Air Force Civil Engineer Center

DOD Fuel Facilities Panel Update

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Chairman, DOD FFEP
03 FEB 17
2017 DoD FFEP Overview

- Intro to DoD Fuels Facilities Engineering Panel (FFEP)
- Unified Facilities Criteria (UFC) Updates
- Standards Updates
- Upcoming Actions
DoD Fuels Facilities Engineering Panel (FFEPP)

- DoD Subject Matter Experts for Fuels Facilities Engineering
- Custodians of fuels facilities related documents
  - Unified Facilities Criteria (UFCs)
  - Unified Facilities Guide Specs (UFGSs)
  - Fuel System Standard Designs
- Technical Approval Authority for design/construction waivers and exemptions
- Forum for new technologies/construction practices
- Representation on API Committees
Core Responsibilities

• Technical Criteria & Standardization
  – System Performance, Safety, Environmental, Life Cycle Economics

• Information Exchange
  – Fire, Environmental, Logistics, DoD Communities & Petroleum Industry
  – Incorporate lessons learned

• Knowledge Transfer
  – Criteria awareness

• Engineer Development
  – Succession & Continuity of Knowledge base
Current FFEP Voting Members

• Air Force Fuels Infrastructure SME (Chairman) AF Civil Engineer Center (AFCEC)

• NAVFAC POL Facility Subject Matter Expert Naval Facilities Engineering & Expeditionary Warfare Center (NAVFAC EXWC)

• HQ Army Corps of Engineers Technical POC POL Facility Criteria (CECW-CE)

• DLA Engineering Division Chief DLA Installation Support for Energy (DS-FEI)
FFEP Members - Coordinating

- Defense Logistics Agency
- Defense Fuel Region Facility Managers
- AF MAJCOM Fuel Engineers
- AF Petroleum Agency Fuel Facilities Team
- NAVSUP Fuel Facility Engineers
- NAVAIR Fuels Engineers
- NAVFACENGCOM, Fuel Facility Engineers
- Army Petroleum Center Fuel Facility Team
- Army Corps of Engineers, Omaha District, POL Facility Design Center of Expertise
- Space and Naval Warfare Systems Center Atlantic (SPAWAR Atlantic)
- Army Corps of Engineers, Value Engineering
UFC 3-460-01 Update

• Design: Petroleum Fuels Facilities
  – Key guidance for all new MILCON design and construction (and modernization via SRM)
  – To provide safe, operationally effective and economic fueling systems
  – Established Fuels Facility Engineering Panel

• Change 2 – published on 17 June 2015
  – Correct Formatting Error in paragraph 8-8 to require an inspection of all tanks prior to placing them into service.

• 2017/18 Update
  – Will incorporate all the changes gathered since change 1 and update/add some facility plates
UFC 3-460-03 Major Rewrite

• Operation and Maintenance: Maintenance of Petroleum Systems
  – Superseded UFC 3-460-03F, MO-230 & TM 5-678
  – Current UFC 3-460-03F is Air Force Centric, published in 2001
  – Incorporates pressure testing Guidelines

• Rewrite Complete Jan 2017
  – Out for review following the Unified Facilities Criteria Program Review/Signature Process

• Hopeful for signature by the end of FY17
AST Standard Design Update

• Above ground Storage Tank (AST) Standard AW-78-24-27
  – Proposed enhancements include:
    • Dike Sizing
    • Dike Layout
    • Dike Wall Type (sloped vs. vertical)
    • Piping configuration (aboveground, pipe supports, ball joint locations, pressure relief)

• Current Status
  – July 2015 Complete and loaded onto the Huntsville website
USAFE/NATO Standard Design Update

• USAFE/NATO Standard Design
  – New (Oct 2010) Cut and Cover Tank Standard Design did not include NATO
  – Not updated since 1987
  – Not digitized
  – Not updated for EU codes

• Current Status
  – Complete September 2015
  – Resides on the Huntsville Website
DOD Fuels Standard Laboratory Update

• New Facility criteria
  – Originally planned to be a standard design
  – Provides:
    • Conceptual level design for applications across all Services
    • Provides consistent interpretation of relevant codes and criteria
    • Provides guidance for size of Laboratory

• Current Status
  – Design Complete
  – Awaiting approval from the UFC Program to create a new UFC
  – Available upon request
Military Service Station/Shop
Fabricated Tank Standard Design

• New Standard Design
  – Provides:
    • Conceptual level design for applications across all Services
    • Provides consistent interpretation of relevant codes and criteria
    • Reduce design costs associated with “one off” designs

• Current Status
  – Design Complete
  – Available on the Huntsville website
Small Rotary Wing Hydrant System Standard Design

• New Initiative funded in FY14
  – Provides:
    • Conceptual level design for applications across all Services
    • Provides consistent interpretation of relevant codes and criteria
    • Reduce design costs associated with “one off” designs

• Current Status
  – Design has not started
  – Will be an update to the Type IV Standard Design
  – Jan FFEP decided to Proceed
Flexible Pipelines

- FFEP completed a material compatibility test of FlexSteel pipe
  - No detrimental effects noted for the fuel or the pipeline.
  - The FFEP is considering language changes to the UFCs and UFGSs to allow this new pipeline product
Up Ahead

• Updating the Type III Standard Design and associated UFGSs
• Updating the Type IV/V Standard Design and associated UFGSs
  – Type IV/V update will include converting the design into BIM modeling software
• A total of 24 UFGSs will be reviewed/updated
• UFC 3-460-01 will have a major Update.
  • This will be a new version, not just a change
• Researching the requirement for emergency eyewashes and showers
• Researching the use of seemed piping systems
Criteria Libraries

• UFCs and Construction Specifications available at: http://www.wbdg.org
