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Maintenance

MISSILE MAINTENANCE MANAGEMENT

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This Air Force Manual (AFMAN) implements Air Force Policy Directive (AFPD) 21-2, *Munitions*, and is consistent with DAFPD 21-1, *Maintenance of Military Materiel*. This manual establishes procedures for maintaining land-based Intercontinental Ballistic Missiles (ICBM) and Air Launched Cruise Missiles (ALCM). It applies to all civilian employees and uniformed members of the Regular Air Force, Air Force Reserve, and Air National Guard. This publication does not apply to the United States Space Force. Requirements of this publication must be implemented immediately. Units will contact the applicable Major Command (MAJCOM) for interpretations of the guidance contained in this manual. MAJCOMs may supplement this publication; route supplements to the office of primary responsibility (OPR) for coordination prior to certification and approval. The authorities to waive wing or unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See Department of the Air Force Manual (DAFMAN) 90-161, *Publishing Processes and Procedures*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the publication OPR for non-tiered compliance items. Send a copy of the approved waiver to the OPR within 30 days of approval. This publication requires the collection and or maintenance of information protected by the Privacy Act of 1974 authorized by 5 U.S. Code 552(a), *Records Maintained on Individuals*, Code of Federal Regulations 1320.5, *Controlling Paperwork Burdens on the Public*, and Federal Register, Volume 75, Number 140, *Routine Uses of Records*. The applicable System of Record Notice(s) (SORN) F021 AFSPC A, Cable Affairs Personnel/Agency Records is available at: **http://dpclo.defense.gov/Privacy/SORNs.aspx**. Ensure all records generated as a result of

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SUMMARY OF CHANGES

This document has been revised and must be completely reviewed. Changes include (1) incorporation of Guidance Memorandum, (2) identifies Production Superintendent and Expediter roles, (3) updated Maintenance Cybersecurity Discipline requirements, (4) replaces 576 FLTS/CC with 377 Test Evaluation Group (TEG), (5) correcting tier waiver authorities, (6) other administrative updates.

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Chapter 1

MAINTENANCE MANAGEMENT GUIDANCE.

1.1. Introduction. This manual prescribes missile maintenance guidance and procedures. AFMAN 21-200, *Munitions and Missile Maintenance Management* and AFMAN21-204, *Nuclear Weapon Maintenance* provide additional guidance. Cruise missile maintenance units will only follow guidance contained in chapters **1, 2, 6, 8**, **Attachment 1**, and **Attachment 2** unless identified as (ICBM) preceding the paragraph. This publication is not applicable to Munitions units within ICBM maintenance groups or the 377 TEG. The following coding is used in this manual preceding certain paragraphs:

1.1.1. **(ICBM)** . This indicates applicability to ICBM units only, including the 377 TEG.

1.1.2. **(377 TEG) .** This indicates applicability to the 377 TEG only.

1.1.3. **(N/A 377 TEG) .** This indicates the specific paragraph or portion thereof is not applicable to the 377 TEG.

1.1.4. **(2 MUNS) .** This indicates this paragraph is applicable to the 2nd Munitions Squadron only.

1.1.5. **(Generation Flight) .** This indicates the paragraph is applicable to Generation Flight only within an ICBM unit or the 377 Flight Test Missile Maintenance Squadron (FTMMXS).

1.1.6. **(377 FTMMXS)** This indicates this paragraph is applicable to the 377th Flight Test Missile Maintenance Squadron only.

1.1.7. **(ALCM)** This indicates applicability to ALCM units only.

1.2. Maintenance Concept. All maintenance actions and management efforts must be directed towards the support of United States Strategic Command requirements. **(T-0)**

1.2.1. **(N/A 377 TEG)** Emergency War Order (EWO) Maintenance

1.2.1.1. At all operational ICBM bases, the normal day-to-day maintenance activities that contribute to achieving, maintaining, or enhancing alert postures are EWO activities. Thus, all Non-Mission Capable (NMC) and Partially-Mission Capable (PMC) maintenance at operational bases is EWO maintenance. EWO essential maintenance is repair actions required to generate or enhance the alert posture of missiles and enhance the launch capability of Launch Control Center (LCCs).

1.2.1.2. For maintenance during advanced Defense Readiness Conditions (DEFCON), the Maintenance Group Commander (MXG/CC) must consider the tradeoffs of temporary degrades in hardness/capability caused by performing high priority maintenance as opposed to not performing the maintenance. **(T-3)** In-shop EWO essential maintenance encompasses those repair actions required to support the generation effort during advanced DEFCONs. Maintenance personnel must know their responsibilities in the unit's EWO role.

1.2.2. **(ICBM)** Remove missiles from alert status to perform maintenance actions that prevent progressive degradation of missile systems or to perform tests prescribed in technical orders (T.O.), higher headquarters' directives, and instructions. **(T-3)** When practical, a scheduled off

alert will be planned to align with other maintenance requiring the sortie to be scheduled off alert.

1.2.3. Leaders at all levels will emphasize configuration management of ICBM Launch Facilities (LFs), LCCs, Launch Center Equipment Building (LCEBs), ALCMs, and all support equipment. **(T-2)**

1.2.4. **(ICBM)** Units will maintain LFs, LCCs, and LCEB to the same standard regardless of deployment status. **(T-1)** This also applies to LFs, LCCs, and LCEBs during transition to Sentinel until they are transferred to the contractor.

1.2.5. **(377 TEG)** Deficiency Reports will not be used to replace waiver authority for Flight Worthiness Assessments and Component Replacement Requests. **(T-0)** An Unsatisfactory Report can be used because the Department of Energy is its own waiver authority. Follow Air Force Global Strike Command (AFGSC) guidance for specific Force Development Evaluation (FDE) waiver requests.

1.2.6. Use only equipment authorized by technical data and/or T.O. 21M-LGM30G-12, *Safety and Electromagnetic Interference Provisions* to conduct maintenance. **(T-2)** Submit requests for alternate or substitute equipment or exempt powered devices through applicable office in AFGSC Directorate of Logistics and Engineering (AFGSC/A4).

1.2.7. Preventive Maintenance. Preventive maintenance is a combination of isochronal inspections and the "Find and Fix" philosophy. T.O. 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures* governs isochronal inspections. All qualified maintenance personnel will apply the "Find and Fix" philosophy by actively inspecting missile sites, cruise missiles, vehicles, and support equipment and making repairs within their capability. **(T-2)**

1.3. Nuclear Certification Program. Manage nuclear-certified equipment, software, vehicles, and end items identified in USAF Master Nuclear Certification List per AFI 63-125, *Nuclear Certification Program*. **https://members.lcmp.af.mil/mncl (T-1)**

1.4. Munitions and Missile Maintenance Tactics, Techniques, and Procedures (TTP). Maintenance leaders should utilize TTP volumes to accomplish the mission more effectively and efficiently. Munitions and Missile Maintenance TTP volumes may be found at: **https://usaf.dps.mil/teams/TTP/SitePages/Home.aspx**

1.5. Safety.

1.5.1. Use unit plans and supplements to establish specific roles and responsibilities during missile or nuclear mishaps and disaster response situations. **(T-2)** These may include Missile Potential Hazards (MPH), Propulsion System Rocket Engine (PSRE) or Post Boost Control System responses, Nuclear Weapon Accident/Incident responses, or Missile Booster Movement Plans.

1.5.2. **(ICBM)** The Missile Combat Crew (MCC) is in command of the LF at all times regardless of its status. The MCC has full authority to prohibit commencement and direct termination of any task. The maintenance team chief is responsible for the safe operation of the missile system in the LF once the LF is penetrated and the lock pin assembly is installed in the safety control switch. The team chief on the LF has full authority to prohibit commencement and direct termination of any task.

1.5.3. When a critical safety deficiency is discovered, the reporting activity will submit a deficiency report. See T.O. 00-35D-54, *USAF Deficiency Reporting, Investigation, and Resolution (DRI&R)* for detailed guidance. **(T-1)** Refer to AFGSC-developed stop-use procedures and **paragraph 5.8**.

1.5.4. **(ICBM)** Units will use the training Reentry System (RS) when generating the off-base training LF to simulated alert. **(T-1)**

1.6. (ICBM) (N/A 377 TEG) Maintenance Augmentation Management. Certain situations may require personnel not assigned to the Maintenance Group to perform maintenance actions as directed by the Missile Maintenance Operations Center (MMOC). All personnel will abide by DAFMAN 91-203, *Air Force Occupational Safety, Fire, and Health Standards*. **(T-0)**

1.6.1. MCCs and Missile Alert Facility Managers (MAFM) may perform locally specified maintenance tasks in the LCC/LCEB. The Maintenance and Operations Group Commanders must approve the specified maintenance tasks in writing. **(T-3)**

1.6.2. Security Forces may perform locally specified maintenance tasks at the LF. The Maintenance and Security Forces Group Commanders must approve specified maintenance tasks in writing. **(T-3)**

1.7. Maintenance Cybersecurity Discipline.

1.7.1. Maintaining positive maintenance cybersecurity discipline practices of Department of Defense (DoD) Information Technology (IT) is critical to sustaining the mission. Department of Defense Instruction (DoDI) 8500.01, *Cybersecurity*, defines both hardware and software that is physically part of, dedicated to, or essential in real-time to the mission assurance of special purpose weapon systems. DoD IT includes (but is not limited to) electronic tools (eTools), Improved Minuteman Physical Security System Data Tool, Environmental Control System Programmable Logic Controller devices, and all associated support equipment. The culture of positive cybersecurity awareness and actions necessary to sustain cybersecurity resiliency is required by all maintenance personnel to mitigate allusive cybersecurity threats and optimize enduring mission generation capabilities.

1.7.1.1. All users perform an integral role in prevention, detection, and reporting suspected corrupted software of DoD IT which includes Information Systems (IS) and Platform Information Technology, which is an electronic platform with information technology for a specific function. See **Table 1.1**.

1.7.1.2. Consult applicable Security Classification Guides listed in T.O. 33-1-38, *Cybersecurity for Automatic Test Equipment and Support Test Equipment* (ATE/STE). T.O. 33-1-38 provides guidance for Cybersecurity Incident Reporting and refers users to applicable technical manuals, instructions, and publications when determining the classification of cybersecurity incidents and vulnerability documents.

1.7.1.3. Mission Design Series (MDS) Lead Commands in coordination with the applicable Program Manager will develop MDS and Support Equipment (SE) cybersecurity threat mitigation methods and procedures for organizational and intermediate level maintenance activities. **(T-2)** The methods and procedures must detect malicious code, report cybersecurity incidence and issues, and remediate the incidence and issue affecting the MDS or SE. **(T-2) Note:** Mitigation plan should be developed per DoDI

8500.01; T.O. 33-1-38, DoD 8570.01, *Information Assurance Workforce Improvement Program*; Military Standard (MIL-STD)-38784A, *General Style and Format Requirements for Technical Manuals*; 17- series AFIs.

Table 1.1. Tiered Interface Examples.

TIER	Type of Interface	Examples	Applicable T.O.s
1	On-Board	Environmental Control System Program Logic Controller, Improved Minuteman Physical Security System Data Interface Software, B-52 DTC Mission File	Device T.O.
2	Directly Connected	Explosive Set Circuitry Test Set, Improved Minuteman Physical Security System Data Tool, Code Change Verifier, Digital Tape Unit, Controller Monitor, Site Activation Remote Control, Electronic System Test Set	Device T.O.
3	Indirectly Connected	Guided Missile Automated Testing System, Wing Code Processing System, Missile Radar Altimeter Test Set	Device T.O.
4	Not Connected	eTools	T.O. 00-5-1, *Air Force Technical Order System*

Chapter 2

ROLES AND RESPONSIBILITIES.

2.1. Introduction. This chapter identifies roles and responsibilities applicable to maintenance management. This chapter applies to the 377 TEG unless indicated and where the division or position exists.

2.2. Air Force Global Strike Command. As the lead command for ICBMs and cruise missiles, AFGSC develops management guidance and procedures that allow units to achieve the highest levels of safety, nuclear surety, security, and productivity. Where applicable, AFGSC will:

2.2.1. ICBM:

2.2.1.1. Develop Missile Maintenance Priority Designator lists, Mission Essential Subsystem lists, and ICBM Communications Mission Capability lists and post them on the Air Force Nuclear Munitions Command and Control (NMC2) website. **https://usaf.dps.mil/teams/11262/afgsc/SitePages/HQ-AFGSC.aspx**

2.2.1.2. Ensure development of guidance to support and resolve a MPH.

2.2.1.3. Develop guidance to execute stop-use procedures.

2.2.1.4. Develop guidance for units to coordinate changes to the published maintenance schedule.

2.2.1.5. Develop guidance to assist units with verifying maintenance data integrity. Develop the Data Integrity Team (DIT) Brief and post on NMC2.

2.2.1.6. Develop guidance for the management and use of lesson plans or task breakdowns used by work center trainers and Maintenance Training Section (MTS) instructors.

2.2.1.7. Ensure the development of a FDE mission assurance certification program.

2.2.1.8. Develop guidance for units to establish a corrosion prevention and control program.

2.2.1.9. Serve as the primary interface between the missile wings and the 982d Training Group concerning Field Training Detachment (FTD) training courses and support agreements.

2.2.1.10. Validate Cable Affairs funding and support requests (e.g., funding support, engineering package reviews, depot level maintenance support, etc.) and coordinate with appropriate agencies.

2.2.1.11. Establish number of training slots required for FTD journeyman courses and publish in the MAJCOM Mandatory Course List (MMCL). Review and update the MMCL annually and coordinate with Air Education and Training Command (AETC) curriculum managers.

2.2.1.12. Ensure subject matter expert support for major maintenance activities outside normal duty hours.

2.2.2. ALCM

2.2.2.1. Develop processes to identify and manage attrition reserve cruise missiles and interface test missiles.

2.2.2.2. Ensure subject matter expert support for MAJCOM identified maintenance activities outside normal duty hours.

2.2.2.3. Develop guidance to execute stop-use procedures.

2.2.2.4. Develop, publish, and disseminate applicable reports from **Chapter 8**.

2.3. Air Force Materiel Command (AFMC). As a supporting command for ICBM and cruise missiles, AFMC develops guidance and procedures that support the highest levels of safety, nuclear surety, security, and productivity. AFMC leads the logistics and sustainment of ICBMs, ALCMs, and associated equipment. In addition to requirements in other publications, AFMC will:

2.3.1. Establish a Missile Mishap Response Team (MMRT) to assist AFGSC with the technical expertise and equipment necessary to respond to an ICBM event outside the technical scope of an ICBM field unit.

2.3.2. Develop guidance for the MMRT, which must include at a minimum: team composition, equipment, training, and the frequency and scope of exercise activities.

2.3.3. Ensure engineering support for major maintenance activities outside normal duty hours.

2.4. (ICBM) Missile Wing Commander (MW/CC). The MW/CC is responsible to the 20th Air Force Commander for mission execution. The MW/CC will:

2.4.1. Ensure Maintenance, Security Forces, Operations, and Mission Support Groups develop joint planning and scheduling cycles to ensure the best use of personnel and resources to accomplish sortie production and long-term fleet health.

2.4.2. Conduct a daily "Wing Standup" meeting. This meeting will include, at a minimum, a review of previous, current, and future activities, focused on identifying and resolving issues with executing the established maintenance schedule.

2.4.3. Review and approve all night-time major maintenance on a case-by-case basis in accordance with **Table 5.2**.

2.5. (ICBM) Maintenance Group Commander (MXG/CC). The MXG/CC provides maximum warfighting capability to the MW/CC. The 377 Test and Evaluation Group Commander (TEG/CC) is the equivalent of an MXG/CC. The responsibilities, expectations, and the specified roles listed in Department of the Air Force Instruction (DAFI) 21-101 *Aircraft and Equipment Maintenance Management* and AFMAN 21-20X series publications require review for application, the MXG/CC will:

2.5.1. Ensure development of emergency response plans, as required.

2.5.2. Ensure development of an environmental program and occupational health which complies with all federal, state, local, and Air Force requirements. Serve as a representative on the base environmental, safety and occupational health council.

2.5.3. Approve team structures for any team without a certified team chief. This should be limited to escort duties, flood control, snow removal, site refueling, or similar operations.

2.5.4. Maintain agreements guaranteeing non-destructive inspection support by authorized agencies. Notify the AFGSC logistics division if support is lost.

2.5.5. Ensure implementation of a corrosion control prevention, detection, and treatment program for all assigned equipment and facilities in accordance with MAJCOM guidance.

2.5.6. Approve weekend major maintenance and maintenance requiring the site to be penetrated after official sunset or before official sunrise in accordance with **Table 5.2** (377 TEG refer to **Table 5.3**.).

2.5.7. **(N/A 377 TEG) .** Approve all cannibalization requests for L-Cat launchers.

2.5.8. **(N/A 377 TEG)** Ensure special purpose vehicles (e.g., payload transporters and transporter erectors) to include cranes are parked indoors during winter months when not in use.

2.6. (ICBM) Deputy Maintenance Group Commander (MXG/CD). The MXG/CD assists the MXG/CC and has the same requisite authority as delegated by the MXG/CC. The 377 TEG/CD is responsible for these tasks in their unit. The responsibilities, expectations, and the specified roles listed in DAFI 21-101 and AFMAN 21-20X series publications require review for application. The MXG/CD will:

2.6.1. Chair the daily production meeting to review, at a minimum, site status, Mission Capable (MICAP) status, previous day's schedule deviations, current-day maintenance schedule execution, and next day's maintenance forecast.

2.6.2. Review the following items at least weekly:

2.6.2.1. Next week's maintenance schedule to de-conflict shared resources.

2.6.2.2. Overdue inspections and planned corrective actions.

2.6.2.3. Status of Time Compliance Technical Orders (TCTOs).

2.6.2.4. Previous week's deviations to maintenance schedules.

2.6.2.5. Items overdue Due-In-From-Maintenance.

2.7. (ICBM) Squadron Commanders. The Missile Maintenance Squadron (MMXS) and Maintenance Squadron (MXS) Commanders provide maximum ICBM and equipment readiness to the MXG/CC. The responsibilities, expectations, and the specified roles listed in DAFI 21-101 and AFMAN 21-20X series publications require review for application, the MMXS/CC and MXS/CC will:

2.7.1. Endorse team chief certification packages prior to members performing team chief duties unsupervised.

2.7.2. MMXS/CC will endorse FTD team chief certification packages prior to members performing team chief duties unsupervised.

2.7.3. Ensure all maintenance personnel who utilize DoD Information Technology systems have received appropriate cyber hygiene training.

2.8. (ICBM) Director of Operations (DO). The responsibilities, expectations, and the specified roles listed in DAFI 21-101 and AFMAN 21-20X series publications require review for application. The DO responsibilities will include:

2.8.1. Manage planning and execution of the overall maintenance effort of the unit in conjunction with the applicable Production Superintendent.

2.8.2. Monitor the Minimum Essential Equipment List (MEEL) and direct efforts to restore MEEL levels to minimum requirements. Forward recommendations for changes, additions, or deletions to the MEEL to AFGSC for evaluation.

2.8.3. **(377 FTMMXS)** Sign maintenance plans and maintenance schedules.

2.8.4. Incorporate AFGSC's maintenance performance indicators in maintenance planning.

2.9. (ICBM) Squadron Senior Enlisted Leader (SEL). The responsibilities, expectations, and the specified roles listed in DAFI 21-101, and AFMAN 21-20X series publications require review for application. The SEL responsibilities will include:

2.9.1. Manage team chief training and certification requirements.

2.9.2. Certify (interview & approve) assigned ICBM team chiefs. MMXS SEL will certify (interview & approve) FTD Team Chiefs, as required. Previously certified team chiefs do not require recertification unless additional work center qualifications are required based on unit requirements.

2.9.3. Annually review and ensure personnel are awarded the appropriate special experience identifiers using DAF Form 2096 *Classification/On-The-Job-Training Action*.

2.9.4. Manage the squadron's SCR. Review and sign semi-annually to verify entries are accurate and task certifications have been completed.

2.10. (ICBM) Production Superintendent. Senior Noncommissioned Officer (SNCO) responsible for squadron maintenance production. The Production Superintendent directs the overall maintenance effort of their unit. Production Superintendent will:

2.10.1. Ensure coordination is established with the DO to plan and execute the overall maintenance effort.

2.10.2. Ensure all coordination with maintenance teams in the missile field occurs through MMOC.

2.10.3. Monitor team and site status to remain informed on maintenance in-progress, including Depot and contracted maintenance.

2.10.4. Monitor maintenance team timelines to ensure teams do not exceed maximum duty times and direct activation of relief teams and/or direct teams to remain overnight (RON) as necessary. Notify MXG/CC as soon as possible if it is determined a team will exceed maximum duty hours due to unplanned events.

2.10.5. Authorize and coordinate parts runs.

2.10.6. Coordinate with MMOC on team diversions for higher priority maintenance. Prior to diversions, verify parts availability and team qualifications with Expediter.

2.10.7. Activate dispatch of quick reaction maintenance teams or standby personnel.

2.10.8. Coordinate, authorize, and direct cannibalization actions in line with Memorandum of Agreement (MOA) between AFGSC and AETC for 982d training group ICBM training detachment.

2.10.9. Coordinate required support for servicing, inspecting, and repairing vehicles/equipment with applicable unit's Production Superintendent.

2.10.10. Be prepared to execute MPH processes to protect personnel and prevent further damage to equipment and other resources. Activate the MPH Network through MMOC and to the MXG/CC (377 TEG/CC) when appropriate.

2.10.11. Ensure ICBM, equipment, and site status is accurately reflected in the Maintenance Information System (MIS) and Force Status and Readiness (FSR) module.

2.10.11.1. Monitor site and equipment NMC and PMC conditions.

2.10.11.2. Update LF, LCC, and Nuclear Command, Control, and Communications (NC3) status via the MMOC.

2.10.12. **(N/A 377 TEG)** Assist units with EWO Generation.

2.10.13. Attend daily maintenance production and weekly/daily scheduling meetings.

2.10.14. Production Superintendent and Expediter duties may be combined when workload allows.

2.11. (ICBM) Flight Commander. The responsibilities, expectations, and the specified roles listed in DAFI 21-101, and AFMAN 21-20X series publications require review for application. The Flight Commander responsibilities will include:

2.11.1. Provide flight resources via the daily maintenance schedule and notify DO and Production Superintendent of any change to availability of resources committed to the weekly maintenance schedule.

2.11.2. **(Generation Flight)** Ensure accurate tracking of spare PSREs, and uninstalled missile motors via the Accountable Property System of Record (APSR).

2.11.3. **(Facilities Flight)** Appoint the Cable Affairs Officers to fulfill Cable Affairs responsibilities.

2.12. (ICBM) Flight Chief. The responsibilities, expectations, and the specified roles listed in DAFI 21-101, and AFMAN 21-20X series publications require review for application. The Flight Chief responsibilities will include:

2.12.1. Establish a field or in-shop supervisory visit program that at a minimum includes safety, security, technical data usage, and nuclear surety.

2.12.2. Recommend personnel for Team Chief certification to the SEL and maintain the team chief certification memorandum, with squadron commander endorsement as long as the member is performing team chief duties.

2.12.3. **(Generation Flight)** Ensure 100 percent supervision of nuclear weapons mate/demate and handling tasks.

2.12.4. **(Generation Flight)** Emphasize team integrity by minimizing team substitutions and approve Missile Maintenance Team (MMT) changes (substitutions, additions, or subtractions) when performing major maintenance.

2.13. (ICBM) Officer in Charge (OIC). The responsibilities, expectations, and the specified roles listed in DAFI 21-101, and AFMAN 21-20X series publications require review for application. The OIC responsibilities will include:

2.13.1. Maintain the trainer certification memorandums.

2.13.2. Ensure enough personnel are qualified to meet mission requirements.

2.13.3. Develop a Recurring Technical Training (RTT) program, in conjunction with the MTS to satisfy individual work center needs.

2.13.4. Verify technicians are qualified for the task prior to the daily and weekly scheduling meeting.

2.13.5. Appoint primary and alternate DIT monitors in-writing and identify these personnel to the Maintenance Management Analysis (MMA) Section.

2.13.6. Track spare PSREs (MMT), and uninstalled missile motors (Missile Handling Team (MHT)) via the APSR.

2.14. (ICBM) Non-Commissioned Officer-in-Charge (NCOIC). The responsibilities, expectations, and the specified roles listed in DAFI 21-101, and AFMAN 21-20X series publications require review for application. The NCOIC responsibilities will include:

2.14.1. Certify (interview and approve) all newly assigned trainers and task certifiers, as applicable. Ensure unit trainers and certifiers meet the criteria in **paragraph 2.17** and maintain the trainer certification memorandum.

2.14.2. Ensure section has 100% task coverage.

2.14.3. Provide Decentralized Materiel Support a list of items requiring functional check, calibration, and build-up prior to use and tear-down before being turned in.

2.14.4. Ensure a certified team chief is assigned responsibility for all maintenance operations, except where approved non-certified team chief is authorized. **Note:** A certified team chief is not required for Vehicle and Equipment Section (VES) maintenance operations. A VES shift supervisor must be available when maintenance operations are being conducted.

2.14.5. Ensure personnel are certified and current on proficiency checks prior to performing nuclear weapons certified tasks.

2.14.6. Ensure equipment load lists are provided to the Vehicle & Equipment Section for all scheduled maintenance dispatches before the scheduling meeting.

2.14.7. Ensure a task-knowledgeable supervisor accompanies MMT team chiefs (portal-to-portal) on at least the first two dispatches that include aerospace vehicle equipment installation or removal.

2.14.8. Ensure a task-knowledgeable supervisor accompanies new MHT team chiefs (portal-to-portal) on at least the first two missile removals or emplacements.

2.14.9. Ensure personnel are trained, understand, and comply with applicable ground, missile and explosive safety, nuclear surety requirements, Air Force Two-Person Concept, No-Lone Zone requirements, security requirements, Personnel Reliability Program (PRP), MPH and code handling procedures.

2.14.10. Ensure personnel are briefed on all T.O. and Civil Engineering Manual (CEM) changes affecting daily maintenance and know the requirements for submitting T.O. and CEM change requests.

2.14.11. Ensure control, security, maintenance, inspection, inventory, and service of assigned parts, equipment, tools, vehicles, and chemicals.

2.14.12. Ensure accomplishment of owner/user maintenance on Test Measurement Diagnostic Equipment (TMDE), as applicable.

2.14.13. **(N/A 377 TEG)** Ensure gas masks are maintained in accordance with governing directives.

2.14.14. Ensure briefing and debriefing requirements are met in accordance with **Chapter 5**.

2.14.15. Notify Quality Assurance (QA) when personnel are ready for initial Maintenance Standardization and Evaluation Program evaluations and when initial training is complete.

2.14.16. Notify QA and flight commander/chief monthly of team structure and before using individuals not identified on the current team structure letter to perform maintenance.

2.14.17. Manage operating stock, shop stock, and work order residue per AFMAN 23-122, *Material Management Procedures*.

2.14.18. **(N/A 377 TEG)** Maintain a method to identify technician qualifications for EWO scheduling purposes.

2.14.19. **(377 TEG)** Initiate a technical assistance request or special request when issues are discovered which impact FDE activities. See AFGSCI 99-102, *Intercontinental Ballistic Missile (ICBM) Operational Test and Evaluation (OT&E)* for further guidance.

2.14.20. Oversee the flight's field or in-shop supervisory visit program.

2.15. (ICBM) Task Supervisors. The task supervisor ensures safe, secure, and reliable maintenance operations, large maintenance vehicle operations, and crane operations. The Task Supervisor must be knowledgeable of the assigned tasks. The task supervisor will:

2.15.1. Ensure all required documents and reports are submitted upon completion of maintenance tasks (e.g., weapons custody transfer document).

2.15.2. Execute the flight's field or in-shop supervisory visit program.

2.15.3. Oversee major maintenance activities, where applicable, and perform in-progress-inspections as required.

2.15.4. Supervise all RS mate/demate and handling tasks and support the Nuclear Weapons Certification Program.

2.16. (ICBM) Expediter. Expediters support the NCOIC and Production Superintendent in the management of resources to accomplish maintenance. The Expediter will:

2.16.1. Direct provided resources in support of the daily schedule to meet mission needs as required by the Production Superintendent.

2.16.2. Notify Production Superintendent of changes to resources committed to maintenance schedule.

2.16.3. Monitor NMC2, MIS, MEEL, and site and equipment status for applicable work center(s) and ensure corrections and updates are made as required and coordinate any required changes with MMOC and the Production Superintendent prior to making changes.

2.16.4. At least daily, verify accuracy and validity of all priority 1-4 work orders assigned to the section.

2.16.5. Review MIS daily for new work orders and changes in parts status.

2.16.6. Manage "awaiting maintenance" conditions within section's repair capability.

2.16.7. Manage "awaiting parts" conditions and ensure parts have been ordered.

2.16.8. Verify parts availability for the task prior to the daily and weekly scheduling meeting.

2.16.9. Ensure ICBM and equipment forms and MIS documentation is complete, accurate and accomplished.

2.16.10. **(N/A 377 TEG)** Serve as workcenter(s) EWO planning team member to provide status and availability of assigned equipment and personnel and to assist in developing generation plans.

2.16.11. Notify Plans and Scheduling of the number of sites and equipment that needs to be loaded to each job standard transaction and any additions, deletions, and updates needed.

2.17. (ICBM) Trainers. Trainers provide initial qualification, recurring technical, and if requested, special training in accordance with **Chapter 6**. Trainers will:

2.17.1. Be certified by the applicable NCOIC prior to performing training unsupervised.

2.17.1.1. Meet minimum trainer requirements in DAFI 36-2689, *Total Force Development.*

2.17.1.2. Complete the ICBM Trainer Course. Previous completion of the Maintenance Instructor Techniques Course prior to the ICBM Trainer Course can satisfy this requirement.

2.17.1.3. Be observed by the work center OIC/NCOIC conducting a training session prior to certification.

2.17.1.4. Be qualified on the tasks being trained and the training systems or devices used. Certified trainers not qualified on the task may partner with a task qualified individual to conduct training.

2.17.2. Document all training sessions, including student man-hours, in MIS and forecast on the daily and weekly schedule.

2.17.3. Develop and maintain Individual Training Plans for all assigned members.

2.17.4. Advise leadership on trainee progress and notify section OIC/NCOIC and MTS Chief if training will exceed completion milestones established in the Individual Training Plan.

2.17.5. Maintain training systems and devices not governed by contractor support as follows:

2.17.5.1. Ensure completion of periodic inspections for Class I and II training equipment. See applicable 43-series and 00-20-series T.O.s for specific guidance.

2.17.5.2. Maintain weapon system components and end items used with Class I and II training equipment. See applicable weapon system T.O.s and associated reference manual for detailed guidance.

2.17.5.3. Coordinate with AFGSC/A4, Missile Maintenance Division (AFGSC/A4B) for approval for all Class III training devices prior to construction. If Class III training devices are to be used in a powered up/power on configuration, they must be maintained in accordance with applicable weapon system T.O.s or CEMs.

2.17.5.4. Maintain accountability of Class III training aids per AFI 23-101, *Materiel Management Policy.*

2.17.5.5. Use MIS to document current status on all Class I, Class II and approved power on/up Class III training devices.

2.17.5.6. Coordinate a maintenance assistance request for Depot-level maintenance support when requirements exceed trainer or unit capabilities. See T.O. 00-25-107, *Maintenance Assistance* for further guidance.

2.17.5.7. FTD training sections will coordinate all requests through MXG leadership. See T.O. 00-25-107 for further guidance.

2.18. (ICBM) Team Chiefs. Team chiefs are responsible for work accomplished by technicians they supervise. Team chiefs have full authority to prohibit commencement or direct termination of any task. Team chiefs will:

2.18.1. Complete team chief, IMDS Familiarization, and MAJCOM identified supply training prior to certification.

2.18.2. Complete at least three supervised dispatches or in-shop maintenance work packages acting in a team chief capacity prior to certification. For MMT Team Chiefs, FTD progress checks during training meet this requirement.

2.18.2.1. **(377 TEG)** Complete and pass applicable evaluations prior to performing aerospace vehicle or downstage maintenance tasks unsupervised, to include:

2.18.2.1.1. **(377 TEG)** MMT field team chiefs will be evaluated performing team chief field duties related to FDE specific tasks for Aerospace Vehicle Equipment (AVE) mate.

2.18.2.1.2. **(377 TEG)** PSRE processing team chiefs will be evaluated on a destruct package checkout or installation task.

2.18.2.1.3. **(377 TEG)** MHT team chiefs will be evaluated performing a downstage emplacement, removal or roll transfer. Booster processing team chiefs will be evaluated on a destruct package checkout or installation task.

2.18.3. Be qualified on the tasks being performed.

2.18.4. Comply with pre-task briefing requirements in accordance with **paragraph 5.4**.

2.18.5. Review workload requirements file (WRF) for additional work orders that can be accomplished during scheduled maintenance and ensure they are added to work package in MIS.

2.18.6. Review the WRF to ensure current documented discrepancies do not impact the scheduled task.

2.18.7. Ensure MIS and Master Restricted Area Badge Listing (MRABL) (if applicable) accurately reflect all team members prior to dispatching to the field or beginning work for in-shop tasks.

2.18.8. Coordinate actions, update status, delays, arrival and departure information, and problems with MMOC.

2.18.9. Comply with applicable ground, missile and explosive safety, nuclear surety requirements, Air Force Two-Person Concept, No-Lone Zone requirements, security requirements, PRP, MPH, and code handling procedures.

2.18.10. Ensure checkout, inspection, safe operation and care of vehicles, equipment, tools, chemicals, and parts.

2.18.11. Ensure technical data is available and used to complete tasks.

2.18.12. Conduct T.O. and task review that includes applicable safety precautions and emergency procedures prior to beginning maintenance.

2.18.13. Ensure all vehicles, equipment, and hand-carried items taken onto the Missile Alert Facility (MAF) or LF are properly searched for unauthorized personnel and material prior to entry.

2.18.14. Apply “Find and Fix” philosophy as outlined in **Chapter 1**.

2.18.15. Notify MMOC of environmental compliance discrepancies.

2.18.16. Notify MMOC as soon as possible upon discovery of Red-X or Red-W conditions or priority 1-4 discrepancies affecting LFs, MAFs or Base Command Post.

2.18.17. Inspect work performed to clear Red-X or Red-W conditions and ensure repair is complete in order to clear Red-X or Red-W condition.

2.18.18. Coordinate site configuration and work order completion status with MMOC, MCC, expeditor and Codes Section (if coding actions were performed) prior to site back out.

2.18.19. Debrief in-shop work before completion of each duty shift and debrief field work before dispatch completion in accordance with **paragraph 5.3**. Immediately debrief items that are below the unit’s MEEL upon task completion. If timeline does not permit, debrief upon completion of crew rest if not previously accomplished by shop supervision.

2.18.20. Certify Not Repairable This Station (NRTS) actions and conditions tags, as applicable.

2.18.21. If authorized by the MXG/CC to perform duties in accordance with **paragraph 2.5.3,** in addition to the applicable responsibilities above, non-certified team chiefs will:

2.18.21.1. Be qualified on the tasks being performed and will not operate outside of the scope of those operations assigned to them.

2.18.21.2. Not be used to clear Red-X or -W, NMC or PMC conditions, or certify NRTS actions or condition tags unless specifically identified on the SCR.

2.19. (ICBM) Technicians. Technicians are responsible to team chiefs for designated tasks. Technicians will:

2.19.1. Maintain, control, checkout, inspect, and properly use and care for assigned tools, vehicles, chemicals, and equipment.

2.19.2. Use technical data to accomplish assigned tasks.

2.19.3. Comply with applicable ground, missile and explosive safety, nuclear surety requirements, Air Force Two-Person Concept, No-Lone Zone requirements, security requirements, PRP, MPH and code handling procedures.

2.19.4. Apply "Find and Fix" philosophy as outlined in **Chapter 1**.

2.19.5. Ensure all items required to perform assigned tasks are available. Resolve any deficiencies with team chief before dispatching or beginning in-shop work.

2.19.6. Notify team chief of environmental compliance discrepancies.

2.19.7. Immediately notify the team chief of any condition perceived to be unsafe or dangerous.

2.20. (ICBM) Work Center Data Integrity Team Monitors. DIT monitors will:

2.20.1. Be a minimum 5-skill level.

2.20.2. Review the new work order report generated by MMA to identify and validate errors.

2.20.3. Forward validated errors to the appropriate team chief for correction. Work center leadership will correct the errors if team chief is unavailable, however the team chief must be retrained on the error.

2.20.4. Ensure corrections have been made in MIS and forward corrective action reports to MMA within 3 duty days.

2.20.5. Ensure errors identified during DIT meetings are corrected.

2.21. (ICBM) Cable Affairs Officers (CAOs). CAOs are appointed to manage interactions with the general public concerning cable locations and excavations. CAOs will:

2.21.1. Maintain and manage Hardened Intersite Cabling System (HICS) Circuit Identification and Recording System. See T.O. 21M-LGM30F-2-20-1, *Hardened Intersite Cable System (Sec III)* for further guidance.

2.21.2. Monitor and track all activities affecting the HICS Right of Way (ROW) (such as highway or utility crossings, construction, earth moving, etc.) to ensure hardness integrity is maintained. Notify the flight commander/chief of ROW deficiencies affecting HICS hardness integrity that cannot be resolved in a timely manner.

2.21.3. Conduct the HICS ROW surveillance program to identify and document erosion problems, HICS ROW gate and marker pole discrepancies, and encroachment problems.

2.21.3.1. Examine each flight area ROW at least every 3 years. Document and track results.

2.21.3.2. Complete ROW surveillance by either land or air method. If air method is used, alternate the method used for each inspection period.

2.21.4. Maintain close contact with non-USAF personnel or agencies who cross, or could cross, inundate, or otherwise affect the HICS ROW above or below the surface. **Note:** System of Records Notice F021 AFSPC A, Cable Affairs Personnel/Agency Records applies. As a minimum, these contacts will include:

2.21.4.1. Landowners and tenants.

2.21.4.2. Highway and road departments (federal, state, and county).

2.21.4.3. Public and private utilities (power, telephone, pipeline, water, etc.).

2.21.4.4. Contractors.

2.21.4.5. Federal, state, and local farm agencies (Farm and Home Administration, Farm Bureau, county agents, soil conservation agencies, etc.).

2.21.4.6. Municipal offices.

2.21.4.7. Railroads.

2.21.5. Maintain a mailing list of personnel and agencies indicated above according to AFI 33-322. Contact all personnel and agencies on the list by mail, at least every 3 years, to relay the following:

2.21.5.1. Emphasize the adverse effect cable cuts have on the defense effort.

2.21.5.2. Requirements and procedures for requesting consent-to-cross over or under the HICS ROW.

2.21.5.3. The necessity of keeping CAOs advised of any planned construction or earth-moving activities along the HICS ROW.

2.21.5.4. A request for updated information, such as additional names of tenants, changes in ownership, erosion problems, and known construction requirements. Use AF Form 3951, *Intercontinental Ballistic Missile Hardened Intersite Cable Right-of Way Landowner/Tenant Questionnaire*, to gather public information.

2.21.6. Notify landowners or tenants in advance with details of any planned cable work on their property. In all cases where digging takes place, make every effort to contact the landowner.

2.21.7. Ensure all non-routine maintenance of the ROW (e.g., erosion repair work, earth moving, cable lowering or relocation, etc.) is monitored and inspected.

2.21.8. Participate in the applicable state "One Call" program. When notified by the state "One Call" agency, CAO must fulfill cable locate requests and coordinate excavations near HICS ROW.

2.21.9. Oversee HICS ROW maintenance and projects.

2.21.9.1. Act as the single POC for all ROW deficiencies and ensure corrective actions are implemented by applicable agencies (e.g., Civil Engineering Squadron (CES), contractors, HICS, etc.).

2.21.9.2. Inspect all ROW problems (e.g., erosion, access, gate discrepancies, etc.) and determine corrective actions. See T.O. 21M-LGM30F-2-20-1 for further guidance and/or refer to applicable drawings.

2.21.9.3. Submit AF Form 9, *Request for Purchase* for contract support when CES cannot support with in-house resources.

2.21.9.4. Provide annual funding requirements for projects requiring contract support to the unit budget officer (excluding gate projects). **Note:** These are included in the yearly financial plans, Program Element Code 11323F, under Electronic Equipment and Inter/Intra Site Cable Maintenance Element of Expense Identification Code funds. AFGSC/A4, Civil Engineering Division (AFGSC/A4C) allocates funds for specific projects as they occur. The expenses generated by reimbursable projects are paid from funds pre-deposited by the crossing agency in the Deposit Fund Account.

2.21.9.5. Coordinate un-programmed project requirements with unit and base budget offices to immediately notify AFGSC/A4C and AFGSC Directorate of Financial Management (AFGSC/FM).

2.21.9.6. Request Depot-level support when repair or project requirements are beyond base level capabilities. Refer to T.O. 00-25-107.

2.21.10. Manage HICS ROW crossings requests in accordance with **paragraph 7.2**. Coordinate with the installation Staff Judge Advocate when HICS crossings are projected in order to determine who has superior easement rights. In all cases, the USAF must comply with the terms of the easement. When the question of superior easement determination cannot be resolved, the CAO forwards all supporting case documents to the AFGSC/A4 for resolution.

2.21.11. Submit requests to the Base Civil Engineering (BCE) Real Estate Office to acquire additional ROW. These requests must contain real estate legal descriptions, maps, and information on the real estate required and the date the CAO must receive notification of the new ROW acquisition. **Note:** Purchase of additional ROW must include the necessary environmental analysis required by AFI 32-1015, *Integrated Installation Planning*, and environmental baseline studies required by AFI 32-9003, *Granting Temporary Use of Air Force Real Property.*

2.21.12. Assist the Staff Judge Advocate when a damage claim is anticipated. Provide the Staff Judge Advocate details of possible damage to private property caused by USAF personnel and/or contractors performing USAF-related duties on or off the HICS ROW.

2.21.13. Establish project and case files to maintain any actions, documents, and photographs pertaining to all HICS crossings, projects, or ROW problems.

2.21.14. Maintain copies of all reimbursement billing documents for future reference should auditing or legal actions occur. Refer to AFI 33-322 and the Air Force Records Disposition Schedule.

2.21.15. Oversee all HICS construction and siting requirements in accordance with T.O. 21M-LGM30F-2-20-1 and **paragraph 7.3** of this publication.

2.22. Air Launched Cruise Missile Maintenance. The following paragraphs are specific to cruise missile maintenance personnel. Cruise missile maintenance responsibilities are included in DAFI 21-101, and AFMAN 21-20X series publications. Refer to those publications for additional responsibilities.

2.23. (ALCM) Maintenance Group Commander (MXG/CC). The MXG/CC provides maximum warfighting capability to the BW/CC. The responsibilities, expectations, and the

specified roles listed in DAFI 21-101 and AFMAN 21-20X series publications require review for application. The MXG/CC will ensure development of emergency response plans, as required.

2.24. (ALCM) Squadron Commander (SQ/CC). The SQ/CC provides maximum warfighting capability to the MXG/CC. The responsibilities, expectations, and the specified roles listed in DAFI 21-101 and AFMAN 21-20X-series publications require review for application. The SQ/CC will ensure all maintenance personnel who utilize DoD Information Technology Systems have received appropriate cyber hygiene training.

2.25. (ALCM) Director of Operations (DO). The responsibilities, expectations, and the specified roles listed in DAFI 21-101 and AFMAN 21-20X series publications require review for application. The DO responsibilities will include:

2.25.1. Manage planning and execution of the overall maintenance effort of the unit in conjunction with the applicable Production Superintendent.

2.25.2. Monitor the MEEL and direct efforts to restore MEEL levels to minimum requirements. Forward recommendations for changes, additions, or deletions to the MEEL to AFGSC/A4 for evaluation.

2.25.3. The DO/SEL will chair the weekly scheduling meeting.

2.26. (ALCM) Squadron Senior Enlisted Leader (SEL). The responsibilities, expectations, and the specified roles listed in DAFI 21-101, and AFMAN 21-20X series publications require review for application. The SEL responsibilities will include:

2.26.1. Manage team chief training and certification requirements.

2.26.2. Certify (interview & approve) assigned ALCM team chiefs. Previously certified team chiefs do not require recertification unless additional work center qualifications are required based on unit requirements.

2.26.3. Annually review and ensure personnel are awarded the appropriate special experience identifiers using DAF Form 2096.

2.26.4. Manage the squadron’s SCR. Review and sign semi-annually to verify entries are accurate and task certifications have been completed.

2.27. (ALCM) Production Superintendent. Responsible for maintenance production. The Production Superintendent directs the overall maintenance effort. Production Superintendent will:

2.27.1. Ensure coordination is established with the DO to plan and execute the overall maintenance effort.

2.27.2. Monitor team and maintenance status to remain informed on maintenance in-progress.

2.27.3. Monitor maintenance team timelines to ensure teams do not exceed maximum duty times. Notify MXG/CC as soon as possible if it is determined a team will exceed maximum duty hours due to unplanned events.

2.27.4. Coordinate higher priority maintenance. Prior to changing tasks, verify parts availability and team qualifications with Expediter.

2.27.5. Activate standby personnel.

2.27.6. Coordinate required support for servicing, inspecting, and repairing vehicles/equipment with applicable unit.

2.27.7. Ensure missile, and equipment is accurately reflected in the MIS and FSR module.

2.27.8. Monitor equipment NMC and PMC conditions.

2.27.9. Assist units with EWO Generation.

2.27.10. Attend daily maintenance production and weekly/daily scheduling meetings.

2.27.11. Production Superintendent and Expediter duties may be combined when workload allows.

2.28. (ALCM) Flight Commander. The responsibilities, expectations, and the specified roles listed in DAFI 21-101, and AFMAN 21-20X series publications require review for application. The Flight Commander responsibilities will include:

2.28.1. Attend the weekly scheduling meeting.

2.28.2. Provide flight resources via the daily maintenance schedule and notify DO and Production Superintendent of any change to availability of resources committed to the weekly maintenance schedule.

2.28.3. Ensure absence of war reserve payload and notify AFGSC/A4 prior to any ALCM shipment. **Note:** Flight Commander may not delegate this any lower than SNCOs/Officers in the Flight.

2.29. (ALCM) Flight Chief. The responsibilities, expectations, and the specified roles listed in DAFI 21-101, and AFMAN 21-20X series publications require review for application. The Flight Chief responsibilities will include:

2.29.1. Ensure absence of war reserve payload and notify AFGSC/A4 prior to any ALCM shipment. **Note:** Flight Chief may not delegate this any lower than SNCOs/Officers in the Flight.

2.29.2. Monitor parts requisition status and enforce supply chain discipline in accordance with AFI 23-101.

2.29.3. Recommend personnel for Team Chief certification.

2.30. (ALCM) Officer in Charge (OIC). The responsibilities, expectations, and the specified roles listed in DAFI 21-101, and AFMAN 21-20X series publications require review for application. The OIC responsibilities will include:

2.30.1. Maintain the trainer certification memorandums.

2.30.2. Ensure enough personnel are qualified to meet mission requirements.

2.30.3. Develop a RTT program, in conjunction with the MTS to satisfy work center needs.

2.30.4. Ensure RTT program is established for all qualified technicians in accordance with this manual. The unit Commander may direct training to correct trends or address specific issues identified through QA evaluations outside the RTT program.

2.30.5. RTT will be conducted on a semi-annual basis by a qualified instructor or trainer. Work center trainers and QA conducting RTT are exempt from this requirement.

2.30.6. Technicians will be entered in the RTT program when they are eligible for quarterly proficiency evaluations in accordance with AFMAN 21-200.

2.30.7. QA, work center trainers, and production work center supervision will meet to determine the task(s) to be trained. The production work center supervision will make the final task selection. Tasks may be tailored to a specific technician or team or applied across a work center.

2.30.8. Verify technicians are qualified for the task prior to the daily and weekly scheduling meeting.

2.31. (ALCM) Non-Commissioned Officer-in-Charge (NCOIC). The responsibilities, expectations, and the specified roles listed in DAFI 21-101, and AFMAN 21-20X series publications require review for application. The NCOIC responsibilities will include:

2.31.1. Track scheduled maintenance status and report issues to the DO/SEL.

2.31.2. Ensure the use of MIS.

2.31.3. Attend the weekly scheduling meeting.

2.31.4. Ensure RTT program covers maintenance trends and deficiencies identified in observations and evaluations.

2.31.5. Ensure training sessions, including student man-hours, are documented in MIS, and forecast on the daily and weekly schedule.

2.31.6. Certify (interview and approve) all newly assigned trainers and task certifiers, as applicable. Ensure unit trainers and certifiers meet the criteria in **paragraph 2.34** and maintain the trainer certification memorandum.

2.31.7. Ensure section has 100% task coverage.

2.31.8. Ensure a certified team chief is assigned responsibility for all maintenance operations.

2.31.9. Ensure personnel are certified and current on proficiency checks prior to performing nuclear weapons certified tasks.

2.31.10. Ensure personnel are trained, understand, and comply with applicable ground, missile and explosive safety, nuclear surety requirements, Air Force Two-Person Concept, No-Lone Zone requirements, security requirements, and PRP.

2.31.11. Ensure personnel are briefed on all T.O. changes affecting daily maintenance and know the requirements for submitting T.O. change requests.

2.31.12. Ensure control, security, maintenance, inspection, inventory, and service of assigned parts, equipment, tools, vehicles, and chemicals.

2.31.13. Ensure accomplishment of owner/user maintenance on TMDE, as applicable.

2.31.14. Ensure gas masks are maintained in accordance with governing directives.

2.31.15. Ensure briefing and debriefing requirements are met.

2.31.16. Notify QA when personnel are ready for initial Maintenance Standardization and Evaluation Program evaluations and when initial training is complete.

2.31.17. Manage operating stock, shop stock, and work order residue per AFMAN 23-122.

2.31.18. Maintain a method to identify technician qualifications for EWO scheduling purposes.

2.31.19. Identify Bay Chiefs and Team Chiefs by inserting individual journal entries, or equivalent, into the member's training records.

2.32. (ALCM) Expediter. Expediters support the NCOIC and Production Superintendent in the management of resources to accomplish maintenance. The Expediter will:

2.32.1. Direct provided resources in support of the daily schedule to meet mission needs as required by the Production Superintendent.

2.32.2. Notify Production Superintendent of changes to resources committed to maintenance schedule.

2.32.3. Monitor MIS, MEEL, missile and equipment status for applicable work center(s) and ensure corrections and updates are made as required and coordinate any required changes with the Production Superintendent prior to making changes.

2.32.4. At least daily, verify accuracy and validity of all priority 1-4 work orders assigned to the section.

2.32.5. Review MIS daily for new work orders and changes in parts status.

2.32.6. Review “awaiting maintenance” conditions and schedule within section’s repair capability.

2.32.7. Review “awaiting parts” conditions and ensure parts have been ordered.

2.32.8. Verify parts availability for the task prior to the daily and weekly scheduling meeting.

2.32.9. Ensure MIS documentation is complete, accurate and accomplished.

2.32.10. Serve as workcenter(s) EWO planning team member to provide status and availability of assigned equipment and personnel and to assist in developing generation plans.

2.32.11. Notify Plans and Scheduling any additions, deletions, and updates needed for each job standard transaction.

2.33. (ALCM) Bay Chief. Bay chiefs are directly responsible for ensuring technicians perform safe, secure, and reliable maintenance. Bay Chiefs will:

2.33.1. Complete team chief training prior to performing bay chief duties.

2.33.2. Verify task qualifications of team chiefs prior to task commencement.

2.33.3. Ensure in-process inspections are accomplished as required.

2.33.4. Verify source documents (work order, build-up sheets, etc.) prior to directing any task to validate the proper operation(s) is/are being performed on the correct end item(s).

2.33.5. Ensure serviceable replacement components and/or TCTO kits, electro-explosive devices are on hand, inventoried and inspected prior to starting maintenance.

2.33.6. Actively monitor and control all on-going activities, assist maintenance teams, and support the Nuclear Weapons Certification Program.

2.33.7. Certify weapon configuration records for launchers and pylons in accordance with AFMAN 21-204.

2.33.8. Ensure all required documents and reports are submitted upon completion of maintenance tasks (e.g., weapons custody transfer document).

2.33.9. Ensure actions are taken when abnormal conditions or defects requiring rejection of a missile, a component or associated component are discovered to ensure the safety of personnel, and security and reliability of the missile or component(s). Immediately report abnormal conditions or defects to the appropriate level of leadership for resolution before continuing the task.

2.33.10. Verify completeness of Electronic Systems Test Set printouts prior to receipt by Missile Analysis in accordance with **paragraph 8.2.6.2.5**.

2.33.11. Assist in developing maintenance schedules and plans.

2.33.12. Update line number and Net Explosive Weight changes with Munitions Control as they occur.

2.34. (ALCM) Trainers. Trainers provide initial qualification, recurring technical, and if requested, special training in accordance with **Chapter 6**. Trainers will:

2.34.1. Be certified by the applicable NCOIC prior to performing training unsupervised.

2.34.2. Meet minimum trainer requirements in DAFI 36-2689.

2.34.3. Be observed by the work center OIC/NCOIC conducting a training session prior to certification.

2.34.4. Be qualified on the tasks being trained and the training systems or devices used. Certified trainers not qualified on the task may partner with a task qualified individual to conduct training.

2.34.5. Document all training sessions, including student man-hours, in MIS and forecast on the daily and weekly schedule.

2.34.6. Develop and maintain Individual Training Records for all assigned members.

2.34.7. Advise leadership on trainee progress and notify section OIC/NCOIC and MTS Chief if training will exceed completion milestones established in the Individual Training Record.

2.34.8. Maintain training systems and devices not governed by contractor support as follows:

2.34.8.1. Ensure completion of periodic inspections for Class I and II training equipment. See applicable 43-series and 00-20-series T.O.s for specific guidance.

2.34.8.2. Maintain weapon system components and end items used with Class I and II training equipment. See applicable weapon system T.O.s and associated reference manual for detailed guidance.

2.34.8.3. Coordinate with AFGSC/A4, Munitions Maintenance Division (AFGSC/A4W) for approval for all Class III training devices prior to construction. If Class III training devices are to be used in a powered up/power on configuration, they must be maintained in accordance with applicable weapon system T.O.s or CEMs.

2.34.8.4. Maintain accountability of Class III training aids per AFI 23-101, *Materiel Management Policy.*

2.34.8.5. Use MIS to document current status on all Class I, Class II and approved power on/up Class III training devices.

2.34.8.6. Coordinate a maintenance assistance request for Depot-level maintenance support when requirements exceed trainer or unit capabilities. See T.O. 00-25-107 for further guidance.

2.35. (ALCM) Team Chiefs. The team chief is directly responsible for performance of safe, secure, and reliable maintenance. Team chiefs will:

2.35.1. Complete team chief training requirements prior to performing team chief duties.

2.35.2. Verify all technicians are task qualified prior to start of task.

2.35.3. Comply with applicable ground, missile and explosive safety, nuclear surety requirements, Air Force Two-Person Concept, No-Lone Zone requirements, security requirements, and PRP.

2.35.4. Stop maintenance upon encountering an abnormal condition or identifying a defect requiring rejection of a missile, component or associated component and notify the bay chief for resolution before proceeding.

2.35.5. If applicable, initiate weapon configuration records (build-up sheets) for launchers and pylons in accordance with AFMAN 21-204.

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

2.35.7. Submit all required documents and reports upon completion of tasks (e.g., work orders, inspection records, custody transfer documents, deficiency reports, etc.).

2.35.8. Conduct pre-task and visitors-casuals briefing prior to start of maintenance task(s) and as additional technicians or visitors-casuals join the operation.

2.35.9. Ensure all items required to perform assigned task(s) are serviceable and readily available.

2.35.10. Conduct T.O. and task review that includes applicable safety precautions and emergency procedures prior to beginning maintenance.

2.36. (ALCM) Technicians. Technicians are responsible to the team chief for assigned tasks. Technicians will:

2.36.1. Ensure all items required to perform the task(s) are serviceable and readily available.

2.36.2. Notify team chief or bay chief of environmental compliance and safety discrepancies.

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

Chapter 3

ICBM MAINTENANCE UNITS.

3.1. Introduction. This chapter outlines typical ICBM maintenance units. This chapter does not apply to cruise missile maintenance. This chapter applies to the 377 TEG unless identified otherwise, but reference in conjunction with **Chapter 4**.

3.2. Maintenance Group. In addition to leadership and administration, the MXG consists of QA and the MTS. In addition to QA requirements outlined in AFMAN 21-200, the appointed Product Improvement Manager will:

3.2.1. Execute deficiency reporting "originating point" responsibilities. **(T-1)** See T.O. 00-35D-54.

3.2.2. Coordinate with AFGSC/A4 on all AF Form 1067, *Modification Proposal.* **(T-2)**

3.2.3. Maintenance Training Section. The mission of the MTS is to conduct, direct, monitor, and schedule training for personnel administratively assigned to the MXG. The MTS is organized and executes requirements in accordance with AFI 36-2650, *Maintenance Training*. Additionally, the MTS will:

3.2.3.1. Manage and schedule ancillary training programs. **(T-3)**

3.2.3.2. Track ancillary training using an AF approved Air Force training system. **(T-3**)

3.2.3.3. Develop and distribute a schedule of future training classes in sufficient time for all agencies to determine requirements. **(T-3)**

3.2.3.4. Monitor and schedule all non-technical training requirements in coordination with work center. **(T-3)**

3.2.3.5. Provide assigned agencies the training forecast and awaiting action listing. **(T-3)**

3.2.3.6. Monitor overdue training and notify supervision to correct training deficiencies. **(T-3)** Ancillary training becomes overdue on the last day of the due month unless course curriculum dictates otherwise.

3.2.3.7. Conduct the monthly training scheduling meetings. **(T-1)**

3.2.3.8. **(N/A 377 TEG)** Coordinate 5-level upgrade Annual Training Forecast with the MXG/CC. **(T-1)**

3.2.3.9. Ensure an RTT program is established and provide overall management of the program. **(T-2)**

3.2.3.10. Ensure unit trainers meet requirements per **paragraph 2.17**. **(T-1)**

3.2.3.11. **(N/A 377 TEG)** Assign personnel to each journeyman training course (when applicable) slot no later than 90 days prior to the projected class start date. **(T-3)**

3.2.3.11.1. **(N/A 377 TEG)** Provide documentation of training prerequisite completion to no later than 14 days prior to the class start date. **(T-3)**

3.2.3.11.2. **(N/A 377 TEG)** Replacing technicians less than 30 days from class start date requires approval by course owner. **(T-3)**

3.2.3.12. **(N/A 377 TEG)** When applicable coordinate the DAF Form 898, *Field Training Requirements Scheduling Document* courses in accordance with AFI 36-2650. **(T-2)**

3.3. Maintenance Squadron. MXS consists of the Maintenance Operations Flight and Resources Flight.

3.3.1. Maintenance Operations Flight. This flight consists of the Plans and Scheduling (P&S) section, MMOC, Maintenance Programs, and MMA.

3.3.1.1. The Maintenance Operations Flight Commander/Chief will: **Note:** Some Ops Flight responsibilities will fall under 377 FTMMXS.

3.3.1.1.1. Ensure inventory and status reporting of PSREs, missile guidance sets, uninstalled missile motors, and other unit designated items in accordance with DAFI 21-103, *Equipment Inventory, Status, and Utilization Reporting* within the applicable APSR. **(T-0)**

3.3.1.1.2. **(N/A 377 TEG)** Ensure development of EWO checklists and provide guidance during EWO planning. **(T-2)**

3.3.1.1.3. Manage the WRF reconciliation in coordination with applicable flight commander/chief. **(T-2)**

3.3.1.1.4. Ensure Single Point Failure and Operational Readiness Parts levels are established in accordance with AFMAN 23-122 and coordinate with AFGSC/A4 for placement on NMC2. **(T-2)**

3.3.1.1.5. Approve deferral of weapon system discrepancies. **(T-3)**

3.3.1.1.6. Ensure PMC documentation of environmental compliance discrepancies that impact the LF or MAF. **(T-0)**

3.3.1.1.7. Develop a process for the cannibalization of parts and ensure proper documentation of cannibalization actions in accordance with T.O. 00-20-2, *Maintenance Data Documentation*, and ensure any part cannibalized from a maintenance training system or Class III training device is checked out and certified prior to installation. **(T-2)**

3.3.1.1.8. Oversee the DIT program. **(T-3)**

3.3.1.1.9. Serve as liaison with 583 MMXS and CES Missile Engineering. **(T-3)**

3.3.1.1.10. Develop local procedures for debriefing outside agencies. **(T-3)**

3.3.1.2. Plans and Scheduling Section. This section serves as the focal point for maintenance planning & scheduling requirements. P&S will:

3.3.1.2.1. In coordination with Security Forces, CES, and Operations Groups, or other agencies as required by the MW/CC, develop, coordinate, and publish maintenance schedules. **(T-2)**

3.3.1.2.2. Coordinate resources and job assignments with applicable section Expeditor and MMOC. **(T-3)**

3.3.1.2.3. Hold daily and weekly scheduling meetings which covers both dispatching and shop maintenance teams, including times and locations, as applicable. **(T-2)**

3.3.1.2.4. Finalize the daily schedule at least one day prior and the weekly schedule the week prior. **(T-2)**

3.3.1.2.5. Upload daily schedules to NMC2 by close of business. **(T-3)**

3.3.1.2.6. Provide assistance to CES in forecasting proposed alteration and construction affecting the weapon system. **(T-3)**

3.3.1.2.7. Maintain Programmed Depot Maintenance and other Depot-level program schedules in support of MAJCOM plans and requirements. **(T-2)**

3.3.1.2.8. Maintain LF and MAF periodic maintenance schedules. **(T-2)** Once established, the due month for an LF and MAF inspection will not change. **(T-2)** Coordinate changes that deviate the due date 60 days or more with AFGS/A4. **(T-2)**

3.3.1.2.9. Interface with CES Missile Engineering for real property installed equipment Depot assistance. **(T-2)**

3.3.1.2.10. Hold coordination meetings prior to any RS and/or missile downstage movement in accordance with AFGSC guidance. **(T-2)**

3.3.1.2.11. Reconcile MIS job standards with T.O. 21M-LGM30F-6, *Scheduled Inspection and Maintenance Requirements*, applicable commodity T.O.s, and CEMs at least semi-annually. **(T-2)** Document the review on the AF 2411, *Inspection Document*. **(T-2)**

3.3.1.2.12. Perform Aerospace Vehicle Distribution Office, ICBM status, and inventory reporting requirements in accordance with DAFI 21-103. **(T-0)**

3.3.1.2.13. Develop and manage the TCTO, Master Change Log, modification, and time change programs in accordance with T.O. 00-5-15, *Air Force Time Compliance Technical Order Process*. **(T-1)**

3.3.1.2.14. Forward TCTOs to the Flight Service Center of the Materiel Management Flight. **(T-3)**

3.3.1.2.15. **(N/A 377 TEG)** Assist with development of war support and contingency plans. **(T-3)**

3.3.1.2.16. Provide a central collection point for maintenance data forms and forward documents as directed by AFGSC. **(T-2)**

3.3.1.2.17. Maintain a site file for each LF and MAF that will include as a minimum:

3.3.1.2.17.1. Air Force Technical Order (AFTO) Form 95, *Significant Historical Data*. **(T-2)** At a minimum, maintain forms in accordance with T.O. 00-20-1 for each item listed in **Table 3.1** when installed on an LF or MAF. **(T-2)**

3.3.1.2.17.2. Physical inventory sheet. **(T-2)**

3.3.1.2.17.3. AFTO Form 430, *Battery Periodic Inspection Maintenance Record*. **(T-2)** Upon receipt of an AFTO Form 430, verify battery serial numbers against MIS. **(T-2)** Upload completed AFTO Form 430 to NMC2. **(T-2)**

3.3.1.2.17.4. Earth ground and grounding system checkout results documented in accordance with CEM 21-SM80X-2-21-X, *Real Property Installed Equipment*

Missile Weapon System. **(T-2)**

Table 3.1. AFTO Form 95 Minimum Item Listing.

Part Number	National Stock Number	Nomenclature
TD102666-01	N/A	Booster Assembly, Missile, LGM30G
85000-102	1420-00-003-7274AH	Propulsion System, Guided Missile (Propulsion System Rocket Engine)
20100-101-X	1420-01-454-4922AH	Guidance Set
Note: X denotes any extension of part number.		

3.3.1.3. Missile Maintenance Operations Center. MMOC serves as the focal point for discrepancy reporting and is responsible for coordinating with appropriate agencies to ensure mission accomplishment. MMOC will:

3.3.1.3.1. **(N/A 377 TEG)** Operate 24 hours per day, 7 days per week. **(T-2)**

3.3.1.3.2. Coordinate all in-field maintenance efforts performed by maintenance personnel to execute the daily schedule. **(T-2)**

3.3.1.3.3. Monitor status of each LF and MAF, uninstalled missile motors, mission support equipment, and vehicles designated on NMC2 for status reporting. **(T-1)**

3.3.1.3.4. Monitor the MEEL, Operational Readiness Parts, and Single Point Failure listing on NMC2 for adequate spare levels. Notify Expeditor when levels fall below the designated minimums. **(T-2)**

3.3.1.3.5. Evaluate all reported fault conditions for NMC or PMC implications in accordance with MAJCOM listing, T.O. 21M-LGM30G-2-1-X series publications, and DAFI 21-103. **(T-0)**

3.3.1.3.6. **(N/A 377 TEG)** Document MCC-approved status changes (e.g. LF, LCC, NC3) in MIS, FSR, NMC2, and other required systems in applicable timelines. **(T-1)** The MCC is in command of the LF at all times and is the final authority in determining alert status through consultation with MMOC. Notify Base Command Post of MCC-approved status changes. **(T-1)**

3.3.1.3.7. **(N/A 377 TEG)** Document discrepancies (e.g. LF, LCC, NC3) in MIS, FSR, NMC2, and other required systems in applicable timelines. **(T-1)** All NMC and PMC discrepancies require documenting in the FSR module. **(T-1)**

3.3.1.3.8. **(N/A 377 TEG)** Notify Base Command Post of situations that impact alert posture, Airborne LCC operational system tests, or other abnormal events that require operational reports outside the unit. **(T-1)**

3.3.1.3.9. Document new priority 1-4 discrepancies for LFs and support equipment, all LCC discrepancies called in by MCC and CES. **(T-2)**

3.3.1.3.10. Prior to diverting teams, verify with Production Superintendent that the team is task qualified, and has all required parts and tools to complete maintenance. **(T-2)**

3.3.1.3.11. **(N/A 377 TEG)** Coordinate with Missile Security Control when directing Security Forces to perform maintenance tasks at LFs. **(T-3)** Ensure T.O.s are used when directing maintenance. **(T-1)**

3.3.1.3.12. Update changes to team departure and arrival times in MIS. **(T-3)**

3.3.1.3.13. Monitor and update LF and LCC, PMC and NMC conditions daily and coordinate with the Expeditor at owning work centers to correct documentation discrepancies and part requirements. **(T-2)**

3.3.1.3.14. Review all priority 1-4 discrepancies for validity and accuracy the duty day following creation. Review all priority 1-4 discrepancies for validity and accuracy weekly. Coordinate with owning workcenter for corrections. **(T-2)**

3.3.1.3.15. Establish procedures for tracking new discrepancies during an MIS outage and ensure MIS is updated when outage is resolved. **(T-3)**

3.3.1.3.16. Process cannibalization requests. **(T-3)**

3.3.1.3.17. Conduct a daily Ground Maintenance Response/Missile Operational Status Reply cross-check and LCC Status cross-check with each manned LCC using the checklists provided on NMC2. **(T-2)**

3.3.1.3.18. **(N/A 377 TEG)** Update shock isolator air compressor operating hours in MIS. **(T-2)**

3.3.1.3.19. Respond to disaster situations in accordance with local procedures and support agreements. **(T-3)**

3.3.1.3.20. Develop and use quick reference checklists for EWO related actions, explosive operations, mishaps, severe weather warnings, disasters, and evacuations and ensure checklists are reviewed at least annually (EWO checklists not required at 377 TEG). **(T-2)**

3.3.1.3.20.1. Coordinate checklists with applicable workcenters/organizations (e.g., Codes Section, QA, and Base Command Post, Safety Office) as required. **(T-2)**

3.3.1.3.20.2. Coordinate all explosive, mishap, and nuclear surety related checklists with the wing weapons safety office. **(T-1)**

3.3.1.3.21. Maintain senior controller and site logs on NMC2 as follows:

3.3.1.3.21.1. Use senior controller and site logs to capture maintenance actions, technical engineering inputs and any other relevant actions coordinated during the course of maintenance. **(T-2)**

3.3.1.3.21.2. Use senior controller and site logs to document site configuration prior to back out and site departure any time a team enters the Launch Support Building, Launcher Equipment Room, Launch Control Equipment Building, MAF Support Building Equipment Rooms, or LCC. MMOC will conference call with the on-site team chief, MCC, and codes section (if coding actions were performed) and record all applicable information on the site log.

3.3.1.3.21.3. Review senior controller logs and site logs during shift changeover to

ensure all controllers are aware of maintenance actions and requirements.

3.3.1.4. **(N/A 377 TEG)** Maintenance Programs. Maintenance Programs serves as the MXG focal point for interaction with external support activities to ensure critical mission generation support. Maintenance Programs will:

3.3.1.4.1. Develop, maintain, and coordinate all local publications within the MXG. **(T-2)**

3.3.1.4.2. Oversee local or functional support agreements applicable to the MXG in accordance with AFI 25-201, *Intra-Service, Intra-Agency, and Inter-Agency Support Agreements Procedures*. **(T-1)**

3.3.1.4.3. Develop and coordinate MXG commercial contracts as directed by the MXG/CC. **(T-2)**

3.3.1.4.4. Manage readiness reporting for the MXG in accordance with AFI 10-201, *Force Readiness Reporting*. **(T-1)**

3.3.1.5. Maintenance Management Analysis. MMA tracks, analyzes, and presents information to help senior leadership assess the health of the unit's weapon systems and equipment. MMA serves as the MXG or 377 TEG POC for MIS issues and performs analysis to assess and improve unit performance. MIS is the main source of information used by analysts to assess unit performance and capability. Additionally, MMA manages and ensures the accuracy of MIS inputs and outputs. MMA will:

3.3.1.5.1. Provide information on analysis services and capabilities to units and supervision. **(T-2)**

3.3.1.5.1.1. Coordinate with MTS and/or FTD for opportunities to provide training on analysis services and capabilities (e.g., Maintenance Orientation, Team Chief Course, etc.). **(T-2)**

3.3.1.5.1.2. Conduct visits to maintenance workcenters and provide information on analysis services and capabilities when contract or supervision changes. **(T-2)**

3.3.1.5.2. Calculate maintenance metrics and compare unit performance against MAJCOM and locally developed goals (if applicable). **(T-2)**

3.3.1.5.3. Develop products to track, monitor, and identify seasonal and cyclical trends at the group and squadron level. **(T-2)**

3.3.1.5.4. Review maintenance data for anomalies, variances, and trends to identify areas requiring further study. **(T-2)**

3.3.1.5.5. Assist unit leaders with the application and interpretation of maintenance data. **(T-2)**

3.3.1.5.6. Serve as the MIS Database Manager (DBM). **(T-1)** The DBM will:

3.3.1.5.6.1. Serve as the focal point for MIS modification/creation requests. **(T-1)**

3.3.1.5.6.2. Provide expertise on MIS for resolution of problems beyond the work center's control and coordinate with the MAJCOM when problems exist that are beyond the scope of responsibilities of Host DBMs. **(T-2)**

3.3.1.5.6.3. Ensure MIS security is maintained in accordance with AFI 17-130, *Cybersecurity Program Management*. **(T-1)**

3.3.1.5.6.4. Ensure support for tenant organizations and users. **(T-2)**

3.3.1.5.6.5. Ensure scheduled MIS downtime is published to users. **(T-2)**

3.3.1.5.6.6. Coordinate on matters pertaining to the interface of other automated systems within the MIS. **(T-2)**

3.3.1.5.6.7. Control access to specific MIS programs and subsystems. **(T-2)** Audit permissions to MIS profile annually and take appropriate measures when compromise is suspected. **(T-2)**

3.3.1.5.6.8. Establish serial-controlled item location and inventory in MIS for asterisked items in the work unit code manuals. **(T-2)**

3.3.1.5.7. Serve as the OPR for the Data Integrity Team. **(T-2)** The DIT ensures the unit has complete and accurate data in the MIS, identifies and quantifies problems within the unit preventing complete and accurate documentation, and identifies and corrects the root causes for poor data integrity. MMA will lead and execute the DIT by performing the following functions:

3.3.1.5.7.1. Review all new work orders for accuracy each day and forward work orders with errors to work center DIT monitors for correction. **(T-2)** Track errors using NMC2. **(T-2)**

3.3.1.5.7.2. Review all debriefed work orders each duty day. **(T-2)** Forward debriefed work orders with errors to work center DIT monitors for correction. Track errors using NMC2. Count the errors by detailed data record and enter number of errors by data record in NMC2. Only one error will be charged for each data record; however, all data record errors will be recorded and broken down by category for trend analysis. **(T-2)**

3.3.1.5.7.3. Ensure all assigned DIT members are trained in the use of MIS applicable programs for the data integrity review/correction process. **(T-2)**

3.3.1.5.7.4. Hold DIT meetings to ensure workorders documented in MIS are accurate and complete. **(T-2)**

3.3.1.5.7.4.1. Frequency and scope of meetings can be determined locally.

3.3.1.5.7.4.2. The DIT meetings will include representatives from each squadron under the MXG.

3.3.1.5.7.4.3. It will include participation from Plans and Scheduling, MMOC, Decentralized Materiel Support, and Quality Assurance. **(T-3)** Other agencies may be required, as determined by MMA.

3.3.1.5.7.5. Work orders in MIS require 100% review at least once a quarter.

3.3.1.5.7.6. Provide a briefing to the MXG/CC of all DIT activities and results using the DIT briefing template, provided by the MAJCOM on NMC2, at least quarterly. **(T-2)**

3.3.2. **(N/A 377 FTMMXS)** Resources Flight. Resources Flight personnel perform off-equipment maintenance on electrical, environmental, power generation, pneumatic, and hydraulic systems of the weapon system; centrally store, issue, inspect and repair support equipment and special purpose vehicles; track and manage assigned support equipment and vehicle inspections, maintenance, and calibration requirements and ensure accurate tracking of spare missile guidance sets. This flight consists of the Electronics Laboratory (ELAB), Mechanical and Pneudraulics Section (MAPS), Power, Refrigeration, and Electrical Section (PREL), Aerospace Ground Equipment (as applicable), and VES.

3.3.2.1. Electronics Laboratory. ELAB technicians inspect, troubleshoot and repair missile electronic and test equipment. They prepare electronic drawers and equipment for dispatch to LFs and MAFs. An ELAB Maintenance Team typically consists of at least two 2M0X1 technicians. Additionally, ELAB technicians will:

3.3.2.1.1. Maintain a 24-hours per day, 7-days per week maintenance support capability. **(T-3)**

3.3.2.1.2. Maintain a master file of LF and LCC unique strapping data documents and ensure it is backed up electronically. Update the master file after approved routine or emergency changes from the ICBM Systems Directorate. Retain letters or messages of approval as historical documents. **(T-2)**

3.3.2.1.3. Track spare missile guidance sets by serial and part number. **(T-0)**

3.3.2.2. Mechanical and Pneudraulics Section. MAPS technicians inspect, troubleshoot, and repair hoists, mechanical support equipment, pneumatic and hydraulic components, weapon system components, support equipment, self-contained breathing apparatuses, and special purpose vehicles. A MAPS Maintenance Team typically consists of at least two 2M0X2 technicians. Finally, MAPS technicians operate and maintain the proof-load test facility.

3.3.2.3. Power, Refrigeration and Electrical Section. PREL technicians inspect, troubleshoot and repair weapon system environmental control systems, power systems, electrical systems, support equipment, test equipment, and special purpose vehicles. A PREL Maintenance Team typically consists of at least two 2M0X3 technicians.

3.3.2.4. Vehicle and Equipment Section. VES technicians manage assigned vehicles and equipment to meet maintenance requirements. Vehicle and Equipment technicians will:

3.3.2.4.1. Ensure availability of serviceable general and special purpose vehicles, cranes, and equipment to meet mission requirements. **(T-3)**

3.3.2.4.1.1. In coordination with Logistics Readiness Squadron ensure vehicle availability, status, discrepancies, and inspections are accurately reflected in the MIS, as applicable, per T.O. 00-20-2. **(T-2)**

3.3.2.4.1.2. Ensure equipment availability, status, discrepancies, calibrations, and inspections are accurately reflected in the MIS, as applicable, per T.O. 00-20-2. **(T-2)**

3.3.2.4.2. Ensure each equipment load is complete prior to and upon return from dispatch and document any abnormalities, evidence of misuse or loss of equipment on the inventory receipt before accepting responsibility from maintenance teams. **(T-2)**

3.3.2.4.3. Schedule RS handling equipment repair and inspections through Munitions Squadron and MIS as applicable. **(T-3)**

3.3.2.4.4. Update MEEL status on NMC2 for all owned equipment and vehicles, as applicable. **(T-2)**

3.3.2.4.5. Inspect and perform minor equipment repair and fabrication as authorized and in accordance with applicable T.O.s. **(T-2)**

3.3.2.4.6. Maintain a 24-hours per day, 7-days per week maintenance support capability. **(T- 3)**

3.4. Missile Maintenance Squadron. MMXS personnel maintain the readiness of Minuteman III ICBMs and corresponding MAFs and LFs through the replacement of limited life components, munitions, missiles, reentry systems, and guidance sets. Additionally, MMXS personnel troubleshoot and repair security, electrical and communication systems. Furthermore, they perform coding operations, corrosion control and periodic maintenance. MMXS consists of Facilities Flight and Generation Flight.

3.4.1. Facilities Flight. Facilities Flight personnel maintain LFs and MAFs in optimal condition and ensure operational readiness by troubleshooting and repairing power and environmental systems, and performing periodic maintenance inspections, corrosion control and preventative maintenance actions. Additionally, they maintain and repair the HICS. The flight consists of the Facilities Maintenance Section (FMS), Corrosion Control, HICS, Cable Affairs, Survivable Systems Teams (SST), and Missile Communications Maintenance (MCM).

3.4.1.1. Facilities Maintenance Section. FMS personnel perform preventive maintenance in accordance with the scheduled periodic maintenance program and perform on-site troubleshooting and repair of LF and MAF power and environmental systems. A Periodic Maintenance Team typically consists of at least eight 2M0X3 technicians. A Facilities Maintenance Team typically consists of at least two 2M0X3 technicians. Team structures can be adjusted based on maintenance requirements. Additionally, FMS technicians will:

3.4.1.1.1. Perform shotgun custodian duties. **(T-1)** Refer to AFI 36-2654, *Combat Arms Program* for detailed guidance.

3.4.1.1.2. Provide for secure storage of the Programmable Logic Circuit Laptop Recovery Image Disk Set and a spare copy of the Wing-specific software disc in the T.O. Distribution Office. **(T-2)**

3.4.1.2. Hardened Intersite Cabling Section. HICS technicians maintain cables connecting MAFs to LFs and to other MAFs by inspecting, troubleshooting, and repairing buried cable and splice case assemblies, terminal splice cases, cable air dryers and correcting erosion issues. A HICS team typically consists of two to six 2M0X3 technicians. Team structures can be adjusted based on maintenance requirements.

3.4.1.3. Cable Affairs Section. Cable Affairs personnel oversee HICS ROW maintenance and projects and maintain close contact with non-Air Force personnel who cross, or could cross, the HICS ROW. They also manage HICS ROW crossing requests, construction, and siting, as well as cable locating and marking. A Cable Affairs team typically consists of at least two 2M0X3 technicians, or civilian equivalent. Cable Affairs does not require

certified team chiefs for operations. Team structures can be adjusted based on maintenance requirements. Cable Affairs personnel will:

3.4.1.3.1. Ensure HICS Circuit Identification and Recording System records are maintained to reflect correct configuration. **(T-2)** Retain a hard copy and electronic back-up of all Communication System Identification Record data to ensure information is always accessible. **(T-2)**

3.4.1.3.2. Update strip map records on both the hard copy and electronic maps. **(T-2)**

3.4.1.4. Corrosion Control. Corrosion Control technicians perform treatment and repair of weapon system components, support equipment, special purpose vehicles and facilities at LFs, MAFs and on-base locations. A Corrosion Control Team typically consists of at least four corrosion technicians. Team structures can be adjusted based on maintenance requirements.

3.4.1.5. Survivable Systems Teams Section. Survivable Systems technicians maintain LCC and Launch Control Equipment Building blast valves, LCC blast doors, LCC and LF shock isolation systems, and operator chairs. A Survivable Systems Team typically consists of two to four 2M0X2 technicians. Team structures can be adjusted based on maintenance requirements.

3.4.1.6. Missile Communications Maintenance Section. MCM technicians perform preventative maintenance, troubleshooting, and repair of multiple communication systems. They also prepare electronic drawers for dispatch to LFs and MAFs. An MCM team typically consists of at least two 2M0X1 technicians. Team structure can be adjusted based on maintenance requirements. MCM technicians will:

3.4.1.6.1. Maintain the following communications systems **(T-2)**:

3.4.1.6.1.1. Minuteman Minimum Essential Emergency Communications Network (MEECN) Program (MMP) Extremely High Frequency Terminal and Very Low Frequency/Low Frequency at MAFs and the MMP Organizational Maintenance System at support base. **(T-2)**

3.4.1.6.1.2. Survivable Low Frequency Communications System antenna and components at MAFs. **(T-2)**

3.4.1.6.1.3. Ultra-High Frequency Radio Set Group (AN/GRC-208) and Dual Mode Antenna at MAFs. **(T-2)**

3.4.1.6.1.4. Ultra-High Frequency Military Strategic and Tactical Relay (MILSTAR) terminals (AN/FRC-175 at MAFs and AN/GSC-42 at Base Command Post) and AN/GRC-228 Time Distribution Subsystem (TDS) supporting the AN/FRC-175 and AN/GSC-42 terminals. **(T-2)**

3.4.1.6.1.5. Strategic Automated Command and Control System at MAFs and Base Command Post. **(T-2)**

3.4.1.6.1.6. Support Information Network (Security Control Center Line, MAF-LF Telephones, MAF Interphones, LF Interphones, and Dial Lines 1-2) **(T-2)**

3.4.1.6.1.7. EWO-1 and EWO-2, Hardened Voice Channel, and Very High Frequency Radio Interface Circuit. **(T-2)**

3.4.1.6.1.8. Maintain a 24-hours per day, 7-days per week maintenance support capability. **(T-3)**

3.4.1.6.2. Perform communications equipment status reporting for their applicable MIS systems per DAFI 21-103. **(T-1)**

3.4.1.6.3. Operate the TDS and TDS Preprocessor to manage Time Standard Modules supporting Ultra High Frequency MILSTAR and MMP. **(T-2)**

3.4.1.6.4. Issue and receive Time Standard Modules to/from dispatching and returning MCCs. **(T-2)**

3.4.1.6.5. Report commercial phone line issues affecting their applicable systems to applicable agencies through the Communications Squadron and MMOC for resolution. **(T-2)**

3.4.1.6.6. Maintain a master file of LF and LCC unique strapping data documents and ensure it is backed up electronically. Update the master file after approved routine or emergency changes from the ICBM Systems Directorate. Retain letters or messages of approval as historical documents. **(T-2)**

3.4.2. Generation Flight. Generation Flight personnel generate and maintain assigned forces through the transportation, removal, installation, and storage of Minuteman III boosters, PSREs, RSs (not storage) and missile guidance sets, coding of the ICBM weapon system, and repair of security, electrical and power systems. The flight consists of Electro-Mechanical Teams (EMT), MHT and MMT Sections.

3.4.2.1. Electro-Mechanical Teams. EMT technicians perform electronic, electro-mechanical, security and electrical system repair and coding of the weapon system. An EMT team consists of at least two 2M0X1 technicians but can be adjusted based on maintenance requirements.

3.4.2.2. Missile Handling Teams. MHT technicians remove, install, transport, ship and receive the missile downstages. An MHT team consists of at least four 2M0X2 technicians but can be adjusted based on maintenance requirements. They will manage and track on-base storage of uninstalled missile motors. **(T-0)**

3.4.2.3. Missile Maintenance Team Section. MMT technicians remove, install and transport Minuteman aerospace vehicle equipment. They also perform maintenance on umbilical cables, suspension systems, and launcher closure systems. MMT assists MHT in the removal and installation of missile downstages. An MMT team consists of at least five 2M0X2 technicians but can be adjusted based on maintenance requirements. MMT will track spare PSREs by serial and part number. **(T-0)**

Chapter 4

ICBM SUPPORT UNITS.

4.1. 377th Test and Evaluation Group. Consists of 377th Flight Test Missile Maintenance Squadron, 576th Flight Test Squadron, and the 377th Test Support Squadron. The 377 FTMMXS actions and management efforts focus on executing the FDE program. The 377 FTMMXS contains Maintenance Operations Flight, Generation Flight, Resources Flight, Munitions Flight, and several contracted maintenance functions.

4.1.1. Unit Technical Training Manager (UTTM). The UTTM manages and oversees all technical training program applications. The UTTM will:

4.1.1.1. Establish and manage lesson plans or task breakdowns for each unit discipline. **(T-2)** Lesson plans or task breakdowns are only required for technical tasks (on-equipment tasks governed by technical data) in the section's master task list.

4.1.1.2. Ensure explosive laden vehicle lesson plans or task breakdowns are routed to the unit safety monitor for review. **(T-2)**

4.1.1.3. Establish and manage Team Chief training course. **(T-2)**

4.1.2. Contracting Officer Representative. These personnel evaluate contracted maintenance functions and will establish minimum inspection intervals as prescribed in the applicable contract and perform additional surveillance inspections in response to customer complaints or others as deemed necessary.

4.2. 377th FTMMXS.

4.2.1. Maintenance Operations Flight personnel maintain the status of all LFs and MAFs and provide the DO/SEL with key information to assist in determining maintenance requirements and priorities. Additionally, they coordinate maintenance requirements with outside agencies. This flight consists of the MMOC, Scheduling Section, MMA. Refer to **paragraph 3.3.1.1** for Maintenance Operations Flight Commander/Chief requirements.

4.2.1.1. Missile Maintenance Operations Center. MMOC personnel direct, control, and implement the daily maintenance effort, utilize personnel and resources to ensure maximum readiness, and assist work centers in resolving conflicts. They are the primary interface with launch directors, Task Force personnel, and are the maintenance lead for FDE missions, weapon system testing and associated operations. Refer to **paragraph 3.3.1.3** for MMOC requirements.

4.2.1.2. Scheduling Section. Scheduling personnel serve as the focal point for maintenance planning and scheduling requirements. Refer to **paragraph 3.3.1.2** for Scheduling requirements.

4.2.1.3. Maintenance Management Analysis. MMA tracks, analyzes, and presents information to help senior leadership assess the health of the unit's weapon systems and equipment. MMA serves as the 377 TEG POC for MIS issues and performs analysis to assess and improve unit performance. MIS is the main source of information used by analysts to assess unit performance and capability. Additionally, MMA manages and

ensures the accuracy of MIS inputs and outputs. Refer to **paragraph 3.3.1.5** for MMA requirements.

4.2.2. Resources Flight. Resources Flight personnel perform off-equipment maintenance on pneumatic, electronic, instrumentation and hydraulic systems associated with the weapon system. Additionally, they are responsible for limited on-equipment repair of LF and MAF subsystems and they install, checkout and repair unique instrumentation packages required for all FDE launches. The flight consists of the ELAB, MAPS, and the Instrumentation Lab.

4.2.2.1. Electronics Laboratory. ELAB technicians inspect, troubleshoot and repair missile electronic components and test equipment. They prepare electronic drawers for dispatch to LFs and MAFs.

4.2.2.2. Mechanical and Pneudraulics Section. MAPS technicians inspect, troubleshoot, and repair hoists, mechanical support equipment, pneumatic and hydraulic components, weapons system components, support equipment, and special purpose vehicles. MAPS technicians also maintain nuclear-certified payload transporters, RS handling gear, A-Circuit, guided missile maintenance platforms, transporter erectors, cranes, hooks, and lifting slings. MAPS technicians also operate and maintain the proof-load test facility.

4.2.2.3. Instrumentation Lab. Instrumentation technicians operate, checkout, troubleshoot and repair instrumentation flight packages and associated Launch Support System ground support equipment for the weapon system. Instrumentation Lab technicians will:

4.2.2.3.1. Coordinate and perform range safety flight certification of instrumentation flight packages. **(T-2)**

4.2.2.3.2. Analyze test data to detect deficiencies and provide test products to systems contractors, engineers, launch officials and range safety authorities. **(T-2)**

4.2.2.3.3. Integrate the instrumentation flight package to the missile guidance set. **(T-2)**

4.2.2.3.4. Provide technicians to serve as Monitor and Control Operator and Assistant Monitor and Control Operator on the FDE Launch Countdown Crew. As required, the work center may appoint an advisor to assist these personnel. **(T-2)**

4.2.2.3.5. Ensure accurate tracking of spare Missile Guidance Sets by serial and part number. **(T-0)**

4.2.3. Generation Flight. Generation Flight personnel maintain assigned facilities, equipment, and vehicles to meet FDE and additional mission requirements. Flight personnel ensure test flight assets are functionally checked and properly configured. The flight consists of EMT, MMT, MHT, and FMS.

4.2.3.1. Electromechanical Teams. EMT technicians perform electronic troubleshooting and repair as well as electromechanical and electrical system checkout. Additionally, they maintain missile communications systems, perform launch capability testing, and coding of the weapon system.

4.2.3.2. Facilities Maintenance Section. FMS technicians inspect, troubleshoot and repair LF and MAF weapon system environmental control systems, power systems, electrical

systems, support equipment, test equipment, special purpose vehicles and performs preventive maintenance actions as part of the periodic maintenance program.

4.2.3.3. Missile Maintenance Teams. MMT personnel remove, install and transport aerospace vehicle equipment. They also perform maintenance on umbilical, suspension system and launcher closure system. MMTs assist MHT in the removal and installation of boosters. MMTs checkout and install destruct packages on PSREs. They will manage and track on-base storage of uninstalled PSREs. **(T-0)**

4.2.3.4. Missile Handling Teams. MHT personnel remove, install, transport, ship, receive, and store boosters. Additionally, MHTs checkout and install destruct packages on boosters. They will manage and track on-base storage of uninstalled missile motors. **(T-0)**

4.2.4. Munitions Flight. The 377 FTMMXS has a munitions flights assigned to support ICBM test requirements. Refer to the AFMAN 21-201, *Munitions Management* for requirements, roles, and responsibilities.

4.2.5. Contracted Functions. The 377 TEG has several contracted functions, including Training Management Services, Vehicle Issues and Control, Equipment Issue and Control, LF Refurbishment, Corrosion Control Services, Environmental Management, and Materiel Control.

4.2.5.1. Training Management Services (TMS). TMS provides Unit Training Manager services in accordance with DAFI 36-2689, AFI 36-2650, and established performance work statement (PWS). TMS will:

4.2.5.1.1. Manage assigned ancillary training programs and track using MIS. **(T-2)**

4.2.5.1.2. Monitor overdue training and notify the appropriate level of supervision to correct training deficiencies. **(T-2)** Ancillary training courses become overdue on the last day of the month unless course curriculum dictates otherwise.

4.2.5.1.3. Manage unit's upgrade training program. **(T-2)**

4.2.5.1.4. Establish a consolidated task coverage file to show the work center responsible for performing each Career Field Education and Training Plan task. Verify a training capability exists for each technical task performed. **(T-2)**

4.2.5.1.5. Serve as the focal point for obtaining and scheduling missile maintenance related training quotas for courses conducted by outside agencies (on- or off-base). Use the AF 3933, *MAJCOM Mission Training Request* to request special training needs. Submit special training need requests to AFGSC/A4 with courtesy copies to 377 TEG/CC. **(T-2)**

4.2.5.1.6. Manage assigned missile maintenance training programs. **(T-3)**

4.2.5.1.7. Ensure an RTT program is established and provide overall management of the program. **(T-2)**

4.2.5.1.8. Ensure unit trainers meet requirements per **paragraph 2.17**. **(T-1)**

4.2.5.2. Vehicle Issue and Control. Vehicle Issue and Control provides services in accordance with established PWS. Vehicle Issue and Control will:

4.2.5.2.1. Ensure maximum availability of safe, reliable, General Services Administration, general and special purpose vehicles, and cranes to meet mission requirements. **(T-2)**

4.2.5.2.2. Perform Vehicle Control Officer/NCO duties for the maintenance complex in accordance with AFI 24-302, *Vehicle Management*. **(T-2)**

4.2.5.2.3. Coordinate accomplishment of squadron vehicle inspections with base Logistics Readiness Squadron and General Services Administration. **(T-2)**

4.2.5.2.4. Submit all vehicle discrepancies and inspection and servicing requirements to base Logistics Readiness Squadron and General Services Administration. **(T-2)**

4.2.5.2.5. Maintain status of assigned vehicles using Integrated Maintenance Data System (IMDS) and report vehicle shortages to MMOC. **(T-2)**

4.2.5.3. Equipment Issue and Control. Equipment Issue and Control provides custodial accountability, issue, and recovery of assigned support equipment in accordance with established PWS. Equipment Issue and Control will:

4.2.5.3.1. Ensure maximum availability of serviceable equipment to meet mission requirements. **(T-2)**

4.2.5.3.2. Ensure equipment availability, status, inspections, calibrations, and discrepancies are accurately reflected in MIS and report equipment shortages to the MMOC. **(T-2)**

4.2.5.3.3. Use load lists as a load check sheet, maintenance team inventory check sheet, configuration control inventory and/or receipt. **(T-2)** Any item with multiple components will have a detailed inventory included with the item. **(T-2)**

4.2.5.3.4. Inspect each equipment load for completeness prior to and upon return from dispatch. **(T-2)** Document any abnormalities, evidence of misuse or loss of equipment on the IMDS inventory or receipt listings and update IMDS database, as required. **(T-2)**

4.2.5.3.5. Inspect and perform minor equipment repair and operator maintenance on owned TMDE. **(T-2)** Limit repair to the replacement of minor hardware and treatment of minor corrosion. **(T-2)** Process TMDE for calibration or repair through the Precision Measurement Equipment Laboratory. **(T-2)**

4.2.5.3.6. Process equipment for inspection or repair through maintenance processing. **(T-2)**

4.2.5.4. LF Refurbishment. The refurbishment contractor performs applicable LF refurbishment and refurbishment support of launch facilities to support FDE. All LF refurbishment will be performed in accordance with applicable technical data. **(T-1)**

4.2.5.5. Corrosion Control Services. Corrosion control performs inspections, preventive maintenance, documentation, and treatment to launch facilities, missile alert facilities, support equipment, and real property-installed equipment in accordance with applicable directives and established PWS. In addition to applicable directives, Corrosion Control Services must treat and paint all topside LF areas affected by launch blast damage and blast residue within 30-days post launch. **(T-3)**

4.2.5.6. Environmental Management. Environmental management serves as the unit liaison with BCE for identifying or resolving environmental compliance issues. They provide environmental services in accordance with established PWS.

4.3. Technical Engineering Operating Locations. Technical Engineering Operating Locations are established at all ICBM units, including the 377 TEG. Technical Engineers will not direct maintenance teams to use procedures that are not contained in T.O.s or CEMs. **(T-1)** Technical Engineering can direct task-qualified maintenance teams to obtain measurements from approved test points using approved test equipment while being referenced from T.O.s, CEMs, schematics or diagrams. Technical Engineers will:

4.3.1. Complete the specialized Technical Engineering Course. **(T-2)**

4.3.2. Assist in the resolution of abnormal weapon system faults and advise Air Force Nuclear Weapons Center (AFNWC) and AFGSC/A4 of abnormal faults which have a weapon system impact. **(T-2)** Technical Engineers are authorized to use the following in resolving faults:

4.3.2.1. All weapon system T.O.s including depot level T.O.s.

4.3.2.2. Special contractor data placed in the T.O. system with identifying T.O. numbers.

4.3.2.3. Depot instructions authorized for use by the appropriate Air Logistics Complex.

4.3.2.4. CEMs and as-built drawings.

4.3.2.5. Engineering data prepared or acquired by the Air Force in support of logistics and system support operation.

4.3.2.6. LF Activity Data and Inertial Performance Data.

4.3.3. Review data, conduct studies and develop changes required to improve the weapon system and coordinate findings with AFNWC and AFGSC/A4. **(T-2)** Coordinate real property/real property installed equipment configuration change requests through CES, AFNWC missile engineering divisions, and AFGSC/A4 for approval or disapproval. **(T-2)**

4.3.4. Direct all technical matters relating to the missile guidance set. Coordinate actions with AFNWC and the Boeing Guidance Repair Center as necessary. **(T-2)**

4.3.5. Maintain capability to perform maintenance per memorandum of agreement with host unit. **(T-3)**

4.3.6. Act as central point of contact for all maintenance activities involving System Engineering Level Evaluation & Correction Team and assist the team during all on-site activities. **(T-3)**

4.3.7. Attend EWO meeting as requested and provide EWO planning team members who can provide accurate equipment and personnel availability status, assist in developing generation plans, and commit resources. **(T-3)**

4.3.8. Publish a quarterly activity summary and forward copies to the applicable AFGSC Operations Directorate (AFGSC/A3), AFGSC/A4, AFMC Directorate of Logistics, Civil Engineering, Force Protection, and Nuclear Integration (AFMC/A4/10), AFNWC, MMIII Systems Directorate, (AFNWC/NM), AFNWC Engineering (AFNWC/EN), AFNWC System Engineering Level Evaluation and Correction Team (AFNWC/SELECT), 20 AF Operations Directorate (20AF/A3), 20 AF Logistics Directorate (20AF/A4), MXG/CCs, and the 377

TEG/CC. **(T-2)** Summary will include current status of all projects, synopsis of all significant or unusual problems encountered and a brief recap of dispatch activity during the period. **(T-2)**

4.3.9. Maintain qualification on ground, missile and nuclear safety requirements, security requirements, MPH procedures, critical component control, and other appropriate tasks. **(T-3)**

4.3.10. Serve as unit focal point for gaining approval for alternate or substitute equipment and new exempt power devices. **(T-2)** Submit requests through applicable MAJCOM logistics division per T.O. 21M-LGM30G-12. **(T-2)**

4.3.11. Approve Engineering Requests when delegated by Program Office. **(T-2)**

4.4. Decentralized Materiel Support. This agency is embedded within each MXG and 377 TEG to provide oversight of all supply related functions. Refer to AFI 23-101 for detailed responsibilities.

Chapter 5

MAINTENANCE PROGRAMS AND REQUIREMENTS.

5.1. General. This chapter outlines maintenance programs and processes required to effectively execute the ICBM mission. This chapter does not apply to cruise missile maintenance. This chapter applies to the 377 TEG except where noted.

5.2. Maintenance Data Documentation. These requirements outline maintenance data documentation. Refer to T.O. 00-20 series publications for specific procedures.

5.2.1. Document all weapon system, support equipment, and communication system discrepancies, including T.O. 21M-LGM30F-6 and missile-related CES discrepancies in the ICBM MIS and record in functional system of record. **(T-2)**

5.2.2. Refer to DAFI 21-103 for additional communications system discrepancy reporting requirements.

5.2.3. Do not delete invalid discrepancies from MIS unless entered in error. **(T-3)** If discrepancy was physically checked for validity, sign them off and indicate discrepancy was invalid without deleting.

5.3. Debriefing Requirements. Proper debriefing is critical to proper maintenance data collection and MIS database integrity. Debriefing actions will include:

5.3.1. Document all identified discrepancies in MIS, to include those corrected during the course of maintenance or "Find and Fix", however, do not document discrepancies that do not affect the life or operation of the system. **(T-2)** Consider form, fit, and function.

5.3.2. Reconcile all work orders completed, including those documented as corrected, assigned proper work unit and action taken codes. **(T-2)**

5.3.3. Initiate parts requests through MIS for discrepancies requiring parts. **(T-2)**

5.3.4. Return all unused parts to supply for disposition, or if the parts are still required, for storage. **(T-1)**

5.3.5. Verify all newly identified priority 1-4 write-ups annotated by MMOC are correct and parts are ordered. **(T-2)**

5.3.6. Turn in all LF and LCC worksheets into P&S. **(T-2)** This includes, but is not limited to, completed AFTO Forms 430, site inventories, and AFTO Forms 95 for items on **Table 3.1.** after installation on site.

5.3.7. Complete all maintenance data forms (e.g., AFTO 350, *Repairable Item Processing Tag*, DD Form 1577, *Unserviceable (Condemned) Tag - Materiel*) prior to turning in faulty equipment or other faulty items to the owning work center or supply. **(T-2)**

5.3.8. Debrief at the end of each shift or at dispatch completion. **(T-2)**

5.4. Briefing Requirements. A 7-level supervisor in the work center will provide face-to-face pre-dispatch/pre-task briefings that will include: **(T-2)**

5.4.1. A work package review to ensure inclusion of all workable discrepancies. **(T-3)**

5.4.2. Confirmation that teams have all T.O.s, tools, vehicles, equipment, chemicals, training materials, forms, tags, and parts. (as applicable) **(T-3)**

5.4.3. Current status of LF, MAF, and/or equipment. **(T-2)**

5.4.4. Review of task qualifications, licensing, issues affecting PRP, PRP status, currency of ancillary training, and security requirements, as applicable. **(T-0)**

5.4.5. Review of Two-Person Concept requirements, location of all No-Lone zones, location of critical components within the No-Lone zone, and emergency procedures. **(T-0)**

5.4.6. Review of proper technical data usage and pertinent technical data changes. **(T-1)**

5.4.7. Verify site access documentation (e.g., Restricted Area Badge, Entry Access List). **(T-3)**

5.4.8. Review approved routes of travel. **(T-2)**

5.4.9. Review sequence of tasks and fault flow. **(T-3)**

5.4.10. Ensure the team is aware of all simultaneous task actions and communication requirements and coordinates with work centers as necessary. **(T-3)**

5.4.11. Review of risk management information pertinent to the task or dispatch. **(T-2)**

5.4.12. Verification that team members were provided required crew rest in accordance with AFMAN 21-200 or governing directives. **(T-1)**

5.4.13. Review of the WRF for discrepancies that indicate the potential for atmosphere impacting conditions (e.g., environmental control system, make up air, and lower explosive limit sensor discrepancies) and make appropriate preparations. **(T-1)**

5.4.14. Ensure two technicians are task qualified prior to performing any task on critical components listed in MNCL (**https://members.lcmp.af.mil/mncl**), USAF Nuclear Certified Equipment and Software, and T.O. 21M-LGM30F-12-1, *Minuteman Nuclear Surety Procedures* for the WS133AM/B Weapon System. **(T-0) Note:** Ensure two designated technicians oversee contractors performing maintenance tasks on critical components. **(T-0)**

5.4.15. **(N/A 377 TEG)** Review Nuclear Maintenance Certification Tool to ensure members have current certifications in accordance with AFMAN 21-204. **(T-1)**

5.5. Special Certification Roster. The SCR is a management tool providing a listing of personnel appointed to perform and/or inspect work of a critical nature. Personnel are not authorized to perform the tasks in **Table 5.1** unless appointed on the SCR. ICBM units will manage the SCR as follows:

5.5.1. Use the AF Form 2426, *Training Request and Completion*, or MAJCOM-approved form to add or remove personnel to the SCR. **(T-2)**

5.5.2. Section OICs/NCOICs will review the individual's qualifications and recommend addition by routing the AF Form 2426 (and waiver request, if applicable) to the approval authority listed in **Table 5.1**. **(T-3)** For removal, the approval authority is the Section Chief, OIC, or NCOIC.

5.5.3. The DO/SEL recommends approval to the MXG/CC or 377 TEG/CC by signing the AF Form 2426, as applicable. **(T-3)**

5.5.4. The DO/SEL retains copies of approved waivers until no longer required (e.g., personnel upgrade). Additionally, retain copies of the approved AF Form 2426 until SCR addition in the MIS is complete. **(T-2)**

5.5.5. Route AF Form 2426 with final approval to the MTS (TMS at 377 TEG) to load or remove the approved course codes against the individual in MIS. **(T-3)**

Table 5.1. Special Certification Roster Requirements.

<table>
<tr><th>ITEM</th><th>Mandatory SCR Item Titles</th><th>Prerequisites</th><th>Approval</th></tr>
<tr><td>1</td><td>Clear Red-X by Primary Air Force Specialty Code (AFSC)</td><td rowspan="3">Minimum SSgt (or civilian equivalent) with a 7-skill level (Note 1)</td><td rowspan="3">DO/SEL (MXG/CC or 377 TEG/CC must approve personnel that do not meet prerequisites)</td></tr>
<tr><td>2</td><td>Certify NRTS and Serviceable Tags</td></tr>
<tr><td>3</td><td>In-Process Inspection by Primary AFSC</td></tr>
<tr><td>4</td><td>Limited Calibration Approval</td><td>Minimum 7-skill level (or civilian equivalent)

Completion of Calibration Limitation Approval Training program</td><td>DO/SEL</td></tr>
<tr><td>5</td><td>Red-X Downgrade</td><td rowspan="2">MSgt or higher (or civilian equivalent)</td><td rowspan="4">MXG/CC (or 377 TEG/CC)</td></tr>
<tr><td>6</td><td>MICAP Approval</td></tr>
<tr><td>7</td><td>Cannibalization Authority</td><td>DO/SEL (Note 2)</td></tr>
<tr><td>8</td><td>Clear Red-X (Lost Tool)</td><td>DO/SEL</td></tr>
<tr><td colspan="4">Notes:
1. May be waived by MXG/CC or 377 TEG/CC.
2. The MXG/CC will be the only cannibalization authority for L-Cat launch facilities and does not need to be included on the SCR. (T-3)</td></tr>
</table>

5.6. Major Maintenance Procedures. Major maintenance is any activity that requires aerospace vehicle equipment maintenance within the launch tube with the launcher closure door open.

5.6.1. When performing major maintenance during holiday, weekend, or nighttime hours, the unit will verify adequate on-duty support agencies are immediately available, as well as applicable AFGSC/A4, Depot and contractor support personnel. **(T-2)**

5.6.2. A site supervisor will oversee all weekend, holiday, or nighttime major maintenance. **(T-3)**

5.6.3. The MXG/CC (or 377 TEG/CC) may extend major maintenance activities into hours of darkness in order to complete an in-progress task.

Table 5.2. (N/A 377 TEG) ICBM Launcher Equipment Room Penetrated Time-Related Maintenance Restrictions. This table establishes ICBM on-site time related maintenance restrictions.

Rule	Time Period	Types of Maintenance Permitted
1	Daylight hours (See Notes 1, 3, 4, 5, 6, and 7)	All
2	Hours of darkness RS Installed (See Notes 2, 3, 4, 5, 6, and 7)	All priority 1-4 discrepancies
3	Hours of darkness No RS Installed (See Note 3)	All priorities, to include the off-base training LF.

Notes:
1. MXG/CC will approve holiday or weekend major maintenance on a case-by-case basis. **(T-3)**
2. MW/CC will approve all nighttime major maintenance on a case-by-case basis (except as noted in Note 5. **(T-1)**
3. Daylight is the period of time 30 minutes before local area official sunrise until 30 minutes after local area official sunset.
4. At LFs with RS installed, priority 3 periodic maintenance requiring launcher equipment room penetration should only be initiated during normal daylight hours.
5. **Exception:** Nighttime major maintenance may be accomplished to complete maintenance in progress that runs over into hours of darkness if approved by the MXG/CC or higher.
6. Maintenance requiring the site to be penetrated after official sunset or before official sunrise must be approved by the MXG/CC or higher. **(T-1)** This approval may be pre-coordinated.
7. If the Personal Alarm System becomes inoperable while on site, maintenance will not be delayed while waiting for replacement.

Table 5.3. (377 TEG) ICBM On-Site, Time-Related Maintenance Restrictions.

Rule	Time Period	Types of Maintenance Permitted
1	Daylight hours	All (See Note 1, 2, and 4)
2	Hours of darkness	All priorities Major maintenance is not permitted (See Notes 2, 3, and 4)

Notes:
1. 377 TEG/CC will approve holiday or weekend major maintenance on a case-by-case basis. **(T-3)**
2. Daylight is the period of time 30 minutes before local area official sunrise or 0700, whichever is earlier, until 30 minutes after local area official sunset or 1900, whichever is later.
3. **Exceptions:**
   - Launch contingency support.
   - Refurbishment activities to support an accelerated launch schedule.
   - AFGSC may direct additional exceptions.
4. Nighttime major maintenance may be accomplished to complete maintenance in progress that runs over into hours of darkness.

5.7. (N/A 377 TEG) Standby Procedures. Standby teams must be available to respond to priority 1 maintenance, 24 hours per day, 7 days per week. **(T-2)**

5.7.1. Units will establish a minimum standby of two teams per day capable of responding to priority 1 maintenance. **(T-2)**

5.7.2. MMOC and Production Superintendent will coordinate to dispatch these teams on all priority 1 maintenance requirements. **(T-2)** If teams are used for other maintenance, plan for teams to work lower priority maintenance that can be easily stopped if priority 1 maintenance is required.

5.8. Stop-Use Procedures. When equipment or vehicle conditions are discovered that pose significant risk to personal injury or equipment damage, units may direct stop-use until investigated and resolved. MAJCOMs will publish procedural guidance. **(T-1)**

5.9. Calibration Limitation Approval Certification Program. A limited TMDE calibration could seriously impact mission capability of weapon systems. All units will have a comprehensive training program to ensure authorized personnel can interpret TMDE calibration limitations to the specified requirement of the applicable weapon system. **(T-1)**

5.9.1. Personnel will be trained and certified on limited calibration approval requirements prior to placement on the SCR and annually thereafter. **(T-1)** Do not remove personnel from SCR unless annual training exceeds 90 days overdue. **(T-1)**

5.9.2. 377 TEG/CC or MXG/CCs may designate contractors in writing to authorize calibration limitations.

Chapter 6

TRAINING REQUIREMENTS.

6.1. General. Commanders are ultimately responsible for all maintenance training within their units. MTS is the single point of contact for maintenance training management. The UTTM is the single point of contact for maintenance training management within the 576 Flight Test Sqd, 377 TEG, and the 377 Flight Test Missile Maintenance Sqd.

6.2. Ancillary Training Requirements. See **Attachment 2** for specific ancillary training courses and requirements. Ready Airman Training requirements will be completed on a cycle not to exceed 24 months. **(T-2)**

6.3. Five Skill-Level Upgrade Training Program. New technicians assigned to work centers will be entered into a phased training program. **(T-2)**

6.3.1. Phase I consists of all required ancillary training, vehicle qualifications, and enrollment in the applicable Career Development Course. Technicians will be entered in Phase I training upon arrival, after First Term Airman's Center orientation. **(T-2)** The goal for new maintenance personnel is to complete Phase I training in no more than 60 days.

6.3.2. Phase II Continuation Training consists of hands-on qualification training. **(T-2)** Personnel enter Phase II immediately following completion of Phase I training. For FTD-trained work center personnel, the goal is for new maintenance personnel to begin journeyman training no later than 6 months after arrival on station.

6.3.3. The owning work center will load master task lists for technicians in the training management system and assign instructors or trainers as required. **(T-3)**

6.4. Recurring Technical Training. The applicable OIC/NCOIC will ensure RTT program is established for all qualified technicians in accordance with this manual. **(T-2)** The unit Commander may direct training to correct trends or address specific issues identified through QA evaluations outside the RTT program.

6.4.1. RTT will be conducted on a semi-annual basis by a qualified instructor or trainer. **(T-2)** Applicable work center trainers, QA, and FTD Instructors conducting RTT are exempt from this requirement.

6.4.2. Technicians will be entered in the RTT program when they are eligible for quarterly proficiency evaluations in accordance with AFMAN 21-200. **(T-2)**

6.4.3. Applicable QA, FTD instructors, work center trainers, and production work center supervision will meet to determine the task(s) to be trained. The production work center supervision will make the final task selection. **(T-3)** Tasks may be tailored to a specific technician, team, or applied across a work center.

6.4.4. Training sessions, including student man-hours, will be documented in MIS. **(T-2)**

6.4.5. **(ICBM) (N/A 377 TEG)** FTD will accomplish RTT for EMT, FMS and MMT sections, as requested through MTS. **(T-2)**

6.5. Special Qualification Training. The OIC/NCOIC may request special qualification training based on upcoming requirements (e.g., EWO generation, Simulated Electronic Launch

Minuteman, Hardness Surveillance Evaluation Program, Code Change). Special qualification training requests will be submitted through MTS. **(T-3)**

6.6. Training Requirements. The following requirements are outlined for any personnel who conduct training:

6.6.1. Training may be conducted on serviceable support equipment or weapon system components to meet work center training needs.

6.6.2. All nuclear maintenance training will be conducted in accordance with AFMAN 21-204. **(T-0)**

6.6.3. Only certified technicians will perform tasks with WR assets in accordance with AFMAN 21-204. **(T-0)**

6.6.4. Do not insert faults in operational ALCMs, LFs, MAFs, LCEBs, or LCCs or degrade status. **(T-1) Note (ICBM):** Faults may be inserted in designated off-base trainers provided proper site configuration can be verified at completion of training dispatch. **(377 TEG)** LFs and Launch Support Centers are considered operational after launch capability tests have been accomplished. MAFs are considered operational after configuration for a test launch. Faults will not be inserted on MAF- 01A without 377 TEG/CC approval. **(T-3)**

6.6.5. Ensure MIS reflects current site, trainer, or equipment configuration. **(T-1)**

6.6.6. Faults may be inserted in support equipment or weapon system subcomponents not installed on an operational ALCMs, LFs, MAFs, LCEBs, or LCCs provided proper configuration can be verified at completion of training. Coordinate configuration changes with appropriate agencies.

6.6.7. Comply with briefing and debriefing requirements and the “Find and Fix” philosophy. **(T-3)**

6.7. (ICBM) Training Systems and Devices. Maintenance training systems and training devices are maintained through a contract. For training systems and training devices not governed by a contract, see **paragraph 2.17.5**. This applies to both FTD instructors and work-center trainers.

6.8. (ICBM) Scheduling Maintenance Training. This section outlines requirements for scheduling FTD maintenance training.

6.8.1. Annual Training Forecast. The FTD Annual Training Forecast is the primary scheduling vehicle for scheduling EMT, MMT, and FMS journeyman courses. To build the annual training forecast the FTD and MTS will conduct an annual training forecast meeting and publish the training forecast in accordance with **paragraph 6.8.1.2**. **(T-2)**

6.8.1.1. Annual Training Forecast Meeting. The MTS and FTD will conduct an annual training forecast meeting no later than 31 July to govern the next fiscal year. **(T-2)** At this meeting, the FTD and MTS will:

6.8.1.1.1. Review previous year’s annual forecast and discuss issues with meeting requirements. **(T-3)**

6.8.1.1.2. Establish the number of courses required to meet the fiscal year demand as published in the MMCL. **(T-2)**

6.8.1.1.3. Plan and project each course start, and completion date based on FTD course control documents. **(T-2)**

6.8.1.2. The MXG/CC, MTS Superintendent, and FTD SEL will review and approve the annual training forecast, ensuring the forecast is published no later than 1 September and uploaded to the AFGSC Maintenance Training Sharepoint. **(T-2)** Changes to the forecast after publishing will require the schedule to be reviewed and approved again.

6.8.2. Monthly Training Scheduling Meeting. The monthly training scheduling meeting is used to project personnel into FTD courses, address issues with supporting the annual training forecast and other training initiatives for the following month. The MTS Superintendent will:

6.8.2.1. Conduct the meeting by the 10th duty day of each month. **(T-3)**

6.8.2.2. Ensure, at a minimum, the meeting attendees:

6.8.2.2.1. Identify/review forecasted personnel to attend courses projected in the annual training forecast for courses starting within 90 days. **(T-2)**

6.8.2.2.2. Review the previous month's training deviations and track solutions to completion. **(T-3)**

6.8.2.2.3. Forecast courses and project personnel for other FTD training requirements (e.g., driver's training, special qualification training, etc.) using the DAF Form 898 in accordance with AFI 36-2650. **(T-1)**

6.8.2.3. Publish and file meeting minutes and provide copies to all attendees. **(T-3)**

6.8.3. **(ICBM) MAJCOM Mandatory Courses**

6.8.3.1. The MAJCOM Mandatory Course List (MMCL) identifies mandatory maintenance training requirements for ICBM missile field technicians and maintenance support personnel.

6.8.3.2. The MMCL is developed by AFGSC/A4B annually and coordinated through 373 Training Squadron and ICBM units to determine the minimum number of training slots required based on fiscal year demand and maximum throughput considering available manpower and resources. **(T-2)** The MMCL will be finalized and published to the AFGSC Maintenance Training SharePoint NLT 31 July of each year. **(T-2)**

6.8.3.3. MMCL courses for maintenance technicians will be identified and loaded into IMDS during in-processing with an appropriate course status and future date (a maximum of 180 days). **(T-2)**

6.8.3.4. MMCL requirements will be listed as a priority course on the AF Form 898. **(T-2)**

6.8.3.5. ICBM units will provide the minimum required amount of students annually as identified on the MMCL. **(T-2)**

6.8.3.6. If annual MMCL requirements are not met, the deviating agency will coordinate a deviation MFR through the MXG/CC to 373 Training Squadron and uploaded to the AFGSC Maintenance Training SharePoint. **(T-2)** Multiple course deviations may be listed on one MFR, provided proper justification is given for each deviation. The MFR template is maintained on the AFGSC Maintenance Training SharePoint.

6.8.3.6.1. The ICBM unit is the deviating agency if the required number of students was available but not provided for each MMCL course. The ICBM unit is not required to complete a deviation MFR if the course backlog is 0 and they did not have the required amount of inbound technicians to support MMCL requirements.

6.8.3.6.2. The 373rd Training Detachment is the deviating agency if the required number of students are provided by the ICBM unit, but the FTD could not support the request for the course.

6.8.3.6.3. Day-to-day course deviations will be input on the AFGSC/A4B managed deviation tracker as they occur. **(T-2)**

Chapter 7

HICS MAINTENANCE AND SUSTAINMENT.

7.1. Introduction. This chapter outlined requirements for Cable Affairs Officers to manage HICS maintenance and surveillance. CAO responsibilities are outlined **Chapter 2**.

7.2. HICS ROW Crossings. The CAO ensures the HICS is not endangered by ROW crossings. Crossings are classified according to whether or not the government has superior easement rights.

7.2.1. Crossings without Government Superior Easement Rights (Lesser). Required actions depend on whether HICS lowering, or relocation is required due to the crossing activity.

7.2.1.1. If no cable lowering or relocating is required, the CAO must advise the crossing agency that the CAO must be notified 72 hours before work begins and crossing work must be restricted to coordinated locations. Intentionally severing, willful or malicious interference, or obstruction to the HICS is a criminal offense and may result in fines or imprisonment according to Title 18, United States Code, Section 1362, *Destruction of Government Property -- Malicious Mischief -- Communication Lines, Stations, or Systems.* **(T-0)**

7.2.1.2. The CAO must schedule teams to locate and stake the cable in the crossing area and monitor the crossing work. **(T-1)**

7.2.1.3. If cable lowering or relocating is required, it must be accomplished at government expense. **(T-1)** The CAO will seek assistance from HICS personnel, BCE, and contract support (in that order). **(T-3)**

7.2.2. Crossings with Government Superior Easement Rights. Before any agency is permitted to cross the HICS, that agency must ask for consent-to-cross. The agency must agree to the reimbursement procedures, when applicable, before the crossing can begin. **(T-1)** CAOs can grant conditional crossing consent if no problems are encountered and crossing restrictions are observed. Consent-to-cross notification, reimbursement, issuance, and follow-on procedures are outlined below:

7.2.2.1. Consent-to Cross Notification. The CAO must advise the crossing agency, by letter, that they cannot cross the ROW where the USAF has the superior easement except in a manner not involving physical or electronic interference with the cable. They must also provide details of their planned activity so the CAO can determine whether cable lowering, or relocation is required, and any requirement to relocate the cable to preclude interference from crossing agency's crossings will be done by the USAF at the crossing agency's expense. Reimbursement procedures must be included in the letter. **(T-1)**

7.2.2.2. Consent-to-Cross Reimbursement. Where the USAF has superior in rights and must lower or relocate the HICS cable due to the crossing agency's activity, the crossing agency must reimburse the USAF. **(T-1)** In these cases, the reimbursement procedures in DAFI 65-601 Volume 1, *Budget Guidance and Procedures*, apply. The CAO must:

7.2.2.2.1. Provide reimbursement details to the crossing agency explaining they must pre-deposit sufficient funds to cover the cost, payable to the local Defense Accounting Office (DAO). **(T-1)** Also, advise the party that they must pay any claims filed as a result of activity associated with the crossing.

7.2.2.2.2. Provide a cost estimate to the crossing agency, containing at a minimum, the military and/or civilian man-hours (by grade), material required (standard cost), commercial equipment required (number of hours, type), travel, and engineering costs. **(T-1)**

7.2.2.2.3. Ensure the cost estimate letter clearly states that the crossing agency must provide additional pre-deposits if actual expenditures exceed the estimate. Pre-deposit must be made before work commences. **(T-1)**

7.2.2.3. Consent-to-Cross Issuance. When the crossing agency has agreed to the reimbursement procedures, the CAO will notify the BCE Real Estate Office by letter of the specific easements involved and a request for that office to issue a consent-to-cross to the crossing agency with at least the following provisions stated **(T-1)**:

7.2.2.3.1. Crossing criteria.

7.2.2.3.2. Reimbursement details, as provided by CAO (when applicable).

7.2.2.3.3. A statement that any USAF work (lowering or relocation) must be complete before the crossing agency crosses the easement.

7.2.2.3.4. The requirement for the crossing agency to notify the CAO at least 48 hours in advance of their crossing.

7.2.2.3.5. Liability for damages.

7.2.2.3.6. If the USAF relocates the cable, the crossing agency must purchase, in the name of the USAF, any additional ROW needed. At no time will the USAF relinquish its superior easement rights to facilitate highway or utility construction. **(T-1)** Purchase of additional ROW in the name of the USAF must include the necessary environmental analysis required by AFI 32-9003. **(T-0)**

7.2.2.4. Follow-on actions. Record day-to-day expenditures associated with the project. **(T-1)** Coordinate with base DAO to ensure funds are available for project completion. In no case may expenditures continue prior to availability of funds to cover the expenses. **(T- 2)**

7.2.2.4.1. Forward requests for additional pre-deposits, as necessary, to the crossing agency with an information copy to the base DAO.

7.2.2.4.2. Compute the total project cost after completion. The final cost accounting must substantiate the transfer of funds from the applicable deposit fund account in order to cover the cost of general accounting and finance, civilian pay, standard cost of material consumed, commercial equipment use charged as billed and travel costs. **(T-2)**

7.2.2.4.3. Forward a copy of the final computation to crossing agency and the base DAO for final resolution of the pre-deposit fund. **(T-2)**

7.2.2.4.4. Retain a copy of the final reimbursement computation and all supporting documentation. Obtain copies of collection and disbursement documentation from the base DAO. **(T-1) Note:** Process reimbursements in a similar manner if the crossing agency is another government agency other than the USAF. In this case, reimbursable expenses are limited to civilian pay, material, travel, and contractual services.

7.3. HICS ROW. Construction and Siting. In addition to requirements found in T.O. 21M-LGM30F-2-20-1, the following requirements apply:

7.3.1. The location of the HICS must be positively identified before work commences. **(T-1)**

7.3.2. Rerouting, relocating, or splicing in additional HICS should be made only as a last resort. **(T-3)**

7.3.3. When HICS relocating or lowering is unavoidable, to maintain separation criteria, 4 inches of select backfill must surround the cable. **(T-2)** Refer to T.O. 21M-LGM30F-2-20-1 for further protection requirements.

7.3.4. Blasting activities are permitted provided the cable is not at risk of sustaining physical damage. See T.O. 21M-LGM30F-2-20-1 for detailed technical guidance.

7.3.5. For underground power cables with a potential difference of greater than 2400 volts to ground, (e.g., Windfarm collection grid lines) increase the minimum separation to at least 24 inches from the cable with crossing angles at 90 degrees.

7.3.6. New utilities should be installed at a 90-degree crossing angle when possible.

7.3.7. Construction permits should not be issued for crossings within 50 feet of HICS splice locations.

7.3.8. Communications cables must have a minimum separation of 12 inches from the HICS. The minimum crossing angle is 30 degrees.

7.3.9. Pipelines must have a minimum separation of 12 inches from the HICS. **(T-2)** Although the crossing angle is not critical, a minimum angle of 30 degrees is desirable to lessen the possibility of damaging the HICS during the crossing.

7.3.10. Power cables must have a minimum separation of 18 inches from the HICS. The minimum crossing angle is 30 degrees. Underground power cables with a potential difference of 2400 volts to ground must have a metallic sheath. **(T-2)**

7.3.11. Highway and railroad crossing criteria are stated in applicable drawings. When more practical to leave the HICS in place, waivers of this criteria must be granted by AFGSC/A4C. **(T-2)**

7.3.12. Installation of aerial transmission line towers or poles will not be within 100 feet of the HICS, if possible. The separation, required to avoid HICS damage during tower or pole installation, may be waived at the discretion of the CAO. The electrical effect of 60 Hertz power transmission lines parallel to the HICS is negligible.

7.3.13. Dam and pond construction over the HICS will be avoided whenever possible. When unavoidable, the CAO must ensure no HICS splices remain in inundated areas.

Chapter 8

CRUISE MISSILE MAINTENANCE UNITS.

8.1. Introduction. This chapter identifies roles and responsibilities applicable to cruise missile maintenance management. This chapter does not apply to ICBMs or the 377 TEG. **Chapter 2**, **paragraph 2.22** contains cruise missile management responsibilities.

8.2. Cruise Missile Maintenance Sections. All cruise missile maintenance activities are aligned under a munitions squadron. The following sections comprise the cruise missile functions. **(2 MUNS)** Variances to this manual are expected IAW this unit's mission transition enabling compliance with MAJCOM guidance.

8.2.1. Missile Maintenance performs on- or off-equipment maintenance on assigned missile systems, missile-pylon or launcher interface electronics, interface test trainer, and associated support equipment.

8.2.2. Weapons Maintenance performs on- or off- equipment maintenance and inspection on assigned launch gear and equipment.

8.2.3. Weapons/Missile Support performs all supply functions, manages consolidated tool kits, TMDE, hazardous material programs, assigned support equipment, assigned vehicles, and a consolidated T.O. library.

8.2.4. **(2 MUNS)** Weapons Handling performs periodic and unscheduled maintenance, repairs, receives and ships assigned Pylon Loader Adapters (PLA)/Launcher Loader Adapters (LLA) and associated equipment. Additionally, this section can be tasked with weapons/missile handling tasks such as the breakout/restore of scheduled and unscheduled maintenance.

8.2.5. Verification and Checkout Equipment (VACE) performs periodic and unscheduled on- and off- equipment maintenance, repair, modification, and calibration of assigned electrical test equipment. Specifically, this section performs maintenance on locally assigned automated or semi-automated test equipment and provides field-level authorized general-application electrical maintenance support at the discretion of the flight chief.

8.2.6. Analysis. The Analysis section compiles and validates source data generated by maintenance activities, maintains historical documentation, performs trend analysis on systems affecting missile performance and compiles and disseminates analysis products as required. Missile Analysis will collect source data from the following and validate for accuracy and completeness. Analysis will: **Note:** If a test does not produce a printout, gather data required for analysis and missile performance.

8.2.6.1. Maintenance data documentation collected per T.O. 00-20-2. **(T-2)**

8.2.6.1.1. Electronic Systems Test Set test printouts (or digital equivalents) for Level I, Level II, Level III, Operational Flight Load, Loaded Pylon Test (LPT), Empty Pylon Test (EPT), Loaded Launcher Test (LLT), Empty Launcher Test (ELT), Inertial Navigation Element (INE) declassification, and INE auto-calibration. **(T-2)**

8.2.6.1.2. Missile, interface test trainer, launch gear, component, and test equipment historical records. **(T-2)**

8.2.6.1.3. Flight line Systems Interface Test (SIT) Flight Data Recording printout when used in place of LLT/LPT. **(T-2)**

8.2.6.2. In addition to maintaining and updating historical information for assigned missiles, interface test trainers, launch gear, components, and test equipment as required by T.O. 21M-AGM86- 6-1, *Technical Manual Inspection Requirements USAF Series AGM-86 Missiles*. Units will:

8.2.6.2.1. Track acceptance inspections, captive flight hours flown aboard aircraft, elapsed time indicator reading (if applicable), narrative for all installation and removal actions to include reason for installation or removal (failed test number & values if applicable) and employee number of individual performing actions. **(T-2)**

8.2.6.2.2. Historical records for engines and INEs are to remain with the missile or interface test trainer records while the component is installed. **(T-2)**

8.2.6.2.3. Missile or interface test trainer records will contain the part number and serial number of all serially controlled items listed in the applicable T.O. **(T-2)** Use of the printed parts tracked screen from MIS is acceptable.

8.2.6.2.4. For time change items not recorded in an automated maintenance data documentation reporting process, include the part number, serial number, lot number, date of manufacture and time change due date. **(T-2)** Additionally, the missile must have the fuel date annotated on the AFTO Form 95. **(T-2)**

8.2.6.2.5. Electronic Systems Test Set printouts must be maintained. **(T-2)** For each missile, maintain most recent Level I and Flight-Load printouts. For Pylon/Launcher maintain most recent empty printout. If package is loaded maintain most recent loaded Pylon/Launcher and Flight-Load printout in respective Pylon/Launcher folder. Printouts may be abbreviated as allowed by T.O.s, but must be maintained intact as printed or digital, if available and include Unit Under Test identification, serial number, test date, employee number of technician who performed the test and test result. If printouts are missing or not intact as printed, a memorandum from the flight commander/chief must accompany the test run in historical records. **(T-2)**

8.2.6.2.6. Inertial Navigation Element (INE) auto-calibration printouts must be maintained in each missile's respective record file for the most recent successful calibration. **(T-2)** 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 Electronic Systems Test Set printout as required to fulfill the requirements of this paragraph must be copied for inclusion in the individual missile(s) records.

8.2.6.2.7. Auto-calibration dates for INEs received through supply will be derived from the INE AFTO Form 95 utilizing the Acceptance Test Procedure date. **(T-2)**

8.2.6.3. Annually, review automated and manual AFTO Form 95 records in accordance with T.O. 00-20-1. Validate MIS inventory and configuration control during this review. **(T-2)**

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

8.2.6.5. Provide the following tests to AFGSC/A4W on a monthly basis: **Note:** AFGSC/A4W will provide required information to ALCM SPO for analysis.

8.2.6.5.1. ELT/EPT. **(T-2)**

8.2.6.5.2. LLT/ LPT **(T-2)**

8.2.6.5.3. SIT/Missile Interface Test (MIT). **(T-2)**

8.2.6.5.4. Missile Level I, II tests. **(T-2)**

8.2.6.5.5. Component Level III tests. **(T-2)**

8.2.6.5.6. The record will identify if the test was a Type A test or a Type B test. **(T-2)** A Type A test confirms serviceability following scheduled maintenance or following upload of missiles. A Type B test confirms faults that occurred following upload on aircraft or during a LLT, LPT, SIT, MIT, or INE calibration.

8.2.6.5.7. The record will specify the root cause of all test failures and corrective actions taken. **(T-2)** If troubleshooting is ongoing, do not report failure data; carry over test failure results to the following month's report.

8.2.6.5.8. The record will identify if faults are inherent failures or induced failures. **(T-2)** An inherent failure is a confirmation of prior event failure or initial failure found during Level I or II missile tests, or ELT/EPT tests and the defective components is identified for repair or replacement. An induced failure is caused by personnel error, test hardware, test software, or failures induced by test equipment.

8.2.6.5.9. The record will identify if a retest passes or if SIT/MIT faults are not confirmed in the resulting Level I or ELT/EPT test. **(T-2)**

8.2.6.6. Develop and distribute the following analysis products:

8.2.6.6.1. Monthly Maintenance Summary Report. Build this report using data tracked in **paragraph 8.2.6.5**. This report must include the applicable items replaced, tests ran, test station used, and test # failures with corrective actions. **(T-2)** Additionally, engine status will be annotated to include number of serviceable on hand, number ready to turn in, and serial numbers of those removed and installed by tail number for the month. **(T-2)** Send report to the AFGSC/A4W no later than the 15th of the following month. **(T-2)**

8.2.6.6.2. Weekly Status Report. At a minimum, report must include the 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)** Send this report to AFGSC/A4W no later than 1200hrs (central time) Thursday of each week. **(T-2)**

8.2.6.6.3. 6-Year Engine Replacement Forecast. In coordination with the Missile Maintenance Section, Missile Analysis will develop a 6-year engine replacement forecast to evenly distribute the engine shipment and overhaul workload. **(T-2)** Forecast will be updated annually and indicate a monthly replacement schedule for the next fiscal year (including serial numbers) and annual requirements for subsequent 5-year period. **(T-2)** Submit annual forecasts to AFGSC/A4W by 15 Jan. **(T-2)**

8.2.6.6.4. 10-Year Pyrotechnic Device Replacement Forecast. In coordination with Missile Maintenance Section, develop and maintain a 10-year rolling pyrotechnic device replacement forecast to evenly distribute workload and ensure maximum 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)** Submit annual updated forecasts to AFGSC/A4W by 1 Sep for programming through the Cartridge Activated Device/Propellant Actuated Device office. **(T-2)**

8.2.6.6.5. Transfer Documents. Historical documents and automated products are sent with missiles, launch gear, replaceable units or equipment when transferred. **(T-2)**

8.2.6.6.6. Expenditures. For expended missiles or components, transfer all historical documentation and automated products to AFNWC Air Delivered Capabilities Directorate, Missile Sustainment Division (AFNWC/NDM). **(T-1)** The last entry must indicate mission number, location (range) and date of missile termination. **(T-1)**

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

8.2.6.7. Schedule missile and engine shipments with base engine managers and Traffic Management Office. Schedule requisition and pick-up/turn-in with applicable agencies and workcenters. **(T-3)**

8.2.7. Training Section. Training section personnel are responsible for all initial, recurring, team chief, and ancillary training requirements for the unit. Responsibility for training section requirements and execution will be assigned to a responsibility center independent of cruise missile maintenance sections. **(T-2)** Training Section personnel will:

8.2.7.1. Establish and manage a trainer qualification program. **(T-2)**

8.2.7.2. Establish and manage lesson plans or task breakdowns for each unit discipline. **(T-2)** Lesson plans or task breakdowns are only required for technical tasks (tasks governed by technical data) in the section's master task list.

8.2.7.2.1. Review lesson plans or task breakdowns annually or when an affecting publication or system changes occur. **(T-2)**

8.2.7.2.2. Route lesson plans or task breakdowns through applicable work centers, QA, and flight commander/chief. **(T-3)**

8.2.7.3. Establish and manage a RTT program, special purpose vehicle training program, and Team Chief Training Course. **(T-2)**

8.2.7.4. Establish a Maintenance Academics Training program. All supervisors, technicians, team chiefs, trainers and evaluators are required to complete initial and annual training. **(T-2)**

8.2.7.4.1. Tailor this training to the unit's needs, however at a minimum it must include an overview of applicable AFIs, weapon system safety rules, operating instructions, and weapon system T.O.s; inspection requirements as outlined in DAFI 90-302, *The*

Inspection System of the Department of the Air Force; security and PRP requirements; and individual responsibilities and reporting requirements. **(T-2)**

8.2.7.4.2. Initial training will be completed prior to performing any weapon system maintenance task. **(T-2)**

8.2.7.5. Manage unit's ancillary training requirements and provide classroom training as required. **(T-3)**

8.2.7.6. Establish pre-requisites, if required, for entry into training courses to minimize training delays. **(T-3)**

8.2.7.7. Establish and maintain class folders for initial training courses. Class folders will include at a minimum a class roster, documented feedback sessions, and training deviations and deficiencies. **(T-3)**

8.3. Management Programs.

8.3.1. Missile Container Management.

8.3.1.1. Container Marking. All containers, when inspected and verified as empty, will be marked with the word EMPTY on the lower section of the container and all Department of Transportation markings will be removed. **(T-1)** After installing a missile and prior to shipment, ensure that all markings are in place and the missile serial number is marked on the lower section of the container. **(T-1)**

8.3.1.2. Container Sealing. Containers will be sealed when inspected and verified as empty or loaded with a missile. **(T-1)** Seal numbers will be documented in MIS. **(T-2)**

8.3.2. Training Device Management.

8.3.2.1. On the internal surface of panels and all removable training components of the ALCM maintenance trainer, "For Training Use Only" must be clearly stenciled in red. **(T-2)**

8.3.2.2. Training assets must be segregated from war reserve and non-war reserve assets by physical separation or a readily visible sign(s). **(T-1)**

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

TOM D. MILLER, Lieutenant General, USAF
DCS/Logistics, Engineering, and Force Protection

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

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DAFMAN 90-161, *Publishing Processes and Procedures,* 15 April 2022

DAFMAN 91-203, *Air Force Occupational Safety, Fire, and Health Standards*, 25 March 2022

AFI 10-201, *Force Readiness Reporting*, 22 December 2020

AFI 10-405, *Ready Airman Training,* 28 August 2023

AFI 17-130, *Cybersecurity Program Management*, 13 February 2020

AFI 23-101, *Air Force Materiel Management,* 20 October 2020

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DAFI 36-2689, *Training Management,* 31 March 2023

DAFI 63-125, *Nuclear Certification Program,* 16 January 2020

AFMAN 21-200, *Munitions and Missile Maintenance Management,* 9 August 2018

AFMAN 21-201, *Munitions Management,* 3 May 2022

AFMAN 21-204, *Nuclear Weapons Maintenance,* 13 January 2023

AFMAN 23-122, *Materiel Management Policy,* 27 October 2020

T.O. 00-5-1, *Air Force Technical Order System,* 30 August 2022

T.O. 00-5-15, *Air Force Time Compliance Technical Order Process,* 28 July 2023

T.O. 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures,* 26 September 2022

T.O. 00-20-2, *Maintenance Data Documentation,* 22 July 2021

T.O. 00-25-107, *Maintenance Assistance,* 15 August 2022

T.O. 33-1-38, *Cybersecurity for Automatic Test Equipment and Support Test Equipment,* 19 August 2022

T.O. 00-35D-54, *USAF Deficiency Reporting, Investigation, and Resolution (DRI&R),* 15 August 2022

T.O. 21M-AGM86-6-1, *Technical Manual Inspection Requirements USAF Series AGM-86 Missiles,* 18 October 2023

T.O. 21M-LGM30F-6, *Scheduled Inspection and Maintenance Requirements,* 13 November 2021

T.O. 21M-LGM30F-12-1, *Minuteman Nuclear Surety Procedures for the WS133AM/B Weapon System,* 1 February 2022

T.O. 21M-LGM30F-2-20-1, *Hardened Intersite Cable System,* 1 October 2023

T.O. 21M-LGM30G-12, *Safety and Electromagnetic Interference Provisions,* 8 July 2022

CEM 21-SM80X-2-21-X, *Real Property Installed Equipment Missile Weapon System,* 1 August 2022

AFGSCI 13-5201V5, *Code Control Standardization: Procedures, Training and Evaluation,* 17 July 2020

AFGSCI 21-106, *Large Maintenance Vehicle Operations,* 23 March 2021

AFGSCI 99-102, *Intercontinental Ballistic Missile (ICBM) Operational Test and Evaluation (OT&E),* 14 April 2023

Prescribed Forms

AF Form 3951, *Intercontinental Ballistic Missile Hardened Intersite Cable Right-of Way Landowner/Tenant Questionnaire*

Adopted Forms

DD Form 1577, *Unserviceable (Condemned) Tag - Materiel*

DAF Form 847, *Recommendation for Change of Publication*

DAF Form 898, *Field Training Requirements Scheduling Document*

DAF Form 2096, *Classification/On-The-Job-Training Action*

AF Form 1067, *Modification Proposal*

AF Form 2426, *Training Request and Completion*

AF 2411, *Inspection Document*

AF 3933, *MAJCOM Mission Training Request*

AF 9, *Request for Purchase*

AFTO Form 95, *Significant Historical Data*

AFTO Form 350, *Repairable Item Processing Tag*

AFTO Form 430, *Battery Periodic Inspection/Maintenance Record*

Abbreviations and Acronyms

AETC—Air Education and Training Command

AFGSC—Air Force Global Strike Command

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFMC—Air Force Materiel Command

AFNWC—Air Force Nuclear Weapons Center

AFPD—Air Force Policy Directive

AFTO—Air Force Technical Order

ALCM—Air Launched Cruise Missile

APSR—Accountable Property System of Record

AVE—Aerospace Vehicle Equipment

BCE—Base Civil Engineering

CAO—Cable Affairs Officer

CC—Commander

CD—Deputy Commander

CEM—Civil Engineering Manual

DAFI—Department of the Air Force Instruction

DAFMAN—Department of the Air Force Manual

DAO—Defense Accounting Office

DBM—Database Manager

DEFCON—Defense Readiness Condition

DIT—Data Integrity Team

DoD—Department of Defense

ELAB—Electronics Laboratory

ELT—Empty Launcher Test

EMT—Electro-Mechanical Team

EPT—Empty Pylon Test

eTools—Electronic Tools

EWO—Emergency War Order

FDE—Force Development Evaluation

FMS—Facilities Maintenance Section

FSR—Forse Status and Readiness

FTD—Field Training Detachment

FTMMXS—Flight Test Missile Maintenance Squadron

HICS—Hardened Intersite Cabling System

ICBM—Intercontinental Ballistic Missile

IMDS—Integrated Maintenance Data System

INE—Inertial Navigation Element

LCC—Launch Control Center

LCEB—Launch Center Equipment Building

LF—Launch Facility

LLA—Launcher Loader Adapters

LLT—Loaded Launcher Test

LPT—Loaded Pylon Test

MAF—Missile Alert Facility

MAFM—Missile Alert Facility Manager

MAJCOM—Major Command

MAPS—Mechanical and Pneudraulics Section

MCC—Missile Combat Crew

MCM—Missile Communications Maintenance

MDS—Mission Designation Series

MEECN—Minimum Essential Emergency Communications Network

MEEL—Minimum Essential Equipment List

MHT—Missile Handling Team

MICAP—Mission Capable

MILSTAR—Military Strategic and Tactical Relay

MIS—Maintenance Information System

MIT—Missile Interface Test

MMA—Maintenance Management Analysis

MMCL—MAJCOM Mandatory Course List

MMOC—Missile Maintenance Operations Center

MMP—Minuteman MEECN Program

MMRT—Missile Mishap Response Team

MMT—Missile Maintenance Team

MMXS—Missile Maintenance Squadron

MPH—Missile Potential Hazard

MRABL—Master Restricted Area Badge Listing

MTS—Maintenance Training Section

MW—Missile Wing

MXG—Maintenance Group

MXS—Maintenance Squadron

NMC—Non-Mission Capable

NMC2—Air Force Nuclear Munitions Command and Control

NC3—Nuclear Command, Control, and Communications

NCO—Noncommissioned Officer

NCOIC—Noncommissioned Officer in Charge

NRTS—Not Repairable This Station

OCR—Office of Collateral Responsibility

OIC—Officer in Charge

OPR—Office of Primary Responsibility

OSHA—Occupational Safety and Health Administration

P&S—Plans and Scheduling

PLA—Pylon Loader Adapters

PMC—Partially-Mission Capable

PREL—Power, Refrigeration, and Electrical Section

PRP—Personnel Reliability Program

PSRE—Propulsion System Rocket Engine

PWS—Performance Work Statement

QA—Quality Assurance

ROW—Right-Of-Way

RON—Remain Overnight

RS—Reentry System

RTT—Recurring Technical Training

SCR—Special Certification Roster

SEL—Senior Enlisted Leader

SIT—Systems Interface Test

SNCO—Senior Noncommissioned Officer

SST—Survivable Systems Teams

TEG—Test Evaluation Group

TDS—Time Distribution Subsystem

TCTO—Time Compliance Technical Order

TMDE—Test Measurement Diagnostic Equipment

TMS—Training Management Services

T.O.—Technical Order

TTP—Tactics, Techniques, and Procedures

UTTM—Unit Technical Training Manager

VACE—Verification and Checkout Equipment

VES—Vehicle and Equipment Section

WRF—Workload Requirements File

Office Symbols

AF/A4L—Directorate of Logistics

AF/A4LW—Headquarters Air Force, Logistics, Engineering, and Force Protection, Directorate of Logistics, Nuclear Weapons, Missiles, and Munitions Division

AFGSC/A3—AFGSC Operations Directorate

AFGSC/A4—AFGSC Directorate of Logistics and Engineering Directorate

AFGSC/A4B—Missile Maintenance

AFGSC/A4C—Civil Engineering

AFGSC/A4W—Munitions Maintenance

AFGSC/FM—Directorate of Financial Management

AFMC/A4/10—AFMC AFGSC Directorate of Logistics, Engineering, Force Protection, and Nuclear Integration

AFNWC/EN—AFNWC Engineering

AFNWC/NDM—Air Delivered Capabilities Directorate, Missile Sustainment Division

AFNWC/NM—AFNWC MMIII Systems Directorate

AFNWC/SELECT—AFNWC System Engineering Level Evaluation and Correction Team

20AF/A3—20thAir Force Operations Directorate

20AF/A4—20thAir Force Logistics Directorate

377 TEG/CC—Test and Evaluation Group Commander

Terms

Cannibalization—The authorized removal of a specific assembly, subassembly, or part from one weapon system, system, support system, or equipment end item for installation on another end item to satisfy an existing supply requisition and to meet priority mission requirements with an obligation to replace the removed item. Refer to T.O. 00-20-2.

Class I Training Equipment—Distinct end items of training equipment specifically designed, developed, fabricated, and assembled to meet training objectives. These items require configuration control and logistic support.

Class II Training Equipment—Weapon system parts, components and end items used for training purposes in its original configuration. Support equipment includes tools and test equipment used for training purposes in the original configuration. These items will retain their supply classification identity and be maintained accordingly.

Class III Training Equipment—Items designed to show a concept or portray the function of an end item without the actual working medium. Examples include animated parts, cutaways, exploded displays, and models.

Deferral—Any IMDS discrepancy which is deemed as not cost effective or practical to repair as approved by the Maintenance Operations Flight Commander/Chief.

Fault—Any act that impairs a subsystem or renders serviceable components unserviceable. A fault can be inserted by a trainer/instructor or caused by a system malfunction.

Force Status and Readiness—Computer program used to inform Higher Headquarters of ICBM sortie status. Sortie status defined as an A-Cat (required on alert, launch capable with targeting), F-Cat (scheduled off-alert, non-launch capable sortie on low-priority target), or an L-Cat (non-deployed LF, no ICBM present).

Minimum Essential Equipment Listing—A listing of the minimum number of vehicles and equipment items, listed individually, to support the unit's mission. When items fall below the designated minimum, maintenance or management actions are required to restore the unit's mission to fully capable.

Missile Potential Hazard—An abnormal situation or condition in the weapon system or support equipment that cannot be resolved by the unit with standard procedures and requires immediate Higher Headquarters and engineering assistance to develop approved procedures to recover to a stable configuration that alleviates the potential for equipment damage and/or injury or death of personnel.

Not Repairable This Station—A condition that identifies when an end item or subassembly is not repairable by the unit because of maintenance restrictions and/or limitations in technical data or equipment. A certified team chief, appointed on the SCR, must make the declaration an item is to be NRTS.

Operational Readiness Parts—Operational Readiness Parts are assets that are specific to a one-of-a-kind weapon system (e.g., ICBM, etc.) which have a limited worldwide inventory.

Red-W—Indicates that the aerospace vehicle, equipment, or support equipment is inoperative for its intended use and requires careful attention because of a condition. The item cannot be used for its intended purpose until the malfunction is corrected and the item can be used without further damage. This requires the symbol to be cleared by a certified team chief, appointed on the SCR.

Red-X—Indicates that the aerospace vehicle, equipment, or support equipment is considered unsafe or unserviceable and is not to be used until the unsatisfactory condition is corrected and the symbol cleared by a certified team chief, appointed on the SCR.

Single Point Failure—Single Point Failure items are assets that fail and will render a system inoperative or unable to perform its designated mission. These items are pre-positioned in spare or storage at a designated central storage location, to meet requirements such as system restoration within 48 hours or less.

Training Deficiency—When student(s) do not receive training on all items specified in the training standard prior to course graduation. There are many situations/circumstances that may result in a training deficiency, such as broken/unavailable equipment or a shortage of instructor personnel required to teach a specific objective, unit, or block in the course.

Training Deviation—Day-to-day deviations for events such as appointments, functions, or unforeseen course interruptions. A few examples of situations include severe weather, illness, and equipment and/or weapon system malfunction.

Workload Requirements File—IMDS product used by a work center to identify all discrepancies assigned to a particular work center or a particular site or piece of equipment.

Attachment 2

TRAINING REQUIREMENTS

Note: All courses required by AFI 10-405 *Ready Airman Training* will not be specifically covered in this attachment. Refer to the applicable Ready Airman Training Requirements Message available at **https://tmis.us.af.mil/afforgenconnect.If** courses listed in this attachment satisfy requirements under the Ready Airman Training umbrella, units are encouraged to not duplicate the training.

A2.1. Cold Weather Indoctrination. Applies to: All personnel assigned to a norther tier base (e.g., Minot AFB, Malmstrom AFB, F.E. Warren AFB).

Frequency: One time. OPR: Determined locally.
Remarks: Content determined locally.

A2.2. Maintenance Management Training. Applies to: All 2M0XX, 21MX, 620X, and appropriate civilian personnel.

Frequency: One time.
OPR: MTS/TMS.
Remarks: Ensure personnel understand AFGSC instructions, AFMAN 21-200 and 21-202 which apply to the maintenance organization.

A2.3. Maintenance Standardization and Evaluation Program Orientation Course. Applies to: All personnel subject to proficiency evaluations.

Frequency: One time. Must be accomplished prior to technicians performing any maintenance.
OPR: QA.
Remarks: Determine content locally.

A2.4. Deficiency Reporting. Applies to: All maintenance technicians and production work center supervisors and managers.

Frequency: One time.
OPR: QA.
OCR: MTS/TMS.
Remarks: Include the purpose, scope, and specific responsibilities within the deficiency reporting system. Emphasize the need for proper use of the deficiency reporting system, general reporting requirements, and exhibit processing procedures, report processing, contact and action point responsibilities, and follow-up actions.

A2.5. Cardiopulmonary Resuscitation. Applies to: Work Center OIC/NCOICs and below who perform maintenance or individuals who directly supervise maintenance.

Frequency: As specified by commercial training program being used. OPR: MTS/TMS.

A2.6. (ICBM) Team Chief Training. Applies to: All Team Chiefs.

Frequency: One time.
OPR: 20 AF
Office of Collateral Responsibility (OCR): MTS/UTTM

Remarks: Emphasize the managerial and leadership requirements of the team chief position, using 20 AF course material. Units are authorized to supplement the course with local information.

A2.7. (N/A 377 TEG) Nuclear, Biological and Chemical (NBC) Mask. Applies to: All personnel who penetrate Launcher Equipment Rooms to perform maintenance or are required by guidance.

Frequency: One time.
OPR: MTS.
Remarks: This training covers how to properly store, use, and inspect the mask in accordance technical directives.

A2.8. (N/A 377 TEG) Shotgun Training Program. Applies to: All personnel who penetrate Launcher Equipment Rooms to perform maintenance or are required by guidance.

Frequency: Annual.
OPR: Combat Arms Training Management.
OCR: MTS.

A2.9. (ICBM) (N/A 377 TEG) Electromagnetic Pulse Hardness Awareness Training. Applies to: All 2M0XX, 21XX, 620X, and appropriate civilian personnel.

Frequency: One time.
OPR: AFGSC.
Remarks: Training is located at myLearning within the AF Portal.

A2.10. (ICBM) (N/A 377 TEG) EWO Familiarization Training. Applies to: All MMOC, P&S, Technical Engineering personnel, flight commanders/chiefs, production work center OICs, NCOICs, Production Superintendents, Expediters, and QA Evaluators.

Frequency: Annual (MMOC, P&S and QA Evaluators) One-Time (all others, unless duty title changes).
OPR: MTS (Schedules training). OCR: Operations Group EWO Plans (Provides training).
Remarks: Conduct training within 60 days of job assignment. Operations Plans will determine course content.

A2.11. (ICBM) Corrosion Control. Applies to: All 2M0XX, 21XX, 620X, and appropriate civilian personnel.

Frequency: Annual for dispatching personnel; One-time for others who do not dispatch or perform corrosion work. Personnel assigned to the Corrosion Control Shop are exempt from this requirement.
OPR: MTS/TMS.
Remarks: Training is located at myLearning within the AF Portal.

A2.12. Weapon Safety Training (Explosive Safety and Missile Safety). Applies to: All personnel, supervisory and non-supervisory positions who operate, handle, transport, maintain, load, or dispose of missiles, explosives, or nuclear weapon systems. This includes all personnel performing or supervising maintenance in an explosive area or an LF.

Frequency: Initial training required prior to performing any of these tasks, and no later than the last day of the 15th month following initial training (Every 15 months).

OPR: Base Weapons Safety Office.
Remarks: Ensure compliance with requirements per DAFI 91-101, *Air Force Nuclear Weapons Surety Program*, DAFI 91-202, *The US Air Force Mishap Prevention Program*, and DESR 6055.09_AFMAN 91-201, *Explosives Safety Standards*. Explosive Safety and Missile Safety Training is located at myLearning within the AF Portal.

A2.13. (ICBM) Air Force Emergency Response Operations First and Emergency Responders Course. Applies to: All 2M0X2 personnel (Team chiefs, technicians, trainers/instructors, and evaluators) requiring entry into a contaminated atmosphere (actual or suspected) containing Minuteman III components.

Frequency: Completion of this course in accordance with DAFI 10-2501, *Emergency Management Program*. FTD training (MMT trainer at 377 TEG) will provide hands-on initial and annual training to Level A qualified individuals, which will, at a minimum, include PSRE specific response actions and equipment.
OPR: MTS/TMS.
Remarks: Ensure compliance with directives prescribed in Occupational Safety and Health Administration (OSHA) 29 Code of Federal Regulations 1910.120, *Hazardous waste operations and emergency response*.

A2.14. (ICBM) Emergency Response Equipment Repair Training. Applies to: Personnel required to perform periodic maintenance of emergency response life support equipment.

Frequency: Initial/3-year recurring training; Training through applicable manufacturer. OPR: MTS/TMS.
Remarks: Training schedules are available through applicable manufacturer.

A2.15. IMDS Familiarization. Applies to: Team chiefs, designated data collection monitors, maintenance production work supervisors and all personnel who use IMDS terminals.

Frequency: One time per duty position. OPR: AFGSC.
Remarks: Include use of IMDS terminals and printers, use of IMDS screen displays and menus, and local procedures.

A2.16. (N/A 377 TEG) Escort Training. Applies to all personnel who perform escort duties on an LF, MAF, Limited Area, Exclusion Area, or No-Lone Zone.

Frequency: Annual.
OPR: MTS/UTTM
Remarks: This training will focus on applicable directives from DoD S-5210.41-M_AFMAN31-108V1-S, (S) The Air Force Nuclear Weapon Security Manual (U), 2 May 2019.

A2.17. Nuclear Surety Training. Applies to: All personnel, supervisory and non-supervisory positions who operate, handle, transport, maintain, load, or dispose of nuclear weapons, nuclear weapon systems, missiles, certified critical components, perform nuclear-related duties or control entry into No-Lone zones.

Frequency: Initial training required prior to performing any of these tasks, and no later than the last day of the 15th month following initial training (Every 15 months).
OPR: Base Weapons Safety Office.
Remarks: Ensure compliance with requirements set forth in DAFI 91-101.

A2.18. (ICBM) Codes Familiarization Training. Applies to: MMOC, P&S, QA, section NCOICs, Technical Engineering, Production Supervisors, Expeditors who manage maintenance on critical and code components, and all non-code handlers who supervise code handlers at the section or flight level.

Frequency: Annual.
OPR: Wing Codes.

Remarks: Initial and annual codes familiarization training self-study packages are developed by Codes Section to inform personnel of code controls and procedures applicable to their areas of responsibility. Testing is not required. Initial and annual self-study packages or other media format (slide show) will be distributed to the applicable NCOIC to distribute to required personnel in their area of responsibility and to verify completion of the self-study package.

Ensure compliance with requirements set forth in AFGSCI 13-5201V5, *Code Control Standardization: Procedures, Training and Evaluation* and EAP STRAP VOL 16

A2.19. (ICBM) (N/A 377 TEG) Fast Rising B-Plug (FRBP) Hazard Awareness Training. Applies to: All personnel who dispatch to operational launch facilities.

Frequency: One time.
OPR: AFGSC/A4.
Remarks: Training is located at myLearning within the AF Portal.

A2.20. Data Integrity Team Training. This is to train all DIT monitors, work center supervisors, and NCOICs/OICs, on work order review tactics, techniques, and procedures to execute the DIT functions and required supervisory review functions.

Frequency: One time.
OPR: MMA

A2.21. (ICBM) Trainer Course. This is to train all 2M0XX personnel who conduct work center training.

Frequency: One time.
OPR: 20 AF
OCR: MTS/UTTM
Remarks: The Air Force Training Course is a prerequisite and must precede this course. This is also required for all 2M0XX personnel in 7-skill level upgrade training, as identified in applicable Specialty Training Standards.

A2.22. Calibration Limitation Approval Training Program. This is to train all qualified personnel on approval of TMDE calibration limitations prior to being appointed on the SCR, and annually thereafter.

Frequency: Initial/Annual
OPR: MTS/UTTM
Remarks: At a minimum, the course will include when to consider a limited calibration, impact of using improperly calibrated equipment, and how to apply calibration specifications to weapon system requirements.

A2.23. Cyber Hygiene Training. This is to train all maintenance personnel on practices of Department of Defense (DoD) Information Technology (IT) and is critical to sustaining the mission.

Frequency: Initial/Annual
OPR: MTS/UTTM
Remarks: The culture of positive cybersecurity awareness and actions necessary to sustain cybersecurity resiliency is required by all maintenance personnel to mitigate allusive cybersecurity threats and optimize enduring mission generation capabilities. Training is located at myLearning within the AF Portal.

A2.24. Tactical Combat Casualty Care. Tactical Combat Casualty Care applies to all technicians, team chiefs, instructors/trainers, QA evaluators, task supervisors, and NCOIC/OIC for dispatching and non-dispatching work centers who perform maintenance or individuals who directly supervise maintenance.

Frequency: 24 months
OPR: Designated Trainers
Remarks: Tactical Combat Casualty Care is the DoD standard of care for first responders (medical and non-medical) and the All Service Member Tactical Combat Casualty Care course replaces Service trauma skills currently taught in first aid and self-aid buddy care courses.