

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

AIR FORCE INSTRUCTION 21-204

30 NOVEMBER 2009



Maintenance

**NUCLEAR WEAPONS MAINTENANCE
PROCEDURES**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

ACCESSIBILITY: This publication is available for downloading from the e-Publishing website at www.e-publishing.af.mil/

RELEASABILITY: There are no releasability restrictions on this publication.

OPR: AF/A4LW

Certified by: AF/A4L (Maj Gen McMahon)

Supersedes: AFI21-204, 17 Jan 2008

Pages: 49

This publication implements Air Force Policy Directive (AFPD) 21-2, Munitions. It provides nuclear weapons maintenance and handling guidance and procedures. It applies to all personnel who maintain and handle nuclear weapons. This publication does not apply to Air National Guard or Air Force Reserve units. Units will not publish a supplement to this publication. Units will contact the applicable MAJCOM for interpretations of the guidance contained in this publication. Waiver authority is AF/A4L. MAJCOM direct supplements to this publication must be routed to the OPR of this publication for coordination prior to certification and approval. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at <https://www.my.af.mil/gcss-af61a/afirms/afirms/>. 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's chain of command.

SUMMARY OF CHANGES

This publication is substantially revised and procedures must be completely reviewed. Revision implements the direction contained in HQ USAF Program Action Directive (PAD) 08-04, *Implementation of the Secretary and Chief of Staff of the Air Force Direction to Establish Air Force Global Strike Command*, and HQ USAF PAD 08-05, *Implementation of the Secretary of the United States Air Force and Air Force Chief of Staff Direction to Execute Phase III of the Air Force Nuclear Weapon Center's Mission Alignment*. This publication contains nuclear weapons maintenance procedures to include general maintenance responsibilities; nuclear

weapon/component management; training, qualification, and certification procedures; and nuclear weapons maintenance and handling guidance. Common maintenance responsibilities; Munitions Control; Plans/Scheduling; Quality Assurance; Key and Lock Program; and Access, Approval, and Authority List procedures previously identified in this publication are published in AFI 21-200, *Munitions and Missile Maintenance Management*. Munitions Accountable System Officer responsibilities and nuclear weapon, nuclear component, and nuclear ordnance controlled material accountability procedures previously identified in this publication are published in AFI 21-203, *Nuclear Accountability Procedures*. This instruction implements many new programs or tasks driving . Units have 180 days from the above date to implement the Nuclear Weapons Training Program requirements (i.e., standardized lesson plans and initial/annual weapons academics curriculum). Units have 45 days from the above date to recertify personnel to comply with the new certifiable task requirements and implement AFNWC/LG developed standardized visual inspection lists.

| | |
|--|-----------|
| Chapter 1—GENERAL | 4 |
| 1.1. Purpose. | 4 |
| 1.2. General. | 4 |
| 1.3. Major Commands | 4 |
| 1.4. Unit Responsibilities. | 8 |
| Chapter 2—MANAGEMENT OF NUCLEAR WEAPONS, NUCLEAR COMPONENTS, AND SPARES | 14 |
| 2.1. Management of Nuclear Weapons. | 14 |
| 2.2. Management of Nuclear Components. | 14 |
| 2.3. Management of Containers and Bolsters. | 15 |
| 2.4. Management of Nuclear Training and Test Items. | 15 |
| 2.5. Management of Retrofit Kits. | 15 |
| 2.6. Management of Funds. | 16 |
| 2.7. Management of Nuclear Weapons, Nuclear Components, Air Force owned DOE-designed Special Equipment and Base or Military Spares. | 16 |
| 2.8. War Reserve Materiel (WRM). | 16 |
| 2.9. Working Capital Fund. | 16 |
| 2.10. Equipment Allowances and Authorizations for Special Equipment Controlled Items. | 16 |
| Chapter 3—NUCLEAR WEAPONS TRAINING, QUALIFICATION, AND CERTIFICATION PROGRAMS | 18 |
| 3.1. Nuclear Weapons Training Program (NWTP). | 18 |
| 3.2. Nuclear Weapons Academic Training. | 18 |
| 3.3. Nuclear Weapons Qualification Program. | 19 |

| | | |
|---|---|-----------|
| 3.4. | Nuclear Weapons Certification Program. | 19 |
| 3.5. | Certifying Officials. | 20 |
| 3.6. | Certification Requirements. | 21 |
| 3.7. | Certification Documentation: | 22 |
| Figure 3.1. | Sample AF Form 2435, Load Training and Certification Document (Front) | 24 |
| Figure 3.2. | Sample AF Form 2435, Load Training and Certification Document (Back) | 25 |
| 3.8. | Certifiable Tasks | 27 |
| 3.9. | Proficiency Checks. | 29 |
| Chapter 4—NUCLEAR WEAPONS MAINTENANCE AND HANDLING POLICIES | | 31 |
| 4.1. | General Policies. | 31 |
| 4.2. | Forms. | 41 |
| 4.2.1. | Adopted Forms. | 41 |
| Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION | | 43 |

Chapter 1

GENERAL

1.1. Purpose. This instruction provides guidance, delineates responsibilities, and establishes nuclear weapons maintenance and handling procedures. Nuclear Weapons Related Material procedures are located in AFI 20-110, *Nuclear Weapons Related Materiel (NWRM) Management*. Basic logistics assessment policy and procedures are located in AFI 20-111, *Logistics Compliance Assessment Program*. General munitions maintenance responsibilities are located in AFI 21-200, *Munitions and Missile Maintenance Management*. Missile maintenance guidance is located in AFI 21-202, *Missile Maintenance Management*. Nuclear accountability guidance is located in AFI 21-203, *Nuclear Accountability Procedures*. Command disablement procedures are located in AFI 21-205, *Command Disable Systems (CDS) (S)*.

1.2. General. Nuclear weapons require special consideration because of their political and military importance, destructive power, cost, and potential consequences of an accident or unauthorized act. Conserving nuclear weapons as national resources and ensuring the safety of the public, operating personnel, and property are most important during maintenance, storage, handling and logistics movement, and operational employment of nuclear weapons.

1.3. Major Commands

1.3.1. General

1.3.1.1. Oversee nuclear weapons employment, maintenance, and storage activities. Assist with weapons system sustainment activities and provide current information to all planning agencies as to weapon availability, compatibility, and capability. Coordinate technical support and provide guidance on maintenance issues beyond unit capabilities.

1.3.1.2. Ensure weapon and equipment resources are managed to comply with operational testing, Department of Energy (DOE) Quality Assurance and Reliability Testing (QART) and all Air Force testing program requirements.

1.3.1.3. Forward unit requests for Limited Life Component (LLC) expiration date extensions to 708 NSUS/NWLO. Requests must include circumstances requiring an extension and must be approved by the Maintenance Group Commander.

1.3.1.4. Verify integration of changes to technical data and review changes for accuracy.

1.3.1.5. Identify unit taskings in the Maintenance Capability Letters (MCL). MCLs must identify all weapons maintenance capabilities to include day-to-day mission requirements, unique certifiable tasks to support contingencies, and/or reconstitution taskings.

1.3.1.6. Ensure units develop and use standardized lesson plans for all certifiable tasks, component packaging, H1616, and chaff operations.

1.3.1.6.1. Review Nuclear Weapons Training Program (NWTP) course curriculum and tests to ensure consistency between units.

1.3.2. Air Force Global Strike Command (AFGSC). AFGSC/A4 is the office of primary responsibility for AFGSC nuclear support guidance.

1.3.3. Air Force Materiel Command (AFMC). AFMC/A4 is the office of primary responsibility for AFMC nuclear support guidance.

1.3.3.1. Air Force Nuclear Weapons Center (AFNWC): In addition to the responsibilities identified in AFI 21-2XX Series, AFNWC oversees Air Force nuclear weapon stockpile stewardship, including Air Force requirements, program planning, system development, stockpile life extension and sustainment programs. AFNWC provides support for reentry systems (RS), gravity weapons, warheads, cruise missiles, and weapons storage and security system (WS3). AFNWC serves as the primary point of contact on matters pertaining to weapons development and resolution of weapons maintenance issues.

1.3.3.1.1. AFNWC/LG. AFNWC/LG has logistics, inspection, and technical oversight duties for the AFNWC. When tasked by HQ Air Force and HQ AFMC, units will send informational replies to AFNWC/LG.

1.3.3.1.1.1. Serve as 24hr POC for notifications to the AFNWC. AFNWC POC contact information will be disseminated to Joint Staff, Defense Threat Reduction Agency (DTRA), National Nuclear Security Administration (NNSA), AF/A4LW, AF/A10, MAJCOMs, and AFMC units.

1.3.3.1.1.2. Coordinate support and provide guidance on maintenance issues beyond unit capability and will coordinate actions with applicable MAJCOM/708 NSUS prior to requesting support from units assigned outside of AFMC.

1.3.3.1.1.3. Develop and publish a standardized visual inspection lists for all weapons systems. Review and update visual inspection lists at least annually.

1.3.3.1.1.4. Monitor test set failure/troubleshooting data entered into the Air Force Munitions Command and Control (AF MC2) Sharepoint Environment. Coordinate support as necessary to resolve test set work stoppages.

1.3.3.1.2. 498 Missile Sustainment Group (MSUG) and 526 ICBM Systems Group (ICBMSG):

1.3.3.1.2.1. Provide status on nuclear issues in work or requiring resolution to include sustainability of current programs in use by the field to the AFNWC and AFMC.

1.3.3.1.2.2. Provide disposition instructions to 708 NSUS for DoD-designed items requiring evaluation based upon their interface with DOE designed items. Disposition instructions will be included with the Unsatisfactory Report (UR) or Deficiency Report (DR) response.

1.3.3.1.3. AFNWC Munitions Maintenance Groups (MUMG) and Munitions Squadrons (MUNS):

1.3.3.1.3.1. Assigned MUNS will manage and perform CONUS field-level maintenance activities as tasked in the MCL.

1.3.3.1.3.1.1. Maintain custody of nuclear weapons until custody is transferred for mating to the delivery system.

1.3.3.1.3.1.2. Maintain capability to perform nuclear munitions maintenance,

including but not limited to LLC exchanges, weapon alterations, receipt inspection/verification inspection, transfer, general maintenance, use control operations, and use/maintenance of test, tiedown, and handling equipment.

1.3.3.1.3.1.3. Maintain capability to perform gravity bomb mate/demate and off-aircraft launcher upload/download. Perform on/off aircraft equipment maintenance on assigned rotary launcher, interface electronics and associated equipment.

1.3.3.1.3.1.4. Maintain capability to perform RS and Reentry Vehicle (RV) maintenance, assembly and testing.

1.3.3.1.3.1.5. Maintain capability to perform air launched cruise missile (ALCM) maintenance, to include warhead mate/demate and missile to pylon/launcher upload and download conducted off-aircraft within the integrated maintenance facility (IMF). Perform on/off aircraft equipment maintenance on assigned ALCM, pylons, launchers, interface electronics and associated equipment. Perform cruise missile shipment/receipt activities.

1.3.3.1.3.1.6. Maintain capability to transport and deliver loaded pylons/launchers, containerized warheads, gravity bombs, and single missile(s) within, to and from the Weapons Storage Area (WSA) to include logistics movements.

1.3.3.1.3.1.7. Manage stockpile, weapons accountability, and weapons storage.

1.3.3.1.4. AFNWC 708th Nuclear Sustainment Squadron (NSUS). 708 NSUS has been delegated logistics and technical oversight duties by HQ Air Force and HQ AFMC. When tasked, units will respond in the same manner as for tasks from HQ Air Force and HQ AFMC. Provide AFMC voting member to gravity weapons and warhead Project Officer Groups (POG) and represent the Air Force as member of the Nuclear Reports Management Group. Serves as the Service Logistics Agent for all nuclear weapons assigned to the Air Force. The 708 NSUS will:

1.3.3.1.4.1. Ensure weapons stockpile quantities align with the Nuclear Weapons Stockpile Memorandum (NWSM), and are available to meet operational mission requirements. Direct charge code changes through either the Nuclear Ordnance Shipping Schedule (NOSS) or other means (e.g. Stockpile Lab Test (SLT) / Stockpile Flight Test (SFT) Warning Orders).

1.3.3.1.4.2. Manage SFT selections and provide SLT candidates to NNSA as required.

1.3.3.1.4.3. Develop Fiscal Year LLC Forecast and provides DTRA with Air Force requirements.

1.3.3.1.4.4. Determine retrofit kit requirements.

1.3.3.1.4.5. Fund procurement and transportation for Military Spares and DOE designed Air Force owned TYPE 3 trainers and special equipment.

1.3.3.1.4.6. Serve as the focal point for Nuclear Ordnance Controlled Material

support, provide units and applicable MAJCOMs assistance and coordinate with DTRA and NNSA, as required, to resolve nuclear management, technical, and sustainment issues.

1.3.3.1.4.7. Provide technical orders, supply support, test and handling equipment, and training devices.

1.3.3.1.4.8. Ensure required weapons trainers are serviceable and in the latest configuration.

1.3.3.1.4.8.1. Prepare and develop funding requests and POM submissions for procurement of parts for fielded trainers, trainers undergoing refurbishment, and unique nuclear support and test equipment.

1.3.3.1.4.8.2. Develop life cycle plans for nuclear weapons trainers and coordinate with applicable MAJCOMs on availability of trainers for shipment to Kansas City Plant (KCP) for repair/refurbishment.

1.3.3.1.4.8.3. Ensure TYPE 3 trainers managed by the 708 NSUS are inspected, maintained and repaired. NOTE: Not all trainers managed by the 708 NSUS require inspection and maintenance (i.e., obsolete and excess trainers).

1.3.3.1.4.9. Serve as the focal point for Code Management System (CMS) development, procurement and support. Provide DoD repair activity for Use Control equipment.

1.3.3.1.4.10. Serve as the single point within the Air Force for management and coordination of nuclear weapons and associated equipment materiel defects and deficiency UR program. They collect, disseminate, and resolve issues concerning unsatisfactory conditions and forwards corrective actions to units and applicable MAJCOMs.

1.3.3.1.4.11. Oversee nuclear weapon maintenance, coordinate support, and provide guidance on maintenance issues beyond unit capability.

1.3.3.1.4.12. Publish a monthly Time Change Item/Support Schedule. This schedule will identify LLC component/support kits scheduled for delivery to each unit.

1.3.3.1.4.13. Publish a monthly Time Change Item Return Schedule (may be combined with support schedule). This schedule will identify component/kits to be returned to NNSA. This schedule may require coordination with affected unit to ensure availability.

1.3.3.1.4.14. Approve/disapprove LLC extension request. Forward approved requests to DTRA for approval by NNSA.

1.3.3.1.4.15. Serve as the Air Force Executive Agent and single point of contact for management and coordination of change proposals affecting Joint Nuclear Weapons Publication System (JNWPS) documents.

1.3.4. United States Air Forces in Europe (USAFE). USAFE/A3 is the office of primary responsibility for USAFE nuclear support guidance.

1.4. Unit Responsibilities.

1.4.1. Wing Commanders. In addition to the applicable responsibilities found in AFI 21-2XX series, Wing Commanders will:

1.4.1.1. Provide storage, security, control, and custodial responsibility for all nuclear weapons and nuclear components.

1.4.1.2. Authorize all nuclear weapons movements outside a restricted area. Nuclear weapons will not be moved outside a restricted area during hours of darkness or in severe weather conditions unless necessary to meet mission requirements.

1.4.2. Maintenance/Munitions Group Commanders. In addition to the applicable responsibilities found in AFI 21-2XX series, Maintenance Group commanders will:

1.4.2.1. Inform applicable MAJCOM if unit does not meet MCL requirements. AFMC units will inform AFNWC/LG and 708 NSUS.

1.4.2.2. Request a waiver from the 708 NSUS, if nuclear weapons maintenance cannot be completed within 60 calendar days of receipt of LLC, alteration, or retrofit components. Provide justification and scheduled completion dates. USAFE units will coordinate through HQ USAFE/A3NM staff.

1.4.2.3. Approve all requests sent to 708 NSUS to extend LLC expiration dates and to perform LLC exchanges earlier than 6 months.

1.4.2.4. Inform the AFNWC/LG and 708 NSUS if nuclear weapons repair actions cannot be completed within 30 calendar days of receipt of UR or DR directions. USAFE units will coordinate through HQ USAFE/A3NM staff.

1.4.2.5. Ensure Quality Assurance (QA) attends maintenance scheduling meetings. This will allow QA the opportunity to schedule/perform required AFI 21-200, Table 8.1 evaluations.

1.4.3. Munitions Accountable Systems Officer (MASO). A single individual who oversees all aspects of the daily accountability and custody of the nuclear weapons stockpile. The MASO executes the accountable officer and custodian responsibilities identified in AFI 21-203, *Nuclear Accountability Procedures*, and T.O. 11N-100-4, *Custody, Accountability, and Control of Nuclear Weapons and Nuclear Material*. In addition to the applicable responsibilities found in AFI 21-2XX series, MASO's will:

1.4.3.1. Ensure valid work orders are issued prior to weapons movement and ensure AF Form 504, *Weapons Custody Transfer Documents*, are used to document custody transfers for operational movements as outlined in AFI 21-203, *Nuclear Accountability Procedures*. This verification will be accomplished by reviewing work orders.

1.4.3.2. Update Defense Integration and Management of Nuclear Data Services (DIAMONDS) Storage Location Planning Report at the end of every shift on which changes occur. Provide an updated copy to Munitions Control unless a DIAMONDS terminal is located in the control center.

1.4.4. Operations Officer/Maintenance Superintendent (MX/SUPT). Responsible for the overall management of weapons/munitions activities. Provides broad guidance. The scope of the responsibility concentrates on the safe, secure, and efficient use of resources, while

maintaining the highest degree of weapons/munitions capability, and reliability in accordance with all governing standards. The ultimate goal is maintaining a combat readiness capability commensurate with mission tasking. In addition to the applicable responsibilities found in AFI 21-2XX series, MX/SUPT will:

1.4.4.1. Appoint, in writing, a minimum of two qualified/certified instructors to establish, implement, and sustain the NWTP outlined in Chapter 3 of this instruction.

1.4.4.2. Appoint, in writing, qualified individuals as nuclear weapons certifying officials for nuclear weapons maintenance, mate/demate, handling, and final assembly tasks IAW Chapter 3.

1.4.4.2.1. Interview newly appointed certifying officials prior to their performing certifications. Document completion of the interviews in the individual's AF Form 623A, *On-the-Job Training Record Continuation Sheet* (or equivalent).

1.4.4.3. Ensure personnel comply with custody/accountability procedures identified in AFI 21-203, *Nuclear Accountability Procedures*, and use source documents to validate job requirements.

1.4.4.4. Ensure 100% of the stockpile is inspected annually at a rate of 25% per quarter.

1.4.4.5. Ensure all TYPE 3 trainers not on the weapons maintenance custody account are controlled, inspected, maintained, and repaired IAW an agreement between MUNS/MXS and owning agency.

1.4.4.6. Ensure all TYPE 3 A/B/C trainers are inspected IAW applicable -1 manuals after receipt and before shipment and applicable Inspection Record Card (IRC) entries are made. Report any deficiencies found during inspections IAW T.O. 11N-5-1, *Unsatisfactory Reports*.

1.4.4.7. Periodically observe maintenance tasks. Every effort should be made to observe tasks on different teams and shifts.

1.4.5. Flight Commander/Flight Chief. The Flight Commander/Flight Chief is responsible to the Maintenance Supervision for the leadership, supervision, and training of all assigned personnel. In addition to the applicable responsibilities found in AFI 21-2XX series, Flight Commanders/Flight Chiefs will:

1.4.5.1. Review the Location Inventory Listing (LIL) and LLC forecasts for assigned weapons systems, if applicable.

1.4.5.1.1. Contact the 708 NSUS through applicable MAJCOM for LLC expiration date extensions. Flight Commander/Flight Chief will provide 708 NSUS with a letter documenting circumstances requiring an extension, signed by the Group Commander.

1.4.5.1.2. Submit requests to perform LLC exchanges earlier than the 6-month window to 708 NSUS, for approval.

1.4.5.2. Inform supervision immediately of any significant nuclear weapons related issue negatively impacting mission requirements. Issues include conditions resulting in non-operational weapons/systems, rejectable parts/components, manning shortfalls, or an inability to meet mission requirements requiring a UR/DR, mishap report, or maintenance assist requests.

1.4.5.3. Interview all newly assigned bay chiefs and team chiefs. Interviews will emphasize supervisory responsibilities to include compliance and enforcement of technical data, safety, security, nuclear surety, NWRM, and accountability requirements. Document these interviews in the Bay Chief's (BC) and Team Chief's (TC) AF Form 623A, *On-the-Job Training Record Continuation Sheet* (or equivalent). Only one interview is required prior to the individual's first TC certification, or if already TC certified, or initially upon assignment if already TC certified, or initially upon assignment as a BC.

1.4.5.4. Interview all newly assigned NWTP primary/alternate trainers. Document these interviews in the individual's AF Form 623A, *On-the-Job Training Record Continuation Sheet* (or equivalent). Only one interview is required prior to the individual's trainer proficiency evaluation.

1.4.5.5. Periodically observe maintenance tasks and perform proficiency checks as required. Every effort should be made to observe tasks and perform proficiency checks on different teams and shifts.

1.4.6. Section/Element Supervisor. Responsible for the daily supervision and training of assigned personnel. In addition to the applicable responsibilities found in AFI 21-2XX series, section/element supervisor will:

1.4.6.1. Ensure oldest LLCs are installed first by the maintenance section. Ensure H1616 containers are shipped prior to their expiration date.

1.4.6.2. Verify accuracy of scheduled and unscheduled maintenance actions and applicable serial numbers on all work orders prior to initiation of the work. This verification will be accomplished during the daily production meeting by reviewing work orders to be issued. Ensure all actions are accomplished and reported as required.

1.4.6.2.1. Corrections to the Job Control Number, Serial Number, Identification Number, Work Center, Location, Discrepancy, or Work Center Event narrative blocks are not authorized and the work order will be reaccomplished prior to issuing. Documentation errors committed during work accomplishment may be corrected on the work order.

1.4.6.3. Ensure visual inspections are accomplished IAW Chapter 4 of this instruction and T.O. 11N-35-51, *General Instructions Applicable to Nuclear Weapons*.

1.4.6.4. Ensure maintenance teams validate contents of each storage structure, bay, or WS3 with Munitions Control prior to closing for all assets that were removed or secured. Ensure the MASO is notified when movements change the DIAMONDS Storage Location and Planning Report. 898 MUNS will use movement control records or a cell inventory listing to validate items moved to/from storage.

1.4.6.5. Ensure applicable maintenance-related nuclear reports are submitted IAW AFI 21-203, *Nuclear Accountability Procedures*.

1.4.6.6. Ensure availability of current publications to meet work center needs. This includes DIAMONDS publications. This validation will be scheduled in the quarterly, monthly, and weekly forecasts and schedules.

- 1.4.6.6.1. Develop and implement a process to inform applicable work-center technicians, in detail, of policy and technical data changes/revisions.
- 1.4.6.7. Ensure repairs or modifications are not made to weapons or weapon support equipment unless authorized by approved technical procedures.
- 1.4.6.8. Ensure personnel maintain shelf life items (lubricants, paint, etc.) IAW T.O. 11N-35-51A, *General Instructions Applicable to Nuclear Weapons (Supplement)*, T.O. 42B-1-1, *Quality Control of Fuels and Lubricants*, and AFMAN 23-110, *USAF Supply Manual*.
- 1.4.6.9. Ensure Common Strategic Rotary Launcher (CSRL) gravity weapon suspension kits are packaged, maintained, and controlled in storage containers.
- 1.4.6.10. Ensure maintenance activities listed in AFI 21-200, Table 8.1 are scheduled in the weekly and monthly schedule.
- 1.4.6.11. Ensure standardized lesson plans are used for training certifiable tasks, component packaging, H1616 and chaff operations.
- 1.4.6.12. Ensure all personnel are qualified, certified, and proficient prior to performing nuclear weapons maintenance, mate/demate, handling, and final assembly tasks. All 2W2XXs will have a Career Field Education and Training Plan (CFETP) documenting activities they are qualified to perform, inspect, report, and/or monitor.
- 1.4.6.13. Ensure team briefings are given before the start of any weapons operation IAW AFI 91-101, *Air Force Nuclear Weapons Surety Program*, AFMAN 91-201, *Explosives Safety Standards*, and T.O. 11N- 45-51 Series technical data, as required.
- 1.4.6.14. Periodically observe maintenance tasks and perform proficiency checks as required. Every effort should be made to observe tasks and perform proficiency checks on different teams and shifts.
- 1.4.7. Bay Chief. Directly responsible for ensuring all maintenance teams perform safe, secure, and reliable nuclear weapons maintenance activities. Bay Chiefs will:
- 1.4.7.1. Be Job Qualification Standard (JQS) qualified and TC certified on tasks identified in the MCL.
- 1.4.7.2. Provide direction to team chiefs, enforce maintenance standards, and removes/recommends sub-standard performers for decertification and remedial training. Document these actions in the AF Form 623A *On-the-Job Training Record Continuation Sheet* (or equivalent).
- 1.4.7.3. Ensure maintenance areas are prepared for the day's or shift's maintenance tasks prior to introducing nuclear weapons or commencing with maintenance activities. For WS3 operations, this preparation must be complete prior to opening a Weapons Storage Vault (WSV) containing War Reserve (WR) weapons. The WSV may not be raised until the Bay Chief has verified all preparatory actions have been completed. This requirement does not apply during contingency operations such as aircraft generation, disablement, and emergency evacuation.
- 1.4.7.4. Verify source documents prior to performing weapons maintenance, mate/demate, handling, or final assembly checkout tasks to validate the proper operation

is being performed on the correct end item. Source documents for maintenance actions include the LIL, time change item schedule, special procedures, retrofit orders, URs, and delayed discrepancy listing. Source documents for rewarehousing and stockpile activities are the maintenance schedule and work order.

1.4.7.5. Ensure personnel are qualified, certified, and proficient prior to performing nuclear weapons maintenance, mate/demate, handling, and final assembly tasks.

1.4.7.6. Ensure prior to use inspections are completed on hoist, vehicles, and related Aerospace Ground Equipment (AGE) equipment.

1.4.7.7. Ensure maintenance teams use nuclear certified software and equipment as required.

1.4.7.8. Ensure availability/serviceability of required expendables, technical orders, tool kits, Test Measurement and Diagnostic Equipment (TMDE), test and handling equipment.

1.4.7.9. Ensure serviceable replacement components, Group X kits, or Time Compliance Technical Order (TCTO) kits are on hand, inventoried, and inspected to ensure serviceable assets are available for the maintenance task.

1.4.7.10. Ensure line numbers are verified prior to commencing maintenance, update line numbers as they occur, and verifying the accuracy of line numbers with Munitions Control at the end-of-day or shift.

1.4.7.11. Ensure teams identify a Sole Vouching Authority (SVA) and comply with No Lone Zone and Two Person Concept requirements.

1.4.7.12. Ensure all technical order changes have been reviewed and fully understood by all personnel prior to starting the operation. Ensure strict compliance with technical order procedures, safety, and security requirements within their maintenance area, and enforces Weapon System Safety Rules (WSSR).

1.4.7.13. Ensure personnel use verbal demand-response techniques on all nuclear weapons tasks.

1.4.7.14. Ensure team chiefs submit all required documents/reports upon completion of the maintenance tasks (i.e., work orders, nuclear weapons configuration records (build-up sheets), inspection record card (IRC), custody transfer documents, status change reports (SCR), weapons information reports (WIR), URs, etc...).

1.4.7.15. Monitor maintenance activities and perform proficiency checks as required.

1.4.7.16. Perform In-Process Inspection (IPI) and visual inspections as required.

1.4.7.17. Ensure test set failure/troubleshooting data is entered in the AF MC2 Sharepoint Environment.

1.4.8. Team Chief. Directly responsible for producing safe, secure, and reliable nuclear weapons maintenance activities. Team Chiefs will:

1.4.8.1. Be JQS qualified and TC certified on tasks identified in the MCL.

1.4.8.2. Provide direction to team members and enforces compliance with No Lone Zone and Two Person Concept requirements.

1.4.8.3. Stop maintenance tasks upon encountering an abnormal condition outside the scope of technical orders or identifying a defect requiring rejection of a weapon or associated component. Up-channel the condition to appropriate level of leadership for resolution before continuing the maintenance task.

1.4.8.4. Verify source documentation prior to performing weapons maintenance, handling, or mating tasks to validate the proper operation is being performed on the correct end item. Source documents for maintenance actions include the LIL, time change item schedule, special procedures, retrofit orders, URs, and delayed discrepancy listing. Source documents for rewarehousing and stockpile activities are the maintenance schedule and work order.

1.4.8.4.1. For weapon receipt/verification and shipment use DD Form 1348-1A, *Issue Release/Receipt Document*, or DD Form 1911, *Material Courier Receipt*, and work order to visually verify that the weapon serial numbers match.

1.4.8.4.2. For maintenance actions, visually verify the weapon serial number matches the source document and work order prior to beginning the operation. Notify Munitions Control prior to starting and upon completion of scheduled and unscheduled explosive operations.

1.4.8.5. Review applicable technical data prior to the start of a nuclear weapons task. TO users must check the date of the TO and the change number against the posted Web Automated Technical Order Management System (ATOMS) Master TO Report before using a DIAMONDS TO.

1.4.8.5.1. TO users will not use a DIAMONDS TO if its status is marked "transitional" or is not authorized for use in DIAMONDS. Contact the unit Technical Order Distribution Office (TODO) to have the TO accepted and printed if the updated TO is needed.

1.4.8.6. Submit all required documents/reports upon completion of the maintenance task (i.e. work orders, nuclear weapons configuration records (build-up sheets), IRC, custody transfer documents, SCR, WIR, URs, etc.).

1.4.8.6.1. Report weapon status changes and line number changes to Munitions Control as they occur.

1.4.8.6.2. Forward original certified nuclear weapon configuration records (build-up sheets) to the MASO and copies to Munitions Control and maintenance section.

1.4.8.7. Enforce verbal demand response for all weapons tasks and ensure team members complete actions only as directed.

1.4.8.8. Comply with technical order procedures, safety, and security requirements and enforce WSSRs.

1.4.8.9. Ensure IPI and visual inspections are performed at required steps within technical order procedures.

Chapter 2

MANAGEMENT OF NUCLEAR WEAPONS, NUCLEAR COMPONENTS, AND SPARES

2.1. Management of Nuclear Weapons.

2.1.1. Broad guidance on nuclear weapon stockpile quantities is provided by various documents (i.e. START I, Presidential Decision Directives, Nuclear Posture Review, etc.). The DoD and DOE prepare, coordinate, and deliver the Nuclear Weapons Stockpile Memorandum (NWSM), which contains the Nuclear Weapons Stockpile Plan (NWSP), to the President. The President then signs a NWSP which directs quantities and types of nuclear weapons in the active and inactive stockpile. The President, through the SECDEF and Chairman of the Joint Chiefs of Staff, entrusts the stockpile to various Services for employment as requested/directed by combatant commanders (e.g. USSTRATCOM, EUCOM), based on their missions and use in execution of war plans.

2.1.2. AFNWC (708 NSUS) is the Service Logistics Agent (SLA) for all nuclear weapons assigned to the Air Force. They ensure stockpile quantities align with the NWSM, and are available to meet mission requirements. They schedule weapon movements through the NOSS to ensure all weapons are at the proper location in adequate quantities. They determine the best storage locations for active and inactive reserve weapons. They direct charge code changes through either the NOSS or other means (e.g. SLT/SFT Warning Orders) to meet NWSM requirements. 708 NSUS will request all MTOs from DTRA. This will be accomplished via the NOSS module or MTO request module in DIAMONDS.

2.1.3. 708 NSUS provides DTRA Long- and Short-Range Plans necessary to achieve end-of-year actions required to meet NWSM requirements.

2.1.4. 708 NSUS is responsible for maintenance management of retired weapons stored at the AFMC MUNS.

2.2. Management of Nuclear Components.

2.2.1. 708 NSUS will develop the annual Fiscal Year LLC Forecast for the Air Force. 708 NSUS will coordinate with MAJCOM or units as necessary to provide forecast to DTRA NLT 1 April. DTRA/CSNOO develops the LLC Shipping and Utilization Schedule specified in T.O. 11N-100-2, *Supply Management of Limited Life Components*.

2.2.1.1. Replacement LLCs will be force shipped to Air Force units having custody of weapons, to allow maintenance actions to be accomplished prior to LLC expiration dates. MAJCOMs/CONUS Munitions Maintenance Groups may request alternate support schedules from 708 NSUS. Changes to the annual schedule must be submitted NLT than 90 days before need date. MAJCOMs/CONUS Munitions Maintenance Groups will review schedules quarterly and provide 708 NSUS any required changes. Negative input is required to 708 NSUS. The requests may represent one-time requirements (i.e., early support of items to align system due dates, or to allow units to deconflict maintenance schedules), or may be ongoing projections to optimize unit maintenance scheduling and workload leveling.

2.2.1.2. Requests for early support in excess of times specified in T.O. 11N-100-2, *Supply Management of Limited Life Components*, require waiver by DTRA. MAJCOMs/CONUS Munitions Maintenance Groups forwards waiver requests to 708 NSUS. Requirements for timely return of expired LLCs in TO 11N-100-2, *Supply Management of Limited Life Components*, apply regardless of requests for early support or alternate support schedules.

2.3. Management of Containers and Bolsters.

2.3.1. Containers and bolsters are used to support storage, maintenance, and logistics movement of weapons and components. In addition, WR containers and bolsters are used to support storage and movement of TYPE trainers.

2.3.1.1. Containers and bolsters are accounted for IAW procedures in AFI 21-203, *Nuclear Accountability Procedures*, and reported IAW 11N-100-4, *Custody, Accountability, and Control of Nuclear Weapons and Nuclear Materiel*.

2.4. Management of Nuclear Training and Test Items.

2.4.1. Nuclear Bomb Dummy Units (BDUs), TYPE Trainers, Tactical Ferry Payloads (TFP) and UA/UE Trainers will be managed using procedures in AFI 21-201, *Conventional Munitions Maintenance Management*. In addition, TYPE 3B Trainers must be reported, IAW T.O. 100-3150, *Joint Reporting Structure, Nuclear Weapons Reports*.

2.4.2. Items supporting operational/developmental testing programs (i.e. Joint Test Assemblies (JTAs), Compatibility Test Units (CTUs), Radar Test Units (RTUs), etc.) are managed and accounted for IAW procedures in AFI 21-203, *Nuclear Accountability Procedures*, and in some cases reported IAW T.O. 100-3150, *Joint Reporting Structure, Nuclear Weapons Reports*, on a QAST Status Reports (QSR). These items are force-shipped to units on an as-needed basis.

2.4.2.1. Maintenance and handling procedures for JTAs are provided in the weapons specific -1 manual. These procedures may be utilized for Developmental Joint Test Assemblies (DJTA). When procedures in the -1 manual are not adequate, Special Procedures (SP) will be developed and provided to field units, as applicable. Minor differences for DJTAs, such as markings and configuration changes may be addressed in the Test Plan and not require an SP.

2.4.2.2. Air Force units supporting and/or conducting nuclear weapons test and evaluation will ensure compliance of non-nuclear assurance program IAW T.O. 11N-569-2, *T569 Non-Nuclear Verification Tester with Non-Nuclear Assurance Program Field Procedures*.

2.4.3. SFT selections made within the Air Force will be selected and managed by the 708 NSUS. SLT selections are made by NNSA. 708 NSUS will provide selection candidates to NNSA as required. Selection of candidates is formalized by inclusion in the NNSA New Material Stockpile Evaluation Schedule (NMSES). The NMSES is the source document to authorize charge code changes for QART weapons, these actions will be directed by the 708 NSUS.

2.5. Management of Retrofit Kits.

2.5.1. 708 NSUS determines retrofit kit requirements. Kits are normally forced-shipped to units based on quantities of items that the unit possesses requiring the retrofit. Kits are maintained and accounted for IAW the procedures in AFI 21-203, *Nuclear Accountability Procedures*.

2.6. Management of Funds.

2.6.1. DOE manages funding for First Destination Transportation of nuclear weapons, components and Base Spares to or from DOE facilities.

2.6.2. SDT funding for nuclear weapons and components and other items transported by Prime Nuclear Airlift Force (PNAF) missions or NNSA's Office of Secure Transportation (e.g. Jet Air or SGT) are forecasted for by 708 NSUS and provided by AFMC/LSO.

2.6.2.1. MAJCOMs provide projections of movement requirements to 708 NSUS as requested. 708 NSUS, in turn, develops funding requirements and forwards them to HQ AFMC/LSO.

2.6.3. 708 NSUS funds procurement and transportation for Military Spares and DOE designed Air Force test and handling equipment. These items are requisitioned IAW T.O. 11N-100-1, *Supply Management of Nuclear Weapons Material*, are free issue, and are shipped without charge to the units. 708 NSUS provides reimbursement to DOE.

2.7. Management of Nuclear Weapons, Nuclear Components, Air Force owned DOE-designed Special Equipment and Base or Military Spares.

2.7.1. DOE and 708 NSUS manage all items unique to the Air Force nuclear weapons program, by their application or initial design. Materiel required for support of the Air Force nuclear weapons programs fall into three categories: Base Spares, Military Spares, and Special Equipment (see definitions for specific examples).

2.7.2. DOE funds and furnishes Base Spare items to the Air Force for maintaining DOE-owned weapons and equipment. Do not use Base Spare items for other purposes unless authorized by NNSA/NA-122.1 through the 708 NSUS. Likewise, do not use Military Spare items to maintain DOE-owned weapons.

2.7.3. 708 NSUS funds and furnishes Military Spare items to the Air Force for maintaining DOE-designed and Air Force owned TYPE 3 trainers and special equipment.

2.8. War Reserve Materiel (WRM). Nuclear ordnance items are excluded from war reserve materiel procedures in AFI 25-101, *War Reserve Materiel Program Guidance and Procedures*.

2.9. Working Capital Fund. All Military Spares and Special Equipment items are considered investment items and excluded from the working capital fund regardless of expendability, recoverability, and reparability category code.

2.10. Equipment Allowances and Authorizations for Special Equipment Controlled Items. Unless otherwise directed in this instruction or AFI 21-203, *Nuclear Accountability Procedures*, all nuclear ordnance special equipment controlled items listed in the nuclear weapons system allowance standards 439, 733, 803, 804, 805, 810 and 822 are controlled mission equipment. The allowance standards are managed by 585 CBSS/GBNA in the AF Equipment Management System (AFEMS/C001) and provide the basis to authorize, acquire, and account for essential support equipment. The equipment management function will manage

allowance and authorizations in Standard Base Supply System and AFEMS IAW AFMAN 23-110, *Supply Manual Procedures*.

Chapter 3

NUCLEAR WEAPONS TRAINING, QUALIFICATION, AND CERTIFICATION PROGRAMS

3.1. Nuclear Weapons Training Program (NWTP). Munitions Supervision is responsible for establishing, implementing, and sustaining an effective NWTP. The NWTP ensures highly qualified supervisors and technicians are readily available to sustain the maintenance requirements identified in the MCL. An NWTP will provide core knowledge on assigned weapons systems and associated maintenance policies via initial/recurring nuclear weapons academic training program. NWTP instructors will develop standardized training outlines and ensure in-depth JQS qualification training prior to certification.

3.1.1. A minimum of two NWTP instructors will be assigned to oversee the NWTP. They will be certified and proficient on all tasks. NWTP instructors are subject to trainer proficiency evaluations identified in AFI 21-200, *Munitions and Missile Maintenance Management*, Chapter 8.

3.1.2. NWTP training outlines will contain as a minimum:

3.1.2.1. Training title.

3.1.2.2. Student instructional material.

3.1.2.3. Training resources.

3.1.2.4. Instructional method.

3.1.2.5. Instructional guidance.

3.1.3. For assistance in writing training outlines, contact local logistics training flight. Refer to AFMAN 36-2234, *Instructional Systems Development*. The MX/SUPT is the final approval authority for course control documents. Initial and recurring course outlines may be combined.

3.2. Nuclear Weapons Academic Training. All personnel, regardless of duty position, who supervise, evaluate, or perform weapons maintenance tasks are required to complete initial and recurring weapons academic training.

3.2.1. Initial weapons academic training must be completed before the start of any task qualification training.

3.2.2. Recurring weapons academics training will be administered annually not later than the end of the month in which initial training was conducted. Academics training may be included as part of training and recertification for failed technical operations.

3.2.3. Individuals must complete a test with a minimum score of at least 80 percent. A test score of less than 80 percent requires retraining and retesting with a different test.

3.2.4. Document initial and recurring weapons academic training in IMDS.

3.2.5. Weapons academics course control documents will be tailored to unit mission/contingency needs and, as a minimum, cover the following items:

- 3.2.5.1. Applicable nuclear weapons/system capabilities, periodic maintenance requirements, accountability, inventory, and reporting requirements.
- 3.2.5.2. Nuclear weapons systems fault isolation, troubleshooting, and emergency procedures.
- 3.2.5.3. Authorized maintenance procedures and security requirements in bays, structures/cells, protective aircraft shelters and WS3 vaults.
- 3.2.5.4. Aircraft/ICBM generation requirements/timelines, if applicable.
- 3.2.5.5. Logistics movement requirements (PNAF, SGT, DoE contracted aviation).
- 3.2.5.6. Higher headquarters inspection requirements.
- 3.2.5.7. Overview of applicable AFIs, WSSRs, weapons system technical orders, and local operating procedures.
- 3.2.5.8. Missile/explosive safety, nuclear surety, NWRM, Intrinsic Radiation, and Personnel Reliability Program (PRP) training may be combined with weapons academics training.

3.3. Nuclear Weapons Qualification Program. All personnel, regardless of duty position, who supervise, evaluate, or perform certifiable weapons maintenance, mate/demate, handling, and final assembly checkout tasks must be JQS qualified.

- 3.3.1. NWTP qualification training will be scheduled and conducted in dedicated facilities/training areas.
- 3.3.2. NWTP trainers will use the CFETP Master Task List, standardized lesson plans, and applicable technical orders to JQS qualify technicians on certifiable tasks.
- 3.3.3. Qualification will be documented in applicable CFETPs.

3.4. Nuclear Weapons Certification Program. The requirements in this publication supplement Quality Assurance guidance identified in AFI 21-200 as they apply to specific unit mission.

3.4.1. Certification, as used here, is a term that applies to nuclear weapons maintenance tasks. The certification program is a requirement over and above the qualification and certification procedures contained in AFI 36-2201, Volume 5, *Air Force Training Program Career Field Education and Training*, and AFI 36-2232, *Maintenance Training*, and takes precedence over all other publications in the area of nuclear weapons certification and evaluation.

- 3.4.1.1. The objective of the certification program is threefold:
 - 3.4.1.1.1. To ensure initial certification is conducted using training weapons.
 - 3.4.1.1.2. To ensure non-certified technicians are not permitted to perform nuclear weapons tasks (maintenance, mate/demate, handling, and final assembly checkout) on WR weapons.
 - 3.4.1.1.3. To ensure technicians performing nuclear weapons tasks understand and use proper technical data, maintenance procedures, and techniques.

3.4.2. Technicians must have completed weapons academic training, applicable safety training, and be JQS task qualified prior to task certification.

3.4.3. Certification is limited to those items on which the technician is qualified.

3.5. Certifying Officials.

3.5.1. The 2WX7X and 2M07X QA are nuclear weapons certifying officials by virtue of position. If necessary, the MX/SUPT may appoint, in writing, additional technically qualified certifying officials for the following tasks: 2M052 for RS mate/demate and weapons handling tasks. 2M07X for launcher/pylon tests, select mate/demate tasks, and weapons handling tasks. 2WX71 for weapons handling tasks. 2W271 for weapons maintenance, mate/demate, handling, and Reentry System Test Set (RSTS) / Safety Enhanced Reentry Vehicle Field Test Set (SFTS) checkout tasks.

3.5.2. Personnel assigned Certifying Official responsibilities as defined in this AFI will be JQS qualified on the specific nuclear weapons, weapons systems, nuclear reporting, CDS, and Permissive Action Link (PAL) procedures as they apply to the task being evaluated. The individual must be capable of accurately observing job performance and identifying deviation from established standards.

3.5.3. Prior to performing certifications, the QA superintendent, Chief Inspector, MX/SUPT, or Flight Commander/Flight Chief will ensure Certifying Officials are JQS qualified on the task to be evaluated and have a current Evaluator Proficiency Evaluation (EPE) while performing a personnel evaluation. All certifying officials must receive a semiannual EPE on a personnel evaluation. If a certifying official is overdue the semiannual personnel EPE, the individual is restricted from performing certifications or personnel evaluations until another EPE is completed.

3.5.3.1. QA will maintain initial and current EPE documentation for all certifying officials.

3.5.4. Certifying Officials will not certify themselves.

3.5.5. Certifications will only be accomplished while observing actual task performance. Certifying Officials will not be part of the task being performed.

3.5.6. Certify technicians to perform or direct nuclear weapons maintenance, mate/demate, and final assembly checkout tasks as TC or TM. Technicians certified in the TC position may perform as TMs. Technicians must perform the entire operation, to include all documentation required for the task.

3.5.7. Certify technicians to perform transfer and transport tasks. All personnel certified on transfer and transport tasks must be able to demonstrate proficiency in all tasks areas that individual is qualified to perform. This includes use and application of all associated technical data.

3.5.8. Certify weapons maintenance, mate/demate, and final assembly checkout tasks by weapon type and task performed (e.g. B61 General Maintenance (GM), B61 LLC, etc.)

3.5.9. Separate certification is not required for nose and tail removals; weapon demate from launch gear; removal of RV from RS; or RV disassembly, provided individual is certified on the applicable installation, mate, or assembly procedure and is appropriately JQS qualified.

3.5.10. CDS recodes, activation, and Strike Enable Plug (SEP) removal or installation do not require certification. Individuals need be JQS qualified only.

3.5.11. PAL/CMS TMs do not require certification but training must be documented in the CFETP. PAL TMs are authorized to open and close access doors, connect/disconnect PAL/CMS cables and adapters, and perform visual monitors provided these items are included in PAL/CMS training.

3.5.12. Personnel involved in a one-time handling and movement of non-assigned weapons such as PNAF contingency, DOE SAFE HAVENs, etc., must be transfer and or transport certified and qualified to operate required equipment (tow vehicle, forklift, etc.) needed to support the mission. Technicians do not require JQS qualification on non-assigned weapons. This is the only exception to normal nuclear weapons certification and JQS qualification requirements. Personnel involved in a one-time handling and movement of non-assigned weapons must have current technical data available and they must review and understand the procedures prior to operation.

3.6. Certification Requirements.

3.6.1. Weapons maintenance, mate/demate, handling, and final assembly checkout task certifications will be performed using the following guidelines:

3.6.1.1. Certifications may involve any procedures that are authorized to be performed by that certification IAW paragraph 3.8 of this instruction. Certifying officials should vary what is demonstrated from certification to certification and limit “standard certifications” as much as possible to prevent technicians from being “trained for the certification.”

3.6.1.2. Abbreviated operations for the purposes of recertifying personnel are not authorized. Additionally, multiple TC certifications must be performed as separate, complete start-to-finish operations (i.e. one TC will not disassemble the weapon and a second TC reassemble it).

3.6.1.3. All certifications will include a sufficient number of injected defects and scenarios to provide the certifying official an accurate assessment of the scope and completeness of training and the crew’s proficiency during actual task performance. Certifying officials will avoid an excessive number of injects during the evaluation. The number of injects per certification will be coordinated through MX/SUPT and spelled out in the Quality Assurance Plan.

3.6.1.3.1. Injects will focus on the crew’s ability to react to emergency situations, detect and properly evaluate defects, and their in-depth knowledge of all technical data procedures applicable to that certification.

3.6.1.3.2. Each GM and LLCE TC certification will involve at least one inject UR against the weapon to verify the crew’s ability to generate accurate reports.

3.6.1.4. A certification is considered a normal evaluation in regards to all the evaluation rules provided in AFI 21-200, *Munitions and Missile Maintenance Management*, with the exception that certifications will not be counted against QA’s required Proficiency Evaluation (PE) totals in the QA database. All certifications will be scored and

documented as “Non-Rated” tasks regardless of whether or not it was a passed or failed certification. Follow established MXG routing procedures for certification reports.

3.6.1.4.1. Certification attempts that are not successful will be treated as training operations and documented as a non-rated evaluation. The evaluation will not be scored against established inspection and evaluation requirements.

3.6.1.4.2. A separate PE will be scored on certified personnel who are on a crew with an individual undergoing a certification. In addition, if the certified personnel commit an error, series of errors, or did not detect an error committed by others that they were in a position to have detected, they themselves will be decertified using the guidance in this chapter.

3.6.1.4.3. While performing a TC upgrade certification, if a previously certified TM commits error(s) which would affect his/her TM certification, the decertification rules provided in this chapter will apply to his/her TM certification. This means that in addition to failing the certification and not upgrading to TC, the technician will also be decertified as a TM based on his/her error(s) committed.

3.7. Certification Documentation:

3.7.1. Record certifications and proficiency checks on AF Form 2435, *Load Training and Certification Document*. Because of the critical nature of the certification, and to avoid conflicting certification data, the AF Form 2435 is to be used as a stand-alone document to validate current certification and proficiency status and is not meant to be used for historical purposes. The certifying official's signature on the AF Form 2435 is the formal act of certification. Automated systems may be used to monitor certifications and recurring proficiency checks. Automated systems cannot be used to verify/validate certifications. Keep AF Form 2435 in the individual's work center for easy access by supervisors, certifying officials, and dispatchers. No alterations to entries are authorized except Block 2. Use Figure 3.1 and Figure 3.2 as a guide.

3.7.2. Complete the AF Form 2435 in ink or type except when use of pencil is indicated below:

3.7.2.1. Blocks 1-4, self-explanatory (Block 2 in pencil).

3.7.2.2. Blocks 5-6, not applicable.

3.7.2.3. Block 7; enter weapon type and task as listed in paragraph 3.6 or as directed by MAJCOM. Enter “TC” or “TM” for appropriate team position.

3.7.2.4. Blocks 8-11, self-explanatory.

3.7.2.5. Block 12; enter the information from block 7 plus the current year. Enter a “C” for certified, a “P” for proficiency checks, a “D” for decertification, or an X (in pencil) for due date, under the corresponding month, year and task.

3.7.2.6. Transcribe AF Form 2435 by copying the applicable information from Blocks 1 through 8 and Block 12 of the old form to the new form. Enter "Transcribed" in Block 11 of the new form. Flight Chief or above enters, signs, and dates a statement on the new form attesting to the accuracy of the transcribed entries. Destroy original AF Form 2435.

3.7.2.6.1. Carry forward the last proficiency check or certification date (if no proficiency checks have been performed since certification) accomplished for each certified task.

3.7.2.6.2. Due to decertification then subsequent recertification, if the recertification date of any prerequisite task (i.e. B61 GM, 4 Feb 07) is after the certification date(s) for any subsequent tasks (i.e. B61 LLC, 22 Aug 06), enter the original GM certification date (15 May 06) in block 8 on the line as the task. Enter the recertification date on the line immediately below the original date. The word TRANSCRIBED will be placed in block 11 on the same line as the recertification date. In this case, proficiency checks do not need to be carried forward.

3.7.3. Flight Commander/Chief or MX/SUPT will decertify individuals for the following reasons:

3.7.3.1. Failure to perform required proficiency check or performing an operation that results in a failed PE.

3.7.3.2. Failure to demonstrate required technical proficiency. Demonstrating lack of technical proficiency, to such a degree that the task being evaluated cannot be completed without direct supervisory intervention. This does not include abnormal conditions requiring supervisory assistance.

3.7.3.3. Failure to use the required technical data during weapons maintenance, mate/demate, handling, or final assembly checkout tasks (i.e. no book or checklist, or wrong book or checklist).

3.7.3.4. Technicians failed to detect a safety or reliability deficiency in the weapon, component, or support equipment.

3.7.3.5. Upon upgrade certification to the TC position, decertify the individual from the TM position if certified in a TM position on the same task. Note: IAW paragraph 3.8.1.1.3, TCs decertified on GM may not perform in a TM position on any other task on the same weapon system until recertified on GM.

3.7.3.6. Flight Commander/Chief or MX/SUPT will decertify individuals for committing procedural errors that, if not corrected, would likely result in an unreliable weapon, unsafe environment, or insecure environment. This includes violations of weapon system safety rules.

Figure 3.2. Sample AF Form 2435, Load Training and Certification Document (Back)

| 12. LOADINGS | | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|--------------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| B83 GM | TC 2006 | | | | | | | | | | C | | |
| | 2007 | P | | | P | | | X | | | | | |
| | 2008 | | | | | | | | | | | | |
| B83 LLC | TC 2006 | | | | | | | | | | C | | |
| | 2007 | P | | | P | | | X | | | | | |
| | 2008 | | | | | | | | | | | | |
| B61 PC | TC 2006 | | | | | | | | | | | C | |
| | 2007 | | D | | | | | | | | | | |
| | 2008 | | | | | | | | | | | | |
| Transport | 2006 | | | | | | | | | | | | C |
| | 2007 | | | | D | | | | | | | | |
| | 2008 | | | | | | | | | | | | |
| W78 GM | TM 2006 | | | | | | | | | | | | C |
| | TC 2007 | | D/C | | | P | | | X | | | | |
| | 2008 | | | | | | | | | | | | |
| W78 LLC | TM 2006 | | | | | | | | | | | | C |
| | TC 2007 | | D/C | | | P | | | X | | | | |
| | 2008 | | | | | | | | | | | | |
| B61 GM | TC 2006 | | | | | | | | | | | | |
| | 2007 | | C | | | X | | | | | | | |
| | 2008 | | | | | | | | | | | | |
| B61 LLC | TC 2006 | | | | | | | | | | | | P |
| | 2007 | | | X | | | | | | | | | |
| | 2008 | | | | | | | | | | | | |

3.8. Certifiable Tasks

3.8.1. Weapons Maintenance.

3.8.1.1. General Maintenance (GM). This task includes receipt inspection, verification inspection, preparation for strike, preparation for storage, preparation for shipment, sealing warhead container, bomb nose and or tail removal/installation and transferring items to/from maintenance stands, alternate storage containers or out-of-container storage configuration. It also includes movement by hand, stacking/bolstering operations, and limited movement within the maintenance or storage facilities for alignment or positioning of the weapon.

3.8.1.1.1. GM certification allows technicians to perform any authorized maintenance, other than parachute exchange, not entailing disassembly of the warhead (e.g. removal of a major bulkhead or pressure cover allowing access to internal components).

3.8.1.1.2. GM certification is required prior to certification on any other certifiable task except those required for storage and handling or limited general maintenance (LGM). When technicians upgrade from TM to a TC position, GM or LGM, as applicable, must be the first task upgraded.

3.8.1.1.3. Decertification on GM does not necessarily require decertification on any other task(s). However, the technician will not perform those tasks until recertified on GM.

3.8.1.2. Limited General Maintenance (LGM). This task is weapon type specific and authorizes personnel to perform any external maintenance required for GM certification except nose/tail removal or removal/installation of warhead to/from container.

3.8.1.3. LLC Exchange (LLCE). Certification allows the technician to perform any authorized maintenance of warheads, or within basic bomb assemblies. This certification includes, but is not limited to, removal/installation of all LLCs (except those associated with Parachute Exchanges), leak tests and all disassembly not included in GM.

3.8.1.4. Parachute (PC) Exchange. Certification allows technicians to remove/install parachute.

3.8.1.5. RV Assemble. Certification allows the technician to assemble/disassemble a RV. Separate certifications are required for MK12, MK12A, and MK21.

3.8.2. Weapons Mate/Demate.

3.8.2.1. Mate/Demate RV. Certification allows the technician to install/remove the RS installation kit and install/remove RV to or from the payload support. Certification on one RV type is required and JQS qualification on the others. RV mate certification on one system certifies the individual on all provided they are GM certified on each warhead.

3.8.2.2. Mate/Demate Payload. Certification allows the technician to install/remove the payload to/from Air Launched Cruise Missile (ALCM) with payload GM certification and appropriate JQS qualifications (i.e., MHU-170/E or GSU-283/E).

3.8.2.3. Mate/Demate Pylon. Certification allows the technician to upload/download the ALCM to/from the pylon with appropriate JQS qualifications.

3.8.2.4. Mate/Demate CSRL. Certification allows the technician to upload/download the ALCM or gravity weapons to/from the CSRL with appropriate gravity weapon GM certification and JQS qualifications. (Certification on missile is required. Only JQS qualification required on gravity weapons mate with current certification on missile mate.)

3.8.2.5. Mate/Demate Rotary Launcher Assembly (RLA). Certification allows the technician to upload/download gravity weapons to/from the RLA with appropriate gravity weapon GM and JQS qualifications. (Certification on one gravity type required and JQS qualification on the other.)

3.8.2.6. Mate/Demate MHU-196/204.

3.8.2.7. Mate/Demate Launcher to/from Load Frame.

3.8.2.8. Mate/Demate Pylon to/from Load Frame.

3.8.2.9. Mate/Demate Aft Shroud. This certification allows the technician to install/remove the aft shroud on payload support, install/remove v-band clamp, install/remove in-flight disconnect cable, install/remove v-band clamp thermal covers, install/remove in-flight disconnect thermal cover, install/remove v-band pressure cartridges, install/remove thruster assembly thermal covers, install/remove shroud release shield, connect or disconnect shroud rocket motor in-flight disconnect. Certification on one system MK12, MK12A, or MK21 certifies technicians on all provided they are GM certified on each individual warhead.

3.8.2.10. Mate/Demate RS to/from Missile Guidance Set (MGS). Certification allows the technician to install/remove the RS to/from the MGS in the Launch Facility to include all electrical checkouts. 2M0X2 technicians will be JQS qualified and position certified in the following team positions: team chief, diving board, and work cage. (Certification on one RS type is required and JQS qualification on the others.)

3.8.2.10.1. Workcage position certification allows the technician to install/remove the RS.

3.8.2.10.2. Team Chief and Diving Board position certification allows the technician to install/remove the RS and checkout electrical system and warhead monitor loop.

3.8.3. Weapons Handling. Technicians are JQS qualified on each weapon type, trailer, lift vehicle, and tow vehicle type they are required to use or handle. Certifiable tasks include the following:

3.8.3.1. Transfer. Certification allows a technician to transfer weapons (excluding aircraft loading operations) to/from a forklift, vehicle, or trailer/SGT and install/remove tie-down devices within the limits of JQS qualifications. Transfer certified technicians with appropriate JQS qualifications may also perform visual monitor/safety checks, stack/unstack bolstered weapons, transfer weapons into/out of bolsters, in/out of the WS3 and Weapons Maintenance Truck (WMT), RS into/out of pit, RS into/out of PT (primary and alternate method), RS topside handling (2M0X2 technicians will be JQS qualified and position certified in the "topside" team position. (Certification on one RS type is required and JQS qualification on the others)).

3.8.3.2. Transport. Certification allows a technician to perform pre- and post-tow procedures, visual monitor/safety checks, and operate a tow vehicle or forklift transporting nuclear weapons within the limits of JQS qualifications. Personnel must have a valid operator's permit and be JQS qualified on the tow vehicle or forklift checkout and operation, trailer checkout and pre-tow inspections, operating tow vehicle with trailer, and post tow inspection for each tow vehicle or trailer utilized. Formal certification is only required on first tow vehicle; JQS qualify individuals on all subsequent vehicles/trailers.

3.8.3.2.1. Transport certification does not authorize an individual to install/remove tiedown devices, however, transport certified personnel must be able to ensure the load is secure and safe to transport.

3.8.3.2.2. During transport certification, the operator must demonstrate an understanding of and ability to operate all levers, switches, gauges, etc. Operator must demonstrate proficiency in vehicle operation while towing a trailer. Units will develop a course to test the operator's ability to turn (right and left), stop in an emergency, and back a loaded trailer.

3.8.3.2.3. Certification is accomplished using the largest, fully loaded, transportable package (i.e., launcher, pylon, etc...) the operator is qualified to operate within the assigned work center. If an individual subsequently qualifies to operate a larger package, a new certification for that operation must be accomplished. If applicable, include CDS procedures as part of initial transport certification.

3.8.4. Final Assembly Tests.

3.8.4.1. RSTS/SFTS Checkout. This certification allows a technician to perform checkout of the arm/disarm device, electronic command signals programmer, targeting function, and chaff subsystem tests. RSTS certification on one system also certifies the individual on the other system.

3.8.4.2. ALCM Loaded Launcher Test (LLT) / Loaded Pylon Test (LPT). This certification allows a technician to perform LLT or LPT. Certification on either LPT or LLT constitutes certification for both tasks if JQS qualification requirements are met. Document LPT/LLT certification on the same line of the AF Form 2435.

3.8.4.2.1. LLT/LPT certification will be performed using serviceable missile(s) with payload electrically isolated or not installed. Certification may be completed using a fully loaded launcher/pylon or a single missile on a launcher/pylon. Only the end-to-end or single missile end-to-end test options will be used for certification.

3.8.4.2.2. LLT/LPT successfully completed during certification are considered certified if the team passes the certification. If the test passes, but entire team or Team Chief certification is unsuccessful, the launcher/pylon is certified only if the test is overseen by a certified instructor, technician, or qualified certifying official.

3.9. Proficiency Checks.

3.9.1. Proficiency checks will be accomplished at least quarterly for each certified task an individual is certified on.

3.9.2. A JQS qualified QA, Bay Chief, or Section/Element Supervisor, or Flight Chief will conduct proficiency checks.

3.9.3. Proficiency checks may be accomplished during maintenance on WR weapons, in conjunction with a personnel evaluation or during a higher headquarters evaluation or inspection.

3.9.4. Proficiency checks will be performed on positions certified (i.e. TC, TM, diving board, work cage, etc...).

3.9.5. Proficiency checks must be accomplished prior to the end of the third month. For example, the last proficiency check for B-61 LLC was accomplished in July 2007, the next check must be accomplished NLT the last day of October 2007.

Chapter 4

NUCLEAR WEAPONS MAINTENANCE AND HANDLING POLICIES

4.1. General Policies. The policies below are applicable to all maintenance personnel who maintain, mate/demate, handle, checkout, or store nuclear weapons or TYPE 3 trainers. If there is a conflict between the policies below and other directives notify the OPR of this publication for resolution.

4.1.1. Maintenance Capability.

4.1.1.1. All levels of supervision will continually monitor shift manning/scheduling, equipment requirements, and will effectively schedule additional duties, leaves, training, and work details to provide maximum capability and minimize work force degradation.

4.1.1.2. Train and certify sufficient personnel to meet mission requirements outlined in the MCL. LLCE and PC exchange certification is mandatory only if assigned weapons are within 3 months of required maintenance.

4.1.1.2.1. If a unit is below their minimum MCL requirements for any reason (including leaves or TDYs); they are prohibited from performing WR maintenance unless approved by the MXG/CC or equivalent. The MXG/CC or equivalent must notify the applicable MAJCOM (AFMC units will notify AFNWC/LG and 708 NSUS). The notification must include the reason for falling below MCL and specific actions/compensatory measures that are in place to minimize the impact on maintenance. Include projected “get well” date and ensure applicable AFI 10-201, *Status of Resources and Training System*, reporting is accomplished.

4.1.2. Maintenance, Storage, and Configuration.

4.1.2.1. Keep nuclear weapons and warheads in fully assembled configurations except during maintenance or as otherwise directed by appropriate agencies. Submit requests to the applicable MAJCOM for deviations to storage configurations.

4.1.2.2. Store nuclear weapons only in approved structures and configurations. Do not co-mingle nuclear and non-nuclear munitions/missiles (i.e., TYPE trainers/shapes, JTAs, TFPs, empty missiles/containers, CALCM/ALCM Test Instrumentation Kits (CATIK), etc...) in the same storage structure, cell, or WS3. Only as a last resort and with written MAJCOM or AFNWC/LG approval may assets be co-mingled. All non-nuclear munitions/missiles will be identified using stanchions/cones, ropes, and placards to ensure there is a clear distinction between nuclear and non-nuclear munitions/missiles. Placards must indicate “Trainer”, “Empty”, “JTA”, or “CATIK”, as applicable.

4.1.2.3. Non-operational weapons will be identified using stanchions/cones, ropes, and placards. Non-operational weapons stored in a WS3 will be identified using placards. Placards must indicate “Non-Operational”. Make identification readily visible and do not remove until the status is changed or immediately before logistics movement. (EXCEPTION: 898 MUNS is not required to stanchion/cone, rope, or placard non-operational weapons).

- 4.1.2.3.1. It is not necessary to open a vault solely for the purpose of installing or removing a non-operational placard. Establish an Awaiting Maintenance (AWM) action against the weapon to install or remove placard during next scheduled opening.
- 4.1.2.4. Training and/or JTA and WR operations may take place at the same time as long as physical separation exists between operations. Physical separation must include clear delineation between operations using stanchions/cones, ropes, and placards. Placards must indicate "Training" or "JTA Operations", as applicable. In USAFE, concurrent operations with training and/or JTA and WR weapons are not authorized in a Protective Aircraft Shelter (PAS).
- 4.1.2.5. Weapons maintenance will have sufficient priority to ensure requirements spelled out in T.O. 11N-100-2, *Supply Management of Limited-Life Components* are met. Nuclear weapons maintenance will be completed within 60 calendar days from receipt of components. MXG/CC or equivalent will send waiver requests to exceed the 60-day requirement to the 708 NSUS. Waiver request will include a detailed justification and a plan for completing required maintenance.
- 4.1.2.6. Non-operational weapons must be returned to operational status as soon as possible, not to exceed 30 duty days following UR disposition and/or receipt of required replacement parts. If this timeframe cannot be met, MXG/CC or equivalent must request a waiver from applicable MAJCOM or AFNWC/LG.
- 4.1.2.7. Cannibalization or interchanging of nuclear weapon components is not authorized unless directed in technical order or by 708 NSUS.
- 4.1.2.8. ICBM units will maintain sufficient RS spares to support operational requirements. Spares will remain fully assembled and operational, except when a configuration change is required to meet mission requirements. Spare systems may be rotated into the missile field to enhance flexibility of the wing's maintenance schedule.
- 4.1.2.9. OCONUS units must make every attempt to store WR weapons in a WSV at the end of the duty day. If a weapon cannot be fully reassembled, or cannot be returned to the WSV for any reason, the MXG/CC or equivalent may authorize temporary storage outside of the WSV as a last resort. Unit will also notify USAFE/A3N and USAFE/A7SON by SIPRNET immediately.
- 4.1.2.10. Personnel may perform any inspection, test, or minor maintenance operation not involving weapon disassembly, in storage structures, vaults, alert areas, or generation areas. Examples include fin replacement, access door panel removal, coding operations and opening containers for inventory. Request waivers to this paragraph IAW AFMAN 91-201, *Explosives Safety Standards*, and the applicable WSSRs.
- 4.1.2.11. Whenever a warhead is exposed during a maintenance technical operation, the visible warhead surfaces will be inspected for defects IAW the applicable technical manuals. Reevaluate all defects to ensure previously acceptable defects are not rejectable because of criteria changes.
- 4.1.2.12. Clearly mark empty weapon storage containers/bolsters IAW T.O. 11N-35-51, *General Instructions Applicable to Nuclear Weapons*.

4.1.2.13. Nuclear weapons storage locations and maintenance bays must contain a thermometer if the types of weapons stored are required to comply with weapon temperature stabilization. This includes weapons storage vaults and WMTs.

4.1.2.14. In nuclear weapons maintenance facilities, display a locally manufactured sign/placard indicating Two-Person Concept is required (e.g. “No-Lone Zone Two-Person Concept Mandatory”) at the entrance to the maintenance bay, when applicable. Signs are not required in storage facilities or for outside operations.

4.1.2.15. When WR weapon(s) are exposed in the maintenance bay or PAS and maintenance personnel are present, secure the personnel entry door from inside. Advance Entry Control System units are exempt from this requirement; however, the maintenance bay door must be closed. If not possible, a two-person team will maintain entry control. SVA will approve all entry/exits in and out of no-lone zones/exclusion areas.

4.1.3. Receipt/Verification Inspections.

4.1.3.1. Maintenance personnel perform verification inspections on weapons and components IAW applicable 11N series TOs as soon as practical after receipt to verify the identity, quantity, and serial numbers with data shown on the shipping document or DIAMONDS data. Open shipping containers for this verification; however, do not disassemble warhead sections, RVs, or bombs. Where weapon disassembly would be required, verification requirements can be satisfied by comparing visible information on the weapon with corresponding data on the shipping document or DIAMONDS data, and weapon history records accompanying the shipment.

4.1.3.2. Do not open the H1616 container upon receipt. Verification of component serial numbers occurs only during unpacking before use. Both NARS and maintenance personnel will use serial numbers and reservoir fill dates on the shipping documentation, DIAMONDS data, and exterior tags on containers to report receipt. If a discrepancy is found between the shipping documentation, DIAMONDS data, and the container, contact 708 NSUS immediately and submit UR IAW T.O. 11N-5-1, *Unsatisfactory Reports*. Obtain component part numbers from the item TO. For DIAMONDS database purposes, if part number suffix is unknown use part number plus -XX (Example: 123456-XX). For special instructions for shipments between Military First Destinations (MFD) and overseas locations, see T.O. 11N-100-3150, *Joint Reporting Structure; Nuclear Weapons Reports*.

4.1.3.3. H1616 container serial numbers and DOT expiration dates will be updated in the AF MC2 Sharepoint Environment as changes occur. NARS personnel will use expiration dates to ensure assets are not shipped in overdue containers beyond the MFD. This requirement will remain in effect until capability is available in DIAMONDS.

4.1.3.4. Do not open packaged MC4519 assemblies upon receipt. Item is to be opened only by the end user immediately prior to use, as directed by applicable TO procedures.

4.1.3.5. NARS personnel will perform inspections of spare parts. If spare parts are determined to be unserviceable, report IAW T.O. 11N-5-1, *Unsatisfactory Reports*.

4.1.4. Defects and Deficiencies.

4.1.4.1. Stop operations upon the discovery of a defect that causes rejection of a weapon or major component, or upon encountering any unknown or unusual condition. Maintenance supervision (Section/Element supervisors or above) determines whether to continue operations based on careful review of the facts and circumstances. This approval to continue does not relieve the unit of any reporting requirements (UR/Dull Sword). Complete the operation if the weapon is safe and no other damage will occur. Following determination that technical data does not provide procedures or adequately address the problem, contact the applicable MAJCOM who will coordinate with the appropriate agency to resolve the situation. AFMC units will contact 708 NSUS. Direct contact between applicable MAJCOM, units, and other agencies (e.g., Defense Threat Reduction Agency (DTRA) or Sandia National Laboratories (SNL)) for any weapons related technical resolution is prohibited, unless directed by 708 NSUS. The 708/NSUS serves as the focal point per AFI 21-200, *Munitions and Missile Maintenance Management*.

4.1.4.1.1. On site DOE representatives may determine continuation of operation (e.g. PAL operation, defect acceptance) when authorized procedures are not available in governing T.O. However, unit personnel must report the defect(s) according to T.O. 11N-5-1, *Unsatisfactory Reports*, and/or AFMAN 91-221, *Weapons Safety Investigations and Reports*, as applicable.

4.1.4.1.2. When technical procedures call for components/parts to be rejected at lowest level available in spares, weapons will be placed in non-operational status if the component/part cannot be replaced within Nuclear Reporting (NUREP) timelines. Weapons will also be placed in non-operational status if involved in an accident or incident and the condition is unknown (e.g. lightning strike, fire, loss of custody, etc...).

4.1.4.2. Non-operational Tools, Test, and Handling Equipment (TTHE) must be returned to operational status as soon as possible, not to exceed 30 duty days following UR, DR, Dull Sword, Engineering Technical Assistance Request (ETAR), and/or receipt of required replacement parts.

4.1.5. Deficiency Reporting.

4.1.5.1. Deficiencies associated with nuclear weapons, nuclear weapon-related items, associated equipment/software or technical orders/publications must be reported.

4.1.5.2. When assistance is required and the problem does not fit into one of the below categories use procedures in T.O. 00-25-107, *Maintenance Assistance*. Use requests from T.O. 00-25-107 for problems with maintenance procedures or production that are beyond the capability of the maintaining command. Maintenance assistance may take the form of emergency maintenance support, technical assistance, or a combination of both.

4.1.5.3. Use procedures in T.O. 11N-5-1, *Unsatisfactory Reports*, to report a deficiency on DOE-designed nuclear weapons or related components, DOE-designed equipment/software, a JNWPS technical order discrepancy/deficiency, or when DoD-designed items require evaluation based upon their interface with DOE-designed items. Nuclear weapons placed in non-operational status will only be returned to operational

status when officially directed by 708 NSUS or when directed via an assigned DTRA UR number.

4.1.5.4. Use procedures in AFMAN 91-221, *Weapons Safety Investigations and Reports*, to report a safety related accident, incident or deficiency (Broken Arrow, Bent Spear or Dull Sword) on items covered in the USAF Master Nuclear Certification List web site or T.O. 21M-LGM30F-12-1, *Minuteman Nuclear Surety Procedures*. Examples include but are not limited to general-purpose vehicles, ICBM related equipment, nuclear certified aircraft software, two-person concept violations, etc.

4.1.5.5. Use procedures in T.O. 00-35D-54, *USAF Deficiency Reporting and Investigating System*, to report deficiencies on DoD-designed items.

4.1.5.6. In certain instances, it may be necessary to submit multiple reports on one deficiency. For example:

4.1.5.6.1. Submit reports IAW T.O. 11N-5-1, *Unsatisfactory Reports*, and AFMAN 91-221, *Weapons Safety Investigations and Reports*, for:

4.1.5.6.2. A weapon involved in an accident or incident (lightning, vehicle accident, loss of custody, etc).

4.1.5.6.3. Stray voltage from a motor generator.

4.1.5.7. Submit reports IAW AFMAN 91-221, *Weapons Safety Investigations and Reports*, and T.O. 00-35D-54, *USAF Deficiency Reporting and Investigating System*, for:

4.1.5.7.1. A nuclear certified vehicle still under warranty with burnt wire insulation.

4.1.5.7.2. Chipped ablative material.

4.1.5.8. Submit reports IAW T.O. 11N-5-1, *Unsatisfactory Reports*, and T.O. 00-35D-54, *USAF Deficiency Reporting and Investigating System*, for:

4.1.5.8.1. Rejected warhead and RS components due to deluge dump.

4.1.5.8.2. Warhead/weapon damage due to hoist failure.

4.1.5.8.3. The steering fails on a newly manufactured/certified forklift causing vehicle and weapon damage.

4.1.6. Maintenance Tasks.

4.1.6.1. Personnel will not perform WR operations until they complete weapons academic training, applicable safety training, and nuclear weapons certification requirements IAW Chapter 3.

4.1.6.2. Nuclear weapons operations will be performed by 2M0XX/2WXXX personnel. 2M0X2s perform RS mate/demate and weapons handling tasks. 2M0X1s perform select mate/demate tasks, weapons handling tasks, and launcher/pylon tests. 2WXXX perform weapons handling tasks. 2W2XX perform weapons maintenance, mate/demate, and RSTS/SFTS checkout tasks.

4.1.6.2.1. In circumstances where there are insufficient 2M0XX or 2WXXX personnel available to perform the required nuclear weapons operations the applicable MAJCOM will designate AFSCs to augment assigned 2M0XX or 2WXXX

personnel, however, there must be core 2W/2M personnel assigned and available to manage and oversee the nuclear operations. In addition to AFSC requirements all training, security clearance, PRP requirements, and certification requirements are applicable.

4.1.6.3. Bay Chief will oversee all certified maintenance operations. This does not apply to handling tasks conducted outside the maintenance bay. Bay chiefs will be JQS qualified and TC certified. Bay Chiefs will not perform in the TC/TM position while concurrently providing task oversight.

4.1.6.4. Prior to beginning any operation, the Bay Chief and TC will verify applicable source documentation and ensure all tools, test, and handling equipment, spares and expendables are available and serviceable.

4.1.6.5. A certified TC will direct every certified maintenance, mate/demate, and final assembly checkout task. TCs will only direct one certifiable operation at a time. Each individual operation must have its own TC. MAJCOMs may require a TC direct every handling task performed with WR weapons.

4.1.6.6. Team chiefs will give team briefings before starting operations involving a WR nuclear weapon or warhead. The briefing must include, as a minimum: description of the task, designation of personnel assigned to the task, nuclear surety IAW AFI 91-101, *Air Force Nuclear Weapons Surety Program*, necessary safety, emergency, and intrinsic radiation procedures, and the requirement of the Two-Person Concept.

4.1.6.7. When performing nuclear weapon maintenance and handling tasks verbal demand-response procedures will be used. TCs will read steps required including all cautions and warnings, TMs will acknowledge and perform applicable procedures, TC will verify and check step off after completion. If TMs are using the technical data and checking off steps as they perform them (such as cleaning person on LLCE operations or topside RS handling), the TC must verify all steps are completed prior to weapon/component reassembly. All notes are applicable but do not require the verbal demand response technique.

4.1.6.8. If an operation is halted for any reason, TC will mark the last step accomplished. Resume maintenance operation only after reviewing the checklist or technical order to determine all the previous steps were accomplished.

4.1.7. Weapons Movements.

4.1.7.1. Cover nuclear weapons, TYPE 3 trainers, JTA, compatibility test units, realistic weapons trainers, and flight test units during all movements (EXCEPTION: Containerized weapons, RSs, and Cruise Missiles do not require covers). BDUs do not require covers except during exercises when simulating WR weapons. JTA movements outside controlled areas must have appropriate level of security. This is dependent upon security requirements for each JTA type.

4.1.7.2. US custody of nuclear weapons must be maintained during all aspects of nuclear weapons storage, handling and logistics movements.

4.1.7.3. All on-base nuclear weapons movements outside the restricted area must have a member serving as a technical and safety advisor. The convoy technical and safety

advisor will be an NCO that is JQS qualified and fully knowledgeable of tiedown, transportation, handling, CDS, custody transfer, and emergency procedures as applicable.

4.1.7.3.1. For ICBM RS convoys, any certified PT driver can serve as the technical and safety advisor.

4.1.7.4. Ensure compliance with the movement procedures identified in DoD S-5210.41-M_AFMAN 31-108, Vol 1, Vol 2, and Vol 3 *Nuclear Weapons Security Manuals*.

4.1.8. Visual Inspections.

4.1.8.1. Annotate each T.O. and checklist step which requires a visual inspection on the affected page (not on the plastic cover) to clearly identify the step as requiring a visual inspection before proceeding.

4.1.8.2. Only technically knowledgeable individuals, not physically performing or otherwise involved in the work, will perform visual inspection requirements specified in T.O. 11N-35-51, *General Instructions Applicable to Nuclear Weapons*. This individual will be a certified TC on that task and cannot be the TC directing the operation. The QA inspector evaluating the operation will not perform visual inspections.

4.1.8.3. The following RV/RS operations require visual inspections IAW 11N-35-51, *General Procedures Applicable to Nuclear Weapons*:

4.1.8.3.1. Prior to mating the MK12/12A/21 forward section, MK12/12A aft section or MK21 rear cover to the mid/body section.

4.1.8.3.2. Prior to mating of the fuze support shield, arming and fuzing assembly (AFA), or other major components and subassemblies covered/contained within the interior of the fuze support/shield on the MK21 weapon system.

4.1.8.3.3. Final Assembly. Prior to aft shroud installation and transfer from maintenance stand to pallet plate, ensure proper configuration of the RS, connection and installation of all RS/RV cables/components, and ensure no tools, hardware, parts, etc., were left behind on the assembled RS.

4.1.8.3.4. Packaging warhead shipping and storage containers. Verify warhead serial number with shipping and storage container to ensure serial numbers match prior to packaging.

4.1.9. IPIs.

4.1.9.1. Units and MAJCOMs may develop IPIs in addition to those identified in paragraph 4.1.9.4. At the unit level, QA and MX/SUPT will jointly develop IPIs IAW AFI 21-200, *Munitions and Missile Maintenance Management*. The IPI list must be reviewed as T.O. changes occur to ensure paragraph references are accurate. Review and publish the complete IPI list at least annually. Completion of IPIs will be documented on the IMDS product identifying the individual who performed them. Annotate each T.O. and checklist step identified as an IPI point on the affected page (not on the plastic cover) to clearly identify the step as requiring an IPI before proceeding.

4.1.9.2. Only technically knowledgeable individuals, not physically performing or otherwise involved in the work, will perform IPIs. This individual will be a certified 7-level TC on the maintenance task and cannot be the TC directing the operation, nor the

QA inspector evaluating the operation. Additionally, the individual must be listed on the unit's Special Certification Roster IAW AFI 21-200, *Munitions and Missile Maintenance Management*.

4.1.9.3. IPIs will be documented in the following way: Inspection point and date will be shown on IMDS product. The responsible TC and individual performing the IPI will print and sign their names on the form as defined in T.O. 00-20-1, *Aerospace Equipment Maintenance, Inspection, Documentation, Policies, and Procedures*, or use employee number as defined in T.O. 00-20-2, *Maintenance Data Collection*, for IMDS product. Maintain documentation in the weapon record package, if applicable.

4.1.9.4. The following RS/RV IPIs are mandatory:

4.1.9.4.1. MK12 RS. Checkouts of the following: arm/disarm device and Electronic Command Signals Programmer (ECSP); targeting function; chaff subsystem; RS arming and fuzing (A&F) safety monitor loop; RS confidence monitor loop; chaff subsystem confidence monitor loop.

4.1.9.4.2. MK12A RS. Checkouts of the following: arm/disarm device; Environmental Sensing Signal Generator (ESSG)(Before Guidance Replacement Program (GRP)); housing assembly and ECSP (After GRP); targeting function; chaff subsystem; unique signal lines; A&F safety monitor loop, RS confidence monitor loop, chaff subsystem confidence monitor loop.

4.1.9.4.3. MK 21 RS. Checkouts of the following: arm/disarm device and ECSP; Fuze Set & Verify (referred to as "Targeting" on MK12A RS); PreArm (D1/D2) (referred to as "Unique Signals" on MK12A); RS arming and fuzing (A&F) safety monitor loop; and RS confidence monitor loop.

4.1.9.4.4. For all RS verifications before issue and site-to-site swaps: Configuration matches assigned missile site (records review).

4.1.9.4.5. On an initial RV build or replacement, all weapon systems will have an IPI in place to verify the serial number of LLCs/NGs (NG for 12A only).

4.1.9.4.6. When assembling an RV/RS, pylon, and launcher confirm proper association of warhead and component serial numbers to RS, air launched missiles, and the missiles or bombs with the pylon or launcher.

4.1.10. Certifying Nuclear Weapons, Nuclear Warheads, and Components Mated to RS or Multiple Carriage Launch Gear.

4.1.10.1. Certifying RS and multiple carriage launch gear configurations.

4.1.10.1.1. When building RS, pylon, and launcher prepare a nuclear weapon configuration record (buildup sheet) to reflect the association of warhead and component serial numbers to RS, air launched missiles, and the missiles or bombs with the pylon or launcher. The maintenance TC responsible for final assembly must prepare and sign the nuclear weapon configuration record (buildup sheet), and a senior NCO or officer must visually verify the serial numbers and configuration and certify doing so by signing the nuclear weapon configuration record (buildup sheet). The TC and certifying individual must both initial beside any changes to the record.

This certified record becomes the source document for tracking the location of weapons and components during storage, alert, and aircraft generation.

4.1.10.2. Nuclear weapon configuration records (build-up sheets) for launchers and pylons will be created and verified for both WR and non-WR packages. Clearly mark nuclear weapon configuration records (build-up sheets) for non-WR packages as “NOT WR”.

4.1.10.3. Use the nuclear weapon configuration record (buildup sheet) as the source document to establish the configuration of the RS, pylon, or launcher. If reportable changes occurred as a result of the buildup, Weapons Maintenance will prepare a separate AF Form 1764 or equivalent to report those changes (see AFI 21-203, paragraph 8.1.1).

4.1.10.4. Forward the original certified nuclear weapon configuration record (buildup sheet) and AF Form 1764 or equivalent, if applicable, to the MASO, munitions control, and keep a copy in the maintenance section.

4.1.10.5. Units may elect to report in-hand/on-hand changes to the MASO based on RS, launcher, and pylon serial numbers only; however, if they do so, the MASO must maintain the certified nuclear weapon configuration record (buildup sheet) showing the configuration of the RS or launch gear at the time of the report for as long as they retain the SCR.

4.1.10.6. Swap of a single missile on a pylon or launcher, or a single bomb on a launcher or loaded combat aircraft.

4.1.10.6.1. Prepare an updated certified nuclear weapon configuration record (build-up sheet).

4.1.10.6.2. Forward the original of the updated nuclear weapon configuration record (build-up sheet) to the MASO and a copy to munitions control and keep a copy in maintenance section.

4.1.11. RV/RS Records Jacket.

4.1.11.1. A record jacket will be established for each RS. It will contain, as a minimum, the following:

4.1.11.1.1. Certified nuclear weapon configuration record (build-up sheets).

4.1.11.1.2. Completed Work Orders. Retain the IMDS product, which documented all IPI's listed on the Group IPI listing.

4.1.12. Trainer Maintenance.

4.1.12.1. Use TYPE 3 A/C trainers for maintenance and Explosive Ordnance Disposal (EOD) training only. Do not use these trainers for aircraft or ICBM load training, or logistical movement exercises and evaluations without 708 NSUS approval. Use TYPE 3E trainers, RV/RS trainers (UA/UE), TFPs, or BDUs for this purpose. Trainers must be controlled, stored, and secured according to their respective security classification.

4.1.12.2. Maintain nuclear weapon TYPE 3 A/C trainers to WR standards using procedures in T.O. 11N-35-51, *General Instructions Applicable to Nuclear Weapons*, and the applicable weapons manual. TYPE 3 A/C trainers used exclusively for EOD training

will be maintained in a WR configuration and may deviate from WR standards with UR approval. Inspect all other nuclear weapons trainers, TYPE 3E, load shape/trainers as specified in the applicable technical order, not to exceed 180-days. RV/RS (UA/UE) load shape trainers are maintained IAW applicable 43D-series technical orders.

4.1.12.2.1. For those trainers not on the weapons maintenance custody account, the Maintenance Supervision and agency owning account (EOD, 708 NSUS, or weapons loaders) will work out a periodic inspection and maintenance schedule to fix deficiencies in order to keep the trainers in WR configuration. Use IMDS to track inspection and maintenance of trainers.

4.1.12.3. Units may elect to track deficiencies/historical documentation for TYPE 3E load shape/trainers using AFTO Form 244, *Industrial/Support Equipment Record*, AFTO Form 95, *Significant Historical Data*, or IMDS, as appropriate. An IRC is not required on TYPE 3E or BDU load shape/trainers.

4.1.12.4. Prohibit installation of WR items, components, or materiel on TYPE 3/UA/UE trainers unless authorized by technical data or the 708 NSUS (510 Systems Squadron for DoD-designed RV/RS components). (EXCEPTION: Reuse of expended or expired Group X items for training is acceptable). Never install training items, components, or materiel on WR items.

4.1.13. Waste Management.

4.1.13.1. Three basic types of tightly regulated materials can be generated during nuclear weapons maintenance activities. These generated materials may become wastes regulated either as Resource Conservation & Recovery Act (RCRA) hazardous waste, 91b Waste or Potentially Mixed Waste. Maintenance personnel shall assure that all wastes are properly identified, segregated and containerized as the waste is generated and according to the type of waste being generated. Appropriate precautions to avoid co-mingling of different types shall be taken to minimize the generation of a Potentially Mixed Waste.

4.1.13.2. RCRA regulated hazardous waste includes spent and/or expired hazardous materials that are available for use or used in the routine conduct of the maintenance activities and includes solvent soaked rags or wipes. RCRA Hazardous Waste, however, does not include materials that become contaminated by a radioactive source or demonstrate a radioactive property. RCRA wastes include items such as un-useable or spent solvents, lubricants and paints.

4.1.13.3. 91b Waste is generated when a system component is inherently and/or becomes contaminated solely by a radioactive source within the contiguous volume where a tritium reservoir resides without the introduction of a hazardous material. These wastes include items such as compression pads, un-greased O-rings, Kim wipes or Q-tips used to wipe internal components without the use of solvents, and expired weapon desiccants.

4.1.13.3.1. 91b waste areas for MK12/12A are: Inside of the associated aft section and inside surfaces of the H1223A/B aft bulkhead cover/ring.

- 4.1.13.3.2. 91b areas for the MK21 are: the enclosure formed by the inside of the Warhead Electrical System (WES) cap and aft end of the AFA and inside the WES cap.
- 4.1.13.4. Potentially Mixed Waste is generated when a 91b Waste is combined with a RCRA Hazardous Waste. An example is a Kim wipe, wiper or rag that becomes contaminated with spent hazardous material solvent once used to wipe internal components and surfaces of a radioactive source.
- 4.1.13.5. Collection and Identification. Local bioenvironmental section may survey and perform analysis on hazardous waste containers to determine what type of waste is generated. These surveys can be used to reduce the number of containers distributed to maintenance activities.
- 4.1.13.6. RCRA Hazardous Waste Management guidance is available through the Installation Environmental Flight. Base-wide instructions are also found in the installation Hazardous Waste Management Plan (HWMP), which outlines specific procedures for managing hazardous waste. Coordinate through the local environmental management flight for container turn-in or pick-up and disposal IAW AFI 32-7042, *Solid and Hazardous Waste Compliance*.
- 4.1.13.7. Package 91b Waste in the smallest plastic bags consistent with the operation being performed and store in 30 to 55-gallon drums. Label packages and drums "Potentially 91b Waste". Coordinate through local bioenvironmental channels for container pickup and disposal IAW AFI 40-201, *Managing Radioactive Materials in the US Air Force*. O-CONUS units will coordinate pick-up and disposal through MAJCOM.
- 4.1.13.8. Package Mixed Waste in the smallest plastic bags consistent with the operation being performed and store in 30 to 55-gallon drums. Label packages and drums "Mixed Waste Potentially 91b". Coordinate through local bioenvironmental channels for container pickup and disposal IAW AFI 40-201, *Managing Radioactive Materials in the US Air Force*. O-CONUS units will coordinate pick-up and disposal through MAJCOM.
- 4.1.13.9. Do not store or co-mingle Hazardous Waste, Potentially 91b Waste or Mixed Waste in the same package or drum.
- 4.1.13.10. Low Level Radioactive Waste (LLRW) programs are driven by environmental regulatory compliance and are not a personnel safety issue. Radiation levels are extremely low. Waste generated during cleaning of tools used during maintenance is NOT a 91b Waste issue. It is not necessary to wear personnel protective or safety equipment while working around the gas transfer systems of a weapon within the parameters outlined in the applicable technical orders, unless otherwise directed (e.g. cleaning with solvents).

4.2. Forms.

4.2.1. Adopted Forms.

AF Form 55, *Employee Safety and Health Record*

AF Form 847, *Recommendation for Change of Publication*

AF Form 1764, *Major Assembly/Component Status Change Report*

AF Form 2435, *Load Training and Certification Document*

AFTO Form 95, *Significant Historical Data*

AFTO Form 244, *Industrial/Support Equipment Record*

DD Form 1348-1A, *Issue Release/Receipt Document*

DD Form 1911, *Material Courier Receipt*

LOREN M. RENO, Lt Gen, USAF
DCS/Logistics, Installations and Mission Support

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

- AFI 10-201, *Status of Resources and Training System*
- AFI 20-110, *Nuclear Weapons Related Materiel Management*
- AFI 20-111, *Logistics Compliance Assessment Program*
- AFPD 21-2, *Munitions*
- AFI 21-200, *Munitions and Missile Maintenance Management*
- AFI 21-202, *Missile Maintenance Management*
- AFI 21-203, *Nuclear Accountability Procedures*
- AFI 21-205, *Command Disable Systems (S:FRD)*
- AFMAN 23-110, *USAF Supply Manual*
- AFI 25-101, *War Reserve Materiel (WRM) Program Guidance and Procedures*
- AFI 33-360, *Publications and Forms Management*
- AFMAN 33-363, *Management of Records*
- AFI 36-2201, Volume 5, *Air Force Training Program Career Field Education and Training*
- AFI 36-2232, *Maintenance Training*
- AFI 40-201, *Managing Radioactive Materials in the US Air Force*
- AFI 91-101, *Air Force Nuclear Weapon Surety Program*
- AFMAN 91-201, *Explosive Safety Standards*
- AFMAN 91-221, *Weapons Safety Investigations and Reports*
- DoD S-5210.41-M_AFMAN 31-108, Vol 1, Vol 2, and Vol 3 *Nuclear Weapons Security Manuals*
- T.O. 00-20-1, *Aerospace Equipment Maintenance General Policy and Procedures*
- T.O. 00-35D-54, *USAF Deficiency Reporting and Investigation System*
- T.O. 11N-5-1, *Unsatisfactory Reports*
- T.O. 11N-20-11, *General Firefighting Guidance (C:RD)*
- T.O. 11N-35-51, *General Instructions Applicable to Nuclear Weapons*
- T.O. 11N-100-1, *Supply Management of Nuclear Weapons Materiel*
- T.O. 11N-100-2, *Supply Management of Limited Life Components*
- T.O. 11N-100-4, *Custody, Accountability, and Control of Nuclear Weapons and Nuclear Materiel*
- T.O. 11N-100-3150, *Joint Reporting Structure; Nuclear Weapons Reports (S:FRD)*

Abbreviations and Acronyms

ACC—Air Combat Command

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFMC—Air Force Materiel Command

AFPD—Air Force Policy Directive

AFSC—Air Force Safety Center or Air Force Specialty Code

AFSPC—Air Force Space Command

AFTO—Air Force Technical Order

AFNWC—Air Force Nuclear Weapons Center

ALC—Air Logistics Center

ALCM—Air Launched Cruise Missile

AMC—Air Mobility Command

BDU—Bomb Dummy Unit

CDS—Command Disable System

CONUS—Continental United States

DIAMONDS— Defense Integration and Management of Nuclear Data Services

DOE—Department of Energy

DTRA—Defense Threat Reduction Agency

ERRC—Expendability, Recoverability, Reparability Code

EUCOM—European Command

GM—General Maintenance

ICBM—Intercontinental Ballistic Missile

IPI—In-Process Inspection

IRC—Inspection Record Card

JCS—Joint Chiefs of Staff

JQS—Job Qualification Standard

JTA—Joint Test Assembly

KCP— Kansas City Plant

LGM—Limited General Maintenance

LIL—Location Inventory List

LLC—Limited Life Component

LLCE—Limited Life Component Exchange
MAJCOM—Major Command
MASO—Munitions Accountable Systems Officer
MCL—Maintenance Capability Letter
MTO—Materiel Transfer Order
MUMG—Munitions Materiel Group
MUNS—Munitions Squadron
NCO—Noncommissioned Officer
NNSA—National Nuclear Security Administration
NOSS—Nuclear Ordnance Shipping Schedule
NWRM—Nuclear Weapons Related Materiel
PAL—Permissive Action Link
PC—Parachute
PNAF—Prime Nuclear Airlift Force
PRP—Personnel Reliability Program
QA—Quality Assurance
QAST—Quality Assurance Service Test
QSR—QAST Status Report
RS—Reentry System
RTU—Radar Test Unit
RV—Reentry Vehicle
SBSS—Standard Base Supply System
SCR—Status Change Report
SDT—Second Destination Transportation
SFT—Stockpile Flight Test
SGT—Safeguards Transporter
SS—Source and Special
TC—Team Chief
TCTO—Time Compliance Technical Order
TM—Team Member
TO—Technical Order
USAF—United States Air Force

USAFE—United States Air Forces in Europe

UR—Unsatisfactory Report

WMT—Weapons Maintenance Truck

WR—War Reserve

WS3—Weapon Storage and Security System

WSA—Weapon Storage Area

WSV—Weapons Storage Vault

Terms

Accountability—The obligation imposed by law or lawful order or instruction on an officer or other person for keeping accurate, reliable and auditable record of property, documents, or funds. The person having this obligation may or may not have actual possession of the property, documents, or funds. Accountability is concerned primarily with records, while responsibility is concerned primarily with custody, care, and safekeeping.

Active Stockpile Weapons or Warheads—Weapons or warheads maintained in an operational status to support operational and logistical requirements. Includes both those weapons or warheads fielded and those on active reserve.

Assembly—An accounting term for nuclear weapons/warheads configured for integration onto delivery vehicles. Examples include ICBM warhead with fwd/aft sections mated (referred to as RV), W80s mated to missiles and gravity weapons.

Base Spares—Parts and components authorized in spare parts list (SPL) published by Sandia National Laboratories (SNL), funded for, procured, and owned by DOE and furnished to the DoD for use in maintaining and repairing War Reserve (WR) nuclear weapons and DOE-owned equipment supplied to DoD with the WR weapon. Parts remain the property of DOE regardless of custody.

Certifying Official—(see Nuclear Weapons Certifying Official)

Charge Codes—A T.O. 100-3150 alphanumeric code, which reflects the allocation and deployment status of reported items as assigned by the commander of the unified or specified or component commander.

Commander—Unless otherwise specified, "commander" in this AFI is defined as the squadron or detachment commander. It does not include the squadron section commander.

Controlled Area—A security area adjacent to or encompassing limited or exclusion areas. Within this area uncontrolled movement does not permit access to a security interest (i.e. nuclear weapon). The controlled area is designed for the principal purpose of providing administrative control and safety, and a buffer area of security restrictions for limited or exclusion areas.

Custodian—The commander of a US custodial unit.

Custody—The responsibility for the control of, transfer and movement of, and access to, weapons and components. Custody also includes maintaining accountability for weapons and their components.

Custody Transfer—Anytime a warhead/weapon/reentry system is moved to another facility (i.e. storage igloo, protective aircraft shelter (PAS) , maintenance facility, launch facility (LF), etc.) or when custodial responsibility is transferred.

Demate—To remove air-launched missile (with or without warhead) or weapon from a pylon or launcher,

to remove a RS from a MMIII Guidance Set.

Disassemble—An accounting term for the basic configuration of nuclear devices. These items may or may not be placed in shipping and storage containers, trailers, maintenance stands and etc. Examples include ICBM warheads without fwd/aft sections mated and W80s not mated to missiles.

DOE-designed Special Equipment Items—Support equipment items designed by DOE used to support and maintain DOE-designed weapons trainers and equipment.

Exclusion Area—Any designated area immediately surrounding one or more nuclear weapon(s)/systems(s). Normally, the boundaries for the area are the walls, floor, and ceiling of a structure or are delineated by a permanent or temporary barrier. In the absence of positive preventive measures, access to the exclusion area constitutes access to the nuclear weapon(s)/system(s).

Handling—Physically maneuvering weapons either directly or indirectly by people (i.e. sliding, lifting, hoisting, over short distances using manpower, tugs, cranes, forklifts or hoists).

H-Gear—Specially designed devices intended for use in assembling, disassembling, handling, transporting or containing weapons or weapons materials. Special equipment items are designated with an "H" designation in their nomenclature.

In-Hand—An accounting term to report weapons transferred into the hands of the operational unit.

In-Process Inspection (IPI)—An IPI is defined as an additional supervisory inspection or verification step at a critical point in the installation, assembly or re-assembly of a system, subsystem or component.

Inactive Stockpile Weapons—Weapons or Warheads retained in a non-operational status for augmentation or replacement of weapons or warheads in the active stockpile.

Installed—A term applicable to nuclear components/subsystems and their presence/ installation in/on a nuclear weapon/warhead/device. Examples included limited-life components, parachutes, etc.

Joint Test Assembly—A DOE developed configuration based on DOE-DoD requirements for use in a joint flight test program, comprised of a joint test subassembly and WR weapons components.

Limited Life Component—Any item listed in T.O. 11N-100-2 or so designated by DOE.

Logistics Movement—The transport of nuclear weapons by any appropriate noncombat delivery vehicle outside a permanent limited or exclusion area.

Munitions Accountable Systems Officer (MASO)—The individual having the guardianship and safekeeping of nuclear weapons, their components and of SS materials.

Mate—To place an air-launched missile (with or without warhead) or weapon on a pylon or launcher, to place a RS on a MMIII Guidance Set.

Military Spares—Parts and components authorized in SPL published by Sandia National Laboratories (SNL), funded for, procured, and owned by DoD, and required for support of DOE and DoD produced training weapons and all cable test (CT) disablement equipment (DE), test (T), and handling (H) equipment except those DOE-owned items supplied to the DoD with WR weapons.

Non-nuclear munitions—Training weapons, shapes, JTAs, TFPs, BDUs, Empty missiles/containers, CATIKs, OMA, etc...

Non-operational—A reportable item that is either defective to the extent that the assembly is rendered unsuitable for employment, is subject to a hold order that prohibits all operational use until a specified defect is remedied, or that contains any major component (including, but not limited to an LLC) that has exceeded its expiration date. Also referred to as Red.

Nuclear Ordnance Shipping Schedule (NOSS)—A Major Command (MAJCOM) monthly forecast of logistics movement of nuclear and nuclear-related cargo.

Nuclear-Related Cargo—Nuclear training and test weapons, non-nuclear components of nuclear weapons, limited life components, and equipment associated with the logistics management of nuclear weapons.

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

Nuclear Weapons Certifying Official—Individual appointed to certify personnel to perform nuclear weapons maintenance and handling tasks.

Nuclear Weapons Related Materiel (DoD)—Classified or unclassified assemblies and subassemblies (containing no fissionable or fusionable material) identified by the Military Departments (MILDEPS) that comprise or could comprise a standardized war reserve nuclear weapon (including equivalent training devices) as it would exist once separated/removed from its intended delivery vehicle.

Nuclear Systems Related Materiel (AF)—Classified or unclassified nuclear weapon system components whose purpose is to prearm, arm, launch or release a nuclear weapon and require special controls to maintain and protect system integrity and security, as well as engineering and design information (e.g. guidance set, classified critical components, launch control, use control equipment).

On-Hand—An accounting term to report weapons transferred from in-hand or red for an operational unit.

Operational—The status of a weapon when ready to discharge its prime function. Also referred to as

Yellow.

Operational Movement—The positioning of weapons to ensure the operational readiness of nuclear-capable strike forces. Operational movements include those related to immediate operational readiness such as: assumption of an alert posture; various categories of exercises

involving removal of a weapon from its normal storage location, preparation for use, exercise loading, and return to storage; maintenance operations involving removal of a weapon from alert for repair, inspection, or return to storage; and those movements such as hurricane flyaways and other emergency evacuations, related to the safety and security of the nuclear force.

Prime Nuclear Airlift Force (PNAF)—The aircraft and aircrew that provide peacetime logistical airlift support for the movement of nuclear weapons and or nuclear components.

Removed—A term applicable to nuclear components/subsystems and their absence/ removal from a nuclear weapon/warhead/device. Examples included limited-life components, parachutes, etc.

Reportable Change—Any transaction applicable to a reportable item. For example, receipt, shipment, completion of an alteration, change in configuration, and change in allocation, sub allocation, or deployment charges.

Safe Haven—Temporary storage provided to DOE classified equipment transporters at DoD facilities in order to assure safety and security of nuclear material and or non-nuclear classified material during civil disturbances, natural disasters, or other conditions, which could affect the safety, or security of the DOE shipment. Also includes parking for commercial vehicles containing Class A or Class B explosives.

Safeguards Transporter (SGT)—A modified semi trailer used for highway transit of special nuclear materiel including nuclear weapons. It includes armored, penetration sensing and deterrent materials. The DOE owns and operates all SGTs.

Second Destination Transportation (SDT)—A term used in transportation budgetary funding processes to identify required internal DoD movement of nuclear cargo.

Sole Vouching Authority—An individual responsible for verifying a person's need to enter a no-lone zone/exclusion area prior to granting them access.

Source Documents—Documents used to schedule maintenance, validate requirements, verify accountability and/or custody procedures. Examples include, but are not limited to, nuclear weapon configuration record (build-up sheets), LIL, MTO, time change item schedule, messages, Special Procedures, retrofit orders, etc.

Support Equipment—All equipment required to perform the support function, except that which is an integral part of the mission equipment. It does not include any of the equipment required to perform mission operation functions. Support equipment consists of: tools; test equipment; automatic test equipment (ATE) (when the ATE is a support function); organizational, field, and depot support equipment; and related computer programs and software.

Unassociated—A term applicable to un-associating nuclear weapons/warheads/ device and components with shipping and storage containers and/or handling units.

War Reserve—Nuclear weapons and nuclear weapons material intended for employment in the event of a war.