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WATER AND FUEL SYSTEM MAINTENANCE
Federal Wage System Series
4201/4204/4206/4255/4742/4749/5406/5408/5409

CAREER FIELD EDUCATION AND TRAINING PLAN

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Attachments

OPR: AFCEC/COF
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Supersedes CFETP3E4X1WG Dated 22 November 2024

PART I

Preface

This Career Field Education and Training Plan (CFETP) is a comprehensive education and training document that identifies life-cycle education/training requirements and training support resources for the Water and Fuel Systems Maintenance Specialty Federal Wage System (FWS) series. The CFETP provides FWS personnel with a clear career path to success and instills rigor in all aspects of our job series training.

The CFETP consists of two parts used by the supervisor to plan, manage, and control training within the job series.

Part I includes the following:

- **Section A** provides general information about how the CFETP will be used.
- **Section B** identifies job series progression information, duties and responsibilities, training strategies, and the job series path.

Part II includes the following:

- **Section A** identifies the Family Series Training Standard (FSTS) to include duties, tasks, and technical references to support FWS training programs.
- **Section B** identifies available support materials.
- **Section C** 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.

Using guidance provided in the CFETP will ensure individuals in Water and Fuel Systems Maintenance FWS series receive effective and efficient training at the appropriate point in their careers. This plan will enable us to train today's workforce for tomorrow's jobs. At the unit level, supervisors and trainers must use Part II to identify, plan, and conduct training commensurate with the overall goals of this guide and the local mission.

ABBREVIATIONS EXPLAINED

Air Force Civilian Career Field Manager (AFCCFM). An individual on the Air Staff charged with the responsibility for overseeing all training and career field management aspects of multiple Air Force job series in a functional area.

Air Force Civil Engineer Center (AFCEC). The focal point for all Civil Engineer training development.

Air Force Institute of Technology (AFIT). Provides vital, relevant, and connected education that enables Airmen to be ready engineers and great leaders who know how to build sustainable installations to last while leading the change for the Civil Engineer career field. Course list can be accessed at: https://www.afit.edu/ce/

Air Force Qualification Training Package (AFQTP). An instructional package designed for use as a training resource 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, in other audiovisual media formats, or all three.

Career Development Course (CDC). A self-paced, correspondence course published to provide the information necessary to satisfy the career knowledge component of on-the-job training (OJT). These courses are developed from references identified in the CFETP. CDCs will contain information on basic principles, techniques, and procedures common to a military AFSC or civilian job series. They do not contain information on specific equipment or tasks unless best illustrating a procedure or technique having utility to the entire career field.

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

CE Career Field SharePoint. Contains information on leadership courses and civilian tuition assistance for degree programs. Can be found at: Civil Engineer Career Field Team SharePoint

Civilian Force Development Homepage. Contains descriptions and requirements for several civilian training opportunities such as degree programs and civilian leadership courses. This page can be found at: Knowledge Detail (af.mil)

Classification Standard. Job grading standards provide information used in determining the occupational series and title of jobs performing trades, craft, and labor work in the Federal Government. They also provide grading criteria for positions classified under the Federal Wage System (FWS). Classification Standards can be found at: https://www.opm.gov/policy-data-oversight/classification-qualifications/classifying-federal-wage-system-positions/#url=5300

Commercial Off the Shelf (COTS). Commercially procured training products or in-resident vendor training.

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

Core Tasks. Mandatory tasks which the AFCCFM has identified as a minimum qualification requirement within a job series or duty position. These tasks are derived from the Standard Core Personnel Document (SCPD) for each job series.

Distance Learning (DL). Includes Video Tele-seminar (VTS), Video Tele-training (VTT), and 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 Detachments.

DoD Civilian COOL: On-line source for civilian credentialing opportunities located at: http://dod-civ-cool-review.s3.amazonaws.com/index.htm

Duty Position Tasks. Tasks identified by the work center supervisor as critical and common training tasks needed for the duty position and mission accomplishment.

Education & Training Course Announcements (ETCA). Web platform, which contains descriptions, requirements, and reporting procedures for in resident Air Force courses. This is located at: ETCA (dps.mil)

Enlisted Professional Military Education (EPME). EPME provides a continuum of learning through progressive courses concentrated on developing Military and Civilian Airmen. EPME plays a vital role in preparing Civilian Airmen for increased supervision, leadership, and management challenges. The three levels of Air Force EPME are Airman Leadership School, Noncommissioned Officer Academy and Air Force Senior Noncommissioned Officer Academy. All levels of EPME are available to FWS civilians in accordance with DAFI 36-2685 and DAFI 36-2687. Information about EPME can be found at: https://www.airuniversity.af.edu/

Family Series Training Standard (FSTS). Describes skills and knowledge that FWS Employees in a particular job series need on the job and for future career development opportunities. It further serves as the overall training requirements for a Wage Series taught in the resident and nonresident courses as well as an on-the-job training program

Functional Advisory Council/Wage Grade Panel. The Wage Grade Panel is one of the four panels that make up the Civil Engineer Functional Advisory Council (FAC). The Wage Grade Panel charter is to work issues, develop policy, and provide recommendations to the FAC on matters related to civilian Wage Grade requirements. The Wage Grade Panel works through the FAC, in service to the CE Total Force community.

myLearning. Anytime, anywhere learning within DoD consisting of instructional modules comprised of sharable content objectives in an Internet/Intranet environment. This can be found at: Air Force myLearning (af.mil)

On-the-Job Training (OJT). Hands-on, over-the-shoulder training conducted to certify personnel in job qualification (duty position certification) training.

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

Red Vector. Commercial web-based training available free of charge to CE employees. Courses are effective for certification renewal and earn Continuing Educations Units (CEUs). Site can be found at: Air Force eLearning Portal: Course Search | CE, PDH, Continuing Education for Engineers, Contractors, Architects (redvector.com)

Regional Training Site (RTS). Total Force training centers managed by the Air National Guard. These sites offer training on specialized military equipment and are available to civilians who require training for local mission needs. Training can be coordinated through the FWS Force Development Team at AFCEC/COF.

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

Total Force. All collective Air Force components (Active Duty, Reserve, Guard, and Civilian elements) of the United States Air Force.

Vendor Training. Training provided to the Air Force by a third party. Typically, a private vendor in the private sector not affiliated with the Department of Defense. Vendor training can be in the form of Web-Based Training, Computer-Based Training, or in resident training at a temporary duty location or even hosted on an Air Force installation.

FWS Series Training. A mix of formal training (technical school) and informal training (on-the-job) to develop, maintain and enhance FWS series specific technical skills.

Web-Based Training. A form of Distance Learning. The term Web-Based just means the training is online and requires access to the internet in addition to the actual course content.

Section A – GENERAL INFORMATION

A1. Purpose. The CFETP is designed to be a tool for supervisors to use in assessing the skill level of current and new employees. The CFETP may be used to document training and proficiency of the employee on associated task/s by the supervisor or certified trainer.

A1.1. Column 1 (*Tasks, Knowledge, and Technical References*). Lists the most common tasks, knowledge, and supporting technical references (TR) necessary for Civilian Airmen to perform duties in the Apprentice, Journeyman, Craftsman, and Supervisor level.

A1.2. Column 2 (*Tasks*). Identifies tasks that have a Core and/or Certification, Civilian Deployment, or Special Experience Identifier (SEI) requirement.

A1.3. Column 3 (*Certification of Training*). Used to record completion of tasks and knowledge training requirements. Task certification requires the task to be trained by a trainer designated by the supervisor. The trainer can be either civilian or military.. The training start and completion date are documented, the task is signed by the trainee and either the work center supervisor, a Staff Sergeant (or above) or the unit training manager. This action will complete the task certification.

Note: The "trainer" signing the record MUST be the work center supervisor, work leader, a Staff Sergeant (or above), Civilian equivalent, or the Unit Training Manager. This person does not necessarily train the task but will ensure the training is conducted by a qualified trainer prior to completing task certification.

Note: If a work center supervisor, Work Leader, a Staff Sergeant (or above), Civilian equivalent, or the unit training manager are not available in a shop or unit to certify a task, the Operations Flight deputy commander will designate a certifier within the flight.

A1.4. Column 4 (*Tasks and Proficiency Codes*). Identifies duty position tasks (series training requirements) with a proficiency code and indicates training requirements. It shows the proficiency to be demonstrated on the job by the employee as a result of hands-on training on the task, knowledge and the career knowledge provided by formal courses, CDC, distance learning (DL) web-based training (WBT) and AFQTPs. CDC listings are maintained by the unit training manager (UTM) for current CDC listings.

A1.5. Qualitative Requirements. Contains the proficiency code key used to indicate the level of training and knowledge provided by CBT, WBT, COTS, in-resident training, and career development courses.

A1.6. Job Qualification Standard (JQS). The Family Series Training Standard (FSTS) becomes the JQS for OJT when entries are made in the FSTS. For OJT, the tasks in Column 1 are trained and qualified to the go/no go level. "Go" means the individual can perform the task without assistance and meets local requirements for accuracy, timeliness, and correct use.

A2. Uses. Managers and supervisors may use the plan at all levels to ensure comprehensive and cohesive training programs are available for each individual in the FWS series.

A2.1. Wage Grade Panel of the Functional Advisory Council will develop/revise formal resident, non-resident, 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 Air Force Civil Engineer Center Force Development Division (AFCEC/COF) to develop acquisition strategies for obtaining resources needed to provide the identified training.

A2.2. The Wage Grade Panel along with the Readiness Training Managers, will ensure their training programs complement the CFETP training requirements and identify requirements that can be satisfied by OJT, resident training, contract training, or exportable courses.

A2.3. Supervisors will guide each individual through completion of training specified in this plan.

A2.4. Each individual completes training requirements specified in this plan. The list of courses in Part II of this CFETP will be used as a reference to support training.

A3. Coordination and Approval. The Air Force Civil Engineer Civilian Career Field Manager is the approval authority for the CFETP. The Wage Grade Panel along with the Readiness Training Managers will identify and coordinate on FWS series training requirements. Using the list of courses in Part II, they will eliminate duplicate training.

A4. HQ USAF/A4C will review this CFETP annually and make updates and changes as deemed appropriate. Please send recommended changes to the AFCEC/COF Training Support Section at DSN 523-6879 or comm. 850-283-6879 or email afcec.ce.training@us.af.mil.

Section B – FWS PROGRESSION AND INFORMATION

B1. Series Descriptions. See each individual's Standard Core Personnel Document for the description.

B1.1. FWS Series Summary: Installs, inspects, maintains, troubleshoots, modifies, repairs, and manages plumbing, water distribution, steam and condensate distribution, wastewater collection systems, water and wastewater treatment systems, fire suppression, backflow prevention systems, natural gas distribution systems, liquid fuel storage, distribution, and dispensing systems. Complies with environmental and safety regulations. Related DoD Occupational Subgroups: 172000.

B2. Skill and Career Progression. It is essential everyone involved in training do their part to participate in, plan, manage, and conduct effective training. The guidance provided in this part of the CFETP will identify viable training at appropriate points in an individual's career.

B2.1. Apprentice/Helper (A/H).

B2.1.1. Upon completion of initial skills training, an employee may work with a trainer to enhance their knowledge and skills to perform at the highest attainable level within their series.

B2.1.2. Utilize the Career Development Course (CDC) and other exportable courses for subject and task fundamentals in the series.

B2.1.3. Encourage apprentice/helpers to continue academic education and begin EPME by enrolling in Airman Leadership School either in-residence or by correspondence course.

B2.2. Journeyman (J).

B2.2.1. Journeymen may enhance their skills by engaging in additional training. After completing training, they may be assigned job positions such as team leader, trainer, or task certifier. Journeymen can pursue leadership training and skills to qualify for potential advancement to Work Leader or Work Supervisor positions.

B2.2.1. Encourage journeyman to enroll in the Noncommissioned Officer Academy (NCOA) either in-residence or by correspondence course.

B2.3. Craftsman (C).

B2.3.1. Craftsmen may continue to advance their skills by completing additional training. They may be assigned job positions such as team leader, trainer, or task certifier. Craftsmen are encouraged to pursue leadership training and skills to qualify for potential advancement to Work Leader or Work Supervisor positions.

B2.3.2. Encourage craftsmen to continue academic education and complete Noncommissioned Officer Academy (NCOA) either in-residence or by correspondence course, civilian leadership courses and degree programs.

B2.3.3. Master Craftsman are typically graded higher than WG-10 where skills, knowledge and abilities require higher technical abilities than standard craftsmen. They are duty/location specific and not for all job series.

B2.4. Work Leader (WL).

B2.4.1. Work Leaders are expected to perform limited functions of a First Line Supervisor or act as a Team Lead.

B2.4.2. Completion of the AFIT Civilian Supervisors Course (WMGT 571) is highly encouraged.

B2.4.3. Should pursue increased knowledge of budget, manpower, resources, and personnel management.

B2.4.4. Recommend pursuit of additional higher education and completion of courses outside of their job series for career broadening opportunities.

B2.4.5. Encourage Work Leaders to continue academic education and complete Noncommissioned Officer Academy (NCOA) either in-residence or by correspondence course, civilian leadership courses and degree programs.

B2.5. First Line Supervisor.

B2.5.1. A supervisor can be expected to fill positions such as the Element Chief or Special Projects Supervisor.

B2.5.2. Must enroll and complete required mandatory supervisor or manager training courses within 1 year of appointment to a supervisory or managerial position and complete experience training every 3 years, thereafter.

B2.5.3. Completion of the AFIT Civilian Supervisors Course (WMGT 571) is highly encouraged.

B2.5.4. Should pursue increased knowledge of budget, manpower, resources, and personnel management.

B2.5.5. Recommend pursuit of additional higher education and completion of courses outside of their job series for career broadening opportunities.

B2.5.6. Encourage supervisors to continue academic education and complete Senior Noncommissioned Officer Academy (SNCOA) by correspondence, civilian leadership courses and degree programs.

B3. Correspondence Course Directions. Nonresident attendance for professional military education courses is accomplished through the Air Force Portal.

B3.1. Login to the AF Portal https://www.my.af.mil/.

B3.2. Copy and paste the URL https://www.airuniversity.af.edu/GCPME/ into your browser.

B3.4. "Distance Learning" tabs are on the right-side menu.

B3.5. Select the appropriate course.

B4. Enlisted Professional Military Education (EPME). Scheduling enlisted professional military education for civilian personnel is a responsibility of AFPC/DP3DW unless otherwise noted. See DAFI 36-2670 Total Force Development, for more detailed information.

B4.1. Airman Leadership School (ALS). Airman Leadership School resident attendance is scheduled by the local Airman Leadership School commandant. Commandants build an annual schedule shortly after the staff sergeant (E-5) promotion release. Eligible Air Force and Department of Defense civilians are considered priority 3 for ALS. DAFI 36-2670 encourages ALS leadership to the extent possible, distribute Priority 2 and 3 students throughout the year to maximize diversity in the classroom.

B4.2. Noncommissioned Officer Academy (NCOA). Selection and scheduling are accomplished by AFPC/DP3DW. Eligible Air Force and Department of Defense civilians are considered priority 3 for NCOA and are considered on a space available basis.

B4.3. Senior Noncommissioned Officer Academy (SNCOA). Selection and scheduling are accomplished by AFPC/DP3DW and is driven by the senior master sergeant (E-8) promotion release. Eligible Air Force and Department of Defense civilians are considered priority 4 for SNCOA and are considered on a space available basis.

B5. FWS Career Building Blocks (CBBs) and Continuous Development Framework Model.

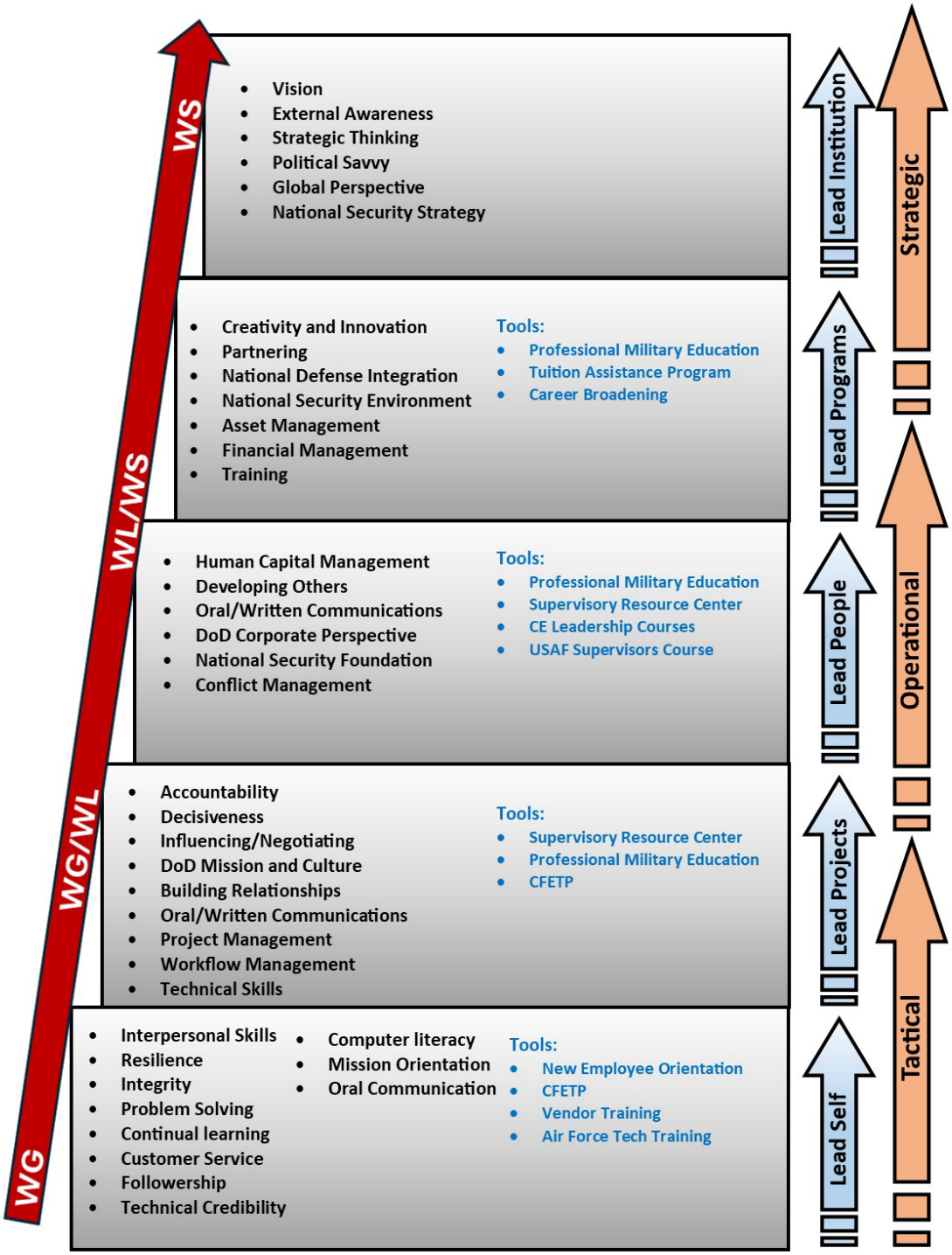
B5.1. The Career Building Blocks illustrate the dispersion of grades and relative experience levels (apprentice, journeyman, craftsman). As you progress through the grades, so should your breadth of experience. This not only includes technical experience, but leadership, supervisory and management experience as well. Using various on-the-job training, military, and civilian vocational schools, and PME, forms the foundation of the CBBs and the "Develop Exceptional Leaders" portion of the strategic vision in the CE Human Capital Road Map.

B5.1.1. The FWS Career Building Blocks (CBBs) are an illustration or an example of your individual development plan or career path. Your individual roadmap may be different than others based on your occupational series and/or career path. The CBBs provide a few examples of development opportunities at the tactical, operational, and strategic levels of performance. Follow this link to see the CBBs for your job series.

https://usaf.dps.mil/sites/10016/Career%20Building%20Blocks/Forms/AllItems.aspx

B5.1.2. Once you have established your career goals, identify a mentor to help you align your steps in this learning and development continuum. A mentor can help you identify different kinds of experience and training you will need as well as the tools to attain them. Mentors also serve as a sounding board and can help you reassess or adjust your career goals when events in your life or career necessitate changes. As you complete these steps and move toward your career goals, it is important to reassess your goals. Once this is accomplished, you and your mentor will be able to further your progression and advancement through the continuous development framework model. Refer to Figure 1 (Continuous Development Framework Model) for visual reference.

Figure 1. Continuous Development Framework Model



PART II

Section A – FAMILY SERIES TRAINING STANDARD

A1. Implementation. This FSTS is used for technical training provided by AETC, OJT and COTS training documentation.

A2. **Purpose.** As prescribed in DAFI 36-2670, *Total Force Development,* DAFMAN 32-2670, *Civil Engineer Federal Wage System Force Development* and in collaboration with the AFCCFM, this FSTS is mandatory for all FWS job series working under the Air Force Specialty Code 3E4X1, regardless of duty assignment. Each employee must use an automated training record.

A2.1. Column 1 (*Tasks, Knowledge, and Technical References*). Lists the most common performance and knowledge requirements necessary for an employee to perform successfully in their job series. The required behaviors will be used as the context for which learning will be assessed.

A2.2. Column 2 (*Core Tasks*). Tasks identified by the AFCCFM or shop foreman as mandatory for each duty position in a job series at their location.

A2.2.1 Column 2 (*Deployment/SEI).* Tasks identified as mandatory for employees who perform roles in Mission Critical, Mission Essential or have been identified for a civilian deployment tasking.

A2.3. Column 3 (*Provides Certification for OJT)*. Used to record completion of each training requirement. Use the automated training system to document qualifications.

A2.3.1. Task certification of core and critical tasks. Require a training completion date and initials of the trainee, trainer, and a certifier. All non-core tasks require training completion date and initials of the trainee and trainer only.

A2.3.2. Performance Standard. All training requirements are trained and qualified to the "Go" level. "Go" means the individual can perform the task without assistance and meets local demands for accuracy, timeliness and, if applicable, correct use of procedures and Technical Orders.

A2.4. Column 4 (*Codes Used to Indicate Level of Training*). Indicates whether the task is a

Knowledge (K), Performance (P) or Performance and Knowledge (PK). Codes are provided in columns labeled for each level of experience. These are labeled A/H for Apprentice/Helper, J for Journeyman, C/WL for Craftsman or Work Leader and S for Supervisor.

A2.5. Job Qualification Standard (JQS). The STS becomes a JQS for OJT when placed in an automated training application and used according to DAFI 36-2670, *Total Force Development* and DAFMAN 32-2670, *Civil Engineer Federal Wage System Force Development*. QTPs are available on myLearning to ensure that all supervisors use standardized procedures for training. When used as a JQS, the following requirements listed below apply.

A2.5.1. Documentation. Document and certify completion of training.

A2.5.1.1. Duty position. Requirements for each duty position (task group) will be developed and identified by the work center supervisor and loaded into the automated training management application. Completion of the identified tasks is mandatory for all duty positions. Ensure the correct duty position title is listed in the Profile section of the trainee's automated training record.

A2.5.1.2. AFQTP Training and Documentation. AFQTPs have been created for several task groups to fulfill performance (P) and knowledge (K) requirements for upgrade/qualification training. Each AFQTP provides the step–by–step procedures for the trainee, trainer, and certifier in completing each.

A2.5.1.3. Hands-On Training. For performance (P) training requirements, *DO NOT* sign off the tasks in the JQS until the trainee has completed hands-on/certification training.

A2.5.2. Transcribing from previous versions to new CFETP. The UTM and supervisor must conduct a review of the new STS to identify any new tasks and add those tasks to their unit specific duty positions.

A2.5.2.1. Previous training certification not listed. If previous training certifications are not listed in the individual training record, select the task to be transcribed, and click on the transcribe button. Enter the date of the original certification and sign off the task(s). The trainee will then sign off the task(s) to finalize the transcription of previous training certification. The automated application will place an entry into the trainee 623a and must be acknowledged by the transcriber and trainee.

A2.5.2.2. Transcribing external training certification. If a trainee attended a formal training course and received appropriate accreditation, select the formal training section of the users automated training record and locate the course title in the master task list, then enter the completion date. If the course is not listed, contact the UETM to have it loaded from the master catalog. If it is not listed in the master catalog, contact AFCEC/COF to have it loaded in the master catalog.

Section B – COURSE OBJECTIVE LIST

B1. Measurement. Measurement of each learning objective is indicated as follows:

B1.1. Use of Progress Checks (PCs) & Rubrics. Indicates formal measurement of knowledge (K) and/or performance (P) elements.

B2. Standard. Standards for measurement are indicated in the course objectives and delineated on the individual progress checklist and rubrics. The minimum standard is 70% on knowledge progress checks. Trainer assistance is used as the standard for performance progress checks and is provided, as warranted during the progress check. Trainee may be required to repeat all or parts of the learning outcome until satisfactory performance is attained.

B3. Proficiency Level. Student must demonstrate mastery on each learning outcome/objective before progressing to the next learning requirement.

B4. Course Objective List. These objectives are listed in the sequence taught by Blocks of Instruction. Per AETCI 36 - 2651, *Basic Military and Technical Training*, a detailed listing of the initial skills course learning objectives in the Basic Course are listed in the 3E4X1 AFSC STS.

Section C – SUPPORT MATERIAL

C1. Air Force Qualification Training Packages

C1.1. The AFQTPs for each task group are identified on the AFQTP Documentation Record located in Attachment 3.

C1.2.1. For a complete list of up-to-date applicable AFQTPs go to myLearning.

C1.2.2. In addition to the AFQTPs there are web-based courses or assessments developed for certain tasks that are available on myLearning under AFCEC in the specialty topic area.

C2. Career Development Course (CDC) Assessment for Civil Engineer CDC/DL course

C2.1. AFCEC/COF has developed CDC assessments for each Air Force CE career field, and they are located on the myLearning under AFCEC in the topic header Civil Engineer Career Development Courses (CDCs) Assessments.

C2.2. CDC assessments are for the sole purpose of providing the trainer and the supervisor a predictive indicator of whether the trainee has a solid grasp on the knowledge portions of the STS.

Section D – EDUCATION AND TRAINING COURSE INDEX

D1. Purpose. This section of the CFETP identifies training courses available for the Water and Fuel Systems Maintenance Specialty. Refer to Education and Training Course Announcements ETCA (dps.mil) web site for information on the Air Force in-residence courses.

D2. Air Force In-Residence Courses/Mobile Training Team (MTT) Courses.

Course Number	Title	Developer
J8AQR3E431 01AB	Water and Fuel Systems Maintenance Apprentice (Qual I)	366 TRS
J8AQR3E431 02AB	Water and Fuel Systems Maintenance Apprentice (Qual II)	366 TRS
J3ABR3E431 03AC	Water and Fuel Systems Maintenance Apprentice (AFU)	366 TRS
J3AZR3E451 04AC	Fuel Systems Maintenance Technician	366 TRS
J3AZR3E451 01FB	Fire Suppression System Maintenance	366 TRS
J6ANW3E451 04AA	Fuel Systems Maintenance Technician (Prerequisite)	366 TRS
J7AZT3E451 03BB	Backflow Prevention Devices Testing (MTT)	366 TRS

D3. Air Force Career Development Academy (AFCDA).

Course Number	Title	Edit Code
CDC 3E451B/O	WFSM Journeyman	03
CDC 3E451A	WFSM Journeyman	04
CDC 3E451B	WFSM Journeyman	04

D4. Exportable/Web-based Courses/Information.

Course Number	Title	Developer
Web based	1500 GPH-Reverse Osmosis Water Purification Unit QTP	AFCEC/COF
Web based	Arc Flash Safety Awareness QTP	AFCEC/COF
Web based	Backhoe Operations: Excavate, Load, and Backfill Material	AFCEC/COF
Web based	Basic Expeditionary Airfield Resources Water System QTP	AFCEC/COF
Web based	Civil Engineer 5-Level Core Concepts Course	AFCEC/COF
Web based	Civil Engineer 7-Level Core Concepts Course	AFCEC/COF
Web based	Confined Space Course	AFCEC/COF
Web based	Electrical Safety Standards QTP	AFCEC/COF
Web based	Expandable Bi-con Shelter (EBS) Hygiene System QTP	AFCEC/COF
Web based	Fall Protection Awareness Course	AFCEC/COF
Web based	Field Deployable Latrine QTP	AFCEC/COF
Web based	Fuel Systems Maintenance Course	AFCEC/COF
Web based	Mueller Fire Hydrant Maintenance & Tapping Machine Video	AFCEC/COF
Web based	Natural Gas Systems Course	AFCEC/COF
Web based	Repair of Water and Wastewater Piping Systems	AFCEC/COF
Web based	Shower and Shave Unit QTP	AFCEC/COF
Web based	Water Testing Course QTP	AFCEC/COF
Web based	Water and Wastewater Systems Operation QTP	AFCEC/COF
Web based	Water and Fuels Expeditionary Repair System (WaFERS)	AFCEC/COF
WMGT 322	Introduction to Project Management	AFIT
WMGT 301	Intro to Asset Management	AFIT
WENG 170	Cybersecurity for Control Systems	AFIT

WENG 270	Advanced Control Systems Cybersecurity	AFIT
WENG 370	Control Systems Cybersecurity for CE Leaders	AFIT
WENG 436	Requirements and Optimization	AFIT
WENG 437	Troop Construction Project Management Course	AFIT

D5. Leadership Training and Academic Fellowships through the Eaker Center

Title
Squadron Officers School (SOS)
Developing Supervisor Course
Defense Emerging Leader Program
Civilian Associate's Degree Program
Civilian Bachelor's Degree Program
Civilian Master's Degree Program
Located at: Knowledge Detail (af.mil)

3 Attachments
1. Qualitative Training Requirements (Proficiency Code Key)
2. Family Series Training Standard (FSTS)
3. AFQTP Tracker

Attachment 1
Qualitative Training Requirements (Proficiency Code Key)

A1. Qualitative Training Requirements

This Block is for Identification Purposes Only.		
Name Of Trainee		
Printed Name (*Last, First, Middle Initial*)	**Initials (Written*)***	**SSAN (Last four)**
Printed Name of Trainer, Certifying Official and Written Initials		
N/I	*N/I*	

Behavioral Statement FSTS Coding System	
Code	Definition
K	Subject Knowledge Training - The verb selection identifies the individual's ability to identify facts, state principles, analyze, or evaluate the subject.
P	Performance Training - Identifies that the individual has performed the task to the satisfaction of the trainer/certifier; however, the individual may not be capable of meeting the field requirements for speed and accuracy.
PK	Performance Knowledge Training - The verb selection identifies the individual's ability to relate advanced facts, procedures, operating principles, and operational theory for the task.
X	Formal Course
*	Core Task. These are mandatory tasks identified by the Career Field Manager

Attachment 2
Family Series Training Standard (FSTS)

A2. Family Series Training Standard.

A2.1. Identification. In the training record User Profile section, the UTM will assign individuals to the correct work center, upon in-processing into the unit.

A2.2. Water and Fuel Systems Maintenance Specialty Tasks. The following are tasks the work center supervisor will use to track each duty position created for their work center.

1. Tasks, Knowledge and Technical References	2. Tasks	3. Certification For OJT					4. Proficiency Codes			
	A	A	B	C	D	E	A	B	C	D
	Core/Cert	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	A/H	J	C WL	S
1.0. CIVIL ENGINEER (CE) CORE CONCEPTS COURSES TR: myLearning										
1.1. Accomplish CE 5-level Core Concepts Course							K			
1.2. Accomplish CE 7-level Core Concepts Course								K		
1.3. CE Core Concepts Overview							K			
1.4. Complete WMGT 131 SMS BUILDER Level 1								X	X	
1.5. Complete WMGT 231: SMS BUILDER Level 2								X	X	X
1.6 Complete AFIT WENG 170 Cybersecurity for Control Systems	*						X	X	X	X
1.7 Complete AFIT WENG 270 Advanced Control Systems Cybersecurity Course							X	X	X	X
1.8. Complete AFIT WENG 370 Control Systems Cybersecurity for CE Leaders									X	X
1.9. Complete AFIT WMGT 301, Introduction to Asset Management								X		
1.10. Complete AFIT WMGT 322, Introduction to Project Management								X		
1.11. Complete AFIT WMGT 436, Requirements and Optimization									X	
1.12. Civilian Supervisor Course									X	X
1.13. WMGT 571 Course									X	X
2.0. PUBLICATIONS										
2.1. Technical orders (T.O.) TR: T.O. 00-5-1										
2.1.1. Organization							K	K	K	K
2.1.2. Use technical orders							PK	PK	PK	PK
2.2. Military							PK	PK	PK	PK
2.3. Commercial							PK	PK	PK	PK

3.0. JOB SERIES SPECIFIC HEALTH and SAFETY										
3.1. Hazards of the job series							**K**	**K**	**K**	**K**
3.2. Safety standards applicable to job series							**K**	**K**	**K**	**K**
3.3. Individual responsibilities							**K**	**K**	**K**	**K**
3.4. Respiratory Protection Program								**K**	**K**	**K**
3.5. Lockout/Tagout Program							**K**	**K**	**K**	**K**
3.6. Mechanical equipment							**K**	**K**	**K**	**K**
3.7. Flammables							**K**	**K**	**K**	**K**
3.8. Chemicals and chemical solutions							**K**	**K**	**K**	**K**
3.9. Remove victim from energized circuit							**K**	**K**	**K**	**K**
3.10. Apply first aid procedures for electrical shock							**K**	**K**	**K**	**K**
3.11. Manual lifting awareness							**K**	**K**	**K**	**K**
3.12. Condition tags							**K**	**K**	**K**	**K**
3.13. Initial Federal Hazard Communication Training Program							**K**	**K**	**K**	**K**
3.14. Toxic and explosive gases							**K**	**K**	**K**	**K**
3.15. Arc Flash Safety							**K**	**K**	**K**	**K**
3.16. Confined space										
3.16.1. Confined space entries							**K**	**PK**	**PK**	**PK**
3.16.2. Atmospheric hazards indicator							**K**	**PK**	**PK**	**PK**
4.0. TOOLS AND EQUIPMENT										
4.1. Maintain hand/power tools							**PK**	**PK**	**PK**	**PK**
4.2. Use common hand/power tools							**PK**	**PK**	**PK**	**PK**

4.3. Shop equipment										
4.3.1. Characteristics/Safety										
4.3.1.1. Ladders							**K**	**K**	**K**	**K**
4.3.1.2. Shoring							**K**	**K**	**K**	**K**
4.3.1.3. Scaffolding							**K**	**K**	**K**	**K**
4.3.1.4. Laboratory							**K**	**K**	**K**	**K**
4.3.1.5. Fall protection							**K**	**K**	**K**	**K**
4.3.2. Use Shop equipment										
4.3.2.1. Ladders							**PK**	**PK**	**PK**	**PK**
4.3.2.2. Shoring							**K**	**PK**	**PK**	**PK**
4.3.2.3. Scaffolding							**K**	**PK**	**PK**	**PK**
4.3.2.4. Laboratory							**K**	**PK**	**PK**	**PK**
4.3.2.5. Fall protection							**K**	**PK**	**PK**	**PK**
4.3.3. Care for shop equipment							**PK**	**PK**	**PK**	**PK**
4.4. Portable Air Compressor										
4.4.1. Characteristics							**K**	**K**	**K**	**K**
4.4.2. Inspect							**K**	**P**	**PK**	**PK**
4.4.3. Operate							**K**	**P**	**PK**	**PK**
4.5. Vapor/oxygen/toxicity indicator							**K**	**P**	**PK**	**PK**
5.0. PROJECT PLANNING										
5.1. Use building construction plans to identify										
5.1.1. Installation procedures							**K**	**PK**	**PK**	**PK**
5.1.2. Materials needed							**K**	**PK**	**PK**	**PK**
5.1.3. Types of systems							**K**	**PK**	**PK**	**PK**
5.2. Prepare working sketches							**K**	**PK**	**PK**	**PK**
5.3. Prepare AF IMT 103, Work Clearance							**K**	**PK**	**PK**	**PK**
5.4. Prepare bill of materials request							**K**	**PK**	**PK**	**PK**
5.5. Preventive Maintenance (PM)							**K**	**PK**	**PK**	**PK**
5.6. NexGEN IT									**PK**	**PK**
5.7. Sustainment Management Systems (SMS) BUILDER									**PK**	**PK**

6.0. AFS FUNDAMENTALS										
6.1. Mathematics								**K**	**K**	**K**
6.2. Metric system								**K**	**K**	**K**
6.3. Biology								**K**	**K**	**K**
6.4. Chemistry								**K**	**K**	**K**
6.5. Water treatment								**K**	**K**	**K**
6.6. Pipe Fitting										
6.6.1. Measure							**PK**	**PK**	**PK**	**PK**
6.6.2. Cut							**PK**	**PK**	**PK**	**PK**
6.6.3. Ream							**PK**	**PK**	**PK**	**PK**
6.6.4. Thread							**PK**	**PK**	**PK**	**PK**
6.6.5. Solder							**K**	**PK**	**PK**	**PK**
6.6.6. Complete solvent weld							**K**	**PK**	**PK**	**PK**
6.7. Tubing										
6.7.1. Types							**K**	**K**	**K**	**K**
6.7.2. Fittings							**K**	**K**	**K**	**K**
6.7.3. Fabricate tubing systems								**PK**	**PK**	**PK**
6.8. Locate components using:										
6.8.1. Utility maps								**PK**	**PK**	**PK**
6.8.2. Electronic equipment								**PK**	**PK**	**PK**
6.9. Cathodic Protection Systems								**PK**	**PK**	**PK**
6.10. Inspect for corrosion							**PK**	**PK**	**PK**	**PK**
6.11. Physical Characteristics										
6.11.1. Water							**K**	**K**	**K**	**K**
6.11.2. Mechanics							**K**	**K**	**K**	**K**
7.0. INDUSTRIAL CONTROL SYSTEMS										
7.1. Fundamentals							**K**	**K**	**K**	**K**
7.2. Cybersecurity concepts							**K**	**K**	**K**	**K**

8.0. WATER SYSTEMS **TR: Unified Facilities Criteria (UFC) 3-230- 02; Uniform Plumbing Code (UPC); Ken Kerri, Water Distribution System Operation and Maintenance; AFM 32-1067; International Plumbing Code (IPC); American Water Works Association (AWWA) Manuals 11, 14, 17, 23**										
8.1. Fundamentals of Water Distribution							**K**	**K**	**K**	**K**
8.2. Operation of water systems										
8.2.1. Wells								**PK**	**PK**	**PK**
8.2.2. Booster stations								**PK**	**PK**	**PK**
8.2.3. Storage tanks								**PK**	**PK**	**PK**
8.2.4. Chemical feeders								**PK**	**PK**	**PK**
8.2.5. Metering equipment								**PK**	**PK**	**PK**
8.3. Install interior water system piping and components										
8.3.1. Steel								**PK**	**PK**	**PK**
8.3.2. Plastic								**PK**	**PK**	**PK**
8.3.3. Copper								**PK**	**PK**	**PK**
8.3.4. PEX								**PK**	**PK**	**PK**
8.3.5. Pipe hangers/supports								**PK**	**PK**	**PK**
8.3.6. Structural openings								**PK**	**PK**	**PK**
8.4. Inspect interior water system										
8.4.1. Perform pressure test								**PK**	**PK**	**PK**
8.4.2. Troubleshoot pressure loss								**PK**	**PK**	**PK**
8.4.3. Locate leaks							**PK**	**PK**	**PK**	**PK**
8.5. Interior water system maintenance										
8.5.1. Thaw frozen water pipes using:										
8.5.1.1. Heaters							**PK**	**PK**	**PK**	**PK**
8.5.1.2. Torches							**PK**	**PK**	**PK**	**PK**
8.5.1.3. Electrical thawers							**PK**	**PK**	**PK**	**PK**
8.5.2. Winterize piping system							**K**	**PK**	**PK**	**PK**

8.5.3. Repair interior water system piping										
8.5.3.1. Steel							**PK**	**PK**	**PK**	**PK**
8.5.3.2. Plastic							**PK**	**PK**	**PK**	**PK**
8.5.3.3. Copper							**PK**	**PK**	**PK**	**PK**
8.5.3.4. PEX							**PK**	**PK**	**PK**	**PK**
8.6. Backflow prevention devices										
8.6.1. Characteristics										
8.6.1.1. Air gap							**K**	**K**	**K**	**K**
8.6.1.2. Atmospheric vacuum breaker								**K**	**K**	**K**
8.6.1.3. Pressure type vacuum breaker								**K**	**K**	**K**
8.6.1.4. Double check valve								**K**	**K**	**K**
8.6.1.5. Reduced pressure principle devices								**K**	**K**	**K**
8.6.2. Install										
8.6.2.1. Air gap								**PK**	**PK**	**PK**
8.6.2.2. Atmospheric vacuum breaker								**PK**	**PK**	**PK**
8.6.2.3. Pressure type vacuum breaker								**PK**	**PK**	**PK**
8.6.2.4. Double check valve								**PK**	**PK**	**PK**
8.6.2.5. Reduced pressure principle devices								**PK**	**PK**	**PK**
8.6.3. Inspect										
8.6.3.1. Air gap							**PK**	**PK**	**PK**	**PK**
8.6.3.2. Atmospheric vacuum breaker								**PK**	**PK**	**PK**
8.6.3.3. Pressure type vacuum breaker								**PK**	**PK**	**PK**
8.6.3.4. Double check valve								**PK**	**PK**	**PK**
8.6.3.5. Reduced pressure principle devices								**PK**	**PK**	**PK**

8.6.4. Repair										
8.6.4.1. Air gap							**PK**	**PK**	**PK**	**PK**
8.6.4.2. Atmospheric vacuum breaker								**PK**	**PK**	**PK**
8.6.4.3. Pressure type vacuum breaker								**PK**	**PK**	**PK**
8.6.4.4. Double check valve								**PK**	**PK**	**PK**
8.6.4.5. Reduced pressure principle devices								**PK**	**PK**	**PK**
8.7. Fire hydrants										
8.7.1. Characteristics							**K**	**K**	**K**	**K**
8.7.2. Install								**PK**	**PK**	**PK**
8.7.3. Inspect							**K**	**PK**	**PK**	**PK**
8.7.4. Repair							**K**	**PK**	**PK**	**PK**
8.7.5. Area flow test										
8.7.5.1. Conduct static pressure test								**PK**	**PK**	**PK**
8.7.5.2. Conduct residual and velocity tests								**PK**	**PK**	**PK**
8.7.5.3. Calculate test data								**PK**	**PK**	**PK**
8.8. Install exterior water system piping and components										
8.8.1. Plastic							**PK**	**PK**	**PK**	**PK**
8.8.2. Steel							**K**	**PK**	**PK**	**PK**
8.8.3. Tap water main							**K**	**PK**	**PK**	**PK**
8.8.4. Disinfect using chlorine							**K**	**PK**	**PK**	**PK**
8.9. Repair exterior water system piping										
8.9.1. Plastic							**PK**	**PK**	**PK**	**PK**
8.9.2. Steel							**K**	**PK**	**PK**	**PK**
8.9.3. Compression couplings							**K**	**PK**	**PK**	**PK**
8.9.4. Clamps							**PK**	**PK**	**PK**	**PK**

9.0. WASTEWATER SYSTEMS **TR: UPC; Ken Kerri, Operation and Maintenance of Wastewater Collection Systems; UFC 3-240-01, UFC 3-240-02, UFC 3-240-03N**										
9.1. Fundamentals of collection										
9.1.1. Sanitary sewer							**K**	**K**	**K**	**K**
9.1.2. Industrial waste (grease traps, oil water separators)							**K**	**K**	**K**	**K**
9.1.3. Storm Drains							**K**	**K**	**K**	**K**
9.1.4. Sewage lift stations										
9.1.4.1. Dry well							**K**	**K**	**K**	**K**
9.1.4.2. Wet well							**K**	**K**	**K**	**K**
9.2. Collection system piping										
9.2.1. Install cast iron pipe								**PK**	**PK**	**PK**
9.2.2. Install plastic pipe								**PK**	**PK**	**PK**
9.2.3. Establish trench grade								**PK**	**PK**	**PK**
9.2.4. Establish pipeline slope								**PK**	**PK**	**PK**
9.2.5. Backfill trenches								**PK**	**PK**	**PK**
9.2.6. Drain excavations								**PK**	**PK**	**PK**
9.3. Repair wastewater system piping										
9.3.1. Interior								**PK**	**PK**	**PK**
9.3.2. Exterior								**PK**	**PK**	**PK**
9.4. Inspect exterior collection systems										
9.4.1. Manholes							**PK**	**PK**	**PK**	**PK**
9.4.2. Leaks							**PK**	**PK**	**PK**	**PK**
9.4.3. Infiltration/inflow							**PK**	**PK**	**PK**	**PK**
9.4.4. Grease traps							**PK**	**PK**	**PK**	**PK**
9.4.5. Oil/water separator							**PK**	**PK**	**PK**	**PK**

9.5. Use										
9.5.1. Plunger							**PK**	**PK**	**PK**	**PK**
9.5.2. Hand/closet auger							**PK**	**PK**	**PK**	**PK**
9.5.3. Power auger							**PK**	**PK**	**PK**	**PK**
9.5.4. Chemicals								**PK**	**PK**	**PK**
9.5.5. Sewer augers								**PK**	**PK**	**PK**
9.5.6. Commercial sewer jet								**PK**	**PK**	**PK**
9.5.7. Sewer pumper truck								**PK**	**PK**	**PK**
9.6. Wastewater treatment										
9.6.1. Primary								**PK**	**PK**	**PK**
9.6.2. Secondary								**PK**	**PK**	**PK**
10.0. SWIMMING POOLS										
10.1. Operate							**K**	**PK**	**PK**	**PK**
10.2. Maintain							**K**	**PK**	**PK**	**PK**
10.3. Repair							**K**	**PK**	**PK**	**PK**
11.0. NATURAL GAS SYSTEMS TR: AFM 32-1067; Department of Transportation (DOT) Small Natural Gas Operator Guide; 49 Code of Federal Regulations (CFR) Part 192										
11.1. Characteristics							**K**	**K**	**K**	**K**
11.2. Government regulations							**K**	**K**	**K**	**K**
11.3. Inspect gas system								**PK**	**PK**	**PK**
11.4. Maintain gas system								**PK**	**PK**	**PK**
11.5. Repair gas system								**PK**	**PK**	**PK**
11.6. Detect leaks								**PK**	**PK**	**PK**
12.0. FIRE SUPPRESSION TR: National Fire Protection Association (NFPA) Pamphlets; UFC 3-600-01, UFC 3-601-02										
12.1. Characteristics										
12.1.1. Wet pipe systems							**K**	**K**	**K**	**K**
12.1.2. Dry pipe systems							**K**	**K**	**K**	**K**
12.1.3. Deluge systems							**K**	**K**	**K**	**K**
12.1.4. Foam systems							**K**	**K**	**K**	**K**
12.1.5. Specialized systems							**K**	**K**	**K**	**K**

12.2. Test										
12.2.1. Wet pipe systems								**PK**	**PK**	**PK**
12.2.2. Dry pipe systems								**PK**	**PK**	**PK**
12.2.3. Deluge systems								**PK**	**PK**	**PK**
12.2.4. Foam systems								**PK**	**PK**	**PK**
12.2.5. Specialized systems								**PK**	**PK**	**PK**
12.3. Repair										
12.3.1. Wet pipe systems								**PK**	**PK**	**PK**
12.3.2. Dry pipe systems								**PK**	**PK**	**PK**
12.3.3. Deluge systems								**PK**	**PK**	**PK**
12.3.4. Foam systems								**PK**	**PK**	**PK**
12.3.5. Specialized systems								**PK**	**PK**	**PK**
13.0. ELECTRICAL SYSTEMS TR: AFM 32-1065; UFC 3-560-01										
13.1. Electrical fundamentals										
13.1.1. Electron Theory							**K**	**K**	**K**	**K**
13.1.2. Programmable logic controller (PLC)							**K**	**K**	**K**	**K**
13.1.3. Use electrical schematics							**K**	**K**	**K**	**K**
13.1.4. Motors							**K**	**K**	**K**	**K**
13.1.5. Inspect electrical circuits								**PK**	**PK**	**PK**
13.1.6. Troubleshoot electrical systems								**PK**	**PK**	**PK**
13.1.7. Replace electrical components								**PK**	**PK**	**PK**
13.1.8. Connect/disconnect motors								**PK**	**PK**	**PK**
13.2. Use test equipment to measure										
13.2.1. Voltage							**PK**	**PK**	**PK**	**PK**
13.2.2. Resistance							**PK**	**PK**	**PK**	**PK**
13.2.3. Current							**PK**	**PK**	**PK**	**PK**

14.0. FIXTURES AND PLUMBING COMPONENTS TR: UPC; IPC; Manufacturer Specifications										
14.1. Characteristics										
14.1.1. Lavatories (Sinks)							K	K	K	K
14.1.2. Faucets							K	K	K	K
14.1.3. Emergency eyewash/shower							K	K	K	K
14.1.4. Water closets (Toilets)										
14.1.4.1. Floor mount							K	K	K	K
14.1.4.2. Wall hung							K	K	K	K
14.1.5. Urinals										
14.1.5.1. Wall hung							K	K	K	K
14.1.5.2. Pedestal							K	K	K	K
14.1.6. Showers										
14.1.6.1. Individual							K	K	K	K
14.1.6.2. Gang							K	K	K	K
14.1.6.3. Tub/shower							K	K	K	K
14.1.7. Industrial sinks										
14.1.7.1. Scullery							K	K	K	K
14.1.7.2. Kitchen							K	K	K	K
14.1.7.3. Utility							K	K	K	K
14.1.8. Traps										
14.1.8.1. Common seal							K	K	K	K
14.1.8.2. Deep seal							K	K	K	K
14.1.9. Mixing valves										
14.1.9.1. Manual							K	K	K	K
14.1.9.2. Pressure balancing							K	K	K	K
14.1.9.3. Thermostatic							K	K	K	K
14.1.10. Flushometers										
14.1.10.1. Diaphragm							K	K	K	K
14.1.10.2. Piston							K	K	K	K

14.1.11. Drinking fountains										
14.1.11.1. Wall hung							**K**	**K**	**K**	**K**
14.1.11.2. Pedestal							**K**	**K**	**K**	**K**
14.1.11.3. Electrically cooled							**K**	**K**	**K**	**K**
14.1.12. Water Heaters										
14.1.12.1. Electric							**K**	**K**	**K**	**K**
14.1.12.2. Gas							**K**	**K**	**K**	**K**
14.1.12.3. Tankless							**K**	**K**	**K**	**K**
14.1.13. Food grinder										
14.1.13.1. Industrial							**K**	**K**	**K**	**K**
14.1.13.2. Domestic							**K**	**K**	**K**	**K**
14.2. Install										
14.2.1. Lavatories (Sinks)							**PK**	**PK**	**PK**	**PK**
14.2.2. Faucets							**PK**	**PK**	**PK**	**PK**
14.2.3. Emergency eyewash/shower							**K**	**PK**	**PK**	**PK**
14.2.4. Water Closets (Toilets)										
14.2.4.1. Floor mount							**K**	**PK**	**PK**	**PK**
14.2.4.2. Wall hung							**K**	**PK**	**PK**	**PK**
14.2.5. Urinals										
14.2.5.1. Wall hung							**K**	**PK**	**PK**	**PK**
14.2.5.2. Pedestal							**K**	**PK**	**PK**	**PK**
14.2.6. Showers										
14.2.6.1. Individual							**K**	**PK**	**PK**	**PK**
14.2.6.2. Gang							**K**	**PK**	**PK**	**PK**
14.2.6.3. Tub/shower							**K**	**PK**	**PK**	**PK**
14.2.7. Industrial sinks										
14.2.7.1. Scullery							**K**	**PK**	**PK**	**PK**
14.2.7.2. Kitchen							**PK**	**PK**	**PK**	**PK**
14.2.7.3. Utility							**K**	**PK**	**PK**	**PK**

14.2.8. Traps										
14.2.8.1. Common seal							**K**	**PK**	**PK**	**PK**
14.2.8.2. Deep seal							**K**	**PK**	**PK**	**PK**
14.2.9. Mixing valves										
14.2.9.1. Manual							**PK**	**PK**	**PK**	**PK**
14.2.9.2. Pressure balancing							**PK**	**PK**	**PK**	**PK**
14.2.9.3. Thermostatic							**K**	**PK**	**PK**	**PK**
14.2.10. Flushometers										
14.2.10.1. Diaphragm							**K**	**PK**	**PK**	**PK**
14.2.10.2. Piston							**K**	**PK**	**PK**	**PK**
14.2.11. Drinking fountains										
14.2.11.1 Wall hung							**K**	**PK**	**PK**	**PK**
14.2.11.2. Pedestal							**K**	**PK**	**PK**	**PK**
14.2.11.3. Electrically cooled							**K**	**PK**	**PK**	**PK**
14.2.12. Water Heaters										
14.2.12.1. Electric							**K**	**PK**	**PK**	**PK**
14.2.12.2. Gas							**K**	**PK**	**PK**	**PK**
14.2.13. Food grinder										
14.2.13.1. Industrial							**K**	**PK**	**PK**	**PK**
14.2.13.2. Domestic							**K**	**PK**	**PK**	**PK**
14.3. Replace										
14.3.1. Faucets							**PK**	**PK**	**PK**	**PK**
14.3.2. Lavatories (Sinks)							**PK**	**PK**	**PK**	**PK**
14.3.3. Emergency eyewash/shower							**K**	**PK**	**PK**	**PK**
14.3.4. Water closets (Toilets)										
14.3.4.1. Floor mount							**PK**	**PK**	**PK**	**PK**
14.3.4.2. Wall-hung							**PK**	**PK**	**PK**	**PK**
14.3.5. Wall-hung urinals							**PK**	**PK**	**PK**	**PK**

14.3.6. Showers										
14.3.6.1. Individual							**K**	**PK**	**PK**	**PK**
14.3.6.2. Gang							**K**	**PK**	**PK**	**PK**
14.3.6.3. Tub/shower							**K**	**PK**	**PK**	**PK**
14.3.7. Industrial sinks										
14.3.7.1. Scullery							**K**	**PK**	**PK**	**PK**
14.3.7.2. Kitchen							**PK**	**PK**	**PK**	**PK**
14.3.7.3. Utility							**K**	**PK**	**PK**	**PK**
14.3.8. Traps										
14.3.8.1. Common seal							**K**	**PK**	**PK**	**PK**
14.3.8.2. Deep seal							**K**	**PK**	**PK**	**PK**
14.3.9. Mixing valves										
14.3.9.1. Manual							**PK**	**PK**	**PK**	**PK**
14.3.9.2. Pressure balancing							**PK**	**PK**	**PK**	**PK**
14.3.9.3. Thermostatic							**K**	**PK**	**PK**	**PK**
14.3.10. Flushometers										
14.3.10.1. Diaphragm							**PK**	**PK**	**PK**	**PK**
14.3.10.2. Piston							**PK**	**PK**	**PK**	**PK**
14.3.11. Drinking fountains										
14.3.11.1. Wall hung							**K**	**PK**	**PK**	**PK**
14.3.11.2. Pedestal							**K**	**PK**	**PK**	**PK**
14.3.11.3. Electrically cooled							**K**	**PK**	**PK**	**PK**
14.3.12. Water Heaters										
14.3.12.1. Electric							**K**	**PK**	**PK**	**PK**
14.3.12.2. Gas							**K**	**PK**	**PK**	**PK**
14.3.13. Food grinder										
14.3.13.1. Industrial							**K**	**PK**	**PK**	**PK**
14.3.13.2. Domestic							**K**	**PK**	**PK**	**PK**

14.4. Repair										
14.4.1. Water closet components (Toilets)										
14.4.1.1. Floor mount							**PK**	**PK**	**PK**	**PK**
14.4.1.2. Wall hung							**PK**	**PK**	**PK**	**PK**
14.4.2. Common Seal Traps							**PK**	**PK**	**PK**	**PK**
14.4.3. Mixing valves										
14.4.3.1. Manual							**PK**	**PK**	**PK**	**PK**
14.4.3.2. Pressure balancing							**PK**	**PK**	**PK**	**PK**
14.4.3.3. Thermostatic							**K**	**PK**	**PK**	**PK**
14.4.4. Flushometers										
14.4.4.1. Diaphragm							**PK**	**PK**	**PK**	**PK**
14.4.4.2. Piston							**PK**	**PK**	**PK**	**PK**
14.4.5. Drinking fountains										
14.4.5.1. Wall hung							**PK**	**PK**	**PK**	**PK**
14.4.5.2. Pedestal							**PK**	**PK**	**PK**	**PK**
14.4.5.3. Electrically cooled							**K**	**PK**	**PK**	**PK**
14.4.6. Water Heaters										
14.4.6.1. Electric							**K**	**PK**	**PK**	**PK**
14.4.6.2. Gas							**K**	**PK**	**PK**	**PK**
14.4.7. Food grinders										
14.4.7.1. Industrial							**K**	**PK**	**PK**	**PK**
14.4.7.2. Domestic							**K**	**PK**	**PK**	**PK**
14.4.8. Emergency eyewash/shower							**K**	**PK**	**PK**	**PK**
14.4.9. Faucets							**PK**	**PK**	**PK**	**PK**
15.0. VALVES TR: UFC 3-230-02; UPC; AWWA M44										
15.1. Characteristics (Check, Globe, Gate, Ball, Altitude, Pressure regulating, Pressure relief, Quick opening)							**K**	**K**	**K**	**K**
15.2. Inspect (Check, Globe, Gate, Ball, Altitude, Pressure regulating, Pressure relief, Quick opening)							**K**	**PK**	**PK**	**PK**

15.3. Replace										
15.3.1. Check							**PK**	**PK**	**PK**	**PK**
15.3.2. Globe							**K**	**PK**	**PK**	**PK**
15.3.3. Gate							**PK**	**PK**	**PK**	**PK**
15.3.4. Ball							**PK**	**PK**	**PK**	**PK**
15.3.5. Altitude							**K**	**PK**	**PK**	**PK**
15.3.6. Pressure regulating							**K**	**PK**	**PK**	**PK**
15.3.7. Pressure relief							**K**	**PK**	**PK**	**PK**
15.3.8. Quick opening							**K**	**PK**	**PK**	**PK**
15.4. Repair										
15.4.1. Check							**PK**	**PK**	**PK**	**PK**
15.4.2. Globe							**K**	**PK**	**PK**	**PK**
15.4.3. Gate							**PK**	**PK**	**PK**	**PK**
15.4.4. Ball							**PK**	**PK**	**PK**	**PK**
15.4.5. Altitude							**K**	**PK**	**PK**	**PK**
15.4.6. Pressure regulating							**K**	**PK**	**PK**	**PK**
15.4.7. Pressure relief							**K**	**PK**	**PK**	**PK**
15.4.8. Quick opening							**K**	**PK**	**PK**	**PK**
15.4.9. Plug valve - non-lubricated							**K**	**PK**	**PK**	**PK**
15.5. Valve Maintenance										
15.5.1. Lubricate							**PK**	**PK**	**PK**	**PK**
15.5.2. Packing							**PK**	**PK**	**PK**	**PK**
15.5.3. Exercise							**PK**	**PK**	**PK**	**PK**
15.6. Valve boxes										
15.6.1. Characteristics							**K**	**K**	**K**	**K**
15.6.2. Install							**K**	**PK**	**PK**	**PK**
15.6.3. Inspect							**PK**	**PK**	**PK**	**PK**
15.6.4. Maintain							**PK**	**PK**	**PK**	**PK**

15.7. Pumps										
15.7.1. Characteristics										
15.7.1.1. Diaphragm							**K**	**K**	**K**	**K**
15.7.1.2. Double diaphragm							**K**	**K**	**K**	**K**
15.7.1.3. Centrifugal							**K**	**K**	**K**	**K**
15.7.1.4. Deep well							**K**	**K**	**K**	**K**
15.7.2. Inspect operation of:										
15.7.2.1. Diaphragm							**K**	**PK**	**PK**	**PK**
15.7.2.2. Double diaphragm							**K**	**PK**	**PK**	**PK**
15.7.2.3. Centrifugal							**K**	**PK**	**PK**	**PK**
15.7.2.4. Deep well							**K**	**PK**	**PK**	**PK**
15.7.3. Rebuild										
15.7.3.1. Diaphragm							**K**	**PK**	**PK**	**PK**
15.7.3.2. Double diaphragm							**K**	**PK**	**PK**	**PK**
15.7.3.3. Centrifugal							**K**	**PK**	**PK**	**PK**
15.7.3.4. Deep well							**K**	**PK**	**PK**	**PK**
15.7.4. Lubricate										
15.7.4.1. Diaphragm							**PK**	**PK**	**PK**	**PK**
15.7.4.2. Centrifugal							**PK**	**PK**	**PK**	**PK**
16.0. WATER TESTING **TR: UFC 3-230-02; Ken Kerri, Operation and Maintenance of Wastewater Collection Systems; American Society for Testing Materials (ASTM) D1253, D1293**										
16.1. Perform water tests										
16.1.1. pH							**K**	**PK**	**PK**	**PK**
16.1.2. Chlorine residual							**K**	**PK**	**PK**	**PK**
16.1.3. Total coliform							**K**	**PK**	**PK**	**PK**
16.2. Collect Samples							**PK**	**PK**	**PK**	**PK**

17.0. FUELS SYSTEMS FUNDAMENTALS										
17.1. Types of fuel							**K**	**K**	**K**	**K**
17.2. Fuel Physical characteristics							**K**	**K**	**K**	**K**
17.3. Fuel Hazards							**K**	**K**	**K**	**K**
17.4. Hydraulics							**K**	**K**	**K**	**K**
17.5. Fuel Systems TR: UFC 3-460-01, UFC 3-460-03; AFM 32-1067										
17.5.1. Types							**K**	**K**	**K**	**K**
17.5.2. Standard Designs							**K**	**K**	**K**	**K**
17.5.3. Modes of Operation							**K**	**K**	**K**	**K**
17.5.4. Programmable Logic Controller (PLC)							**K**	**K**	**K**	**K**
17.5.5. Valve Operation							**K**	**K**	**K**	**K**
17.6. Inspect operation of:										
17.6.1. Type I							**PK**	**PK**	**PK**	**PK**
17.6.2. Type II							**PK**	**PK**	**PK**	**PK**
17.6.3. Type III							**PK**	**PK**	**PK**	**PK**
17.6.4. Type IV							**PK**	**PK**	**PK**	**PK**
17.7. Pressure/flow transmitters (PIT/DPT-Type III IV)										
17.7.1. Replace							**K**	**PK**	**PK**	**PK**
17.7.2. Calibrate							**K**	**PK**	**PK**	**PK**
17.8. Troubleshoot:										
17.8.1. Type I							**K**	**PK**	**PK**	**PK**
17.8.2. Type II							**K**	**PK**	**PK**	**PK**
17.8.3. Type III							**K**	**PK**	**PK**	**PK**
17.8.4. Type IV							**K**	**PK**	**PK**	**PK**
17.9. Hydrant Outlets										
17.9.1. Characteristics							**K**	**K**	**K**	**K**
17.9.2. Repair							**K**	**PK**	**PK**	**PK**
17.9.3. Surge Arrestors							**K**	**K**	**K**	**K**
17.9.4. Portable Pantograph							**K**	**K**	**K**	**K**

17.10. Coupler/Single-point nozzle										
17.10.1. Characteristics							**K**	**K**	**K**	**K**
17.10.2. Repair							**K**	**PK**	**PK**	**PK**
17.10.3. Hoses							**K**	**K**	**K**	**K**
17.10.4. Perform hydrostatic hose test								**PK**	**PK**	**PK**
17.11. Perform pressure test										
17.11.1. Leak test							**K**	**PK**	**PK**	**PK**
17.11.2. Annual							**K**	**PK**	**PK**	**PK**
17.11.3. Five year							**K**	**PK**	**PK**	**PK**
17.12. Double block and bleed										
17.12.1. Characteristics							**K**	**K**	**K**	**K**
17.12.2. Inspect							**K**	**PK**	**PK**	**PK**
17.12.3. Repair							**K**	**PK**	**PK**	**PK**
17.12.4. Replace							**K**	**PK**	**PK**	**PK**
17.13. Automatic valves										
17.13.1. Characteristics							**K**	**K**	**K**	**K**
17.13.2. Adjust							**K**	**PK**	**PK**	**PK**
17.13.3. Repair							**K**	**PK**	**PK**	**PK**
17.14. Pumps										
17.14.1. Characteristics										
17.14.1.1. Gear							**K**	**K**	**K**	**K**
17.14.1.2. Rotary-vane							**K**	**K**	**K**	**K**
17.14.1.3. API 610										
17.14.1.3.1. Standard centrifugal							**K**	**K**	**K**	**K**
17.14.1.3.2. Deep well							**K**	**K**	**K**	**K**
17.14.2. Inspect operation of:										
17.14.2.1. Rotary-vane							**K**	**K**	**K**	**K**
17.14.2.2. API 610										
17.14.2.2.1. Standard centrifugal							**K**	**K**	**K**	**K**
17.14.2.2.2. Deep well							**K**	**K**	**K**	**K**

17.14.3. Rebuild										
17.14.3.1. Rotary-vane							**K**	**PK**	**PK**	**PK**
17.14.3.2. API 610										
17.14.3.2.1. Standard centrifugal							**K**	**PK**	**PK**	**PK**
17.14.3.2.2. Deep well							**K**	**PK**	**PK**	**PK**
17.14.4. Replace mechanical seals										
17.14.4.1. Rotary-vane							**K**	**PK**	**PK**	**PK**
17.14.4.2. API 610										
17.14.4.2.1. Standard centrifugal							**K**	**PK**	**PK**	**PK**
17.14.4.2.2. Deep well							**K**	**PK**	**PK**	**PK**
17.14.5. Align										
17.14.5.1. Rotary-vane							**K**	**PK**	**PK**	**PK**
17.14.5.2. API 610										
17.14.5.2.1. Standard centrifugal							**K**	**PK**	**PK**	**PK**
17.14.6. Lubricate										
17.14.6.1. Rotary-vane							**K**	**PK**	**PK**	**PK**
17.14.6.2. API 610										
17.14.6.2.1. Standard centrifugal							**K**	**PK**	**PK**	**PK**
17.15. Issue/receipt equipment										
17.15.1. Characteristics							**K**	**PK**	**PK**	**PK**
17.15.2. Filtration equipment										
17.15.2.1. Characteristics							**K**	**K**	**K**	**K**
17.15.2.2. Replace filter element cartridge							**PK**	**PK**	**PK**	**PK**
17.15.2.3. Repair filtration equipment							**PK**	**PK**	**PK**	**PK**
17.15.3. Set safety relief valve							**PK**	**PK**	**PK**	**PK**
17.15.4. Fuel meters										
17.15.4.1. Characteristics							**K**	**K**	**K**	**K**
17.15.4.2. Calibrate meters								**PK**	**PK**	**PK**
17.15.4.3. Use master meter							**PK**	**PK**	**PK**	**PK**

17.16. Storage tanks										
17.16.1. Characteristics										
17.16.1.1. Above ground							**K**	**K**	**K**	**K**
17.16.1.2. Below ground							**K**	**K**	**K**	**K**
17.16.1.3. Cut and cover							**K**	**K**	**K**	**K**
17.16.1.4. Organizational							**K**	**K**	**K**	**K**
17.16.2. Components										
17.16.2.1. Repair							**K**	**PK**	**PK**	**PK**
17.16.2.2. Inspect							**K**	**PK**	**PK**	**PK**
17.16.2.3. Check leak detection systems							**K**	**PK**	**PK**	**PK**
17.16.2.4. Inspect dikes							**K**	**PK**	**PK**	**PK**
17.17. Gauges										
17.17.1. Characteristics							**K**	**K**	**K**	**K**
17.17.2. Calibrate							**K**	**PK**	**PK**	**PK**
17.18. Automotive dispensing system										
17.18.1. Characteristics										
17.18.1.1. Submersible							**K**	**K**	**K**	**K**
17.18.1.2. Self-contained							**K**	**K**	**K**	**K**
17.18.2. Inspect							**K**	**K**	**K**	**K**
17.18.3. Troubleshoot							**K**	**K**	**K**	**K**
17.18.4. Repair							**K**	**K**	**K**	**K**
17.18.5. Replace							**K**	**K**	**K**	**K**
17.18.6. Calibrate meters							**K**	**K**	**K**	**K**
17.19. TANK/CONFINED SPACE ENTRY TR: API Standard 2015 7th Ed (Note 3b); AFM 91-203, AFM 32-1067; myLearning										
17.19.1. Characteristics							**K**	**K**	**K**	**K**
17.19.2. Complete Confined Space Course WBT							**K**	**K**	**K**	**K**

17.19.3. Specialized protective equipment										
17.19.3.1. Inspect							**K**	**PK**	**PK**	**PK**
17.19.3.2. Use							**K**	**PK**	**PK**	**PK**
17.19.3.3. Maintain							**K**	**PK**	**PK**	**PK**
17.19.3.4. Characteristics							**K**	**K**	**K**	**K**
17.20. Perform tank inspection							**K**	**PK**	**PK**	**PK**
17.21. Perform tank cleaning							**K**	**PK**	**PK**	**PK**
17.22. Return tank to service							**K**	**PK**	**PK**	**PK**
17.23. DEACTIVATE FUEL SYSTEMS TR: UFC 3-460-01										
17.23.1. Characteristics										
17.23.1.1. Tanks							**K**	**K**	**K**	**K**
17.23.1.2. Piping							**K**	**K**	**K**	**K**
17.23.1.3. Electrical							**K**	**K**	**K**	**K**
17.23.1.4. Mechanical							**K**	**K**	**K**	**K**

Attachment 3
Air Force Qualification Training Package Tracker

A3. AFQTP Documentation Record.

A3.1. To ensure each Water and Fuel Systems Maintenance Specialist is trained to the correct standard an AF Qualification Training Package (AFQTP) has been developed for each task group identified in their STS. These AFQTPs are to be used by the trainee, trainer, and certifier in their on-the-job-training program for qualification training and developmental training.

A3.2. These AFQTPs ensure all aspects of the task are covered sufficiently and provide additional task knowledge, in preparation for hands-on training. AFQTPs summarize procedures on a task performance checklist for use by trainers, certifiers, and trainees.

A3.2.1. The UTM or supervisor can download paper based AFQTP's. Paper-based AFQTP's are found on CE DASH under documents in the AFQTP folder.

A3.2.2. In addition to the paper-based AFQTPs there are web-based courses or assessments developed for certain tasks that are available on myLearning under AFCEC in the Home Station topic area.

A3.3. Documentation. Before a core or diamond task can be signed off in the JQS section of the individual automated training record, the task must be signed off in the QTP section first.

A3.4. 3E4X1WG AFQTP Tracker.

Task Number	Tasks, Knowledge and Technical References	Tasks		Certification of AFQTPs			
		A/J	C/S	Tng Start	Tng Complete	Trainee Initials	Trainer Initials
1.0.	**CIVIL ENGINEER (CE) COMMON CORE CONCEPTS COURSES**						
1.1.	Accomplish CE 5-Level Core Concepts Course	*					
1.2.	Accomplish CE 7-Level Core Concepts Course		*				
1.4.	Complete AFIT WMGT 301 Introduction to Asset Management	*					
1.5.	Complete AFIT WMGT 322 Intro to Project Management		*				
3.0.	**AFS-SPECIFIC HEALTH and SAFETY**						
3.15.	Arc Flash Safety	*					
3.16.	**Confined Space**						
3.16.1.	Confined space entries	*					
3.16.2.	Atmospheric hazards indicator	*					
5.0.	**PROJECT PLANNING**						
5.1.	**Use building construction plans to identify:**						
5.1.1.	Installation procedures		*				
5.1.3.	Types of systems		*				
5.2.	Prepare working sketches		*				
5.4.	Prepare bill of materials request	*					
6.0.	**AFS FUNDAMENTALS**						
6.6.	**Pipe Fitting**						
6.6.1.	Measure	*					
6.6.2.	Cut	*					
6.6.3.	Ream	*					
6.6.4.	Thread	*					
6.6.5.	Solder	*					
6.6.6.	Complete solvent weld	*					
6.8.	**Locate components using:**						
6.8.1.	Utility maps	5					
7.0.	**INDUSTRIAL CONTROL SYSTEMS**						
7.3.	Complete WENG 170 Cybersecurity for Control Systems	*					
7.4.	Complete WENG 370 Control Systems Cybersecurity for CE Leaders		*				
8.0.	**WATER SYSTEMS**						
8.7.	**Fire hydrants**						
8.7.3.	Inspect		*				
8.7.4.	Repair	*					
8.7.5.	**Area flow test**						
8.7.5.1.	Conduct static pressure test		*				
8.7.5.2.	Conduct residual and velocity tests		*				
8.7.5.3.	Calculate test data		*				
9.0.	**WASTEWATER SYSTEMS**						
9.2.	**Collection system piping**						
9.2.2.	Install plastic pipe	*					
9.2.3.	Establish trench grade	*					

Task Number	Tasks, Knowledge and Technical References	Tasks		Certification of AFQTPs			
		A/J	C/S	Tng Start	Tng Complete	Trainee Initials	Trainer Initials
9.2.4.	Establish pipeline slope	*					
9.2.5.	Backfill trenches	*					
9.2.6.	Drain excavations	*					
9.5.	**Use**						
9.5.3.	Power augers	*					
9.5.7.	Sewer pumper truck	*					
13.0.	**ELECTRICAL SYSTEMS**						
13.1.	**Electrical fundamentals**						
13.1.3.	Use electrical schematics	*					
13.1.5.	Inspect electrical components/circuits	*					
13.1.7.	Replace electrical components	*					
13.1.8.	Connect/disconnect motors	*					
13.2.	**Use test equipment to measure:**						
13.2.1.	Voltage	*					
13.2.2.	Resistance	*					
13.2.3.	Current	*					
14.0.	**FIXTURES AND PLUMBING COMPONENTS**						
14.3.	**Replace**						
14.3.1.	Faucets	*					
14.3.2.	Lavatories (Sinks)	*					
14.3.4.	**Water closets (Toilets)**						
14.3.4.1.	Floor mount	*					
14.3.4.2.	Wall-hung	*					
14.3.5.	Wall-hung urinals	*					
14.3.10.	**Flushometers**						
14.3.10.1.	Diaphragm	*					
14.3.10.2.	Piston	*					
14.4.	**Repair**						
14.4.1.	**Water closet components (Toilets)**						
14.4.1.1.	Floor mount	*					
14.4.1.2.	Wall hung	*					
14.4.3.	**Mixing valves**						
14.4.3.1.	Manual	*					
14.4.3.2.	Pressure balancing	*					
14.4.4.	**Flushometers**						
14.4.4.1.	Diaphragm	*					
14.4.6.	**Water Heaters**						
14.4.6.1.	Electric	*					
14.4.8.	Emergency eyewash/shower	*					
15.0.	**VALVES**						
15.4.	**Repair**						
15.4.6.	Pressure regulating	*					
15.4.7.	Pressure relief	*					
15.7.	**Pumps**						
15.7.3.	**Rebuild**						
15.7.3.2.	Double Diaphragm	*					
16.0.	**WATER TESTING**						
16.1.	**Perform water tests**						

Task Number	Tasks, Knowledge and Technical References	Tasks		Certification of AFQTPs			
		A/J	C/S	Tng Start	Tng Complete	Trainee Initials	Trainer Initials
16.1.2.	Chlorine residual	*					
17.0.	**FUELS SYSTEMS FUNDAMENTALS**						
17.5.	**Fuel Systems**						
17.5.4.	Programmable Logic Controller (PLC)		*				
17.7.	**Pressure/flow transmitters** (PIT/DPT-Type III IV)						
17.7.2.	Calibrate	*					
17.8.	**Troubleshoot**						
17.8.3.	Type III	*					
17.10.	**Coupler/Single-point nozzle**						
17.10.2.	Repair	*					
17.11.	**Perform pressure test**						
17.11.2.	Annual	*					
17.13.	**Automatic valves**						
17.13.2.	Adjust	*					
17.13.3.	Repair	*					
17.14.7	**API 610 standard centrifugal pump**						
17.14.7.5.	Align	*					
17.15.2.	**Filtration equipment**						
17.15.2.2.	Replace filter element cartridge	*					
17.15.3.	Set safety relief valve	*					
17.15.4.	**Fuel meters**						
17.15.4.2.	Calibrate meters	*					
17.15.4.3.	Use master meter	*					
17.17.	**Automotive dispensing system**						
17.17.1.	**Characteristics**						
17.17.3.	Troubleshoot	*					
17.17.6.	Calibrate meters	*					
17.18.	**Storage Tanks**						
17.18.5.	**Gauges**						
17.18.8.2.	Calibrate	*					
17.19.	**TANK/CONFINED SPACE ENTRY**						
17.19.2.	Complete Confined Space Course WBT	*					
17.19.3.	**Specialized protective equipment**						
17.19.3.1.	Inspect	*					
17.19.3.2.	Use	*					
17.19.3.3.	Maintain	*					