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SECRETARY OF THE AIR FORCE**

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VOLUME 2**



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Maintenance

**CRUISE MISSILE MAINTENANCE
MANAGEMENT**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Air Force Policy Directive (AFPD) 21-2, *Munitions*. This Air Force Instruction (AFI) establishes procedures for maintaining conventional/nuclear air launched cruise missiles (CM). This publication applies to all major commands (MAJCOMs) and their subordinate units. Units will contact the applicable MAJCOM for interpretations of the guidance contained in this publication. This publication does not apply to Air National Guard, Air Force Reserve. The authorities to waive wing/unit level requirements in this publication are identified with a Tier (T-0, T-1, T-2, or T-3) number following the compliance statement. Subordinate paragraphs carry the parent tiering unless otherwise specified. See AFI 33-360, *Publications and Forms Management*, Table 1.1 for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the Publication Office of Primary Responsibility (OPR) for non-tiered compliance items. MAJCOM supplements to this publication must be routed to the OPR of this publication for coordination prior to certification and approval. Units will not supplement this publication. Ensure all records created as a result of the processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Disposition Schedule (RDS) in the Air Force Records Information Management System (AFRIMS). Refer recommended changes and questions about this publication to the 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. This document must be completely reviewed.

SUMMARY OF CHANGES

This document includes significant changes that require compete review. Major changes include tiering of Wing level and below requirements. Units have 60 days from the date of this change to fully implement revised procedures.

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Chapter 1

MISSILE MAINTENANCE MANAGEMENT PHILOSOPHY AND GUIDANCE

1.1. AFI 21-200, Munitions and Missile Maintenance Management. AFI 21-200 contains general information to support Air Force munitions and missile maintenance and provides broad responsibilities for these organizations. It is the capstone document that defines munitions organizational structure and related roles and responsibilities and is supported by a family of 21-2XX series instructions, which includes this volume of AFI 21-202.

1.2. Introduction. This instruction prescribes specific missile maintenance guidance and procedures to be used throughout the USAF and provides senior leadership and management direction for the accomplishment of this mission. This AFI provides guidance for Cruise Missile Maintenance (CMM) for both the Conventional Air Launched Cruise Missile (CALCM) and Air Launched Cruise Missile (ALCM). CMM encompasses all maintenance actions performed by the sections listed in Chapter 4 on Cruise Missile Systems and related equipment regardless of supported mission or location.

1.3. Publications. Air Force Missile Systems is defined by this instruction. MAJCOMs may supplement this AFI or publish a separate instruction IAW AFI 33-360, *Publications and Forms Management*. Units must tailor procedures to the unique aspects of their own maintenance operation and publish directives, instructions, **and supplements**. **Additionally, functional areas must tailor procedures to operating instructions** according to AFI 33-360 areas where more detailed guidance or specific procedures will ensure a smooth and efficient operation. Adhere to the following procedures:

1.3.1. Do not publish unit instructions or Operating Instructions (OI) to change or supplement Technical Orders (TO). Use the authorized procedures in TO 00-5-1, *AF Technical Order System*.

1.3.2. Coordinate directives with all appropriate unit agencies.

1.4. Supervision of Maintenance. Safety, security, reliability, quality, and timeliness in the planning, scheduling, and performance of maintenance must be emphasized at all levels of supervision.

1.5. Missile and Equipment Readiness. Missile and equipment readiness is the mission. Maintenance ensures assigned missile and support equipment are operationally available to meet mission requirements. **Maintenance actions include, but are not limited to: certification, inspection, repair, overhaul, modification, preservation, refurbishment, testing, and analyzing condition and performance.**

1.5.1. Manage nuclear-certified equipment, software, vehicles, and end items identified in USAF Master Nuclear Certification List (MNCL) per AFI 63-125, Nuclear Certification Program, and Supplements to AFI 63-125.

1.6. Preventive Maintenance (Find and Fix Philosophy). The primary focus of the maintenance effort must be on preventive rather than corrective actions. Preventive maintenance ensures assets are available at the time of need and function as designed. A conscientious and disciplined approach to preventive maintenance is required to meet this goal safely and

effectively. The CMM Find and Fix Philosophy requires all technicians to actively inspect maintenance areas, equipment, and missiles to identify and correct discrepancies on the spot or document delayed discrepancy items in the Maintenance Information System (MIS). Preventive maintenance concepts are described in TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Polices, and Procedures*.

1.7. Use of TOs and Supplements. Use of the prescribed TOs to maintain missile systems and associated equipment is mandatory. 'Use' is defined as having the appropriate TO in the immediate work area and open to the current step of the task being performed and referenced for direction in performing required tasks.

1.7.1. When a technician does not have physical access to TOs and are performing maintenance operations, mate/demate, final assembly, checkout, and handling tasks with weapons, they shall use verbal demand-response. The step to be performed, along with all notes, cautions and warnings, will be read to the technicians performing the work. The performing technicians will acknowledge understanding, perform the step, and then verbally verify completion to the person reading the steps. The person reading the steps will then check off the steps. If technicians are using technical data and checking off steps as they perform them, a team chief must ensure all steps are completed prior to weapon/component reassembly. Note: the above referenced operations often require the use of general procedures contained in both Operations and Maintenance and Methods and Procedures TOs (i.e. 11N-35-51, 1-1A-8, 00-25-234, etc.). These TOs do not require verbal demand-response or checking off of steps.

Chapter 2

CMM SUPERVISORY RESPONSIBILITIES

2.1. MAJCOM Responsibilities. Lead MAJCOM develops maintenance management guidance and procedures that allow units to achieve the highest levels of safety, nuclear surety, security, readiness, and maintenance productivity. Applicable MAJCOM logistics division will:

- 2.1.1. Publish command guidance for CMM organizations.
- 2.1.2. Justify and request additional resources or negotiate for depot maintenance assistance to perform emergency workloads.
- 2.1.3. Develop process to identify Attrition Reserve missiles.
- 2.1.4. Develop policy to address the cannibalization approval of ALCM attrition reserve missile components prior to performing actions. (T-0)
- 2.1.5. Establish a standardized lesson plan format for all CM units. (T-0)

2.2. Wing/Installation Commander (or equivalent). These responsibilities will be aligned to the first Wing/Installation Commander in the CMM activity's chain of command. Wing/Installation Commander responsibilities are found in AFI 21-101, Aircraft and Equipment Maintenance Management, and AFI 21-200, Munitions and Missile Maintenance.

2.3. Maintenance Group Commander (or equivalent). These responsibilities will be aligned to the first Maintenance Group Commander in the CMM activity's chain of command. Maintenance Group Commander responsibilities are found in AFI 21-101, Aircraft and Equipment Maintenance Management, and AFI 21-200, Munitions and Missile Maintenance.

2.4. Squadron Commander (or equivalent). Squadron Commander responsibilities are found in AFI 21-101, Aircraft and Equipment Maintenance Management, and AFI 21-200, Munitions and Missile Maintenance.

2.5. Unit Requirements

2.5.1. Operations Officer (OO)/Maintenance Superintendent (MX SUPT). In addition to AFI 21-101, *Aircraft and Equipment Maintenance Management* and 21-200, *Munitions and Missile Maintenance Management* requirements they will:

- 2.5.1.1. Ensure training and maintenance priorities are balanced.
- 2.5.1.2. Appoint Training Instructors in writing. (T-2)
- 2.5.1.3. Interview Training Instructors prior to beginning instructor duties. Interviews will be documented in instructor folders. (T-2) Interviews may be delegated no lower than Flight Chief/CC. (T-2)
- 2.5.1.4. Monitor/correct overdue training and training deficiencies.
- 2.5.1.5. Approve CMM Lesson Plans (LPs). (T-2)
- 2.5.1.6. Conduct a weekly scheduling meeting. (T-2)

2.5.1.7. Develop standard briefings to include a flight pre-shift briefing, standard flight visitors/casuals briefing (may be included in pre-task team briefing) and a standard flight pre-task team briefing. (T-1)

2.5.2. ALCM/CALCM Flight. The Flight Commander (CC)/Flight Chief is responsible to Operations Officer/Maintenance Superintendent for leadership, supervision, and training of assigned personnel. Flight CC/Chief may delegate responsibilities involving day-to-day management of CMM sections and elements, as appropriate. The CC/Flight Chief may elect to assign a specified responsibility of one section/element to another section/element if necessary to offset local constraints that would otherwise impede mission accomplishment. Perform the following as outlined in this supplement: Analysis, Missile Maintenance, Missile/Weapons Support, Verification and Checkout Equipment (VACE), Training. In addition to responsibilities specified in AFI 21-200 the Flight Chief/CC will:

2.5.2.1. Ensure cannibalization actions taken against Interface Test Trainers (ITT) or maintenance trainers are only to facilitate ITT or maintenance trainer repair. (T-1) This covers all parts associated with training missiles to include hardware, fasteners, nut-plates, engine inlet covers, etc.

2.5.2.2. ALCM attrition reserve missile components may only be cannibalized with prior approval and per MAJCOM policy from the applicable MAJCOM logistics division. (T-1)

2.5.2.3. Ensure a visible leadership presence commensurate with task complexity, hazards, and criticality is assigned to all maintenance operations.

2.5.2.4. Attend weekly scheduling meeting. (T-2)

2.5.2.5. Ensure an Electrostatic Discharge (ESD) Survey(s) is/are performed IAW TO 00-25-234, *General Shop Practice Requirements for the Repair, Maintenance and Test of Electrical Equipment* and develop and implement an ESD Control program tailored to survey results. (T-1)

2.5.2.6. Certify absence of War Reserve (WR) payload and notify applicable MAJCOM logistics division in writing prior to any shipment of ALCM/CALCM. (T-1)

2.5.2.7. Ensure equipment account is maintained and supply chain management is accomplished IAW AFI 23-101, *Air Force Material Management*. (T-1)

2.5.3. Work center/Element NCOIC. In addition to AFI 21-101, *Aircraft and Equipment Maintenance Management* and 21-200, *Munitions and Missile Maintenance Management*, the Work center/Element NCOIC has specific CMM responsibilities. The Work center/Element Supervisor will:

2.5.3.1. Ensure pre-shift, pre-task, and applicable visitor/casual briefing(s) are performed. (T-1)

2.5.3.2. Review data entered into the MIS daily by personnel under their control IAW TO 00-20-2.

2.5.3.3. Enforce verbal demand-response for all CMM tasks when technicians do not have physical access to TOs. (T-1)

2.5.3.4. Use procedures in TO 00-20 series to document equipment inspections. (T-1)

2.5.3.5. Ensure Safety Data Sheet (SDS) and applicable Bioenvironmental Engineering reports are readily available in the work area for hazardous consumable procedures and equipment. (T-1)

2.5.3.6. Ensure all personnel are familiar with MSDSs and work area/shop survey reports. Refer to applicable Bioenvironmental Engineering reports for control requirements specific to work areas. Ensure the referenced report is maintained IAW the Records Disposition Schedule.

2.5.3.7. Conduct 30-, 60-, and 90-day follow-ups on all maintenance items ordered through any source (i.e. supply, government credit card). Notify applicable MAJCOM logistics division by electronic means when items are not received by the 120-day point, or sooner if item is mission critical. (T-2) Provide off-base requisition number, local follow-up actions, and requisition remarks from source of supply.

2.5.3.8. Coordinate with QA to schedule personnel evaluations for tasks in the QA Key Task Listing (KTL). Inclusion of the following are mandatory in the KTL: wing replacement, fin replacement, engine air inlet replacement, file drawer replacement, GPS Anti-Jam System (GAJAS) replacement, and fuel system valve replacement. (T-1) Additional tasks may be added locally. Added tasks will be reviewed on an annual basis for impact. (T-3) The updated list will be provided to QA. (T-2)

2.5.3.9. Disqualify technicians on task performed when a rating of “fail” is received during a Personnel Proficiency Evaluation (PPE). (T-1)

2.5.3.10. Team with Training Section to monitor and schedule all non-technical training requirements. (T-2)

2.5.3.11. Coordinate Section Master Training Plans (MTP) with Training Section and assist with creation and review of CMM LPs, IAW AFI 36-2201, *Air Force Training Program* and AFI 36-2650, *Maintenance Training*. (T-1)

2.5.3.12. Ensure CMM technicians graduate from Team Chief Training Program prior to performing Bay Chief or Team Chief duties. (T-1)

2.5.3.13. Ensure the effective use of maintenance automated data systems, e.g. IMDS. (T-1)

2.5.4. **Bay Chief.** Directly responsible for ensuring technicians perform safe, secure, and reliable CMM activities. Bay Chiefs will:

2.5.4.1. Graduate from Team Chief Training Program prior to performing Bay Chief duties. Requirement may be waived by Flight Chief/CC. (T-2) Document waiver in Training Business Area (TBA).

2.5.4.2. Ensure IPIs are accomplished as required.

2.5.4.3. Verify source documents prior to directing any task to validate the proper operation(s) is/are being performed on the correct end item(s). (T-1)

2.5.4.4. If applicable, ensure work orders are marked “Two Person Concept Required” and all payload serial numbers are listed in the work order narrative for tasks performed on loaded packages or missiles. (T-2)

- 2.5.4.5. Ensure personnel are qualified, certified (if required), and proficient prior to performing CMM tasks and leverage opportunities to provide training. (T-1)
- 2.5.4.6. Ensure prior to use inspections are completed on hoists, vehicles, and equipment. (T-1)
- 2.5.4.7. Ensure Nuclear Certified Equipment (NCE) is verified against MNCL IAW AFI 63-125. (T-1)
- 2.5.4.8. Ensure serviceable replacement components and/or Time Compliance Technical Order (TCTO) kits are on hand, inventoried and inspected prior to starting CMM tasks. (T-2)
- 2.5.4.9. Ensure the accuracy of line numbers/ Net Explosive Weight (NEW) prior to commencing maintenance and ensure line numbers/NEW is updated as changes occur. (T-1)
- 2.5.4.10. If applicable, identify a Sole Vouching Authority and comply with No Lone Zone and Two Person Concept requirements. (T-1)
- 2.5.4.11. Actively perform the following:
- 2.5.4.11.1. Be available in the maintenance facility when maintenance is being performed. (T-1) Bay Chiefs do not have to be physically present at all times during completion of maintenance tasks.
 - 2.5.4.11.2. Monitor and control all CMM activities, assist maintenance teams, and perform proficiency checks as required. (T-2)
 - 2.5.4.11.3. Ensure technicians comply with WSSRs, TO procedures, as well as other safety and security requirements. (T-1)
 - 2.5.4.11.4. Ensure Team Chiefs complete and submit all required documents/reports upon completion of maintenance task(s) (i.e., work orders, inspection records, custody transfer documents, Deficiency Reports (DR), etc.). (T-1)
 - 2.5.4.11.5. Ensure appropriate actions are taken when abnormal conditions or defects requiring rejection of a weapon, a component or associated component are discovered to ensure the safety of personnel, and security and reliability of the weapon or component(s). (T-1) Immediately report abnormal condition or defect to Munitions Control and appropriate level of leadership for resolution before continuing the maintenance task. (T-2)
 - 2.5.4.11.6. Verify completeness of Electronic Systems Test Set (ESTS) printouts prior to receipt by Missile Analysis to meet requirements in paragraph 4.6.6. (T-2)
 - 2.5.4.11.7. Ensure a pre-shift briefing prior to assigning maintenance tasks/duties and ensure visitors/casual briefing(s) is/are provided as required. (T-2)
- 2.5.4.12. Review data entered into the MIS daily by personnel under their control IAW TO 00-20-2.
- 2.5.4.13. Participate in developing and executing monthly and weekly maintenance schedules/plans.

2.5.4.14. Coordinate with Munitions Control for AGE, Vehicles, CE support, etc. required to support maintenance operations.

2.5.4.15. Initiate nuclear weapon configuration records (build-up sheets) for launchers and pylons. Build-up sheets 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", as applicable. Forward the original of the updated nuclear weapon configuration record (build-up sheet) to the Munitions Accountable Systems Officer (MASO) and a copy to munitions control and keep a copy in maintenance section.

2.5.5. **Team Chief.** Directly responsible for performance of safe, secure and reliable CMM. Team Chiefs will:

2.5.5.1. Graduate from Team Chief Training Program prior to performing required Team Chief duties. (T-1)

2.5.5.2. Be responsible for work accomplished by technicians performing maintenance under their supervision. Provide direction to team members and enforce compliance with No Lone Zone and Two Person Concept requirements when required.

2.5.5.3. Stop maintenance tasks upon encountering an abnormal condition or identifying a defect requiring rejection of a weapon, weapon system, component or associated component. (T-1) Up-channel details of the condition to appropriate level of leadership (Bay Chief at minimum) for resolution before continuing the maintenance task. (T-2)

2.5.5.4. Use and enforce the Find and Fix Philosophy in paragraph 1.6. (T-2)

2.5.5.5. Verify source documents prior to performing any task to validate the proper procedure(s) is/are being performed on the correct end item(s). (T-1)

2.5.5.6. Review TOs for accuracy and completeness prior to the start of CMM tasks. (T-1) Review applicable TO safety summaries with Technicians prior to beginning task/operations

2.5.5.7. Submit all required documents/reports upon completion of CMM task (i.e., work orders, inspection records, custody transfer documents, DRs, etc.). (T-1)

2.5.5.8. Update line number/NEW changes with munitions control as they occur. (T-2)

2.5.5.9. Enforce verbal demand-response for all tasks to ensure directions are understood and team members and actions are completed as directed. (T-2)

2.5.5.10. Comply with and enforce WSSRs, TO procedures, as well as safety and security requirements. (T-1)

2.5.5.11. Ensure NCE is verified against MNCL IAW AFI 63-125. (T-1)

2.5.5.12. Be knowledgeable of Team Member qualification(s) and proficiency for task(s) to be performed and leverage opportunities to provide training to Team Members. (T-1)

2.5.5.13. Conduct pre-task/visitors-casuals briefing prior to start of maintenance task(s) and as additional technicians/visitors-casuals join the operation. (T-1)

2.5.5.14. Ensure all items required to perform assigned task(s) are serviceable and available in the immediate work area prior to beginning the task. (T-2) Resolve any deficiencies before beginning operations.

2.5.5.15. Notify Munitions Control prior to starting and upon completion of maintenance operations.

2.5.5.16. Ensure In-Process Inspection (IPI) and KTL identified tasks are performed at required steps/tasks within technical order procedures.

2.5.5.17. Review applicable TO safety summaries with Technicians prior to beginning task/operations.

2.5.6. **Technician.** Responsible to Team Chief for assigned tasks, Technicians will:

2.5.6.1. Maintain, control, and properly use assigned tools and equipment. (T-2)

2.5.6.2. Use TOs and applicable guidance to accomplish assigned tasks. (T-2)

2.5.6.3. Comply with WSSRs, TO procedures, as well as other safety and security and procedural guidance requirements. (T-1)

2.5.6.4. Use the Find and Fix Philosophy in paragraph 1.6.

2.5.6.5. Ensure all items required to perform the task(s) are serviceable and in the immediate work area prior to beginning the task. Resolve any deficiencies with Team Chief/Bay Chief before beginning operations. (T-2)

2.5.6.6. Perform inspection, safe operation and care of vehicles and equipment. (T-2)

2.5.6.7. Notify Team Chief/Bay Chief of environmental compliance and safety discrepancies.

2.5.6.8. Ensure personal qualification(s) for task(s) to be performed and actively seek training opportunities to expand knowledge, ability, and proficiency. (T-1)

2.5.6.9. Graduate from Maintenance Fundamentals Course, and complete the missile/weapons academic training, applicable missile/explosive safety training, and additional local requirements prior to performing CMM operations. (T-1)

Chapter 3

CMM MANAGEMENT RESPONSIBILITIES

3.1. Container Management. Manage containers as follows:

3.1.1. Container Inspection. All CNU-617/E Missile Shipping and Storage Containers will be inspected for munitions/explosives/explosives residue/training assets immediately upon receipt and/or removal of missile. (T-1) Immediately after inspection, empty containers will be closed, marked, sealed, and segregated from containers with missiles installed. (T-2) This inspection must be documented in the MIS. (T-2)

3.1.2. Container Marking. All containers, when inspected and verified as empty, will be marked with the word EMPTY. (T-1) Old Department of Transportation markings and other markings not specifically authorized/required in T.O. 35E20-2-47-2, *Maintenance Instructions With Illustrated Parts Breakdown For CNU-617/E Shipping And Storage Container* and T.O. 11A-1-10, *Munitions Serviceability Procedure* will be completely removed or obliterated to make them illegible. (T-2) As a minimum, stencil or print the word EMPTY on the lower section of the container in an easily visible location on each end (forward and aft) of the container. (T-2) Locally obtained decal (EMPTY) may be used.

3.1.3. Prior to shipment of ALCM/CALCM in CNU 617/E ensure all required container markings are present IAW TO s 35E20-2-47-2 and 11A-1-10. (T-1) When installing missile in CNU 617/E, stencil or print missile number on lower section of container. (T-1)

3.1.4. Container Sealing. Containers inspected in accordance with paragraph 3.1.1 will be kept closed and sealed (i.e., metal bands or lead or paper seals) until needed for shipment or storage of missiles. (T-2) Evidence of tampering requires re-inspection and resealing. (T-2)

3.2. Time Change Item Management.

3.2.1. **F-107 Engine Management.** Comprehensive Engine Management System (CEMS) for F-107 engines is maintained by the base engine manager using inputs generated from units with assigned missiles/engines (except 36 MUNS). Missile Analysis, in coordination with Missile Maintenance Section, will develop a 6 year engine replacement forecast to smooth peaks and valleys in engine shipments/overhaul workload. Forecast will be updated annually and indicate a monthly replacement schedule for the next fiscal year and annual requirements for subsequent 5 year period. (T-1) Annual forecasts are due to the applicable MAJCOM logistics division by 15 Jan. (T-2) Annual forecasts will be utilized by the MAJCOM for use in depot workload management and budgeting.

3.2.1.1. **(36 MUNS)** CALCM Flight must preserve a minimum of two personnel trained and able to access and operate the CEMS to maintain configuration control and management of assigned engines. (T-2)

3.2.1.2. Engine turn-in. Engines will be scheduled for turn-in at the first available opportunity to ensure scheduled engine production. (T-2)

3.2.2. **Pyro-Technic Device Management.** Missile Analysis, in coordination with Missile Maintenance Section, will develop and maintain a 10 year rolling pyro-technic device replacement forecast to smooth peaks and valleys in workload and ensure pyro availability.

(T-2) Forecast will be updated at least annually and indicate a monthly replacement schedule for the next fiscal year and annual requirements for subsequent years. (T-2) Annual updated forecasts will be provided to the MAJCOM/A4WC by 1 Sep for programming of pyro-technic device purchases through the Cartridge Activated Device/Propellant Actuated Device office. (T-2)

3.3. Trainer Management.

3.3.1. Clearly stencil in red “For Training Use Only” on the internal surface of panels and all removable training components of ALCM maintenance trainers. (T-2)

3.3.2. Ensure training assets are segregated from WR and Non-WR assets by physical separation or a readily visible sign(s). (T-1)

3.3.3. Maintain an ALCM maintenance trainer panel and component inventory for each training missile assigned. (T-2)

3.3.4. Document, schedule and correct maintenance discrepancies on all trainers in a timely manner.

3.3.5. Identify problems that cannot be resolved to applicable MAJCOM logistics division

3.3.6. Maintenance Data Reporting. Accomplish maintenance data reporting for all trainers IAW TO 00-20 series. Use the Integrated Maintenance Data System (IMDS) to maintain current status on all trainers.

Chapter 4

CMM SECTION RESPONSIBILITIES

4.1. Missile Maintenance. Performs on/off equipment maintenance on assigned missile systems, missile-pylon/launcher interface electronics, ITTs, and associated support equipment.

4.2. Launcher Maintenance (CALCM Flight). Performs on/off equipment maintenance and inspection on assigned missiles, associated launch gear and equipment. Additional levels of launch gear maintenance may be delegated to shops as required by the Flight Chief.

4.3. Weapons/Missile Support. Performs all supply functions, manages Consolidated Tool Kit, TMDE, Hazardous Material programs, assigned support equipment, and consolidated TO library.

4.3.1. Ensure availability/serviceability of required expendables, TOs, tool kits, TMDE, test and handling equipment.

4.4. Pylon Loading Adapter/Launcher Loading Adapter (PLA /LLA) Maintenance. Performs periodic and unscheduled maintenance, repairs, receives and ships assigned PLAs and LLAs and if designated, provides the capability to store and handle assigned missiles/weapons.

4.5. VACE. Performs periodic and unscheduled on/off equipment maintenance, repair, modification and calibration of assigned missile electronic/electrical test equipment. Specifically, VACE performs maintenance on locally assigned automated or semi-automated test equipment and provides field-level authorized general-application electrical/electronic maintenance support at the discretion of the Flight Chief. (509 MUNS, VACE Element also performs on/off equipment maintenance and inspection on assigned launch gear and equipment as well as applicable Analysis functions in Paragraph 4.6.)

4.6. Analysis. The primary functions of this section are to: compile source data generated by CMM activities; review compiled data for accuracy; maintain historical documentation on missiles, ITTs, launch gear and related components; perform trend analysis on systems affecting missile performance and disseminate analysis products as required. Specific responsibilities include:

4.6.1. Compile data from all sources as directed by the Flight Chief. (T-2) The following data sources are used as a minimum:

4.6.1.1. Maintenance Data Documentation (MDD) process (TO 00-20-2, *Maintenance Data Documentation*).

4.6.1.2. ESTS test printouts for Empty Rotary Launcher Assembly (RLA) and Common Strategic Rotary Launcher (CSRL), Level 1, Operational Flight Load, Missile Interface Test (MIT), Loaded Pylon Test (LPT), Loaded Launcher Test (LLT), and Inertial Navigation Element (INE) Auto-calibration.

4.6.1.3. Missile, ITT, launch gear, component, and test equipment historical records.

4.6.1.4. Flight line Systems Interface Test (SIT) Fault Data Recording (FDR) printout when used in place of LLT/LPT.

4.6.2. Review Source Data. Work centers accomplishing maintenance are responsible for documenting configuration changes in the MIS. (T-1) Work center/element supervisors are responsible for reviewing (on a daily basis) data entered into the system by personnel under their control IAW TO 00-20-2. (T-1) Analysis personnel will review/audit completed maintenance data for accuracy and thoroughness.

4.6.3. Responsibilities include updating historical information for assigned missiles, ITTs, launch gear, components, and test equipment as required by -6 TOs.

4.6.4. Use MIS Automated History Event function for Air Force Technical Order (AFTO) Form 95, *Significant Historical Data*. (T-1) Automated forms may be used unless classified. Paper histories may be maintained in conjunction with automated histories.

4.6.4.1. In addition to TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures* requirements, the following historical entries are required for serially CM tracked items: acceptance inspections, captive flight hours flown aboard aircraft, elapsed time indicator reading (if applicable), narrative for all removal actions to include reason for removal (failed test number & values if applicable) and employee number of individual performing action. (T-2)

4.6.4.2. Supplemental historical records are required for engines and select missile components listed in the -6 TO. (T-1) These records must remain with the missile/ITTs records while the component is installed and must be updated and forwarded when the component is replaced and shipped. (T-1)

4.6.4.3. Missile/ITTs AFTO Form 95 will reflect part number and serial number of all serially controlled items listed in the -6 TO. (T-1)

4.6.4.4. For time change items not recorded in an automated Maintenance Data Documentation (MDD) reporting process, include part number, serial number, lot number, date of manufacture and time change due date. (T-1) Additionally, missile must have fuel date and number annotated on AFTO Form 95. (T-1)

4.6.5. Configuration Management. Configuration control must be maintained for all assigned missiles/ITTs to track serially-controlled items.

4.6.5.1. Out-of-configuration conditions must be verified and corrected. (T-1) Establish delayed discrepancy for each out-of-configuration condition. Ensure Work center Event is added for Work Unit Code, part number and/or serial number requiring physical verification.

4.6.6. ESTS printout. ESTS printouts must be maintained for each missile and empty/loaded launcher/pylon for the most recent test conducted. (T-1) Printouts may be abbreviated as allowed by TOs, but must be maintained intact as printed or digital, if available and include Unit Under Test (UUT) identification/serial number, test date, employee number of technician who performed the test and test result. (T-2) If ESTS printouts are not intact as printed, a memorandum from the Flight Chief/CC must accompany the test run in historical records. (T-2) Missing ESTS printouts will require official memorandum signed by Flight Chief/CC and routed through applicable MAJCOM Logistics office; memorandum will include at a minimum: serial number of UUT, date test performed, and date missing report

discovered. (T-2) Memorandum will be placed in the missile record in place of the missing ESTS run.

4.6.6.1. INE auto-calibration printouts must be maintained in each missile's respective record file for the most recent successful calibration. (T-1) If INE auto-calibration is performed while installed on a launcher or pylon, the original copy is kept with the launcher or pylon records and only as much of the ESTS printout as required to fulfill the requirements of this paragraph must be copied for inclusion in the individual missile(s) AFTO Form(s) 95. (T-2)

4.6.6.1.1. Auto-calibration dates for INEs received through supply will be derived from the INE AFTO Forms 95. (T-2)

4.6.7. The AFTO Form 95 is the source document for F-107 overhaul dates. (T-1) Derive engine overhaul dates from F-107 AFTO Forms 95. Team with local engine management section to correct CEMS/MIS data which does not match the AFTO Form 95. (T-2)

4.6.8. Perform annual review of automated/manual AFTO Form 95/records and document completion IAW TO 00-20-1. (T-1) MIS inventory and configuration control must be validated during this review and correct any discrepancies discovered. (T-2)

4.6.9. Perform trend analysis of diagnostic testing results to determine high failure and most likely to fail items to aid in test and missile systems troubleshooting. (T-2) Develop and utilize repeat/reoccur rate and cannot duplicate rate metrics to identify trends.

4.6.10. CMM Monthly Maintenance Summary Report. (T-2) As a minimum, the following tests/results will be tracked on a monthly and cumulative annual basis:

4.6.10.1. Empty Launcher Test (ELT)/ Empty Pylon Test (EPT)

4.6.10.2. LLT/LPT

4.6.10.3. SIT/MIT

4.6.10.4. Missile Level I, II tests

4.6.10.5. Component Level III tests

NOTES:

Reports must classify LLT/LPT as follows:

Type A- Test to confirm serviceability following upload of missiles

Type B- Test to confirm faults that occurred following upload on aircraft (SIT/MIT)

Reports must classify missile Level I testing as follows:

Type A- Test to confirm serviceability of missile following scheduled maintenance

Type B- Test to confirm faults which occurred during LLT/LPT, SIT/MIT, or INE Autocalibration

Specify the root cause of all test failures and corrective actions taken. If troubleshooting is ongoing, do not report failure data, carry over test failure results to the following month's report.

Only report faults against failed UUT.

Identify if faults are:

Inherent failures- Confirmation of prior event failure or initial failure found during Level I/II or EPT/ELT and defective component is identified for repair or replacement.

Induced failures- Personnel error, test hardware/software or test equipment induced failures.

Re-Test OK- SIT/MIT or LLT/LPT faults that are NOT confirmed in the resulting Level I or ELT/EPT test.

4.6.11. Develop tracking and documentation methods to be used when equipment/missiles/launch gear remains assigned to your unit but is located at a deployed location. (T-2)

4.6.12. Analysis Products. Disseminate the following products:

4.6.12.1. Transfer Documents. Historical documents and automated products are sent with missiles, launch gear, replaceable units or equipment when transferred. Ensure classified material is handled IAW AFI 31-401. (T-1)

4.6.12.2. Expenditures. For expended missiles/components, transfer all historical documentation and automated products to Cruise Missile Program Office (AFNWC/NCM). (T-1) Last entry must indicate mission number, location (range) and date of missile termination.

4.6.12.3. Monthly Maintenance Summary Report. Monthly Maintenance Summary is due to the MAJCOM logistics division NLT the 15th of the following month. (T-2) Submit report electronically to MAJCOM logistics division, unit distribution and other addressees as directed by MAJCOM logistics division. (T-2) At a minimum, the monthly maintenance summary must include the following information: tests, test station used, test # failures, corrective actions, cannibalization actions and serial numbers of any line replaceable units. (T-2) These reports are considered FOUO and will be handled accordingly.

4.6.12.4. Weekly Status Report. Weekly Status Reports are due NLT 1200hrs (CST) Thursday of each week. (T-2) Submit report by email and/or electronically (i.e. NMC2) to MAJCOM logistics division, unit distribution and other addressees as directed by MAJCOM logistics division. (T-2) At a minimum, the Weekly Status Report must include the following information: individual missile and launch gear inventory/status/inspections due, TCTO status, build-up (installed on launch gear), missile expenditure and gain loss information, training missiles and the CNU-617/E container inventory. (T-2)

4.6.12.5. Automated Test Equipment (ATE) weekly status report will include at a minimum: Electronic Systems Test Set, Missile Radar Altimeter Test Assembly, Air Data Test Set, Portable Automatic Test Equipment Calibrator, Signal Data Converter, and Cooling Control Unit status. (T-2)

4.6.12.6. The ATE status and Weekly Status Report may be reported separately. (T-2) These reports are considered FOUO and will be handled accordingly.

Chapter 5

CMM TRAINING

5.1. CMM Training Section. The mission of the Training Section is to provide trained, mission ready Airmen to meet unit requirements. To that end, the Training Section manages and/or performs initial, recurring and other training as directed. The Training Section provides centralized ancillary training to maintenance technicians and supervisors. Use this instruction along with AFI 36-2201, *Air Force Training Program* guidance.

5.1.1. Responsibility for Training Section requirements and execution will be assigned to a responsibility center independent of CMM sections.

5.2. CMM Training will:

5.2.1. Manage assigned CMM Training programs.

5.2.2. Promptly identify and initiate corrective actions for training deficiencies.

5.2.3. Provide non-technical training information, (i.e., safety, security and management) applicable to duty performance.

5.2.4. Coordinate with work centers to identify technician task requirements in the Career Field Education Training Plan (CFETP)/TBA and align TT curriculum with section MTP(s). (T-1)

5.2.5. Use the Instructional System Development (ISD) process to develop maintenance training programs and manage/develop lesson plans. (T-1)

5.2.6. Utilize MAJCOM standardized lesson plan format. (T-2)

5.2.7. Develop lesson plan review tracking system. (T-2)

5.2.8. Ensure active LPs are routed for review through applicable work center NCOIC and QA. (T-2)

5.2.8.1. Route active LPs for review/approval through Maintenance Superintendent/Operations Officer. (T-2)

5.2.8.2. Active LPs will be reviewed/approved annually, or when major equipment changes or changes to governing instructions have been incorporated. (T-2) Review for adequacy, safety and technical accuracy (ensure the Weapon Safety Manager reviews all lesson plans that affect nuclear surety/missile or explosive safety). Annual reviews of lesson plans become overdue on the last day of the month in which they are due. (T-2) For major changes to equipment or governing instruction lesson plans will immediately be reviewed for safety compliance prior to performing training on applicable tasks. (T-2)

5.2.9. Team with section supervisors when they conduct and document their annual MTP reviews. (T-1)

5.2.10. Ensure a quarterly Recurring Technical Training (RTT) program is established and provide overall management of the program. (T-1) Tailor this program to individual technician and work center needs.

5.2.11. Manage Unit Ancillary Training section with development of an Initial and Recurring CMM Academic Training Program. (T-2)

5.2.12. Team with work center supervision to develop Team Chief Training Course. (T-2)

5.2.13. Act as liaison between unit and technical training schools for training pipeline management.

5.2.14. Maintain a rolling annual Initial Training (IT) forecast based on projected technical school accessions. (T-2)

5.2.15. Develop and use training deviation logs to evaluate scheduling and training effectiveness. (T-2)

5.2.16. Team with work centers and QA to identify trends in maintenance performance that need further emphasis and incorporate their inputs into the RTT program. (T-2) Ensure tasks with negative trend data are considered for inclusion in RTT program. (T-2)

5.2.17. Perform and document training observation on all newly assigned TT instructors prior to certification. (T-1) Document these observations on an AFGSC Form 261, *Instructor Evaluation Checklist* (Performed by QA at 509 MUNS) or similar MAJCOM directed form and file in the instructors folder. (T-2)

5.2.18. Develop and maintain instructor folders to document certification of all newly assigned TT and non-TT instructors (folders will be maintained while the instructor is certified and 12 months after decertification). (T-1) Certified instructors must meet the following:

5.2.18.1. Meet minimum instructor requirements of AFI 36-2201, *Air Force Training Program*. (T-1)

5.2.18.2. Complete local instructor orientation requirements. (T-2) At minimum include:

5.2.18.2.1. Instructor responsibilities from AFI 21-200 series and AFI 36-2201.

5.2.18.2.2. Review AFMAN 36-2236, *Guidebook for Air Force Instructor*.

5.2.18.2.3. Trainer Proficiency Evaluation (TPE) requirements

5.2.18.2.4. Training section mission and overview

5.2.18.2.5. Lesson plan maintenance procedures

5.2.18.3. Receive/document an initial observation by the Training NCOIC and individual's lead instructor prior to receiving initial QA TPE. (T-2)

5.2.18.4. Complete a MAJCOM approved instructor course (i.e. 20AF ICBM Center of Excellence - Instructional Techniques Course) covering fundamental of instruction, instructional development and instructional presentations. (T-1) If course seats are unavailable, the Maintenance Superintendent/Operations Officer may authorize an instructor to conduct unsupervised training prior to completing the course. (T-2) Instructors so approved must attend at the earliest possible date not to exceed six months. (T-2)

5.2.18.5. Instructors must be Job Qualification Standard qualified on the task(s) being trained. (T-1)

5.2.19. Work with section supervision to select instructors from the best qualified technicians. This selection process must consider technical expertise, experience, management ability, judgment, temperament, communicative skills, administrative competence, and retainability.

5.2.20. Instructors must be appointed in writing by the Maintenance Superintendent/Operations Officer. (T-1)

5.2.21. Appoint a Lead Instructor to oversee each Team Training (TT) Element. (T-2)

5.2.22. Establish a consolidated task coverage file for each work center responsible for performing CFETP tasks. (T-1) Ensure a training capability for each CFETP technical task performed. (T-1)

5.2.23. Monitor certified technician numbers against the Maintenance Capabilities Listing (MCL). (T-1)

5.2.24. If certified technician numbers are projected to fall below squadron requirements, notify applicable Flight Chief/CC for action and inform the Maintenance Superintendent/Operations Officer. (T-2)

5.2.25. Work with QA to schedule certifications after qualification training has been accomplished as required. (T-2)

5.2.26. Team with work centers to ensure lesson plans, qualified instructors, and MTPs are available and implemented. (T-2)

5.2.27. Assist work center supervisors with the management of TBA to ensure accuracy and currency of records. (T-2)

5.3. Unit Training Management, CMM Responsibilities:

5.3.1. Establish and manage learning center resources and equipment (Student computers for Computer Based Training (CBT) completion, classrooms, etc.).

5.3.2. Ensure proper administration of ancillary training programs. (T-2)

5.3.3. Ensure course completion is tracked and documented. (T-2)

5.3.4. Develop and distribute a quarterly forecast of unit ancillary training classes. (T-2) Ensure sufficient capacity to meet unit needs.

5.3.5. Serve as the focal point for obtaining and scheduling CMM related training quotas for courses conducted by outside agencies (on/off base). Use the AF Form 3933, **MAJCOM Mission Training Request**, to request special training needs. Submit requests to responsible MAJCOM representatives. (T-2)

5.3.6. In cooperation with work center supervisors, monitor and schedule all non-technical training requirements. (T-2)

5.3.7. Provide each applicable agency the training forecast and awaiting action listing monthly. (T-3)

5.3.8. Monitor overdue training and notify Maintenance Operations Officer/Maintenance Superintendent to correct training deficiencies. (T-2)

5.3.9. Document RTT completion in MIS after written notification from TT. (T-2)

5.3.10. Load RTT course codes against technicians only after graduation from IT. (T-2)

5.3.10.1. Develop an initial and recurring CM Maintenance Academics Training (MAT) program. (T-1) All 2M0 Supervisors, Technicians, Team Chiefs, Bay Chiefs, Instructors, and Evaluators are required to complete initial and recurring MAT. (T-1)

5.3.10.2. Initial MAT must be completed prior to performing any training or maintenance task. (T-1)

5.3.10.3. Recurring MAT will be administered every 12 months, and may be included as part of training and requalification for failed personnel proficiency evaluations. (T-1)

5.3.10.4. Individuals must complete a comprehensive closed-book test with a minimum score of 80 percent. (T-2) A test score of less than 80 percent requires retraining and retesting with a different test. If a student fails twice, schedule for Initial MAT on next available date.

5.3.10.5. Document Initial and Recurring MAT in the MIS. (T-1)

5.3.10.6. MAT course control documents will be tailored to meet unit's mission/contingency needs (T-3) and at a minimum, cover the following items:

5.3.10.6.1. Applicable weapons system capabilities, individual responsibilities, and reporting requirements.

5.3.10.6.2. Weapon system fault isolation, troubleshooting, and emergency procedures.

5.3.10.6.3. Security requirements per DoD S-5210.41-M_AFMAN31-108, *The Air Force Nuclear Weapon Security Manual*.

5.3.10.6.4. Weapons generation requirements/actions/timelines, as applicable.

5.3.10.6.5. Inspection requirements IAW AFI 90-201, *The Air Force Inspection*.

5.3.10.6.6. Overview of applicable AFIs, WSSRs, weapons system TO, and local operating procedures.

5.3.10.6.7. Missile/explosive safety, nuclear surety, Nuclear Weapons Related Material, Munitions Close in Sentry (MCIS), Intrinsic Radiation, and Personnel Reliability Program training may be combined with MAT.

5.3.10.7. MAT may be included in Nuclear Weapons Academics trained IAW AFI 21-204 *Nuclear Weapons Maintenance Procedures* or Weapons Academics IAW AFI 21-101, *Aircraft and Equipment Maintenance Management*. (T-2)

5.4. Team Training Responsibilities:

5.4.1. Conduct and monitor upgrade training for students assigned to IT course in coordination with the trainee's work center supervision. (T-2)

5.4.2. Establish Special Purpose Vehicle Operations (SPVO) training program to conduct special purpose vehicle courses. (T-2)

5.4.3. Ensure required training resources are pre-coordinated with maintenance sections and included in monthly and weekly maintenance schedules. (T-3)

5.4.4. Control, use and maintain assigned maintenance trainers and equipment. (T-2)

5.4.5. Develop and maintain class folders for IT and Team Chief Training Courses. (T-3) At minimum folders will contain:

5.4.5.1. A structured and visible training plan for each trainee or trainee team enrolled. (T-3) For IT program training from arrival on station through graduation based on trainee qualifications, tasks required and projected graduation date from technical training. Ensure training plan is aligned with applicable MTP(s).

5.4.5.1.1. Training plans must establish start and graduation dates. (T-3)

5.4.5.1.2. Report any changes to class start or graduation dates to work centers monthly. (T-3)

5.4.5.1.3. Ensure training schedule changes are reported at the scheduling meeting and reflected in the weekly schedule. (T-3)

5.4.5.1.4. Training may be completed prior to projected graduation date but will not exceed that date without justification to and written approval of the governing Flight Chief/CC. (T-3)

5.4.5.2. Keep a daily record of activities for each trainee or team. (T-3) The record will include:

5.4.5.2.1. Material and procedures covered.

5.4.5.2.2. Date(s) accomplished.

5.4.5.2.3. Training plan deviations, including reason(s) for deviation and date rescheduled.

5.4.5.2.4. Documentation of trainee's strengths, weaknesses and recommended improvement areas.

5.4.5.2.5. Student and Instructor acknowledgement that feedback has been administered.

5.4.5.3. Course roster and student biographical information. (T-3)

5.4.5.4. Completed student measurement results (written test/performance evaluations). (T-3)

5.4.5.5. Training folder will be maintained for the duration of the course and one year after course completion. (T-2) Upon class graduation instructors will provide an overall summary of student's performance and route completed folder through squadron and flight leadership for review NLT one week after graduation. (T-3) Document course completion in TBA. (T-2)

5.4.6. Team with work center supervisors and Unit Training Manager to manage the upgrade training program IAW AFI 36-2650, *Maintenance Training*. (T-1)

5.5. Maintenance Fundamentals Course (MFC). The purpose of the Maintenance Fundamentals Course (MFC) is to prepare technicians to safely perform basic maintenance tasks while awaiting IT. Develop and implement a MFC to be completed by students arriving from

technical training prior to entering IT. MFC will be started within 60 days of technician's arrival on station. (T-2) At a minimum the following will be taught in MFC:

- 5.5.1. TO and general hand tool usage.
- 5.5.2. Use and inspection of general safety equipment.
- 5.5.3. Use and inspection of maintenance documentation forms.
- 5.5.4. Vehicle operation.
- 5.5.5. Escort, MCIS and security duties, as applicable.

5.6. IT Program. Implement and manage an IT program (T-2) which at minimum will consist of:

- 5.6.1. (2/705 MUNS) 3-level core task refresher and qualification on 5-level tasks as identified in the CFETP/TBA.
- 5.6.2. Task qualification on locally identified task requirements.
- 5.6.3. Basic troubleshooting skills/knowledge.

5.7. RTT Program. Implement a quarterly RTT program as follows:

- 5.7.1. All 2M0 Team Chiefs and Technicians who are subject to PPE and qualified on the selected CFETP/TBA task will receive RTT. (T-1) Technicians not qualified on the chosen RTT task will receive initial task training in place of RTT. (T-2)
- 5.7.2. Coordinate with QA and work center supervisors to determine tasks for RTT. (T-2)
- 5.7.3. Ensure Training Management is notified in writing of completed RTT. (T-2)

5.8. Team Chief Training Program. Team with work center(s) to design and implement a Team Chief Training Program. (T-1) At minimum, the Team Chief Training Program will include:

- 5.8.1. Team Chief responsibilities IAW this instruction and other AFI 21-2XX series guidance.
- 5.8.2. Deficiency reporting.
- 5.8.3. Maintenance documentation procedures and supply processes.
- 5.8.4. Abnormal condition procedures.
- 5.8.5. Technical operation evaluation processes and procedures.
- 5.8.6. Applicable Weapons System Evaluation Program requirements, Operation Plans, DOC statements, Concept of Operations, maintenance planning factors and CMM scheduling process.
- 5.8.7. Document course completion in TBA.

5.9. Develop student measurement process. Student measurement in maintenance training is a systematic process used to determine if a student can perform the behavior(s) specified in an objective. Measurement devices such as performance evaluations, written tests and oral questions are used to evaluate student achievement of course objectives.

- 5.9.1. Evaluate or test students on course objective(s) before course completion/graduation.
- 5.9.2. Identify students who need special individual assistance or additional training.
- 5.9.3. Inform students of their progress in the course, stimulate effective learning and reinforce knowledge and skills.
- 5.9.4. Student Measurement Requirements. IT and Team Chief Course will have written tests and, when required, a performance evaluation.
- 5.9.5. Use a performance evaluation, written evaluation or a combination of both when an objective requires the student to perform a task.
- 5.9.6. Subject knowledge evaluations may be written or oral. If oral evaluations are used, the instructor must develop a list of questions to ensure standardization for each class.
 - 5.9.6.1. Determine the number of test questions required based on the complexity and criticality of the subject matter. The test must be comprehensive in nature and sample all course objectives. For additional test development information refer to AFH 36-2235, Volume 12, *Information for Designers of Instructional Systems Test and Measurement Handbook*.
 - 5.9.6.2. Written tests are based on a pass/fail system with 80 percent as the minimum passing score.
 - 5.9.6.3. Students will be re-tested using an alternate test. Complete a thorough review of the failed objective(s) before re-testing is accomplished.
 - 5.9.6.4. Students who fail a behavioral objective must receive remedial instruction. After remedial training is completed, students can then be reevaluated on the failed behavioral objective.
- 5.9.7. Task/performance evaluations. Used for criterion objectives that require students to perform tasks.
 - 5.9.7.1. A criterion objective checklist may be developed and used. However, do not use the checklist in lieu of TOs. Measure all evaluations using applicable TOs.
 - 5.9.7.2. Task/performance evaluations will be based on the 3c proficiency level and must be performed with 100% accuracy.
 - 5.9.7.3. Students who fail the task/performance evaluation will receive remedial training and will be reevaluated. If the student repeatedly fails the performance evaluation, the instructor will document the students training record explaining reasons for non-qualification on the task.
- 5.9.8. Refer to AFH 36-2235, Volume 12 and AFMAN 36-2236 for further guidance on test development.
- 5.9.9. Develop and implement an IT Graduation Program. Program should recognize training milestones and accomplishments, as well as efforts put forth by instructors.
- 5.9.10. Coordinate post-graduation initial personnel evaluation with QA prior to IT graduation. (T-2)

5.9.11. Notify QA, in writing, when an IT class graduates. (T-2) Notification will include:

5.9.11.1. Class Roster including student employee numbers.

5.9.11.2. Listing of task(s) students are qualified to perform to facilitate PPE task selection.

5.9.12. QA will conduct a post-graduation initial PPE on each IT graduate within 30 days of graduation. (T-2) QA will make every effort to evaluate the full spectrum of IT tasks trained. File copy of evaluation report in student's class folder.

5.9.13. Annually, team with work center(s) and Training NCOIC to perform and document by memorandum periodic reviews of MTPs. (T-2)

5.10. TT Instructor Responsibilities. Directly responsible for training safe, secure and reliable CMM tasks. Instructor will be qualified per paragraph 5.2.18 and should be assigned to TT for a minimum two/maximum three year tour. (T-2) Instructors will:

5.10.1. Provide direction to, and be responsible for, work accomplished by trainees performing maintenance under their supervision. Comply with Nuclear Surety requirements and enforce compliance with No Lone Zone and Two Person Concept, as required. (T-1)

5.10.2. Train procedures for abnormal conditions and damaged weapon system components.

5.10.3. Train source documentation verification.

5.10.4. Review and indoctrinate trainees with applicable TO(s) prior to the start of CMM tasks.

5.10.5. Train technicians to complete and submit all required documents/reports upon completion of the task (i.e., work orders, inspection records, custody transfer documents, DRs, etc...).

5.10.6. Update line number/NEW as changes occur and train their purpose/importance.

5.10.7. Enforce verbal demand/response for all CMM tasks and ensure team members complete actions as directed.

5.10.8. Comply with and indoctrinate TO procedures, safety, WSSR, security requirements and enforce TO usage with trainees.

5.10.9. Train NCE verification and use of the MNCL.

5.10.10. Ensure IPIs are accomplished and documented as required.

5.10.11. Provide documentation of training deviations and daily student progress.

5.10.12. Provide immediate supervisor feedback on student's training progress.

5.10.13. Use ISD teaching techniques when presenting lessons to students.

5.10.14. TT Instructors will not be removed from their duties without approval of the Maintenance Superintendent/Operations Officer.

5.10.15. TT Instructors need not be qualified on every CFETP/TBA task; however, the combination of instructors assigned to TT must provide 100 percent task coverage for work center tasks. (T-1)

5.10.16. Maintain a personal file of personalized lesson plans required for IT.

5.10.17. Perform applicable safety briefings.

5.11. Non-Team Training (Augmentees) Instructors. Sections will appoint in-house instructor augmentees to fill voids in TT experience/qualifications. Work center NCOIC will nominate, and Flight Chief/CC responsible for TT will appoint, augmentee instructors in writing to perform task qualification training. (T-2) Once signed, augmentee appointment letters will be routed through Maintenance Superintendent/Operations Officer for review and then maintained by Training Section NCOIC in the instructor folder(s). Augmentees will:

5.11.1. Meet and maintain the same instructor qualification requirements and responsibilities as TT Instructors. (T-2)

5.11.2. When requested, assist TT instructors to develop lesson plans for all CFETP/TBA tasks. Inform TT if technical errors are identified while performing training.

5.11.3. Assist work center supervisors in determining topics for and instruction of RTT.

JUDITH A. FEDDER
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Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

- AFH 36-2235, Volume 12, *Information for Designers of Instructional Systems Test and Measurement Handbook*, 1 Nov 02
- AFI 20-110, *Nuclear Weapons-Related Materiel Management*, 18 Feb 11
- AFI 21-101, *Aircraft and Equipment Maintenance Management*, 26 Jul 10
- AFI 21-103, *Equipment Inventory, Status and Utilization Reporting*, 26 Jan 12
- AFI 21-200, *Munitions and Missile Maintenance Management*, 2 Jan 14
- AFI 24-203, *Preparation and Movement of Air Force Cargo*, 2 Nov 10
- AFI 21-204, *Nuclear Weapons Maintenance Procedures*, 30 Nov 09
- AFI 23-101, *Air Force Material Management*, 8 Aug 13
- AFI 31-401, *Information Security Program Management*, 1 Nov 05
- AFI 33-360, *Publications and Forms Management*, 25 Sep 13
- AFI 36-2201, *Air Force Training Program*, 10 May 96
- AFI 36-2650, *Maintenance Training*, 20 May 14
- AFI 63-125, *Nuclear Certification Program*, 8 Aug 12
- AFI 90-201, *The Air Force Inspection System*, 2 Aug 13
- AFI 91-101, *Air Force Nuclear Weapons Surety Program*, 13 Oct 10
- AFI 91-104, *Nuclear Surety Tamper Control and Detection Programs*, 23 Apr 13
- AFI 91-108, *Air Force Nuclear Weapons Intrinsic Radiation and 91(B) Radioactive Material Safety Program*, 21 Sep 10
- AFI 91-111 *Safety Rules for US Strategic Bomber Aircraft*, 26 Oct 11
- AFMAN 33-363, *Management of Records*, 1 Mar 08
- AFMAN 36-2236, *Guidebook for Air Force Instructors*, 12 Nov 03
- AFMAN 91-201, *Explosives Safety Standards*, 12 Jan 11
- AFPD 21-2, *Munitions*, 17 Dec 12
- DoD S-5210.41-M_AFMAN 31-108, *Air Force Nuclear Weapon Security Manual*, 7 Mar 13
- TO 00-5-1, *AF Technical Order System*, 15 Jan 13
- TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures*, 1 April 13
- TO 00-20-2, *Maintenance Data Documentation*, 1 Sep 09

TO 00-25-234, *General Shop Practice Requirements for the Repair, Maintenance and Test of Electrical Equipment*, 23 Mar 14

TO 11A-1-10, *Munitions Serviceability Procedure*, 7 Jul 10

TO 11A-1-60, *General Instruction - Inspection of Reusable Munitions Containers and Scrap Material Generated From Items Exposed To or Containing Explosives*, 15 May 2014

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Adopted Forms

AF Form 847, **Recommendation for Change of Publication**

AF Form 3933, **MAJCOM Mission Training Request**

AFTO Form 95, **Significant Historical Data**

AFGSC Form 261, **Instructor Evaluation Checklist**

Abbreviations and Acronyms

2M0—Missile and Space Systems Electronic Maintenance (Air Force Specialty Code)

ACC—Air Combat Command

AFGSC—Air Force Global Strike Command

AFH—Air Force Handbook

AFI—Air Force Instruction

AFMC—Air Force Materiel Command

AFNWC—Air Force Nuclear Weapons Center

AFPD—Air Force Policy Directive

AFRIMS—Air Force Records Information Management System

ATE—Automated Test Equipment

AFTO—Air Force Technical Order

ALCM—Air Launched Cruise Missile

CALCM—Conventional Air Launched Cruise Missile

CBT—Computer Based Training

CC—Commander

CEMS—Comprehensive Engine Management System

CFETP—Career Field Education Training Plan

CM—Cruise Missile

CMM—Cruise Missile Maintenance

CSRL—Common Strategic Rotary Launcher
CST—Central Standard Time
DOC—Design Operational Capability
DR—Deficiency Reports
ELT—Empty Launcher Test
EPT—Empty Pylon Test
ESD—Electrostatic Discharge
ESTS—Electronic Systems Test Set
FDR—Fault Data Recording
FOUO—For Official Use Only
GAJAS—GPS Anti-Jam System
IMDS—Integrated Maintenance Data System
INE—Inertial Navigation Element
IPI—In-Process Inspection
ISD—Instructional System Development
IT—Initial Training
ITT—Interface Test Trainer
KTL—Key Task Listing
LLA—Launcher Loading Adapter
LLT—Loaded Launcher Test
LP—Lesson Plan
LPT—Loaded Pylon Test
MAJCOM—Major Command
MASO—Munitions Accountable Systems Officer
MAT—Maintenance Academics Training
MCIS—Munitions Close in Sentry
MCL—Maintenance Capabilities Listing
MDD—Maintenance Data Documentation
MFC—Maintenance Fundamentals Course
MIS—Maintenance Information System
MIT—Missile Interface Test
MNCL—Master Nuclear Certification List

MTP—Master Training Plans
NCE—Nuclear Certified Equipment
NCOIC—Non-commissioned Officer In Charge
NEW—Net Explosive Weight
NLT—Not Later Than
OI—Operating Instructions
OPR—Office of Primary Responsibility
PACAF—Pacific Air Forces
PLA—Pylon Loading Adapter
POI—Plan of Instruction
PPE—Personnel Proficiency Evaluation
QA—Quality Assurance
RDS—Records Disposition Schedule
RLA—Rotary Launcher Assembly
RTT—Recurring Technical Training
SDS—Safety Data Sheets
SIT—Systems Interface Test
SPVO—Special Purpose Vehicle Operations
SWF—Special Weapons Flight
TBA—Training Business Area
TCTO—Time Compliance Technical Order
TM—Training Management
TMDE—Test Measurement and Diagnostic Equipment
TO—Technical Order
TPE—Trainer Proficiency Evaluation
TT—Team Training
UUT—Unit Under Test
VACE—Verification and Checkout Equipment
WR—War reserve
WSSR—Weapon System Safety Rules