Narrative Description

Summary Paragraph

The USS OAK RIDGE is a closed-basin floating dry dock owned by the U.S. Coast Guard. It is located alongside Pier 3 at the Coast Guard Yard in Curtis Bay, Anne Arundel County, Maryland. Originally commissioned by the U.S. Navy in 1944 as the auxiliary repair dock USS ARD-19, following structural and equipment upgrades and enhancements it was re-commissioned in 1963 as the auxiliary repair dock-medium USS OAK RIDGE (ARDM-1). The Navy decommissioned the USS OAK RIDGE in 2001 and struck it from the Navy Register. It was transferred to the Coast Guard in 2002 and brought to the Coast Guard Yard. The Coast Guard lists this floating dry dock as OAKRIDGE and it is categorized as a piece of equipment. This property has one contributing resource, the USS OAK RIDGE. It is 536 feet long with a breadth of 81 feet. The OAK RIDGE is built of welded steel, painted battleship grey, and displaces 9,700 tons. It includes an enclosed bow and dock basin with stern gate that facilitate oceanic navigation via tow. The bow is approximately 79 feet in length and supports a deck house superstructure. The dock basin is 60 feet wide and 457 feet long. The basin’s floor is the upper deck of a pontoon hull containing buoyance tanks. The basin’s sides are formed by port and starboard wing walls that are 42 feet tall and 10 feet wide. Both wing walls support a movable 25-ton capacity crane. The basin’s stern gate can be lowered and raised as needed. The USS OAK RIDGE draws approximately six feet of water when its buoyance tanks are empty. It draws approximately 33 feet when the tanks are filled with water and its basin is flooded, allowing a vessel to enter or exit. While much of this property’s original equipment and furnishings have been removed, the OAK RIDGE’s overall structural configuration and hull structure are largely unchanged from when it was the Navy’s ARDM-1. This property is accessible on foot from land. It is not open to public visitation.

Description

This property consists of one contributing resource, the closed-basin floating dry dock that was historically named the USS OAK RIDGE. It is owned by the U.S. Coast Guard (USCG) and located in Curtis Creek on the western side of Pier 3 at the Coast Guard Yard in northern Anne Arundel County, Maryland (Figure 1). The USS OAK RIDGE was originally commissioned by the U.S. Navy in 1944 as the auxiliary repair dock USS ARD-19 (Photo 1). It was lengthened in 1962 to 1963 and re-commissioned in 1963 as the auxiliary repair dock-medium USS OAK RIDGE (ARDM-1) (Photo 2). This property was transferred in 2002 to the Coast Guard and renamed OAKRIDGE. It was brought to the Coast Guard Yard in 2002 and has been operated since then as equipment used to maintain and repair USCG vessels (Photo 7). The following description uses this property’s current name, OAKRIDGE.
The OAKRIDGE is 536 feet in length, 81 feet in breadth, and built of welded steel. It displaces 9,700 tons and is painted battleship grey. The bow area is approximately 79 feet long and situated forward of a dock basin that is 60 feet wide and 457 feet long (Figure 2 and Photo 12). The basin’s sides are the floating dry dock’s port and starboard wing walls; its floor is the deck of a pontoon hull containing buoyance tanks. The basin is fitted with a movable stern gate that is opened and closed as needed. The OAKRIDGE draws 6 to 7 feet of water normally, and 32 to 34 feet when sunk to its flooded level. The highest open-air deck extending from bow to stern is designated the first deck. The interior deck below this is the second deck, and the one below that is the third deck.

This property occupies a fixed position with its bow pointing northward (Photo 8). It is held in place horizontally by steel pilings mounted vertically in brackets attached to the OAKRIDGE’s exterior port and starboard sides. There are four pilings along each side. The brackets allow the property to move up and down with the tide and as needed when operating.

The OAKRIDGE is accessible on foot from the Coast Guard Yard’s southern waterfront by way of two transit-ways on its port side near the bow. These consist of steel stairways and horizontal gangways. One leads upward to the bow’s elevated open-air first deck. The other leads horizontally to a large rectangular opening approximately 8 feet tall by 15 feet wide and 90 feet from the prow. This opening provides direct access to the OAKRIDGE’s interior dock basin.

**Bow and Deck House**

The bow area is enclosed and configured as a ship’s prow to facilitate oceanic navigation by tow (Photos 2 and 9). The bow’s first deck is open-air and approximately 50 feet in length. On it are mounted a capstan flanked on port and starboard with a windlass (Figure 3 and Photo 11). The prow has three hawse holes, with the largest centered in the prow and smaller ones on port and starboard. The anchors are missing. The prow is rounded above the hawse holes. A vertical series of draught numbers is welded to the hull on both port and starboard approximately 50 feet aft of the prow (Photo 10). These mark one-foot increments up to “45.”

A deck house superstructure sits atop the bow’s first deck (Figure 3). It includes two levels of compartments and the OAKRIDGE’s bridge. The forward part of the deck house’s second level and bridge overhang the bow’s capstan and windlasses. A steel ship’s door on the first level provides access from the bow’s forward deck to a passage leading to the open-air first deck aft of deck house.
Port and starboard ship’s ladders on the deck house’s aft side provide access to an open deck on the second level. This level’s center compartment holds the Control Room for the pumping system that fills and empties the OAKRIDGE’s buoyance tanks. The Control Room has a steel ship’s door, three large rectangular windows, and contains port and starboard control panels (Photo 17). Other compartment rooms on this level were formerly used as staterooms and office space. These are now largely vacant.

A doorway to starboard of the Control Room opens to stairs leading up to the deck house’s bridge. It is elevated approximately three feet above the deck house’s second level. The bridge consists of an enclosed wheelhouse lighted with seven rectangular windows. The wheelhouse’s original controls, steering system, and equipment (helm, binacle, radios, etc.) have been removed. Its aft wall includes a small rectangular opening to the Control Room that provides for direct communication between them.

Two ship’s ladders, one to port and the other to starboard, lead up from the second level’s aft deck to an open-air deck atop the superstructure. There is a smaller rectangular deck in the center, atop the wheelhouse, that is elevated three feet higher. It supports a triangular steel skeleton tower mast approximately 25 feet tall that holds a long yardarm extending to port and starboard (Figure 3). The superstructure’s roof deck includes two attached rectangular steel cabinets near its port and starboard ends. These contain small compartments that formerly held signal flags.

The bow’s enclosed interior below the first deck includes the OAKRIDGE’s second and third decks. It is divided into several compartments, including a two-story tall open area that wraps around the bulkhead separating the enclosed bow from the dock basin (Photo 18). This open area was formerly used as a work shop. It contains several wood- and metal-working machines used in the past for cutting and custom-fitting blocks to support and stabilize vessels brought into dry dock. Other bow area compartment rooms were formerly used for offices, living quarters, wardrooms, showers, heads (toilets), and equipment and supply storage. These are now largely vacant except for fixtures such as sinks, toilets, and shower stalls. Below the third deck, the bow’s lowest level contains buoyance tanks and chain lockers.

Port Wing Wall

The port wing wall is approximately 457 feet in length and 10 feet wide (Photos 13 and 14). It rises to a height of 42 feet above the dock basin floor. The wing wall’s open-air first deck supports a massive 25-ton crane and two-rail track for moving it along the wing wall. The crane is positioned at the wing wall’s forward end and is presently non-operating.
The port wing wall’s interior is accessed by way of four small enclosed companionways atop the first deck. Each has doorways leading to interior ship’s ladders that descend to the second deck. The second deck level is divided into several compartments formerly used for crew berthing, meal service, work space, showers, heads, and storage. These are now largely vacant. The wing wall’s third deck is below the second deck. It includes compartments used for office space, a lounge and recreation room, laundry, compressor room, and storage. A compartment near the stern is designated the “Port Ram Room.” It contains a massive hydraulic ram oriented at a 45-degree angle with the lower end towards the stern (Photo 20). This ram works in tandem with a partner ram in the starboard wing wall to raise (close) and lower (open) the stern gate.

The wing wall’s fourth deck is occupied by the port side pump room and a number of compartments used for personnel support (barber shop, medical treatment, and storage). It also includes buoyance tanks and potable water storage tanks that extend into the level below.

Starboard Wing Wall

The starboard wing wall is the same length, width, and height as the port wing wall (Photos 13 and 14). It also supports a non-operating 25-ton crane and two-rail track. The crane is positioned at the wing wall’s forward end. Like the port wing wall, access to the starboard wing wall’s interior is by way of four small enclosed companionways mounted atop its first deck.

This wing wall’s interior includes a second and third deck that are divided into several compartments used formerly for crew berthing, office space, work space, medical space, lounge space, classroom, technical library, showers, heads, and storage. A large, two-story tall engine room compartment contains electrical generators. A compartment near the starboard wing wall’s stern is designated the “Starboard Ram Room.” It contains a massive hydraulic ram oriented at a 45-degree angle with the lower end towards the stern (Photo 19). This ram is connected to the dock basin’s stern gate and works in tandem with the port side ram.

This wing wall’s fourth deck is occupied by the starboard side pump room, along with a number of compartments used for storage. The level below this is even with the floor of the dry dock basin and is occupied by buoyance tanks, waste oil storage tanks, a sewage pump room, and waste water storage tanks.
Pontoon and Stern Gate

The OAKRIDGE’s lower hull below the wing walls is designated the pontoon. It is approximately 457 feet long, 81 feet wide, and seven feet deep. The pontoon is divided into 14 buoyance tanks that can be filled with water to sink the dock basin, and pumped out to raise it. The pontoon’s upper deck is the dock basin’s floor (Photo 15).

A steel stern gate is mounted at the dock basin’s aft end (Photo 16). It is 60 feet wide and approximately 30 feet tall. Its base is hinged, allowing the gate to be lowered for a vessel to enter or exit when the dock basin is flooded. It is closed when the dock basin is in the raised position and dry.

Changes Through Time

The OAKRIDGE was originally built in 1943 to 1944 and commissioned in 1944 as the USS ARD-19. Its configuration then was much the same as today except that it was 491 feet, 8 inches long and the wing walls were equipped with 10-ton capacity cranes. The ARD-19 was taken to a shipyard in 1962 to 1963 and modified to accommodate Cold War-era fleet ballistic missile nuclear submarines. This work lengthened it to 536 feet by adding a 45-foot long section approximately amidships. Other modifications replaced and upgraded various onboard systems including electrical and pumping. The ARD-19 was originally equipped with two 10-ton cranes. These were removed and replaced with two 25-ton cranes. The Navy commissioned the rebuilt ARD-19 on 1 October 1963 as the auxiliary repair dock-medium USS OAK RIDGE (ARDM-1). It was outfitted and equipped to accommodate an onboard crew of 210 people.

The Navy decommissioned the USS OAK RIDGE in August 2001 and transferred it to the U.S. Coast Guard in 2002. The Coast Guard renamed the floating dry dock OAKRIDGE and brought it to the Coast Guard Yard in 2002. The OAKRIDGE was moored alongside Pier 3 and fixed in position by installing brackets on the port and starboard sides to hold steel pilings oriented vertically. The brackets allow the OAKRIDGE to move down and up with the change in tide and during dry-docking operations, while the pilings maintain it in place horizontally. The USS OAK RIDGE was originally equipped with two rudders (at the aft end of each wing wall) and a steering system. These were removed in 2003.

The OAKRIDGE does not have a live-aboard crew. Interior compartments that are no longer functional have been largely cleared of unneeded furnishings and equipment. This has included removing beds, tables and chairs from former living spaces, and material from former workshops and administrative offices. The helm, binnacle, radios, and other equipment have been removed from the bridge’s wheelhouse.
The removal of this equipment and furnishings has not adversely impacted the OAKRIDGE's overall structural integrity. Such materials are replaceable. Various heavy equipment items such as the two onboard 25-ton cranes and electrical generators remain, although a portion of these are non-operating. Other equipment such as the pumping system used to flood and dewater the buoyance tanks and the stern gate's hydraulic rams are maintained in service.

The OAKRIDGE underwent a Service Life Extension Project (SLEP) from March 2011 to November 2013. This work replaced more than 2,000 square feet of steel plating and 3,200 linear feet of longitudinal stiffeners. It also included installation of a new firemain system and new transit-ways providing access from shore. Improvements were also made to the remote valve and pump controls for the water ballast system and internal emergency dewatering equipment. The interior communications and closed circuit television systems were upgraded, and the stern gate was improved.
Figure 1. Location Map. This is a portion of the "Curtis Bay, Maryland," 7.5 minute quadrangle topographic map, scale 1:24,000 (United States Geological Survey 1969, photorevised 1974).
Figure 2. USS OAK RIDGE (ARDM-1) longitudinal drawings; stern on left, bow on right (U.S. Navy 1992).

- Outboard Profile – Starboard Side
- Inboard Profile – Port Side Wing Wall
- Interior Cross-Section Profile – Port Side Wing Wall
Figure 3. USS OAK RIDGE (ARDM-1) deck house, forward and aft elevations (U.S. Navy 1992).
Figure 4. USS ARD-19 awards, citations, and campaign ribbons (source: Grazевич 2017).

Awards, Citations and Campaign Ribbons

Chief of Naval Operations Letter of Commendation

Precedence of awards is from top to bottom, left to right
Top Row - Combat Action Ribbon (retroactive) - Navy Meritorious Unit Commendation (3)
Second Row - Navy Battle "E" Ribbon (5) - American Campaign Medal - Asiatic-Pacific Campaign Medal (1)
Third Row - World War II Victory Medal - National Defense Service Medal - Philippine Liberation Medal
Figure 5. USS OAK RIDGE (ARDM-1) logo circa 1990s (Grazevich 2017). Translation of the Lain phrases include “Peace by means of tridents” (weaponry), and “At first, weak condition - At the end, exalted condition.”
Photo 1. USS ARD-19 at Subic Bay, Philippines (US Navy Photo 1946).
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Photo 2. USS OAK RIDGE (ARDM-1) under tow from Norfolk, VA, to Naval Station Rota, Spain (US Navy photo 1964).
Photo 3. USS OAK RIDGE (ARDM-1) at Naval Station Rota, Spain, with APL-31 (non-self-propelled barracks ship) alongside (US Navy photo circa1970s).
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Photo 4. USS OAK RIDGE (ARDM-1) at Naval Station Rota, Spain, with vessel in dry dock (US Navy photo late 960s).
Photo 5. USS OAK RIDGE at Naval Station Kings Bay, GA, with submarine in dry dock (US Department of Defense photo 1994).
Photo 6. USS OAK RIDGE at Naval Submarine Base New London, Groton, CT, with submarine in dry dock (US Navy photo circa 2000).
Photo 7. OAKRIDGE following arrival alongside Pier 3 at the Coast Guard Yard, MD (Coast Guard photo circa 2002).
Photo 8. OAKRIDGE alongside Pier 3 at the Coast Guard Yard, MD (source: Michael Baker, Jr., Inc., and Environmental Management & Planning Solutions, Inc. 2010). North is at the top of the photo.
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Photo 10. Bow and deck house with 25-ton crane on left, camera facing southwest.
Photo 11. Bow first deck with windlass and capstan showing deck house overhang, camera facing south.
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Photo 12. Dock basin forward end with deck house above, camera facing north.
Photo 13. Dock basin interior with USCGC EAGLE in dry dock, camera facing south.
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Photo 14. Dock basin with USCGC EAGLE in dry dock, camera facing south.
Photo 15. Dock basin with USCGC EAGLE in dry dock, camera facing northwest.
Photo 16. Dock basin and stern gate, camera facing south.
Photo 17. Buoyance tank pump system control room interior, camera facing southeast.
Photo 18. Bow area interior work shop, with basin forward end bulkhead on left, camera facing southwest.
Photo 19. Stern gate starboard ram with basin bulkhead on left, camera facing north.
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Photo 20. Stern gate port ram with basin bulkhead on left, camera facing south.