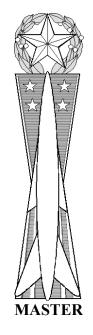
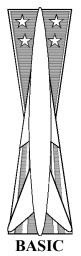
DEPARTMENT OF THE AIR FORCE Headquarters US Air Force Washington DC 20330-1030

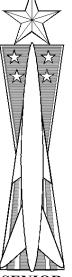
CFETP 2M0X3 5 March 2002







CAREER FIELD EDUCATION AND TRAINING PLAN (CFETP)



AFSC 2M0X3

MISSILE AND SPACE FACILITIES

MISSILE AND SPACE FACILITIES SPECIALTY

AFSC 2M0X3 CAREER FIELD EDUCATION TRAINING PLAN

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THIS DOCUMENT SUPERSEDES CFETP 2M0X3 DATED 31 OCTOBER 2000

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MISSILE AND SPACE FACILITIES SPECIALTY AFSC 2M0X3 CAREER FIELD EDUCATION TRAINING PLAN

PREFACE

1. A highly trained, motivated enlisted workforce is the Air Force's key resource in meeting challenges of the future. If the Air Force is to meet present and future challenges, it's essential the workforce be effectively and efficiently trained to perform duties within each skill level of the Air Force Specialty (AFS). The Career Field Education Training Plan (CFETP) for the Missile and Space Facilities Maintenance specialty provides the framework and guidance necessary for planning, developing, managing, and conducting a career field training program. The plan documents a "training roadmap" for the career field. This roadmap is used to identify mandatory and optional skill level training an individual should receive during their career in the Missile and Space Facilities Specialty.

2. The CFETP consists of two parts that are used to plan, manage, and control training within the 2M0X3 career field.

a. Part I provides information necessary for overall management of training in the career field. <u>Section A</u> explains how everyone will use the plan; <u>Section B</u> identifies career progression information, duties and responsibilities, training strategies, and career field flowcharts; <u>Section C</u> associates each skill level with specialty qualifications (knowledge, training, education, experience, and other); <u>Section D</u> identifies training resource constraints. Some examples are: funds, manpower, equipment, and facilities.

b. Part II includes the following: <u>Section A</u> identifies the Specialty Training Standard (STS)/Course Training Standard (CTS) and includes duties, tasks, technical references to support training, Air Education and Training Command (AETC) training conducted, wartime course/core task and correspondence course requirements; <u>Section B</u> identifies available OJT support materials. Qualification training packages identified in this section have been developed to support both upgrade and qualification training. These packages are available through the AF Pubs webpage, www.afpubs.hq.af.mil/pubs/; <u>Section C</u> contains a training course index supervisors can use to determine resources available to support both mandatory and optional training. <u>Section D</u> can be used to identify Major Command (MAJCOM) unique training requirements. At unit level, supervisors and trainers use Part II to identify, plan, and conduct training commensurate with the overall goals of this plan.

3. Use of this CFETP will ensure each individual in the Missile and Space Facilities Specialty will receive effective and efficient training at the appropriate point in his/her career. This plan will enable the Air Force to train today's workforce for tomorrow's mission.

Abbreviations/Terms Explained

Advanced Training - A formal course that provides individuals who are already fully qualified in their Air Force Specialty (AFS) with additional skills/knowledge to enhance their expertise in the career field. Training is for selected career airmen at the advanced level of an AFS.

Career Development Course (CDC) - A formal written course that provides personnel with additional knowledge necessary to advance to the next higher skill level.

Career Field Education Training Plan (CFETP) - A multipurpose document that encapsulates the entire spectrum of training for a career field or specialty. It outlines a logical growth plan that includes training resources and is designed to make career field training identifiable, eliminate duplication, and is budget defensible.

Continuation Training - Additional qualification training exceeding the minimum upgrade training requirements with emphasis on present or future duty assignments.

Core Task - Tasks the AFCFM identify as minimum qualification requirements within the AFSC, regardless of duty position. Core tasks may be specified for a particular skill level or in general across the AFSC. Guidance for using core tasks can be found in the applicable CFETP narrative.

Critical Task - Tasks identified by the MAJCOM functional manager or local unit supervisors as additional qualification requirements within a specialty or duty position for assigned personnel.

Cruise missile (CM) - Personnel in AFSC 2M0XX and 2M0X1B associated with Air Launched Cruise missile (ALCM), Advanced Cruise missile (ACM) and Conventional Air Launched Cruise missile (CALCM) programs. These personnel are normally associated with Air Combat Command, but may be assigned in Air Force Material Command positions.

Facilities Maintenance Team (FMT) - FMT consists of personnel in AFSC 2M0X3 who troubleshoot and repair power generation/distribution and environmental control system faults at launch facilities and missile alert facilities.

Field Technical Training (Type 4) - Special or regular on-site training conducted by a field training detachment (FTD) or by a mobile training team (MTT).

Initial Skills Training (Type 3) - A formal resident course which results in award of the 3-skill level.

Intercontinental Ballistic Missile (ICBM) - Personnel in AFSC 2M0XX associated with Minuteman III and Peacekeeper weapon systems. These personnel are normally associated with Air Force Space Command, but may be assigned in Air Force Material Command positions.

Occupational Survey Report (OSR) - A detailed report showing the results of an occupational survey of tasks performed within a particular AFS.

On-The-Job Training (OJT) - A method used to certify personnel in both upgrade (skill level award) and qualification (duty position certification) training. OJT is hands-on, over-the-shoulder training conducted at the duty station.

Periodic Maintenance Team (PMT) - PMT consists of personnel in AFSC 2M0X3, who perform periodic inspections, troubleshoot and repair on launch facility and missile alert facility power, environmental control, power generation/distribution, and miscellaneous support systems.

Power Refrigeration and Electric (PREL) - 2M0X3s performing in-shop maintenance on weapons system components and support equipment at ICBM units.

Qualification Training (QT) - Actual hands-on task performance-based training designed to qualify an airman in a specific duty position or specific task. This training occurs both during and after the upgrade training process and is designed to provide performance skills training required to do the job.

Research and Development (R&D) - Personnel in AFSC 2M0XX associated with research, development, acquisition, and support of missiles, spacelift, lasers, weapons, drones, etc. These personnel are normally associated with Air Force Material Command.

Resource Constraints - Resource deficiencies, such as money, facilities, time, manpower, and equipment that preclude training from being delivered.

Spacelift - Personnel in AFSC 2M0XX associated with national space programs supporting the launch and recovery of space assets. These personnel are normally associated with Air Force Space Command.

Specialty Training Standard (STS) - Part II, Section A of the CFETP which identifies the training standard required to achieve a skill level(s) within an enlisted AFS. It standardizes and controls the quality of individual training.

Standard - A fixed quantity, quality, or level of performance that an individual is expected to demonstrate.

Upgrade Training (UGT) - Mandatory training which leads to the award of a higher skill level.

PART I Section A - GENERAL INFORMATION

1. **Purpose of the CFETP**. This CFETP provides information that career field functional managers, training managers, commanders, supervisors, trainers, and the technical training center use to plan, develop, manage and conduct an effective and efficient career field training program. The plan outlines training those individuals must receive to develop and progress throughout their career. This plan identifies initial skills, upgrade, qualification, advanced, and continuation training. This plan does not address Professional Military Education (PME) or ancillary training. The CFETP has several purposes:

1.1. Serves as a management tool to plan, develop, manage, and conduct a career field training program. It is also used to ensure that established training is provided at the appropriate point in an individual career.

1.2. Identifies task and knowledge requirements for each skill level in the specialty and recommends training throughout each phase of an individual career.

1.3. Lists training courses available in the specialty, identifies sources of training, and provides the training medium.

1.4. Identifies major resource constraints that impact implementation of the desired career field training program.

2. Use of the CFETP. The CFETP will be approved and maintained by the Air Force Career Field Manager (AFCFM). The MAJCOM 2M0XX Functional Managers and AETC will review the CFETP annually to ensure currency and accuracy and forward recommended changes to the AFCFM. MAJCOMs must make sure additional training isn't developed that can be satisfied by existing courses. This plan will be used at all levels to ensure a comprehensive and cohesive training program is available and instituted for each individual in the career ladder.

2.1. AETC training personnel will develop/revise formal resident and exportable training based upon requirements established by the users and documented in part II of the CFETP. They will also develop procurement and acquisition strategies for obtaining resources needed to provide the identified training. In addition, the AETC training manager will prepare a camera ready CFETP and send to SAF/AADD for publication. The training manager is also responsible for updates and publication of all changes. A Utilization and Training Workshop (U&TW) will be conducted as needed and hosted by the training manager. The AFCFM will chair the U&TW.

2.2. The MAJCOM functional managers will ensure their training programs complement the CFETP mandatory initial skills and UGT requirements. OJT, resident training, contract training, or exportable courseware/courses can satisfy identified requirements. MAJCOM-developed training must be identified for inclusion in this plan and must not duplicate available training.

2.3. Each individual will complete the mandatory training requirements specified in this plan. Unit level training managers and supervisors will manage and control progression through the career field by ensuring that each individual completes the mandatory training requirements for upgrade specified in this plan as supplemented by their MAJCOM. The list of courses in Part II, Sec. C, will be used as a reference to determine training required.

PART I Section B - CAREER PROGRESSION AND INFORMATION

1. **Purpose**. This section provides information for career field functional managers, training managers, commanders, supervisors, trainers, and the technical training center use to plan career field progression in the Missile and Space Facilities specialty. This plan describes the functions and responsibilities of AFSC 2M0X3, skill progression, training decisions, and outlines Community College of the Air Force educational opportunities.

2. Specialty Descriptions:

2.1. Missile and Space Facilities Apprentice and Journeyman (2M033/53).

2.1.1. Specialty Summary. Inspects, troubleshoots, operates, maintains, repairs, and services power generation, environmental control, and associated support systems/equipment for missile, spacelift, and R&D facilities.

2.1.2. Duties and Responsibilities.

2.1.2.1. Performs or directs and controls the performance of preventive and operator maintenance on missile, spacelift and R&D facilities. Operates, troubleshoots, repairs, adjusts, removes/replaces, inspects, services or controls these actions on missile weapon systems, spacelift and R&D equipment, facilities and ground support equipment. Included are power generation and distribution systems such as diesel generators, automatic switching units, manual switching gear, distribution and control panels, portable auxiliary power units, battery systems, power processors and associated controls; Environmental Control Systems, brine chillers, Heating Ventilation Air Conditioners (HVAC), guidance and control chillers, guidance control conditioning units, test stands, refrigerant reclaiming/recycling systems, portable air conditioners, waste water systems and

dewatering wells, water treatment systems; space lift support systems and associated equipment, and complies with hazardous materials handling procedures. Services or directs and controls the servicing of support equipment with fuel, lubricants, hydraulic fluid, and air. Isolates or directs and controls the isolation of malfunctions in support facilities and equipment, and arranges for repair. Complies with technical, procedural, safety, security, and quality assurance standards. Maintains and uses Air Force indexes, technical orders, and publications.

2.1.2.2. Monitors, operates, or directs and controls these actions for missile and spacelift support equipment. Monitors, operates, and directs and controls these actions for fault display, check panels, and test stands to detect systems and component malfunctions. Determines operational readiness of support equipment. Includes testing or directing and controlling the testing of electrical circuits; security, gas detection, and fire warning systems for proper operation; and auxiliary power equipment for readiness. Isolates or directs and controls the isolation of malfunctions in electrical, pneumatic, refrigeration, and power generation equipment by interpreting test equipment indications. Performs inspections, troubleshoots, repairs and operates special purpose vehicles. Operates or directs and controls the operation of diesel generators, battery systems, and portable self-powered handling equipment.

2.1.2.3. *Assesses quality of personnel, facilities, and equipment*. Inspects personnel performance, equipment, and management functions for compliance with technical data and governing directives. Submits reports to management on all quality assessment findings.

2.1.2.4. *Conducts maintenance and operations training*. Conducts initial, recurring, and special training of personnel.

2.2. Missile and Space Facilities Craftsman (2M073).

2.2.1. Specialty Summary. Supervises the inspection, troubleshooting, operation, maintenance, repair, and servicing of power generation and distribution systems, environmental control systems, and associated support systems/equipment for missile, spacelift, and R&D facilities.

2.2.2. Duties and Responsibilities.

2.2.2.1. Supervises the performance of preventive and operator maintenance on missile, spacelift and *R&D facilities*. Supervises the operation, troubleshooting, repair, adjustment, removal/replacement, inspection, and servicing of missile weapon systems, spacelift and R&D facilities and ground support equipment. Included are power generation and distribution systems such as diesel generators, automatic switching units, manual switching gear, distribution and control panels, portable auxiliary power units, battery systems, power processors and associated controls; environmental control systems, brine chillers, Heating Ventilation Air Conditioners (HVAC), guidance and control chillers, guidance control conditioning units, test stands, refrigerant reclaiming and

recycling systems, portable air conditioners, water treatment systems; waste water systems and dewatering wells; spacelift support systems and associated equipment, and complies with hazardous materials handling procedures. Supervises the troubleshooting and repair of electrical, pneudraulic, and mechanical accessories and components of direct support and real-property-installed equipment. Analyzes support facilities and equipment malfunctions and determines operational readiness to support mission. Determines nature and extent of repairs necessary to support launch or launch processing activities. Solves interface problems between electrical and electronic equipment by troubleshooting and analyzing equipment procedures. Directs compliance of technical, procedural, safety, security, and quality assurance standards. Performs acquisition and activation functions for related systems. Supervises the maintenance of technical orders, publications, Air Force indexes, and record management.

2.2.2.2. Supervises the troubleshooting, repair, monitoring, and operation of missile, spacelift and *R&D support equipment*. Troubleshoots, inspects, repairs and directs and controls these actions for auxiliary power units, hoists, and environmental control systems on support vehicles, and aerospace ground equipment. Maintains records and logs on missile weapon system, spacelift and R&D support equipment.

2.2.2.3. Assesses quality of personnel, facilities, and equipment. Inspects personnel performance, equipment, and management functions for compliance with technical data and governing directives. Submits reports to management on all quality assessment findings.

2.2.2.4. *Conducts and assesses effectiveness of maintenance and operations training*. Conducts and assesses effectiveness of initial, recurring, and special training.

2.3. Missile and Space Systems Superintendent/Chief Enlisted Manager (2M090/00).

2.3.1. Specialty Summary. Superintends maintenance, processing, acquisition, and operation of missiles, spacelift boosters, payloads, and associated subsystems, facilities, support and test equipment. Superintends the activities associated with specialized R&D systems. Superintends maintenance activities engaged in on- and off-equipment maintenance of strategic bomber-launched missiles, aircraft missile and bomb rotary launchers, aircraft stores management systems, and associated test equipment.

2.3.2. Duties and Responsibilities.

2.3.2.1. Plans and organizes missile, spacelift booster, payload, air launched missile and R&D maintenance and processing activities. Manages processing activities. Develops organizational structure to establish lines of authority, and assigns specific responsibilities. Determines materiel and personnel requirements for current and projected commitments. Establishes work procedures for

effective personnel use and increased efficiency and accuracy of operation. Analyzes inspection and test reports, and recommends product improvement. Requisitions and accounts for equipment, facilities, special tools, and supplies. Coordinates missile, booster, and payload maintenance and launch processing activities with base organizations. Manages acquisition and activation activities. Monitors engineers and technicians during R&D experiments for procedural compliance. Superintends ICBM coding operations and activities at missile alert facilities.

2.3.2.2. Directs missile maintenance, booster and payload launch processing, air-launched missile, and R&D activities. Controls work flow, assigns special projects, and monitors program and special project progress. Monitors unit and individual productivity and work quality. Evaluates unit performance in terms of compliance with policies, directives, technical publications, and hazardous materials operations. Ensures conformance with prescribed efficiency, quality, and training standards. Supervises preparing and maintaining records and reports. Explains maintenance, operations, inspection, test, repair, and launch processing policies, procedures, and technical directives. Advises supervisors of missile, and spacelift systems, facilities, and personnel capabilities to meet requirements.

2.3.2.3. Inspects missile, booster, payload, air-launched missile, and R&D maintenance and processing functions. Inspects and evaluates missile maintenance activities. Inspects and evaluates booster and payload maintenance and processing activities. Interprets efficiency and equipment reliability findings and recommends improvements. Reviews maintenance and processing data to evaluate programs and project requirements and capabilities. Analyzes unit records and reports for correcting or improving recurring malfunctions in missile, booster, and payload systems, subsystems, components, and related equipment. Coordinates inspection findings with other support agencies.

2.3.2.4. *Instructs maintenance, operations and R&D functions*. Oversees the management and the integration of all training activities. Interprets and determines essential training requirements. Coordinates unit training requirements with all activities. Evaluates unit's training in terms of compliance with policies, directives and technical publications.

2.3.2.5. *Supervises the performance of inspections to comply with international treaties.* Supervises inspections to comply with international treaties relating to nuclear weapons and associated equipment.

3. **Skill/Career Progression.** Quality training and timely progression from the apprentice to the superintendent skill level play an extremely important role in the Air Force's ability to accomplish its mission. Therefore, it is essential everyone involved in training do their part to plan, develop, manage, conduct, and evaluate an effective and efficient training program. The guidance provided in this part of the CFETP will ensure individuals receive viable training at appropriate points in their career. The following narrative and the AFSC 2M0X3 career field flowcharts identify the training career path and define training required.

3.1. Apprentice (3-skill level) Training. Initial skills training in this specialty consists of tasks and knowledge training provided in the Electronics Principles Course and Missile and Space Facilities Apprentice Course. Individuals must successfully complete these initial skills training courses to be awarded the 3-skill level.

3.2. Journeyman (5-skill level) Training. To upgrade to the 5-skill level in the Missile and Space Facilities specialty all personnel must: (1) complete mandatory requirements identified in AFMAN 36-2108, (2) complete knowledge training provided in the 2M053 CDC, and (3) obtain qualification on 5-level core tasks identified in Part II, Section A3, of this plan. After award of the 5-skill level, continuation training, when available, should be utilized based on an individual's particular duty position or other needs. Continuation training is listed in, but not limited to that described in Part II, Section C, of this plan.

3.3. Craftsman (7-skill level) Training. To upgrade to the 7-skill level in the Missile and Space Facilities specialty all personnel must: (1) complete mandatory requirements identified in AFMAN 36-2108, (2) complete knowledge training provided in the 2M073 CDC, and (3) obtain qualification on 7-level core tasks identified in Part II, Section A3, Attachment 1, Common 2M0XX Missile and Space Maintenance Tasks. After award of the 7-skill level, continuation training, when available, should be utilized based on an individual's particular training needs. Continuation training is listed in, but not limited to that described in Part II, Section C, of this plan.

3.4. Superintendent (9-skill level) Training. Upgrade training to the 9-skill level as a Missile and Space Systems Superintendent is accomplished by completion of requirements identified in AFMAN 36-2108. No additional requirements were identified for upgrade to AFSC 2M090. Continuation training, if available, should be utilized based on an individual's particular needs.

4. **Training Decisions**. The CFETP was developed to encapsulate an entire spectrum of training requirements for the Missile and Space Systems Electronics specialty using a building block approach (simple to complex). Included in the spectrum was the strategy of when, where, and how to meet the training requirements. The strategy must be apparent and affordable to make it easier to comply with and reduce duplication of training. The following paragraphs list the historical training decisions we've made. These paragraphs are not directive in nature. They are listed to provide continuity for future career field management. The paragraphs are in chronological order. Subsequent meetings may have reversed decisions made at earlier meetings.

4.1. 2M0XX U&TW 20 - 30 Sep 93.

4.1.1. Initial skills. The STS was rewritten to include tasks that were previously not identified prior to the AFSC mergers effective October 1993 and April 1994. All initial skills tasks were reviewed to include these functions.

4.1.2. Upgrade training. In addition to Year of Training initiatives, the following decisions were made regarding AFSC 2M0X1:

4.1.2.1. 5 level upgrade - All tech school graduates will be assigned to an operational missile (ICBM or Cruise missile) unit to complete 5-level core task training requirements. Core tasks for upgrade to the 5-skill level will consist of Electro-Mechanical Team (EMT) at ICBM units and Missile Maintenance Section tasks at Cruise missile units. ELAB and VACE tasks were discussed and a decision was reached to exclude them from the core task listing, placing the focus of five level training on field dispatching (ICBM) or in-shop air vehicle maintenance (cruise missiles). Training in these workcenters builds a foundation for subsequent progression into all other areas of the 2M0X1 career field. All applicable 5-level core task training must be completed prior to reassignment to a unit that does not possess 5-level core task training capability.

4.1.2.2. 7 level upgrade - Core tasks for upgrade to 7-level must be accomplished at an ICBM or Cruise missile unit. Personnel assigned to ICBM units will complete all required core tasks in Electromechanical team (EMT) or Electronics Laboratory (ELAB) for the assigned weapon system. Individuals assigned to missile units with multiple weapon systems (including Vandenberg AFB) are required to complete core task training for one of the assigned weapon systems. In this case, local training managers will select the appropriate weapon system to satisfy upgrade requirements. Personnel assigned to Cruise missile units will complete all required core tasks in either Missile Checkout or Verification and Checkout Equipment (VACE).

4.1.2.3. Personnel who were awarded the 5-skill level or 7-skill level prior to implementation of the Year of Training (YOT) initiatives **are not** required to complete core tasks for that awarded skill level unless required for current duty position. Individuals are highly encouraged to complete these core tasks, if possible. Personnel upgrading after the implementation of YOT initiatives must complete all upgrade training requirements, including core tasks. This decision was based on the overwhelming training burden that would result if personnel previously awarded 5-and 7-skill levels were required to return to training. Additionally, many personnel are located at units which could not comply with current core tasks identified by this U&TW.

4.2. 2M0XX U&TW 31 Jul - 4 Aug 95 & ICBM Training Conference 21 - 22 Feb 96. Mission Ready Technician (MRT) Program: After the 2M0XX U&TW met 31 Jul - 4 Aug 95, the 2M0XX community was directed to incorporate the MRT concept in its 3-level technical training. The Air Force MRT Program is designed to shift the training burden from the operational units to the technical school by producing certified 3-level apprentice personnel directly from technical school. Upon arrival at their first duty station, a mission ready trained apprentice may be utilized on those 3-level tasks certified at the technical school in minimum time. An ICBM MRT conference was held with representatives from all units to identify MRT 3-level tasks to be trained and certified by the technical school. Certification of these 3-level tasks by technical school instructors resulted in a significant increase in training days to the original U&TW. This and the MRT concept drove the group to reevaluate the STS requirements identified at the previous U&TW resulting in changes to the STS. All

subjects and tasks were still covered; however, some were deleted from the basic course if they could be covered in the CDC.

4.3. 2M0XX Training Conference 23 - 26 Mar 98. Mission Ready Technician (MRT) Program: After the Feb 98 AETC Trained Personnel Requirements (TPR) conference, a decision was made to revise the 2M0X1 Specialty Training Standards (STS). The existing MRT training courses cannot produce a sufficient amount of graduates to sustain the career field. Air Force Space Command (AFSPC) redefined MRT training requirements.

4.4. 2M0XX Training Conference 23 - 25 Feb 99. Mission Ready Technician (MRT) will now be identified as a Mission Ready Airman (MRA). All 2M0XX specialty and course training standards were reviewed and revised. Seven-level in residence courses will be discontinued at Vandenberg AFB effective Mar 99. Space Launch Maintenance Training Course will be discontinued at Vandenberg AFB effective Sep 99.

4.5. 2M0XX Training Conference 16 - 17 Aug 99. Career Field Manager directed a review of the 2M0XX technical training courses. The Technical Engineering B/CDB course will be discontinued in residence at Vandenberg AFB effective Sep 00. The Wing VI information will be converted to Wing IX, enhanced and moved to the AM/CDB course effective Oct 00. Career Development Courses (CDCs) were reviewed in-depth. A new Electronic Principles (EP) STS is scheduled to be implemented Oct 00. 20 AF will create a course for new shop chiefs incorporating the 532d Training Squadron's discontinued 7-level course material.

4.6. 2M0XX Pre U&TW 15 - 16 May 01. A pre U&TW meeting was held at the 532nd TRS in May 01. Purpose was to provide familiarization of the U&TW process to the AFSC and to identify proposed changes to the 2M0XX AFSC awarding courses, CFETPs and CDCs. We also revised the 5- and 7-level upgrade requirements to address problems for 2M0XX personnel assigned to Spacelift and R&D positions.

4.7. 2M0XX U&TW 10 - 12 Dec 01. Each of the 2M0XX AFSCs met and made changes to core tasks, Specialty Training Standards and general CFETP verbiage. In addition, the 2M0X1B AFSC added material to the Career Development Course. Extensive minutes have been compiled detailing the changes made by each AFSC --- the Training Managers and Career Field Managers have copies of these Minutes.

4.7.1. A major topic of this U&TW was upgrade training. We decided to provide 5-level core tasks in limited areas. For cruise missiles, 5-level core tasks are limited to Missile Checkout section. For ICBMs, 2M0X1 5-level core tasks are limited to Electro-mechanical section, 2M0X2 5-level core tasks can be obtained in either Missile Mechanical section or Missile Handling section, 2M0X3 5-level core tasks can be obtained in either Facilities Maintenance Team section or Periodic Maintenance Teams section. 7-level core tasks have been changed to non-technical tasks, which can be found in Attachment 1. These decisions were made in full appreciation of the difficulties this places on manning moves for airmen in our AFSC. Our intent is that our airmen receive basic instruction in the

duties that are fundamental for our AFSC. The 5-level core task sections, by default, become "feeder" sections for all other 2M0XX positions.

4.7.2. Another major topic of this U&TW centered on delays in obtaining security clearances and subsequently the Personnel Reliability Program (PRP). Our airmen cannot enter into 5-level training without security clearances and PRP. We decided to address the PRP issue with changes to the wording of AFMAN 36-2108, Airmen Classifications, and address our problems with security clearances by message through the Air Staff (CFM has action to submit both).

5. **Community College of the Air Force Academic Programs**. Enrollment in CCAF occurs upon completion of basic military training. *Off duty education is a personal choice but highly encouraged*. Individuals desiring to become an Air Education and Training Command Instructor should actively pursue an associate degree. A degreed faculty is necessary to maintain accreditation through the Southern Association of Colleges and Schools. CCAF provides the opportunity to obtain an Associate in Applied Sciences Degree. In addition to its associate degree program, CCAF offers the following:

5.1. Occupational Instructor Certification. Upon completion of instructor qualification training, consisting of an instructor methods course and supervised practice teaching, CCAF instructors who possess an associate degree or higher may be nominated by their school commander/commandant for certification as an Occupational Instructor.

5.2. Trade Skill Certification. When a CCAF student separates or retires, a trade skill certification is awarded for the primary occupational specialty. The College uses a competency based assessment process for trade skill certification at one of four proficiency levels - Apprentice, Journeyman, Craftsman/Supervisor, or Master Craftsman/Manager. All are transcribed on the CCAF transcript.

5.3. Degree Requirements. The skilled (5) level must be held at the time of program completion with degree requirements for an Associate in Applied Science in Mechanical and Electrical Technology as follows:

Overall Requirements

Subject	Semester Hours
Technical Education	
Leadership, Management, and Military Studies	
Physical Education	
General Education	
Program Elective	
Total	

5.4 Technical Education (24 Semester Hours): A minimum of 12 semester hours of Technical Core subjects/courses must be applied and the remaining semester hours applied from Technical Core/Technical Elective subjects/courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject/course must be approved in advance by the Services Branch. Refer to page 15 for Application of Courses to the Technical Education area.

Technical Core

Subjects/Courses	Maximum Semester Hours
CCAF Internship	
Electrical Power Production	
Electrical Systems	
Heating Systems	
Refrigeration and Air-Conditioning	
Missile and Space Facilities	

Technical Electives

Subjects/Courses	Maximum Semester Hours
Air Force Enlisted Professional Military Education	
Air Distribution and Filtering Systems	
Blueprint Reading/Schematic Reading	
Building Codes and Ordinances	
Computer Science	
Control Systems/Maintenance	
Electronics	
Engine Principles	
Industrial Management	
Industrial Safety	
Alternate Heating and Cooling	
Motor, Starter, and Control Devices	
Quality Assurance	
Environmental Awareness	
Environmental Compliance	
Technical Mathematics (College Algebra or Higher)	

Technical Physics	4
Technical Writing	3
Welding and Pipe fitting	

5.5. Leadership, Management, And Military Studies (6 Semester Hours): Professional military education and/or civilian management courses. The preferred method of completing Leadership, Management, and Military Studies is through attendance at an Airman Leadership School, MAJCOM NCO Academy, and/or Air Force Senior NCO Academy. However, civilian courses that emphasize fundamentals of managing human or material resources may also be applicable.

5.6. Physical Education (4 Semester Hours): Basic Military Training satisfies this requirement.

5.7. General Education (15 Semester Hours): This requirement is satisfied by application of courses accepted in transfer or by testing credit. The following is a specific breakout of requirements:

Subjects/Courses	Semester Hours
Oral Communication (Speech)	
Written communication (English Composition)	
Mathematics	
Intermediate algebra or a college-level mathematics course is required. If a course is applied as a Technical or Program Elective, a natural science con education requirements Application criteria may be applied as a General E Social Science	an acceptable mathematics urse meeting general ducation Requirement.
Anthropology, Archeology, Economics, Geography, Government, History, H	
Psychology, Sociology.	
Humanities	
Fine Arts (History, Criticism, and Appreciation), Foreign Language, Litera	ture, Philosophy, Religion.

5.8. Program Elective (15 Semester Hours): Satisfied with applicable Technical Education; Leadership, Management, and Military Studies; or General Education subjects/courses, including natural science courses meeting general education requirements application criteria. Six semester hours of CCAF degree-applicable technical credit, otherwise not applicable to this program, may be applied.

6. **Career Field Flow Charts**. Charts depicting this career path are presented. The Career path outlines when training is required for career progression within this specialty. This is a nominal timeline for comparison purposes only.

2M0X3 MISSILE AND SPACE FACILITIES SPECIALTY TRAINING FLOW

6 MONTHS	 COMPLETE 3-LEVEL COURSES ELECTRONIC PRINCIPLES MISSILE FACILITIES TECH SCHOOL AWARD 3-LEVEL AWARD OF BASIC MISSILE BADGE
12 MONTHS	- ENROLL IN 5-LEVEL CDC - BEGIN 5-LEVEL CORE TASK TRAINING
24 MONTHS	- COMPLETE CDC - COMPLETE 5-LEVEL CORE TASK TRAINING
36 MONTHS	- PROMOTE E-4/AWARD 5-LEVEL - ADDITIONAL CONTINUATION TRAINING
48 MONTHS	- AIRMAN LEADERSHIP SCHOOL - TRAINER DUTIES
6.5 YEARS	- PROMOTION TO E-5 - BEGIN 7-LEVEL CORE TASK TRAINING - BEGIN 7-LEVEL CDCs
8 YEARS	- 18 MONTHS TIG AS SSGT - COMPLETE 7-LEVEL CDCs - COMPLETE CORE TASK TRAINING
11 YEARS	- SELECTION FOR PROMOTION TO E-6 - AWARD 7-LEVEL - NCO ACADEMY - AWARD OF SENIOR MISSILE BADGE
14 YEARS	- SELECTION FOR PROMOTION TO E-7 - ADVANCED TRAINING COURSES
16 YEARS	- AWARD OF MASTER MISSILE BADGE
18 YEARS	- SELECTION FOR PROMOTION TO E-8 - SENIOR NCO ACADEMY
23 YEARS	- AWARD 9-LEVEL - SELECTION FOR PROMOTION TO E-9

PART I Section C - SKILL LEVEL TRAINING REQUIREMENTS

1. **Purpose**. The various skill levels in the career field are defined in terms of tasks and knowledge requirements for each skill level in the Missile and Space Facilities specialty. They are stated in broad, general terms and establish the standards of performance. The specific task and knowledge training requirements are identified in the STS.

2. Missile and Space Facilities Apprentice (3-skill level).

2.1. Specialty Qualifications.

2.1.1. Knowledge. Knowledge is desirable of electrical, mechanical, and pneumatic principles; and using and interpreting technical orders, work flow diagrams, blueprints, and schematics.

2.1.2. Education. Completion of high school is mandatory with courses in mathematics and physics desirable.

2.1.3. Training. The following requirements are mandatory for award of the 3-skill level:

2.1.3.1. Completion of the in-residence Electronics Principles course.

2.1.3.2. Completion of the in-residence Missile and Space Facilities Apprentice course.

2.1.3.3. Shotgun. Familiarization and live fire of the weapon.

2.1.3.4. Other. Any record of emotional instability precludes entry, award, and retention of AFSC 2M0X3. Normal color vision as defined in AFPAN 48-133 is mandatory for entry into this AFSC. Eligibility for a Secret security clearance according to AFI 31-501 is mandatory for award and retention of this AFSC. Eligibility for Personnel Reliability Program (PRP) certification IAW AFI 36-2104 is mandatory to complete core requirements and upgrade to the 5-skill level.

2.2. Training Sources/Resources. Completion of the basic Space and Missile Facilities Course at Vandenberg AFB, CA satisfies the knowledge and training requirements for the award of the 3-skill level. A list of all training courses to support education and training is in Part II, Section C of this CFETP.

3. Missile and Space Facilities Journeyman (5-skill level).

3.1. Specialty qualifications.

3.1.1. Knowledge. Knowledge is mandatory of electrical, mechanical, and pneumatic principles; using technical orders, work flow diagrams, blueprints, and schematics.

3.1.2. Education. Completion of high school is mandatory with courses in mathematics and physics desirable.

3.1.3. Training. The following requirements are mandatory for award of the 5-skill level:

3.1.3.1. Completion of mandatory requirements in AFMAN 36-2108.

3.1.3.2. Completion of the 5-skill level CDC 2M053.

3.1.3.3. Qualification on applicable 5-skill level core tasks for the assigned weapon system.

3.1.4. Experience. Experience is mandatory in missile facilities maintenance team tasks or periodic maintenance team tasks.

3.1.5. Other. Any record of emotional instability precludes entry, award, and retention of AFSC 2M0X3. Normal color vision as defined in AFPAN 48-133 is mandatory for entry into this AFSC. Eligibility for a Secret security clearance according to AFI 31-501 is mandatory for award and retention of this AFSC. Personnel Reliability Program certification IAW AFI 36-2104 is mandatory to complete core requirements and upgrade to the 5-skill level.

3.2. Five level core tasks - All 2M033 personnel will be qualified/certified on the applicable core tasks before being awarded a 5 skill-level. Mandatory 2M053 core tasks are listed in Part II, Section A3, Attachment 2 of the 2M0X3 STS.

3.3. Training Sources/Resources. The STS identifies all the core tasks required for qualification in the individual's weapon system. Qualified trainers provide UGT and QT. Continuation (Advanced) training courses are available and individuals should attend based on training needs and duty position requirements. A list of all training courses to support education and training is in Part II, Section C of this CFETP.

3.4. Implementation. Entry into 5-level upgrade training may be initiated when an individual possesses the 3-skill level and has been assigned to the base. Then, the individual may be enrolled in the 2M053 CDC upon recommendation of the supervisor. Qualification training is initiated anytime an individual is assigned duties he/she is not qualified to perform.

4. Missile and Space Facilities Craftsman (7-skill level).

4.1. Specialty Qualifications.

4.1.1. Knowledge. Knowledge is mandatory of electrical, mechanical, and pneumatic principles; using and interpreting technical orders, work flow diagrams, blueprints, and schematics.

4.1.2. Education. To assume the grade of SSgt and MSgt, individuals must be graduates of the Airman Leadership School and NCO Academy, respectively.

4.1.3. Training. The following requirements are mandatory for award of the 7-skill level:

4.1.3.1. Completion of mandatory requirements in AFMAN 36-2108.

4.1.3.2. Completion of the 7-skill level CDC 2M073.

4.1.3.3. Qualification on all applicable 7-skill level core tasks.

4.1.3.4. Experience. Qualification is mandatory as a Missile and Space Facilities Journeyman. Also, experience is mandatory in performing or supervising functions in 2M0X3 production workcenters.

4.1.3.5. Other. Any record of emotional instability precludes entry, award, and retention of AFSC 2M0X3. Normal color vision as defined in AFPAN 48-133 is mandatory for entry into this AFSC. Eligibility for a Secret security clearance according to AFI 31-501 is mandatory for award and retention of this AFSC. Eligibility for Personnel Reliability Program certification IAW AFI 36-2104 is recommended for upgrade to the 7-skill level.

4.2. Seven level core tasks - All 2M053 personnel will be qualified/certified on the applicable core tasks before being awarded a 7 skill-level. See Part II, Section A3, Attachment 1, Common 2M0XX Missile and Space Maintenance Tasks.

4.3. Training Sources/Resources. The STS identifies all the core tasks required for qualification in the individual's duty position. Qualified trainers provide UGT and QT. Continuation (Advanced) training courses are available and individuals should attend based on training needs and duty position requirements. A list of all training courses to support education and training is in Part II, Section C of this CFETP.

4.4. Implementation. Entry into 7-level upgrade training is initiated when an individual possesses the 5-skill level and has been selected for promotion to the grade of SSgt. Qualification training is initiated any time an individual is assigned duties he/she is not qualified to perform.

5. Missile and Space Systems Superintendent (9-skill level).

5.1. Specialty Qualifications.

5.1.1. Knowledge. Possess advanced skills and knowledge of ICBM, Air Launched Missiles, R&D systems, and Spacelift operations.

5.1.2. Education. To assume the grade of CMSgt, individuals must be graduates of the Senior NCO Academy.

5.1.3. Training. Completion of mandatory requirements in AFMAN 36-2108.

5.1.4. Experience. Qualification as one of the following is mandatory: Missile and Space Systems Electronics Craftsman, Missile and Space Systems Maintenance Craftsman, or Missile and Space Facilities Craftsman.

5.1.5. Other. Any record of emotional instability precludes entry, award, and retention of AFSC 2M090. Normal color vision as defined in AFPAN 48-133 is mandatory for entry into this AFSC. Eligibility for a Secret security clearance according to AFI 31-501 is mandatory for award and retention of this AFSC.

5.2. Training Sources/Resources. A list of all training courses to support education and training is in Part II, Section C of this CFETP.

5.3. Implementation. Entry into OJT is initiated when an individual possesses the 7 skill level and is a SMSgt selectee. Qualification training is initiated anytime an individual is assigned duties he/she is not qualified to perform.

PART I Section D - RESOURCE CONSTRAINTS

Purpose. This section of CFETP identifies known resource constraints which preclude minimal/desired training from being developed or conducted. This section includes a narrative explanation of each resource constraint and impact statement describing what effect each constraint has on training. Also identified in this section are the resources needed to satisfy training requirements, include information such as part numbers, national stock numbers, number of units required, cost, manpower, etc. Finally, this section includes action required, identifies the OPR, and establishes target completion dates. Resource constraints will be, at a minimum, reviewed and updated annually.

None identified.

PART II Section A - SPECIALTY TRAINING STANDARDS

1. **Implementation**. This STS will be used for technical training provided by AETC for classes beginning 29 Oct 2002 and graduating 4 Mar 2003.

2. **Purpose**. This section identifies the specific task and knowledge training requirements required for personnel to be awarded specific skill levels and perform duties in AFSC 2M0X3. This section contains:

2.1. Section A1 - The Proficiency Code Keys. The proficiency code key is used to indicate level of training and knowledge provided by resident training and career development courses. This proficiency code key applies to the training standards in section A2 and A3.

2.2. Section A2 - The Course Training Standard for the Electronic Principles Course. This course is a prerequisite for all personnel attending the in-residence Missile Facilities Apprentice course.

2.3. Section A3 - The STS for the 2M0X3 Missile and Space Facilities career field. It identifies the training requirements for the 3-/5-/7-skill levels of AFSC 2M0X3. The 3-level column reflects training requirements for the Apprentice course. The 5- and 7-level CDC columns identify the knowledge requirements for development of the 5- and 7-level CDCs for the 2M0X3 career field. Attachments to the STS list the qualification tasks for specific weapon systems/duties of the 2M0X3 career field. These attachments also identify the core tasks and any critical tasks.

3. Qualification training will be documented on the appropriate attachment of the 2M0X3 STS unless the AFCFM has approved the use of other training systems to document and manage the training of 2M0X3 personnel.

Part II Section A1

PROFICIENCY CODE KEY			
	SCALE	LE DEFINITION: THE INDIVIDUAL	
	VALUE		
	1	Can do simple parts of the task. Needs to be told or shown how to do most of the task. (EXTREMELY LIMITED)	
TASK PERFORMANCE	2	Can do most parts of the task. Needs help only on hardest parts. (PARTIALLY PROFICIENT)	
LEVELS	3	Can do all parts of the task. Needs only a spot check of completed work. (COMPETENT)	
	4	Can do the complete task quickly and accurately. Can tell or show others how to do the task. (HIGHLY PROFICIENT)	
	a	Can name parts, tools, and simple facts about the task. (NOMENCLATURE)	
TASK	b	Can determine step by step procedures for doing the task. (PROCEDURES)	
KNOWLEDGE LEVELS	c	Can identify why and when the task must be done and why each step is needed. (OPERATING PRINCIPLES)	
	d	Can predict, isolate, and resolve problems about the task. (ADVANCED THEORY)	
	Α	Can identify basic facts and terms about the subject. (FACTS)	
SUBJECT KNOWLEDGE	В	Can identify relationship of basic facts and state general principles about the subject. (PRINCIPLES)	
LEVELS	С	Can analyze facts and principles and draw conclusions about the subject (ANALYSIS)	
	D	Can evaluate conditions and make proper decisions about the subject. (EVALUATION)	

EXPLANATIONS

* A task knowledge value may be used alone or with a task performance scale value to define a level of a specific task. (Examples: b and 1b)

** A subject knowledge scale value is used alone to define a level of knowledge for a subject not directly related to any specific task, or for a subject common in several tasks.

- This mark is used alone instead of a scale to show that no proficiency training is provided in the course or CDC.

X This mark is used in course columns to show that training is required but not given due to limitations in resources.

Part II Section A2

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ELECTRONIC PRINCIPLES Condensed Course

1. Implementation of training in support of this CTS is with the first class after 1 October 2000.

2. <u>Purpose</u>. This course training standard:

2.1. Establishes the training requirements using tasks, knowledge, and proficiency levels of training for the following courses:

PDS Code PO4 (34 days):

L3AQR2A331A 332 (PDS Code PO4) L3AQR2A331B 332 (PDS Code PO4) L3AQR2A331C 332 (PDS Code PO4) L3AQR2A332 332 (PDS Code PO4) L3AQR2A533A 332 (PDS Code PO4) L3AQR2A533A 333 (PDS Code PO4) L3AQR2A533B 332 (PDS Code PO4) L3AQR2A533C 332 (PDS Code PO4) L3AQR2M031A 332 (PDS Code PO4) L3AQR2M031B 332 (PDS Code PO4) L3AQR2M031B 332 (PDS Code PO4)

PDS Code PO5 (31 days):

L3AQR2A131 301 (PDS Code PO5) L3AQR2A131 302 (PDS Code PO5)

PDS Code PO6 (7 days): L3AQR2MO32A 701 (PDS Code PO6)

2.2. Provides the basis for the development of more detailed training materials, training objectives, and training evaluation instruments for the course.

2.3. Is derived from the Course Training Standard for the Electronic Principles Master Course L3ATR40020 001. The Master Course CTS permanently replaces the Electronics Fundamentals and Applications (EF&A) listing dated June 1996.

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3. <u>Course description</u>. This course provides training in the knowledge and skills needed to perform the duties of maintenance personnel for several AFSCs. This course also trains selected DOD and International Military personnel, and is the prerequisite for follow-on courses either at Sheppard or Vandenberg AFB. The scope of training includes safety, first aid, Direct Current (DC) principles, Alternating Current (AC) principles, semiconductors, power supplies, amplifiers, wave shaping circuits, digital circuits, computer fundamentals, and soldering. The training day for this course is an 8 hour training day for each student. The scope of training is tailored to the prerequisites of the AFSCs. Trainees must be assigned as a student in one of the following AFSCs: 2A331X, 2A332, 2A533X, 2M031X, 2M032A, or 2M033A, international students destined for 2A131 factory training, or the civilian or other military equivalent. Specific course content is identified on the attached training matrix. AFSCs identified in previous EP Training Plans but not reflected above will be trained in the EP Master Course, L3ATR40020-001, which has its own Training Plan and CTS. There is one exception. Effective 1 October 2000, the 2E631 career field will merge into the 2E632 AFSC. Therefore 2E631 training will be discontinued after 1 October 2000.

4. Qualitative requirements: Attachment 1 contains the tasks, knowledge, and proficiency levels referenced in paragraph 2. Columns are marked with a proficiency code to indicate subjects taught. Trainees without prerequisites specified in EDUCATION & TRAINING COURSE ANNOUNCEMENT (ETCA) WEBSITE cannot be expected to meet proficiency levels indicated.

5. Recommendations: Comments and recommendations are invited concerning quality of AETC training. Reference this CTS and address correspondence regarding changes to 37 Training Group/TTS, 1000 Mercury Drive, Lackland AFB, TX 78236-5717. Return the Field Evaluation Questionnaire (FEQ), to identify unsatisfactory performance of individual graduates. A Customer Service Information Line has been installed for the supervisor's convenience to identify graduates who may have received over or under training on task/knowledge items listed in this training standard. For a quick response to problems, call our Customer Service Information Line, DSN 473-2917, anytime day or night.

OFFICIAL

JESSE JOHNSON, MSgt, USAF Chief, Group IM

Supersedes: None Prepared by: 342 TRS/DOR KENNETH M. FREEMAN, Colonel, USAF Commander

2 Attachments

- 1. Qualitative Requirements
- 2. Task Listing

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QUALITATIVE REQUIREMENTS

	P04	P05	P06
1. ELECTRONICS SUPPORT SUBJECTS			
1.1. Safety	В	В	В
1.2. First Aid	В	В	В
1.3. Electrostatic Discharge (ESD) Control	В	В	-
1.4. Electromagnetic Effects (EMP/EMI)	В	В	-
1.5. Metric Notation			
1.5.1. Powers of Ten	В	В	В
1.5.2. Electrical Prefixes	В	В	В
2. USE TEST EQUIPMENT			
2.1. Analog Multimeter	2b	2b	2b
2.2. Digital Multimeter	2b	2b	2b
2.3. Oscilloscope	-	-	-
2.4. Signal Generator	-	-	-
3. BASIC CIRCUITS			
3.1. Direct Current (DC)			
3.1.1. Terms	В	В	В
3.1.2. Theory	В	В	В
3.1.3. Calculations	В	В	В
3.2. Alternating Current (AC)			
3.2.1. Terms	В	В	-
3.2.2. Calculations	В	В	-
4. BASIC CIRCUIT COMPONENTS			
4.1. Resistors			
4.1.1. Theory	В	В	В
4.1.2. Color Code	В	В	В
4.1.3. Troubleshoot	2b	2b	2b
4.2. Inductors			
4.2.1. Theory	В	В	-
4.2.2. Troubleshoot	2b	2b	-
4.3. Capacitors			
4.3.1. Theory	В	В	-
4.3.2. Troubleshoot	2b	2b	-
4.4. Resistive-Capacitive-Inductive (RCL) Circuits			
Theory			

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	P04	P05	P06
4.4.1. Basic	-	-	-
4.4.2. Resonant	-	-	-
4.4.3. Frequency Sensitive Filter	-	-	-
5. ELECTROMAGNETIC DEVICES			
5.1. Transformers			
5.1.1. Theory	В	В	-
5.1.2. Troubleshoot	2b	2b	-
5.2. Relays and Solenoids			
5.2.1. Theory	В	В	-
5.2.2. Troubleshoot Relays	2b	2b	-
5.3. Motor Theory			
5.3.1. Direct Current (DC)	В	В	-
5.3.2. Alternating Current (AC)	В	В	-
5.4. Generator Theory			
5.4.1. Direct Current (DC)	В	В	-
5.4.2. Alternating Current (AC)	В	В	-
5.5. Synchro/Servo			
5.5.1. Theory	В	В	-
5.5.2. Fault Isolate	b	b	-
5.6. Transducer Theory	В	В	-
6. SOLID STATE DEVICES			
6.1. Diodes			
6.1.1. Theory	В	В	-
6.1.2. Troubleshoot	2b	2b	-
6.2. Bipolar Junction Transistors			
6.2.1. Theory	В	В	-
6.2.2. Troubleshoot	2b	2b	-
6.3. Special Purpose Device Theory			
6.3.1. Zener Diode	В	В	-
6.3.2. Light Emitting Diode (LED)	В	В	-
6.3.3. Liquid Crystal Display (LCD)	В	В	-
6.3.4. Integrated Circuits (IC)	В	В	-
6.3.5. Metal Oxide Semiconductor Field Effect	-	-	-
Transistor (MOSFET)			
6.3.6. Operational Amplifiers	-	-	-

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	P04	P05	P06
7. TRANSISTOR AMPLIFIER CIRCUITS			
7.1. Theory	-	-	-
7.2. Stabilization	-	-	-
7.3. Coupling	-	-	-
7.4. Troubleshoot	-	-	-
8. POWER SUPPLY CIRCUITS			
8.1. Theory			
8.1.1. Rectifiers	В	В	-
8.1.2. Filters	В	В	-
8.1.3. Voltage Regulators	В	В	-
8.2. Troubleshoot	-	-	-
9. WAVE GENERATING CIRCUITS			
9.1. Theory			
9.1.1. Oscillators	В	В	-
9.1.2. Multivibrators	В	В	-
9.1.3. Wave shaping Circuits	В	В	-
9.2. Fault Isolate	-	-	-
10. DIGITAL NUMBERING SYSTEMS			
10.1. Conversions			
10.1.1. Binary	В	В	-
10.1.2. Octal	В	В	-
10.1.3. Hexadecimal	В	В	-
10.1.4. Binary Coded Decimal	В	В	-
10.2. Binary Math Operations	В	В	-
11. DIGITAL LOGIC CIRCUITS			
11.1. Theory			
11.1.1. Gates	В	В	-
11.1.2. Flip-flops	В	В	-
11.1.3. Counters	-	-	-
11.1.4. Registers	-	-	-
11.1.5. Combinational Logic Circuits	-	-	-
11.2. Troubleshoot	-	-	-
11.3. Digital to Analog (DA) and Analog to Digital (AD) Converters Theory	A	A	-

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	P04	P05	P06
12. BASIC COMPUTER FUNDAMENTALS			
12.1. Computer Theory			
12.1.1. Hardware	В	В	-
12.1.2. Software			
12.1.2.1. Operating Systems	В	В	-
12.1.2.2. Virus Protection	В	В	-
12.1.2.3. Diagnostics	В	В	-
12.1.2.4. Applications	В	В	-
12.1.3. Peripherals	В	В	-
12.2. Network Theory			
12.2.1. Components	-	-	-
12.2.2. Types	-	-	-
12.2.3. Topologies	-	-	-
12.2.4. Communication Mediums	-	-	-
13. BASIC COMMUNICATIONS THEORY			
13.1. Antenna	В	В	-
13.2. Transmission Lines	В	В	-
13.3. Wave guides	В	В	-
13.4. Transmitters			
13.4.1. Amplitude Modulation (AM)	В	В	-
13.4.2. Frequency Modulation (FM)	В	В	-
13.5. Receivers			
13.5.1. Amplitude Modulation (AM)	В	В	-
13.5.2. Frequency Modulation (FM)	В	В	-
14. SOLDER AND DESOLDER			
14.1. Terminal Connection	2b	-	-
14.2. Printed Circuit Board (PCB)	2b	-	-
14.3. Multipin Connector	2b	-	-
14.4. Coaxial Connector	2b	-	-
15. ASSEMBLE SOLDERLESS CONNECTORS			
15.1. Crimped Connection	2b	-	-
15.2. Coaxial Connector	2b	-	-
15.3. Multipin Connector	2b	-	-

PART II Section A3

AFSC 2M0X3 SPECIALTY TRAINING STANDARD

1. Purpose. As prescribed in AFI 36-2201, this STS:

1.1. Lists the tasks, knowledge, and technical references (TR) necessary for airmen to perform in the 3, 5, and 7-skill level in the Missile and Space Facilities ladder of the Missile and Space Systems Career Field. These are based on an analysis of the duties in AFMAN 36-2108. Those tasks marked with an asterisk (*) will be trained in the resident wartime initial skills course.

Note: Users are responsible for annotating training references to identify current references pending STS revision.

1.2. Shows <u>formal training</u> requirements. The basic STS shows the level to which task/knowledge training has been accomplished by the Technical Training Unit for courses 2M033A and 2M073, as described in ETCA, located on the HQ 2AF website. When two codes are used in the same task proficiency column, the first code is the established requirement for resident training on the task/knowledge, and the second code indicates the level of training provided in the course due to equipment shortages or other resource constraints.

1.3. Indicates the career knowledge provided in the 5-skill level and 7-skill level CDC. See ECI/AFSC/CDC listing maintained by the unit Enlisted Specialty Training (EST) manager for current CDCs or part II, section C of the CFETP.

1.4. Identifies Air Force minimum core task training requirements for award of AFSCs 2M053 and 2M073.

1.5. Provides OJT certification columns to record completion of task and knowledge training requirements.

1.6. Is a guide for <u>development of promotion tests</u> used in the Weighted Airman Promotion System (WAPS). Senior NCOs with extensive practical experience in the career fields develops specialty Knowledge Tests (SKTs) at the USAF Occupational Measurement Squadron. The test samples knowledge of STS subject matter areas judged by test development team members to be the most appropriate for promotion to higher grades. Questions are based on the study references listed in the WAPS catalog. Individual responsibilities are in AFI 36-2605.

1.7. Serves as a Job Qualification Standard (JQS). Trainees are trained, evaluated and qualified to the go/no go level. "Go" means the individual can perform the task without assistance and meets local

requirements for accuracy, timeliness, and correct use of procedures. This document may be automated in whole or part to reflect duty position requirements and qualifications.

1.8. <u>Upgrade Certification Procedures:</u> Prior to upgrade, all 2M0X3 maintenance personnel, regardless of duty position, must satisfactorily complete upgrade training requirements identified in Part I, Section B, paragraph 3b for 5-level upgrade, paragraph 3c for 7-level upgrade, and paragraph 3d for 9-level upgrade. Trainees must also meet AFSC experience requirements outlined in AFI 36-2101 and AFMAN 36-2108. Work centers may add local upgrade core tasks and non-mandatory tasks to the applicable attachment. Completion of non-mandatory tasks pertinent to the unit will continue to be accomplished, as tasks become available for training.

1.8.1. Five skill level core tasks are listed in Attachment 2.

1.8.2. Seven skill level core tasks are listed in Attachment 1.

2. Records Documentation. Document training as follows:

2.1. <u>Identification</u>: Enter trainee, trainer, and certifying official information on the identification page (page 41 of this CFETP).

2.2. Certification: Certify tasks in pencil as follows:

2.2.1. Identify tasks required for current duty position by circling applicable task numbers and/or weapon system identifier.

2.2.1.1. If in skill level upgrade training, annotate required core tasks and other required tasks (as applicable) commensurate with the required upgrade skill level. (The only "circled" tasks should be the tasks required for the duty position.)

2.2.1.2. Once upgrade training is completed, remove the annotation for core-level tasks. (The only "circled" tasks should be the tasks required for the duty position.)

2.2.2. When task training starts, enter the training start date.

2.2.3. When the trainer and trainee agree to task proficiency, enter the completion date and both will initial the appropriate section of the STS. If third party certification is required, i.e. core tasks, task certification occurs when the appropriate certifier determines the trainee is proficient, and initials the certifying officials block for that task. Third party certifiers are mandatory for all core tasks and MAJCOM identified critical tasks (see AFI 36-2201 for exceptions). For non-core tasks, only the trainer's initials in the trainer block are required for certification. Within a given CFETP, the certifier may be the same individual as the trainer provided they meet all requirements as a certifier (see AFI 36-2201), however, a single person cannot be the trainer and certifier for the same task. (NOTE:

Certification can be performed without a demonstration/performance of the task (i.e. at the certifier's desk)).

2.3. <u>Decertification</u>: To decertify an individual, who is no longer proficient in a task, erase the trainer's initials. For core tasks, erase the certifier's initials. Annotate 623a with reason for decertification.

2.4. <u>Recertification</u>: Task recertification requires some level of retraining. To recertify an individual on a previously certified task, erase the start date, completion date, trainee initials, and trainer initials. Recertify following the procedures in paragraphs 2.2.2. and 2.2.3. above.

2.5. <u>Transcription:</u> When necessary, e.g., a new CFETP is published, the supervisor or designated representative may transcribe the data to a new CFETP Part II. Following the transcription, annotate an AF Form 623a to explain the transcription actions. The supervisor will enter his or her name and initials following the explanation. This annotation will be the certifying process that ensures all applicable information was properly transferred from the old CFETP Part II. Transcription should be performed by the supervisor or a trainer or certifier (other than the person who the CFETP is for). Give the old CFETP Part II to the trainee to retain as training history. To transcribe data, the supervisor (or designated representative) will:

2.5.1. For tasks required in current duty position:

2.5.1.1. Identify required tasks for current duty position by circling the applicable task number in the new CFETP Part II.

2.5.1.2. Have the trainee initial in the "trainee block" in the new CFETP Part II.

2.5.1.3. Initial in the trainer or certifier block, for non core tasks as applicable in the new CFETP Part II. Initial in the certifier block for core tasks as applicable in the new CFETP Part II.

2.5.1.4. Enter the transcription date in the "comp date" column.

2.5.2. For tasks not required in current duty position:

2.5.2.1. Transcribe the previous "comp date" to the new "comp date" column.

2.5.2.2. Ensure all completion dates are transcribed from the old CFETP Part II to the new CFETP Part II.

2.6. Tasks that are not included in the CFETP Part II may be added to a local attachment, provided the same format as the STS is used. These attachments will be reviewed annually during the CFETP review to determine if these tasks should be added to the CFETP Part II.

3. **Proficiency Code Keys.** The proficiency code key is used to indicate level of training and knowledge provided by resident training and career development courses.

4. Report inadequacies and suggested corrections to this CFETP to the 2M0XX AFCFM (DSN 222-9941) through your MAJCOM functional manager. All approved changes to this CFETP will be forwarded to 532 TRS/DOAT, 597 7th St, Vandenberg AFB, CA, 93437-5305.

5. This STS supersedes AFSC 2M0X3 STS in CFETP 2M0X3, Parts 1 - 2, 31 Oct 2000.

MICHAEL E. ZETTLER, Lt General, USAF DCS/Installations & Logistics

3 Atch

- 1. Common Msl & Spc Maint
- 2. ICBM Maint
- 3. Spacelift Maint

AFSC 2M0X3 **SPECIALTY TRAINING STANDARD (STS)** MISSILE AND SPACE SYSTEMS FACILITY SPECIALIST

TASK #	TASK / KNOWLEDGE ITEM & TRAINING REFERENCE	3 Level Course	5 Level CDC	7 Level CDC
1	CAREER LADDER PROGRESSION TR: AFI 36-2101; 2M0X3 Career Field Education and Training Plan (CFETP)			
1a	Progression in career ladder 2M0X3	-	В	-
1b	Duties of AFSC 2M0X3	-	В	-
2	AF OCCUPATIONAL SAFETY AND HEALTH (AFOSH) PROGRAM TR: AFI 91-301			
2a	Hazards of AFSC 2M0X3	A	-	-
2b	Safety TR: TOs 00-25-245, 21-LG118A-2-10, 21M-LGM30G-2-10 (-1)	A	-	-
2c	USAF Mishap Prevention Program TR: AFIs 91-202; TO 31-1-141	A	-	-
2d	Missile safety TR: AFIs 91-114, 91-202	A	-	-
2e	Nuclear surety TR: AFIs 91-101, 91-104, 91-105, 91-107	A	-	-
2f	Explosive safety TR: AFI 91-202; AFMAN 91-201	A	-	-
2g	Hazard report TR: AFI 91-202	A	-	-
2h	Environmental compliance	-	-	-
2h(1)	Overview of hazardous waste TR: AFIs 32-7041, 32-7042; 40 CFR Part 261, 262, 29 CFR Part 1910	A	-	-
2h(2)	Hazardous material TR: 49 CFR Part 107, 120, 172	-	-	-
2h(2a)	Handler responsibilities	A	-	-
2h(2b)	Transportation requirements	A	-	-
2h(3)	Refrigerant certification (See note 5) TR: 1990 CAA Amendments, Section 608 (40 CFR Part 82)	В	-	-
2h(4)	Impact on environment of Ozone Depleting Chemicals (ODCs) TR: 40 CFR Part 82	A	-	-
2h(5)	Overview of Federal Facilities Compliance Act (FFCA) TR: FFCA; Federal Facilities Compliance Strategy EPA/130/4-89-003	A	-	-
2h(6)	Overview of Environmental Compliance Assessment and Management Program TR: AFI 32-7045	A	-	-
2h(7)	Overview of Air Force Pollution Prevention Program (P3) TR: AFI 32-7080	A	-	-
2h(8)	Hazardous material pharmacy concept of operation TR: AFI 32-7086	A	-	-
2h(9)	Hazard communication TR: 29 CFR Part 1910; AFOSH 161-21	В	-	-
2h(10)	Polychlorinated Biphenyls (PCBs) TR: 40 CFR Part 761	A	-	-

AFSC 2M0X3 **SPECIALTY TRAINING STANDARD (STS)** MISSILE AND SPACE SYSTEMS FACILITY SPECIALIST

PUBLICATIONS TR: AFI 37-X; AFSPCI 21-0114Use standard publicationsTechnical order system TR: AFPD 21-3; TOS 0-1-01, 0-1-02, 00-5-1, 00-5-2DescriptionUse technical ordersInitiate TO improvement reportUse CEMs TR: AFSPCIND7, AFSPCIs 32-1005, 32-1006, 32-1009Initiate CEM improvement reports TR: AFSPCIND7, AFSPCIs 32-1005, 32-1006, 32-1009MAINTENANCE MANAGEMENT TR: AFSPC 21-1; AFIS 21-108, 21-114, 38-101; AFSPCIS 21-0108, 21-0114Functions and responsibilities of missile and space organizationsFunctions of missile/space maintenance units	Course a A A 3c A 3c A	сос В - В В В В В	- - - - -
Technical order system TR: AFPD 21-3; TOS 0-1-01, 0-1-02, 00-5-1, 00-5-2 Description Use technical orders Initiate TO improvement report Use CEMs TR: AFSPCIND7, AFSPCIs 32-1005, 32-1006, 32-1009 Initiate CEM improvement reports TR: AFSPCIND7, AFSPCIs 32-1005, 32-1006, 32-1009 MAINTENANCE MANAGEMENT TR: AFPD 21-1; AFIs 21-108, 21-114, 38-101; AFSPCIs 21-0108, 21-0114 Functions and responsibilities of missile and space organizations	- A 3c A 3c A	- B - B B B	
TR: AFPD 21-3; TOs 0-1-01, 0-1-02, 00-5-1, 00-5-2DescriptionUse technical ordersInitiate TO improvement reportUse CEMsTR: AFSPCIND7, AFSPCIs 32-1005, 32-1006, 32-1009Initiate CEM improvement reportsTR: AFSPCIND7, AFSPCIs 32-1005, 32-1006, 32-1009MAINTENANCE MANAGEMENTTR: AFPD 21-1; AFIs 21-108, 21-114, 38-101; AFSPCIs 21-0108, 21-0114Functions and responsibilities of missile and space organizations	3c A 3c A	- B B B	
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TR: AFPD 21-1; AFIs 21-108, 21-114, 38-101; AFSPCIs 21-0108, 21-0114Functions and responsibilities of missile and space organizations	-	В	
	-	В	-
Functions of missile/space maintenance units		1	В
	-	В	В
Deficiency reporting TR: TO 00-35D-54	-	A	В
Hardness assurance program TR: AFI 32-1054; TOs 21-LG118A-2-10, 21M-LGM30G-2-10 (-1), 21M-LGM30G-2-31	A	В	-
Improved Maintenance Management Program TR: Document #IMMP-SIOM, Vol 1 of 1, dated 21 Dec 95, Tutorials	-	В	В
Reliability and maintainability TR: AFI 21-118; AFSPCI 21-0114	-	-	В
TR: AFI 21-103; MCR 55-8; AFSPCI 21-0103	-	-	В
COMMON MAINTENANCE PRACTICES TR: AFI 32-1054; TOs 00-25-234, 1-1A-8, 21-LG118A-2-10, 21M-LGM30G-2-10 (-1), 21M-LGM30G-2-31			
Use tools TR: TOs 32-1-2, 32-1-101, 32-1-151, 32B14-3-1-101	3c	-	-
Use aerospace hardware TR: TOs 1-1A-8, 1-1A-15		-	-
TR: TO 1-1-691; AFSPCI 21-0105	A	-	-
TR: TO 21M-LGM30F-112	-	-	-
	3c		-
Repair	а	В	-
Troubleshooting techniques TR: TO 31-1-141 Series; Althouse, Turnquist and Bracciano; Modern Refrigeration and Air Conditioning, Goodheart-Willcox Company; Andrew Norman, John Corinchock, Robert Scharff; Diesel Technology: Fundamentals, Service, Repair, Goodheart-Willcox	-	В	В
	Deficiency reporting TR: TO 00-35D-54 Hardness assurance program TR: AFI 32-1054; TOS 21-LG118A-2-10, 21M-LGM30G-2-10 (-1), 21M-LGM30G-2-31 Improved Maintenance Management Program TR: Document #IMMP-SIOM, Vol 1 of 1, dated 21 Dec 95, Tutorials Reliability and maintainability TR: AFI 21-118; AFSPCI 21-0114 Status reporting: Status of Forces Assessment Module (SFAM) TR: AFI 21-103; MCR 55-8; AFSPCI 21-0103 <i>COMMON MAINTENANCE PRACTICES</i> TR: AFI 32-1054; TOS 00-25-234, 1-1A-8, 21-LG118A-2-10, 21M-LGM30G-2-10 (-1), 21M-LGM30G-2-31 Use tools TR: TOS 32-1-2, 32-1-101, 32-1-151, 32B14-3-1-101 Use aerospace hardware TR: TOS 1-1A-8, 1-1A-15 Corrosion identification TR: TO 1-1-691; AFSPCI 21-0105 RFI/EMI gaskets TR: TO 21M-LGM30F-112 Inspect Repair Troubleshooting techniques TR: TO 31-1-141 Series; Althouse, Turnquist and Bracciano; Modern Refrigeration and Air Conditioning, Goodheart-Willcox Company; Andrew Norman, John Corinchock, Robert Scharff; Diesel	Functions of missile/space maintenance units-Deficiency reporting TR: TO 00-35D-54-Hardness assurance program TR: AFI 32-1054; TOS 21-LG118A-2-10, 21M-LGM30G-2-10 (-1), 21M-LGM30G-2-31AImproved Maintenance Management Program TR: Document #IMMP-SIOM, Vol 1 of 1, dated 21 Dec 95, Tutorials-Reliability and maintainability TR: AFI 21-118; AFSPCI 21-0114-Status reporting: Status of Forces Assessment Module (SFAM) TR: AFI 21-103; MCR 55-8; AFSPCI 21-0103-COMMON MAINTENANCE PRACTICES TR: AFI 32-1054; TOS 00-25-234, 1-1A-8, 21-LG118A-2-10, 21M-LGM30G-2-10 (-1), 21M-LGM30G-2-313cUse tools TR: TOS 32-1-2, 32-1-101, 32-1-151, 32B14-3-1-1013cUse aerospace hardware TR: TO 1-1-691; AFSPCI 21-0105bRFI/EMI gaskets TR: TO 21M-LGM30F-112-Inspect3cRepairaTroubleshooting techniques TR: TO 31-1.141 Series; Althouse, Turnquist and Bracciano; Modern Refrigeration and Air Conditioning, Goodheart-Willcox Company; Andrew Norman, John Corinchock, Robert Scharff; Diesel Technology: Fundamentals, Service, Repair, Goodheart-Willcox	Functions of missile/space maintenance units-BDeficiency reporting-ATR: TO 00-35D-54-Hardness assurance programATR: AFI 32-1054; TOS 21-LG118A-2-10, 21M-LGM30G-2-10 (-1), 21M-LGM30G-2-31AImproved Maintenance Management Program-TR: Document #IMMP-SIOM, Vol 1 of 1, dated 21 Dec 95, Tutorials-Reliability and maintainability-TR: AFI 21-118; AFSPCI 21-0114-Status reporting: Status of Forces Assessment Module (SFAM)-TR: AFI 21-103; MCR 55-8; AFSPCI 21-0103-COMMON MAINTENANCE PRACTICES-TR: AFI 32-1054; TOS 00-25-234, 1-1A-8, 21-LG118A-2-10, 21M-LGM30G-2-10 (-1), 21M-LGM30G-2-313cUse tools3cTR: TOS 32-1-2, 32-1-101, 32-1-151, 32B14-3-1-101-Use aerospace hardwarebTR: TO 1-1-691; AFSPCI 21-0105RFI/EMI gaskets-TR: TO 21M-LGM30F-112-Inspect3cRepairaTR: TO 31-1-141 Series; Althouse, Turnquist and Bracciano; Modern Refrigeration and Air Conditioning, Goodheart-Willcox Company; Andrew Norman, John Corinchock, Robert Scharff; Diesel Technology: Fundamentals, Service, Repair, Goodheart-Willcox

TASK #	TASK / KNOWLEDGE ITEM & TRAINING REFERENCE	3 Level Course	5 Level CDC	7 Level CDC
5f	Electrostatic Discharge (ESD) Procedures TR: TO 00-25-234	-	-	-
5f(1)	Perform printed circuit board handling and storage procedures	3c	-	-
5f(2)	Perform ESD control procedures	3c	-	-
6	SPACE AND MISSILE SYSTEMS TEST/INSPECTION PROCESSES TR: TOs 21M-LGM30G-1-17, 21M-LGM30G-1-18, 33D9-61-108-1			
6a	Test and evaluation TR: AFIs 99-101, 99-102	-	-	В
6b	Simulated Electronic Launch Minuteman (SELM)	-	-	В
6c	Simulated Electronic Launch Peacekeeper (SELP)	-	-	В
7	WS-118A SYSTEMS TR: TOs 21-LG118A-1, 21-LG118A-1-1			
7a	Missile	A	-	-
7b	Launch Facility (LF) TR: TOs 21-LG118A-2-10, 21-LG118A-2-28	-	В	-
7c	Guidance and control conditioning unit: TR: TOs 21-LG118A-2-6, 35E9-232-1, 36A13-31-1	-	В	-
7d	Guidance and control conditioning unit test bench TR: TO 33D9-3-265-1	-	В	-
7e	Guidance and control conditioning unit test set TR: TO 33D9-3-264-1	-	В	-
7f	Elevator work cage TR: TOs 21-LG118A-2-10, 35M3-8-11-1	-	В	-
7g	LF power distribution system TR: AFI 32-1062; TO 21-LG118A-2-11; CEMs 21-SM80B-2-21-4, 21-SM80B-2-26-4, 35R-1-551-4, 35R-1-581-4	-	В	-
7h	LF/MAF Environmental Control Systems TR: TOs 21-LG118A-2-7, 21-LG118A-2-7-1	-	В	-
7h(1)	Emergency air conditioning subsystem/controls/alarms	-	В	-
7h(2)	Launch tube heating subsystem/controls/alarms TR: 21-LG118A-2-6	-	В	-
71	LF waste disposal system TR: TO 21-LG118A-2-28; CEMs 21-SM80B-2-24-4, 35R-1-561-4	-	В	-
8	WEAPON SYSTEM (WS-133) TR: TO 21M-LGM30X-1-XX			
8a *	Launch Facilities	A	В	-
8b *	Missile Alert Facilities	A	В	-
8c *	Missile Support Base (MSB)	A	В	-
8d	Missile	А	-	-
9	DELTA TR: Delta II MLV III Self Study Guide; AU-18 Space Handbook			
9a	Mission	-	A	-
9b	Characteristics	-	В	-
9c	Propellants	-	-	В
9d	Propellant transfer systems	-	-	В

TASK #	TASK / KNOWLEDGE ITEM & TRAINING REFERENCE	3 Level Course	5 Level CDC	7 Level CDC
9e	Launch complex	-	-	-
9e(1)	Description	-	Α	-
9e(2)	Mobile service tower	-	-	В
9e(3)	Environmental control	-	-	В
9e(4)	Hazardous gas detection	-	-	В
9e(5)	Breathing air system	-	-	В
9e(6)	Air conditioning units	-	-	В
9e(7)	Generator systems	-	-	В
9e(8)	Electrical distribution systems	-	-	В
9e(9)	Electrical motors	-	-	В
9e(10)	Cranes, hoists, and winch systems	-	-	В
9e(11)	Water and sewage systems	-	-	В
9e(12)	Compressed air system	-	-	В
10	ATLAS II TR: Atlas IIAS Type 1 Training			
10a	Mission	-	Α	-
10b	Characteristics	-	В	-
10c	Propellants	-	-	В
10d	Propellant transfer systems	-	-	В
10e	Launch complex	-	-	-
10e(1)	Description	-	Α	-
10e(2)	Mobile service tower	-	-	В
10e(3)	Environmental control	-	-	В
10e(4)	Hazardous gas detection	-	-	В
10e(5)	Breathing air system	-	-	В
10e(6)	Air conditioning units	-	-	В
10e(7)	Generator systems	-	-	В
10e(8)	Electrical distribution systems	-	-	В
10e(9)	Electrical motors	-	-	В
10e(10)	Cranes, hoists, and winch systems	-	-	В
10e(11)	Water and sewage systems	-	-	В
10e(12)	Compressed air system	-	-	В
11	<i>TITAN</i> TR: Titan IVB Type 1 Training			
11a	Mission	-	А	-
11b	Characteristics	-	В	-
11c	Propellants	-	-	В
11d	Propellant transfer systems	-	-	В
11e	Launch complex	-	-	-

TASK #	TASK / KNOWLEDGE ITEM & TRAINING REFERENCE	3 Level Course	5 Level CDC	7 Level CDC
11e(1)	Description	-	А	-
11e(2)	Mobile service tower	-	-	В
11e(3)	Environmental control	-	-	В
11e(4)	Hazardous gas detection	-	-	В
11e(5)	Breathing air system	-	-	В
11e(6)	Air conditioning units	-	-	В
11e(7)	Generator systems	-	-	В
11e(8)	Electrical distribution systems/UPS	-	-	В
11e(9)	Electrical motors	-	-	В
11e(10)	Cranes, hoists, and winch systems	-	-	В
11e(11)	Water and sewage systems	-	-	В
11e(12)	Compressed air system	-	-	В
12	ENVIRONMENTAL CONTROL SYSTEMS TR: TOs 21-LG118A-2-7, 21M-LGM30X-2-7-X; CEMs 21-SM80X-2-20-X, 35R-1-X41-X; Althouse, Turnquist and Bracciano, Modern Refrigeration and Air Conditioning, Goodheart- Willcox Company			
12a *	Refrigeration principles	В	В	В
12b *	Refrigeration systems components and control/monitoring devices	В	В	В
12c *	Interpret schematics/wiring diagrams	2b	В	В
12d *	Heat transfer process in environmental control systems	В	В	В
13	POWER GENERATION AND DISTRIBUTION/INTERNAL COMBUSTION ENGINE SYSTEMS TR: AFIs 32-1062, 32-1063; TO 21M-LGM30X-2-11(-1); CEMs 21-SM80X-2-21-X, 21-SM80X-2-26-X, 21-SM80-6 (Vol XX), 35R-1-X51-X, 35R-1-X81-X; National Electric Code; Andrew Norman, John Corinchock, Robert Scharff, Diesel Technology: Fundamentals, Service, and Repair, Goodheart-Willcox Company, Inc.			
13a *	Principles	В	В	В
13b *	Components and control/monitoring devices	В	В	В
13c *	Interpret schematics/wiring diagrams	2b	В	В
14	OPERATION AND MAINTENANCE OF WS-133 SYSTEMS TR: TOS 21M-LGM30F-6, 21M-LGM30X-2-7-X, 21M-LGM30X-2-11, 21M-LGM30X-2-11-X; CEMs 21-SM80X-2-20-X, 21-SM80X-2-21-X, 21-SM80X-2-24-X, 21-SM80X-2-26-X, 21-SM80-6 (Vol XX), 35R-1-X41-X, 35R-1-X51-X, 35R-1-X61-X, 35R-1-X81-X			
14a	LF/MAF diesel engines	-	-	-
14a(1)	Engine fuel oil system	В	В	-
14a(1a)	Perform biennial periodic inspection	2b	-	-
14a(1b)	Perform quadrennial periodic inspection	2b	-	-
14a(1c)	Engine governor/injection pump/injectors	В	В	-
14a(1c1)	Repair	2b	-	-

TASK #	TASK / KNOWLEDGE ITEM & TRAINING REFERENCE	3 Level Course	5 Level CDC	7 Level CDC
14a(2)	Engine lube oil system	В	В	-
14a(2a)	Perform biennial periodic inspection	2b	-	-
14a(2b)	Perform quadrennial periodic inspection	2b	-	-
14a(3)	Engine cooling system	В	В	-
14a(3a)	Perform biennial periodic inspection	3c	-	-
14a(4)	Engine safety/alarm devices	В	В	-
14a(4a)	Perform biennial periodic inspection	2b	-	-
14a(5)	Engine intake/exhaust system	В	В	-
14a(5a)	Perform quadrennial periodic inspection	2b	-	-
14a(6)	Engine start batteries/charging systems	В	В	-
14a(6a)	Perform annual periodic inspection	3c	-	-
14a(6b)	Perform biennial periodic inspection	3c	-	-
14a(7)	Engine starting/stopping devices	В	В	-
14a(7a)*	RSU Checkout	2b	-	-
14a(7b)	Repair	2b	-	-
14b	LF/MAF power generation system	-	-	-
14b(1)	LF power distribution system	В	В	В
14b(2)	MAF power distribution system	В	В	В
14b(3)	Generator/exciter/voltage regulator	В	В	-
14b(4)	Automatic switching unit/transfer switches/switch gear	В	В	-
14b(4a)	Troubleshoot	2b	-	-
14b(5)	Engine/generator control panel	В	В	-
14b(6)	Minuteman power processor	В	В	-
14b(6a)	Replace	2b	-	-
14b(7)	Minuteman power processor battery/charger	В	В	-
14b(7a)	Perform biennial periodic inspection	3c	-	-
14c	LF/MAF environmental control system	-	-	-
14c(1)	LSB Heating subsystem	В	В	-
14c(2)	Support building ventilation air subsystem/controls/alarms	В	В	-
14c(2a)	Perform biennial periodic inspection (LF)	2b	-	-
14c(2b)	Repair	2b	-	-
14c(3)	Refrigerant subsystem	В	В	-
14c(3a)	Servicing	2b	-	-
14c(4)	Brine subsystem	В	В	-
14c(4a)	Perform biennial periodic inspection (LF)	2b	-	-
14c(5)	Brine chiller control panel	В	В	-
14c(5a)	Perform biennial periodic inspection (LF)	3c	-	-
14c(5b)*	Troubleshoot	2b	-	-
14c(5c)	Repair	2b	-	-

TASK #	TASK / KNOWLEDGE ITEM & TRAINING REFERENCE	3 Level Course	5 Level CDC	7 Level CDC
14c(6)	Air conditioning subsystem/controls/alarms	В	В	-
14c(6a)	Perform biennial periodic inspection (LF)	3c	-	-
14c(6b)*	Troubleshoot	2b	-	-
14c(6c)	Repair	2b	-	-
14c(7)	Master control panel/controls	-	В	-
14c(8)	Emergency air conditioning subsystem/controls/alarms	В	В	-
14c(8a)	Perform biennial periodic inspection (LF)	2b	-	-
14c(8b)	Repair	2b	-	-
14c(9)	Makeup air subsystem/controls/alarms	В	В	-
14c(9a)	Perform biennial periodic inspection (LF)	3c	-	-
14c(10)	Instrument air subsystem	В	В	-
14c(10a)	Perform biennial periodic inspection	3c	-	-
14c(10b)*	Troubleshoot	2b	-	-
14c(10c)	Repair	2b	-	-
14c(11)	Launch tube heating subsystem/controls/alarms	В	В	-
14c(11a)	Perform biennial periodic inspection	2b	-	-
14c(11b)*	Troubleshoot	2b	-	-
14c(11c)	Repair	2b	-	-
14c(12)	LCC heater/controls	-	В	-
14d	LF environmental control system	В	В	-
14e	MAF environmental control system	В	В	-
14f	LF waste disposal system	Α	В	-
14f(1)	Sump pump 102	Α	-	-
14f(1a)	Perform biennial periodic inspection	2b	-	-
14g	LCC oxygen regeneration unit	-	В	-
14h *	MAF ventilation safety system	A	В	-
14i *	LF/MAF shock attenuation system	Α	В	-
14j	LCSB/LCEB/LCC monitor/alarm system	A	В	-
14k	LF/MAF emergency storage batteries	-	В	-
14k(1)	Perform annual periodic inspection	3c	-	-
15	EQUIPMENT TR: Applicable Manufacturer's Operation and Service Instructions			
15a	Use ECS test equipment TR: TOs 33-1-19, 33D9-17-82-1	3c	В	-
15b *	Use electronic/electrical circuit portable test equipment TR: TOs 33A1-12-1199-1, 33DA98-15-1	3с	В	-
15c	Glycol recycler	-	В	-
16	<i>TUBING MAINTENANCE</i> TR: TOs 00-25-234, 21M-LGM30F-12, 31-10-7, 34W4-1-5, 34W4-1-7, 34W4-1-8			

TASK #	TASK / KNOWLEDGE ITEM & TRAINING REFERENCE	3 Level Course	5 Level CDC	7 Level CDC
16a	Flare copper tubing	-	В	-
16b	Swage copper tubing	-	В	-
16c	Open flame soldering	-	В	-
17	MSB MAINTENANCE TR: TO 21M-LGM30F-6WC-3; Applicable Manufacturers Operation and Service Instructions			
17a	Prepare brine solution TR: TO 21M-LGM30X-2-7-X	-	В	-
17b	Prepare chromate dioxin solution TR: TO 35E9-35-22	-	В	-
17c	Emergency storage battery reconditioning TR: TO 35M1-1-101	-	В	-
17d	Guidance and control liquid cooling bench test and repair set TR: TO 33D9-17-81-2	-	В	-
17e	Transporter erector TR: TOs 35C2-3-493-1, 35D3-11-52-2, 35D3-11-52-4, 35E9-266-1	-	В	-
17f	Portable air conditioner TR: TOs 35C2-3-493-1, 35D3-11-52-2, 35E9-270-1	-	В	-
17g	Support vans TR: TOs 35D4-7-4-2, 36A12-24-3-1; LJG 20AF-95-001	-	В	-
17h	PMT van TR: TOs 35C2-3-498-1, 35E9-272-1, 36A9-8-56-1, 36Y16-25-1	-	В	-
17i	Payload transporter TR: TOs 36A9-8-49-1, 36A9-58-1	-	В	-
17j	Elevator work cage/Maintenance Platform, Guided Missile TR: TOs 35A4-2-31-1, 35A4-4-9-1	-	В	-
17k	Guidance and control liquid cooler system TR: TO 33D9-17-89-1	-	В	-
171	Hydraulic pipe pusher TR: TO 35M27-3-8-1, 35M27-3-11-1	-	В	-
17m	Brine chiller test stand TR: TOs 21M-LGM30X-2-7-X, 33D9-61-84-1	-	В	-
18	<i>LAUNCH FACILITY PROCEDURES</i> TR: TOs 21M-LGM30F-2-19, 21M-LGM30G-2-10, 21M-LGM30G-2-28(-1)			
18a	Enter LSB	1b	-	-
18b	Exit LSB	1b	-	-
18c	Enter LER	1b	-	-
18d	Exit LER	1b	-	-
18e	Perform emergency shutdown	1b	-	-
18f	Evacuate launch facility for EWO launch condition	1b	-	-
18g	Perform emergency electrical isolation of LSB	1b	-	-
18h	Perform LF hostile securing	1b	-	-
18i	Personnel access system	Α	-	-
18j	Raise/lower Equipment	1b	-	-

TASK #	TASK / KNOWLEDGE ITEM & TRAINING REFERENCE	3 Level Course	5 Level CDC	7 Level CDC
	NOTE 1: Items in column 1 marked with an asterisk (*) are tasks that are trained in resident wartime course			
	NOTE 2: Applicable AFSC job oriented safety training is integrated throughout the courses			
	NOTE 3: Applications of the USAF technical data systems are integrated throughout the courses			
	NOTE 4: Mission Ready Airman tasks ("3c" level) will be certified by the technical school in the applicable attachment (identified with a "3" in the core task column)			
	NOTE 5: Universal taught; Type I and Type II certification required to graduate			

Trainee/Trainer/Certifier Identification Table

THIS BLOCK I	IS FOR IDENTIFICATION PURPOSES ONLY
	NAME OF TRAINEE
PRINTED NAME (LAST, FIRST, MIDDLE INITIAL)	INITIALS (<i>WRITTEN</i>) SSAN
	AINING/CERTIFYING OFFICIAL AND WRITTEN INITIALS
N/I	N/I
N/I	N/I
N/I	N/I
N/I	N/I
N/I	N/I
N/I	N/I
N/I	N/I
N/I	N/I
N/I	N/I
N/I	N/I
N/I	N/I
N/I	N/I
N/I	N/I
N/I	N/I
N/I	N/I
N/I	NЛ
	· · · ·
N/I	N/I
19/1	18/1
N/I	N/I

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
1	AF OCCUPATIONAL SAFETY AND HEALTH (AFOSH) PROGRAM TR: AFI 91-301						INITIALS
1a	Use safety practices when working with weapon system equipment TR: TO applicable to the weapon system						
1b	Report hazards TR: AFI 91-202						
1c	Inspect safety equipment for serviceability TR: TOs 00-25-245, 21-LG118A-2-10, 21-LG118A-2-17-2, 21M-LGM30F-2-17-9, 21M-LGM30G-2-10 (-1)						
1d	Comply with hazardous material safety requirements TR: AFOSH STD 161-21	3					
2	PUBLICATIONS						
2a	Use standard publications TR: AFI 37-X; AFSPCI 21-0114						
2b	Use technical orders TR: AFPD 21-3; TOs 00-5-1, 00-5-2	3					
2c	Initiate TO improvement report TR: TO 00-5-1						
2d	Use supply publications/Illustrated Parts Breakdown (IPB) TR: AFMAN 23-110						
2e	Use Civil Engineering Manuals (CEM) TR: AFSPCIND7; AFSPCIs 32-1005, 32-1006, 32-1009	3					
2f	Initiate CEM improvement report TR: AFSPCIs 32-1005, 32-1006, 32-1009						
3	MAINTENANCE MANAGEMENT TR: AFPD 21-1; AFIs 21-108, 21-114; AFSPCI 21-0114; ACCI 21-101						
3a	Complete Maintenance Data Collection (MDC) forms TR: TOs 00-20-2, 21M-AGM86-06, 21-AG129-06, 21M-LGM30F-06-X; CEM 21-SM80-06						
3b	Use Core Automated Management System (CAMS) TR: AFCSM 21-556 thru 21-579						
3c	Use Improved Maintenance Management Program (IMMP) TR: Applicable Software and System Manuals						
4	TOOLS AND HARDWARE TR: TOs 00-25-234, 1-1A-8, 21-LG118A-2-10, 21-LG118A-12, 21M-LGM30F-12, 21M-LGM30G-2-10(-1), 21M-LGM30G-2-31						
4a	Use tools TR: TOs 32-1-2, 32-1-101, 32-1-151, 32B14-3-1-101	3					
4b	Use aerospace hardware TR: TOs 1-1A-8, 1-1A-14, 1-1A-15	3					
5	SUPERVISION AND TRAINING TR: AFI 36-2201; AFSPCI 21-0114; ACCI 10-204						
5a	Supervision						
5a(1)	Orient new personnel	7					

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
5a(2)	Conduct predispatch/pretask maintenance briefings	7	<u> </u>				ALO
5a(3)	Plan work assignments	7					
5a(4)	Schedule work assignments	7					
5a(5)	Evaluate technical school graduates						
5a(6)	Perform team chief duties						
5a(7)	Perform production inspector duties						
5a(8)	Perform team member duties						
5b	Training						
5b(1)	Plan and supervise training programs						
5b(2)	Conduct qualification training TR: AF Trainer Course						
5b(3)	Prepare lesson plans						
5b(4)	Maintain training records	7					
5b(5)	Certify trainee qualifications TR: AF Trainer Course						
6	GENERAL MAINTENANCE						
6a	Operate portable heaters TR: TO 35E7-2-11-11; Applicable Manufacturer's Operation and Service Instructions						
6b	Operate portable pumps TR: TOs 21-LG118A-2-10, 21M-LGM30G-2-10 (-1); Applicable Manufacturer's Operation and Service Instructions						
6c	Tubing maintenance TR: TOs 00-25-233, 1-1A-8						
6c(1)	Flare tubing						
6c(2)	Swage tubing						
6d	Solder/Solderless connectors TR: TOs 00-25-234, 1-1A-14, 1-1A-15, 21M-LGM30F-12, 31-1-141-15, 31-10-7, 34W4-1-5, 34W4-1-7, 34W4-1-8						
6d(1)	Soft soldering						
6d(2)	Silver soldering						
6d(3)	Electrical soldering						
6d(3a)	Perform basic soldering/desoldering procedures						
6d(3b)	Perform soldering/desoldering on printed circuit boards						
6d(4)	Solderless connectors						
6d(4a)	Assemble solderless crimp connectors						
6d(4b)	Assemble solderless multipin connectors						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
6e	Pneumatics TR: TOs 00-25-223, 00-25-229, 1-1A-8, 33-1-19, 42B5-1-2, 42E1-1-1, 42E2-1-2, 44H3-1-3						
6e(1)	Remove components						
6e(2)	Install components						
6e(3)	Read pneumatic flow diagrams						
6e(4)	Replace hoses						
6e(5)	Replace tubing						
6e(6)	Replace seals						
6e(7)	Fabricate tubing						
6e(8)	Fabricate hoses						
6f	Hydraulics TR: TOs 00-25-223, 00-25-229, 1-1A-8, 33-1-19, 42B2-1-3, 42E1-1-1, 42E2-1-2, 44H3-1-3						
6f(1)	Remove components						
6f(2)	Install components						
6f(3)	Read hydraulic flow diagrams						
6f(4)	Replace hoses						
6f(5)	Replace tubing						
6f(6)	Replace seals						
6f(7)	Fabricate tubing						
6f(8)	Fabricate hoses						
6g	Standard Test Equipment TR: TO 33-1-21; Applicable Manufacturer's Operation and Service Instructions						
6g(1)	Use analog multimeters TR: TOs 33A1-12-2-1, 33A1-12-216-1, 33A1-12-681-1, 33A1-12-773-1, 33A1-12-933-1						
6g(2)	Use bridge meters TR: TOs 33A1-6-63-1, 33A1-16-91-1						
6g(3)	Use counters						
6g(4)	Use digital multimeters TR: TOs 33A1-12-1059-1, 33A1-12-1092-1, 33A1-12-1176-1, 33A1-12-1177-1, 33A1-12-1198-1, 33A1-12-1199-1	3					
6g(5)	Use modulation meters						
6g(6)	Use oscilloscopes						
6g(7)	Use power meters						
6g(8)	Use power supplies TR: TO 33AA17-176-1						
6g(9)	Use signal generators	1					

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
6g(10)	Use megohmeters TR: TOs 33A1-4-29-1, 33A1-4-35-1						
6g(11)	Use bonding meters TR: TO 33A1-12-1124-1						
6g(12)	Use ammeters/current probes TR: TOs 33A1-12-145-21, 33A1-12-871-1, 33DA98-15-1						
6g(13)	Use ohmmeters TR: TOs 33A1-12-185-11, 33A1-12-1006-1						
6h	Perform operator maintenance on weapon system test equipment TR: TO 33-1-27						
6i	General Maintenance TR: TOs 00-25-234, 1-1A-1, 1-1A-8, 1-1A-14, 1-1A-15, 33D9-61-58-2						
6i(1)	Repair equipment panels and cases						
6i(2)	Perform safety wiring						
6i(3)	Repair wiring						
6i(4)	Repair general connectors						
6i(5)	Repair shielded and coaxial connectors						
6i(6)	Perform cable binding and lacing						
6i(7)	Repair crimped electrical connections						
6i(8)	Qualify solderless wire wrapping Tool Kit (TK-148/g)						
6i(9)	Perform wire wrapping						
6i(10)	Perform systematic troubleshooting						
6i(11)	Perform electronic part replacement and repair						
6i(12)	Repair electrical contact strips						
6i(13)	Perform printed circuit board handling and storage procedures	3					
6i(14)	Perform electrostatic discharge control procedures	3					
6i(15)	Perform visual inspections						
6i(16)	Clean electronic equipment						
6j	Emergency breathing apparatus TR: TOs 14P4-9-31, 14P5-3-1, 14S5-11-11, 14S5-16-1, 14S5-18-1, 14S5-19-11, 14S5-29-1, 14S5-30-2, 14S5-32-1; LJGs 20AF-01-001, 20AF-01-002; Applicable Manufacturer's Operation and Service Instructions						
6j(1)	Perform periodic maintenance						
6j(2)	Troubleshoot						
6j(3)	Repair			1		1	
6j(4)	Operate						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
6j(5)	Self Contained Atmospheric Protective Ensemble (SCAPE) TR: Local Training Course						MINALO
6j(5a)	Describe						
6j(5b)	Checkout/operate						
6j(6)	Emergency response equipment TR: TOs 21-LG118A-2-32, 21M-LGM30G-2-33; OO-ALC 91-1; LJGs 20AF-01-001, 20AF-01-002; Applicable Manufacturer's Operation and Service Instructions; Wing emergency response plan						
6j(6a)	Level A suit						
6j(6a1)	Inspect						
6j(6a2)	Use						
6j(6b)	Air skid						
6j(6b1)	Inspect						
6j(6b2)	Service						
6j(6b3)	Operate						
6k	Communications equipment						
6k(1)	Inspect						
6k(2)	Service						
6k(3)	Operate						
61	Bench stock items TR: AFMAN 23-110; AFSPCI 21-0114; ACCI 21-101						
6l(1)	Issue						
6l(2)	Inventory						
6l(3)	Maintain						
6m	Isolate faulty components TR: TO 31-1-141 Series						
6m(1)	Basic circuits						
6m(2)	Resistors						
6m(3)	Relays/solenoids						
6m(4)	Capacitors						
6m(5)	Semi-conductors						
6m(6)	Inductors						
6m(7)	Transformers						
6n	RFI / EMI Gaskets TR: TO 21M-LGM30F-112, 21-AG129-2-1, 33D9-19-55-1						
6n(1)	Inspect	3					
6n(2)	Repair						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
60	Terminal Swagger Kit TR: TO 33A16-3-1						
60(1)	Operate						
60(2)	Service						
6р	Portable cable terminal pull tester TR: TO 33A8-4-6-1						
6p(1)	Operate						
6p(2)	Service						
7	CRANE - LORAINE/NATIONAL TR: AFOSH 91-46; TOs 35D36-1-102, 35D36-2-2; LJG 20AF-95-002; Applicable Manufacturer's Operation and Service Instructions						
7a	Inspect						
7b	Repair components						
7c	Troubleshoot components						
7d	Proofload						
8	VEHICLE AND EQUIPMENT CONTROL TR: AFSPCI 21-0114						
8a	Perform preoperational checkout of						
8a(1)	Payload Transporter (PT) TR: TOs 21M-LGM30G-2-33, 36A9-8-49-1, 36A9-8-58-1						
8a(2)	Mechanical Maintenance Truck TR: TOs 21M-LGM30G-2-10 (-1), 35D4-7-4-2, 36A12-24-3-1; LJG 20AF-95-001						
8a(3)	Missile Guidance and Control Set Support Truck TR: TOs 21-LG118A-2-10, 21-LG118A-2-34, 36A13-31-1						
8a(4)	Periodic Maintenance Van TR: TO 36A9-8-56-1						
8b	Operate hoist in						
8b(1)	Payload Transporter TR: TOs 21M-LGM30G-2-33, 36A9-8-49-1, 36A9-8-58-1						
8b(2)	Mechanical Maintenance Truck TR: TOs 21-LG118A-2-10, 21M-LGM30G-2-10 (-1), 35D4-7-4-2, 36A12-24-3-1; LJG 20AF-95-001						
8b(3)	Missile Guidance and Control Set Support Truck TR: TOs 21-LG118A-2-10, 21-LG118A-2-34, 36A13-31-1						
8b(4)	Periodic Maintenance Van TR: TO 36A9-8-56-1						
8c	Forms/records TR: TOs 00-20-1, 00-20-2, 00-20-5, 00-20B-5, 00-25-245, 36-1-58						
8c(1)	Initiate						
8c(2)	Maintain						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
8d	Vehicles						INTIALO
8d(1)	Perform daily inspections of TR: AFI 24-301						
8d(1a)	General purpose vehicles TR: TO 36-1-23						
8d(1b)	Special purpose vehicles TR: TOs 36A9-8-49-1, 36A9-8-58-1, 36A12-24-3-1, 36A13-31-1						
8d(2)	Track vehicle status/location						
8d(3)	Schedule vehicles for inspection/repair						
8e	Equipment						
8e(1)	Store/Issue equipment						
8e(2)	Track equipment status/location						
8f	Nitrogen bottles TR: TOs 35M1-1-101, 42B5-1-1-2						
8f(1)	Install in purge manifold						
8f(2)	Remove from purge manifold						
8f(3)	Drain						
8g	Perform self test on						
8g(1)	Explosive set circuitry test set TR: TO 33D9-38-15-21						
8h	Configure vehicles with equipment for TR: Applicable weapon system TO; configuration load lists						
8h(1)	MMT dispatches						
8h(2)	EMT dispatches						
8h(3)	FMT dispatches						
8h(4)	PNEU dispatches						
8i	Equipment recovery TR: TOs 00-25-234, 00-24-245, 1-1A-8, 11N-HRV-5022-2						
8i(1)	Inspect equipment						
8i(2)	Repair equipment						
8i(3)	Process equipment						
9	TRAINER MAINTENANCE OPERATION						
9a	Launch Facility trainer (AN/GSQ-T8 and AN/GSQ-T9) TR: TO 43D2-3-27-1						
9a(1)	Perform startup, shutdown, emergency shutdown, and startup after inadvertent shutdown						
9a(2)	Perform inspection and lubrication of trainer						
9a(3)	Perform checkout, trouble analysis and repair of the following trainer unique equipment						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
9a(3a)	Security system						INITIALS
9a(3b)	OGE power and systems						
9a(3c)	Communication system						
9a(3d)	Instructor control panel						
9a(3e)	Ground G&C liquid cooling system						
9a(3f)	Distribution box						
9a(3g)	Simulated environmental control system						
9b	Launch Facility trainer (AN/GSQ-T10, AN/GSQ-T13, and AN/GSQ-T41) TR: TOs 43D2-3-55-1, 43D2-3-81-1						
9b(1)	Perform startup, shutdown, emergency shutdown, and startup after inadvertent shutdown						
9b(2)	Perform inspection and lubrication of trainer						
9b(3)	Perform checkout, trouble analysis and repair of the following trainer unique equipment						
9b(3a)	Security system						
9b(3b)	OGE power and systems						
9b(3c)	Communication system						
9b(3d)	Instructor control panel						
9b(3e)	Ground G&C liquid cooling system						
9b(3f)	GMSR system						
9b(3g)	Distribution box						
9c	Launch Facility trainer (A/F 24A-T2) TR: TOs 43D2-10-3-1, 43D2-10-3-2						
9c(1)	Inspect trainer						
9c(2)	Repair trainer						
9c(3)	Lubricate trainer						
9c(4)	Perform startup, shutdown and emergency shutdown						
9d	Launch Facility operational support equipment (AF 24A-T4) TR: TOs 43D2-10-3-1, 43D2-10-3-2						
9d(1)	Inspect						
9d(2)	Repair					1	
9d(3)	Perform startup, shutdown and emergency shutdown						
9e	Training guided missile set (A/E37A-T47) TR: TO 43D2-3-18-1						
9e(1)	Perform checkout, trouble analysis, and repair of trainer						
9e(2)	Perform inspections						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
9f	Perform checkout, trouble analysis, and repair of code change verifier set (AN/DJW-36T1A) TR: TO 43D2-3-18-1						INTIALS
9g	Missile Guidance Set trainer (AN/DJW-36T1) TR: TO 43D2-3-73-1						
9g(1)	Perform checkout, trouble analysis, and repair						
9g(2)	Perform inspections						
9h	Propulsion system rocket engine trainer (A/A44A-4T1) TR: TO 43D2-3-72-1						
9h(1)	Perform checkout, trouble analysis, and repair						
9h(2)	Perform inspections						
9i	Control monitor procedures trainer (AN/GSQ-T46/T47/T48/T49) TR: TO 43D2-3-93-1						
9i(1)	Operate trainer						
9i(2)	Perform installation, adjustment, checkout, trouble analysis, inspection, and repair						
9j	Environmental control system/power procedures trainer (A/F37FU-T19/T22/T24/T25) TR: TOs 43D2-3-84-1, 43D2-3-89-1, 43D2-3-91-1, 43D2-3-92-1						
9j(1)	Perform startup, shutdown, and emergency shutdown						
9j(2)	Perform checkout, trouble analysis, repair, adjustment, and inspection of the following trainer unique equipment						
9j(2a)	Instructor control panel						
9j(2b)	Intercommunication system						
9j(2c)	Load bank						
9j(2d)	Simulated electronic rack						
9j(2e)	DC power supply PS-500						
9j(2f)	Transfer control panel						
9j(3)	Perform checkout trouble analysis, repair, adjustment, and inspection of trainer unique circuitry/mechanical devices						
9k	Perform checkout, trouble analysis, and repair of Minuteman III reentry system trainer (A/E32U-T4) TR: TO 43D2-3-67-1						
91	Missile guidance and control set (P/N 14900-201-1) TR: TO 43D32-2-3-1						
9I(1)	Inspect						
9I(2)	Repair						
9m	Operate digital computer system model PC380-AA TR: TOs 43D2-10-3-1, 43D2-10-3-2						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
9n	Sump pump trainers, Minuteman/Peacekeeper (A/F 374-T25) TR: TOs 43D2-3-84-1, 43D2-3-92-1, 43D2-3-97-1; CEM 21-SM80X-2-24-X						INITIALS
9n(1)	Inspect/operate						
9n(2)	Perform checkout						
9n(3)	Troubleshoot						
9n(4)	Repair						
90	Third Stage Trainer TR: TO 21MLGM30F-2-17-5						
90(1)	Checkout						
90(2)	Troubleshoot						
90(3)	Repair						
90(4)	Inspect						
9р	Operate Code Change Verifier Simulator (SM-876/G) TR: TO 43D2-3-18-1						
10	QUALITY ASSURANCE						
10a	Technical data TR: AFPD 21-3; TOs 00-5-1, 00-5-2; AFSPCIND7; AFSPCIs 21-0108, 21-0114, 32-1005, 32-1009; ACCI 21-101						
10a(1)	Review/process AFTO Forms 22 and AFSPC Forms 272						
10a(2)	Review all new and revised technical data and standard publications for completeness and technical accuracy						
10a(3)	Review supplements and maintenance OIs for accuracy, intent, and necessity						
10b	TCTO, MCLs, and modifications TR: AFSPCIs 21-0108, 21-0114; ACCI 21-101						
10b(1)	Review for applicability, training, supplies, and equipment requirements						
10b(2)	Determine sampling size and perform random inspections						
10b(3)	Conduct final review of TCTO/MCLs submitted by Logistics Group						
10c	Management inspections TR: AFSPCIs 21-0108, 21-0114; ACCI 21-101						
10c(1)	Conduct activity inspections						
10c(2)	Conduct special inspections						
10d	Hardware inspections TR: AFSPCIs 21-0114						
10d(1)	Conduct hardware equipment inspection						
10d(2)	Conduct hardware acceptance inspection						
10e	Proficiency evaluations TR: AFSPCIs 21-0108, 21-0114						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
10e(1)	Conduct personnel proficiency evaluations					1	
10e(2)	Conduct proficiency verification evaluations						
10e(3)	Conduct trainer proficiency evaluations						
10f	Evaluation/Inspection reports TR: AFSPCIs 21-0108, 21-0114; ACCI 21-101						
10f(1)	Document evaluations/inspections						
10f(2)	Prepare evaluation/inspection reports						
10g	Evaluate deferred discrepancies TR: AFSPCIs 21-0114						
10h	Training TR: AFSPCI 21-0114						
10h(1)	Conduct MEP orientation course						
10h(2)	Conduct DR course						
10h(3)	Conduct production inspector course						
10h(4)	Conduct technical data course TR: TOs 00-5-1, 00-5-2						
10i	Deficiency Reporting TR: AFMAN 23-110; TO 00-35D-54						
10i(1)	Identify deficiencies						
10i(2)	Process deficiency reports						
11	MISSILE MAINTENANCE OPERATIONS CENTER (MMOC)						
11a	Understand security enhancement procedures and site security procedures TR: AFSPCIs 21-0114, 31-1101						
11b	Use the maintenance priority system TR: AFSPCI 21-0114						
11c	Accept, evaluate, and respond to reports from LFs/MAFs TR: TOs 21-LG118A-2-1, 21M-LGM30X-2-1-X; AFSPCI 21-0114						
11d	Monitor, update, and delete maintenance data for priorities 1–4 TR: AFSPCI 21-0114						
11e	Coordinate with Material Control on priority changes, PMCS, NMCS, and MICAP conditions TR: AFSPCI 21-0114						
11f	Coordinate and document maintenance on and off base TR: AFSPCI 21-0114						
11g	Coordinate unscheduled dispatches TR: AFSPCI 21-0114						
11h	Monitor critical equipment and vehicle status TR: AFSPCI 21-0114						
11i	Coordinate and document cannibalization procedures TR: TO 00-2-2; AFSPCI 21-0114						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
11j	Perform EWO actions TR: AFSPCI 21-0114; SRR OPLAN 55; Local wing OPLANs						
11j(1)	Senior controller						
11j(2)	Weapons system controller						
11k	Use procedural, situational, and EWO checklists to TR: AFSPCI 21-0114						
11k(1)	Coordinate disaster response actions TR: Local OPLAN directive						
11k(2)	Coordinate movement of and emergency procedures for						
11k(2a)	Stage IV TR: Local OPLAN directive						
11k(2b)	PSRE TR: Local OPLAN directive						
11k(2c)	Reentry Systems TR: AFSPCI 31-1101; Local OPLAN directive						
11k(2d)	Missile TR: Local OPLAN directive						
11k(3)	Perform actions in support of Missile Potential Hazard (MPH) conditions TR: AFSPCI 21-0114						
111	Coordinate with BCE on RPIE maintenance requirements and interruptions of normal commercial power TR: AFSPCIs 21-0114, 32-1005						
11m	Coordinate and document airborne launch and control systems tests TR: TOs 21-LG118A-2-1, 21M-LGM30X-2-1-X; AFSPCI 21-0114; ALCC Log						
11n	Coordinate and document code change action TR: TOs 21-LG118A-2-1, 21M-LGM30G-2-1-X; AFSPCIs 21-0114, 91-1005						
110	Perform actions required of severe weather, snow, ice, and flood control plans TR: Local OPLAN directives						
11p	Perform support battle staff maintenance duties TR: Local OPLAN directives						
11q	Report wing status TR: AFI 21-103; MCR 55-8; AFSPCIs 21-0103, 21-0114						
11r	Use STU III TR: Operating Manual						
12	PLANS AND SCHEDULING TR: AFSPCI 21-0114						
12a	Planning						
12a(1)	Plan, coordinate, and compile maintenance forecasts						
12a(2)	Plan and coordinate						1
12a(2a)	SELM/SELP						
12a(2b)	Code change				1		<u> </u>

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
12a(2c)	TCTO/MCL modification program						INTIALS
12a(2d)	EWO generation meeting						
12a(2e)	Periodic maintenance program						
12a(2f)	RIVET Mile programs						
12a(2g)	Perform AVDO Functions						
12b	Scheduling						
12b(1)	Plan and schedule the use and maintenance of vehicles and equipment						
12b(2)	Coordinate jobs in conjunction with Missile Maintenance Operations Center (MMOC) using appropriate work center requirements						
12b(3)	Develop daily work packages						
12b(4)	Conduct daily scheduling meetings					1	
13	BRIEFING/DEBRIEFING TR: AFSPCI 21-0114						
13a	Brief work packages, site discrepancies, current road and weather conditions, and related information to						
13a(1)	On base shop personnel						
13a(2)	Dispatching personnel/teams						
13b	Debrief work packages, site discrepancies, and related information from						
13b(1)	On base shop personnel						
13b(2)	Dispatching personnel/teams						
13c	Assign, verify, and change maintenance priorities using the maintenance priority system						
13d	Forward LF site inspections and inventory forms to the proper agencies for review						
13e	Maintain currency of record copy of Site Workload Requirements/ Equipment Workload Requirements (SWR/EWR)						
13f	Perform SWR/EWR reconciliation with applicable agencies						
14	TECHNICAL ENGINEERING						
14a	Use technical data, special drawings, engineering data, and other data as applicable TR: Special contractor data; depot instructions; CE technical data; "as built" drawings; engineering data; Inertial Performance Data (IPD); Launch Facility Activity Data (LFAD)						
14b	Conduct engineering studies TR: Applicable technical data; AFSPCI 21-0114						
14c	Evaluate applicable Engineering Change Proposals (ECPs) and Facility Change Proposals (FCPs) TR: Applicable technical data; AFSPCI 21-0114						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
14d	Perform technical assistance and/or analysis for system effectiveness TR: Applicable technical data						MINALO
14e	Perform technical engineering EWO planning duties TR: Local directives						
14f	Perform Disaster Control Group Team duties TR: Local O-Plan directives						
14g	System anomalies TR: Applicable technical data						
14g(1)	Troubleshoot						
14g(2)	Use special engineering test equipment						
14g(3)	Document faults and dispatches						
15	TO LIBRARY TR: RM 1103						
15a	Maintain and generate products from ATOMS data base						
15b	Process and control technical order, CEM, and CPIN distribution						
15c	Maintain initial distribution requirements						
15d	Perform routine, annual, and other required checks						
15e	Post TO						
15e(1)	Revisions						
15e(2)	Changes						
15e(3)	Supplements						
15e(3a)	Safety						
15e(3b)	Operational						
15e(3c)	Routine						
15e(3d)	TOPS						
15e(3e)	ITPS						
15e(3f)	TOFCN/VB pages						
15f	Post CEM						
15f(1)	Revisions						
15f(2)	Changes						
15f(3)	CEMICs						
15g	A-Page TO, CEM						
15h	Maintain task documents					1	
15h(1)	Revision and supplements						
15h(2)	RM 150 Change requests						
15h(3)	RM 150 logs						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
15i	Maintain other support documents						INITIALS
15i(1)	CPIN						
15i(2)	Task requirement documents						
15i(3)	Task flow documents						
15j	Issue/sign-in TO, CEM, and dispatch kits						
16	MAINTENANCE PROGRAMS TR: AFIs 38-101, 38-201; AFSPCI 21-0114						
16a	Manpower						
16a(1)	Monitor adequacy of assigned and authorized positions						
16a(2)	Advise maintenance managers of overall manpower positions						
16a(3)	Initiate manpower change requests						
16b	Mission Support Equipment (MSE) TR: AFMAN 23-110						
16b(1)	Monitor authorized and assigned MSE						
16b(2)	Ensure MSE is requisitioned by the appropriate custodian						
16b(3)	MSE allowance authorization change request						
16b(3a)	Review, evaluate, and coordinate						
16b(3b)	Approve/Disapprove						
16b(4)	Complete allowance document files						
16b(5)	Plan and accomplish acquisition/deletion of MSE for system modifications						
16b(6)	Assist equipment custodians						
16b(7)	Monitor Maintenance Complex CA/CRLs						
16c	Facility management						
16c(1)	Manage facility program						
16c(2)	Monitor and act upon requests for new/additional facilities or alterations of existing facilities						
16c(3)	Coordinate with work centers						
16d	Resource management						
16d(1)	Monitor and control expenditure of funds						
16d(2)	Plan and budget for financial requirements						
16d(3)	Add financial requirements to long range plans						
16e	OPLAN monitor	1					
16e(1)	Develop, coordinate, and distribute OPLANs within the maintenance complex						
16e(2)	Coordinate and review	1					
16e(2a)	OPLANs from outside agencies						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
16e(2b)	Feasibility studies						INTIALS
16e(2c)	Host-tenant and Interservice Support Agreements						
16f	Review/Update/Maintain LG Battle Staff checklists						
17	ICBM CODES VAULT						
17a	Lock/Alarm class A vault door TR: AFI 31-209; TO 00-20F-2; SD 501-12; AFSPCI 91-1005						
17b	Maintain security of division containers, locks/combinations TR: AFPD 31-1, 31-4; AFI 31-401; SD 501-12						
17c	Maintain visitor control TR: SD 501-12; AFMAN 37-139; AFSPCI 91-1005						
17d	Maintain code controller operations records TR: SD 501-12; AFSPCI 91-1005						
17e	Comply with system control/requirements for TR: SD 501-12; AFSPCI 91-1005						
17e(1)	WCPS						
17e(2)	20 year spares						
17e(3)	HCVE						
17e(4)	Master tapes/cartridges/discs						
17e(5)	LCP/keys						
17e(6)	LECG/EP (WS118A)						
17e(7)	LEP						
17e(8)	CCV/CSD(M)						
17e(9)	CCV/SCD (WS118A)						
17e(10)	P Plug						
17e(11)	KVP (WS118A)						
17e(12)	LFLC						
17e(13)	MCLC/LCLC/KCLC (WS118A)						
17e(14)	LFOC/Pen D LFLC						
17e(15)	WSC/MCG Pen C/D Tapes (WS118A)						
17e(16)	Encryption System components						
17e(17)	Program tapes/cartridges/discs						
17e(18)	Target materials and execution plans TR: AFI 10-1102						
17e(19)	WSC (WS118A)						
17e(20)	MCG (WS118A)						
17e(21)	LVP/COOP panel/keys (WS118A)				1		
17e(22)	TDIs				1	1	

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
17e(23)	CSD(G)						INITIALS
17e(24)	IMU tapes						
17e(25)	GRP MGS Parameters data						
17e(26)	MGCS parameter tapes (WS118A)						
17e(27)	CTU (C631A)						
17e(28)	LCSC (WS118A)						
17e(29)	LCMU (WS118A)						
17e(30)	Tape transport (C-164A)						
17e(31)	MCU						
17e(32)	MGS computer						
17e(33)	MGC Computer (GRP)						
17e(34)	MGCS computer (WS118A)						
17e(35)	WCPS computer						
17e(36)	Sum check controls						
17e(37)	Off base training LF						
17e(38)	Test components						
17e(39)	Code change procedures						
17e(40)	SELM						
17e(41)	SELP (WS118A)						
17e(42)	Encryption PROMS						
17e(43)	Failed WCPS components						
17e(44)	WCPS APM (KIV-42) (WS118A)						
17e(45)	LF APMs (KIV-42) (WS118A)						
17e(46)	WSP						
17e(47)	SIOP unlock code change						
17f							
17f(1)	TR: AFIs 33-322, 37-138; SD 501-12; AFSPCI 91-1005 Establish and maintain files						
17f(2)	File and locate records						
17f(3)	Classify and control records						
17f(4)	Maintain component control records						
17f(5)	Maintain WCPS operation records						
17f(6)	Maintain receipt/disposition records						
17g	Follow emergency procedures for						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
17g(1)	Possible Code Compromise (PCC) TR: SDs 501-11, 501-12; AFSPCI 91-1005						
17g(2)	Two-person concept violations TR: AFIs 91-101, 91-104						
17g(3)	Single flight/ECC TR: AFI 91-114; SD 501-11						
17g(4)	Lateral coding TR: SD 501-11						
17g(5)	Emergency evacuation/destruction TR: SD 501-11						
17g(6)	Violations of code handling procedures TR: SDs 501-11, 501-12; AFSPCI 91-1005						
17g(7)	Possible compromise to Tamper Detection Indicator (TDI) technology TR: SDs 501-11, 501-12; AFSPCI 91-1005						
17h	Code components, programs, and misc. materials TR: SD 501-12; AFSPCI 91-1005						
17h(1)	Receipt for materials						
17h(2)	Store materials						
17h(3)	Inventory materials						
17h(4)	Dispose of materials						
17h(5)	Transfer materials						
17h(6)	Select and assign materials for						
17h(6a)	WCPS use only						
17h(6b)	Squadron use						
17h(6c)	LCC use						
17h(6d)	LF use						
17h(7)	Monitor availability of materials						
17h(8)	Identify, classify, and mark materials TR: AFI 31-401						
17i	Field requirements TR: SD 501-12; AFSPCI 91-1005						
17i(1)	Operational/test code configuration						
17i(1a)	Monitor code requirements/status						
17i(1b)	Coordinate job requirements						
17i(1c)	Maintain work status boards						
17i(2)	Team dispatch/recovery TR: SD 501-12; AFSPCI 91-1005						
17i(2a)	Prepare materials/equipment for issue						
17i(2b)	Identify and brief team						
17i(2c)	Apply issue restrictions						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
17i(2d)	Recover materials						INITIALS
17i(3)	Status of Field Teams						
17i(3a)	Monitor transport of material						
17i(3b)	Monitor transfer of material						
17i(3c)	Monitor field storage of material						
17i(3d)	Monitor installation of materials						
17i(3e)	Validate CMSC from LF						
17i(3f)	Validate VN from LF						
17i(3g)	Validate WSC/MCG CMCC from LCC						
17i(3h)	Install/inspect/remove TDIs						
17j	Equipment configuration TR: TO 31X8-2-2-1						
17j(1)	Load/unload MTC						
17j(2)	Load/unload punched mylar tape						
17j(3)	Install/remove LECG test adapter						
17j(4)	Install/remove LECG/EP						
17j(5)	Install/remove LEP						
17j(6)	Install/remove MCU and reset tamper mechanism						
17j(7)	Install/remove MCU (MCU encoder)						
17j(8)	Install/remove C-164A tape transport						
17j(9)	Install/remove WSC test adapter						
17j(10)	Install/remove WSC processor drawer (WS118A)						
17j(11)	Install/remove WSC memory drawer (WS118A)						
17j(12)	Install/remove MCG test adapter						
17j(13)	Install/remove MCG controller-synchronizer (WS118A)						
17j(14)	Install/remove MCG drum (WS118A)						
17j(15)	Degauss MTC/7-track/9-track magnetic tape TR: TO 31X8-2-2-1						
17j(16)	Install/remove CSD(G) test adapter						
17j(17)	Install/remove CSD(G) (Code verifier)						
17j(18)	Apply 7/9-track magnetic tape BOT/EOT markers						
17j(19)	Load/place on-line /unload 7/9-track magnetic tape						
17j(20)	Install/remove LCP verifier/test adapter						
17j(21)	Install/remove P Plug test adapter TR: TO 31X8-2-2-2						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE	TRAINER	CERTIFYING OFFICIAL INITIALS
17j(22)	Install/remove KVP test adapter TR: TO 31X8-2-2-2						
17j(23)	Install/remove removable disc						
17j(24)	Load KG84A						
17j(25)	Load/adjust/unload printer paper						
17j(26)	Load/remove printer ribbon cartridge						
17k	Equipment checkout TR: TO 31X8-2-2-1						
17k(1)	Clean CTU read/write head						
17k(2)	Inspect MTC						
17k(3)	Condition MTC						
17k(4)	Inspect/clean CDU, CTU, LCMU, 7/9 track read head and lamp aperture						
17k(5)	Clean MTU tape deck						
17k(6)	Perform CCV self test						
17k(7)	Perform MCU functional test TR: TO 31X8-2-2-1						
171	Shielded enclosure TR: TO 31X8-2-2-1						
17l(1)	Perform SE visual inspection						
17l(2)	Perform SE fire alarm test						
17l(3)	Perform SE environmental test						
17l(4)	Perform SE air pressure and door seal test						
17l(5)	Perform SE communications test						
17m	WCPS power TR: TO 31X8-2-2-1						
17m(1)	Start-up WCPS - normal start procedure						
17m(2)	Start-up WCPS - cold start procedure						
17n	CCOS executive functions TR: TOs 31X8-2-2-1, 31X8-2-2-2						
17n(1)	Perform						
17n(1a)	Computer subsystem test						
17n(1b)	CRT/keyboard terminal test						
17n(1c)	Power supplies/ADC test						
17n(1d)	Disc assembly test						
17n(1e)	Line printer test						
17n(1f)	Tape transport test	<u> </u>					
17n(1g)	Cartridge drive unit test						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
17n(1h)	9-track MTU test						INTIALS
17n(1i)	KVP interface test						
17n(1j)	7-track MTU test						
17n(1k)	Isolation circuit test						
17n(1l)	Digital clock test						
17n(1m)	KG84A/modem comm link test						
17n(1n)	P-Plug adapter test						
17n(1o)	MCU encoder test						
17n(1p)	Force mod/Peacekeeper LCP test						
17n(1q)	Wing IX LCP test						
17n(1r)	LECG interface test						
17n(1s)	CSD(G) interface test						
17n(1t)	KIV-42 interface test						
17n(1u)	KI-22 interface test						
17n(1v)	MCG interface test						
17n(1w)	CCV interface test						
17n(1x)	MSD/L interface test						
17n(1y)	WSC interface test						
17n(1z)	REACT BS/L test						
17n(1aa)	REACT FDD test						
17n(1ab)	Self test						
17n(1ac)	End item load						
17n(2)	Display equipment status						
17n(3)	Display/reset log file						
17n(4)	Pack system disc						
17n(5)	Prepare new disc						
17n(6)	Display disc ID						
17n(7)	Transmit data via link						
17n(8)	Receive data via link						
17n(9)	Edit link control files						
17n(10)	Perform manual record keeping						
17n(11)	Relog (change operator)						
17n(12)	Prepare PVS backup tape						
17n(13)	Verify DC300 program copies						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
17n(14)	Verify 9-track program copies						INTIALS
17n(15)	Select commanded overwrite						
17n(16)	Perform media to media conversion						
17n(17)	Log off (exit) systems						
17n(18)	Inhibit operator input print						
17n(19)	Enable operator input print						
17n(20)	Perform console shutdown						
17n(21)	Change KI-22 keying variable						
17n(22)	Initialize REACT BS/L HDA						
17n(23)	Verify reel to reel tape copies						
17n(24)	Enable telephone						
17n(25)	Convert 9-track to 7-track tapes						
17n(26)	Backup system disk						
17n(27)	Format disc in data drive						
17n(28)	Execute all tests						
170	Display main menu (WMAP/WPAP) TR: TO 31X8-2-2-1						
17p	Accomplish master data control (WMAP/WPAP) TR: TO 31X8-2-2-1						
17p(1)	Load A/B cartridge						
17p(2)	Change ITSC pen data						
17p(3)	Load pen data						
17p(4)	Load wing code disc						
17p(5)	Perform KI-22 key change						
17p(6)	Assign pen data to LCF						
17p(7)	Assign pen data to LF						
17p(8)	Display master data						
17p(9)	Load/delete P-Plug						
17p(10)	Rekey KIV-42 (WS118A)						
17p(11)	Assign L prime data (WS118A)						
17p(12)	Load L prime data (WS118A)						
17p(13)	Load F data (WS118A)					1	
17p(14)	Load/delete KVP (WS118A)						
17p(15)	Load/replenish I code data (REACT)						
17p(16)	Load GRP I code data						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
17p(17)	Prepare end item tapes						INTIALO
17p(18)	Assign GRP I code data to LF						
17q	Establish support data TR: TO 31X8-2-2-1						
17q(1)	Load MM III WS133AM OGP						
17q(2)	Load MM III WS133B OGP (Wing 1X Only)						
17q(3)	Load MM III OFP						
17q(4)	Load MM III overwrite						
17q(5)	Load execution plan						
17q(6)	Load flight constants						
17q(7)	Load OEP						
17q(8)	Load IMU tape						
17q(9)	Load LF offload tapes						
17q(10)	Load GRP OGP/OFP data						
17q(11)	Load GRP MGS parameter data						
17q(12)	Load targeting tape						
17q(13)	Load LF master data						
17q(14)	Load MCG tapes (WS118A)						
17q(15)	Load PK OGP/OFP (WS118A)						
17q(16)	Load mission parameters (WS118A)						
17q(17)	Load MGCS parameters (WS118A)						
17q(18)	Load launch control program (WS118A)						
17q(19)	Load POEP tapes (WS118A)						
17q(20)	Load REACT MAF tapes						
17q(21)	Load GRP flight programs constants data						
17r	Generate and verify data (WMAP/WPAP) for TR: TO 31X8-2-2-1						
17r(1)	MCG Pen C/D tape (WS118A)						
17r(2)	Fixed data cartridge						
17r(3)	LFLC variable data						
17r(4)	Complete load LFLC (GRP)		1			1	
17r(5)	Code change LFLC (GRP)		1			1	
17r(6)	Pen D LFLC (GRP)						
17r(7)	LFOC variable data						
17r(8)	Wing code disk						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
17r(9)	MECA LFLC (WS118A)						INITIALS
17r(10)	Keys/codes LFLC (WS118A)						
17r(11)	LCSC LFLC (WS118A)						
17s	Perform the sum checks (WMAP/WPAP) TR: TO 31X8-2-2-1						
17s(1)	MM CMSC						
17s(2)	GRP CMSC						
17s(3)	WSC CMCC						
17s(4)	MCG CMCC						
17s(5)	LCSC CMSC (WS118A)						
17s(6)	MECA CMSC (WS118A)						
17s(7)	Keys/codes CMSC (WS118A)						
17t	Encode and verify devices (WMAP/WPAP) TR: TO 31X8-2-2-1						
17t(1)	Encode and verify LECG (WS118A)						
17t(2)	Encode and verify LEP						
17t(3)	Encode and verify LCP						
17t(4)	Encode and verify CCV						
17t(5)	Perform CCV trace data functions						
17t(6)	Verify CSD(G)						
17t(7)	Encode MCU with maintenance code						
17t(8)	Encode SCD (WS118A)						
17u	Data verification TR: TO 31X8-2-2-1						
17u(1)	Perform selective enable verification (WS118A)						
17u(2)	Perform launch verification						
17v	Verify only data functions TR: TO 31X8-2-2-1						
17v(1)	Verify MCG Pen C/D tapes (WS118A)						
17v(2)	Verify fixed data cartridges						
17v(3)	Verify LFLC variable data						
17v(4)	Verify GRP complete load LFLC						
17v(5)	Verify GRP code change LFLC					1	
17v(6)	Verify GRP Pen D LFLC					1	
17v(7)	Verify LFOC variable data						
17v(8)	Verify wing code disk						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
17v(9)	Verify LECG (WS118A)						INTIALS
17v(10)	Verify LEP						
17v(11)	Verify MECA LFLC (WS118A)						
17v(12)	Verify keys/codes LFLC (WS118A)						
17v(13)	Verify LCSC LFLC (WS118A)						
17w	Display tape ID (WMAP/WPAP) TR: TO 31X8-2-2-1						
17w(1)	Display wing code disk ID						
17w(2)	Display A/B cartridge ID						
17w(3)	Display WSC/MCG pen tape ID						
17w(4)	Display DC300 cartridge ID						
17w(5)	Display MECA LFLC ID (WS118A)						
17w(6)	Display keys/codes LFLC ID (WS118A)						
17w(7)	Display LCSC LFLC ID (WS118A)						
17x	Load and verify devices (REACT) TR: TO 31X8-2-2-1						
17x(1)	Initialize LCF BS/L HDA						
17x(2)	Load/verify LCF BS/L HDA						
17x(3)	Perform LCF BS/L HDA backout CMSC						
17x(4)	Load/verify LCF diskettes						
17x(4a)	Code change diskette						
17x(4b)	EPP/MA database diskette						
17x(4c)	FDM format database diskette						
17x(4d)	TCI/EPCI diskette						
17y	Load WSC (WMAP/WPAP) TR: TO 31X8-2-2-1						
17z	Load and initialize MCG (WMAP/WPAP) TR: TO 31X8-2-2-1						
17aa	Respond to unsuccessful sum checks TR: TO 31X8-2-2-1						
17aa(1)	Perform MM CMSC backout procedures						
17aa(2)	Perform GRP CMSC backout procedures						
17aa(3)	Perform MM CMCC backout procedures						
17aa(4)	Perform PK CMCC, CMSC backout procedures						
17aa(5)	Respond to unsuccessful VNs TR: SD 501-12, AFSPCI 91-1005						
17ab	Equipment malfunctions TR: TOs 31X8-2-2-1, 31X8-2-2-2						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
17ab(1)	Perform corrective actions						
17ab(2)	Restart 7/9-track after power failure						
17ab(3)	Perform WCPS emergency shutdown						
17ab(4)	Perform KG84A emergency operations						
17ab(5)	Perform SCD code erase procedure (WS118A)						
17ac	Administrative communications management TR: AFIs 10-1102, 31-401; AFMAN 33-326; AFKAG-3H; SD 501-12; AFSPCI 91-1005						
17ac(1)	Process official incoming/outgoing communications						
17ac(2)	Process, protect, and destroy classified information						
17ac(3)	Apply classification markings						
17ac(4)	Handle/store/account for classified materials						
17ac(5)	Document/package/process package for courier/classified shipments						

AFSC 2M0X3 STS **ATTACHMENT 2** ICBM FACILITY MAINTENANCE TASKS

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
1	<i>TEST EQUIPMENT</i> TR: TOS 33-1-19, 33A1-9-34-1, 33D7-22-34-1, 33D7-22-34-11, 33D9-17-70-1, 33D9-17-82-1, 33D9-84-26-1, 33K6-4-3021-1; Applicable Manufacturer's Operation and Service Instructions						INITIALS
1a	Use ECS test equipment	3					
1b	Brine charging and hydrostatic test set (Wing 1X) TR: 33D9-122-19-1						
1b(1)	Inspect						
1b(2)	Operate						
1b(3)	Troubleshoot						
1b(4)	Repair						
1c	Pneumatic control test set (Wing 1X and VAFB only) TR: 33D9-17-73-1						
1c(1)	Operate						
1d	WS-133 guidance section cooler test repair set TR: TOs 21M-LGM30X-2-6, 33D9-17-89-1						
1d(1)	Checkout						
1d(2)	Troubleshoot						
1d(3)	Repair						
1d(4)	Calibrate						
1e	Guidance and control conditioning unit test bench TR: TO 33D9-3-265-1						
1e(1)	Checkout						
1e(2)	Troubleshoot						
1e(3)	Repair						
1f	Guidance and control conditioning unit test set TR: TO 33D9-3-264-1						
1f(1)	Checkout						
1f(2)	Troubleshoot						
1f(3)	Repair						
1g	Refrigerant reclaim system TR: Applicable Manufacturer's Operation and Service Instructions						
1g(1)	Operate						
1g(2)	Service						
1g(3)	Repair						
2	MSB MAINTENANCE	1					
2a	PMT van air compressor TR: TO 34Y1-1-171; Applicable Manufacturer's Operation and Service Instructions						
2a(1)	Inspect						

AFSC 2M0X3 STS **ATTACHMENT 2** ICBM FACILITY MAINTENANCE TASKS

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
2a(2)	Repair						INITIALS
2b	Support vans TR: TOs 21M-LGM30F-6WC-3, 35D4-7-4-2, 36A12-24-3-1; LJG 20AF-95-001						
2b(1)	Electrical systems						
2b(1a)	Perform periodic inspection						
2b(1b)	Troubleshoot						
2b(1c)	Repair						
2b(2)	Hoist/crane						
2b(2a)	Perform periodic inspection						
2b(2b)	Troubleshoot						
2b(2c)	Repair						
2c	PMT van TR: TOs 21M-LGM30F-6WC-3, 36A9-8-56-1; Applicable manufacturer's operation and Service instructions						
2c(1)	Hoist TR: TO 36Y16-25-1						
2c(1a)	Perform periodic inspection						
2c(1b)	Troubleshoot						
2c(1c)	Repair						
2c(2)	APU/electrical system TR: TO 35C2-3-498-1						
2c(2a)	Perform periodic inspection						
2c(2b)	Troubleshoot						
2c(2c)	Repair						
2c(2d)	Operate						
2c(3)	ECS TR: TO 35E9-272-1						
2c(3a)	Perform periodic inspection						
2c(3b)	Troubleshoot						
2c(3c)	Repair						
2c(3d)	Operate						
2d	Payload transporter TR: TOs 21M-LGM30F-6WC-3, 21M-LGM30G-2-33, 31S9-4-83-1, 36A9-8-49-1, 36A9-8-58-1, 38G1-16-161, 38G1-16-162						
2d(1)	Security system						
2d(1a)	Perform periodic inspection						
2d(1b)	Troubleshoot						
2d(1c)	Repair	1			1		

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING
2d(2)	Hoist						INITIALS
2d(2a)	Perform periodic inspection						
2d(2b)	Troubleshoot						
2d(2c)	Repair						
2d(3)	APU/electrical system						
2d(3a)	Perform periodic inspection						
2d(3b)	Troubleshoot						
2d(3c)	Repair						
2d(4)	ECS						
2d(4a)	Perform periodic inspection						
2d(4b)	Troubleshoot						
2d(4c)	Repair						
2e	Transporter erector TR: TOs 21M-LGM30F-6WC-3, 35C2-3-493-1, 35D3-11-52-2, 35D3-11-52-4, 35E9-266-1						
2e(1)	Electrical system						
2e(1a)	Perform periodic inspection						
2e(1b)	Troubleshoot						
2e(1c)	Repair						
2e(2)	ECS						
2e(2a)	Perform periodic inspection						
2e(2b)	Troubleshoot						
2e(2c)	Repair						
2e(3)	APU						
2e(3a)	Perform periodic inspection						
2e(3b)	Troubleshoot						
2e(3c)	Repair						
2e(4)	Repair handheld control unit						
2f	Portable air conditioner TR: TOs 21M-LGM30F-6WC-3, 35C2-3-475-2, 35C2-3-479-4, 35C2-3-493-1, 35E9-25-3, 35E9-270-1						
2f(1)	APU/electrical system						
2f(1a)	Perform periodic inspection						
2f(1b)	Operate						
2f(1c)	Troubleshoot						
2f(1d)	Repair					1	

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
2f(2)	ECS						INITIALS
2f(2a)	Perform periodic inspection						
2f(2b)	Troubleshoot						
2f(2c)	Repair						
2g	Hydraulic pipe pusher electrical system TR: TOs 35M27-3-8-1, 35M27-3-11-1						
2g(1)	Troubleshoot						
2g(2)	Repair						
2h	Elevator work cage/Maintenance Platform, Guided Missile TR: TOs 35A4-2-31-1, 35A4-4-9-1						
2h(1)	Checkout						
2h(2)	Troubleshoot						
2h(3)	Repair						
2h(4)	Operate to facilitate inspection/repair						
2i	Elevator work cage, power and communication distribution box TR: TOs 21M-LGM30X-2-11(-1), 35A4-2-31-1						
2i(1)	Troubleshoot						
2i(2)	Repair						
2j	Lead acid, chloride, MPP batteries TR: TOs 35C2-2-101-X, 36A9-8-49-1; CEMs 21M-SM80X-2-21-X, 35R-1-X51-X						
2j(1)	Perform periodic inspection						
2j(2)	Charge/discharge						
2j(3)	Repair						
2k	Reconditioning of LF/MAF batteries TR: TO 35M1-1-101						
2k(1)	Charge						
2k(2)	Discharge						
2k(3)	Repair						
2k(4)	Inspect						
21	Instrument air compressor TR: TO 21M-LGM30X-2-7-X; Applicable Manufacturer's Operation and Service Instructions						
2l(1)	Checkout						
2l(2)	Troubleshoot						
2l(3)	Repair				1		
2m	Sump pumps TR: CEMs 21-SM80X-2-24-X, 35R-1-X61-X						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
2m(1)	Troubleshoot						INTIALO
2m(2)	Repair						
2n	Prepare brine solution/antifreeze premix TR: TO 21M-LGM30X-2-7-X; CEM 21-SM80X-2-21-X						
20	Brine chiller test stand TR: TOs 21M-LGM30X-2-7-X, 33D9-61-84-1						
20(1)	Perform semi-annual periodic inspection						
20(2)	Operate						
20(3)	Troubleshoot						
20(4)	Repair						
2р	LF brine chiller TR: TO 21M-LGM30X-2-7-X						
2p(1)	Checkout						
2p(2)	Troubleshoot						
2p(3)	Repair						
2q	MAF brine chiller TR: TO 21M-LGM30X-2-7-X						
2q(1)	Checkout						
2q(2)	Troubleshoot						
2q(3)	Repair						
2r	LF brine pump TR: TO 21M-LGM30X-2-7-X						
2r(1)	Checkout						
2r(2)	Repair						
2s	MAF brine pump TR: TO 21M-LGM30X-2-7-X						
2s(1)	Checkout						
2s(2)	Repair						
2t	Operate cable vulcanizer TR: TO 34Y9-3-9-1						
2u	Use maintenance stands TR: TOs 35A4-2-5-1, 35A4-2-6-1						
2v	Elevator work platform electrical system TR: TOs 35D36-1-102, 36C3-5-15-1						
2v(1)	Perform periodic inspection						
2v(2)	Troubleshoot						
2v(3)	Repair						
2w	Environmental compliance TR: Applicable Manufacturer's Operation and Service Instructions						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
2w(1)	Reclaim ethylene glycol						INTIALS
2w(2)	Operate oil filter crusher						
2x	Operate ultrasonic degreaser TR: Applicable Manufacturer's Operation and Service Instructions						
3	MSB MAINTENANCE OF GUIDANCE AND CONTROL COOLING SYSTEM TR: TOs 21M-LGM30X-2-6, 33D9-17-32-1, 33D9-17-81-2, 35E9-35-22						
3a	400 Hz chiller unit						
3a(1)	Checkout						
3a(2)	Troubleshoot						
3a(3)	Repair						
3b	Control valve assembly						
3b(1)	Checkout						
3b(2)	Repair						
3c	400 Hz liquid cooling pump						
3c(1)	Checkout						
3c(2)	Troubleshoot						
3c(3)	Repair						
3d	Liquid cooler filter/assembly						
3d(1)	Checkout						
3d(2)	Clean						
3d(3)	Repair						
3e	Guidance section liquid cooler test set						
3e(1)	Checkout/calibrate						
3e(2)	Troubleshoot						
3e(3)	Repair						
3f	Prepare chromate dioxin solution						
4	<i>LGM 30 LAUNCH FACILITY PROCEDURES</i> TR: TOs 21M-LGM30F-2-17-9, 21M-LGM30X-2-10 (-1), 21M-LGM30X-2-19						
4a	Enter LER	5					
4b	Enter LSB/LEB	5					
4c	Perform emergency shutdown						
4d	Evacuate launch facility for EWO launch conditions						
4e	Perform emergency electrical isolation of LSB/LEB						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
4f	Lower/raise equipment						INITIALS
4g	Exit LER	5					
4h	Exit LSB/LEB	5					
4i	Enter launch tube						
4j	Exit launch tube						
4k	Perform partial LF power removal/shutdown TR: 21M-LGM30X-2-11(-1)						
41	Perform hostile LF securing						
4m	Perform LF exit procedures						
4n	Install/remove LER platform set						
40	Elevator work cage/Maintenance Platform, Guided Missile TR: 35A4-2-31-1, 35A4-4-9-1						
40(1)	Operate						
40(2)	Install/remove						
4р	Operate maintenance vehicle hoist						
5	WS-118A LAUNCH FACILITY PROCEDURES TR: TOs 21-LG118A-2-10, 21-LG118A-2-17-2, 21-LG118A-2-19						
5a	Enter LER						
5b	Enter LSB						
5c	Perform emergency shutdown						
5d	Evacuate launch facility for EWO launch conditions						
5e	Perform emergency electrical isolation of LSB						
5f	Lower/raise equipment						
5g	Exit LER						
5h	Exit LSB						
5i	Enter launch tube						
5j	Exit launch tube						
5k	Perform LF exit procedures						
51	Elevator work cage TR: 35A4-2-31-1						
5l(1)	Operate						
5l(2)	Install/remove						
5m	Operate maintenance vehicle hoist						
5n	Perform partial LF power removal/shutdown TR: 21-LG118A-2-11						
50	Perform hostile LF securing						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
6	LAUNCH FACILITY MAINTENANCE (WS133AM/CDB, WS133B/CDB, WS118A)						INITIALS
6a	Power Generation System TR: AFI 32-1062; AFSPCI 32-1005; CEMs 21-SM80X-2-21-X, 21-SM80X-2-21-X-1, 21-SM80X-2-26-X, 21-SM80-6 (Vol XX), 35R-1-X51-X, 35R-1-X81-X						
6a(1)	Replace DEU						
6a(2)	Engine fuel oil system						
6a(2a)	Perform biennial periodic inspection	5					
6a(2b)	Perform quadrennial periodic inspection						
6a(2c)	Service						
6a(2d)	Troubleshoot						
6a(2e)	Repair						
6a(3)	Engine lube oil system						
6a(3a)	Perform biennial periodic inspection	5					
6a(3b)	Perform quadrennial periodic inspection						
6a(3c)	Troubleshoot						
6a(3d)	Repair						
6a(4)	Engine cooling system						
6a(4a)	Perform biennial periodic inspection	3					
6a(4b)	Perform quadrennial periodic inspection						
6a(4c)	Troubleshoot						
6a(4d)	Repair						
6a(5)	Engine governor/injection pump/injectors						
6a(5a)	Perform biennial periodic inspection						
6a(5b)	Perform quadrennial periodic inspection	5					
6a(5c)	Troubleshoot						
6a(5d)	Repair						
6a(6)	Generator/exciter/voltage regulator						
6a(6a)	Perform biennial periodic inspection						
6a(6b)	Troubleshoot						
6a(6c)	Repair						
6a(7)	Engine starting/stopping devices				1		
6a(7a)	Troubleshoot						
6a(7b)	Repair						
6a(8)	Diesel battery charger				1		

ITEM #	TASK / KNOWLEDGE ITEM	CORE	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL
6a(8a)	Perform biennial periodic inspection	3					INITIALS
6a(8b)	Troubleshoot						
6a(8c)	Repair						
6a(9)	Starting batteries						
6a(9a)	Perform annual periodic inspection	3					
6a(9b)	Perform biennial periodic inspection	3					
6a(9c)	Troubleshoot						
6a(9d)	Repair						
6a(10)	Engine cranking/alarm panel						
6a(10a)	Perform biennial periodic inspection						
6a(10b)	Troubleshoot						
6a(10c)	Repair						
6a(11)	Engine/generator control panel						
6a(11a)	Perform biennial periodic inspection						
6a(11b)	Troubleshoot						
6a(11c)	Repair						
6a(12)	Engine safety/alarm devices						
6a(12a)	Perform biennial periodic inspection						
6a(12b)	Perform quadrennial periodic inspection						
6a(12c)	Troubleshoot						
6a(12d)	Repair						
6a(13)	Engine intake/exhaust system						
6a(13a)	Perform biennial periodic inspection						
6a(13b)	Perform quadrennial periodic inspection						
6a(13c)	Troubleshoot						
6a(13d)	Repair						
6a(14)	Immersion heater						
6a(14a)	Troubleshoot						
6a(14b)	Repair						
6a(15)	Automatic switching unit/power control center						
6a(15a)	Perform biennial periodic inspection	5					
6a(15b)	Troubleshoot						
6a(15c)	Repair						
6a(16)	Automatic transfer switches/switch gear						
6a(16a)	Perform biennial periodic inspection	5		1		1	

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL
6a(16b)	Troubleshoot						INITIALS
6a(16c)	Repair						
6a(17)	Replace Minuteman power processor						
6a(18)	Minuteman power processor battery/charger						
6a(18a)	Perform biennial periodic inspection	3					
6a(18b)	Troubleshoot						
6a(18c)	Repair						
6a(19)	Diesel vibration dampers/snubbers						
6a(19a)	Perform periodic inspection						
6a(19b)	Repair						
6a(20)	Energy cells (Wing 1 only) TR: CEMs 21-SM80A-2-21-2, 35R-1-451-2						
6a(20a)	Perform biennial periodic inspection						
6a(20b)	Repair						
6b	Environmental Control System (ECS) TR: TOs 21-LG118A-2-7, 21-LG118A-6WC-1, 21M-LGM30F-6WC-1, 21M-LGM30X-2-7-X						
6b(1)	Brine subsystem						
6b(1a)	Perform biennial periodic inspection						
6b(1b)	Troubleshoot						
6b(1c)	Repair						
6b(1d)	Service hydraulic accumulators (Wing 1X)						
6b(2)	Refrigerant subsystem						
6b(2a)	Perform biennial periodic inspection						
6b(2b)	Troubleshoot	5					
6b(2c)	Repair	5					
6b(3)	Brine chiller control panel						
6b(3a)	Perform biennial periodic inspection	3					
6b(3b)	Troubleshoot	5					
6b(3c)	Repair	5					
6b(4)	Replace brine chiller unit						
6b(5)	Air conditioning subsystem/controls/alarms						
6b(5a)	Perform biennial periodic inspection	3					
6b(5b)	Troubleshoot						
6b(5c)	Repair						
6b(5d)	Balance air flow						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
6b(6)	Launch tube heating subsystem/controls/alarms						INITIALS
6b(6a)	Perform annual periodic inspection						
6b(6b)	Perform biennial periodic inspection	5					
6b(6c)	Troubleshoot						
6b(6d)	Repair						
6b(7)	Emergency air conditioning subsystem/controls/alarms						
6b(7a)	Perform biennial periodic inspection	5					
6b(7b)	Troubleshoot						
6b(7c)	Repair						
6b(8)	Heating and ventilation/circulating air subsystem/controls/alarms TR: CEMs 21-SM80X-2-20-X, 21-SM80-6 (Vol X), 35R-1-X41-X						
6b(8a)	Perform annual periodic inspection						
6b(8b)	Perform biennial periodic inspection	5					
6b(8c)	Troubleshoot						
6b(8d)	Repair						
6b(8e)	Balance LEB air flow						
6b(9)	Instrument air subsystem						
6b(9a)	Perform biennial periodic inspection	3					
6b(9b)	Perform quadrennial periodic inspection						
6b(9c)	Troubleshoot						
6b(9d)	Repair						
6b(10)	Make-up air subsystem/controls/alarms						
6b(10a)	Perform biennial periodic inspection	3					
6b(10b)	Troubleshoot						
6b(10c)	Repair						
6c	Guidance and control system: TR: TOs 21M-LGM30F-6WC-1, 21M-LGM30X-2-6						
6c(1)	Perform biennial periodic inspection						
6c(2)	Service missile guidance set cooling system						
6d	Electrical power distribution system TR: TO 21-LG118A-6, 21M-LGM30F-6WC-1, CEM 21-SM80-6 (Vol XX)						
6d(1)	Perform annual inspection of emergency storage battery set TR: TOs 21-LG118A-2-11, 21M-LGM30X-2-11(-1)	3					
6d(2)	Electrical power filters TR: TOs 21-LG118A-2-11, 21-LG118A-2-21, 21M-LGM30X-2-11, 21M-LGM30X-2-21-X; CEMs 21-SM80X-2-21-X, 35R-1-X51-X						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
6d(2a)	Perform biennial periodic inspection						INTIALS
6d(2b)	Perform quadrennial periodic inspection						
6d(2c)	Troubleshoot						
6d(2d)	Repair						
6d(3)	Earth ground and grounding systems TR: AFI 32-1065; TOs 33A1-12-310-1, 33A1-12-687-1; CEMs 21-SM80X-2-21-X, 35R-1-X51-X						
6d(3a)	Perform biennial periodic inspection						
6d(3b)	Repair miscellaneous hardware						
6d(4)	Distribution panels/main junction boxes TR: TO 21-LG118A-2-11, 21M-LGM30X-2-11(-1), CEMs 21-SM80X-2-21-X, 35R-1-X51-X; National Electric Code; National Fire Protection Association						
6d(4a)	Perform biennial periodic inspection						
6d(4b)	Troubleshoot						
6d(4c)	Repair						
6d(5)	Electrical wiring TR: CEMs 21-SM80X-2-21-X, 35R-1-X51-X; National Electric Code; National Fire Protection Association						
6d(5a)	Troubleshoot						
6d(5b)	Repair						
6d(6)	Elevator work cage power and communications distribution box TR: TOs 21M-LGM30X-2-11(-1), 35A4-2-31-1						
6d(6a)	Troubleshoot						
6d(6b)	Repair						
6d(6c)	Remove						
6d(6d)	Replace						
6d(7)	Perform annual periodic inspection of motor generator set TR: TOs 21M-LGM30X-2-11(-1)						
6d(8)	Buck boost transformer TR: 21-SM80X-2-21-X, 35R-1-X51-X						
6d(8a)	Perform biennial periodic inspection (Wing 1X only)						
6d(8b)	Troubleshoot						
6d(8c)	Repair						
6d(9)	Site light system TR: 21-SM80X-2-21-X, 35R-1-X51-X						
6d(9a)	Troubleshoot						
6d(9b)	Repair						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
6e	Waste disposal system TR: CEMs 21SM80X-2-24-X, 21-SM80X-2-26-X, 21-SM80-6 (Vol XX), 35R-1-X61-X, 35R-1-X81-X						INITIALS
6e(1)	Sump pump 103/501						
6e(1a)	Perform biennial periodic inspection						
6e(1b)	Troubleshoot						
6e(1c)	Repair						
6e(2)	Sump pump 104						
6e(2a)	Perform biennial periodic inspection						
6e(2b)	Troubleshoot						
6e(2c)	Repair						
6e(3)	Sump pump 102/601						
6e(3a)	Perform biennial periodic inspection						
6e(3b)	Perform special periodic inspection						
6e(3c)	Troubleshoot	5					
6e(3d)	Repair	5					
6e(4)	Heat cable TR: 21-SM80X-2-20-X, 35R-1-X41-X						
6e(4a)	Perform biennial periodic inspection						
6e(4b)	Troubleshoot						
6e(4c)	Repair						
6f	Personnel access/security system TR: TOs 21-LG118A-2-10, 21-LG118A-2-19, 21-LG118A-2-28, 21-LG118A-6WC-1, 21M-LGM30F-2-19, 21M-LGM30F-6WC-1, 21M-LGM30G-2-10 (-1), 21M-LGM30G-2-28(-1), 35M1-9-2-2						
6f(1)	Perform annual periodic inspection						
6f(2)	Perform biennial periodic inspection						
6f(3)	Perform quadrennial periodic inspection						
6f(4)	Perform security pit electrical test						
6f(5)	Change secondary door lock combination						
6f(6)	PAH hand driven linear actuator						
6f(6a)	Perform biennial periodic inspection						
6f(6b)	Perform quadrennial periodic inspection						
6f(6c)	Replace						
6f(7)	LEB blast door						
6f(7a)	Perform annual periodic inspection						
6f(7b)	Perform biennial periodic inspection						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
6f(7c)	Repair minor mechanical components						INTIALS
6g	Shock attenuation system TR: TOs 21-LG118A-2-28, 21-LG118A-6WC-1, 21M-LGM30F-6WC-1, 21M-LGM30X-2-11(-1), 21M-LGM30G-2-28(-1); CEMs 21M-SM80X-2-26-X, 35R-1-X81-X						
6g(1)	Perform quadrennial periodic inspection						
6g(2)	Troubleshoot						
6g(3)	Repair						
6h	Perform semi-annual periodic inspection of gas mask TR: TOs 14P4-1-151, 14P4-15-1						
6i	Perform biennial periodic inspection of launch tube access system TR: CEMs 21-SM80X-2-26-X, 21-SM80-6 (Vol XX), 35R-1-X81-X						
6j	Electronic fuel tank monitor system TR: CEMs 21-SM80X-2-26-X, 21-SM80-6 (Vol XX), 35R-1-X81-X						
6j(1)	Perform annual inspection (Wing 1X only)						
6j(2)	Troubleshoot						
6j(3)	Repair						
7	WS 118A LAUNCH FACILITY MAINTENANCE						
7a	ECS TR: TOs 21-LG118A-2-7, 21-LG118A-6WC-1						
7a(1)	Air conditioning subsystem/controls/alarms						
7a(1a)	Perform biennial periodic inspection						
7a(1b)	Troubleshoot						
7a(1c)	Repair						
7a(2)	Launch tube heating subsystem/controls/alarms						
7a(2a)	Perform biennial periodic inspection						
7a(2b)	Troubleshoot						
7a(2c)	Repair						
7a(3)	Emergency air conditioning subsystem/controls/alarms						
7a(3a)	Perform biennial periodic inspection						
7a(3b)	Troubleshoot						
7a(3c)	Repair						
7a(4)	Purge air subsystem						
7a(4a)	Perform biennial periodic inspection						
7a(4b)	Troubleshoot						
7a(4c)	Repair	1			1		
7b	Guidance and control conditioning unit TR: TOs 21-LG118A-2-6, 21-LG118A-6WC-1						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
7b(1)	Perform annual periodic inspection						INTIALS
7b(2)	Perform biennial periodic inspection						
7b(3)	Troubleshoot						
7b(4)	Repair						
7b(5)	Service						
7c	Sump pump 102 TR: TO 21-LG118A-2-28; CEMs 21-SM80X-2-24-X, 21-SM80-6 (Vol XX), 35R-1-X61-X						
7c(1)	Perform biennial periodic inspection						
7c(2)	Troubleshoot						
7c(3)	Repair						
7d	Perform periodic inspection of the umbilical restraint device TR: TO 21-LG118A-6WC-1						
7e	LER platforms TR: TOs 21-LG118A-2-7, 21-LG118A-6						
7e(1)	Install						
7e(2)	Remove						
7f	Operate gas/oxygen analyzer TR: TO 11H5-29-1; Applicable Manufacturer's Operation and Service Instructions						
7g	LF stage IV in-flight coolant assembly TR: TO 21-LG118A-52						
7g(1)	Troubleshoot						
7g(2)	Remove hoses						
7g(3)	Install hoses						
7g(4)	Repair						
8	MISSILE ALERT FACILITY MAINTENANCE						
8a	LCEB/MAFSB power generation system TR: AFMAN 32-1062; AFSPCI 32-1005; CEMs 21-SM80X-2-21-X, 21-SM80X-2-21-X-1, 21-SM80X-2-26-X, 21-SM80-6 (Vol XX), 35R-1-X51-X, 35R-1-X81-X						
8a(1)	Replace diesel electric unit						
8a(2)	Engine fuel oil system						
8a(2a)	Perform biennial periodic inspection						
8a(2b)	Perform quadrennial periodic inspection	1					
8a(2c)	Troubleshoot			1			
8a(2d)	Repair						
8a(3)	Engine lube oil system						
8a(3a)	Perform biennial periodic inspection						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL
8a(3b)	Perform quadrennial periodic inspection						INITIALS
8a(3c)	Troubleshoot						
8a(3d)	Repair						
8a(4)	Engine cooling system						
8a(4a)	Perform biennial periodic inspection	3					
8a(4b)	Perform quadrennial periodic inspection						
8a(4c)	Troubleshoot						
8a(4d)	Repair						
8a(5)	Engine governor/injection pump/injectors						
8a(5a)	Perform biennial periodic inspection						
8a(5b)	Perform quadrennial periodic inspection						
8a(5c)	Troubleshoot						
8a(5d)	Repair						
8a(6)	Generator/exciter/voltage regulator						
8a(6a)	Perform biennial periodic inspection						
8a(6b)	Perform quadrennial periodic inspection						
8a(6c)	Troubleshoot						
8a(6d)	Repair						
8a(7)	Engine starting/stopping devices						
8a(7a)	Troubleshoot						
8a(7b)	Repair						
8a(8)	Diesel battery charger						
8a(8a)	Perform biennial periodic inspection	3					
8a(8b)	Troubleshoot						
8a(8c)	Repair						
8a(9)	Starting batteries						
8a(9a)	Perform annual periodic inspection	3					
8a(9b)	Perform biennial periodic inspection	3					
8a(9c)	Troubleshoot						
8a(9d)	Repair						
8a(10)	Engine cranking/alarm panel						
8a(10a)	Perform biennial periodic inspection						
8a(10b)	Troubleshoot						
8a(10c)	Repair						
8a(11)	Engine/generator control panel						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
8a(11a)	Perform biennial periodic inspection						INITIALS
8a(11b)	Troubleshoot						
8a(11c)	Repair						
8a(12)	Engine safety/alarm devices						
8a(12a)	Perform biennial periodic inspection						
8a(12b)	Perform quadrennial periodic inspection						
8a(12c)	Troubleshoot						
8a(12d)	Repair						
8a(13)	Engine intake/exhaust system						
8a(13a)	Perform biennial periodic inspection						
8a(13b)	Perform quadrennial periodic inspection						
8a(13c)	Troubleshoot						
8a(13d)	Repair						
8a(14)	Immersion heater						
8a(14a)	Troubleshoot						
8a(14b)	Repair						
8a(15)	Automatic switching unit/power control center						
8a(15a)	Perform biennial periodic inspection						
8a(15b)	Troubleshoot						
8a(15c)	Repair						
8a(16)	Automatic/manual transfer switches/switch gear						
8a(16a)	Perform biennial periodic inspection						
8a(16b)	Troubleshoot						
8a(16c)	Repair						
8a(17)	Replace Minuteman Power Processor (MPP)						
8a(18)	Minuteman power processor battery/charger						
8a(18a)	Perform biennial periodic inspection	3					
8a(18b)	Troubleshoot						
8a(18c)	Repair						
8a(19)	Diesel vibration dampers/snubbers				1		
8a(19a)	Perform periodic inspection				1		
8a(19b)	Repair				1		
8b	Environmental control system TR: TOs 21-LG118A-2-7-1, 21-LG118A-6WC-2, 21M-LGM30F-6WC-2, 21M-LGM30X-2-7-X						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING
8b(1)	Brine subsystem						INITIALS
8b(1a)	Perform annual periodic inspection						
8b(1b)	Perform biennial periodic inspection						
8b(1c)	Perform quadrennial periodic inspection						
8b(1d)	Troubleshoot						
8b(1e)	Repair						
8b(1f)	Service hydraulic accumulators (Wing 1X only)						
8b(1g)	Balance brine flow (Wing 1X and VAFB only)						
8b(2)	Pneumatic brine mixing valves (Wing 1X and VAFB only)						
8b(2a)	Troubleshoot						
8b(2b)	Repair						
8b(3)	Refrigerant subsystem						
8b(3a)	Perform annual periodic inspection						
8b(3b)	Perform biennial periodic inspection						
8b(3c)	Perform quadrennial periodic inspection						
8b(3d)	Troubleshoot						
8b(3e)	Repair						
8b(4)	Brine chiller control panel						
8b(4a)	Perform biennial periodic inspection						
8b(4b)	Troubleshoot						
8b(4c)	Repair						
8b(5)	Replace brine chiller unit						
8b(6)	Air conditioning subsystem/controls/alarms						
8b(6a)	Perform annual periodic inspection						
8b(6b)	Perform biennial periodic inspection						
8b(6c)	Perform quadrennial periodic inspection						
8b(6d)	Troubleshoot						
8b(6e)	Repair						
8b(6f)	Balance air flow						
8b(7)	Ventilation air subsystem/controls/alarms TR: CEMs 21-SM80X-2-20-X, 35R-1-X41-X						
8b(7a)	Perform annual periodic inspection (Wing 1X and VAFB only)						
8b(7b)	Perform biennial periodic inspection						
8b(7c)	Perform quadrennial periodic inspection						
8b(7d)	Troubleshoot						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
8b(7e)	Repair						INTIALS
8b(7f)	Balance air flow (Wing 1X and VAFB only)						
8b(8)	Refrigerator/oven TR: CEMs 21-SM80X-2-26-X, 21-SM80-6 (Vol XX), 35R-1-X81-X						
8b(8a)	Perform biennial periodic inspection						
8b(8b)	Remove						
8b(8c)	Replace						
8b(9)	LCC heating subsystem/controls (Wing 1X only)						
8b(9a)	Perform annual periodic inspection						
8b(9b)	Troubleshoot						
8b(9c)	Repair						
8b(10)	Emergency air conditioning subsystem/controls/alarms						
8b(10a)	Perform annual periodic inspection						
8b(10b)	Perform biennial periodic inspection						
8b(10c)	Perform quadrennial periodic inspection (Wing 1X and VAFB only)						
8b(10d)	Troubleshoot						
8b(10e)	Repair						
8b(11)	Oxygen regeneration unit						
8b(11a)	Perform biennial periodic inspection						
8b(11b)	Perform quadrennial periodic inspection						
8b(11c)	Repair						
8b(12)	Instrument air subsystem						
8b(12a)	Perform biennial periodic inspection	3					
8b(12b)	Perform quadrennial periodic inspection						
8b(12c)	Troubleshoot						
8b(12d)	Repair						
8b(13)	Makeup air subsystem/controls/alarms						
8b(13a)	Perform biennial periodic inspection						
8b(13b)	Troubleshoot						
8b(13c)	Repair						
8c	Electrical power distribution system TR: TOs 21-LG118A-6WC-2, 21M-LGM30F-6WC-2; CEM 21-SM80-6 (Vol XX)						
8c(1)	Perform annual inspection of emergency storage battery set TR: TOs 21-LG118A-2-11-1, 21M-LGM30X-2-11(-1)						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
8c(2)	LCC/LCEB/MAFSB junction boxes/distribution panels TR: TOs 21-LG118A-2-11-1, 21M-LGM30X-2-11(-1); CEMs 21-SM80X-2-21-X, 35R-1-X51-X; National Electric Code; National Fire Protection Association						INTALS
8c(2a)	Perform biennial periodic inspection						
8c(2b)	Troubleshoot						
8c(2c)	Repair						
8c(3)	Electrical power filters TR: TOs 21-LG118A-2-11-1, 21-LG118A-2-21, 21M-LGM30X-2-11(-1), 21M-LGM30X-2-21-X; CEMs 21-SM80X-2-21-X, 35R-1-X51-X						
8c(3a)	Perform biennial periodic inspection						
8c(3b)	Troubleshoot						
8c(3c)	Repair						
8c(4)	Earth ground and grounding system TR: AFI 32-1065; TOs 33A1-12-310-1, 33A1-12-687-1; CEMs 21-SM80X-2-21-X, 35R-1-X51-X						
8c(4a)	Perform biennial periodic inspection						
8c(4b)	Repair miscellaneous hardware						
8c(5)	Electrical wiring TR: National Electric Code; National Fire Protection Association						
8c(5a)	Troubleshoot						
8c(5b)	Repair						
8c(6)	Perform annual periodic inspection of motor generator set TR: 21M-LGM30X-2-11(-1)						
8c(7)	Buck boost transformer TR: CEMs 21-SM80X-2-21-X, 35R-1-X51-X						
8c(7a)	Troubleshoot						
8c(7b)	Repair						
8d	Tunnel junction/LCEB/LCC blast door TR: TO 21-LG118A-2-28-1, 21-LG118A-6WC-2, 21M-LGM30F-6WC-2, 21M-LGM30X-2-28(-1)						
8d(1)	Perform annual periodic inspection						
8d(2)	Perform biennial periodic inspection					1	
8d(3)	Repair minor mechanical components						
8e	LCC lighting, emergency/survival TR: TO 21-LG118A-2-11-1, 21-LG118A-6WC-2, 21M-LGM30F-6WC-2, 21M-LGM30X-2-11(-1)						
8e(1)	Perform quadrennial periodic inspection						
8e(2)	Troubleshoot						
8e(3)	Repair	1					

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
8f	Annunciator/monitor/alarm panel LCC/LCEB/MAFSB TR: CEMs 21-SM80X-2-21-X, 21-SM80X-2-26-X, 21-SM80-6 (Vol XX), 35R-1-X51-X, 35R-1-X81-X						
8f(1)	Perform biennial periodic inspection (Wing 1X only)						
8f(2)	Troubleshoot						
8f(3)	Repair						
8g	LCC operator's chair TR: TOs 21-LG118A-2-28, 21M-LGM30X-2-28(-1)						
8g(1)	Repair minor hardware						
8g(2)	Replace						
8h	Shock attenuation system TR: TO 21-LG118A-2-11-1, 21-LG118A-2-28-1, 21-LG118A-6WC-2, 21M-LGM30F-6WC-2, 21M-LGM30X-2-11(-1), 21M-LGM30X-2-28(-1); CEMs 21-SM80X-2-26-X, 21-SM80-6 (Vol XX), 35R-1-X81-X						
8h(1)	Perform biennial periodic inspection						
8h(2)	Troubleshoot						
8h(3)	Repair						
8i	Electronic fuel tank monitor system TR: CEMs 21-SM80X-2-26-X, 35R-1-X81-X						
8i(1)	Troubleshoot						
8i(2)	Repair						
9	WS 118A MSB MAINTENANCE TR: TOs 21-LG118A-6WC-3, 36A13-31-1						
9a	Guidance and control conditioning unit TR: TOs 21-LG118A-2-6, 35E9-232-1						
9a(1)	Fan assembly						
9a(1a)	Checkout						
9a(1b)	Troubleshoot						
9a(1c)	Repair						
9a(2)	Compressor assembly						
9a(2a)	Checkout						
9a(2b)	Troubleshoot						
9a(2c)	Repair						
9a(3)	Condenser assembly						
9a(3a)	Checkout						
9a(3b)	Troubleshoot						
9a(3c)	Repair						
9a(4)	Electrical assembly						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL
9a(4a)	Checkout						INITIALS
9a(4b)	Troubleshoot						
9a(4c)	Repair						
9a(5)	Final conditioning unit						
9a(5a)	Checkout						
9a(5b)	Troubleshoot						
9a(5c)	Repair						
9a(6)	Refrigerant hose assembly						
9a(6a)	Checkout						
9a(6b)	Troubleshoot						
9a(6c)	Repair						
9a(7)	Filter dryer						
9a(7a)	Repair						
9a(7b)	Evacuation						
9a(7c)	Service						
9b	Elevator workcage hoist assembly TR: TOs 21-LG118A-2-10, 35M3-8-11-1						
9b(1)	Checkout						
9b(2)	Troubleshoot						
9b(3)	Repair						
9c	Stage IV in-flight coolant assembly TR: TO 21-LG118A-52						
9c(1)	Troubleshoot						
9c(2)	Remove hoses						
9c(3)	Install hoses						
9c(4)	Repair						
10	VANDENBERG AFB MAINTENANCE						
10a	Facilities Maintenance						
10a(1)	Launcher Auxiliary Support Building (LASB) TR: TO 21-LG118A-2-17-2						
10a(1a)	Enter						
10a(1b)	Exit						
10a(1c)	Perform electrical isolation						
10a(2)	Portable Diesel Electric Unit (PDEU) power system TR: CEM 21-SM80-102, AFJMAN-24-306						
10a(2a)	Install						
10a(2b)	Operate						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
10a(2c)	Service					1	INTIALO
10a(2d)	Adjust						
10a(2e)	Remove						
10a(2f)	PDEU trailer acceptance and preparation for towing						
10a(2g)	Force Development Evaluation (FDE) PDEU operation in test mode						
10a(2h)	Pintle hook						
10a(3)	Refire control panel TR: TO 21M-LGM30F-2-7-4						
10a(3a)	Troubleshoot						
10a(3b)	Repair						
10a(4)	Guidance control conditioning unit checkout TR: TO 21-LG118A-2-6						
10a(5)	Partial Operational Support Equipment (OSE) startup/shutdown TR: TO 21-LG118A-2-17-2						
10a(6)	Umbilical restraint device tether service TR: TOs 21-LG118A-6WC-1, 21-LG118A-2-28						
10a(7)	Minuteman MAF static ground points TR: CEMs 21-SM80-2-21-X, 21-SM80-6 (Vol VII), 35R-1-X51-1						
10a(7a)	Perform annual periodic inspection						
10a(8)	Minuteman LF static ground points TR: CEMs 21-SM80-2-21-X, 21-SM80-6 (Vol VII), 35R-1-X51-1						
10a(8a)	Perform annual periodic inspection						
10a(9)	LF/MAF topside Automatic Transfer Switch (ATS) TR: CEMs 21-SM80X-2-21-X, 35R-1-X51-1						
10a(9a)	Troubleshoot						
10a(9b)	Repair						
10a(10)	FDE ECS checkout TR: TOs 21-LG118A-2-7 (-1), 21M-LGM30X-2-7-X						
10a(10a)	LF normal mode checkout						
10a(10b)	MAF normal mode checkout						
10a(10c)	LF emergency mode checkout						
10a(10d)	MAF emergency mode checkout						
10a(11)	Launch tube access system TR: CEMs 21-SM80X-2-26-X, 35R-1-X81-X, 21-SM80-6 (Vol VII)						
10a(11a)	Perform annual periodic inspection						
10a(12)	MAF makeup air subsystem TR: TOs 21-LG118A-2-7-1, 21-LG118A-6WC-2, 21M-LGM30F-6WC-2, 21M-LGM30X-2-7-X						
10a(12a)	Perform annual periodic inspection						
10a(13)	MAF 01A maintenance TR: CEM 21-SM80-19 (Vol XX)						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
10a(13a)	Perform gate and support building entry						INTIALS
10a(13b)	Perform launch control center entry						
10a(13c)	Perform launch control center exit						
10a(13d)	Perform gate and support building exit						
10a(13e)	Perform emergency shutdown						
10a(13f)	Perform support building electrical isolation						
10a(14)	MAF 01E maintenance TR: CEM 21-SM80-19 (Vol XX)						
10a(14a)	Perform MAF entry						
10a(14b)	Perform launch control center entry						
10a(14c)	Perform MAF exit						
10a(14d)	Perform emergency shutdown						
10a(14e)	Perform LCEB electrical isolation						
10a(15)	MAF DDD maintenance TR: CEM 21-SM80-19 (Vol XX)						
10a(15a)	Perform MAF entry						
10a(15b)	Perform launch control center						
10a(15c)	Perform MAF exit						
10a(15d)	Perform emergency shutdown						
10a(15e)	Perform LCEB electrical isolation						
10a(16)	Remote ECS monitor sensor						
10a(16a)	Removal and replacement TR: TO 21M-LGM30F-2-30-1						
10a(17)	Power control center TR: CEMs 21-SM80F-2-21-1, 21-SM80-6 (Vol VII), 35R-1-651-1						
10a(17a)	Perform quadrennial periodic inspection						
10a(18)	Electrical power filters TR: CEMs 21-SM80F-2-20-1, 21-SM80-6 (Vol VII), 35R-1-641-1						
10a(18a)	Perform annual periodic inspection						
10a(19)	Distribution panels/main junction boxes TR: TO 21-LG118A-2-11, 21M-LGM30X-2-11(-1), CEMs 21-SM80X-2-21-X, 35R-1-X51-X; National Electric Code; National Fire Protection Association						
10a(19a)	Perform LF annual periodic inspection						
10a(19b)	Perform MAF annual periodic inspection						
10b	Power Refrigeration and Electric Shop maintenance						
10b(1)	HIP-E1 hydraulic test stand TR: TO 33A2-2-87-1						
10b(1a)	Troubleshoot						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL
10b(1b)	Repair						INITIALS
10b(2)	CTL winch set TR: TO 35D4-2-45-1						
10b(2a)	Troubleshoot						
10b(2b)	Repair						
10b(3)	Elevator work platform system boom cable reel TR: TO 35D6-2-2						
10b(3a)	Remove and replace						
10b(4)	Missile transporter TR: TO 35C2-3-493-1, 35M4-3-7-1						
10b(4a)	Auxiliary power unit						
10b(4a1)	Troubleshoot						
10b(4a2)	Repair						
10b(4b)	Electrical						
10b(4b1)	Troubleshoot						
10b(4b2)	Repair						
10b(5)	Air elevator support trailer TR: TOs 21-LG118A-6WC-5, 35M3-8-17-1, 35M10-7-5-1, 35M10-7-6-1, 35M19-2-22-1, 36C8-13-1, 38G1-82-12						
10b(5a)	Electrical system						
10b(5a1)	Inspect						
10b(5a2)	Troubleshoot						
10b(5a3)	Repair						
10b(5b)	Refrigeration system						
10b(5b1)	Inspect/Service						
10b(5b2)	Troubleshoot						
10b(5b3)	Repair						
10b(5c)	Diesel engine						
10b(5c1)	Inspect/Service						
10b(5c2)	Troubleshoot						
10b(5c3)	Repair						
10b(5d)	Fire suppression system						
10b(5d1)	Inspect				1		
10b(5d2)	Troubleshoot				1		
10b(5d3)	Repair			1			
10b(6)	Support truck TR: TOs 21-LG118A-6WC-3, 35C2-3-279-1, 35C2-3-475-2, 35C2-3-479-4, 35C2-3-480-1, 36A13-31-1						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
10b(6a)	Electrical system						INITIALS
10b(6a1)	Inspect						
10b(6a2)	Troubleshoot						
10b(6a3)	Repair						
10b(6b)	ECS						
10b(6b1)	Inspect/Service						
10b(6b2)	Troubleshoot						
10b(6b3)	Repair						
10b(6c)	Diesel engine						
10b(6c1)	Inspect/Service						
10b(6c2)	Operational checkout						
10b(6c3)	Troubleshoot						
10b(6c4)	Repair						
10b(6d)	Hoist (electrical)						
10b(6d1)	Inspect						
10b(6d2)	Operational checkout						
10b(6d3)	Troubleshoot						
10b(6d4)	Repair						
10b(7)	Transporter semi-trailer type I TR: TOs 21-LG118A-6WC-5, 35D3-11-46-1						
10b(7a)	Electrical system						
10b(7a1)	Inspect						
10b(7a2)	Troubleshoot						
10b(7a3)	Repair						
10b(7b)	Diesel engine						
10b(7b1)	Inspect/Service						
10b(7b2)	Operational checkout						
10b(7b3)	Troubleshoot						
10b(7b4)	Repair						
10b(8)	Transporter semi-trailer type II TR: TOs 21-LG118A-6WC-5, 35D3-11-46-1						
10b(8a)	Electrical system						
10b(8a1)	Inspect						
10b(8a2)	Troubleshoot						
10b(8a3)	Repair						
10b(8b)	Diesel engine						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
10b(8b1)	Inspect/Service						INITIALS
10b(8b2)	Operational checkout						
10b(8b3)	Troubleshoot						
10b(8b4)	Repair						
10b(9)	Emplacer TR: TOs 21-LG118A-6WC-5, 36A9-11-14-1						
10b(9a)	Electrical system						
10b(9a1)	Inspect/Service						
10b(9a2)	Troubleshoot						
10b(9a3)	Repair						
10b(9b)	Hoist (electrical)						
10b(9b1)	Inspect						
10b(9b2)	Troubleshoot						
10b(9b3)	Repair						
10b(9c)	Ventilation system						
10b(9c1)	Inspect/Service						
10b(9c2)	Repair						
10b(10)	Stage IV/RS/LEGG/LSA/Emplacement container TR: TOs 21-LG118A-6WC-3, 35E20-2-38-1						
10b(10a)	Physical security system						
10b(10a1)	Inspect						
10b(10a2)	Operational checkout						
10b(10a3)	Troubleshoot						
10b(10a4)	Repair						
10b(11)	Stage II, III and IV emplacement container TR: TOs 21-LG118A-6WC-3, 35C2-3-475-2, 35C2-3-479-1, 35C2-3-480-1, 35E20-2-38-1, 35M1-10-2-1						
10b(11a)	APU/ECS package						
10b(11a1)	Inspect/Service						
10b(11a2)	Operational checkout						
10b(11a3)	Troubleshoot						
10b(11a4)	Repair						
10b(12)	Guidance and control conditioning unit TR: TOs 21-LG118A-2-6, 35D9-232-1						
10b(12a)	Manifold assembly						
10b(12a1)	Checkout						
10b(12a2)	Troubleshoot						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
10b(12a3)	Repair						INTIALO
10b(13)	Air elevator control module TR: TOs 33D9-19-78-1, 35M10-7-6-1						
10b(13a)	Inspect						
10b(13b)	Troubleshoot						
10b(13c)	Repair						
10b(14)	Shroud external maintenance platform TR: TO 16W21-7-2; Applicable Manufacturer's Operation and Service Instructions						
10b(14a)	Inspect/Service						
10b(14b)	Operate						
10b(14c)	Troubleshoot						
10b(14d)	Repair						
10b(15)	Overhead cranes TR: AFOSH 91-46; TO 21-LG118A-2-31; CEM 21-SM118A-2-232- 2						
10b(15a)	Operate						
10b(15b)	Perform emergency procedures						
11	MISSILE ALERT FACILITY MANAGEMENT TR: AFSPCI 10-204; CEM 21-SM80-19 (Vol XX); Local Directives						
11a	General procedures						
11a(1)	Ensure all personnel comply with MAF directives						
11a(2)	Perform changeover procedures						
11a(3)	Conduct basic weather observations						
11a(4)	Conduct visitor safety briefings						
11a(5)	Conduct safety inspections						
11a(6)	Conduct periodic equipment/lighting checks						
11a(7)	Identify safety equipment location and operational procedures						
11a(8)	Maintain/control medical supplies						
11a(9)	Perform fuels management duties TR: AFI 23-201, 23-204, CEMs 21-SM80X-2-26-X, 35R-1-X81-X						
11a(10)	Maintain inventory and control of MAF supplies and equipment TR: AFMAN 23-110						
11a(11)	Perform facility custodial manager duties TR: AFI 91-XX; Applicable Manufacturer's Operation and Service Instructions						
11a(12)	Support equipment						
11a(12a)	Operate snow control vehicles/equipment TR: AFI 32-1045						

11a(12b) Operate/maintain lawn care equipment Tr: Applicable Manufacturer's Operation and Service Imstructions 11a(12c) Inspect below ground rescue equipment (Hoist/litter) Imstructions 11a(12b) Inspect below ground rescue equipment (Hoist/litter) Imstructions 11a(13) Support helicopter operations Imstructions 11a(14) Perform MAF entry/escort duties Imstructions TR: AFSPCI 31-101 Imstructions Imstructions 11b Emergency proceedures Imstructions Imstructions 11b(2) Perform MAFSB/LCEB belexing and mergency response Imstructions Imstructions 11b(3) Perform MAFSB/LCEB belexing and the response Imstructions Imstructions 11b(4) Perform MAFSB/LCEB belexing procedures Imstructions Imstructions 11b(5) Perform ECS emergency shutdown/restart Imstructions Imstructions Imstructions 11b(6) Perform MAF fire fighting procedures Imstructions Imstructions <t< th=""><th>ITEM #</th><th>TASK / KNOWLEDGE ITEM</th><th>CORE TASK</th><th>START DATE</th><th>COMP DATE</th><th>TRAINEE INITIALS</th><th>TRAINER INITIALS</th><th>CERTIFYING OFFICIAL INITIALS</th></t<>	ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
111(13) Support helicopter operations Image: Control of the image of the i	11a(12b)	TR: Applicable Manufacturer's Operation and Service						INTIALO
11a(14) Perform MAF entry/escort duties TR: AFSPCI 31-1101 Image: Composition of the second of	11a(12c)	Inspect below ground rescue equipment (Hoist/litter)						
TR: AFSPCI 31-1101 Image of the second	11a(13)	Support helicopter operations						
11b(1) Perform above/below ground emergency response Image: Constraint of the image:	11a(14)							
11b(2) Perform MAFSB/below ground fire response Image: Constraint of the second s	11b	Emergency procedures						
11b(3) Perform MAFSB/LCEB electrical isolation Image: constraint of the systems in the system in the systems in the systems in the systems in the systems in the system in the syste	11b(1)	Perform above/below ground emergency response						
11b(4) Perform MAFSB/LCEB DEU isolation/shutdown Image: Constraint of the systems of the system	11b(2)	Perform MAFSB/below ground fire response						
11b(5) Perform below ground medical response Image: Comparison of the systems of	11b(3)	Perform MAFSB/LCEB electrical isolation						
11b(6) Perform LCC blast door forced entry/emergency response I<	11b(4)	Perform MAFSB/LCEB DEU isolation/shutdown						
11b(7) Perform MAF fire fighting procedures Image: Second Se	11b(5)	Perform below ground medical response						
11b(8) Perform ECS emergency shutdown/re-start Image: Constraint of the start of the st	11b(6)	Perform LCC blast door forced entry/emergency response						
11b(9)Perform ISST/MMP fire/overheat condition responseImage: Condition responseImage: Condition response11b(10)Disaster Preparedness TR: AF132-4001; AFMAN 32-4005; 20AF1 10-2Image: Condition responseImage: Condition response11b(10a)Perform MAF Shelter Management operationsImage: Condition responseImage: Condition responseImage: Condition response11b(10b)Perform MAF hazardous material spill responseImage: Condition responseImage: Condition responseImage: Condition response11b(10c)Perform severe weather responseImage: Condition responseImage: Condition responseImage: Condition response11cFacility equipmentImage: Condition responseImage: Condition responseImage: Condition responseImage: Condition response11c(1)Water systems: Class 1, Class 2 TR: CEMs 21-SM80X-2-24-X, 35R-1-X61-XImage: Condition responseImage: Condition responseImage: Condition response11c(1)NepectImage: Condition responseImage: Condition responseImage: Condition responseImage: Condition response11c(2)Dewatering systems TR: CEMs 21-SM80X-2-24-X, 35R-1-X61-XImage: Condition responseImage: Condition responseImage: Condition response11c(3)ServiceImage: Condition responseImage: Condition responseImage: Condition responseImage: Condition response11c(4)Heating/HVAC systems TR: CEMs 21-SM80X-2-20-X, 35R-1-X41-XImage: Condition responseImage: Condition responseImage: Condition response11c(4)Heating/HVAC systems TR: CEMs	11b(7)	Perform MAF fire fighting procedures						
11b(10) Disaster Preparedness TR: AFI 32-4001; AFMAN 32-4005; 20AFI 10-2 Image: Constraint of the second of t	11b(8)	Perform ECS emergency shutdown/re-start						
TR: AFI 32:4001; AFMAN 32:4005; 20AFI 10-2 Image: Comparison of the section of t	11b(9)	Perform ISST/MMP fire/overheat condition response						
11b(10a) Perform MAF Shelter Management operations Image: Constraint of the systems of the system of the sys	11b(10)							
11b(10c)Perform severe weather responseImage: Constraint of the severe weather responseImage: Constraint of the severe weather response11cFacility equipmentImage: Constraint of the severe weather responseImage: Constraint of the severe weather resp	11b(10a)							
11c Facility equipment Image: Class 1, Class 2 11c(1) Water systems: Class 1, Class 2 Image: CEMs 21-SM80X-2-24-X, 35R-1-X61-X 11c(1a) Inspect Image: CEMs 21-SM80X-2-24-X, 35R-1-X61-X 11c(1b) Service Image: CEMs 21-SM80X-2-24-X, 35R-1-X61-X 11c(1b) Service Image: CEMs 21-SM80X-2-24-X, 35R-1-X61-X 11c(1c) Operate Image: CEMs 21-SM80X-2-24-X, 35R-1-X61-X 11c(2) Dewatering systems TR: CEMs 21-SM80X-2-24-X, 35R-1-X61-X Image: CEMs 21-SM80X-2-24-X, 35R-1-X61-X 11c(2b) Service Image: CEMs 21-SM80X-2-24-X, 35R-1-X61-X Image: CEMs 21-SM80X-2-24-X, 35R-1-X61-X 11c(2b) Service Image: CEMs 21-SM80X-2-24-X, 35R-1-X61-X Image: CEMs 21-SM80X-2-24-X, 35R-1-X61-X 11c(3a) Inspect Image: CEMs 21-SM80X-2-24-X, 35R-1-X61-X Image: CEMs 21-SM80X-2-24-X, 35R-1-X61-X 11c(3b) Service Image: CEMs 21-SM80X-2-24-X, 35R-1-X61-X Image: CEMs 21-SM80X-2-24-X, 35R-1-X41-X Image: CEMs 21-SM80X-2-20-X, 35R-1-X41-X	11b(10b)	Perform MAF hazardous material spill response						
11c(1) Water systems: Class 1, Class 2 TR: CEMs 21-SM80X-2-24-X, 35R-1-X61-X Image: Comparison of the systems	11b(10c)	Perform severe weather response						
TR: CEMs 21-SM80X-2-24-X, 35R-1-X61-X Image: Cems 21-SM80X-2-24-X, 35R-1-X41-X Image: Cems 21-SM80X-2-20-X, 35R-1-X41-X Im	11c	Facility equipment						
InterfaceImage: Constraint of the second	11c(1)							
11c(1c)OperateImage: CEMs 21-SM80X-2-24-X, 35R-1-X61-XImage: CEMs 21-SM80X-2-24-X, 35R-1-X61-X11c(2a)InspectImage: CEMs 21-SM80X-2-24-X, 35R-1-X61-XImage: CEMs 21-SM80X-2-24-X, 35R-1-X61-X11c(2b)ServiceImage: CEMs 21-SM80X-2-24-X, 35R-1-X61-XImage: CEMs 21-SM80X-2-24-X, 35R-1-X61-X11c(3)Sewage Systems: Lagoon/Septic/Lift Station TR: CEMs 21-SM80X-2-24-X, 35R-1-X61-XImage: CEMs 21-SM80X-2-24-X, 35R-1-X61-X11c(3a)InspectImage: CEMs 21-SM80X-2-24-X, 35R-1-X61-XImage: CEMs 21-SM80X-2-20-X, 35R-1-X41-X11c(3b)ServiceImage: CEMs 21-SM80X-2-20-X, 35R-1-X41-XImage: CEMs 21-SM80X-2-20-X, 35R-1-X41-X	11c(1a)	Inspect						
11c(2)Dewatering systems TR: CEMs 21-SM80X-2-24-X, 35R-1-X61-XImage: Cems 21-SM80X-2-24-X, 35R-1-X61-XImage: Cems 21-SM80X-2-24-X, 35R-1-X61-X11c(2a)InspectImage: Cems 21-SM80X-2-24-X, 35R-1-X61-XImage: Cems 21-SM80X-2-24-X, 35R-1-X61-XImage: Cems 21-SM80X-2-24-X, 35R-1-X61-X11c(3a)InspectImage: Cems 21-SM80X-2-24-X, 35R-1-X61-XImage: Cems 21-SM80X-2-24-X, 35R-1-X61-XImage: Cems 21-SM80X-2-24-X, 35R-1-X61-X11c(3b)ServiceImage: Cems 21-SM80X-2-24-X, 35R-1-X61-XImage: Cems 21-SM80X-2-24-X, 35R-1-X41-XImage: Cems 21-SM80X-2-20-X, 35R-1-X41-X11c(4)Heating/HVAC systems TR: CEMs 21-SM80X-2-20-X, 35R-1-X41-XImage: Cems 21-SM80X-2-20-X, 35R-1-X41-XImage: Cems 21-SM80X-2-20-X, 35R-1-X41-X	11c(1b)	Service						
TR: CEMs 21-SM80X-2-24-X, 35R-1-X61-XImage: Cems 21-SM80X-2-24-X, 35R-1-X61-X11c(2a)InspectImage: Cems 21-SM80X-2-24-X, 35R-1-X61-XImage: Cems 21-SM80X-2-24-X, 35R-1-X61-X11c(3a)InspectImage: Cems 21-SM80X-2-24-X, 35R-1-X61-XImage: Cems 21-SM80X-2-24-X, 35R-1-X61-X11c(3b)ServiceImage: Cems 21-SM80X-2-24-X, 35R-1-X61-XImage: Cems 21-SM80X-2-24-X, 35R-1-X61-X11c(3b)ServiceImage: Cems 21-SM80X-2-24-X, 35R-1-X41-XImage: Cems 21-SM80X-2-24-X, 35R-1-X41-X11c(4)Heating/HVAC systems TR: CEMs 21-SM80X-2-20-X, 35R-1-X41-XImage: Cems 21-SM80X-2-20-X, 35R-1-X41-X	11c(1c)	Operate						
11c(2b)ServiceImage: CEMs 21-SM80X-2-24-X, 35R-1-X61-XImage: CEMs 21-SM80X-2-24-X, 35R-1-X61-X11c(3a)InspectImage: CEMs 21-SM80X-2-24-X, 35R-1-X61-XImage: CEMs 21-SM80X-2-24-X, 35R-1-X61-X11c(3a)InspectImage: CEMs 21-SM80X-2-24-X, 35R-1-X61-XImage: CEMs 21-SM80X-2-24-X, 35R-1-X61-X11c(3b)ServiceImage: CEMs 21-SM80X-2-24-X, 35R-1-X41-XImage: CEMs 21-SM80X-2-24-X, 35R-1-X41-X11c(4)Heating/HVAC systems TR: CEMs 21-SM80X-2-20-X, 35R-1-X41-XImage: CEMs 21-SM80X-2-20-X, 35R-1-X41-X	11c(2)							
11c(3)Sewage Systems: Lagoon/Septic/Lift Station TR: CEMs 21-SM80X-2-24-X, 35R-1-X61-XImage: Cemp 21-SM80X-2-24-X, 35R-1-X61-X11c(3a)InspectImage: Cemp 21-SM80X-2-24-X, 35R-1-X61-XImage: Cemp 21-SM80X-2-24-X, 35R-1-X61-X11c(3b)ServiceImage: Cemp 21-SM80X-2-24-X, 35R-1-X41-XImage: Cemp 21-SM80X-2-24-X, 35R-1-X41-X11c(4)Heating/HVAC systems TR: CEMs 21-SM80X-2-20-X, 35R-1-X41-XImage: Cemp 21-SM80X-2-24-X, 35R-1-X41-X	11c(2a)	Inspect						
TR: CEMs 21-SM80X-2-24-X, 35R-1-X61-X Image: Cemp and the systems Image: Cemp and the system Image: Ce	11c(2b)	Service						
11c(3b) Service Image: Constraint of the systems Image: Constraint of the systems 11c(4) Heating/HVAC systems Image: Constraint of the systems Image: Constraint of	11c(3)							
Heating/HVAC systems Image: CEMs 21-SM80X-2-20-X, 35R-1-X41-X Image: CEMs 21-SM80X-2-20-X, 35R-1-X41-X		Inspect						
TR: CEMs 21-SM80X-2-20-X, 35R-1-X41-X	11c(3b)	Service						
11c(4a) Inspect		TR: CEMs 21-SM80X-2-20-X, 35R-1-X41-X						
	11c(4a)	Inspect						

ITEM #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING OFFICIAL INITIALS
11c(4b)	Service						INTIALO
11c(4c)	Troubleshoot						
11c(5)	Fuel system TR: AFIs 23-201, 23-204; CEMs 21-SM80X-2-26-X, 35R-1-X81-X						
11c(5a)	Vehicle issue tanks						
11c(5a1)	Inspect						
11c(5a2)	Service						
11c(5b)	Support tanks						
11c(5b1)	Inspect						
11c(5b2)	Service						
11c(5b3)	Manual fuel transfer						
11c(6)	Electrical power systems TR: CEMs 21-SM80X-2-21-X (Vol I & II), 35R-1-X51-X						
11c(6a)	LCEB/LCSB/MAFSB DEU						
11c(6a1)	Inspect						
11c(6a2)	Operate						
11c(6b)	Perform LCSB manual power transfer						
11c(6c)	Perform primary power restoration						
11c(6d)	Perform standby power system EWO effectiveness checkout						
11c(7)	Communications Systems (ISST) TR: TOs 21M-LGM30F-1-22, 21M-LGM30F-1-23						
11c(7a)	Inspect						
11c(7b)	Operational limits check						
11c(7c)	Load input variables						
11c(7d)	Perform minor maintenance						
11c(8)	Inspect/test fire alarm systems TR: CEMs 21-SM80X-2-26-X, 35R-1-X81-X						
11c(9)	Operate LCEB blast valves						
11c(10)	Emergency shut-off valves TR: CEMs 21-SM80X-2-24-X, 35R-1-X61-X						
11c(10a)	Inspect						
11c(10b)	Operate						
11c(11)	Operate Tunnel junction/LCEB blast door						

AFSC 2M0X3 STS **ATTACHMENT 3** SPACELIFT FACILITIES MAINTENANCE TASKS

TASK #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYIN G OFFICIAL
1	MAINTENANCE CONTROLLER COMMON TASKS TR: AFSPCI 21-0108; EWR 127-1; Local directives and operating instructions						INITIALS
1a	Support						
1a(1)	Program/readiness reviews						
1a(2)	Problem resolutions/troubleshooting						
1b	Perform						
1b(1)	Post launch actions						
1b(2)	Launch day activities						
1b(3)	Walk-down procedures						
1b(4)	Disaster recovery operations						
1b(5)	Data reviews/procedure closeout						
1c	Ensure compliance with						
1c(1)	Procedures						
1c(2)	Configuration control						
1c(3)	Emergency procedures						
1c(4)	Local safety plans						
1c(5)	Local security requirements						
1c(6)	Environmental requirements						
1d	Conduct briefing/debriefing						
1e	Review/approve procedures						
1f	Operate communication systems						
2	UNDERSTAND FUNCTION, OPERATION AND PROCESSING OF THE FOLLOWING ATLAS SUBSYSTEMS TR: Procedures and training materials						
2a	Launcher						
2b	Generators						
2c	Umbilical tower						
2d	Mobile service tower						
2e	Propellant/Gas storage						
2f	Water deluge and ponds						
2g	Hazardous gas detection						
2h	Uninterruptible power system	1					
2i	Environmental control system						
2ј	Miscellaneous facility systems						
2k	Launch facility pressure and fluid						

AFSC 2M0X3 STS **ATTACHMENT 3** SPACELIFT FACILITIES MAINTENANCE TASKS

TASK #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE	TRAINER INITIALS	CERTIFYIN G OFFICIAL INITIALS
21	Launch facility vehicle stabilization						
2m	Electrical distribution and grounding						
3	UNDERSTAND FUNCTION, OPERATION AND PROCESSING OF THE FOLLOWING DELTA SUBSYSTEMS TR: Procedures and training materials						
3a	Launcher						
3b	Elevators						
3c	Generators						
3d	Propellant/Gas						
3е	Umbilical tower						
3f	Pneumatic systems						
3g	Mobile service tower						
3h	Cranes, hoists and winches						
3i	Control and monitoring system						
Зј	Miscellaneous facility systems						
3k	Environmental control systems						
31	Water deluge and suppression						
3m	Status, warning and alarm systems						
3n	Electrical distribution and grounding						
30	Uninterruptible power system/backup power						
4	UNDERSTAND FUNCTION, OPERATION AND PROCESSING OF THE FOLLOWING TITAN SUBSYSTEMS TR: Procedures and training materials						
4a	Lighting						
4b	Elevators						
4c	Generator						
4d	Pneumatic						
4e	Propellant						
4e(1)	Fuel						
4e(2)	Oxidizer						
4f	Umbilical tower	1					
4g	Gaseous systems	1					
4h	Lightning protection	1		1			
4i	Breathing air system			1			
4j	Mobile service tower			1			
4k	Status, alarm and warning	1					

AFSC 2M0X3 STS **ATTACHMENT 3** SPACELIFT FACILITIES MAINTENANCE TASKS

TASK #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYIN G OFFICIAL INITIALS
41	Cranes, hoists and winches						
4m	Miscellaneous facility systems						
4n	Water deluge and suppression						
40	Electrical distribution and grounding						
4р	Facility control and monitoring system						
4q	Heating ventilation and air conditioning						

PART II Section B - COURSE OBJECTIVE LIST

There is currently no course objective list. This area is reserved.

Section C - SUPPORT MATERIALS

There are currently no support material requirements. This area is reserved.

Section D - TRAINING COURSE INDEX

1. **Purpose.** This section of CFETP identifies training courses available in the Missile and Space Facilities specialty and shows how the courses are used by each MAJCOM in their career field training programs. Career field functional managers and training management personnel should use this information to plan, develop, and update their respective MAJCOM continuation training program.

2. Air Force In-Residence Courses

2.1. *3-Level Awarding Course*. Completion of the following course is mandatory for the award of the 3-skill level.

CRS NO./TITLE	MDS/EQUIP	LOCATION	USER
V3ABR2M033 000 Missile and Space Facilities Apprentice	ICBM	VANDENBERG	AFSPC
2.2. Other In-Resident Courses.			
CRS NO./TITLE	MDS/EQUIP	LOCATION	USER
V3AZR2M071 009 WS-133A/M Technical Engineering	ICBM g	VANDENBERG	AFSPC
L3AQR2M033A 332 Electronics Principles		LACKLAND	ALL
ICBM-IC ICBM Maintenance Instructional Techniques Course	ICBM	F E WARREN	AFSPC
ICBM-MEC ICBM Maintenance Evaluator Course	ICBM	F E WARREN	AFSPC

3. Extension Course Institute (ECI) Courses

CRS NO.	COURSE TITLE
CDC 2M053	Missile and Space Facilities Journeyman
CDC 2M073	Missile and Space Facilities Craftsman

PART II Section E - MAJCOM UNIQUE PROCEDURES

There are currently no MAJCOM unique requirements. This area is reserved.