenario descriptions.

3.1.4. Report Development and Production Timeline.

3.1.4.1. Completed preliminary/final ULS reports will be provided to AFSEC/SEW. **(T-1)**.

3.1.4.2. ULS reports will be provided to AFSEC/SEW within established timelines to support the development of TNSAs for NWSSG studies and/or to support certification need dates. **(T-1)**. Certification need dates which drive timelines are established in applicable Certification Requirements Plans as delineated in AFI 63-125, *Nuclear Certification Program.*

3.2. Conducting a TMP.

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

3.2.2. The goal of the TMP is to reduce the overall risk of any UL scenario. When the calculated UL risk is high enough for concern, the PM impacted (e.g., Intercontinental Ballistic Missile, B-52, B-2, F-15, F- 16, F-35, or PA-200), using the assessment in the TMP, will recommend mitigation factors in the form of modifications to specific equipment and/or system procedural changes. Most of these mitigation factors are derived from the ULS recommendations. Determination of mitigation effects on 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.

3.2.3. 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 an UL scenario's overall unmitigated risk value, and comparing that value to the mitigated risk value. Selecting which 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.

3.2.4. 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.

3.2.5. The nuclear certification process, as defined in AFI 63-125 and AFI 91-101, 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 to ensure it does not degrade weapon system's nuclear surety. **(T-0)**. Recommended changes to any test equipment used to certify operational critical components must be documented and provided to the ULS/TMP Working Group and ULSSC members for coordination and approval. **(T-0)**.

3.2.6. Once a mitigator is selected, it must be designed, built and implemented into the weapon system, **(T-0)**. 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.

3.2.7. Preparing a TMP Report. Use the following outline to prepare the TMP final report (Note: Reports are exempt from licensing in accordance with Paragraph 2.3 of AFI 33-324):

3.2.7.1. 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.

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

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

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

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

3.2.7.5.1. Make an estimate of financial and personnel costs.

3.2.7.5.2. Make adjustments to the TF and CWI factors for the relevant UL scenarios and then re-rank the UL scenarios.

3.2.7.6. 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.

3.2.8. Report Development and Production Timelines will be completed as directed by AFSEC/SEW, and may be consolidated with the ULS Report.

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

Chapter 4

STUDY REPORT CONTROLS

4.1. Information Controls and Safeguards. All information shall be classified and controlled in accordance with this instruction and applicable security classification guides. **(T-0)**.

4.2. ULS, TMP, and LAS Final Documents.

4.2.1. AFSEC/SEW controls the distribution of ULS, TMP, and LAS documentation. AFSEC/SEW shall approve distribution of ULS, TMP, and LAS reports, briefings or source data. **(T-1)**.

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

4.2.3. AFSEC/SEW shall determine the number of copies to produce and defines the agency distribution list. **(T-1)**.

Chapter 5

ACCESS RESPONSIBILITY AND AUTHORITY

5.1. Management Responsibility.

5.1.1. Sensitive Material. ULS and TMP reports are extremely sensitive, and because access to this data limits an individual's (includes military, civilian, and contractor) choice of assignments (see Section F), it must be managed responsibly. This is particularly important in operational MAJCOMs and combatant commands (CCMDs).

5.1.2. Operational MAJCOM and CCMD Obligations:

5.1.2.1. Limit access to ULS and TMP information on a need-to-know basis. Individuals with access to ULS and TMP information will receive permanent assignment limitations due to the nature of the material being accessed.

5.1.2.2. Anyone with access to the ULS or TMP information (including military, civilian, and contract personnel) will be prohibited from being part of a Two-Person Concept team controlling, operating, or maintaining an assembled nuclear weapon system, an OPCERT component, or positive control document custodian or handler duties. **(T-0)**.

5.1.2.3. 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 needed to understand the specific threats and the actions needed to counter those threats.

5.2. Access Authority. 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-0)**.

Chapter 6

ASSIGNMENT LIMITATIONS

6.1. Extent of Limitations. Duty limitations apply to all individuals who have had access to UL or TMP information, this applies to military, civilian and contractor personnel.

6.2. Assignment Limitations. Assignment limitations apply to all personnel who have access to UL or TMP information. To limit assignments:

6.2.1. AFPC will ensure military members will receive an assignment limitation (M Code), see para 11. **(T-0)**.

6.2.1.1. AFSEC/SEW will maintain the master source file of all individuals who have had access to UL or TMP information; this will be the primary tracking list for civilian and contractor personnel. **(T-1)**.

6.2.1.2. Direct all questions on the applicability of assignment limitations to AFSEC/SEW.

6.2.2. Assignment/duty limitations are permanent.

6.2.3. 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.

6.3. Responsibilities of Access-Granting Officials.

6.3.1. Individuals will be notified of their assignment limitations before they are briefed into or are granted access to UL or TMP information. **(T-0)**. Individuals may choose to decline access without prejudice, if they want certain duties that would otherwise be denied.

6.3.2. Access is granted to UL or TMP information, and assignment limitations imposed when the individual knowingly accepts the limitations in writing (see Attachment 2 for sample letter). When unsure whether or not an individual has an assignment limitation on file, contact AFSEC/SEW. The acceptance letter will include:

6.3.2.1. The name, grade, and Social Security Number (SSN) of the individual gaining access; and **(T-1).**

6.3.2.2. Refers to DoDD 3150.02 and this Instruction as authority for the assignment limitation. **(T-0)**.

6.3.3. Send the final signed acceptance letter to AFSEC/SEW. For military personnel, AFSEC/SEW will provide AFPC/DP3A the letter to ensure it is filed in ARMS and an Assignment Limitation is placed in the MilPDS.

6.3.4. Inform individuals that to decline the permanent assignment limitation means access to UL or TMP information is not granted and their supervisor will be notified immediately.

JOHN T. RAUCH JR.
Major General, USAF
Chief of Safety

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

Title 5, United States Code, Section 552a, *The Privacy Act of 1974*

Title 10, United States Code, Section 8013, *Secretary of the Air Force*

Title 32, Code of Federal Regulation, Part 293, *Personnel Records* UL

EO 9397, *Numbering System for Federal Accounts Relating to Individual Persons*, 22 Nov 1943

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

HAF MD 1-46, *Chief of Safety*, 10 Dec 2013

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

AFPD 91-1, *Nuclear Weapons and Systems Surety*, 30 Nov 2016

AFI 33-324, *The Air Force Information Collections and Reports Management Program*, 6 Mar 2013

AFI 33-360, *Publications and Forms Management*, 1 Dec 2015

AFI 63-125, *Nuclear Certification Program*, 24 Jul 2017

AFI 91-101, *Air Force Nuclear Weapons Surety Program*, 15 Aug 2014

AFI 91-102, *Nuclear Weapon System Safety Studies, Operational Safety Reviews and Safety Rules*, 22 May 2019

AFMAN 33-326, *Preparing Official Communications*, 25 May 2017

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

AFSEC/SEW UL Studies Procedures Guide, 29 Apr 2015

Adopted Forms

AF Form 679, *Air Force Publication Compliance Item Waiver Request/Approval*

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

ACC—Air Combat Command

AFGSC—Air Force Global Strike Command

AFMC—Air Force Materiel Command

AFPC—Air Force Personnel Center

AMC—Air Mobility Command

ARMS—Automated Record Management System

CWI—Completion Without Intervention

CCMD—Combatant Command

DECERT—Decertification

DOE—Department of Energy

DTRA—Defense Threat Reduction Agency

EMD—Engineering and Manufacturing Development

EO—Executive Order

ICBM—Intercontinental Ballistic Missile

LABE—Launch Action Basic Event

LAP—Launch Activation Path

LAS—Launch Action Study

MilPDS—Military Personnel Data System

NNSA—National Nuclear Security Administration

NSA—National Security Agency

NWSSG—Nuclear Weapon System Surety Group

OPCERT—Operational certification

OSD—Office of the Secretary of Defense

OSR—Operational Safety Review

PM—Program Manager

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

ULSSC—Unauthorized Launch Senior Steering Committee

ULWG—Unauthorized Launch Working Group

USAFE-AFAFRICA—United States Air Forces Europe-Air Forces Africa

USEUCOM—United States European Command

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 authorizes a device or devices in the weapon system to allow pre-arming, arming, launching, or releasing of a nuclear weapon.

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.

Credible UL Threat or Scenario—A threat or scenario, fitting the assumptions and ground rules in this instruction, 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 been determined to be credible.

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

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, pre-arming, arming, or launch of a combat delivery platform carrying a nuclear weapon, or the employment of a nuclear weapon against anything other than an authorized target.

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.

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.

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

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

Life Cycle Flow—The life cycle flow is a system model that illustrates the flow of equipment through its life cycle phases.

Nuclear Component—A Major subassembly of a nuclear explosive that contains Special Nuclear Material 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—The nuclear, Department of Energy-provided component(s) coupled with the non-retrievable hardware that leaves a delivery platform intended for approved targets.

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, hazardous exposure of radioactive materials to the environment, or degradation of weapon effectiveness during its Stockpile-to-Target Sequence.

Nuclear Weapon System—A nuclear weapon and a means for delivering it to the target, with associated specialized support equipment, facilities, procedures, personnel, and any vehicles peculiar to the system used for weapon transport.

Positive Measure—The combination of procedural and administrative actions, physical safeguards, and design features expressly for the purpose of ensuring security, safety, and control of nuclear weapons and systems, including associated personnel.

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

Threat Mitigation Program—This program identifies potential mitigators and determines which potential mitigators most effectively reduce the overall risk to nuclear surety due to identified vulnerabilities.

Unauthorized Launch—A deliberate launching or releasing of a nuclear weapon system (except jettisoning) before execution of a valid and authentic emergency war order.

Unauthorized Launch Studies—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 UL of a missile using its own propulsion and guidance subsystem, or the UL of a nuclear-loaded aircraft and the unauthorized launch or release of a nuclear weapon.

Attachment 2

SAMPLE ACCEPTANCE LETTER

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

The information herein is FOR OFFICIAL USE ONLY (FOUO) information which must be protected under the Freedom of Information Act (5 U.S.C 552) and/or the Privacy Act of 1974 (5 U.S.C. 552a). Unauthorized disclosure or misuse of this PERSONAL INFORMATION may result in disciplinary action, criminal and/or civil penalties.

(Date)

MEMORANDUM FOR AFSEC/SEW

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 DoDD 3150.02, *DoD Nuclear Weapons Surety Program* and 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, and its components. An Assignment Limitation Code of "M" will be placed in my records permanently.

3. I understand that this code is permanent. 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, Secretary of the Air Force. PURPOSE: Information is collect to document and track individual's access to nuclear weapon Unauthorized Launch (UL) and Threat Mitigation Program (TMP) information. ROUTINE USES: Information may be disclosed for any of the DoD "Blanket Routine Uses." DISCLOSURES: Voluntary; however, failure to provide the necessary information may limit your access to UL and TMP information.