
Fuel Pier/Pipeline Relocation

Project Summary

In order to accommodate the fueling of large-class naval vessels and refueling tankers and to relocate its aging marine fueling facilities from a remote harbor destined for re-development, the U.S. Navy determined that a new fuel pier was needed at the U.S. Naval Station in Long Beach, California. Parsons Brinckerhoff (PB) provided the design and construction of a fuel oil pipeline system, tank farm and a fueling pier to replace an existing facility and pier.

(LONG-FORM PROJECT DESCRIPTION FOLLOWS)

Fuel Pier/Pipeline Relocation

Long Beach, California

Client

Naval Facilities Engineering Command (NAVFAC)

Owner

U.S. Navy

Background

In order to accommodate the fueling of large-class naval vessels and refueling tankers and to relocate its aging marine fueling facilities from a remote harbor destined for re-development, the U.S. Navy determined that a new fuel pier was needed at the U.S. Naval Station in Long Beach, California.

Parsons Brinckerhoff Role

Parsons Brinckerhoff (PB) provided the design and construction of a fuel oil pipeline system, tank farm and a fuel pier to replace an existing facility. PB's San Francisco office performed civil/structural design for the pier and PB Energy Storage Services (PBESS) performed the mechanical, electrical and instrumentation engineering for fuel handling, storage and support facilities.

Project Elements

- Conceptual study
- Engineering documents
- Construction support
- Field consultation
- Post-construction consultation

Project Description

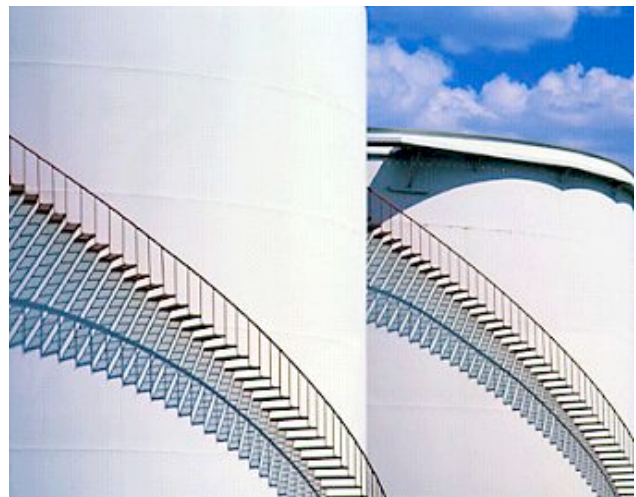
In order to accommodate the fueling of large-class naval vessels and refueling tankers and to relocate its aging marine fueling facilities from a remote harbor destined for re-development, a new fuel pier was. This project involved the design and construction of a fuel oil pipeline system, tank farm and a fueling pier to replace an existing facility all to seismic zone 4 criteria.

PB provided detail design, project engineering, documentation, submittal review, construction management of mechanical/electrical elements for three 3.5-mile-long (5.6-kilometer-long), 18-inch-diameter (45.7-centimeter-diameter) pipelines to carry marine and aviation fuel. These pipelines tied into the DFSA San Pedro Depot Storage and Transfer Facility and extended across the main



channel of Los Angeles harbor to the new tank farm at the Navy Mole on Terminal in Long Beach.

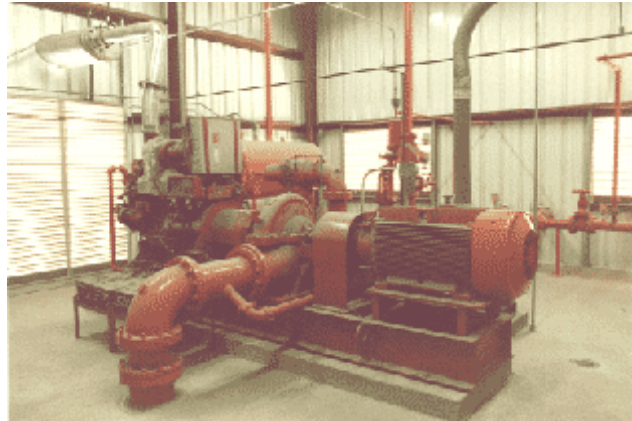
The tank farm consisted of 12 storage tanks, ranging in capacity from 2,000 to 20,000 barrels, for fuels handling and ballast treatment as well as and marine loading and unloading facilities. The project also involved, lube oil and fuel stores, a ballast reclamation system, cargo transfer facilities, spill prevention, supervisory control, corrosion control and compressed air systems. The ship support



system consisted of ballast and waste water handling, potable water distribution, spill control and fire protection.

Adjacent to the tank farm, a 1,080-foot-long, 65-foot-wide (329-meter long and 19.8-meter-wide) pier to accommodate fueling vessels and barges was built and provided with three-load arm fuel transfer stations and two-hose loading stations. PB also provided engineering evaluation and estimating services for the demolition and removal of the existing fueling wharf, tank farm and terminal facilities. This effort also included environmental work relating to evaluation of soils contamination, soils remediation, asbestos removal and abandonment of existing pipelines.

Under separate contract, PB provided the operations and maintenance (O&M) manuals and training manuals for the operation of the facility.



Teaming

PB served as prime consultant.

Staffing

Peter Bibbes (PBQD) served as project manager; Pete Settle served as principal-in-charge. Tim Reichwein, Len Sher and Raghu Raghuraman served as lead PBESS mechanical, electrical and civil engineers, respectively.

Schedule

Our services began in July 1981 and were completed in December 1985.

Project Number: 3362

Creation Date: 11/10

Approved By: Tim Reichwein