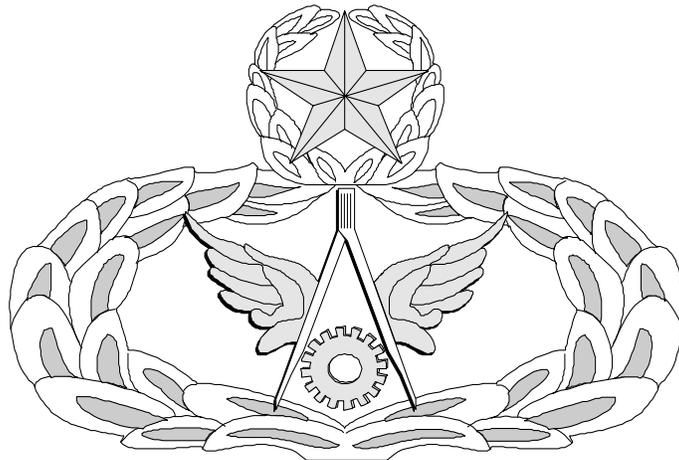
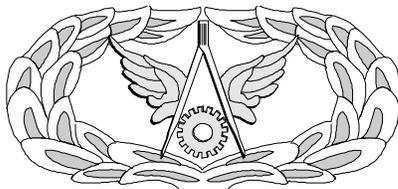


AFSC 3E4X2

LIQUID FUEL SYSTEMS MAINTENANCE



MASTER



BASIC



SENIOR

CAREER FIELD EDUCATION AND TRAINING PLAN

**CAREER FIELD EDUCATION AND TRAINING PLAN
LIQUID FUEL SYSTEMS SPECIALTY
3E4X2**

Table of Contents

Preface	4
Abbreviations/Terms Explained	6
PART I	
Section A - General Information	10
Purpose	
Uses	
Coordination and Approval	
Section B - Career Field Progression and Information	12
Specialty Descriptions	
Skill/Career Progression	
Apprentice (3-Level)	
Journeyman (5-Level)	
Craftsman (7-Level)	
Superintendent (9-Level)	
Civil Engineer Manager	
Training Decisions	
Community College of the Air Force Academic Programs	
Career Field Path	
Section C - Skill Level Training Requirements	22
Purpose	
Specialty Qualification Requirements	
Apprentice (3-Level)	
Journeyman (5-Level)	
Craftsman (7-Level)	
Superintendent (9-Level)	
Civil Engineer Manager	
Section D - Resource Constraints	29
Purpose	
Training Constraints	
Section E - Transition Training Guide	30

PART II

Section A - Specialty Training Standard.....31
Implementation
Purpose
Recommendations
Qualitative Requirements
AFQTP Documentation Record

Section B - Course Objective.....55

Section C - Support Materials56

Section D - Training Course Index57

Section E - Major Command (MAJCOM)-Unique Requirements58

Section F - Home Station Training59

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PREFACE

1. This Career Field Education and Training Plan (CFETP) is a comprehensive education and training document that identifies life-cycle education/training requirements, training support resources, and minimum core task requirements for this specialty. The CFETP will provide personnel a clear career path to success and instill rigor in all aspects of career field training.

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

2.1. Part I provides information necessary for overall management of the specialty.

2.1.1. Section A provides general information about how the CFETP will be used.

2.1.2. Section B identifies career field progression information, duties and responsibilities, training strategies, and career field path.

2.1.3. Section C associates each level with specialty qualifications (knowledge, education, and training).

2.1.4. Section D indicates resource constraints.

2.1.5. Section E identifies transition training guide requirements for SSgt through MSgt.

2.2. Part II includes the following:

2.2.1. Section A identifies the Specialty Training Standard (STS) to include duties, tasks, and technical references to support Air Education and Training Command (AETC)-conducted training, wartime course, and correspondence course requirements.

2.2.2. Section B contains the course objective list and training standards supervisors will use to determine if airmen satisfy training requirements.

2.2.3. Section C identifies available support materials. Air Force Qualification Training Packages (AFQTPs) and CerTests support both Upgrade Training (UGT) and qualification training. AFQTPs are indexed in AF Index (AFIND) 8, Numerical Index of Specialized Educational Training Publications.

2.2.4. Section D identifies a training course index supervisors can use to determine resources available to support training. Included here are both mandatory and optional courses, and exportable courseware.

2.2.5. Section E identifies MAJCOM-unique training requirements supervisors can use to determine additional training required for the associated qualification needs.

2.2.6. Section F identifies home station training references and courses material required for this specialty in support of contingency/wartime training.

3. Using guidance provided in the CFETP will ensure individuals in this specialty receive effective and efficient training at the appropriate point in their careers. This plan will enable us to train today's work force for tomorrow's jobs. At unit level, supervisors and trainers will use Part II to identify, plan, and conduct training commensurate with the overall goals of this guide.

ABBREVIATIONS/TERMS EXPLAINED

Advanced Distributive Learning (ADL). Anytime, anyplace learning within DoD consisting of instructional modules comprised of sharable content objectives in an Internet/Intranet environment.

Advanced Training (AT). A formal course which provides individuals who are qualified in one or more positions of 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 the AFS.

Air Force Career Field Manager (AFCFM). An individual on the Air Staff charged with the responsibility for overseeing all training and career field management aspects of an Air Force specialty or group of specialties.

Air Force Job Qualification Standard/Command Job Qualification Standard (AFJQS/CJQS). A comprehensive task list that describes a particular job type or duty position. Used by supervisors to document task qualifications. The tasks on the AFJQS/CJQS are common to all persons serving in the described duty position.

Air Force Qualification Training Package (AFQTP). An instructional package designed for use at the unit to qualify, or aid qualification, in a duty position or program, or on a piece of equipment. AFQTPs identify the Air Force's standardized method for performing the task. The AFQTP may be printed (paper-based), computer-based, or in other audiovisual media.

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

Certification and Testing (CerTest). A multi-media evaluation program used to test an individual's knowledge of principles and procedures in their career field.

Commercial Off The Shelf (COTS). Commercially-procured training products.

Computer-Based Training (CBT). A self-paced stand-alone computer product used to deliver interactive subject and task knowledge.

Continuation Training. Additional training exceeding requirements with emphasis on present and future duty assignments.

Core Task. A task Air Force Career Field Managers (AFCFMs) identified as a minimum qualification requirement within an Air Force specialty or duty position. These tasks exemplify the essence of the career field.

Course Objective List (COL). A publication derived from initial/advanced skills course training standard, identifying the tasks and knowledge requirements, and respective standards provided to achieve a 3-, 5-, and 7-skill level in this career field. Supervisors use the COL to assist in conducting graduate evaluations in accordance with AFI 36-2201, Developing, Managing, and Conducting Training.

Critical Task. Tasks that have been identified by the work center supervisor as having a detrimental effect on mission accomplishment if not performed correctly. Critical tasks may or may not be the same as core tasks but are mandatory if identified as 'critical' to the individual's position by the supervisor or work center.

Diamond Tasks (◆). Diamond tasks are extremely important to the career field. Diamond tasks are the same as core tasks with one exception--equipment shortfalls at most locations have created problems with the actual hands-on certification of these tasks. In instances where required equipment is not available for instruction, completion of the task's AFQTP and passing the corresponding CerTest is all that is required for upgrade and qualification training. Hands-on certification should be accomplished at the first opportunity when equipment is available.

Distance Learning (DL). Includes Video Teleseminar (VTS), Video Teletraining (VTT), and Computer-Based Training (CBT). Formal courses that a training wing or a contractor develops for export to a field location (in place of resident training) for trainees to complete without the on-site support of the formal school instructor. For instance, courses are offered by Air Force Institute of Technology, Air University, and Training Detachment.

Duty Position Task. The tasks assigned to an individual for the position currently held. These include as a minimum all core tasks, critical tasks, and any other tasks assigned by the supervisor.

Enlisted Specialty Training (EST). A mix of formal training (technical school) and informal training (on-the-job) to qualify and upgrade airmen in each skill level of a specialty.

Exportable Training. Additional training via computer-assisted, paper text, interactive video, or other necessary means to supplement training.

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. AFS-specific training an individual receives upon entry into the Air Force or upon retraining into this specialty for award of the 3-skill level. Normally, this training is conducted by AETC at one of the technical training wings.

Instructional System Development (ISD). A deliberate and orderly, but flexible, process for planning, developing, implementing, and managing instructional systems. It ensures personnel are taught in a cost-efficient way the knowledge, skills, and attitudes essential for successful job performance.

Mission Ready Airmen (MRA) Training. Initial skills training allowing airmen to perform select tasks unsupervised equal to 3-levels with one year of experience.

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). Hands-on, over-the-shoulder training conducted to certify personnel in both upgrade (skill-level award) and job qualification (duty position certification) training.

Optimal Training. The ideal combination of training settings resulting in the highest levels of proficiency on specified performance requirements within the minimum time possible.

Proficiency Training. Additional training, either in-residence, exportable advanced training courses, or on-the-job training provided to personnel to increase their skills and knowledge beyond the minimum required for upgrade.

Qualification Training (QT). Actual hands-on task performance training designed to qualify an individual in a specific duty position. This portion of the dual channel on-the-job training program occurs both during and after the upgrade training process. It is designed to provide the performance skills required to do the job.

Readiness Training Package (RTP). Establishes standard levels of knowledge and proficiency for common Disaster Preparedness and Readiness subject areas by providing instructors with training references, materials, and lesson objectives used in teaching and evaluating the course subject matter.

Representative Sites. Typical organizational units having similar missions, weapon systems or equipment, or a set of jobs, used as a basis for estimating average training capacities and costs within the Training Impact Decision System (TIDES).

Resource Constraints. Resource deficiencies, such as money, facilities, time, manpower, or equipment that precludes desired training from being delivered.

Skills Training. A formal course resulting in the award of a skill level.

Specialty Training. A mix of formal training (technical school) and informal training (on-the-job) to qualify and upgrade airmen in the award of a skill level.

Specialty Training Standard (STS). Describes skills and knowledge that airmen in a particular AFS need on the job. It further serves as a contract between the Air Education and Training Command (AETC) and the user to show the overall training requirements for an AFS taught in the resident and nonresident courses.

Spin-up Training. Training required just prior to a select deployment that delivers training necessary for mission accomplishment. It is typically predicated on hard to attain contingency skills.

Standard. An exact value, a physical entity, or an abstract concept, established and defined by authority, custom, or common consent to serve as a reference, model, or rule in measuring quantities or qualities, establishing practices or procedures, or evaluating results; a fixed quantity or quality.

Supplemental Training. Training for a portion of an AFS without a change in AFSC. Formal training on new equipment, methods, and technology that are not suited for on-the-job training.

Total Force. All collective Air Force components (active duty, Reserve, Guard, and civilian elements) of the United States Air Force.

Training Capacity. The capability of a training setting to provide training on specified requirements, based on the availability of resources.

Training Impact Decision System (TIDES). A computer-based decision support technology designed to assist Air Force Career Field Managers (AFCFMs) in making critical judgments relevant to what training should be provided to personnel within career fields, when training should be provided (at what career points), and where training should be conducted (training setting). A TIDES template is used Air Force-wide for standardization and formatting of CFETPs.

Training Planning Team (TPT). Comprised of the same personnel as a U&TW; however, TPTs are more intimately involved in training development and the range of issues is greater than is normal in the U&TW forum.

Training Requirements Analysis. A detailed analysis of tasks for a particular AFS to be included in the training decision process.

Upgrade Training (UGT). Identifies the mandatory courses, task qualification requirements, and correspondence course completion requirements for award of the 5-, 7-, and 9-skill levels.

Utilization and Training Workshop (U&TW). A forum of the AFCFMs, MAJCOM Functional Managers (MFMs), Subject Matter Experts (SMEs), and AETC training personnel that determines career ladder training requirements.

PART I

SECTION A - GENERAL INFORMATION

1. Purpose. This CFETP provides information necessary for Air Force Career Field Managers (AFCFMs), MAJCOM Functional Managers (MFMs), commanders, Unit Education and Training Managers (UETMs), supervisors, and trainers to plan, develop, manage, and conduct an effective career field training program. This plan outlines the training individuals require to develop and progress throughout their careers. It identifies initial skills, upgrade, qualification, advanced, and proficiency training.

1.1. Initial skills training. Is the AFS-specific training an individual receives upon entry into the Air Force or upon retraining into this specialty for award of the 3-skill level. Normally, this training is conducted by AETC at one of the technical training wings.

1.2. Upgrade training. Identifies the mandatory courses, task qualification requirements, and correspondence course completion requirements for award of the 5-, 7-, and 9-skill levels.

1.3. Qualification training. Is actual hands-on task performance training designed to qualify an airman in a specific duty position. This training program occurs both during and after the upgrade training process. It is designed to provide the performance skills/knowledge required to do the job.

1.4. Advanced training. Is a formal course that provides individuals who are qualified in one or more positions of 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 the AFS.

1.5. Proficiency training. Is additional training, either in-residence, exportable advanced training courses, or on-the-job training, provided to personnel to increase their skills and knowledge beyond the minimum required for upgrade.

2. The CFETP has several purposes:

2.1. Serves as a management tool to plan, manage, conduct, and evaluate a career field training program. It is used to help supervisors identify training at the appropriate point in an individual's career.

2.2. Identifies task and knowledge training requirements for each skill level in the specialty and recommends education/training throughout each phase of an individual's career.

2.3. Lists training courses available in the specialty and identifies sources of training and training delivery methods.

2.4. Identifies major resource constraints that impact full implementation of the desired career field training process.

3. Uses. The plan will be used by MFMs and supervisors at all levels to ensure comprehensive and cohesive training programs are available for each individual in the specialty.

3.1. AETC training personnel will develop/revise formal resident, nonresident, field, and exportable training based on requirements established by the users and documented in Part II of the CFETP. They will also work with the AFCFM, Air Force Civil Engineer Support Agency Training Division (HQ AFCESA/CEOF) to develop acquisition strategies for obtaining resources needed to provide the identified training.

3.2. AF Career Field Managers and MAJCOM Functional Managers will ensure their training programs complement CFETP mandatory initial, upgrade, and proficiency requirements and identify requirements that can be satisfied by OJT, resident training, contract training, CerTest, or exportable courses. MAJCOM-developed training to support this AFS must be identified for inclusion into the plan.

3.3. Unit Education and Training managers and supervisors must ensure each individual completes the mandatory training requirements (including MAJCOM supplemental requirements) for the upgrade training specified in this plan.

3.4. Each individual will complete the mandatory training requirements specified in this plan. The lists of courses in Part II will be used as a reference to support training.

4. Coordination and Approval. The AFCFM is the approval authority for the CFETP. MAJCOM representatives and AETC personnel will identify and coordinate on the career field training requirements. The AETC training manager for this specialty will initiate an annual review of this document by AETC and MFMs to ensure currency and accuracy. Using the list of courses in Part II, they will eliminate duplicate training.

SECTION B - CAREER FIELD PROGRESSION AND INFORMATION

5. Specialty Descriptions. Liquid Fuel Systems Apprentice, Journeyman, Craftsman, and Superintendent.

5.1 Specialty Summary. Installs, inspects, maintains, troubleshoots, repairs, and modifies liquid fuel storage, and dispensing systems. Related DoD Occupational Subgroup: 720.

5.2. Duties and Responsibilities for Apprentice, Journeyman, and Craftsman.

5.2.1. Installs, inspects, and maintains liquid fuel storage, distribution, and dispensing systems.

5.2.1.1. Manages and modifies liquid fuel systems and components.

5.2.1.2. Checks system components for operation, adjustment, pressure, and internal and external leaks.

5.2.1.3. Troubleshoots malfunctions.

5.2.1.4. Uses drawings and schematics to analyze and isolate malfunctions.

5.2.1.5. Inspects condition and operation of electrical components.

5.2.1.6. Manages Recurring Work Program (RWP) and provides non-technical automated assistance as needed.

5.2.1.7. Manages/performs confined space entry.

5.2.1.8. Modifies equipment for specific mission or to increase efficiency.

5.2.2. Advises on problems with installing and repairing of liquid fuel storage, distribution and dispensing equipment and systems.

5.2.2.1. Solves complex maintenance problems by studying layout drawings, wiring and schematics, and by analyzing construction and operating characteristics.

5.2.2.2. Develops and establishes operation and maintenance procedures to ensure maximum efficiency.

5.2.2.3. Provides technical assistance to CE hazardous waste generators.

5.2.3. Performs planning activities and facility surveys.

5.2.3.1. Surveys proposed work to determine resource requirements.

5.2.3.2. Prepares cost estimates for in-service work.

5.2.3.3. Applies engineer performance standards to plan and estimate jobs.

5.2.3.4. Coordinates plans and other activities.

5.3. Duties and Responsibilities for Superintendent. Plans and organizes installation, maintenance, and repair of water and waste water treatment and collection systems, natural gas distribution; liquid fuels distribution systems; and pest management and environmental activities with users.

5.3.1. Manages and advises on issues related to the Liquid Fuel Systems career field.

5.3.2. Resolves complex issues related to CE cost and reimbursement, work performance, progress trends, standards, and policies.

5.3.3. Evaluates inspection findings and recommends corrective actions.

5.3.4. Performs planning activities and facility surveys.

5.3.5. Coordinates plans with other civil engineer and base activities.

5.3.6. Makes on-site investigations of proposed work to determine resource requirements.

5.3.7. Applies engineer performance standards in planning and estimating jobs.

6. Skill/Career Progression. Adequate training and timely progression from the apprentice to the superintendent skill level play an important role in the Air Force's ability to accomplish its mission. It is essential that everyone involved in training do their part to plan, manage, and conduct an effective training program. The guidance provided in this part of the CFETP will ensure individuals receive viable training at appropriate points in their careers.

6.1. Apprentice (3-Level).

6.1.1. Upon completion of initial skills training, a trainee will work with a trainer to enhance their knowledge and skills.

6.1.2. Utilize the Career Development Course (CDC), Air Force Qualification Training Packages (AFQTPs) and other exportable courses for subject and task fundamentals in the career field. Successfully complete applicable CerTests.

6.1.3. Once trained and task certified, a trainee may perform the task unsupervised.

6.1.4. After all upgrade training requirements are completed, supervisors and Unit Education and Training Managers (UETMs) coordinate upgrade procedures.

6.1.5. NOTE: All trainees are automatically enrolled in the Community College of the Air Force (CCAF) when awarded their primary AFSC.

6.2. Journeyman (5-Level).

6.2.1. Enter into continuation training to broaden experience base.

6.2.2. 5-Levels may be assigned job positions such as team leader, shift supervisor, scheduler, programmer, work order priority program monitor, and quality assurance evaluator.

6.2.3 5-Levels may be assigned to units other than Civil Engineering to perform duties as CE liaison.

6.2.4. Will attend the Airman Leadership School (ALS) after serving 48 months in the Air Force (active duty only). Either the in-residence or correspondence course is required for Air Reserve Component (ARC) personnel.

6.2.5. Will use CDCs and other reference material to prepare for Weighted Airman Performance Systems (WAPS) testing.

6.2.6. Should continue pursuing a CCAF degree.

6.2.7. After all upgrade training requirements are complete, supervisors and UETMs coordinate upgrade procedures.

6.3. Craftsman (7-Level).

6.3.1. Completion of Read-Ahead Material (RAM), 100% core/diamond task completion, and resident graduation from the 7-level resident course are basic prerequisites for award of the 7-level.

6.3.2. A craftsman may be assigned job positions such as NCOIC/Chief of Liquid Fuel Systems, self-help manager, chief of service contracts, NCOIC of command and control, zonal manager, NCOIC/Chief of customer service and various unit or staff positions.

6.3.3. Seven-levels should take continuation training courses or obtain additional knowledge on management of resources and personnel.

6.3.4. Continued academic education through CCAF and higher degree programs is encouraged.

6.3.5. Will attend the Noncommissioned Officer Academy (NCOA) after promotion to TSgt (active duty only). Either the in-residence or correspondence course is required for ARC personnel.

6.3.6. After all upgrade training requirements are complete, supervisors and UETMs coordinate upgrade procedures.

6.4. Superintendent (9-Level).

6.4.1. A 9-level can be expected to fill positions such as flight chief, superintendent of zones, infrastructure, maintenance engineering, heavy repair, facility maintenance, and various staff positions.

6.4.2. Should pursue increased knowledge of budget, manpower, resources, and personnel management.

6.4.3. Recommend the pursuit of additional higher education and completion of courses outside of their career AFS.

6.5. Civil Engineer Manager.

6.5.1 Must be selected for CMSgt and possess qualifications in a feeder specialty (3E090, 3E191, 3E291, 3E391, 3E490, 3E591, or 3E691).

6.5.2. Will work in a variety of similar jobs and functional areas where general managerial and supervisory abilities can be most effectively used and challenged.

6.5.3. Resident graduation of the USAF Senior NCO Academy (SNCOA) is a prerequisite for CMSgt sew-on (active duty only). In residence or correspondence course required for ARC personnel.

7. Training Decisions. The CFETP uses a building block approach (simple to complex) to encompass the entire spectrum of training requirements for the Liquid Fuel Systems career field. The spectrum includes a strategy for when, where, and how to meet the training requirements. The strategy must be apparent and affordable to reduce duplication of training and eliminate a disjointed approach to training. The following decisions were made at the career field Utilization & Training Workshop (U&TW) held at Sheppard AFB TX in August 2000.

7.1. Initial Skills Training. The initial skill course was reviewed for content. Additions, deletions, and modifications were made to the course. Wartime training tasks were identified. Additional contingency training was also identified.

7.2. Five-Level Upgrade Training Requirements. A mandatory 5-level CDC will be developed and implemented 27 September 2002.

7.3. Seven-Level Upgrade Training Requirements. Seven-level training requirements were reviewed. The mandatory 7-level CDCs were deactivated October 1999.

7.4. Proficiency Training.

7.4.1. Any additional knowledge and skill requirements that were not taught through initial skills or upgrade training are assigned as continuation training.

7.4.2. Purpose of continuation training is to provide training exceeding minimum upgrade training requirements with emphasis on present and future duty positions.

7.4.3. MAJCOMs must develop a continuation training program that ensures individuals in the Liquid Fuel Systems career field receive the necessary training at the appropriate point in their careers.

7.4.4. The training program will identify both mandatory and optional training requirements.

7.5. Supplemental Training. Subject Matter Experts (SMEs) and the Training Committee reviewed supplemental training courses for technical accuracy and identified training that was no longer required. They revalidated the remaining courses as necessary to fully support career progression in the AFS.

7.6. CerTest. Originally, the CerTest program was developed to support transition training, and meet DoD certification requirements. Now, it is also the sole platform to present AFQTP tests and supplement the evaluation of OJT.

8. Community College of the Air Force (CCAF) Academic Programs. Airmen are automatically enrolled in CCAF upon completion of basic military training. CCAF provides the opportunity to obtain an Associates Degree in Applied Sciences. In addition to its associates degree program, CCAF offers the following:

8.1. Occupational Instructor Certification. Upon completion of instructor qualification training (consisting of the Instructor Methods course and supervised practice teaching), CCAF instructors possessing an associates degree or higher may be nominated by their school commander/commandant for certification as an occupational instructor.

8.2. 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.

8.3. The Ecological Controls Associates Degree (3AKY) applies to AFSC 3E4X2.

8.3.1. Degree Requirements. Prior to completing an Associates Degree, the individual must be awarded a 5-level and the following requirements must be met:

Course	Semester Hours
Technical Education.....	24
Leadership, Management, and Military	6
Physical Education.....	4
General Education.....	15
Program Elective.....	15
Technical Education; Leadership, Management, and Military Studies; or General Education	
Total.....	64

8.3.2. 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 courses.

Technical Core Requirements	Semester Hours
CCAF Internship	16
Environmental Support	20
Liquid Fuels Systems	20
Utilities Systems.....	20

Technical Electives	Semester Hours
Algebra-Based Physics	8
Biology	3
Blueprint Reading/Schematic Diagrams	6
Botany	4
Chemistry	3
Computer Science	6
Ecology	3
Electronics	3
Enlisted Professional Military Education	12
Environmental Awareness	3
Environmental Compliance	3
Fire-Suppression Systems.....	6
Hazardous Materials	6
Industrial Management	3
Industrial Safety	6
Microbiology	4
Natural Gas Distribution.....	6
Plant Disease and Pest Control	6
Pollution Prevention	3
Quality Assurance.....	3
Technical Math (College Algebra or Higher).....	3
Technical Writing	3
Welding and Pipefitting	6

8.3.3. Leadership, Management, and Military Studies (6 Semester Hours). Professional military education, civilian management courses accepted in transfer, and/or by testing credit.

8.3.4. Physical Education (4 Semester Hours). This requirement is satisfied by completion of Basic Military Training.

8.3.5. General Education (15 Semester Hours). Applicable courses must meet the criteria for application of courses to the General Education Requirements (GER) and be in agreement with the definitions of applicable general education subjects/courses as provided in the CCAF General Catalog.

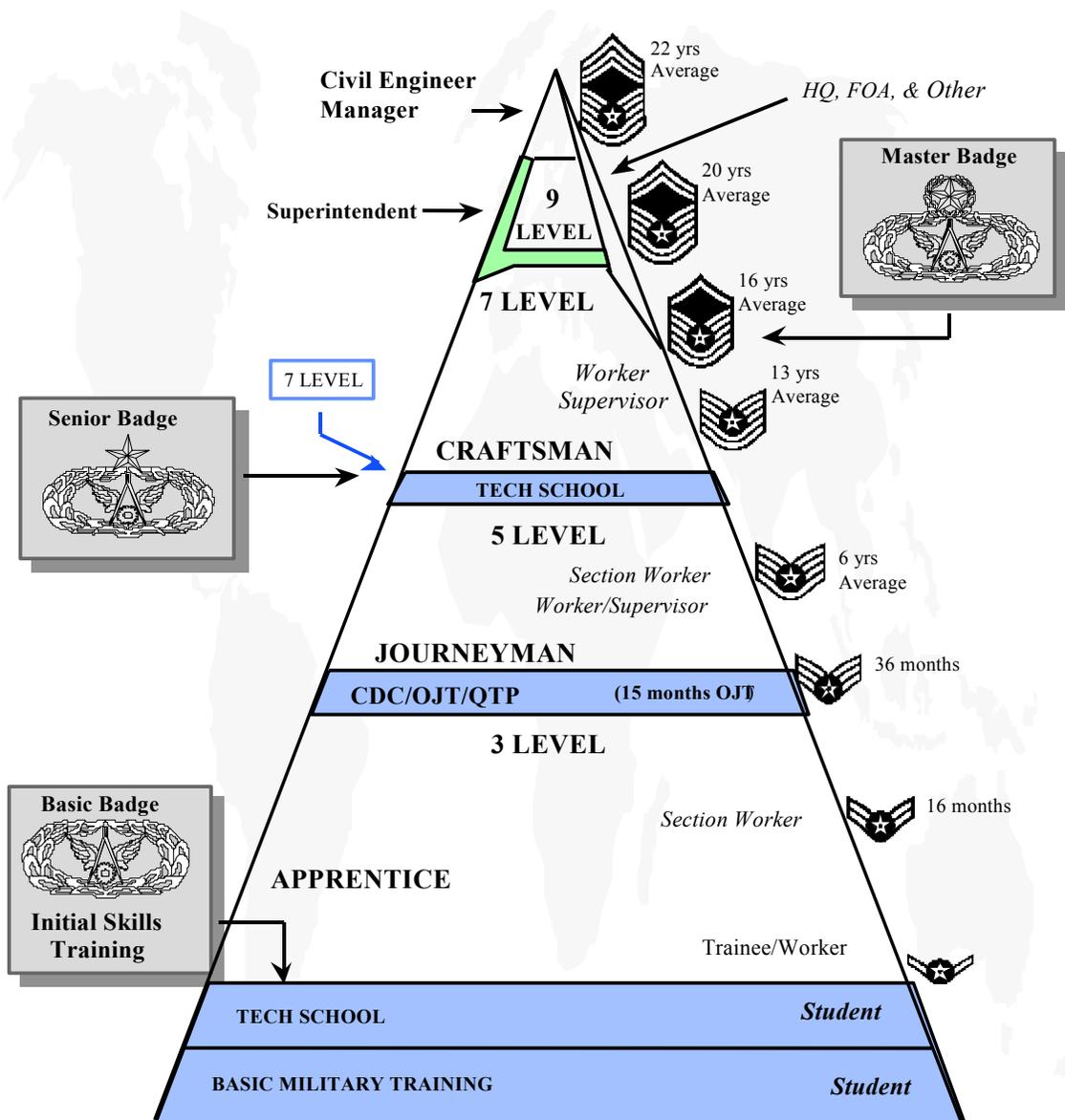
General Education	Semester Hours
Oral Communication	3
Speech	
Written Communication.....	3
English Composition	
Mathematics.....	3
An intermediate algebra or a college-level mathematics course that satisfies the delivering institution's mathematics requirement for graduation. If an acceptable mathematics course is used as a Technical or Program Elective, a natural science course may be substituted for mathematics	
Social Science	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, and sociology	
Humanities	3
Fine Arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

8.3.6. Program Elective (15 Semester Hours). Courses applicable to the technical education, Leadership, Management, and Military Studies (LMMS); or general education requirements. Natural science courses meet general education requirement application criteria. Foreign language credit earned at the Defense Language Institute or through the Defense Language Proficiency Test. A maximum of six (6) semester hours of CCAF-degree applicable technical course credit otherwise not applicable to this program of enrollment. See the CCAF General Catalog for details regarding the Associates of Applied Science for this specialty.

9. Additional off-duty education is a personal choice that is encouraged for all. Individuals desiring to become an Air Education and Training Command (AETC) Instructor should actively pursue an Associates Degree. A qualified faculty is necessary to maintain accreditation through the Southern Association of Colleges and Schools.

10. Career Field Path. The following chart depicts this specialty's career path and average sew-on time.

Liquid Fuel Systems Enlisted Career Pyramid



10.1 Enlisted Career Path.

Table: Enlisted Career Path				
Education and Training Requirements	GRADE REQUIREMENTS			
	Rank	Average Sew-On	Earliest Sew-On	High Year Of Tenure (HYT)
Basic Military Training school				
Apprentice Technical School (3-Skill Level)	Amn A1C	6 months 16 months		
Upgrade To Journeyman (5-Skill Level) -- Complete all core and duty-related tasks identified in CFETP. - Minimum 15 months on-the-job training (9 months for retrainees) - Complete appropriate CDC if/when available.	SrA	3 years	28 months	10 Years
Airman Leadership School (ALS) - Must be a SrA with 48 months time in service or be a SSgt Selectee. - Resident graduation is a prerequisite for SSgt sew-on (Active Duty Only).	<u>Trainer</u>			
	- Trainer must be qualified and certified on tasks to be trained. - Must attend formal AF Training Course and be appointed by Commander in writing.			
Upgrade To Craftsman (7-Skill Level) - Complete all core and duty-related tasks identified in CFETP. - Minimum rank of SSgt - 12 months OJT (12 months for retrainees) - Complete appropriate CDC if/when available. - Attend 7-level Craftsman Course (may attend prior to completion of 12 months UGT; however, must complete Read-Ahead Material (RAM) prior to attending.	SSgt	6 years	3 years	20 Years
Retrainee - Minimum 9 months for 5-level - Minimum 12 months for 7-level UGT	<u>Certifier</u>			
	- SSgt with 5-skill level or civilian equivalent. - Attend formal AF Certifier Course and appointed by Commander in writing. - Be a person other than the trainer (for core and critical tasks only).			
Noncommissioned Officer Academy (NCOA) - Must be a TSgt or TSgt Selectee - Resident graduation is a prerequisite for MSgt sew-on (Active Duty Only).	TSgt	13 years	5 years	20 Years
	MSgt	16 years	8 years	24 Years
Upgrade To Superintendent (9-Skill Level) - Minimum rank of SMSgt	SMSgt	20 years	11 years	26 Years
Civil Engineer Manager (CEM) -USAF Senior NCO Academy (SNCOA) resident graduation is a prerequisite for CMSgt sew-on (Active Duty Only)	CMSgt	22 years	14 years	30 years

10.2. CE Occupational Badge. The Civil Engineer badge reflects a great history and tradition. By wearing it, you will be recognized by your fellow airmen as having achieved an expected level of competence. The multitude of engineers before you established this expectation through excellent service in both peace and war. Eligibility criteria for award and wear of AF occupational badges can be found in AFI 36-2923 (Aeronautical, Duty, and Occupational Badges), on the AFEPL, Air Force Electronic Publications Library (AFEPL).

10.2.1. CE Badge Heraldry. The gear wheel and compass have historically been used to represent the engineering profession, in both the military and civilian sector. The gear represents the essence of engineering: applying scientific principles and technology to practical ends. To Air Force engineers, the gear symbolizes an element (representing the built environment) that meshes with other environments (weapon systems and trained personnel) to enable the Air Force to perform its mission. The compass is a precision tool historically used by engineers in designing and constructing facilities and equipment. The gear and compass together symbolize all the diverse specialties within Air Force civil engineer. Finally, the wings help to portray the fundamental linkage between the engineering and aviation components; and that the built environment is the foundation supporting Air Force mission and people.

10.2.1.1. Basic Badge. The basic badge is awarded upon successful completion of the apprentice course.

10.2.1.2. Senior Badge. The senior badge adds a star to the top of the badge. This is awarded after the member successfully completes the 7-level awarding course.

10.2.1.3. Master Badge. The master badge adds a wreath around the star. It's awarded to master sergeant or above with 5 years in the specialty from award of the 7-skill level.

SECTION C – SKILL-LEVEL TRAINING REQUIREMENTS

11. Purpose. The various skill levels in the career field are defined in terms of tasks and knowledge requirements for the Liquid Fuel Systems career ladder. They are stated in broad, general terms and establish the standards of performance. An all-encompassing core task list has been developed for this specialty because of the diversity of the missions supported and the equipment installed to meet mission requirements. Core tasks, knowledge items, and skill requirements for this specialty are identified in the STS. Completion of the mandatory 3-level awarding course, the mandatory completion of CDCs, the mandatory completion of applicable AFQTPs and CerTests, and the mandatory 7-level Craftsman course, comprise Air Force requirements.

12. Skill-Level Training Requirements

12.1. Apprentice (3-Level) Training Requirements.

12.1.1. Specialty Qualifications.

12.1.1.1. Knowledge. Completion of the Liquid Fuel Systems Apprentice course satisfies this mandatory requirement.

12.1.1.2. Education. Completion of high school or General Education Development (GED) is mandatory for entry into this AFS. Courses in physics are desirable.

12.1.1.3. Training. Completion of the Liquid Fuel Systems Maintenance Apprentice course, J3ABR3E432 004, is mandatory for award of this skill level.

12.1.1.4. Experience. N/A

12.1.1.5. Other.

12.1.1.5.1. Qualification to operate government vehicles according to AFI 24-301, Vehicle Operations.

12.1.1.5.2. A non-claustrophobia requirement exists for this AFS.

12.1.1.5.3. Normal color vision as defined in AFMAN 48-123, Medical Examination and Standards.

12.1.1.5.4. Freedom from fear of height.

12.1.1.5.5. Ability to wear a respirator.

12.1.2. Training Sources/Resources.

12.1.2.1. Formal training is accomplished through course J3ABR3E432 004, at Sheppard AFB TX.

12.1.2.2. The COL (Part II, Section B of this CFETP) identifies all the knowledge and tasks, with their respective standards.

12.1.2.3. When applicable, AFQTPs and associated CerTests are mandatory for use during UGT/QT on all core tasks, critical tasks, and diamond (◆) tasks.

12.1.3. Implementation.

12.1.3.1. The 3-skill level is awarded upon graduating the Liquid Fuel Systems Maintenance Apprentice course.

12.2. Journeyman (5-Level) Training Requirements.

12.2.1. Specialty Qualification. Entry into 5-level upgrade training is initiated after the individual has completed the 3-level school. All 3-level qualifications apply to 5-level requirements.

12.2.1.1. Knowledge. Knowledge of the following is mandatory:

12.2.1.1.1. Principles of hydraulic, electrical, and mechanical theory and principles that apply to liquid fuel systems.

12.2.1.1.2. Emergency first aid, physiological effects, characteristics, and hazards of liquid fuel products.

12.2.1.1.3. Use and interpretation of wiring and schematic diagrams, blue prints, and environmental regulations for fuel and hazardous materials.

12.2.1.2. Education. N/A

12.2.1.3. Training.

12.2.1.3.1. Completion of CDCs is mandatory.

12.2.1.3.2. Certification of all 5-level core tasks identified with a single asterisk (*) in the core task column of the STS is mandatory.

12.2.1.3.3. Completion of AFQTPs for assigned core tasks and contingency war diamond (◆) tasks is mandatory.

12.2.1.3.4. Completion of CerTests for all contingency war diamond (◆) tasks with a minimum of 80% is mandatory.

12.2.1.3.5. Certification of duty position requirements identified by the supervisor is mandatory.

12.2.1.4. Experience.

12.2.1.4.1. Qualification in and possession of 3-skill level.

12.2.1.4.2. Minimum 15 months on-the-job training (9 months for re-trainees) before award of 5- skill level.

12.2.1.4.3. Functions such as installation, maintenance, and repair of liquid fuel systems and components.

12.2.1.5. Other. N/A

12.2.2. Training Sources/Resources.

12.2.2.1. CDC 3E452, Liquid Fuel Systems Journeyman.

12.2.2.2. The STS (Part II, Section A of the CFETP) identifies all core tasks required for qualification in the individual's duty position.

12.2.2.3. Qualified trainers provide upgrade and qualification training for duty positions, managed programs, and/or equipment to be used.

12.2.2.4. A variety of AFQTPs and Commercial Off-the-Shelf (COTS) products.

12.2.3. Implementation.

12.2.3.1. Entry into formal Journeyman upgrade training is accomplished after individuals are assigned to their first duty station.

12.2.3.2. Qualification training is initiated any time individuals are assigned duties they are not certified to perform.

12.2.3.3. AFQTPs are used concurrently to obtain necessary duty position qualifications.

12.3. Craftsman (7-Level) Training Requirements.

12.3.1. Specialty Qualification. All 5-level qualifications apply to 7-level requirements.

12.3.1.1. Knowledge. 3E452 knowledge requirements apply to 3E472 requirements.

12.3.1.2. Education.

12.3.1.2.1. To assume the grade of SSgt, individuals must successfully complete the in-resident Airman Leadership School (active duty only).

12.3.1.2.2. To assume the grade of MSgt, individuals must successfully complete the in-resident NCO Academy (active duty only).

12.3.1.2.3. For ANG/AFRC, completion of Air Force Institute for Advanced Distributive Learning (AFIADL) courses 00001 (ALS) and 00006 D&E (NCO Academy) satisfy the requirements.

12.3.1.3. Training.

12.3.1.3.1. Completion of 7-level Read Ahead Material (RAM) for course J3ACR3E070-000 is mandatory prior to attendance at the resident course.

12.3.1.3.2. Completion of in-residence CE Management Craftsman Course J3ACR3E070-000 is mandatory. Exception: Fire, EOD, and Readiness.

12.3.1.3.3. Certification of all 5- and 7-skill level core tasks identified with a single asterisk (*) and double asterisk (**) in the core column of the STS is mandatory.

12.3.1.3.4. Completion of all AFQTPs for assigned core and critical tasks.

12.3.1.3.5. Completion of CerTests for all diamond (◆) tasks with a minimum of 80% is mandatory.

12.3.1.3.6. Completion of Liquid Fuels Storage Tank Entry Supervisor (J3AZR3E472-000) and the Liquid Fuels System Maintenance Technician (J3AZR3E272-001) Courses, instructed at Sheppard AFB TX are desirable.

12.3.1.4. Experience.

12.3.1.4.1. Qualification in and possession of a 5-level.

12.3.1.4.2. Performing or supervising functions such as installation, maintenance, and repair of liquid fuel systems and components.

12.3.1.5. Other. N/A

12.3.2. Training Sources/Resources.

12.3.2.1. CE Management Craftsman Course Read Ahead Material (RAM).

12.3.2.2. Course J3ACR3E070-000, CE Management Craftsman.

12.3.2.3. NCO Academy Course 00006 D&E (paper-based correspondence).

12.3.2.4. Course J3AZR3E472-000, Liquid Fuels Storage Tank Entry Supervisor, Sheppard AFB TX.

12.3.2.5. Course J3AZR3E472-001, Liquid Fuels System Maintenance Technician, Sheppard AFB TX.

12.3.2.6. The STS (Part II, Section A of this CFETP) identifies all core tasks required for qualification in the individual's duty position.

12.3.2.7. Qualified trainers provide upgrade and qualification training for duty positions, managed programs, and/or equipment to be used.

12.3.2.8. A variety of AFQTPs and COTS products.

12.3.3. Implementation.

12.3.3.1. Entry into 7-level training is initiated when an individual is selected for SSgt and has fulfilled all 5-level requirements.

12.3.3.2. Qualification training is initiated any time an individual is assigned duties that they are not qualified to perform.

12.3.3.3. AFQTPs are used concurrently to obtain necessary duty position qualifications.

12.4. Superintendent (9-Level) Training Requirements.

12.4.1. Specialty Qualification.

12.4.1.1. Knowledge. Knowledge of the following is mandatory:

12.4.1.1.1. Air Force training programs.

12.4.1.1.2. CE policies, practices, and procedures of base maintenance and operations, crafts, facilities, equipment, and systems.

12.4.1.1.3. Interpretation and application of maintenance and work force management.

12.4.1.1.4. Principles of water and wastewater distribution systems, liquid fuels distribution systems, natural gas distribution, pest management and environmental activities.

12.4.1.2. Education.

12.4.1.2.1. Completion of in-residence Senior NCO Academy is mandatory (active duty only) prior to award of 9-skill level.

12.4.1.2.2. ANG/AFRC must complete AFIADL course 00005 (computer-based CD-ROM) to satisfy the Senior NCO Academy requirement.

12.4.1.3. Training. Completion of duty position training requirements.

12.4.1.4. Experience.

12.4.1.4.1. Qualification in and possession of 7-skill level is mandatory.

12.4.1.4.2. Directing functions such as operations, maintenance, and repair of water and wastewater treatment, distribution, and collection systems.

12.4.1.4.3. Natural gas and liquid fuels distribution systems.

12.4.1.4.4. Pest/environmental management activities.

12.4.1.5. Other. N/A

12.4.2. Training Sources/Resources.

12.4.2.1. In-residence SNCO Academy located at Maxwell AFB - Gunter Annex AL.

12.4.2.2. SNCO Academy Course 00005 (exportable computer-based CD ROM).

12.4.3. Implementation.

12.4.3.1. Entry into 9-level training is initiated when an individual is selected for SMSgt and is a fully qualified 7-level.

12.4.3.2. QT is initiated any time an individual is assigned duties they are not qualified to perform.

12.5. Civil Engineer Manager.

12.5.1. Specialty Qualification.

12.5.1.1. Knowledge. Knowledge of the following is mandatory:

12.5.1.1.1. Managing and directing personnel resource activities.

12.5.1.1.2. Interpreting and enforcing policy and applicable directives.

12.5.1.1.3. Establishing control procedures to meet work goals and standards.

12.5.1.1.4. Recommending or initiating actions to improve operational efficiency.

12.5.1.1.5. Planning and programming work commitments and schedules.

12.5.1.1.6. Developing plans regarding facilities, supplies, and equipment procurement and maintenance.

12.5.1.2. Education. Must be a resident graduate of SNCOA (active duty only).

12.5.1.3. Training. N/A

12.5.1.4. Experience.

12.5.1.4.1. Possess qualifications in feeder specialty (3E490) prior to award of Civil Engineer Manager code 3E000.

12.5.1.4.2. Managerial ability to plan, direct, coordinate, implement, and control a wide range of work activity.

12.5.1.5. Other. N/A

12.5.2. Training Sources and Resources. N/A

12.5.3 Implementation. Entry into Civil Engineer Manager code 3E000 is initiated when an individual is selected for CMSgt and possesses qualifications in a feeder specialty (3E090, 3E191, 3E291, 3E391, 3E490, 3E591, and 3E691).

SECTION D - RESOURCE CONSTRAINTS

3E4X2 – Liquid Fuel Systems

13. Purpose. This section identifies known resource constraints that preclude optimal/desired training from being developed or conducted.

13.1. Apprentice (3-Level) Training

13.1.1. Equipment Constraints: N/A

13.1.2. Time/Manpower/Student Manyears Constraints: N/A

13.1.3. Facilities Constraints: N/A

13.1.4. Funding Constraints: N/A

13.1.5. Exportable Training: N/A

13.1.6. Proficiency Training: N/A

13.1.7. Constraint. Course implementation with slashes (column 4A1). Course cannot be implemented until completion and approval of Plan of Instruction (POI).

13.1.8. Impact. Required training will not be ready for implementation upon publication of this CFETP.

13.1.9. Action Required. Revise curriculum to meet all training requirements and proficiency codes identified in this CFETP.

13.1.10. OPR/Target Completion Date. 366 TRS will implement revised training with class beginning 29 July 2002.

13.2. Journeyman (5-Level) Training. AFQTP development for all core tasks.

13.2.1. Constraints. None

13.2.2. OPR. HQ AFCESA/CEOF

13.3. Craftsman (7-Level) Training. AFQTPs

13.3.1. Constraints. None.

13.3.2. OPR. HQ AFCESA/CEOF

13.4. Superintendent (9-Level) Training. No Constraints.

SECTION E - TRANSITION TRAINING GUIDE

14. No transition training requirements at this time. This area is reserved.

PART II

SECTION A - SPECIALTY TRAINING STANDARD

1. Implementation. This STS will be used to identify technical training provided by AETC for the 3-level Liquid Fuel Systems Apprentice course with classes beginning 29 July 2002, and graduating 26 September 2002.

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

2.1. Lists in Column 1 (*Tasks, Knowledge, and Technical Reference*) the most common tasks, knowledge, and Technical References (TRs) necessary for airmen to perform duties in the 3-, 5-, and 7-skill level.

2.2. Column 2 (*Core Tasks*) identifies core tasks (specialty-wide training requirements) by an asterisk (*) for 5- and 7- skill levels or a double asterisk (**) for 7-skill level only. **As a minimum, trainees must complete all core and critical tasks for skill-level upgrade.**

2.2.1. All tasks in the 3 level column are considered wartime tasks. In response to a wartime scenario, these tasks will be taught in the 3-level course in a streamlined training environment.

2.2.2. Tasks identified by a diamond (◆) in column 2 are extremely important to the career field. Equipment shortfalls at most locations however, have created problems with the actual hands-on certification of these tasks. In instances where required equipment is not available for instruction, completion of the task's AFQTP and passing the corresponding CerTest is all that is required for upgrade and qualification training.

2.3. Provides certification for OJT. Columns 3A, B, C, D, and E are used to record completion of tasks and knowledge training requirements. If available, use automated training management systems to document technician qualifications. Task certification of core and critical tasks requires a training completion date and initials of the trainee, trainer, and certifier. All non-core tasks require training completion date and initials of the trainee and trainer only.

2.4. Shows formal training and correspondence course requirements. Columns 4A, B, and C show the proficiency to be demonstrated on the job by the graduate as a result of training on the task/knowledge and the career knowledge provided by the initial skills training course, correspondence course, and read-ahead material. See CADRE/AFSC/CDC listing maintained by the unit training manager for current CDC listings.

2.5. Identifies qualitative requirements. Attachment 1 contains the *Proficiency Code Key* used to indicate the level of training and knowledge provided by resident training and career development courses

2.6. Becomes a Job Qualification Standard (JQS) for on-the-job training when placed in AF Form 623, Individual Training Record, and used according to AFI 36-2201. When used as a JQS, the following requirements apply:

2.6.1. Documentation. Document and certify completion of training.

2.6.1.1. Identify current duty position requirements by circling the subparagraph number or letter next to the task statement. Additionally, all core and diamond (◆) tasks should be circled. Document task completion by annotating columns 3A, 3B, 3C, and 3D. **NOTE:** All entries shall be made in pencil.

2.6.1.2. Enter the start date of the AFQTP on the AFQTP documentation record. Once completed enter the completion date. When **hands-on** training is started and completed annotate the STS accordingly.

2.6.1.3. Transcribing from old document to CFETP. Use the new STS to identify and certify all current and past task qualifications.

2.6.1.3.1. For tasks previously certified and still required in the current duty position:

2.6.1.3.1.1. For core and critical tasks, the trainer and certifier evaluate the airman's current qualifications and validate airman's ability to complete the task. The certifier and trainee then enter their initials and new certified date.

2.6.1.3.1.2. For non-core duty position tasks, the trainer evaluates the airman's current qualifications and validates the airman's ability to complete the task. The trainer and trainee then enter their initials in columns 3D and 3C respectively and the current date is entered in column 3B.

2.6.1.3.2. To transcribe previous certification for tasks not required in the current duty position, carry forward only the previous completion dates (not the initials of another person). If and when these tasks become a duty position requirement, re-certify with current date and certifier, trainer, and trainee's initials.

2.6.1.4. Documenting Career Knowledge. When a CDC is not available, the supervisor identifies STS training references that the trainee requires for career knowledge and ensures, as a minimum, that trainees cover all mandatory items specified in AFMAN 36-2108, Enlisted Classification. For two-time CDC exam failures, supervisors identify all STS items corresponding to the areas covered by the CDC. The trainee completes a study of STS references, undergoes evaluation by the task certifier, and receives certification on the STS. **NOTE:** Career knowledge must be documented prior to submitting a CDC waiver.

2.6.1.5. De-Certification and Re-Certification. When an airman is found to be unqualified on a task, the supervisor shall erase previous certification and enter airman into qualification training. Appropriate remarks are entered on the AF Form 623a, On-The-Job Training Record Continuation Sheet, as to the

reason for de-certification. The individual is re-certified using the normal certification process.

2.6.2. Training Standard. Tasks are trained and certified to the “go” level. “Go” means the individual can perform the task without assistance and meets the local requirements for accuracy, timeliness, and correct use of procedures. This equates to a “3c” in the proficiency code key. AFQTPs, when available, shall be used to identify Air Force standardized procedures. Local requirements for accuracy, timeliness, and use of procedures shall be applied accordingly.

2.7. Is a guide for development of promotion tests used in the Weighted Airman Promotion System (WAPS). Senior NCOs with extensive practical experience in their career fields develop Specialty Knowledge Tests (SKTs) at the USAF Occupational Measurement Squadron. The tests sample knowledge of STS subject matter areas judged by test development team members as most appropriate for promotion to higher grades. Questions are based upon study references listed in the WAPS catalog. Individual responsibilities are in Chapter 14 of AFI 36-2606, United States Air Force Reenlistment, Retention, and NCO Status Programs. WAPS is not applicable to the Air National Guard or Air Reserve Forces.

3. Recommendations. Comments and recommendations are invited concerning quality of training AETC graduates receive. Reference this STS and address your correspondence regarding changes to 782 TRG/TTS, 620 9th Avenue, Suite 3, Sheppard AFB TX 76311-2368 or E-mail 782d csil@sheppard.af.mil. A Customer Service Information Line (CSIL) has been installed for the supervisor’s convenience to identify graduates who may have received over or under training on tasks/knowledge items listed in this STS. For a quick response to problems, call the CSIL at DSN 736-2574 any time day or night.

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

EARNEST O. ROBBINS II, Maj Gen, USAF
The Civil Engineer
DCS/Installations and Logistics

4 Attachments

1. Qualitative Requirements
2. 3-, 5-, and 7-level career field training requirements
3. General Contingency Requirements
4. AFQTP Documentation Record

THIS BLOCK IS FOR IDENTIFICATION PURPOSES ONLY

NAME OF TRAINEE

PRINTED NAME *(Last, First, Middle Initial)*

INITIALS *(Written)*

SSN

PRINTED NAME OF CERTIFYING OFFICIAL AND WRITTEN INITIALS

N/I	N/I

QUALITATIVE REQUIREMENTS

PROFICIENCY CODE KEY

	SCALE VALUE	DEFINITION: The individual
TASK PERFORMANCE LEVELS	1	Can do simple parts of the task. Needs to be told or shown how to do most of the task. (EXTREMELY LIMITED)
	2	Can do most parts of the task. Needs help only on hardest parts. (PARTIALLY PROFICIENT)
	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)
*TASK KNOWLEDGE LEVELS	a	Can name parts, tools, and simple facts about the task. (NOMENCLATURE)
	b	Can determine step by step procedures for doing the task. (PROCEDURES)
	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)
**SUBJECT KNOWLEDGE LEVELS	A	Can identify basic facts and terms about the subject. (FACTS)
	B	Can identify relationship of basic facts and state general principles about the subject. (PRINCIPLES)
	C	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 scale value may be used alone or with a task performance scale value to define a level of knowledge for 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 to several tasks.
- This mark is used alone instead of a scale value to show that no proficiency training is provided in the course or CDC.
- X This mark is used alone in course columns to show that training is required but not given due to limitations in resources.

Note 1: Underlined training references are commercial publications or other publications essential for enlisted specialty training and mission accomplishment.

Note 2: Task knowledge gained at Basic Military Training (BMT) will not be repeated during resident training.

Note 3: Prior to attending Civil Engineer Management Craftsman resident course, all personnel must successfully complete the 7-level Read-ahead Material (RAM) for J3ACR3E070 000. Personnel must present RAM test results upon arrival.

Note 4: AFQTPs are provided through multiple delivery systems (paper-based, CD-ROM, or video). Completion is required for upgrade or qualification. Access AFCESA's homepage (www.afcesa.af.mil) for most current AFQTPs.

Note 5: Annotate AFQTP completion on the AFQTP Documentation Record (available on the AFCESA home page) and maintain the completed documentation form in the trainee's records.

Note 6: In addition to completing the AFQTP Documentation Record, for ease of reference, you may place an "X" in column "4B(2)-QTP" to denote QTP completion.

1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
1. CE ORGANIZATION AND CAREER FIELD STRUCTURE TR: AFDD 2-4.2; AFIs 10-209, 10-210, 10-211, 32-1022, 32-1031, 36-2101, 38-101, 51-903; AFMAN 36-2108; War & Mobilization Plan (WMP)-1, Annex S												
1.1. Base Civil Engineer (BCE) structure						A		B				
1.2. Progression in career ladder						A		B				
1.3. Duties and responsibilities												
1.3.1. Peacetime						A						
1.3.2. Contingency						A						
1.4. Functions of:												
1.4.1. BCE						A		B		B		
1.4.2. Prime BEEF						A		B		B		
1.4.3. RED HORSE						A		B		B		
1.4.4. HQ ANG/AFRC						A		B		B		
1.5. Resources												
1.5.1. Assess manpower requirements										b	3c	
1.5.2. Identify budget requirements										b	3c	
1.5.3. Determine equipment requirements										b	3c	
1.5.4. Use Allowance Standards (AS)										b	3c	

1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
1.5.5. Research, Development, and Acquisition (RD&A) TR: DoDD 5000.1												
1.5.5.1. Process												B
1.5.5.2. Unit responsibilities												B
1.5.5.3. Major command responsibilities												B
1.5.6. Assess vehicle requirements											b	1b
1.5.7. Requesting contract services											b	2c
1.5.8. Requesting Simplified Acquisition of Base Engineering Requirements (SABER) contract											B	C
2. SPECIFIC OPSEC VULNERABILITIES TR: AFI 10-1101							A					
3. PRACTICE COMPUTER SECURITY TR: AFSSI 5100							A				A	1b
4. SUPERVISION TR: AFMAN 36-2108; AFIs 36-2201, 36-2403, 36-3104; AFPAM 36-3627; AFP 35-49; DoDD 5500-7												
4.1. Orient new personnel											b	
4.2. Assign personnel to work crew											b	
4.3. Coordinate work assignments											b	
4.4. Schedule work assignments and priorities											b	
4.5. Establish:												
4.5.1. Work methods											b	
4.5.2. Controls											b	
4.5.3. Performance standards											b	
4.6. Evaluate work performance of subordinate personnel											b	
4.7. Resolve technical problems for subordinate personnel											b	
4.8. Direct projects											b	2b

1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
5. TRAINING TR: AFIs 36-2101, 36-2201, 36-2202; AFMAN 36-2108; AFCAT 36-2223												
5.1. Evaluate personnel to determine need for training									b		b	3c
5.2. Enlisted specialty training supervision												
5.2.1. Prepare job qualification standards											b	3c
5.2.2. Conduct training											b	3c
5.2.3. Counsel trainees on their progress											b	3c
5.2.4. Monitor training effectiveness												
5.2.4.1. Career knowledge									a		b	3c
5.2.4.2. Job proficiency upgrade									a		b	3c
5.2.4.3. Qualification									a		b	3c
5.3. Maintain training records									a		b	3c
5.4. Evaluate training programs effectiveness											b	3c
5.5. Recommend people for training											a	b
5.6. AETC training management system (Training Allocation)									A		A	B
5.7. Managing Certification and Testing (CerTest)							A		B			B
5.8. National/DoD Certification requirements									A		A	B
5.9. AFQTP Requirements											B	
6. ENVIRONMENTAL AWARENESS AND COMPLIANCE TR: AFIs 32-4002, 32-7045, 32-7061; Chemicals in Your Community (EPA 550-K-93-003); EO 12856												
6.1. Environmental Compliance Assessment Management Program (ECAMP)							A		B		B	
6.2. National Environmental Policy Act (NEPA)							A		B		B	
6.3. Environmental Impact Analysis Process (EIAP)							A		B		B	

1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
6.4. Emergency Planning and Community Right to Know Act (EPCRA)							A		B		B	
6.5. Initial Federal Hazard Communication Training Program (FHCTP) TR: DoD 6050.5G.1; OSHA 29CFR1910.1200; AFI 91-302							A					
7. CE MANAGEMENT TR: AFI 32-1031, 32-1022; AFPAM 32-1098; AFMAN 23-110												
7.1. Customer relationships							A		B		B	
7.2. Work identification and authorization									A		B	
7.3. Plan work requirements									a		b	2b
7.4. Plan logistics support (CEMAS, BOM)									a		b	2b
7.5. IMPAC Program											A	B
7.6. Maintain recurring work program									a		b	2b
7.7. Scheduling/time accounting									a		b	2b
7.8. Warranty and Guarantee Program									A		B	
7.9. Property Accountability									B			B
7.10. Base Comprehensive Plan											A	
7.11. Legal limits									A			
7.12. Mark "As Built " Drawings											b	2b
7.13. Reimbursements procedures									A		B	
7.14. CE Specific Automated Systems (Computer) Capability												
7.14.1. Perform inputs									a		b	1a
7.14.2. Maintain files									a		b	1a
7.14.3. Develop automated reports									a		b	1a
7.14.4. Extract automated reports									a		b	1a
7.14.5. Perform automated data analysis									a		b	1a
7.15. Host Tenant and Interservice Agreements											A	
7.16. Civil Engineer Civilian Management											B	C

1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
8. COMMUNICATIONS TR: AFI 33-106; AFJMAN 24-306												
8.1. Use radios						b						
8.2. Use hand signals						b						
8.3. Identify airdrome signals						b						
9. AF OCCUPATIONAL SAFETY AND HEALTH (AFOOSH) PROGRAM TR: AFPDs 91-2, 91-3; AFI 91-302; AFIND 17												
9.1. Supervisory responsibilities								B				
9.2. Hazardous materials waste handling						A		B				
9.3. Lead-based paint (LBP) Hazard TR: 29-CFR 1926.62; Working With Lead-based Paint: Facts and Information Applicable to Air Force Facilities						B						
9.4. Fire extinguisher training						A						
10. PUBLICATIONS TR: AFI 37-160 Vol I; AFINDs 2, 9												
10.1. Military						A		B				
10.2. Commercial						A		B				
10.3. Engineering Technical Letters (ETL)						A		B				
11. AFS SPECIFIC PUBLICATIONS TR: AFMAN 32-1275, T.O.s 0-01, 0-1-02, 00-2-1, 005-2, 00-20-7, 42B-1-1, 37A-1-101, 00-25-172, AFPSH STD 91 25 National Electric Code (NFPA 70) API Publications												
11.1. Use indices to locate numbers and titles of commercial manuals, regulations, and forms								b				
11.2. Locate desired information in:												
11.2.1. Standard publications								b				
11.2.2. Technical orders								b				

1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
11.2.3. National Electric Code (NFPA 70)							A		B			
11.3. Use commercial publications to perform maintenance, operation, and troubleshooting							2b		B			
11.4. Lockout Tagout							A		B			
11.5. Respiratory Protection Program							A		B			
11.6. Confined Space entry												
11.6.1. Confined Space entry program							A		B			
11.6.2. Perform Confined Space entry							a		b			
12. TOOLS AND EQUIPMENT TR: AFMAN 32-1275, T.O.s 00-25-172, 33-1-101, 11H5-35-1												
12.1. Metric system									A			
12.2. Use common hand tools							2b		b			
12.3. Use specialized hand tools							2b		b			
12.4. Use vapor/oxygen indicator	*						2b		b			
12.5. Use master meter							2b		b			
12.6. Maintain Tools							b		b			
12.7. Air Compressor												
12.7.1 Inspect							a		b			
12.7.2. Operate							a		b			
13. PHYSICAL PRINCIPLES TR: AFMAN 32-1275												
13.1. Hydraulics							B		B			
13.2. Mechanics							B		B			
14. FUELS SYSTEMS TR: AFMAN 32-1275; MIL-HDBK 1022A, API Publication												
14.1. Types							B		B			
14.2. Interpret mechanical drawings	*						2b		b			
14.3. Standard Designs							B		B			
14.4. Operational inspect												
14.4.1 Type I							a		b			
14.4.2. Type II							2b		b			
14.4.3. Types III & IV												
14.4.3.1. Modes of Operation							2b		C			
14.4.3.2. Valve Operation							2b		C			

1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
14.5. Inspect Electrical/PLC							2b		C			
14.6. Pressure/flow transmitters (PIT/DPT-Type III & IV)												
14.6.1. Replace							b		b			
14.6.2. Calibrate							2b		b			
14.7. Inspect Panograph station (Type IV)							b		b			
14.8. Troubleshoot												
14.8.1. Type II							2b		b			
14.8.2. Type III							2b		b			
15. MAINTENANCE OF INSTALLED FUEL SYSTEMS TR: AFMAN 32-1275; AFOSH STD 127-40; MIL STD 161, 37-1-1, 42B-1-1, 37A-1-101, 37A6 7-1, 00-25-172; MIL-HOBK 1022A, API Publication												
15.1. Tubing												
15.1.1. Types							A		B			
15.1.2. Fittings							A		B			
15.1.3. Fabricate tubing systems							2b		b			
15.2. Automatic valves												
15.2.1. Constructional features							B		B			
15.2.2. Operational characteristics							B		B			
15.2.4. Adjust							2b		c			
15.4.4. Repair	*						2b		c			
15.2.5. Troubleshoot							2b		c			
15.3. Pumps												
15.3.1. Constructional features							B		B			
15.3.2. Operational inspect	*						2b		b			
15.3.3. Adjust/Align							b		b			
15.3.4. Lubricate bearings							b		b			
15.3.5. Mechanical seals												
15.3.5.1. Replace							2b		c			
15.3.5.2. Adjust									b			
15.3.6. Replace components							2b		b			
15.4. Filtration equipment												
15.4.1. Constructional Features							B		B			
15.4.2. Replace filter element cartridge							2b		b			
15.4.3. Repair Filtration equipment							b		b			
15.5. Fuel meters												
15.5.1. Constructional features							B		B			
15.5.2. Calibrate meters							2b		b			
15.5.3. Repair									a			

1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
15.6. Storage tanks												
15.6.1. Constructional features												
15.6.1.1. Above ground						B		B				
15.6.1.2. Below ground						B		B				
15.6.1.3. Cut and cover						B		B				
15.6.2. Components												
15.6.2.1. Repair						b		c				
15.6.2.2. Inspect						b		c				
15.6.2.3. Check leak detection systems						b		c				
15.6.3. Gauging systems												
15.6.3.1. Remove/reinstall automatic						b		b				
15.6.3.2. Mechanical												
15.6.3.2.1. Constructional features						B		B				
15.6.3.2.2. Repair						b		b				
15.6.3.2.3. Inspect						b		b				
15.6.3.2.4. Adjust						b		c				
15.6.4. Inspect dikes						b		c				
15.7. Manual valves												
15.7.1. Constructional features						B		B				
15.7.2. Lubricate						b						
15.7.3. Repair						2b		c				
15.8. Loading/off loading equipment												
15.8.1. Constructional features						B		B				
15.8.2. Truck Overfill Protection						A		B				
15.8.3. Dry Break Couplers ex. Single-point nozzles, cam-lock coupler and ground product coupler)												
15.8.3.1. Constructional features						A		B				
15.8.3.2. Repair						2b		b				
15.8.4. Hoses						A		B				
15.8.5. Use hydrostatic hose tester						2b		b				
15.9. Piping systems												
15.9.1. Constructional features						B		B				
15.9.2. Perform pipe threading						2b		b				
15.9.3. Perform pipe fitting						2b		b				
15.9.4. Perform pressure test												
15.9.4.1. Leak test						b		b				
15.9.4.2. Annual	*					b		b				
15.9.4.3. Five year	*					b		b				
15.10 Gauges												
15.10.1. Constructional features						B		B				
15.10.2. Calibrate						2b		b				

1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
15.11. Automotive gasoline dispensing system												
15.11.1. Troubleshoot dispensing systems						2b		b				
15.11.2. Submersible												
15.11.2.1. Construction						A		B				
15.11.2.2. Inspect						2b		b				
15.11.2.3. Repair						b		b				
15.11.2.4. Replace						b		b				
15.11.3. Self-Contained												
15.11.3.1. Construction						A		B				
15.11.3.2. Inspect						2b		b				
15.11.3.3. Repair						b		b				
15.11.3.4. Replace						b		b				
15.11.4. VIL Systems						A		B				
15.11.5. Calibrate meters						2b		b				
15.12. Hydrant outlets												
15.12.1. Construction features						B		B				
15.12.2. Repair						2b		b				
15.13. Corrosion Control						A		B				
15.14. Surge Arrestors						A		B				
15.15. Contract Administrator/QAE								A				
15.16. Defense Energy Support Center								B				
16. LIQUID FUELS ELECTRICAL TR: AFI 32-1064; T.O. 31-1-141 series												
16.1. Electrical fundamentals												
16.1.1. Electron Theory						B		B				
16.1.2. AC Circuits						B		B				
16.1.3. DC Circuits						B		B				
16.1.4. Solid State Components						B		B				
16.2. Solid State Circuits												
16.2.1. Analog						B		B				
16.2.2. Digital						B		B				
16.3. Circuit components												
16.3.1. Overcurrent protection devices						B		B				
16.3.2. Electromagnetic devices						B		B				
16.3.3. Switches						B		B				
16.3.4. Transformers						B		B				

1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
16.4. Interpret schematics: Block, wiring, connection, schematic, ladder	*						2b		b			
16.5. Motors							B		B			
16.6. Use test equipment to measure:												
16.6.1. Voltage	*						2b		b			
16.6.2. Resistance	*						2b		b			
16.6.3. Current	*						2b		b			
16.7. Inspect electrical components/circuits	*						2b		b			
16.8. Troubleshoot electrical systems							2b		b			
16.9. Replace electrical components	*						2b		b			
16.10. Apply safety precautions	*						2b		b			
16.11. Cathodic protection							A		B			
17. TANK/CONFINED SPACE ENTRY TR: AFMAN 32-1275; AFOSH STD LGT-1, 91-25, 91-38, 127-45; API Pub 2015 4th Ed (Note 3b); NIOSH 38-193, T.O. 11H5-35-1												
17.1. Safety hazards							B		B			
17.2. Prepare tanks							b		b			
17.3. Specialized protective clothing												
17.3.1. Inspect							a		b			
17.3.2. Use							a		b			
17.3.3. Maintain							a		b			
17.4. Specialized protective equipment												
17.4.1. Inspect	*						2b		b			
17.4.2. Use	*						2b		b			
17.4.3. Maintain	*						a		b			
17.5. Perform tank inspection							a		b			
17.6. Perform tank cleaning							a		b			
17.7. Return tank to service							b		b			
18. DEACTIVATE FUEL SYSTEMS TR: MIL HDBK 1022; AFMAN 32-1275												
18.1. Fundamentals									A			
19. ENVIRONMENTAL TR: STANAG 7102; AFMAN 32-1275												
19.1. Concerns												

1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
19.1.1. Governing Authorities								A		A		
19.1.2. Operational								A		A		
19.2. Disposal												
19.2.1. Fuel								A		B		
19.2.2. Sludge								A		B		
19.2.3. Solid waste								A		B		
20. AFSC SPECIFIC CONTINGENCY RESPONSIBILITIES TR: AFIs 10-210; 10-211, 32-1026; T.O.s 35E 5-6-1, 35E4-132-1, 35E94-1, 37A13-5-1, 37A13-6-1, 37A13-6-2; Army TMs 10-8340-207-14, 10-450-200-12; WMP-1, Annex S; (Mar 95); AFPAM 10-219, Vol 2,3,4,&5												
TR: AFIs 32-7005; 32-1065; 10-201; 10-410; AFPAM 10-209, Vol 2,3,&5; AFOSH STDs 48-22; 127-31; MIL STD 161; T.O.s 37A13-5-1, 37A13-6-1, 37A13-6-2, 11H5-35-1, 34Y5-4-12-1, 34Y1-184-21, 32B13-3-8-1, 38G1-112-3, 35F5-16-1, 35D26-9-2-1												
20.1.1. Expedient techniques								A		B		
20.1.2. Invasion pipeline system								A		B		
20.1.3. Rapid Utility Repair Kit (RURK)												
20.1.3.1. Concept								A		B		
20.1.3.2. Operate/Maintain RURK I	◆							2b		b		
20.1.3.3. Operate/Maintain RURK II Contingency Fuels Recovery System (CFRS)	◆							b		b		
20.2. Fuel (R-14 types) Storage Bladder Erection TR: T.O. 39-3-5 series; TM 5-5430-200-12 AFPAM 10-209, Vol 5								A		B		
20.3. Water Distribution System Repair TR: AFI 91-13; 32-7041; AFI 32-1066; AFI 32-1067; AFPM 10-209, Vol 3, Uniform Plumbing Code												

1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
20.3.1. Expedient line repair techniques									B			
20.3.2. Main line blocking techniques									B			
20.3.3. Feeder to main line joining actions									B			
20.4. Sewage system pipe repair TR: AFIs 32-1054, 10-1066, 10-1067, 10-7041; AFPM 10-209, Vol 3, Uniform Plumbing Code									A			
20.5. Waste Water Disposal TR: AFPM 10-209, Vol 5; AFIs 10-200, 32-1054, 32-1066, 32-1067, 32-7041, 48-110, 36-2238; AFM 91-32; AFD 48-1; Army TM 5-654; T.O.s 34W4-1-5,7,&8; ANSI A13-1; MIL STD 101-B												
20.5.1. Black iron and steel pipe									B			
20.5.2. Copper									B			
20.5.3. Hazardous piping identification									B			
20.6. Heater 35,000-70000 BTU TR: AFI 23-204; AFPAM 10-209, Vol 5, TM 5-4520-20435P; 5-4520-253-13												
20.6.1. Installation									A			
20.6.2. Operation									A			
20.6.3. Maintenance									A			
20.6.4. Repair									A			
20.7. Special Purpose Vehicles /Equipment TR: T.O.s 36A2 series, 36C2 series, 36C 12 series												
20.7.1. Tractor mounted backhoe												
20.7.2. Dump Truck												
20.7.3. HMMVV												
20.8. Expedient Beddown TR: AFPAM 10-200, Vol 2 & 5; AFH 10-22, Vol 1												
20.8.1. Setup Field Deployable Latrine												

21.2.1. Individual's responsibilities for administering first aid													
21.2.2. Self aid and buddy care concept													
21.2.3. Basic lifesaving steps													
21.2.4. Move and transport injured personnel													
21.3. Field Sanitation & Hygiene Measures TR: AFIs 48-110, 10-210; AFDD 35; ARMY FM 21-10													
21.3.1. Personal hygiene measures													
21.3.2. Countermeasures													
21.3.2.1. Disease and pestilence													
21.3.2.2. Communicable diseases													
21.3.3. Sanitation requirements													
21.3.3.1. Field													
21.3.3.2. Kitchen & Mess													
21.4. Self Protection from Extreme Weather TR: A77 AFPAM 10-221, Vol 5; Army FM 21-76													
21.4.1. Hot weather survival techniques													
21.4.2. Cold weather survival methods													
21.5. Force Protection TR: Joint Pub 1-02; AFH 32-4014, Vol 4; AFH 10-222, Vol 3; AFPAM 10-221 Vol 2; DoD 0-2000.12-H; Joint Services Guide 5260													
21.5.1. Personal / Work Party Security TR: AFIs 36-2226, 36-2209, 31-301, 10-403, 10-404, 31-207, 10-215; AFPAM 10-221, Vol 3 ; Army FMs 21-75; 7-8; A88													
21.5.1.1. Combat skills													
21.5.1.2. Defensive tactics													
21.5.1.2.1. Cover and concealment													
21.5.1.2.2. Individual movement													
21.5.1.2.3. Weapons fire control													
21.5.1.2.4. Communications													
21.5.1.2.5. Field fortifications													
21.5.1.2.6. Guard placement/perimeter defense													
21.5.1.2.7. Recognition code system													

For Reference Only

Document General
Contingency Training
IAW AFI 10-210

For Reference Only

Document General
Contingency Training
IAW AFI 10-210

21.8. Explosive Ordnance Reconnaissance (EOR) TR: AFI 10-210; AFPAM 10-221, Vol 3 & 4; Army FMs 21-16, 21-75												
For Reference Only												
21.8.1. Potential ordnance												
21.8.2. Marking procedures												
21.8.3. Reporting procedures												
21.8.4. Mass ordnance clearance												
Document General												
Contingency Training												
IAW AFI 10-210												
21.9. Beddown shelters TR: T.O.s 35E-5-6-1, 35E4-132-1, 35E4-94-1; TM 10-4500-200-13; AFI 10-221, Vol 2, 3, & 5												
21.9.1. Bare base concept												
21.9.2. Beddown package assets												
21.9.2.1. Harvest Eagle												
21.9.2.2. Harvest Falcon												
21.9.2.3. TEMPER Tent												
TR: AFPAM 10-221, Vol 2, 5;												
AFH 10-222, Vol 1; T.O. 35E5-6-1												
21.9.2.4. Small Shelter System (SSS)												
TR: T.O. 35E5-6-11												
For Reference Only												
21.10. Rapid Runway Repair (RRR) TR: AFIs 10-210, 10-211, 10-212; TOs 35E2-3-1, 35E2-2-7, 35E2-5-1; AFPAM 10-221, Vol 4												
Document General												
Contingency Training												
IAW AFI 10-210												
21.10.1. Base Recovery concepts												
21.10.2. Damage assessment												
21.10.3. Damage reporting												
21.10.4. Rapid Runway Repair (RRR) concept												
21.10.4.1. RRR Philosophy												
21.10.4.2. AM-2 Matting												
21.10.4.3. Fiberglass Mat												
21.10.5. Spall Repair												

AFQTP Documentation Record For AFSC 3E4X2

- Download the applicable AFQTPs at <http://www.afcesa.af.mil/Directorate/CEO/Training/Enlisted/QTPs/3E4X2.htm>
- Trainers/Certifiers enter their name and initials in the identification block at beginning of the STS
- Upon administering AFQTPs, enter start date in column 4 of this record
- Upon completion of each unit, document columns 5, 6, and 7
- Upon completion of applicable CerTests, trainer will place the completion date in column 8
- Transcribe by entering current date in columns 5 and 8, Trainees & Trainers Initials in columns 6 & 7

1	2	3	4	5	6	7
TASK NUMBER	TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	* 5 LEVEL * 7 LEVEL ◆ SEE NOTE 1	START DATE	COMPLETE DATE	TRAINEE'S INITIALS	TRAINER'S INITIALS
12.	Tools and Equipment Ref: AFQTP Module 12 – Tools and Equipment					
12.4.	Use vapor/oxygen indicator	*				
14.	Fuel Systems Ref: AFQTP Module 14 – Fuel Systems					
14.2.	Interpret mechanical drawings	*				
15.	Maintenance of Installed Fuel Systems Ref: AFQTP Module 15 – Maintenance of Installed Fuel Systems					
15.2.4.	Repair (Automatic valves)	*				
15.3.2.	Operational inspect (Pumps)	*				
15.9.4.2.	Annual (Perform pressure test)	*				
15.9.4.3.	Five year (Perform pressure test)	*				
16.	Liquid Fuels Electrical Ref: AFQTP Module 16 – Liquid Fuels Electrical					
16.4.	Interpret schematics: Block wiring, connection, schematic, ladder	*				
16.6.1.	Voltage (Use test equipment to measure)	*				
16.6.2.	Resistance (Use test equipment to measure)	*				
16.6.3.	Current (Use test equipment to measure)	*				
16.7.	Inspect electrical components/circuits	*				

16.9.	Replace electrical components	*				
16.10.	Apply safety precautions	*				
17.	Tank/Confined Space Entry Ref: AFQTP Module 17 – Tank/Confined Space Entry					
17.4.1.	Inspect (Specialized protective equipment)	*				
17.4.2.	Use (Specialized protective equipment)	*				
17.4.3.	Maintain (Specialized protective equipment)	*				

NOTE 1: ♦ Diamond tasks are extremely important to the career field. Diamond tasks are the same as core tasks with one exception--equipment shortfalls at most locations have created problems with the actual hands-on certification of these tasks. In instances where required equipment is not available for instruction, completion of the task's AFQTP and passing the corresponding CerTest is all that is required for upgrade and qualification training. Hands-on certification should be accomplished at the first opportunity when equipment is available. In locations where the equipment is available for hands-on certification, CerTest completion is still a mandatory requirement.

1	2	3	4	5	6	7	8
TASK NUMBER	TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	♦ ** 5 LEVEL * 7 LEVEL ♦ SEE NOTE 1	START DATE	COMPLETE DATE	TRAINEE'S INITIALS	TRAINER'S INITIALS	CerTest COMP DATE
20.	AFS Specific Contingency Responsibilities Ref: AFQTP Module 20 – AFS Specific Contingency Responsibilities						
20.1.3.2.	Operate/Maintain Rapid Utility Repair Kit (RURK I) CerTest # 8033, 8034, 8035 and 8036	♦					
20.1.3.3.	Operate/Maintain Contingency Fuel Recovery System (CFRS) Note: AFQTP and CerTest under development ECD: Oct 02	♦					

SECTION B - COURSE OBJECTIVE LIST (COL)
(This section used when developing lesson plans)

4. Measurement. Measurement of each objective is indicated as follows:

4.1. Written Test (W) - used to sample each knowledge objective and the knowledge components of performance objectives.

4.2. Performance Test (P) - used under specified conditions in a formal testing mode to measure student accomplishment of performance objectives after the teaching-learning activity has been completed.

4.3. Progress Checks (PC) - administered by the instructor during classroom or laboratory instruction time to assess the student's accomplishment of knowledge or performance objectives.

5. Standard. The standard is 70% on written examinations. Standards for performance measurement are indicated in the objectives and delineated on the individual progress checklist. Instructor assistance is provided as needed during the progress check, and students may be required to repeat all or parts of the behavior until satisfactory performance is attained.

6. Proficiency Level. Most task performance is taught to the "2b" proficiency level which means the student can do most parts of the task, but does need assistance on the hardest parts of the task (partially proficient). The student can also determine step-by-step procedures for doing the task.

7. Course Objective List. These objectives are listed in the sequence taught by Block of Instruction.

7.1. Initial Skills Course. A detailed listing of the initial skills course objectives may be obtained by written request to 366 TRS/DO, 727 Missile Road, Sheppard AFB TX 76311-2254.

7.2. 7-Skill Level Course. A detailed listing of the CE Craftsman Management course objectives may be obtained by written request to 366 TRS/DO, 727 Missile Road, Sheppard AFB TX 76311-2254.

SECTION C - SUPPORT MATERIALS

8. CerTest.

8.1. CerTest is a program that uses computer-based evaluation to ensure skilled craftsmen are available to meet the Air Force's changing needs. It enhances upgrade and qualification training by testing and evaluating an individual's knowledge of the principles and procedures in each specialty.

8.1.1. The program contains tests used evaluate task knowledge received through different media such as paper products (text), videotapes, and computer-based programs.

8.1.2. The CerTest program contains **mandatory** tests, required for upgrade. All **diamond** (◆) coded tasks on the STS have a corresponding **mandatory** test.

8.1.3. CerTest is also a powerful training management tool. It can be used to find the strengths and weaknesses in an individual's training and experience. CerTest automatically records and updates all test results. The training manager can copy records to a disk so that an individual can bring current, accurate training information to a new unit; thereby helping the gaining supervisor evaluate the trainee's knowledge and experience.

8.2. CerTest also enable unit personnel to develop site-specific tests. These custom-made tests standardize testing on tasks unique to a specific duty station and/or assignment. The program contains a graphics library that may be used along with a menu-driven test editor to develop these site-specific tests.

8.3. CerTest also contains **optional** CDC pre-evaluation tools. Volume review exercises are available for progress checks after each volume is completed. After all volumes are completed in a set, the trainee may take the course review exercise before taking the final End of Course exam at the base training office. Commanders are encouraged to integrate these tools in their unit's OJT program.

8.4. CerTest has been adopted as the Air Force platform for future electronic CDC testing. The Air Force Institute for Distributive Learning (AFIADL) began using CerTest on 1 June 2000. Currently, all CE AFSCs are allowed to use AFIADL's CerTest on installations where Base Test Control Facilities (TCFs) are equipped. See your UETM for further information.

8.5. The **mandatory** CerTests for each AFSC are identified, by number, with it's corresponding AFQTP on the 3E4X2 AFQTP Documentation Record.

8.6. Air Force Qualification Training Packages. (See AFCESA web page for up-to-date AFQTP status)

<http://www.afcesa.af.mil/Directorate/CEO/Training/Enlisted/QTPs/3E4X2.htm>

SECTION D - TRAINING COURSE INDEX

9. Purpose. This section of the CFETP identifies training courses available for the specialty. Refer to the Education and Training Course Announcements (ETCA) web site, <https://etca.randolph.af.mil> for complete information on Air Force resident courses.

10. Air Force In-Residence/Mobile Training Team (MTT) Courses.

Course Number	Title	Developer
J3ABR3E432 004	Liquid Fuel Systems Apprentice Course	366 TRS
J3AZR3E472 000	Liquid Fuels Storage Tank Entry Supervisor Course	366 TRS
J3AZR3E472 001	Liquid Fuel Systems Technician Course	366 TRS
J3ACR3E070 000	Civil Engineer Management Craftsman Course	366 TRS

11. Air Force Institute for Advanced Distributive Learning (AFIADL) Courses.

Course Number	Title	Date
CDC 3E452 01	Liquid Fuel Systems Journeyman	Feb 02

12. Exportable Courses/Information.

Course Number	Title	Date
	Civil Engineer Management Craftsman Read-Ahead Material (RAM) version 2.1	Jul 01

13. Courses Under Development/Revision.

Course Number	Title	Date Due
J3ABR3E432 004	Liquid Fuel Systems Apprentice Course	24 June 02
CDC 3E452	Liquid Fuel Systems Journeyman	01 August 02

SECTION E – MAJCOM-UNIQUE REQUIREMENTS

14. No current MAJCOM-unique requirements. This area is reserved.

SECTION F - HOME STATION TRAINING

15. Purpose. The purpose of this section is to identify the tasks, training references, and training sources available in support of contingency/wartime training. Training ranges from knowledge-type training conducted in a classroom to task-oriented (hands-on) training conducted in the field. These training requirements, frequencies, and sources are listed in AFI 10-210, Prime Base Emergency Engineer Force (BEEF) Program.

15.1. Home Station Training (HST). HST is training that is conducted at the individual's home station for contingency operations.

15.1.1. Category I (CAT-I) training consists of knowledge-level training such as Prime BEEF orientation, field sanitation, and expedient methods. CAT-I training is normally accomplished through briefings and the use of videos and other training aids. These various training aids are listed in AFI 10-210, Attachment 2 under the "Optional Source for Training Material" column.

15.1.1.1. . The "General Contingency Responsibilities" (GCR), CD-ROM Training Package may be used for Category I contingency training. Successful completion of the lessons in the GCR CD-ROM will satisfy those SORTS requirements indicated in AFI 10-210, Chapter 4 and Attachment 2. It can be used for training and evaluation and is based on successful completion of one or more lessons completed in any order. One, some or all lessons may be completed at a given time. At the end of each lesson, the trainee will successfully complete the Lesson Review Exercise (LRE) and receive a certificate of training generated by the CD-ROM. The trainee must present the certificate or certificates to the Readiness Training Monitor to receive credit for the training.

15.1.1.2. Also available are various volumes of Home Station Training CD-ROM packages. These disks contain up to five presentations covering various CAT I topics. These are an additional method of providing required recurring training and topics covered are indicated in the training material column of Attachment 2 by the letters "PBCD".

15.1.1.3. For personnel assigned to a unit with a Prime BEEF mission for the first time, the 3-Level General Contingency Responsibilities CD-ROM is to be completed within the first 90 days of assignment. This product contains 17 lessons covering CAT I training topics. CAT I credit can be given for completion of these lessons for the same areas as the previously mentioned General Contingency Responsibilities product as indicated in AFI 10-210. Completion certificates should be presented to the Readiness Training Monitor for documentation of training.

15.1.1.4. The Unit should develop procedures to use these products to suit their needs. Remember these are tools to assist you in fulfilling CAT I training requirements. Document this training as outlined in AFI 10-210.

15.1.2. Category II (CAT-II) training is primarily task-oriented training such as weapons training, hard-back tent construction, and convoy security and the hands-on portion of various CAT I topics. This training is listed in AFI 10-210, Attachment 3 can be conducted during regularly required field training exercises.

15.2. Training References.

15.2.1. AFI 10-210, Prime Base Engineer Emergency Force (BEEF) Program.

Chapter four of AFI 10-210 identifies the Prime BEEF recurring training requirements. You can review this document by going to the Air Force publications web site. Attachment 2 is a list of HST CAT-I training requirements and Attachment 3 lists CAT-II training requirements.

15.2.2. Prime BEEF Contingency and Wartime Tasks - AFPAM 10-219, Vol 10.

The Contingency Training Guide and Task Standards (AFPAM 10-219, Vol 10) lists basic wartime skills, knowledge, and the major common contingency/wartime tasks that Prime BEEF teams will be required to perform. The Contingency Training Guide and Task Standards identify the AFSs associated with each task, required resources to accomplish the task, and the maximum time (under optimum conditions) expected to complete the task. The document also identifies the lead AFS on each task. This document is located on the Air Force Publications Web site.

15.2.3. AFPAM 10-219 Series. These documents assist in home station training and contingency responses. They replaced the AFP 93-12 series of planning documents and are available on the Air Force Electronic Publications Library (AFEPL).

15.2.4. Air Force Education and Training Course Announcements (ETCA).

Superseded AFCAT 36-2223. It is located at the following URL: <https://etca.randolph.af.mil> lists additional training/educational opportunities available for civil engineer personnel. This catalog contains information on formal education and training courses. The catalog is updated quarterly.

15.2.5. Readiness Training Package (RTP). RTPs are lesson plans for HST lessons. The RTPs are intended for those personnel who teach any area of HST. The index and RTPs are located on the Air Force Civil Engineer Support Agency (AFCESA) home page. The internet address for this information is <https://wwwmil.afcesa.af.mil>.

15.2.6. Other Documents. AFH 10-222, Bare Base Development, Bare Base Facility Erection, Force Protection, Mechanical Systems, Bare Base Assets, Bare Base Generators and other volumes in the AFH 10-222 series are used for contingency training and operations. The AFH series are pocket guides providing information on bare base systems for all AFSs. AFH 10-222, Vol 4, Air Force Environmental Handbook for Contingency Operations, was developed to assist the environmental career field (3E4X3) on environmental quality issues during contingency and training operations. The hand-book can be used by any AFS that works closely with environmental issues. Visit the Air Force Publications web site to download this information.

15.2.7. AFCESA/CEX. Maintains a comprehensive listing of audiovisual products that support the contingency training program. To view this listing as well as gain information on how to order specific audiovisual products, please consult the AFCESA Contingency Support page.

15.3. Ancillary Training.

15.3.1. Team Exercise Sites (CAT III). All CE personnel who fill critical Unit Type Code (UTC) positions will receive team training at Silver Flag Exercise Sites (SFES)

with the exception of members on headquarters staff augmentation UTCs, pavement evaluation UTCs, and generator repair and maintenance UTCs. There are currently three active SFES in the world today. They are located at Tyndall AFB, FL; Ramstein AB, Germany; and Kadena AB, Japan. Active duty personnel in critical UTC positions will be qualified at least every 30 months on the elements listed in table 4.3 of AFI 10-210. The Air Reserve Components (ARC) will be qualified at least every 45 months.

15.3.2. AEF/Spin-up Training. The AFCESA home page has the worldwide locator for the different types of training, locations, and Points Of Contact (POC) for equipment items that may be encountered during contingency operations.