

FIELD MANUAL
No. 10-416
HEADQUARTERS

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PETROLEUM PIPELINE AND TERMINAL OPERATING UNITS

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PREFACE

The mission of the United States Army is to protect and defend the Constitution of the United States of America. The Army does this by deterring war and, when and/or if deterrence fails, by achieving quick, decisive victory anywhere in the world and under virtually any conditions as part of a joint or combined team. Military leaders, at all levels, have the inherent responsibility to know and fully understand their role in supporting and fulfilling the Army's mission

Purpose and Scope

The Army's doctrine lies at the heart of its professional competence. It is the official guide to how Army forces fight wars and conduct SASO. This manual, FM 10-416, provides military leaders the basic doctrine for the petroleum pipeline and terminal operating units in a theater of operations (developed and/or undeveloped). FM 10-416 further provides insight, general data and operational information for the commander, key leadership, and personnel assigned to the petroleum pipeline and terminal operating units (TOEs 10416 and 10417L0). Information in this FM will assist in the supervision and conduct of training and operations in peacetime as well as during hostilities. Important environmental information is in Chapter 2 about individual and collective duties and responsibilities. Commanders and their leaders are encouraged to use their own judgments, experiences, initiatives, and imaginations along with the information in this FM to assist in the smooth and effective operation of their units.

User Information

The proponent of this FM is HQ TRADOC. Send comments and recommendations on DA Form 2028 directly to:

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*Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

**All equipment listings are based on OTOEs at time of publication. Consult the using unit MTOE for current equipment authorizations.

INTRODUCTION

Current petroleum doctrine, as this edition of FM 10-416 will reflect, is based on the Army's IPDS; its concept of employment and its interface with the U.S. Navy's OPDS as it pertains to either an "undeveloped" or "developed" theater of operations. FM 10-416 will serve as a key source of information for the leadership of the petroleum pipeline and terminal operating company's leadership. It will also serve as a vital source document in the current structuring of the unit's TOE.

OPDS Overview

The mission of the OPDS is to deliver fuel to a BTU on the beachhead (near the shoreline). The OPDS consists of a fleet of specialized waterborne vessels (modified petroleum tanker cargo ships). Each ship carries a cargo of fuel, a single anchor leg mooring system (mooring buoy, anchor chain and mooring base) and 4 miles of heavy-duty flexible conduit (hose) stored on reels. In operation, the ship can anchor a maximum of 4 miles offshore and pump fuel through the mooring system and conduit to the BTU. At that location, the fuel is transferred into the IPDS through the beach interface assembly for movement inland.

IPDS Overview and Concept of Employment

The IPDS consists of commercially available and military standard petroleum equipment that can be assembled by trained U.S. soldiers into an integrated petroleum distribution system. The system provides the Army with the unique capability required to support an operational force with bulk fuels in either an undeveloped and/or developed theater of operations. Bulk petroleum (fuel) can be supplied from either local sources or over-the-shore by the OPDS. The fuel is then moved inland via a pipeline system and pump stations to TPT or fuel storage facilities. Each TPT consists of three fuel units (bulk fuel receipt, storage and distribution facilities) and PLCAs. Each fuel unit consists of three tank farm assemblies. Fuel units may be used in combination with PLCA, and receive fuel from the pipeline or they can be used as independent units and receive fuel only from petroleum tank trucks/vehicles. In either case, the fuel unit can distribute fuel from bulk storage to tanker trucks for operational use.

Theater OPLANs identify fuel storage and distribution requirements from which pipeline traces (routes), pump stations locations and quantities and temporary storage sites are predetermined. If a requirement for OPDS exists, planning for location and installation is accomplished concurrently. In operation, the IPDS is designed to be transported to the theater of operations via the most expeditious and feasible way available, pending the CINC's priority of requirements. Engineer support units have the primary responsibility to install the pipeline, construct the pump stations, and assist with storage site preparation. Designated/selected Quartermaster units install the storage system and operate the total system when it is completed. Quartermaster units may also assist with the installation of pipelines when required. When not in use, the IPDS is stored in predetermined configurations and containers for deployment.