

U.S. NAVAL BASE, PEARL HARBOR, FUEL FACILITIES BEFORE 1938
(U.S. Naval Base, Pearl Harbor, Naval Supply Center)
(U.S. Naval Base, Pearl Harbor, Pre-WWII Fuel Facilities)
Various Locations Throughout Base
Pearl Harbor
Honolulu County
Hawaii

HABS No. HI-389

HABS
HI-389

WRITTEN HISTORICAL DATA

HISTORIC AMERICAN BUILDINGS SURVEY
National Park Service
U.S. Department of the Interior
Oakland, California

HISTORIC AMERICAN BUILDINGS SURVEY

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Location: Various Locations
(see individual HABS reports listed below)
Pearl Harbor Naval Base
City and County of Honolulu, Hawaii

See HABS No. HI-60 for UTM coordinates of the base and HABS/HAER reports listed below for UTM coordinates of specific facilities.

Present Owner: U.S. Navy

Present Occupant: Most extant pre-1938 fuel facilities are under control of Fleet and Industrial Supply Center (successor activity to Naval Supply Center)

Present Use: various fuel-related functions

Significance: The early fuel facilities at Pearl Harbor are associated with the Navy's transition from coal- to oil-powered ships. The U.S. Navy's need for a coaling station in the mid Pacific is part of the intricate relationship between the Kingdom of Hawaii and the United States, which eventually led to Hawaii becoming part of the U.S. The 1920s fuel facilities at Pearl Harbor are associated with the national Teapot Dome Oil Reserve scandal.

For locations and descriptions of individual fuel facilities related to the pre-World War II history of Pearl Harbor see the following reports (list in chronological order):

Report Number	Fac. No.	Current or Last Facility Use	Date	Report Name (all preceded by: U.S. Naval Base, Pearl Harbor)
HABS No. HI-(draft)	31	Fuel Pumphouse (not in use)	1919	Pump House (Fuel Transfer and Storage Building)
HAER No. HI-11	M 3	Berthing Wharf	1922	Mike Dock M3
HABS No. HI-401	88	Lubricant Storage	1923	Lubricating Oil Storage Building
HABS No. HI-413	89	SIMA-Merry Point	1923	Merry Point Barracks
HAER No. HI-54	S 377	Wharf Berthing F4	1924	Ford Island Gasoline Wharf
HAER No. HI-32	S 729	NSFO Storage Tank	1924	Ship Fuel Storage Tank (Lower Tank Farm, Tank No. 13)
HAER No. HI-33	S 733	NSFO Storage Tank	1924	Ship Fuel Storage Tank (Lower Tank Farm, Tank No. 17)

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HAER No. HI-43	S 746 & S 747	Storage Tanks, Diesel, Tank Nos. 34& 35	1924	Bulk Fuel Storage Tank Type (Middle Tank Farm)
HAER No. HI-46	S 748, S 749, & S 750	Storage Tanks, Diesel, Tank Nos. 36, 37, 38	1924	Bulk Fuel Storage Tank Type (Middle Tank Farm)
HABS No. HI-312	76	Pumphouse, Jet Fuel	1924	Lower Tank Farm
HABS No. HI-313	162	Pumphouse, Diesel Fuel	1937	Pump House
HAER No. HI-30	S 88	JP-4 Storage Tank	1944 (1924)	Jet Engine Fuel Storage Tank (Pearl City Fuel Annex, Tank No. 3)

Notes: The fuel tanks, wharfs, etc. were not given facility numbers until the early 1950s, and before that they were referred to by their tank numbers or berthing designation.

Except for the first four facilities in the list, which are still extant, the HABS or HAER reports for the other facilities were prepared prior to their demolition.

HISTORICAL INFORMATION

1. Technology of Coal-Burning Ships and Politics of Coaling Stations (1840s-1899)

Wind was still the main propellant power for ships, including U.S. warships, until the early 1880s. As early as the 1840s, coal-burning steam engines with screw propellers had started to be installed in Navy ships as a backup device when the wind was not cooperative. However, the new technology was not welcome on sailing ships.

The whole thing was an abominable nuisance. The drag of the propeller reduced speed when under sail; the boilers, engine and fuel bunkers wasted great amounts of useful space; the stack emitted dirty smoke and dangerous sparks and got in the way of proper masts and rigging; and the coal dust was a plague. . . . Engines and engineers were tolerated, but little more (Alden 1972: 221).

It was not until the Civil War that use of coal engines became common in the U.S. Navy. Still, for more than a decade after that war, Navy officers, especially the senior ones, preferred the familiar sailing ships. Even though the steam-driven ships had proved superior and faster in war, the Navy budget had been greatly reduced after the war, and the use of engines was restricted. One admiral of the period noted:

To burn coal was so grievous an offense in the eyes of the authorities, that for years the captain was obliged to enter in his logbook in red ink his reasons for getting up steam (Miller 1977: 193).

Coal-burning ships required coaling stations to refuel. For commercial vessels and warships operating with engines in the mostly empty North Pacific Ocean, there were not many location choices for coaling stations. The main islands of the Hawaiian Kingdom offered ports or somewhat sheltered anchorages, water and supplies, as well as locations for storing coal, although none of the natural resource to mine. As early as 1848 the Privy Council in Hawaii had discussed establishing a coaling station in the Hawaiian Islands (Hawaii State Archives 1848).

The only other place in the northern Pacific that the U.S. had considered developing into a coaling station, for both naval and commercial vessels, during the 1800s was Midway Atoll. This uninhabited group of small, low islands was not officially part of the Kingdom of Hawaii, although geographically part of the Northwest Hawaiian Islands' chain. Discovered in 1859, the atoll was claimed for the U.S. in 1867 by Captain Reynolds, commanding the *USS Lakawanna*. The coral reef of the Midway lagoon required blasting and dredging in order for large ships to enter. After the U.S. Congress appropriated \$50,000, the *USS Saginaw* was sent to Midway in 1870 to accomplish this work. The crew not only failed at this task, but also wrecked the ship on Ocean (now Kure) Island after leaving Midway. Many in Hawaii were eager to see U.S. steamships come into Oahu, where, they argued, at least labor, wharfs, and supplies were available. However, the U.S. said it was reluctant to pay for construction of coaling station facilities in another country, unless the U.S. would have exclusive control and use.

The 1887 extension of the reciprocity treaty, relating to the importation of Hawaiian sugar duty free, included terms that granted the United States sole rights to Pearl Harbor, as "a coaling and repair station for the use of vessels of the United States" (Tate 1968: 184). However,

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Congress did not provide any funding to deepen the water at the mouth, and so no use was made of Pearl Harbor by the U.S., until after Hawaii was annexed. In any case, the intricate nineteenth-century politics of sugar treaties and annexation were somewhat related to the need for a coaling station.

2. Earliest Navy Fuel Facilities in the Pacific (late 1800s-1913)

In 1844, the Hawaiian Kingdom's Secretary of Foreign Affairs received a letter from the U.S. Commissioner in Hawaii, asking "whether any objection would be made by the Hawaiian Government to the establishment of a naval depot at Honolulu or some other port in the Hawaiian Group" (Hawaii State Archives 1844). It is not clear if this depot was to include coal storage. By 1857, if not earlier, a Naval storehouse was established in Honolulu, since a newspaper article notes the appointment of Lt. William Reynolds as "U.S. Naval Storekeeper" (*Pacific Commercial Advertiser*, February 5, 1857). An 1894 newspaper article noted that the United States had "for several years rented a lot of land in Honolulu and has kept stored there from 1,500 to 2,000 tons of coal for the use of [its] naval vessels" (*Pacific Commercial Advertiser*, April 13, 1894).

The joint resolution of annexation had not yet been passed, in May 1898, when the Spanish American War broke out. However, the American Consul in Hawaii was authorized to build four new coal sheds and purchase coal for supplying the American fleet in the Pacific, then steaming between the U.S. west coast and the Philippines (Landauer and Landauer 1999: 170). This coaling station became the first official Naval installation in the newly annexed territory of Hawaii. In May 1899, Commander J.F. Merry arrived in Honolulu to command the Naval Coal Depot, relieving the U.S. Consul. In November 1899 this coaling station was renamed "Naval Station" (Landauer and Landauer 1999: 173), reflecting a broader purpose than refueling Navy ships.

The older coal shed was apparently not torn down when four more were authorized in 1898. Drawings and specifications for three coal sheds were done by O.G. Traphagen, and one was done by C.B. Ripley with C.W. Dickey (1898). These three architects constituted two of the most prominent architectural firms in Honolulu during the late nineteenth century. The need for speed in design and construction was evident in the specifications, which noted that "should vessels now due with coal for this shed arrive before the building is completed the Contractor will allow the coal to be put on the floor" (Ripley & Dickey 1898: 10). It is not clear if all four sheds were actually built, since a 1909 map shows only two coal sheds on the block bounded by Ala Moana, Richards Street, Halekauwila Street, and an extension of Mililani Street. There was a "stores" building, which may have been the older coal shed, on a parcel northeast of that Coal Sheds block, which was also labeled "Coal." When the first contingent of Marines arrived in Hawaii in 1904, they were housed in the old shed until 1907 (Landauer and Landauer 1999: 182 & 186). The Naval Station in Honolulu continued to be used until facilities were ready at Pearl Harbor. The transfer of the Naval Station to Pearl Harbor occurred in 1913.

3. Earliest Fuel Facilities at Pearl Harbor (1913-1919)

The construction of the Panama Canal, planned since the late 1800s but not completed until 1914, also increased the importance of Hawaii as a coaling station for American ships, since the canal changed the routing across the Pacific. The canal was important for the U.S. Navy,

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as well as for commercial shipping, allowing the Atlantic Fleet to more quickly respond to any potential threat in the Pacific.

Until the entrance channel at Pearl Harbor had been dredged, which was not substantially accomplished until 1911, it was not practical to develop facilities there. Fuel structures were among the earliest facilities built. A coaling depot at Pearl Harbor with a 100,000-ton capacity had been recommended in the early 1900s. By the time this was built, it was almost obsolete, since heavy fuel oil was becoming more popular as a fuel for ships. The first large oil-burning steam engine was installed in a Navy ship in 1908. However, coal remained a fuel for some ships even during World War II (Alden 1972: 224).

The coal facilities at Pearl Harbor were authorized in 1912. The wharf portion was completed by 1915, but the basin and other parts were not completed until 1918. The coaling station included a huge partitioned coal basin and a C-shaped wharf of concrete, railroad tracks on steel trestles, movable hoisting towers and coal chutes, cranes, locomotives, dump cars, and a flooding system. The coal basin was the largest structure on the base for decades, measuring about 767' x 457', but not quite rectangular, with the north corner angled. The exterior walls are about 18' tall, with most sloped at 45 degrees, and buttressed on the outside. Originally interior partition walls, to allow storage of up to eight different kinds of coal, were designed, but historic photographs indicate these were never built. The basin was designed to be watertight, because flooding was necessary to reduce the danger of heating in the 25' high piles of coal. Its normal storage capacity was 125,000 tons (U.S. Navy, Bureau of Yards and Docks 1938: 554). The top of the trestle was 40' above the deck of the wharf. The tracks were arranged in a loop system, always passing along the wharf, and then along any one of six lines crossing the coal basin. The railroad lines were supported on 75 concrete piers. These six lines were in pairs, spaced 30' apart, so that the cranes with clamshell scoops could load the cars on the adjacent track. The coaling station was established at the end of the installation closest to the entrance channel, and generally downwind of the other Naval Station facilities.

Adjacent to the coal bin, seven metal fuel oil tanks were built in 1913-15, using five different contractors and station labor. Each tank was surrounded by an earth embankment so that the contents of the tank could be contained in case of a leak, "with a slight excess for a factor of safety against boiling over in case the escaped oil took fire" (U.S. Navy, Bureau of Yards and Docks [1915]: 1). The four largest tanks each held 50,000 barrels of fuel oil, and a fifth, slightly smaller one, held 35,000 barrels of fuel oil. There was also a 7,100-barrel diesel fuel oil tank, and a 90,000-gallon (2,143-barrel) gasoline tank. The latter was surrounded by an insulating wall of terracotta tiles, to slow evaporation. The first two tanks built were the gasoline tank and the smaller fuel oil tank. The diesel oil tank, for the fuel used on submarines, was the last one erected. A fuel depot pumphouse was also built in 1913, close to the coaling wharf. At the end of the decade, in 1919, a few additional oil-related fuel facilities were constructed, including a large (324' x 128' x 31') underground concrete reservoir for heavy fuel oil (150,000-barrel capacity), two foam plants/pumphouses for fire protection, and, near the coaling wharf, another pumphouse and heater building, all of which have long been demolished. Interior photos of the reservoir show that it had "tilting twin oil suction pipes" and varnished concrete columns (National Archives II). Also, built in 1919, although listed in the Navy database with a 1937 date, was a fuel oil pumphouse (Fac. 31). This facility was connected to the 1919 underground reservoir. It consisted of a small building over a pump well about 40' deep; the pump well pit was recently filled, but the building, its valves, and its foundation were retained. Besides Fac. 31, only a portion of the coaling wharf and some of the coal bin walls remain, of all these earliest fuel facilities.

4. Naval Oil Reserve Scandal and its Relationship to Pearl Harbor (1921-1929)

The popular name for the Naval Oil Reserve Scandal in the 1920s was "Teapot Dome," a term as resonant of government corruption in its era, as the Watergate and other "gate" controversies are in ours. A Naval Oil Reserve in California was the one actually connected with Pearl Harbor's fuel facilities, not Teapot Dome in Wyoming. Three reserves of public land (two in California, at Elk Hills and Buena Vista), had been set aside early in the century; their natural oil reservoirs, or domes, were intended for future Navy use in time of war or crisis. The reason these were acquired was because, at the turn of the century, John D. Rockefeller controlled 90 percent of all oil refining and retailing and thus dictated the price of oil. The Navy, which in the early 1910s had converted its ships to oil from coal, was a major customer of this new industry. The underground oil deposits in Wyoming and California were intended as "a strategic reserve for the fleet during national emergencies and as a hedge against increases in the retail price" (Love 1992: 540).

After World War I, millions of automobiles were sold by Ford and other manufacturers, driving up the price of fuel oil. The amount of fuel that Navy funds could buy was so low that ship movements were restricted. The Secretary of the Navy, Edwin Denby, heard many complaints from his admirals. He also was told that drillers in lands adjacent to the Naval Oil Reserves were depleting those deposits.

Albert B. Fall, the Secretary of the Interior under President Warren G. Harding, convinced Denby and the President to turn administration of the reserves over to his department in 1921. He quickly leased the reserves to two companies. The Elk Hills lease went to the Pan-American Petroleum and Transport Company (PAPTC), owned by Edward L. Doheny, and the Teapot Dome reserve was leased to Harry Sinclair of Sinclair Oil. Granting the leases could be defended, but Fall also received gifts and "loans" from the two oil companies.

Although the two companies now had access to the oil, the Navy benefited from the leases because the oil companies in exchange built oil tanks and other fuel facilities. This way, the Navy got facilities without depending on Congressional funding, which was hard to obtain in the post World War I period. At Pearl Harbor in 1923 and 1924 there were five main areas where fuel facilities were built by PAPTC: the lower, upper and Middle Tank Farms, plus Merry Point and Ford Island. All the tanks were of riveted steel construction. Because of the greatest pressure there, the lowest ring of steel plates has the most rivets. Each tank has a bolt-on manhole cover about 20" in diameter. Historic photos show there were originally revolving sprinklers installed on their low-pitched conical roofs (National Archives II).

In the Lower Tank Farm, near the coaling station, 21 more fuel oil tanks, one diesel oil tank, and two pumphouses were constructed in 1923 by PAPTC. These tanks measured 106' in diameter and 32' tall, and held 50,000 barrels of fuel. Of these facilities, all but four were demolished before 1963. In the 1990s two more were demolished. Now, one tank remains in the Lower Tank Farm in its original shape (Fac. S 727), and another (Fac. S 726) has a new tank inserted inside the walls of the original one.

Originally the Upper Tank Farm also included the area inland of Merry Point, but after the construction of the Makalapa entry gate and road (during WWII), this term only included the area north of Makalapa Road. In 1924 PAPTC built one pumphouse and the 17 largest fuel oil tanks in this area, measuring 40' tall by 164' diameter, and holding 150,000 barrels. Of these

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facilities, five original tanks remain (Fac. S 754, S 755, S 756, S 761, and S 762) plus a 1978 tank which replaced one that burned. Since the construction of Kamehameha Highway in the 1940s, these have been the most visible of all the Pearl Harbor tanks.

The ten tanks of the Middle Tank Farm (tanks 29-38, Facilities S741 to S750) have all been demolished. Nine of these were the same dimensions as the Lower Tank Farm ones, and one 80,000-barrel tank measured 123' in diameter and 34' in height, intermediate in size between the numerous 50,000-barrel tanks and the 150,000-barrel ones in the Upper Tank Farm. Historic photos show that these ten tanks were all completed in 1923 (National Archives II).

The distinctive triangular shape of Merry Point was created when the fueling wharfs (Fac. M 1 to M 4) were built and the land filled in 1922 by PAPTC. In the next two years, they also built a lubricating oil storehouse and a barracks on Merry Point, which are still extant (Marine Barracks n.d.). The storehouse (Fac. 88, see HABS No. HI-401) still has its 56 original small riveted tanks (25,000-gallon capacity) inside on racks. Many small tanks were necessary because, for decades, different equipment at the Navy Base required that many varieties of lubricating oils be available. Now with standardization of equipment and lubricant improvements, only four different types of lubricating oil are used (Gammon 2000).

Nine aviation fuel tanks, a pumphouse, and a T-shaped fuel dock (Fac. S 377) were built on Ford Island in the mid 1920s. None of these remain. These facilities were labeled "Reserve Gasoline Tanks," "Gasoline Pumphouse," and "Gasoline Wharf" on 1932 maps. Gasoline was then the more highly refined fuel used for planes, compared to the fuel oil used for ships, and to the diesel oil used in submarine engines. Cork, to minimize evaporation, was used to insulate the above-ground gasoline tanks, which measured 36' in diameter and 30' in height. Unlike the square earthen berms built around the fuel tanks on the main part of the base, circular concrete walls about 6' tall were constructed around the Ford Island tanks.

Most of the fuel facilities were built or under construction when a Congressional investigation:

revealed that Secretary Fall had illegally received some \$400,000 from the oil companies. A lengthy legal battle ensued and Fall was convicted of accepting bribes in the disposal of government oil lands, a maneuver that cost him his job and two years in jail. Secretary Denby was forced to resign (de Yarmin 1984: 9-10).

Trials relating to this scandal stretched from 1924 through 1929. Because the construction of the second series of tanks was so far advanced that any delay would involve a loss far greater than the cost of completion, the tanks were completed by agreement between government and PAPTC. However, at least some of the tanks then stood empty and rusting until the early 1930s, due to concerns about prejudicing the litigation regarding ownership and payment issues (*Honolulu Advertiser* 1925 and Coletta 1985: 447). Sinclair Oil's Harry Sinclair was sentenced to a about a half-year prison term for contempt of both court and U.S. Senate. Edward Doheny of PAPTC was found innocent, and one Senator complained: "You can't convict a million dollars in the United States" (Yergin1992: 216).

5. Other Fuel Facilities Built Before 1939

There were a few fuel facilities built at Pearl Harbor during the late 1920s and 30s that are not connected with the Naval Oil Reserve scandal. In 1927, a diesel purification plant and a pumphouse were built on Merry Point. These are no longer extant, having been replaced with

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another diesel purification system at the Submarine Base during World War II. Also, an extension of a 1924 pumphouse was built in 1934 (both portions of that building demolished in 1974). The only new fuel facility constructed at Pearl Harbor during the 1930s was an additional pump house (Fac. 162) in 1937.

6. Early Fuel Facilities During and After World War II

At the end of the 1930s the build-up for World War II started. Fuel facilities with an enormous capacity were built in the 1940s, and most were built underground to provide protection against attack. Many historians have speculated why the Japanese did not bomb the highly visible fuel tanks at Pearl Harbor during their December 7, 1941 attack. In the immediate aftermath of the attack, some minor improvements and repairs were made to the tank farms. An ensign in the Civil Engineer Corps reported that they "changed all pipe-line fittings from cast iron to wrought iron, installed portable foam systems, stopped leaks caused by penetration of machine-gun bullets with wooden plugs, and placed a six-inch clay layer throughout the berms in order to prevent oil leakage into the harbor and the resulting fire hazard" (Peabody 1991: 254). The above-ground fuel tanks and the other early fuel facilities contributed to the Navy's achievements during WWII. Few modifications were needed, but one major improvement was a new fuel line run to the Ford Island aviation fuel tanks from the Pearl City Peninsula. This allowed an alternative way to fill them, besides unloading from tankers at the island's fuel wharf (Dodge 2002).

Most early fuel facilities continued in use during World War II, but the diesel fuel purification system was replaced, as mentioned above, and some fuel oil tanks were removed to accommodate other needed facilities. In the Upper Tank Farm, Tanks 39-41 were dismantled before June 1942, and North Road was straightened, to provide space for additional temporary barracks at Submarine Base. Tank 43 was also removed before June 1944. Two of these four tanks were re-erected on Pearl City Peninsula for aviation fuel, as Facilities S87 (Gammon 2000) and S88 (Oeda 1995). These tanks are no longer used by the Navy, but may be leased (Dodge 2002). The two other tanks were cleaned and erected on the side of Aliamanu Crater as water tanks, as Facilities S1 and S2. These 1924 riveted tanks were replaced by welded steel water tanks with the same facility numbers in 1995 (Aratani 2000). Four tanks (Tanks 25-29) in the Lower Tank Farm were demolished about 1945 to build two large, two-story warehouses (Fac. 393 and 394). At least two of the 1919 tanks and one 1923 tank, located in the triangle northeast of the coaling station, were demolished before the end of World War II, and all of the rest in this triangle were gone by 1948 (Fourteenth Naval District 1948).

After WWII, with greatly reduced needs for fuel facilities, many of the early tanks were abandoned, or used only as reserve tanks for periodic cleanings, and eventually demolished. The gasoline tanks (56-64) on Ford Island were removed sometime between 1951 and 1953. Most of the 1923 tanks in the Lower Tank Farm were demolished in 1957. The concrete reservoir in the Middle Tank Farm was abandoned in 1953, and it was eventually demolished by collapsing in the roof in 1976 (Gammon 1999). Tanks 29-33 in the Middle Tank Farm were demolished in 1959, and the remaining five (Tanks 34-38) in the Middle Tank Farm were removed ca. 1999, along with their associated piping. Tanks 42, 44, 45, and 49 through 52 in the Upper Tank Farm were demolished in 1959. Tank 55 in the Upper Tank Farm was rebuilt in 1978, after a fire. The five remaining 1924 tanks (Tanks 46, 47, 48, 53, and 54) in the Upper Tank Farm are being rehabilitated, which requires welding all seams and rivets and reconstructing the tank floors and roofs (Dodge 2002). The six tanks in the Upper Tank Farm

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are the only alternative fuel source for the fleet and Pearl Harbor activities besides the Red Hill system.

As the need for coal decreased and as the Navy continued its build-up to World War II, the huge coaling facility was partially dismantled for other uses. Concrete Plant No. 2 was built around 1941 within the coaling plant. The erection of the huge new concrete plant, which supplied most of the concrete used in building Dry Docks Nos. 2, 3 and 4 "necessitated the removal of two coal crane structures, of the trestle along the entire length of the outer wharf, and of considerable portions of other trestles -- as well as the transfer of some 30,000 tons of coal to the south end of the storage basin" (Pacific Bridge Company [1944]: 64 &108). The coaling dock became a cement dock.

SOURCES OF INFORMATION

A. ENGINEERING DRAWINGS

The drawings for some of the early fuel facilities are listed in the individual HABS or HAER reports noted on the first page. Some overall maps and drawings of the layout of Pearl Harbor in its early years were also helpful and are listed individually in the Bibliography below. Two historic maps are reproduced in this report.

B. EARLY VIEWS

Numerous photographs of the early fuel facilities, usually under construction, were found at the National Archives II photo collection in the Bureau of Yards & Docks record group, RG 71 CA. In Hawaii, the National Park Service, USS Arizona Memorial, 14th Naval District Photograph Collection and the photo collections at the Bishop Museum Archives (especially in the Dillingham Family Papers) also have some good historic photographs of the early Pearl Harbor fuel facilities.

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- 2002 Comments on draft of this report by Historic Preservation Specialist, Naval Facilities Engineering Command, Pacific.

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- 1929 "Map of the Yard and Adjacent Units Showing Developments to June 30, 1929" with notation "Plan Showing Outline and Location of Improvements Recommended in Annual Estimates for 1932, Submitted 1930." Drawing no. A-152. From National Archives, courtesy Earth Tech.
- 1932 Pearl Harbor, T.H., Showing Developments to June 30, 1932. Drawing no. I-N1-110. From National Archives, courtesy Earth Tech.
- c.1934 Pearl Harbor, T.H., Key Map, Topography -- Subsurface. Drawing no. A-141. Provided by Jeffrey Dodge. Naval Facilities Engineering Command, Pacific.
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U.S. Naval Station

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D. LIKELY SOURCES NOT YET INVESTIGATED

National Archives II, Text section, 8601 Adelphi Road, College Park, Maryland 20740, ph. (301) 713-6625.

National Archives, Pacific Sierra Region, 1000 Commodore Drive, San Bruno, California 94066, ph (415) 876-9009.

Navy Historical Center, Washington Navy Yard, 805 Kidder Breese, S.E., Washington, D.C. 20734, ph. (202) 433-4131.

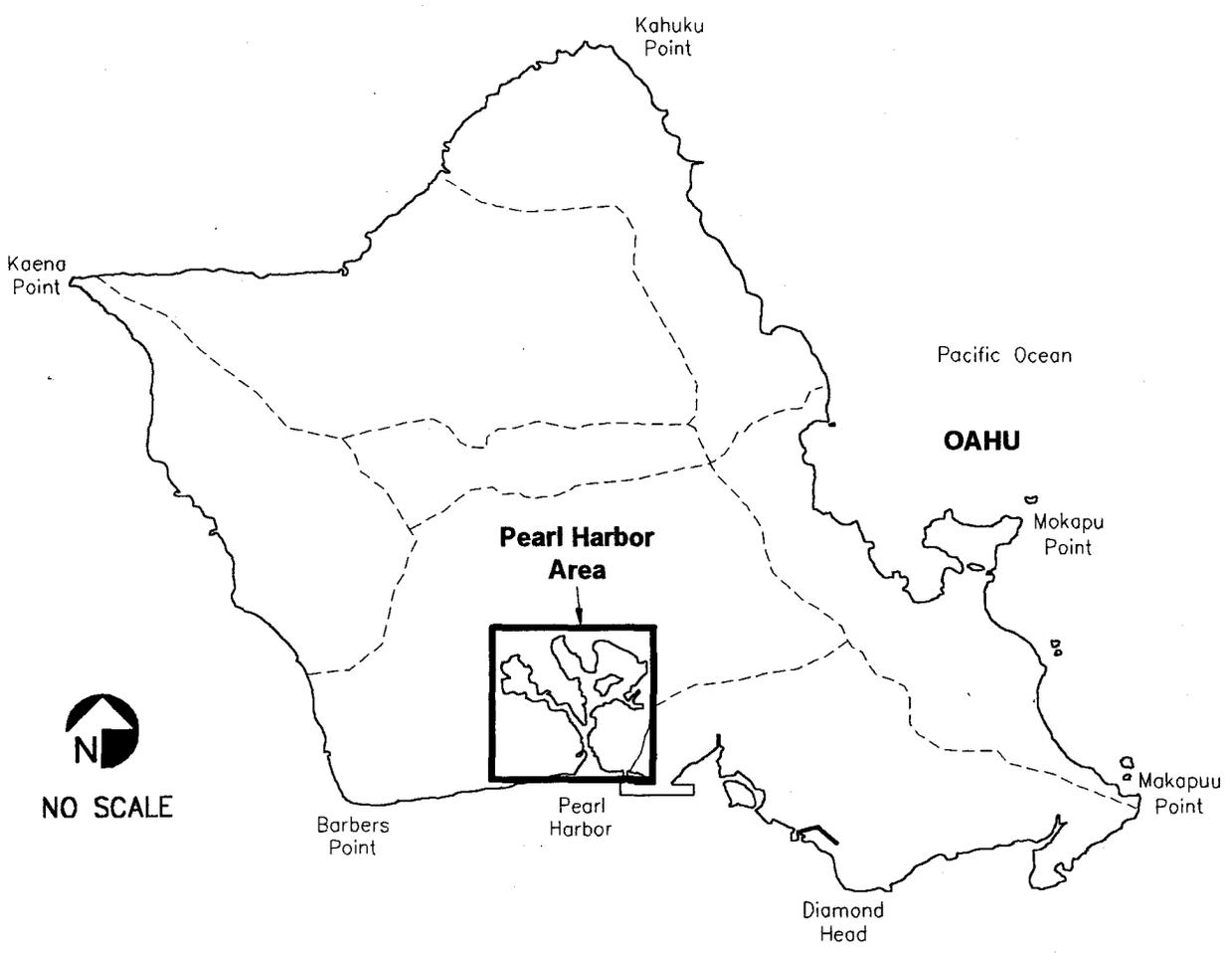
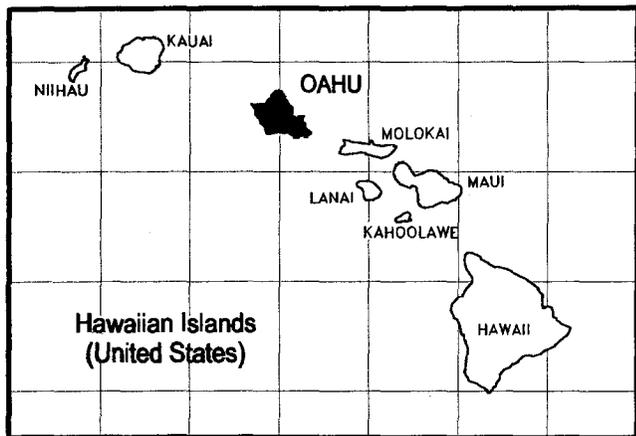
PROJECT INFORMATION

Commander Navy Region (COMNAVREG) Hawaii has embarked on a program of documentation of historic properties within its area of responsibility, with the goal of recording historic information about each set of facilities. In order to establish the context of significance for the pre-WWII fuel facilities this overview report was prepared. This information will assist COMNAVREG Hawaii in the appropriate management of these properties, be it routine repair and maintenance for continuing use, rehabilitation for continuing use / adaptive reuse, or demolition. This report was prepared under a Historic Preservation Services contract (N62742-97-D-3502) awarded to AMEC Earth and Environmental, the prime contractor, by the U.S. Navy, Naval Facilities Engineering Command, Pacific. The contract was funded through the Cultural Resources Program of COMNAVREG Hawaii. The Oahu map was made by Nestor Beltran of NAB Graphics. This report was researched and written by Ann Yoklavich, Architectural Historian at Mason Architects, Inc.

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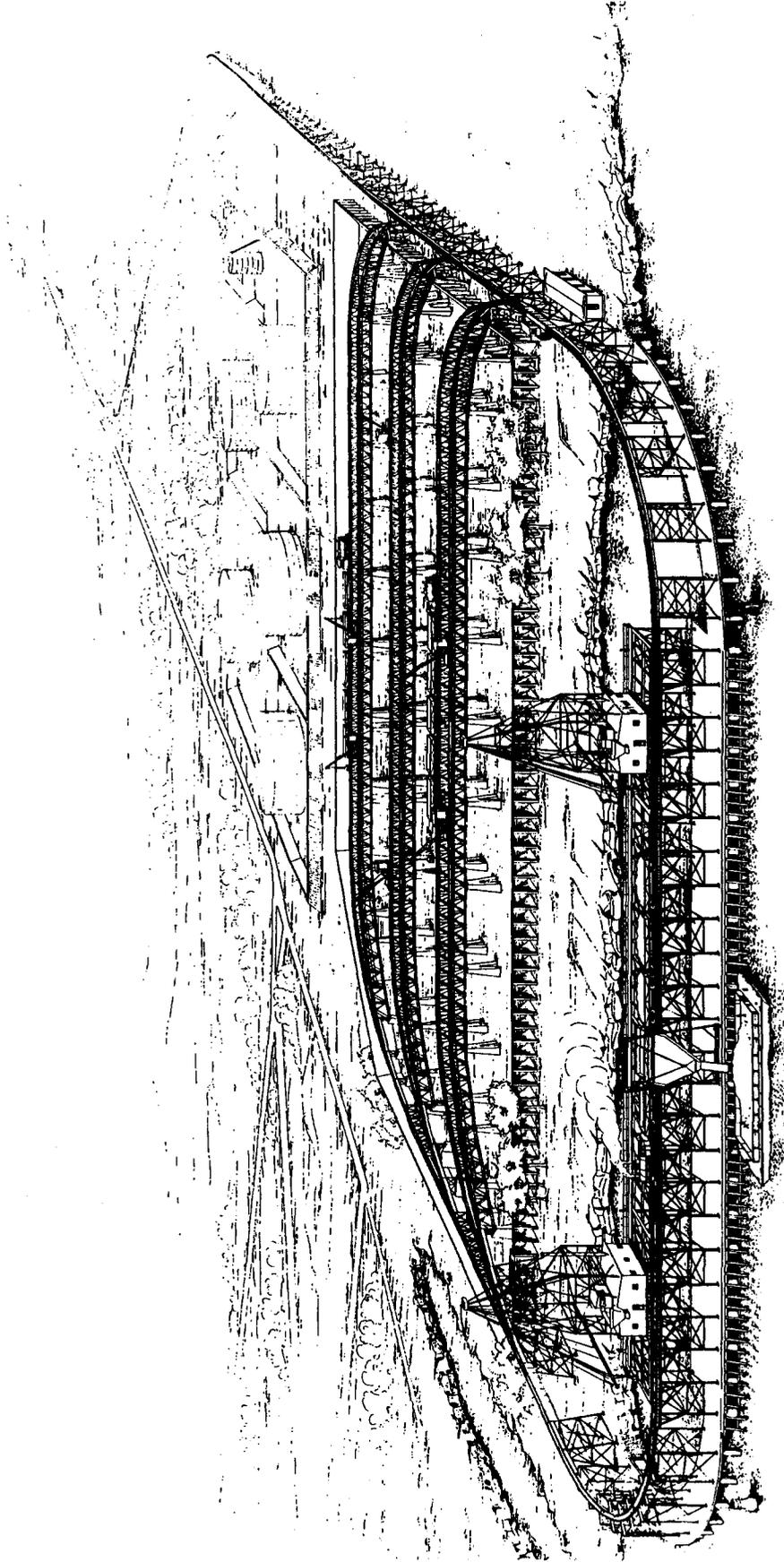
Date of Final Report: August 2004

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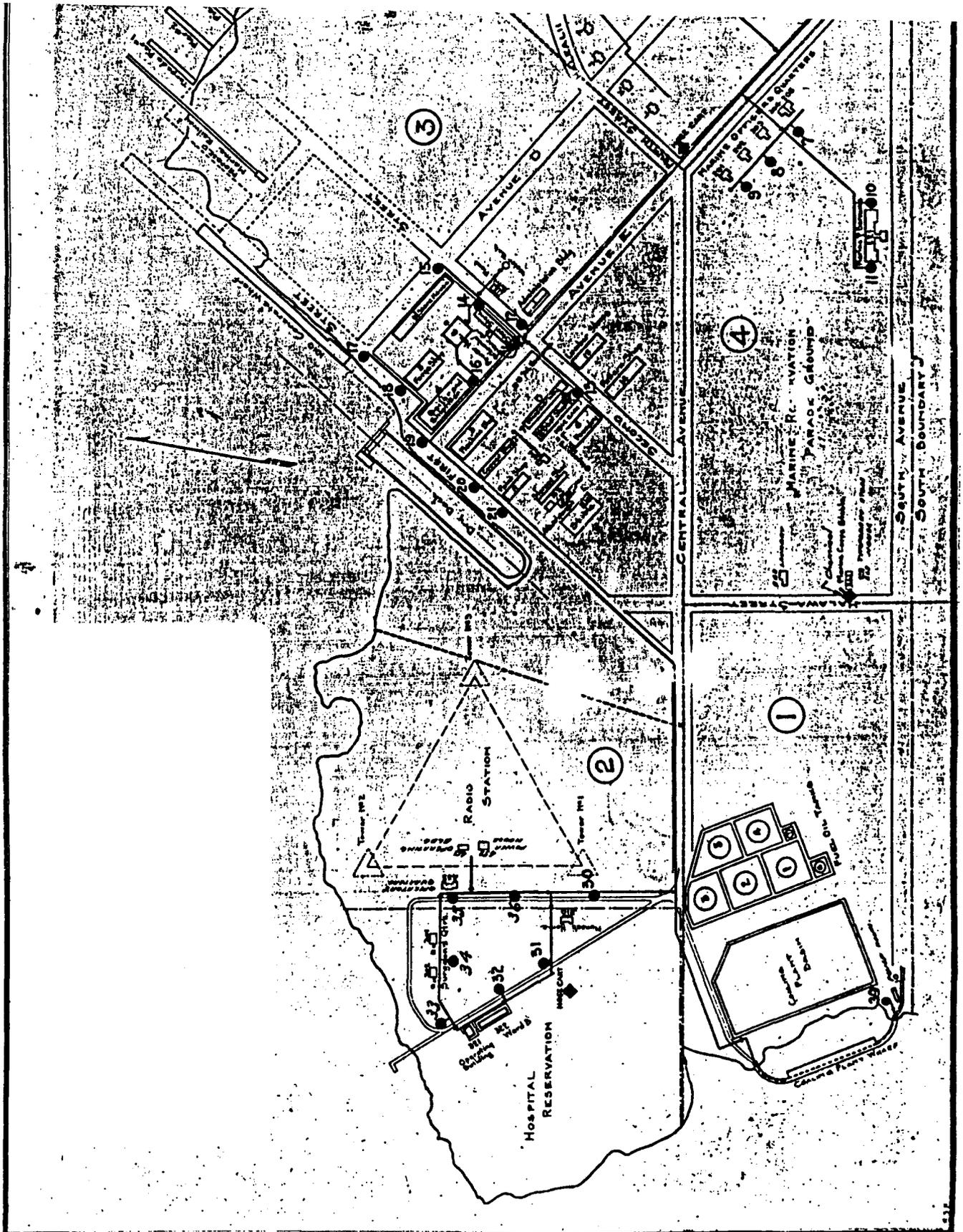
Perspective Drawing of Coaling Plant Wharf and Basin at Pearl Harbor
Source: National Archives II, Fifth Floor, RG 71 CR



GENERAL VIEW
PEARL HARBOR COALING STATION

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Early oil tanks near coaling station in 1916 (Drawing no. O-40)



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Location of tanks and other fuel facilities c. 1934 (Drawing no. A-141)

