

CECW-CE

DEPARTMENT OF THE ARMY  
U.S. Army Corps of Engineers  
Washington, DC 20314-1000

ER 1110-1-8167

Regulation  
No. 1110-1-8167

31 August 2016

Engineering and Design  
PETROLEUM, OIL, AND LUBRICANTS  
MANDATORY CENTER OF EXPERTISE

TABLE OF CONTENTS

Paragraph	Page
1. Purpose .....	1
2. Applicability .....	1
3. Distribution.....	1
4. References .....	1
5. History/Background .....	2
6. Mission .....	2
7. Policy .....	2
8. Roles and Responsibilities .....	2
9. Definition of POL Fueling Systems .....	3
10. POL-MCX Services .....	4
11. Architectural-Engineering (A-E) Services and Design-Build Contracts .....	8
12. Method of Operation .....	8
13. Exceptions .....	10
14. Recertification .....	10
15. Agency Representation .....	10

ER 1110-1-8167  
31 Aug 16

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1. Purpose. This regulation sets forth the policies, roles and responsibilities of the U.S. Army Corps of Engineers (USACE) Petroleum, Oil, and Lubricants (POL) Mandatory Center of Expertise (MCX), located within Omaha District (CENWO). It also prescribes the roles and responsibilities of USACE districts and their use of the POL-MCX in the execution of fueling systems projects from planning to construction.

2. Applicability. The regulation applies to all Headquarters, HQUSACE/Office of the Chief of Engineers (OCE) elements, major subordinate commands (MSC), district commands (Military and Civil), laboratories, and field operating activities and other Department of Defense (DOD) agencies required, or electing, to use POL-MCX services.

3. Distribution. Approved for public release, distribution unlimited.

4. References:

- a. AR 420-1, Army Facilities Management
- b. Unified Facilities Criteria (UFC) 3-460-01, Design Petroleum Fuel Facilities
- c. Engineering Regulation (ER) 5-1-10, Corps Wide Areas of Work Responsibility
- d. ER 1110-1-12, Quality Management
- e. ER 1110-1-8158, Corps Wide Centers of Expertise Program
- f. ER 1140-1-211, Support for Others: Non-Department of Defense Reimbursable Services
- g. ER 1140-3-1, Support to Defense Department and Agencies
- h. ER 5-1-10, Corps-Wide Areas of Work Responsibility
- i. ER 5-1-11, USACE Business Process

31 Aug 16

j. Memorandum of Agreement between Defense Logistics Agency Energy (DLA Energy), and the U.S. Army Corps of Engineers (USACE) for provision of specialized support for services requested by DLA Energy (June 2015).

k. Charter between HQUSACE POL Facilities Proponent and USACE POL-Technical Center of Expertise (TCX) designating POL-TCX as the Army proxy voting member for the Fuels Facility Engineering Panel (FFEP) activities (February 2015).

l. DoD Instruction 8510.01. "Risk Management Framework (RMF) for DoD Information Technology (IT)," March 12, 2014.

m. DoD Instruction 8500.01, "Cybersecurity," March 14, 2014.

5. History/Background. Omaha District has a history of leading USACE in the planning, engineering, design and construction of fueling systems. USACE formally established the POL Design Center in Omaha District in 1999 in response to requests for professional fuel design/technical services to support Army and Air Force installations. The POL Design Center later transformed into the POL-TCX in 2012. DOD agencies and executing agents utilized the POL-TCX to support fueling systems project execution due to the technical expertise and capabilities accumulated and maintained by experienced government fuels engineers. The limited number of fueling systems projects in any geographic district at any one time, compounded by the highly specialized nature of fueling systems design and construction, inhibits the development and sustainment of fueling systems planning, engineering, design, evaluation/assessment, and construction expertise across individual districts.

6. Mission. The POL-MCX provides highly specialized expertise in fueling systems planning, engineering, design and construction to USACE activities, the Army, and other DOD and non-DOD federal agencies.

7. Policy. All work identified hereinafter shall be executed, reviewed or otherwise controlled in accordance with ER 1110-1-8158 and ER 5-1-10.

8. Roles and Responsibilities.

a. HQUSACE. The Chief of Engineering and Construction, Civil Works Directorate (CECW-CE) is assigned oversight responsibility of the POL-MCX and assignment of a HQUSACE proponent. The headquarters proponent will work the POL-MCX to effectively and efficiently manage the CX program. HQUSACE will assure that adequate central funding is made available to cover all costs associated with the mandatory and optional centrally funded services as identified herein.

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b. USACE Major Subordinate Commands. In accordance with ER 1110-1-8158, each MSC is responsible for monitoring the activities of their districts and ensuring appropriate use of the POL-MCX for fueling systems planning, engineering, design and construction activities. The MSC is also responsible to ensure any proposed exceptions to the use of POL-MCX services are coordinated with POL-MCX. MSC will review any proposed exceptions to the use of POL-MCX services prior to submitting to HQUSACE (CECW-CE) for consideration.

c. USACE Districts. All geographic districts and the US Army Engineering and Support Center – Huntsville (USAESC) are responsible for engaging the POL-MCX in accordance with this ER and providing funding for execution of POL-MCX services. MILCON and Non-MILCON projects are executed by the geographic district within their area of responsibility utilizing support from the POL-MCX in accordance with this ER. Each geographic district is responsible for identifying and following any existing MOA's and other agreements (such as the June 2015 Memorandum of Agreement between Defense Logistics Agency Energy (DLA Energy) and the U.S. Army Corps of Engineers (USACE). Districts will include statements in their project documentation, signed by the Chief of the Engineering function, certifying that the POL-MCX has been appropriately used in the planning, design, and execution of the project per the support agreement(s) developed by the local district and POL-MCX. Geographic districts are responsible for performing the Biddability, Constructability, Operability, Environmental, and Sustainability (BCOES) review.

d. Omaha District. The Omaha District will provide the management, construction, and technical support to the POL-MCX that is necessary for the successful execution of the mission and function identified in this regulation. District leadership will assure that staffing levels in the POL-MCX are adequate to handle all tasks assigned in this regulation. Organizational and administrative support such as office space, contracting and computer hardware and software will be provided by the district as is done for other district organization elements. Mission and functions of the POL-MCX shall not be changed without the approval of the HQUSACE proponent.

e. POL-MCX. The POL-MCX will maintain state-of-the-art technical expertise in the planning, engineering, design, evaluation/assessment, and construction of fueling systems to provide the services and execute the responsibilities outlined within this regulation. The POL-MCX will serve as the Army proxy voting member for FFEP activities.

## 9. Definition of POL Fueling Systems.

a. Fueling systems that fall under the auspices of this ER would involve any component of a petroleum based fuel facility as identified below. Refer to UFC 3-460-01 for further description of fueling systems and components.

- (1) Bulk fueling facilities.
- (2) Fuels laboratories.
- (3) Refueler parking and maintenance facilities.

31 Aug 16

- (4) POL pipelines.
- (5) Aircraft fueling facilities and associated infrastructure.
- (6) Marine fueling facilities and associated infrastructure.
- (7) Ground vehicle fueling facilities and associated infrastructure:
  - (a) Military service station.
  - (b) Retail gas station.
  - (c) Compressed natural gas vehicle service stations.
  - (d) Liquid propane vehicle service stations to include industrial equipment (e.g., forklifts).

b. Projects or components which do not fall under the auspices of this ER are:

- (1) Natural gas systems (unrelated to motor vehicles).
- (2) Propane systems (unrelated to motor vehicles).
- (3) Projects solely for environmental remediation of POL contamination.

(4) Recurring Maintenance and Minor Repair, Marine Loading Arms, and Automation and Controls.

10. POL-MCX Services. Mandatory and optional services provided by the POL-MCX are outlined below and in Table B-1. The POL-MCX will provide such services when requested and funded by the geographic district or requesting entity.

a. Mandatory Services: Geographic districts with fueling systems projects are required to utilize the POL-MCX for various aspects of the planning, engineering, design and construction services. The POL-MCX may not refuse mandatory work without approval of the HQUSACE proponent.

(1) Planning Phase

(a) Review requirements documents and pre-design planning documents: The requirements document is used to validate the 1391 for funding and is sometimes referred to as a MILCON Project Development Brochure. POL-MCX review is required when this document is developed by USACE and must occur during all phases of review (e.g., draft, draft final, final, etc.). Any pre-design planning documents that serve the same function as requirements documents must be reviewed by the POL-MCX. This task is optional for projects with programmed amount under \$1,000,000 USD.

(b) Review 1391: The 1391 is a DOD standard template used to communicate resource requirements for programming purposes. POL-MCX review is required when this document is developed by USACE and must occur during all phases of review (e.g., draft, draft final, final, etc.). This task is optional for projects with programmed amount under \$1,000,000 USD.

## (2) Contracting Services

(a) Contract source selection advisor: The POL-MCX shall serve as an advisor on source selection for any A-E contract. This task is optional for projects with programmed amount under \$1,000,000 USD. This applies to any contract pertaining to fueling systems.

## (3) Design Phase

(a) Review DOR design scope of work: The POL-MCX shall review any scope of work for a DOR (A-E or USACE) for design-build and design-bid-build contracts. POL-MCX review is required when this document is developed by USACE and must occur during all phases of review (e.g., draft, draft final, final, etc.). Districts will include statements in their project documentation, signed by the Chief of the Engineering function, certifying that the POL-MCX has been appropriately used in the planning, design, and execution of the project. This task is optional for projects with programmed amount under \$1,000,000 USD.

(b) Review design documents: The POL-MCX shall review all design review submissions prepared by the DOR (A-E or USACE) for any USACE design-build and design-bid-build contract. This does not include participation in design review conferences. All comments provided by POL-MCX must be incorporated. Districts will include statements in their project documentation, signed by the Chief of the Engineering function, certifying that the POL-MCX has been appropriately used in the planning, design, and execution of the project. This task is optional for projects with programmed amount under \$1,000,000 USD.

## (4) Construction Phase

(a) POL-MCX training: The POL-MCX shall provide on-site construction quality assurance and control training specific to fueling systems construction/repair to identify critical features of work. Training typically takes one day and will vary based on project scope and complexity. Participants will include primary stakeholders of local district and contractors. This task is optional for projects with programmed amount under \$1,000,000 USD.

(b) Attend final acceptance testing: The POL-MCX shall attend final acceptance testing of fueling systems. This task is optional for projects with programmed amount under \$1,000,000 USD.

31 Aug 16

(5) Inspection/Assessment Phase

(a) Review aboveground storage tank inspection reports: The POL-MCX shall review all aboveground storage tank inspection reports prepared by USACE for tanks greater than or equal to 1000 gallons. The POL-MCX review is required for inspections performed in accordance with Steel Tank Institute (field and factory fabricated tanks) and American Petroleum Institute (field fabricated) guidance, and must occur during all phases of review.

(b) Review underground storage tank inspection reports: The POL-MCX shall review all Underground storage tank inspection reports prepared by USACE for tanks greater than or equal to 1000 gallons. The POL-MCX review is required for inspections performed in accordance with Petroleum Equipment Institute (factory fabricated) and American Petroleum Institute (field fabricated) requirements, and must occur during all phases of review.

(c) Review project planning studies: A project planning study is a multi-phase method of executing a SRM project, consisting of deficiency identification, scope development, and field execution and acceptance testing. The POL-MCX review is required for project planning studies developed by USACE and must occur during all phases of review (e.g., draft, draft final, final, etc.).

(6) Standards and Criteria

(a) Develop and update standards and criteria pertaining to fueling systems defined in Section 9.a., to include the fuel standards (Pressurized Hydrant Fueling System (Type III), Pressurized Hydrant Direct Fueling System (Type IV and Type V), Cut'n'Cover Standards; fuel related Unified Facilities Guide Specifications; UFCs; AST Standards; and other specific Fueling Standards upon request by HQUSACE, the DOD Fuels Facility Engineering Panel, Defense Logistics Agency, Army Petroleum Center, Naval Facilities Engineering Command, Air Force Petroleum, Naval Supply Systems Command for Energy, and the Air Force Civil Engineer Center to support/accomplish. Funding will be provided by the requesting agency.

(b) Serve as the designated proxy voting member for all FFEP activities on behalf of the HQUSACE voting member (reference charter).

b. Optional Services. The following optional, non-mandatory services, are offered by the POL-MCX to support geographic districts with fueling systems projects for any facet of project development from planning, engineering, design to construction management upon request.

(1) Planning Phase

(a) Develop requirements documents and/or 1391: The requirements document is used to validate the 1391 for funding and is sometimes referred to as a MILCON project development brochure.



(2) Contracting Services

(a) Source selection board member: The POL-MCX is available to serve as a source selection board member on source selection for any USACE A-E, design-build, and design-bid-build contract for fueling systems.

(3) Design Phase

(a) Attend design charrette: The POL-MCX is available to participate on design charrettes as needed.

(b) Attend review conferences: The POL-MCX is available to participate in review conferences as needed.

(c) Perform design services: The POL-MCX is available to perform full design whether in-house or through the use of A-E contracts managed by the POL-MCX.

(4) Construction Phase

(a) Evaluation of RFI's and submittals: The POL-MCX is available to support designer of record (DOR) construction phase services.

(b) Perform construction oversight: The POL-MCX is available to provide a wide range of construction support services to support the geographic district.

(c) Review design modifications: The POL-MCX is available to review design modifications for any USACE design-build and design-bid-build contract.

(5) Inspection/Assessment Phase

(a) Review pipeline integrity reports: The POL-MCX is available to review all pipeline integrity reports prepared by USACE. These inspections are performed in accordance with American Petroleum Institute requirements.

(b) Pipeline and tank inspection: The POL-MCX is available to perform pipeline integrity inspections, aboveground storage tank inspection, and underground storage tank inspections. The POL-MCX is available to perform full design whether in-house or through A-E contracts managed by the POL-MCX.

(c) Review pressure vessel testing reports: The POL-MCX is available to review all pressure vessel testing reports prepared by USACE. These inspections are performed in accordance with American Petroleum Institute requirements.

31 Aug 16

(d) Review cathodic protection inspection reports: The POL-MCX is available to review all cathodic protection testing reports prepared by USACE. These inspections are performed in accordance with National Association of Corrosion Engineers requirements.

11. Architectural-Engineering (A-E) Services and Design-Build Contracts. Geographic districts are expected to utilize capable A-E firms suitably qualified for designing fueling systems. The POL-MCX will serve as an advisor to Source Selection Evaluation Boards (mandatory), and is available to serve as voting members of Source Selection Evaluation Boards (optional) and is available to consulting regarding A-E qualifications.

12. Method of Operation. The following lists the POL-MCX's method of operation and specific operational requirements for both POL-MCX and the requesting geographic district.

a. Organizational Structure.

(1) The POL-MCX Program is a matrixed organization that leverages fueling systems engineering, program management, project management, and construction expertise from across Omaha District elements as shown in Figure B-1.

(2) The POL-MCX Director is the Chief of Engineering Division and provides overall technical/engineering direction to the organization.

(3) The POL-MCX Program Manager/Technical Coordinator resides in Special Projects Branch, Planning, Programs, and Project Management Division and provides overall day-to-day program management direction to the program.

b. Work Acceptance.

(1) Requests for POL-MCX services can be submitted to the POL-MCX by telephone, by e-mail, or in writing. Informal communication is encouraged; however, before any reimbursable work commences the POL-MCX and the geographic district will develop a mutually acceptable scope of work, schedule and cost estimate for the efforts of POL-MCX. The actual costs for design reviews and the length of time for doing the reviews shall be negotiated between the geographic district and the POL-MCX due to each project being unique in size and complexity. Additional funding for travel and labor will be required for review conferences and site visits, when requested or required by the geographic district or customer. Funds shall be transferred to the POL-MCX prior to execution of requested or required services.

(2) The POL-MCX will assist in coordinating area of responsibility issues, roles and responsibilities, schedules and funding between the geographic district and their MSC in accordance with ER 5-1-10.

(3) The POL-MCX will coordinate with the geographic district through the POL-MCX Program Manager/Technical Coordinator to define the scope, schedule, and level of effort required of the POL-MCX for each work request. The POL-MCX Program Manager/Technical Coordinator will qualify work requests against the selection criteria outlined in this ER in coordination with the designers/engineers depending on the project scope. Once the work request has been accepted, the POL-MCX Program Manager/Technical Coordinator will accept the funds in CEFMS.

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c. Administration and Funding for POL-MCX Services. Administrative requirements, including transfer of funds, are the same as those for any reimbursable work.

(1) The POL-MCX will develop a scope, schedule and cost estimate (budget) for services requested of the POL-MCX based on discussions between the POL-MCX and the requesting geographic district. The POL-MCX's services must be reimbursed at cost, and every effort will be made to stay within the project budget. The POL-MCX will immediately notify the geographic district when circumstances develop that impact the budget. The parties involved must mutually agree to any revisions made to scope and cost.

(2) Funding provided through HQUSACE to the POL-MCX and by other Agencies will be through a Funding Authorization Document (FAD). Funding by the geographic district is typically by cross-charge labor codes for labor and MIPR or FAD for other expenses (e.g., travel).

(3) Any excess funds remaining after project completion will be returned to the customer.

d. Annual Workload Assessment. Each year in November the POL-MCX will request the geographic districts to provide the best estimate of anticipated needs for POL-MCX services in terms of schedule and dollar value for the ensuing 2 to 5 year period. The POL-MCX will then meet with district representatives to discuss workload execution in order to facilitate and coordinate workload planning and provision of POL-MCX services.

e. Conflict Resolution. Conflicts or differences shall be resolved between the POL-MCX and the geographic district. If a conflict or difference develops that cannot be resolved by mutual agreement between the parties involved, it shall then be elevated to the Command's MSC for resolution. Finally because the POL-MCX is a Corps-wide asset, HQUSACE (CECW-E), if requested by either the POL-MCX or the MSC, will resolve the conflict or difference.

31 Aug 16

f. Evaluation. Upon completion of work performed by the POL-MCX, the geographic district will be requested to complete a customer satisfaction survey to assess the quality of POL-MCX products and services. The survey results will be utilized by the POL-MCX to improve processes, products and services as appropriate.

g. Annual Report. The POL-MCX will prepare an annual report for the HQUSACE proponent. The report will include a summary of major programs, activities and funds. The report will be on a fiscal year basis and will be completed and furnished to the proponent no later than 90 days after the end of the fiscal year.


13. Exceptions. A request for an exception to the requirements of this regulation shall be fully justified. The request shall be submitted to HQUSACE (CECW-E) in accordance with ER 1110-1-8158.

14. Recertification. The POL-MCX will be recertified as a POL-MCX every five years according to the requirements of ER 1110-1-8158 Appendix B. Six months prior to its recertification date, the POL-MCX shall provide the HQUSACE proponent a draft copy of the recertification document as outlined in the Appendix.

15. Agency Representation. The POL-MCX is authorized to represent the Corps on industry technical committees related to fueling systems, consistent with applicable ethics statutes and regulations.

FOR THE COMMANDER:

2 Appendixes  
Appendix A - Acronyms  
Appendix B – Figure and Tables



PAUL E. OWEN  
COL, IN  
Chief of Staff

## APPENDIX A

### Acronyms

A-E	Architect-Engineer
API	American Petroleum Institute
AST	Aboveground Storage Tank
CECW-CE	Chief of Engineering and Construction, Civil Works Directorate
CENWD	Northwestern Division, US Army Corps of Engineers
CENWO	Omaha District, US Army Corps of Engineers
CX	Center(s) of Expertise
DLA	Defense Logistics Agency
DOD	Department of Defense
DOR	Designer of Record
ER	Engineering Regulation
FFEP	Fuels Facility Engineering Panel
HQUSACE	Headquarters, US Army Corps of Engineers
IDIQ	Indefinite Deliverable Indefinite Quantity
MCX	Mandatory Center of Expertise
MIPR	Military Interdepartmental Purchase Request
MSC	Major Subordinate Command
NWD	Northwestern Division
OCE	Office of the Chief of Engineers
POL	Petroleum, Oils, and Lubricants
RFI	Request for Information
TCX	Technical Center of Expertise
UFC	Unified Facilities Criteria
UFGS	Unified Facilities Guide Specifications
USACE	United States Army Corps of Engineers
US	United States
USD	United States Dollars
USACE	US Army Corps of Engineers
USAESC	US Army Engineering and Support Center – Huntsville

ER 1110-1-8167  
31 Aug 16

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## APPENDIX B

### Figures and Tables

Figure B-1 – POL-MCX Organizational Chart

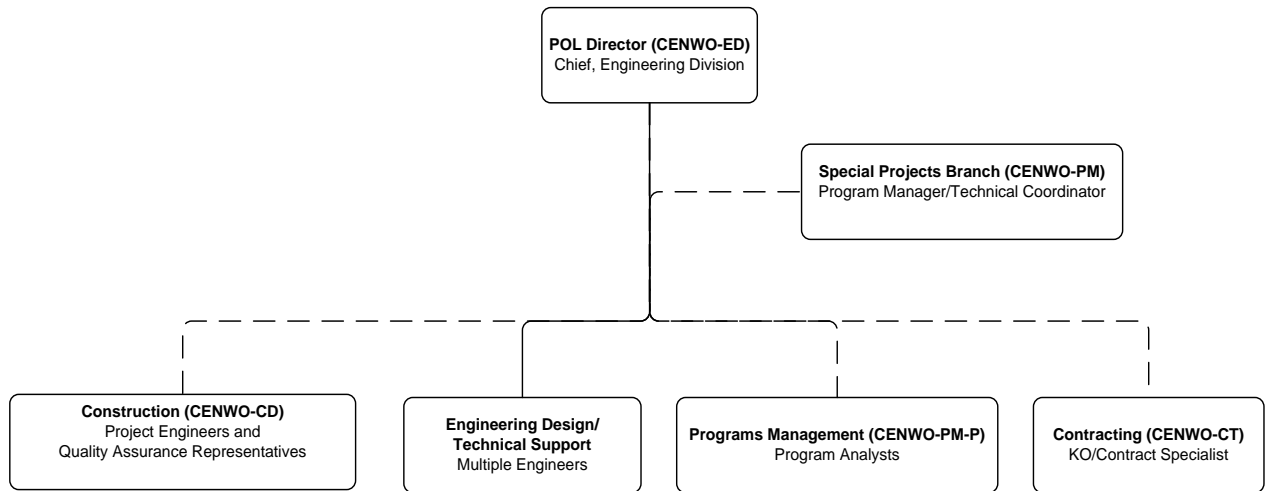


Table B-1 – Summary of Mandatory and Optional POL-MCX Services<sup>1</sup>

Service	Mandatory or Optional
<u>Planning Phase</u>	
• Review requirements documents and pre-design planning documents	Mandatory <sup>2</sup>
• Review 1391	Mandatory <sup>2</sup>
• Develop requirements documents and/or 1391	Optional
<u>Contracting Services</u>	
• Contract source selection advisor	Mandatory <sup>2</sup>
• Source selection board member	Optional
<u>Design Phase</u>	
• Attend design charrette	Optional
• Attend review conferences	Optional
• Review DOR design scope of work	Mandatory <sup>2 4</sup>
• Review design documents	Mandatory <sup>2 4 5</sup>
• Perform design services	Optional
<u>Construction Phase</u>	
• POL-MCX training	Mandatory <sup>2</sup>
• Evaluation of RFI's and submittals	Optional
• Attend final acceptance testing	Mandatory <sup>2</sup>
• Perform construction oversight	Optional
• Review design modifications	Optional
<u>Inspection/Assessment Phase</u>	
• Review pipeline integrity reports	Optional
• Pipeline and tank inspection	Optional
• Review pressure vessel testing reports	Optional
• Review aboveground storage tank inspection reports	Mandatory <sup>3</sup>
• Review underground storage tank inspection reports	Mandatory <sup>3</sup>
• Review cathodic protection inspection reports	Optional
• Review Project Planning Studies	Mandatory
<u>Standards and Criteria</u>	
• Develop and update standards and criteria	Mandatory
• Serve as the designated proxy voting member for all FFEP activities	Mandatory
<u>Footnotes:</u> <sup>1</sup> Refer to Section 10 for guidance on Mandatory requirements. <sup>2</sup> optional for projects with programmed amount under \$1,000,000 USD. <sup>3</sup> applicable to tanks equal to or greater than 1,000 US gallons. <sup>4</sup> POL-MCX must receive copies of all submittals distributed for each design phase review. <sup>5</sup> POL-MCX must review all design documents used for construction by USACE, regardless of Designer of Record.	