

## **Liquid Fuel Unloading Pier. FAC: 1511**

CATCODE: 151155

OPR: AF/A4LE, AFPET/PTOT

OCR: AFCEC/COS

1.1. **Description.** Waterfront unloading facilities for the delivery of petroleum products by ship or barge.

1.2. **Requirements Determination.** At installations where the delivery of petroleum products by ship or barge is feasible and economically advantageous, waterfront unloading facilities may be provided. A separate unloading pier or wharf may be provided if shore conditions permit.

1.3. **Scope Determination.** The pier includes mooring equipment, hose connections, pipe manifolds, valving, hose derricks and racks, and fire protection equipment. Facilities that are intended for barge receipts include a product filtration system. See UFC 4-151-10 *General Criteria for Waterfront Construction*; UFC 4-152-01, *Design: Piers and Wharves*; and UFC 4-159-03, *Design: Moorings*.

1.4. **Dimensions.** See UFC 3-460-01.

### **1.5. Design Considerations.**

1.5.1. Design piping systems to permit tankers to unload in the shortest reasonable time. This normally does not exceed 24 hours. Size piping in accordance with the requirements outlined in UFC 3-460-01.

1.5.2. Provide a safe, navigable channel access and mooring that has sufficient depth at mean low water (MLW) to provide a floating keel and vessel propulsion at all times.

1.5.3. Provide a vessel ground cable. Permanently connect the cable to shore piping and equip it with an explosion-proof open/close switch. Equip the cable end with a screw clamp for securing to the vessel hull.

1.5.4. Provide a product recovery system to collect liquid spilled from hose end pipe sections during connect-disconnect operations.

1.5.5. Provide a capability to contain and recover marine spills at the berth. The capability may be contracted out, or provided by Air Force or DoD owned equipment physically positioned on station.