



DoD Fuels Discipline Working Group (DWG) Overview

Who we are and how we support the Fuels
Facilities Enterprise

Topics



- What is the Fuels DWG, who are they and what do they do?
- Applicable Fuels Unified Facilities Criteria and updates
- Applicable Fuels Unified Facilities Guide Specification updates
- Standard Designs
- Q & A Session

What is the DoD Fuels DWG?



- DOD FUELS DISCIPLINE WORKING GROUP (FDWG)
 - Previously known as the Fuels Facility Engineering Panel (FFEP)
 - Establishes the criteria for the DoD community on ways to provide safe, operationally effective, and economic fuel facilities systems to meet the mission requirements
 - Examines, develops, recommends and provides design features for the standardization of facilities and equipment, and procedures used in fuel handling systems for storage, distribution, maintenance and dispensing of aircraft, marine, and ground fuels
 - FDWG meetings are a forum to update members on new equipment, DoD or service-specific programs, and changes affecting the fuels facility maintenance, repair and construction community

Fuels DWG



Membership



DWG Members				
Component	Name	Chair	Organization	Yrs. on DWG
Army	<i>John W Wilkus</i>	X	USACE	7
Navy	<i>Frank Kern</i>		NAVFAC	3
Air Force	<i>Jim Works</i>		AFCEC	4
DLA	<i>Bill Coblentz</i>			1

DWG Associate Members	
Component/ Agency	Name
USACE	<i>Dustin J Scheuffele</i>
NAVFAC	<i>Terri Regin</i>
AFCEC	<i>Stephen Godbee</i>
USACE	<i>James Kaspar</i>

Executive Service Engineering Panel Members	
Component/ Agency	Name
Army	<i>PETE G. PEREZ, P.E., SES</i>
Navy	<i>S. KEITH HAMILTON, P.E., SES</i>
Air Force	<i>DAVID H. DENTINO, SES</i>
OSD	<i>MICHAEL McANDREW, SES</i>

FDWG Meetings



- Twice per year – Spring and Fall in-person and Teams
 - Attend by DWG members and Associates
 - Attended by representatives of Service Control Points
 - One at DLA Headquarters; One at a different DoD locations
 - Discuss document changes in work
 - Review and adjudicate Criteria Change Requests (CCR)
 - Discuss new technologies or practices in commercial world

FDWG Guidance Documents



- Unified Facilities Criteria
 - UFC 1-200-01, DoD Building Code
 - UFC 3-460-01, Design: Petroleum Systems – **Change 3**
UFC 3-460-03, Petroleum Fuel Systems Maintenance – **Change 2**
 - UFC 4-310-03, DoD Fuels Laboratory Standards
 - UFC 3-430-05, Natural Gas And Liquefied Petroleum Gas (LPG) Distribution Pipelines – **Revision by summer 2024 adding LNG chapter**
- Can be found at <https://www.wbdg.org/ffc/dod>

FDWG Guidance Documents



- UFC 3-460-01, DESIGN: PETROLEUM FUEL FACILITIES
 - Current Version 16 July 2019, Change 3, 8 June 2023
 - CHAPTER 1 INTRODUCTION
 - CHAPTER 2 GENERAL DESIGN REQUIREMENTS
 - CHAPTER 3 BULK FUEL STORAGE FACILITIES
 - **CHAPTER 4 AIRCRAFT FUELING FACILITIES**
 - **CHAPTER 5 MARINE AND DISPENSING FACILITIES**
 - **CHAPTER 6 INTERTERMINAL AND INSTALLATION PIPELINES**
 - CHAPTER 7 GROUND PRODUCTS FUELING FACILITIES
 - **CHAPTER 8 ATMOSPHERIC STORAGE TANKS**
 - CHAPTER 9 PIPING SYSTEMS
 - CHAPTER 10 ALTERNATE POL FACILITIES
 - CHAPTER 11 SUPPORT FACILITIES
 - **CHAPTER 12 MAJOR REHABILITATION**
 - CHAPTER 13 FUELING FACILITY TEMPORARY DEACTIVATION
 - CHAPTER 1 INTRODUCTION
 - CHAPTER 15 FUEL SYSTEM COMPONENTS
 - CHAPTER 16 AUSTERE LOCATION FUEL SYSTEM REQUIREMENTS
 - APPENDIX A MANUAL SURGE CALCULATIONS FOR SIMPLE PIPING SYSTEMS
 - APPENDIX B CHARTER OF DOD FUELS DISCIPLINE WORKING GROUP (FDWG)
 - APPENDIX C PLATES

FDWG Guidance Documents



- UFC 3-460-03, PETROLEUM FUEL SYSTEMS MAINTENANCE
- Current Version 10 November 2017, Change 2, 24 Aug 2023
 - CHAPTER 1 INTRODUCTION
 - **CHAPTER 2 GENERAL**
 - **CHAPTER 3 BULK TRANSFER FACILITIES**
 - CHAPTER 4 AIRCRAFT FUELING FACILITIES
 - CHAPTER 5 MARINE RECEIVING AND DISPENSING FACILITIES
 - **CHAPTER 6 PIPING SYSTEMS**
 - CHAPTER 7 GROUND VEHICLE FUELING FACILITIES
 - CHAPTER 8 PETROLEUM STORAGE TANKS
 - CHAPTER 9 ELECTRICAL SYSTEMS
 - CHAPTER 10 ALTERNATE POL FACILITIES
 - CHAPTER 11 SUPPORT FACILITIES
 - CHAPTER 12 FUEL FACILITY TEMPORARY DEACTIVATION OR CLOSURE
 - **APPENDIX A – DLA ENERGY PROJECT PROGRAMMING**
 - **APPENDIX B CONTAINMENT INTEGRITY TESTING CHECKLIST**
 - **APPENDIX C – MAINTENANCE TABLE**
 - APPENDIX D – MAINTENANCE PROCEDURES
 - APPENDIX E – TANK INSPECTION CHECKLISTS
 - APPENDIX F – TANK INSPECTION CHECKLISTS
 - APPENDIX G – PETROLEUM FUEL PIPELINE PRESSURE TESTING GUIDELINES AND CRITERIA
 - APPENDIX H – TANK CLEANING GUIDANCE
 - APPENDIX I – **ACRONYMS**
 - APPENDIX J – **REFERENCES**

FDWG Guidance Documents



- UFC 4-310-03, DoD Fuels Laboratory Standards
 - Current Version 12 August 2020
 - Design Guide for all new labs
 - Basic Lab Requirements
 - Type A Testing Lab
 - Type B Testing Lab
 - Type C Testing lab
 - C++ is typical at AFB
 - Change in work to eliminate emergency showers/sunken floors
- UFC 3-430-05 Natural Gas And Liquefied Petroleum Gas (LPG) Distribution Pipelines
 - Current Version 26 Feb 2021
 - New or modifications to existing distribution pipelines owned by Government that convey natural gas, manufactured gas, or LPG in the vapor phase
 - Being updated to add Liquid Natural Gas (LNG) plants

FDWG Guidance Documents



Document Number	Title	DWG	Date Published	Change Date
UFGS 01 33 23.33	Aviation Fuel System Specific Submittal Requirements, Chg 1	Fuels	8/1/2018	2/1/2021
UFGS 01 78 23.33	Operation and Maintenance Manuals For Aviation Fuel Systems	Fuels	8/1/2018	2/1/2021
UFGS 02 65 00	Underground Storage Tank Removal	Fuels	11/1/2022	
UFGS 05 59 10	Rolling Cover For Aviation Refueling Vaults	Fuels	11/1/2022	
UFGS 09 97 13.15	Low VOC Polysulfide Interior Coating Of Welded Steel Petroleum Fuel Tanks	Fuels	5/1/2024	
UFGS 09 97 13.17	Three Coat Epoxy Interior Coating Of Welded Steel Petroleum Fuel Tanks	Fuels	5/1/2022	
UFGS 32 13 15 20	Concrete Pavement for Fuel Storage Containment Dikes	Fuels	11/1/2022	
UFGS 33 01 50.31	Leak Detection for Fueling System	Fuels	2/1/2020	
UFGS 33 01 50.55	Cleaning Fuel Storage Tanks	Fuels	2/1/2021	
UFGS 33 01 50.65	Inspection Of Field Fabricated Fuel Storage Tanks	Fuels	2/1/2021	
UFGS 33 08 53	Aviation Fuel Distribution System Start-Up	Fuels	8/1/2018	
UFGS 33 08 55	Fuel Distribution System Start-Up (Non-Hydrant)	Fuels	2/1/2021	
UFGS 33 09 52	Aviation Fuel Pump Control and Annunciation System (Non-Hydrant)	Fuels	8/1/2018	
UFGS 33 09 53	Aviation Fuel Pump Control and Annunciation System (Type III), Chg 1	Fuels	2/1/2021	
UFGS 33 09 54	Aviation Fuel Pump Control and Annunciation System (Type IV,V)	Fuels	8/1/2018	
UFGS 33 09 55	Aviation Fuel Pump Control and Annunciation System (Cut-N-Cover Tanks)	Fuels	8/1/2018	

Being Revised 2024

New Revision Next Qtr Issue

FDWG Guidance Documents



Document Number	Title	DWG	Date Published	Change Date
UFGS 33 51 15	Natural Gas/Liquid Petroleum Gas Distribution	Fuels	8/1/2019	
UFGS 33 52 10	Fuels Systems Piping (Service Station), Chg 1	Fuels	11/1/2018	11/1/2020
UFGS 33 51 20	Liquified Natural Gas (LNG) Receiving Facilities Systems	Fuels	8/1/2024	
UFGS 33 52 23.15	POL Service Piping Welding	Fuels	11/1/2018	
UFGS 33 52 40	Fuel System Piping (Non-Hydrant), Chg 2	Fuels	11/1/2018	11/1/2020
UFGS 33 52 43.11	Aviation Fuel Mechanical Equipment	Fuels	8/1/2018	
UFGS 33 52 43.12	Aviation Fuel Pantograph	Fuels	8/1/2018	
UFGS 33 52 43.13	Aviation Fuel Piping, Chg 1	Fuels	8/1/2018	2/1/2021
UFGS 33 52 43.14	Aviation Fuel Control Valves, Chg 1	Fuels	8/1/2018	2/1/2021
UFGS 33 52 43.23	Aviation Fuel Pumps, Chg 1	Fuels	8/1/2018	2/1/2021
UFGS 33 52 43.28	Filter Separator, Aviation Fueling Systems	Fuels	8/1/2018	
UFGS 33 52 80	Liquid Fuels Pipeline Coating Systems	Fuels	8/1/2022	
UFGS 33 56 10	Factory-Fabricated Fuel Storage Tanks, Chg 1	Fuels	5/1/2019	11/1/2020
UFGS 33 56 19	Fuel Impermeable Liner System, Chg 1	Fuels	11/1/2022	
UFGS 33 56 21.17	Single Wall Aboveground Fixed Roof Steel POL Storage Tank	Fuels	11/1/2018	11/1/2020
UFGS 33 56 21.18	Single Wall POL Tank Undertank Interstitial Space	Fuels	11/1/2018	
UFGS 33 57 55	Fuel System Components (Non-Hydrants)	Fuels	11/1/2018	
UFGS 33 TBD	Repair of Field Fabricated Fuel Storage Tanks	Fuels		

Being Revised 2024

New Revision Next Qtr Issue

FDWG Guidance Documents



- Standard Designs
 - AW 78-24-27, DOD Aboveground Vertical Steel Fuel Tanks with Fixed Roofs
 - AW 078-24-28 DOD Pressurized Hydrant Fueling System Type III – Rev 3/2020
 - AW 078-24-29 DoD Standard Pressurized Hydrant Direct Fueling System Type IV/V **(Being Updated)**
 - AW 078-24-33, DOD Cut-N-Cover Standards **(Being Updated)**
 - STD 121-122-01, USAFE/NATO, Airfield Standard Design US, Jet Fuel Storage Dispensing Systems for Tactical and Wide Body Aircraft
 - STD 123-335-03, DOD Military Service Station and Factory Fabricated Tank Engineering Standard
- Can be found at <https://www.wbdg.org/ffc/dod>
 - Standard Designs are in the Non-COS Standards section

Questions from the Audience



- How to Submit CCR

A screenshot of a web browser displaying the Unified Facilities Criteria (UFC) website. The browser tabs show 'UFC/UGS Management | Who...', 'Unified Facilities Criteria (UFC) |', and 'FPCON Alpha'. The address bar shows 'wbdg.org/ffc/dod/unified-facilities-criteria-ufc'. The page content includes a search bar with 'LOGIN', 'CREATE ACCOUNT', and 'SEARCH' buttons. Below the search bar, there is a section for 'These documents are available in the following format: Adobe Acrobat (PDF)'. A note states: 'Indicates the UFC has an attachment. Click the title to view the attachment under 'Related Materials'.' Below this is a table with columns for 'Status', 'Series', 'TITLE', 'DATE', 'CHANGE DATE', 'VIEW', and 'CCR'. The table lists several UFC documents, each with a 'PDF' icon in the 'VIEW' column and a 'CCR' checkbox in the 'CCR' column. An arrow points from a box labeled 'Click Here' to the 'CCR' checkbox of the first document in the table.

Status	Series	TITLE	DATE	CHANGE DATE	VIEW	CCR
Active	- Any -	UFC 1-200-01 DoD Building Code, with Change 3	09-01-2022	02-26-2024	PDF	CCR
		UFC 1-200-02 High Performance and Sustainable Building Requirements, with Change 2	12-01-2020	06-01-2022	PDF	CCR
		UFC 1-201-01 Non-Permanent DoD Facilities in Support of Military Operations, with Change 4	03-04-2022	08-08-2023	PDF	CCR
		UFC 1-201-02 Assessment of Existing Facilities for Use in Military Operations	06-01-2014		PDF	CCR
		UFC 1-300-01 Criteria Format Standard	12-17-2021		PDF	CCR

Click Here

- Questions?

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