

A History of "Service To The Fleet"

1995 Edition

U.S. Department
of Transportation

United States
Coast Guard



Commanding Officer
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5700
24 February 1995

From: Commanding Officer, U.S. Coast Guard YARD
To: Friends of the Coast Guard YARD
Subj: UPDATE OF THE COAST GUARD YARD'S HISTORY

1. The 1995 edition of "A History of Service To The Fleet" complements the first Coast Guard YARD history book published in 1985. This edition updates the activities of the shipyard over the past 10 years. The successful events of the last decade tell the story of the Coast Guard YARD's pursuit of "world-class" status within the business community and are a testimony to the Coast Guard YARD's goal to be the "Shipyard of Choice" for its Coast Guard customers.
2. The Coast Guard YARD Family relates its history with enthusiasm and pride and looks forward to the shipyard's quickly approaching centennial. The contents of this book herald scores of success stories and challenge its readers to recognize the shipyard's vital contributions to the U.S. Coast Guard for nearly 100 years.
3. I encourage the Coast Guard YARD's active and retired employees, customers, suppliers, partners, and friends to enjoy the story of a tradition of excellence which readies the shipyard for continued quality work, while proudly living up to its motto "Service To The Fleet!"

A handwritten signature in cursive script, reading "Ronald J. Marafioti".

RONALD J. MARAFIOTI

A Matter of History
by SKI Gerard Gibault, USCG

A battered, crippled ship slowly limps into sanctuary, to be repaired by skillful hands. These hands belong to the YARD.

YARD hands have cradled valiant ships that save lives and put to sea in an unending battle against disaster.

These brave little ships have sought refuge here these past 86 years. Here have they come for solace and relief. Here have they come for repair and joyful reunions.

Here they come, the weary veterans of the high seas, as they battle storms. Tediously they search for vessels in distress, for icebergs, and for violators of the law.

These cutters have served with honor and pride; their record is without equal. They are proud ships, harried, and overworked ships; they are too few for so very much.

YARD hands have nursed these weary veterans of a hundred missions back to health, hands that have replaced rigging, windlass guns, and guts of a hundred worn vessels.

It makes no difference whether Revenue cutter nor battle scarred 327; YARD hands have repaired, painted, and secured a place in history for these ships.

A matter of history is the YARD. Through war and peace, we have rescued ships and have bound their wounds suffered from their endless encounters with the sea.

It matters not, whether Coast Guard, Navy, or other military vessel. We stand ready to repair, renew, reshape, these gallant vessels so that they may once again, to into arms way.

For nearly a century, an all-to-brief history, weary, aged veterans of the sea have sought respite from the sea in this place.

The YARD is a haven for these battle-scarred, bone weary ships back from the sea, secure in the strong, gentle hands of the YARD.

Introduction

The U.S. Coast Guard YARD, founded in 1899, is the only shipbuilding and repair facility of the United States Coast Guard.

It is the Coast Guard's largest, most modern industrial plant. The YARD is responsible for construction, repairs, and renovation of vessels and various aids to navigation, and for the manufacturing of miscellaneous Coast Guard equipment.

Today, over 700 civilian employees are employed, and 140 military personnel are stationed at the YARD. It spans 112 acres and has an annual budget larger than \$65 million.

Besides its principal shipyard role, the Coast Guard YARD serves as host facility for the Coast Guard Supply Center Curtis Bay, Coast Guard Group Baltimore and Curtis Bay Station. It is homeport for Coast Guard Cutters SLEDGE and RED BIRCH.

For 96 years now, the shipyard has lived its motto "Service to the Fleet." Its history is found in the following pages.



A mural of the YARD, painted by BMC Samuel Emrys Evans in 1946, hangs in the Conference Room of the Main Administration Building. The painting depicts the industrial activities of the YARD during the Second World War.



An early Arundel Cove shot (above) reveals a densely vegetated area. But thanks to the wisdom and eagerness of LT John C. Moore (left), the land would eventually be developed into the Coast Guard YARD.

The turn of the century was accompanied by a burst of nationalism, a public awakening to the value of the armed services. This was mainly a result of the U. S. war with Spain. Spurred by this support, LT Moore arrived at Arundel Cove in 1899 on board the COLFAX (below) and began operation of his shipyard.



The YARD Begins

The site occupied by the YARD has been a part of Maryland's history from the very first days Lord Baltimore dispatched English settlers to his overseas dominion. On June 29, 1663, two hundred acres of land, the major portion of today's Coast Guard YARD, were patented to Paul Kinsey. He named his estate "Curtise's Neck." Sixteen years later, on July 18, 1679, his friend, George Yates, acquired an adjoining lot of 250 acres which he named "Denchworth." The stream which marked the western limits of Kinsey's estate, now Curtis Creek, was called "Broad Creek." In Yates' patent, Arundel Cove is described as the "Cove of Curtise's Creek."

The question naturally arises, why did the first colonists in this general area settle on Arundel Cove? Kinsey was free to select his estate from the many scores of thousands of acres of land all touching on the Patapsco or its estuaries. Why this particular spot?

The reasons prompting the selection were quite sound, as events later confirmed. The first colonists, as was natural in such undeveloped, unsettled country, used the Bay and its tributaries as a broad highway to all points in early Maryland. Little time would be required by Kinsey and venturesome fellow explorers to discover that in all this wide and generally fertile area, Arundel Cove was the most satisfactory anchorage. It afforded perfect protection in ample water depth. It was strategically located to the Patapsco River, with short and easy access to the Bay itself. In short, geography, or nature, or merely fate, marked this favored location for an important future.

In proof, two and a third centuries later, these identical reasons, plus the important fact that the Bay leads to the Atlantic, would prompt the establishment of a small boat building and repair plant for the United States Revenue Cutter Service at Arundel Cove.

Since the formation of the Revenue Cutter Service in 1790, the construction of its life-saving boats and larger vessels had been carried out in private yards. Repairs were likewise made on contract. As the nation grew in size and its activities broadened, the Service also increased in scope and importance. The building and upkeep of its constantly increasing number of vessels gradually became a serious matter of mounting cost. Often too, both the quality of work done and prices charged by private yards proved unsatisfactory. To

improve these conditions, certain individuals felt the service should build and repair its own vessels. Among those advocating this idea was Lt. John C. Moore, an experienced officer, at the time in command of the COLFAX, an ancient side-wheel vessel that had served with the Navy in the Civil War.

Moore argued that maintenance and repair could be accomplished more reasonably in the Service's own yard than in commercial shipyards, and pointed out Arundel Cove as an excellent site for such a Depot. He suggested that the idea might be more readily "sold" to Congress if the Depot could be designed to do double duty as a base for the School of Instruction as well.

Lt. Moore and his supporters approached Captain-Commandant Shoemaker (1895-1905), and he agreed with their suggestion. He pointed out, however, there was the matter of funds for the venture; money that must be appropriated by Congress. But the Service itself could scrape together a few hundred dollars which could be enough to start a small yard manned by workers drawn from Service personnel. Lt. Moore accepted the responsibility and furthermore knew exactly where the plant should be located. Lt. John C. Moore, founder of the present U.S. Coast Guard YARD at Curtis Bay, was well equipped by training and experience to undertake the strenuous task. He was then in his 41st year.

The COLFAX Arrives

It was in April 1899, that Lt. Moore, aboard the COLFAX, was on his way at long last to establish the experimental yard at Arundel Cove. The government-leased land, on part of which the small boat building and repair plant was to be erected, was on the north side of the western half of the Cove – some 35 acres leased at the rate of \$800 per year. The original shoreline was approximately 300 feet from the present southeast bulkheads. Well up into the Cove, at its most sheltered part, ten and twelve feet of water carried to within a few yards of the north shoreline. It was here Lt. Moore carefully outlined his plant setup – four small buildings – a mill for sawing, shaping and dressing lumber (about where the machine shop is now); a boat shop proper for actual assembly and construction (between the present facilities management building and the boat shop); a storage structure (adjacent to and behind the present

facilities management building) housing a sail loft where sails, hatch covers, tarpaulins and other canvas work could be produced, and squarely in the center (just above where the woodworking shop now stands), an administration building. The COLFAX provided the living quarters for the entire force of some twenty workers – officers and men from the COLFAX.

It took the summer, fall and winter of the first year to get the initial work started.

In 1900, a small railway was constructed to repair the life-saving boats. These famous unsinkable, self-bailing-and-righting boats, already well-developed, were perfected during the first few years they were produced at the Cove. A variety of other small boats were built, including the 26-foot race point surf rowboats. A small machine shop and several auxiliary buildings were erected in 1901, and additional enlisted personnel transferred to the Cove. The cutter COLFAX furnished steam from her boilers to constitute the central heating plant for these buildings. The winters during this period were extremely severe, and the waters of Arundel Cove and Curtis Creek frequently froze to a depth of 12 inches or more.

Original Coast Guard Academy Site

Late in the fall of 1900, the CHASE arrived to establish permanent winter quarters at Arundel Cove. The arrival of the CHASE, a famous vessel in her day, marked the beginning of the Coast Guard Academy, now located at New London, Connecticut.

Instruction had started 23 years earlier when Capt. J. A. Henriques fitted out the old topsail schooner, J. C. DOBBIN, as a training school for the first class cadets. Winter quarters for academic instruction were then established at New Bedford, Massachusetts. In 1877, the J. C. DOBBIN was abandoned in favor of the CHASE. The CHASE was an ideal training ship.

The custom was soon established to spend four to six months each year in cruising instruction, returning by fall to lay up at New Bedford for the school term. This routine was abandoned when the CHASE left New Bedford in 1895 to proceed to Baltimore to be lengthened. For the next five years, the CHASE laid up during the winter months at various southern ports of the United States. It was after these tours, in the fall of 1900,

that the CHASE established permanent winter quarters at Arundel Cove.

Cadets lived aboard the CHASE until 1906 when additional dormitory space was acquired in the form of the ORIOLE, a Maryland naval militia cast off hulk originally built as a sloop-of-war in 1838. CAPT J. P. Gray tells us, "Depot workmen laid a hardwood flooring on the ORIOLE's spar deck to make a drill and dancing hall. Four large staterooms, each accommodating four cadets, a dining room and galley were built into the gun deck. Cadets on the ORIOLE were living in greater comfort than those on the CHASE. All was not perfect, however, for the ORIOLE had open seams and would sink every now and then, always around midnight, in eighteen inches of water – signifying that the old Swede who was charged with tending the bilge pump had consumed too much schnapps."

Arundel Cove was selected because the wanderer in many ports could find a home on a site controlled and directed by the Revenue Cutter Service itself. An additional reason could have been that the commandant of the school at that time was Captain David Allen Hall, a native of Baltimore.

It was decided, for the best interest of the Service, to keep the school and the boatbuilding plant separate and apart. The CHASE was moored about where drydock No. 1 on the south bulkhead is now located. A good stout "L" shaped pier about 400 feet long was built. This came to be known as the "Long Dock" and was located about where Drydock Headhouse No. 1 now stands. As long as the school remained at the Cove, the school ship was moored to this pier. (In 1941, this pier was demolished.)

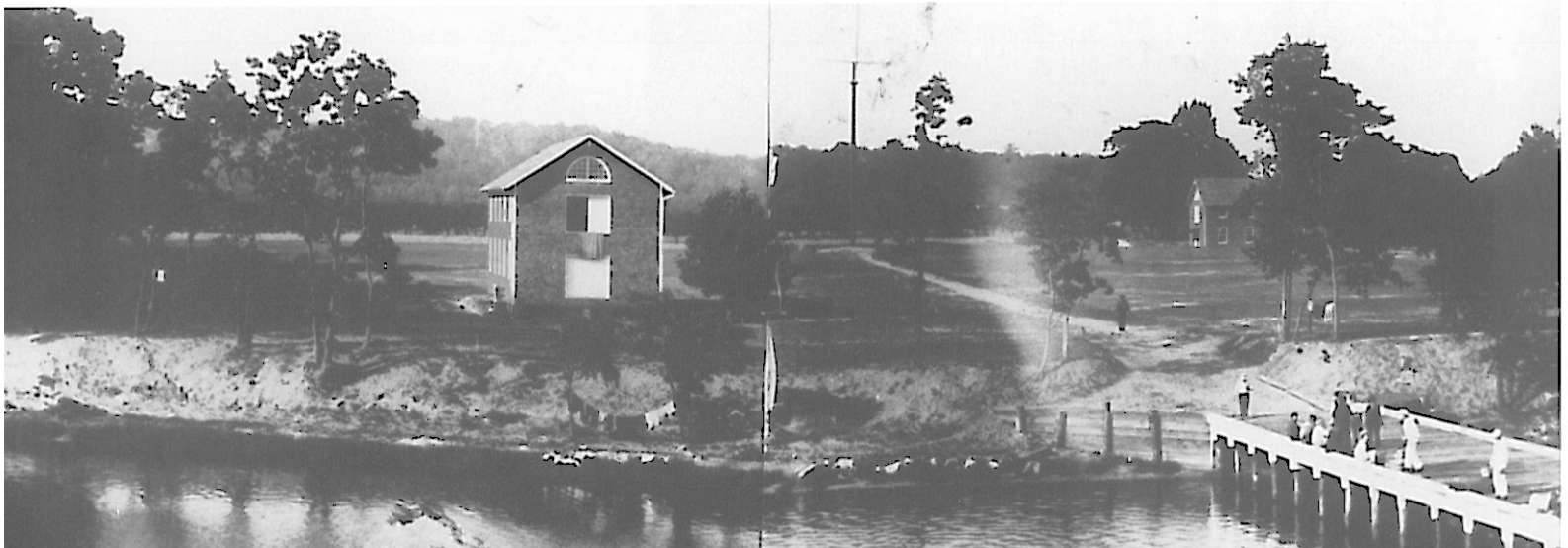
And now, for the first time, in 1906, an important step in establishing the permanency of the Academy was taken. Lt. Moore's sailors, assisted by those from the CHASE, erected a rough two-story wooden building on the shore along the West Depot boundary to serve for instruction of the cadets. Baltimoreans have long claimed this building marked the real beginning of the Coast Guard Academy. As you recall, all instruction up to that time had been aboard the school ship. It was a humble forerunner of the present magnificent New London Academy facilities.

The shingled frame school building housed a drill hall on the first floor, three classrooms on the second floor and a loft above for the storage of sails and gear of

Work begins on construction of the lumber mill (right).

This photo (center) depicts cadets working on board the CHASE in 1905. The sign in the upper right reads, "DEPOT - REVENUE CUTTER SERVICE." The picture was taken near today's Boat Shop, the northern corner of Arundel Cove.

Doing laundry was part of the cadet's daily routine as depicted in this early YARD photo (bottom), taken near the east waterfront's shore.





Cadets at Arundel Cove march to class in 1909 (top).

The Academy School Building is pictured in the left foreground (center).



The Corps of Cadets participate in training exercises (bottom).

the CHASE. Steam heat was provided by the Depot, and lighting was by acetylene gas. While the installation could not be described as sumptuous, it was adequate for the purposes intended. Boats for the Life Saving Service were being constructed; cutters were coming in for maintenance and repair, and a shore-based Academy was being developed.

The school fared well at Arundel Cove, although until the government purchased the site in 1905, there were scant accommodations for shore life. Later, a few homes were erected outside the reservation, including the eight two-story houses named "Heiskell's Row," just outside the main entrance gate (now known as the east gate). Some of these were occupied by officers of the school, but the cadets continued to live aboard the school ships moored at the "L" shaped pier.

In 1903, Congress acted upon the training period for the cadets, and a three year program was instituted at the Academy. The course of study was officially designated "School of Instruction for the Revenue Cutter Service" in 1904, when there were seven instructors and eighteen students. Three years later, two civilian instructors were appointed, and the School's curriculum was broadened to include cultural as well as technical subjects. In return, the students were, for the first time, required to agree to remain in the Service for at least three years following graduation. (It is interesting to note that the curriculum was practically unchanged until 1930, when the present four year course was adopted.)

Thus, year by year, conditions at the Cove improved. The cadets lived a strenuous existence. Every moment of the day was utilized and there was little time the students could call their own.

Beyond the large drill ground which stretched to the rear of the school building, laid a considerable stretch of undeveloped land which the instructors and cadets used to plant vegetables. It is now the open area east of the Administration Building.

The "Puddintown Express," consisting of two mules and a wagon, brought food daily from Baltimore.

During the pioneer days of the Depot, there were very few automobiles, and transportation to and from the carline terminal in Curtis Bay was primarily by water until 1927. The bus line from the YARD to Baltimore was not put into service until January 2, 1946.

Prior to 1927, ships undergoing repairs operated

liberty launches for their personnel – weather permitting – to Curtis Bay. Hawkins Point Road, the only land route, was a sparsely populated narrow rough country road of sand, reinforced somewhat with oyster shells. The bridge over Curtis Creek, located about 150-feet northwest of the present bridge, was a narrow, rotted, and patched wooden structure with a swinging draw operated by hand jacking, and later by a gasoline engine.

While the bridge was a convenience to pedestrians and vehicles, it was anything but that to boats and ships. Craft approaching the narrow draw were required to signal and secure until the bridge could be laboriously opened. The gasoline engine propulsion of the draw was nearly as slow as the hand method, for the engine had to be started for each opening.

Since the Depot was not equipped with a drydock, vessels had to be sent to commercial shipyards for drydocking. When the vessel could not proceed under her own power, the Depot tug had to nose the towed ship into one side of the narrow draw openings, give the towed craft a hard push, quickly break loose all lines and then back clear and steam through to the other side of the draw where the tow was picked up and resumed. Amazingly enough, there is no documentation indicating any incident resulting in damage to the bridge, tugs, or towed vessels as the result of this maneuver.

Workmen were brought to the Depot by the steam tug ARUNDEL, which left Flood's Park at the end of the carline at 6:50 a.m. and departed from the YARD each day at 4:15 p.m. Those who missed the boat on its morning run to the Depot either had to walk the two miles of rough road – occasionally some were fortunate enough to hitch-hike a ride in a farm wagon – or return home. If they missed the evening cruise, or if the boat was inoperative due to mechanical trouble or the weather, they had to walk to the carline or remain at the Depot overnight. Ships crewmen returning from town who missed the liberty launches had to walk the road at night. There have been stories told of highwaymen hiding along the dark road to waylay returning service men and rob them of their few dollars. Men were urged to walk the road in groups of two or more.

Another important step forward was taken in 1906 when Congress authorized the appointment of cadet engineering officers commissioned directly from civilian life. The act of 1906 also provided a six month period of

cadetship for engineers and subsequently extended this to a full year. It must be remembered that it was not until 1926, long after the Academy had moved to New London, that the line and engineer corps were combined.

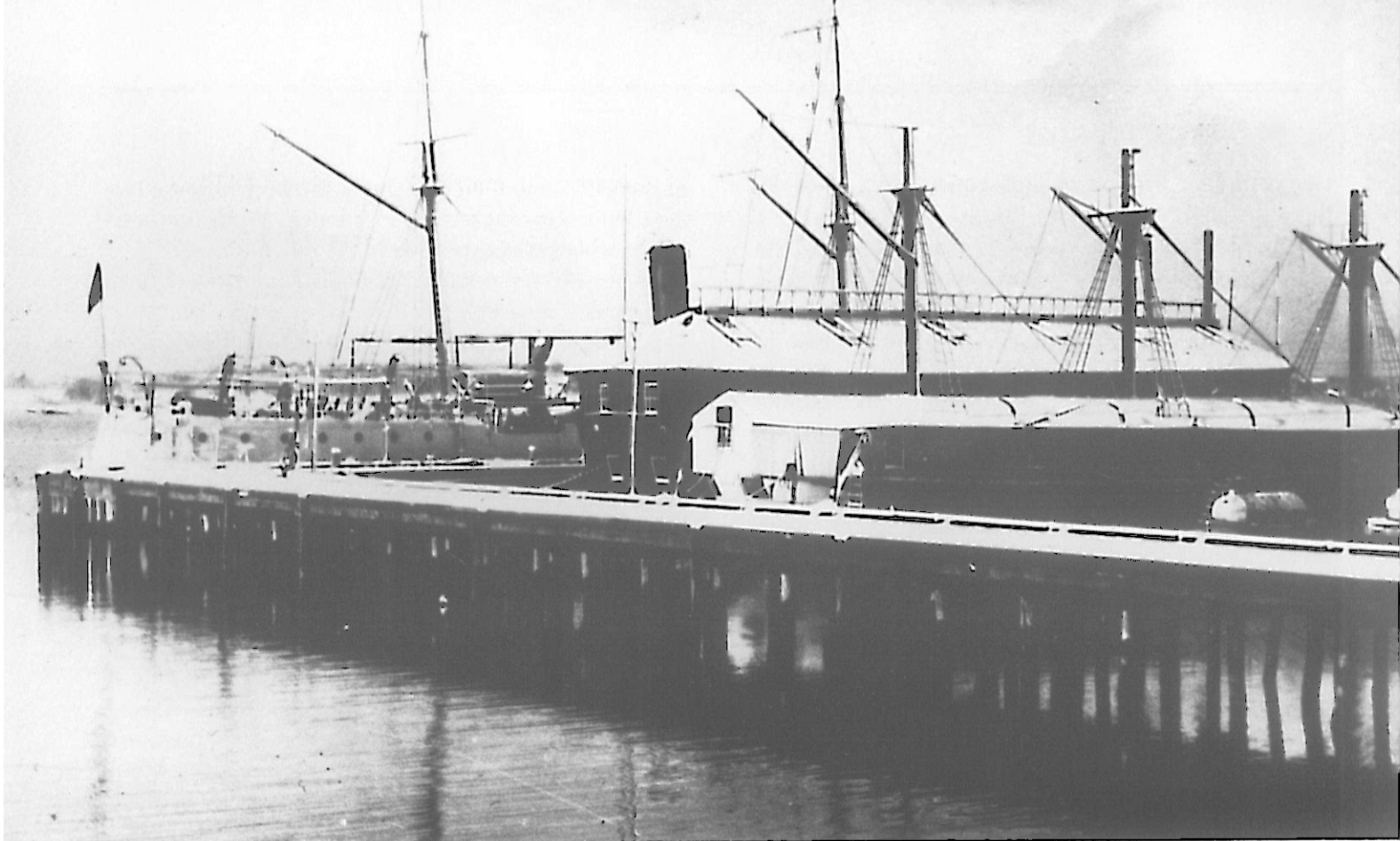
With the establishment of a shore installation, the School of Instruction again began to gain an identity independent of its training ship. The CHASE was still used for cruises and housed at least half of the Corps. But time was taking its toll on the faithful and beloved old ship. Not only was she aging; she was proving too small for the needs of the new "three class" Academy as well. In 1906, the Navy agreed to turn over the BANCROFT, a former Annapolis training ship. This vessel would accommodate at least 50 cadets. Designed as a kind of cruiser in miniature, she was an auxiliary two masted sailing vessel of 190' length, 32' beam. She was armed with 14 five and six pounders, a torpedo tube, and a Gatling gun, and she carried armor plating. Taken to a Baltimore shipyard in 1907, she was renamed the ITASCA, fitted with new water tube boilers, and re-rigged as a brigantine. Refrigeration was installed; compartmentation was made watertight. The bill for conversion came to \$100,000 – almost five times the original cost of the CHASE.

In the spring of 1907, the CHASE was stripped of her sails, light yards, and running rigging. When ITASCA arrived at Arundel Cove, a massive transfer of

equipment and materials took place. CHASE was decommissioned and towed to Baltimore for use as a quarantine station. ITASCA set off on an extensive European cruise under the command of CAPT W.E. Reynolds.

While cadets regretted the passing of the old bark CHASE, they welcomed their new found freedom from less dependence on the winds; further, they were pleased to be able to train with more modern equipment. In some respects, however, the shift was a mixed blessing. No longer did they enjoy the luxury of staterooms. From now on, they swung hammocks at night, tryced them and stowed them in daytime, and had only lockers and seabags to call their own.

Toward the end of the first decade of the present century, shipbuilding and repair work at Arundel Cove had increased. The industrial activity was no longer suitable for study. CAPT John Reinburg, Superintendent of the School of Instruction, appealed to Washington, and the Treasury Department took action. Fort Trumbull, at New London, was transferred from the War Department to the Revenue Cutter Service. When the ITASCA returned from her summer cruise in 1910, she headed for Connecticut where, for the first time, the cadets lived in barracks ashore. The school remained at Fort Trumbull until some of the present academy buildings were constructed in 1932.



The Academy's Schools of Instruction at Arundel Cove in 1909 are pictured above. The United States Revenue Cutter ITASCA is in the background. The CHASE is in the foreground. The ORIOLE is docked in between.

The Turn of the Century

The Revenue Cutter SEMINOLE had the distinction of being the first major vessel customer. She had been built by Columbia Iron Works in Baltimore, for \$141,000, under a contract dated October 28, 1897. Following her commissioning on September 3, 1900, she was assigned duties at Boston, Massachusetts. The SEMINOLE's orders were to proceed to Arundel Cove for overhaul and painting. She arrived on June 18, 1902. In July, the ALGONQUIN followed.

Thus, from 1899 to 1905, the quality and quantity of the work turned out at the YARD confirmed the opinion of Captain Moore and of Captain-Commandant Shoe-

maker that the plant should be made a permanent part of the Revenue Cutter Service. Consequently, in 1905 a strong effort was made to have Congress authorize a "Revenue Cutter Station at Curtis Bay," and to appropriate money to purchase the site. Congressional action was sought on the basis of need and economy, considering that \$60,000 had been saved on repairs of service craft during the previous four years. It wasn't until the last day of the session on March 3, 1905, the bill was passed authorizing the establishment of the Station and appropriating \$30,000 to purchase the land. To economize, however, Congress cut out an appropriation for \$65,000 for building a cutter for the Pacific Coast, thus effecting an overall savings to the Government of \$35,000.



Dr. Sidney O. Heiskell, the resident physician at the Quarantine Station, and Mr. Walter R. Townsend, a Baltimore attorney, from whom the first 36 acres of land had been leased, followed the Congressional proceedings closely. Apparently, there was an understanding between them and the Service concerning the property needed and the price to be paid. On October 4, 1905, the partners purchased the 97 acre Hall Farm on the south side of the Cove for \$10,000. On the same day, they sold the originally leased 36 acres, plus 29 acres of the Hall Farm to the Service for \$30,000. The future of the plant was secure. Plans could now be made for its future development to fit the needs of the Service.

The facilities at the Depot were enlarged and improved upon consistently from 1910 to 1920. The storeroom was enlarged; buildings were erected to provide for the stowing of gear belonging to vessels undergoing repairs; a boiler and pump house were constructed; a foundry, boat, sheetmetal, electrical, paint, upholstery, and blacksmith shops were built; mess halls, barracks, garages, recreation building, lumber storage sheds, and other structures were set up.

In 1915, the Revenue Cutter Service and the Lifesaving Service were combined to form the United States Coast Guard. The Depot was selected as the site to train surfmen in the care and operation of the new gasoline engines. These were augmenting the traditional oars and sails of the Lifesaving Service.

In those days, there was little background knowledge about such machinery and few people had seen the newfangled contraptions. But the advantages of engine power had been proved, and the Service was determined to introduce it as rapidly as funds permitted.

The school was housed in a shed along the west Depot boundary. After a few years, this training activity was transferred to Cape May, but the Boat Shop continued to develop and supply the boats needed for the service.

Work During World War I

On April 6, 1917, after the United States declared war on Germany, the Coast Guard's more than 200 officers and 5,000 men were ordered into action with the Navy. World War I was the first time the Coast Guard served as part of the Navy. The Coast Guard was in the thick of the action, convoying cargo ships and screening

transports. Several units of the U. S. Navy were sent to the Depot for repairs and conversion. Work on these Navy vessels was expedited to the fullest extent.

After 1924, production of boats, canvas work, and numerous other articles for the needs of the Service were stepped up. Extensive overhaul and repairs were performed on such then-modern vessels as the YAMACRAW, SENECA, SEMINOLE and many 100 foot, 125 foot, and 175 foot patrol boats and seagoing tugs. The 500 personnel of the Depot now included civilian employees along with the enlisted men. The Depot was rapidly coming into its own.

On May 1, 1928, employees of the Depot were blanketed under the Civil Service Act by an Executive Order issued by President Calvin Coolidge. The Depot had two hundred and forty-five wage board and two classified employees on its civilian employment rolls in 1928. The military complement of officers and enlisted men at this time was approximately two hundred and fifty.

Although vessel construction, repair, overhaul, conversion, and the manufacture of many items for the Coast Guard were progressing at a high plan, Depot facilities were becoming outdated. The shops and other buildings were wooden, and, by now, too small and inadequate. The machinery, boilers, and plant and shop equipment in general were second hand acquisitions from old cutters and salvage piles. Additional mooring space was sorely needed, and the shallow water depth placed a limitation on the type of vessels which could safely be dispatched to the Depot. The Depot personnel consisted of a small, but highly efficient mixed force of military and civilian mechanics and seafaring men with numerous trades. The work load was flexible, increasing considerably in summer months, and decreasing in winter months.

Despite its inadequate facilities, the Depot had gained a nationwide reputation for the fine quality of its work. Its small boats were famed throughout the world, wherever life-saving stations were located or cutters patrolled the seas. The Depot's production was excellent, in spite of considerable handicaps.

By 1934, the industrial plant of the Depot had definitely become outmoded, and the buildings and equipment had, for all practical purposes, far surpassed their normal span of operations. Funds were obtained through Congressional appropriations to modernize the



The picture of the waterfront above was taken in late 1919 or early 1920.

The photo below pictures the scene from a different angle at the same time period.



plant. New boat, gas engine, and machine shops were constructed and equipped, and a forty-ton marine railway was installed.

These improvements were followed in 1937 by a new ordnance building (now housing Baltimore Group, Bldg. No. 70). The two-story concrete and brick structure used as a small-arms supply repair base and an ordnance building was, at the time, the most imposing and modern structure at the Depot. In 1939, the Lighthouse Service of the Department of Commerce was transferred to the Coast Guard. With the acquisition of the Lighthouse Service, buoy construction became another major Depot function.

From Depot to Shipyard

With the advent of 1940, the Depot took on aspects of a large, extensive, modern shipyard, but greater and more modern improvements and additions were yet to come. As the possibility of another World War loomed, a Congressional Committee, foreseeing the need for greater shipyards capable of repairing, overhauling, converting, and redesigning, made an inspection tour of the Depot. They determined its requirements for war-time operations and functions. The Committee arrived at the Depot aboard the now famed cutter ALEXANDER HAMILTON. They conducted a thorough inspection



Construction of the shipyard's facilities stepped up in the 1920's and 30's. Bulkhead construction is pictured in the left photo.

The YARD was called the U.S. Coast Guard Depot in that era, evidenced by the photo below.



of the Depot, and recommended an extensive program of expansion. The program was accepted by Congress, and large appropriations were made for the purpose of further developing the Depot. A new concrete and brick administration building; a 3,000 ton floating drydock; a combination shop building for the sheetmetal, electric, pipe and rigging shops; a 320 foot by 60 foot concrete pier with a tower crane; and two shipways were all constructed with the funds made available by Congressional action. Other improvements in this program included dredging of the channels and waterways approaching the Depot, a high pressure boiler to augment the heating plant and to test steam fixtures on vessels at the Depot, and the installation of new pipe lines.

When this broad program of expansion and improvement had been fulfilled, the Depot was no longer a small repair and supply base. It was now comparable in size and operations functional to a medium-sized Navy Yard. This is when the official designation was changed from the U.S. Coast Guard Depot to the U.S. Coast Guard YARD.

In addition to work performed on all manner of Coast Guard vessels, the Coast Guard YARD manufactured all types and sizes of navigational buoys; outfitted equipment for small boats in the field, and made machinery parts for all sizes of vessels. These materials were requisitioned by other Coast Guard units. Also, practically all canvas work for the Coast Guard Service, such as awnings, boat and gun covers, etc. were manufactured at the Coast Guard YARD. On a yearly basis, the YARD constructed an average of 300 small wooden boats ranging from 10-foot dinghies to 52-foot buoy boats, including the world famous Coast Guard 36-foot 8-inch nonsinkable, self-bailing, self-righting life-boats. The boatbuilding programs of the YARD were conducted on a production-line basis.

The first steel hulled boat to be built at the YARD was constructed in 1940. She was a 40-foot prototype motor lifeboat. The CG 40300, upon completion, was assigned to the Ninth Coast Guard District.

Shortly after Pearl Harbor, the Navy purchased adjacent land and enlarged the area and facilities of the YARD, increasing the land area to its present 112.5 acres. The approximately 50 acres added were the western and northern areas of the present YARD. Two

new piers, approximately 60 feet by 400 feet, each served by tower cranes, were constructed, along with 1,800 foot bulkhead for mooring vessels. A new shop building was erected which contained fabricating, electric, and pipe shop annexes, and an outside machine shop. New temporary type buildings for the paint shop, garage, employment office, and storehouses, were also erected. Railroad track was laid throughout the YARD with connections to the Baltimore and Ohio main line. A cafeteria building was constructed, and the Navy assigned a 1,000 ton all-steel floating drydock to the YARD to relieve the heavy docking schedule of the No. 1 drydock. The YARD drydocked over 125 vessels in excess of 60 feet in length each year. Locomotive cranes and other railroad equipment were provided. These improvements made the YARD a first-class ship repair and building plant, with many features not found in other shipyards in the Baltimore area. Its capabilities were limited only by the capacity of the 3,000-ton drydock for underwater work, and the depth of the water, which was approximately 20 feet. The floating equipment of the plant at that time included a 110-foot steel hull steam derrick barge of 25 tons capacity, an oil handling and sludge removal barge, a 96-foot steam tug, and a 75-foot fireboat.

New Work Era

The 110-foot Harbor Cutter MANITOU and her sister ship KAW marked the beginning of a new era in the work of the Coast Guard YARD. These two 110-footers were the first cutters to be built since the recent completion of the ship building ways and the enlargement of shop facilities. Now, the Coast Guard could build at least a part of its own ships where formerly it undertook only repair work. The MANITOU and the KAW were being constructed on the shipways at the same time; however, the MANITOU, on September 29, 1942, was the first of the two vessels to be launched. The KAW followed three months later.

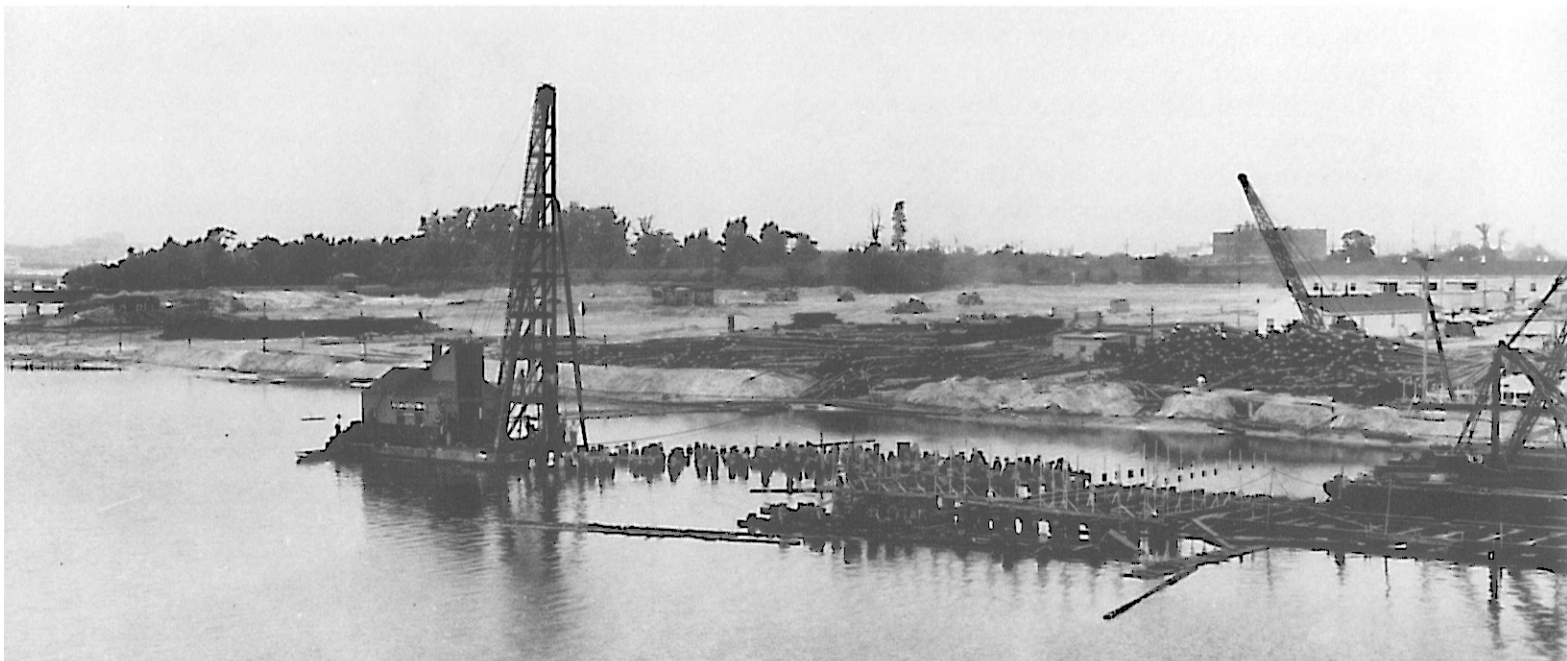
The next large vessel to be constructed at the YARD was the cutter IRONWOOD, a 180-foot buoy tender which was launched on March 16, 1943. She was powered by a 1,200 horse power diesel electric drive engine and could cruise at the speed of 13 knots.



In the early 1940's, a small, wooden office building served as the YARD's Main Administration Building. It was located between Building 4 (today, housing the Facilities Management Department and the Woodworking Shop) and Building 1 (the present Main Administration Building). (top photo)

Construction of the YARD's shipways began in 1941 (center photo). They are capable of simultaneously constructing two 350' x 45' ships.

Construction of the west portion of the waterfront is shown in this 1942 photo (bottom). Today, this section is home base for the Curtis Bay Search and Rescue Station and two of the Coast Guard's Fifth District ships, CGC RED BIRCH, a 157' buoy tender, and CGC SLEDGE, a 160' construction tender.



Largest Cutters Ever Built

On July 5, 1943, the keel was laid for a 255-foot class cutter. Once completed, she would be the largest cutter ever to be constructed by YARD employees. Only seven months later, on February 29, 1944, the MENDOTA was launched.

One month after the launching of the MENDOTA, on April 29, 1944, the cutter PONTCHARTRAIN, another 255-class cutter, was launched. Both the MENDOTA and the PONTCHARTRAIN were entirely constructed and outfitted at the YARD.

In 1944, the YARD was contracted by the U.S. Navy to build six 100-foot ocean going tugs. The first keel was laid on April 29, 1944. As the U.S.C.G. YARD Band played "Anchors Away," on July 14, 1944, the first of the series of 100's were launched, the SATAGO and the SONNICANT. The next 100's, the SECOTA and the TACONNET, were launched on August 4, 1944. The SECOTA was named after an Indian village of the 16th century on the north bank of Pamlico River, in present Beaufort County, North Carolina. The TACONNET was named after an Abnaki Indian village near Waterville, Kenebec County, Maine. The final series of 100's were launched on October 14, 1944, the TENSAW and the TOPAWA.

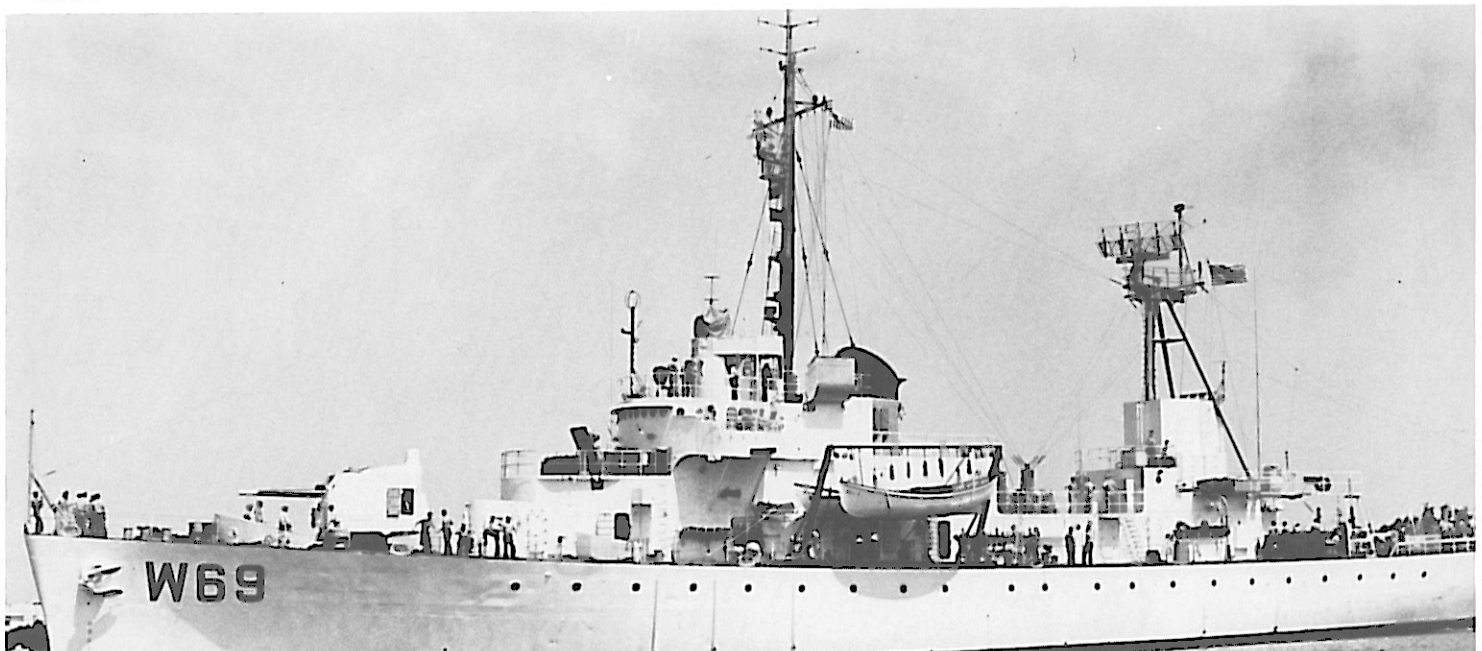
The YARD, in January 1945 employed 3,100 civilian workers, and the military complement increased accordingly. Ships of many allied nations were repaired, including submarines and surface vessels. In as much as the need for small boats never ceases, small boat construction activities were not neglected.



The CGC MANITOU, built in 1942, is pictured above.
The 255-foot United States Cutter PONTCHARTRAIN is pictured below.



The famous CGC MENDOTA, launched in 1944, is seen below.





**UNITED STATES COAST GUARD
TRAINING STATION
CURTIS BAY, MARYLAND**

Coast Guard Training Station

Across the Cove, which was cluttered with vessels of all types, a huge Training Station sprang up virtually overnight. Not only were men being trained at the station, but a special program was set up to train horses and dogs for war-time duties. Many World War II employees may recall the dogs barking as they arrived for work in the early morning hours.

“Cutters”

During the war years, prime athletes were made part of the station crew as well as at many other Coast Guard installations. The YARD baseball team took on and defeated all comers, including the New York Giants, Philadelphia Athletics and other big league teams. Records indicate that organized YARD baseball goes back as far as 1908. The YARD also had football and basketball teams that played in league competition against teams from the Baltimore Metropolitan area. But the name of the game was ice hockey, and the name of the team was United States Coast Guard “CUTTERS.”

Thousands of loyal Baltimore hockey followers – older ones that is – will never forget names like LCDR C. R. MacLean, Hub Nelson, John Maricucci, Seymour Hunter, Joe Kucler, Frankie “Johnny Zero” Brimsek, just to mention a few. Most fans would agree the CUTTERS comprised the finest all around team ever to represent Baltimore ice hockey circles. The CUTTERS home ice was Carlin’s Iceland Arena in Baltimore.

At this time, Baltimore had a minor league team, the Orioles, which was so weakened by the draft that it had to drop its franchise. The Coast Guard had enlisted many young hockey players and was invited to take over the Orioles franchise in the Eastern Amateur Hockey League. LCDR Clifford R. MacLean, Personnel Officer at the YARD, became the playing manager of the team, and Mel Harwood, formerly of the Baltimore Orioles hockey team, became the coach.

In the 1942-43 season, the team played a 50 game schedule, playing home games during the week, then traveling by train on the weekends to play teams like Boston Olympics, the New York Rovers, and the Philadelphia Falcons. During the week, the men worked their regular shift at the YARD. The team paid for its

Coast Guardsmen receive their instructions at the YARD’s Training Center during the Second World War (below).





New York Mayor Jimmy Walker (right) presents the 1943-44 U.S. Amateur Title to LCDR MacLean (left) and the YARD's ice hockey team, the famous "CUTTERS" (above).

own travel expenses out of home game receipts, and in the 1942-43 season, took in \$24,000. They turned over the excess money to the YARD's athletic fund for football and baseball equipment. When they had the finances, the 30 piece Coast Guard Band went with them on the road.

In the 1943-44 season, the CUTTERS won the U.S. Amateur Title. The trophy was presented to LCDR MacLean and the team in Madison Square Garden by Mayor Jimmy Walker of New York.

Post-War Reduction-In-Force

During the period from 1945 thru 1950, reduction-in-force (RIF) was the name of the game. The YARD reduced its wartime civilian employment level of 3,100 to a peacetime level of 1,200 civilians. This situation was complicated by the return of hundreds of WW II veterans who had left the YARD to enter the armed

forces. These men and women were entitled to re-employment rights, and the YARD was obligated to give them a job. Very little new construction was done during that time. Vessel overhaul and repair work, plus buoy construction and miscellaneous manufacturing, constituted most of the YARD's work load. This type of work continued to 1950, when the Korean War broke out.

The Early Fifties

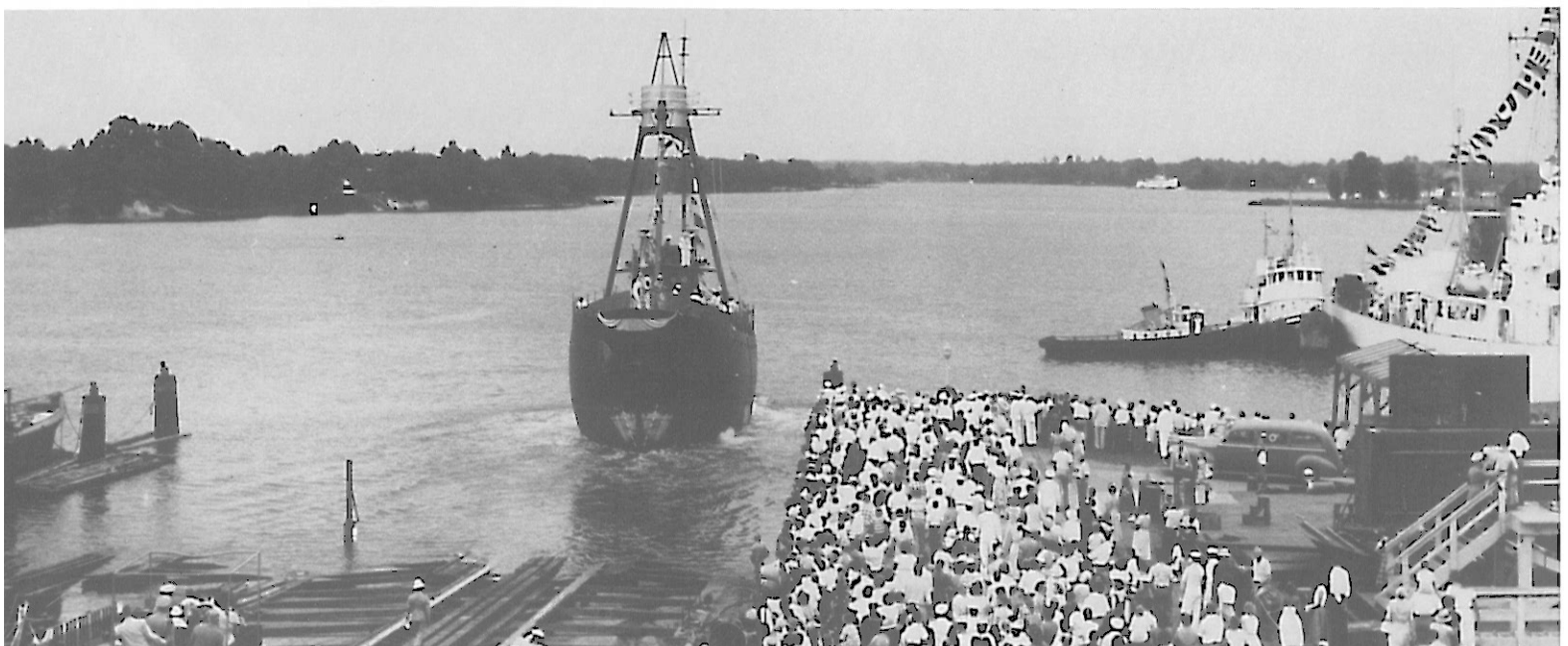
By 1950, the abilities and capabilities of the YARD were well known. YARD employees may recall what was known as the "tunnel of love," a quonset hut which was purposely built over railroad tracks and extended from Bldg. No. 8 to Pier 3. Inside this tunnel, workmen constructed the metal 40-foot life-saving patrol boats on a production-line basis. The YARD built approximately 300 of these boats, and at one time could turn out one "40-footer" craft per day. This wasn't the only



Boat Shop workers in 1952 remove a 10'6" fiberglass hulled dinghy from the mold (top photo).

In the early 1950's, the YARD constructed the 52' wooden buoy boats (center photo).

YARD personnel launched the Lightship AMBROSE in 1952 (bottom photo).



construction being done at this time. On August 4, 1950, the U.S.C.G. Lightship SAN FRANCISCO was launched, and exactly two years later, on August 4, 1952, her sister ship, the Lightship AMBROSE, was launched. In 1953, the AMBROSE returned to the YARD for minor alterations and for the installation of a new mast and beacon light. The tripod mast was the first to be installed on any Coast Guard Lightship. The new light was of English design and manufacture. It could develop 5.5 million candlepower using only six 1000 watt bulbs. The AMBROSE was the subject of magazine and newspaper stories, and also was featured on national television programs.

The early fifties saw the construction of 36 foot 8 inch motor life boats, 30 foot rescue boats, 40 foot buoy boats, 52 foot buoy boats, 25 foot 10 inch self bailing surfboats, 10 foot plastic dinghies. The plastic boat construction marked another advancement for the YARD in the manufacturing of small crafts.

The 95-Foot Patrol Boat Program

At 10 a.m. on February 26, 1953, the first of the 95-foot steel patrol boats was launched at the YARD. The rest were scheduled for launching at the rate of one each week. These boats were being constructed on a production-line basis with the last one scheduled to hit the water by the end of the fiscal year, barring unforeseen delays. It was on the Coast Guard's One Hundred and Sixty-Third anniversary date, August 4, 1953, that the last of the sixteen 95-footers was launched. Her christened name, the ELECTRA, was constructed of a steel hull and aluminum superstructure. YARD personnel were optimistic that once the 95-footers had the opportunity to demonstrate their ability, additional ones would be manufactured.

YARD prediction came true. In the next seven years, the YARD constructed forty-two additional 95-footers for the Coast Guard and the U.S. Navy; however, not without modification. On January 3, 1955, the YARD launched its first two Class "B" 95-footers being built under the current program. Six weeks later, on February 14, 1955, the YARD launched two more 95-footers. The last series of 95-footers to be built at the YARD were modified again. The final 95-footer Class "C" was launched in 1962.

A Shift Toward Steel Boat Construction

After the Korean conflict, the YARD reduced its work force to 1,100 civilian workers. The YARD work load for fiscal year 1954 was reduced to approximately \$9,500,000. This meant that for the next twelve months, fewer ships would be sent to the YARD for repair, fewer boats would be built, and less manufacturing and special projects would be undertaken. Also, at this time, the Training Stations were disbanded. Vessels were laid up; some would remain in storage at the YARD. Even as the YARD saw and felt its force slowly dwindling, it continued to uphold its established reputation.

The overhaul of aging ships is an ever-increasing challenge to engineering. How to repair the ship on the money allocated and also bring her up to Coast Guard standards of seaworthiness and efficiency are constant challenges.

The 125-foot Patrol Crafts (WPC) were nearly thirty-six years old at this time, and many of them which came to the YARD were in deplorable condition. The YARD succeeded in restoring them, as well as, the twenty-nine year old 165-footers to a sound seaworthy condition once again.

The next several years saw the YARD shift further toward steel utility boat construction. Also, the YARD, during this time, was very active in miscellaneous manufacturing, ship repair and new vessel construction. This included the 95-footer program, navigational buoys construction and repair, and many special projects. Some of the vessels that visited the YARD for repair or modification were the Cutters RELIEF, PANDORA, ANDROSCOGGIN, GENTIA, and the CASTLE ROCK.

In the late 50's and early 60's, the YARD took on a unique project. Workers built a great number of the sled mounted wanigans, pre-fabricated buildings that were initially put in the Arctic back when the first major U.S. efforts were made on this relatively unknown continent. In addition, many of the T-5 pre-fabricated buildings at Camp Century, Byrd Station and McMurdo Sound Station in the Antarctic were constructed at the Coast Guard YARD. Of note is that the YARD also built many of the buildings that were sent to Greenland for the Army and this included the installation of a nuclear generator. Interesting work for a shipyard, especially for the Coast Guard's shipyard!



One of the YARD's longest building programs, the construction of the 95' steel patrol boats, began in the middle 1950's (top photo).

YARD built wanigans are transported to their destination sites in the Arctic (center photo).

The YARD launched the CGC AZALEA, a 100-foot buoy tender, in 1958 (bottom photo).



On October 3, 1956, the cutters CHILULA and the AVOYEL were commissioned at the YARD. These two decommissioned Navy vessels were completely revamped by YARD personnel, and within 90 days of their arrival at the YARD were ready to serve as vessels of the Coast Guard Fleet.

On March 4, 1958, the Coast Guard Cutter AZALEA was launched at the YARD. This 100-foot buoy tender was equipped with a pile driver and a 5 ton capacity steel boom which worked from an aluminum alloy mast. The cutter AZALEA was air conditioned for living comfort and her machinery cooled through the hull by a skin system using treated water. On May 23rd, the AZALEA was formally placed in commission, assigned to replace the forty-two year old PALMETTO, and would be homeported in Charleston, South Carolina.

In April 1958, the YARD completed the assembly of a new light beacon for Oak Island Light Station. This beacon was considered to be the most powerful in United States history. The upper lights were rated at 14,000,000 candle power.

In July, 1958, YARD management announced that the work load would increase over the next several years. The YARD's volume of business in fiscal year 1958 would be in excess of 12 million dollars. The scheduling of work for the YARD is developed jointly by Coast Guard Headquarters and the YARD. Some of the work projects for fiscal year 1958 were: (1) overhaul nine Navy YP Boats (2) forty-eight ship overhauls (3) construct thirteen steel 40-foot UT Boats (4) construct 30-foot wood UT Boats (5) construct 100-foot buoy tender (6) construct eight 95-foot Patrol Boats and (7) miscellaneous construction.

The USCGC DEXTER was commissioned at the YARD on June 30, 1958. Approximately one year later at appropriate ceremonies, the CGC COMANCHE was commissioned. Both of these cutters were completely refurbished at the YARD. The USCGC DEXTER was the former USS BISCAYNE, which was decommissioned following World War II. She was recommissioned as the CGC DEXTER in 1946 and served as a North Atlantic Weather Patrol vessel until 1953, when she was again decommissioned. The CGC COMANCHE was formerly the USS WANPANOAG of the Navy's reserve fleet.



The YARD's 82' patrol boats served with distinction during the Vietnam War (above).

The 82-Foot Patrol Boat Program

The first of seventeen vessels built at the YARD under the 82-foot program was launched on February 24, 1960. This program marked the YARD's first use of the inverted erection method on assemblies with the hull being constructed in an inverted position. These two sections were then joined together in an upright position at the launching site. The method used for launching the 82-footer was unique. It consisted of lifting the vessel with a derrick barge and placing it in the water instead of the normal shipways launching procedure for a vessel of this size.

Of special interest is the fact that during the Vietnam War, twenty-six of the YARD built 82-footers were quickly and heavily armed and shipped to Southeast Asia to form "Coast Guard Squadron One." They served with distinction throughout that conflict.

YARD Acquires New Tenants

In the fall of 1960, the YARD welcomed Coast Guard Group Baltimore and, under its control, small boat station, Group Station (now known as Curtis Bay Station). The primary duty of the Group then and today is search and rescue, law enforcement, and ice-breaking missions in the upper Chesapeake Bay, from the C&D Canal to Smith Point, including the Potomac River.

(Today, Group Baltimore also controls five other small boat stations: Stillpond, Md., Annapolis, Md., Taylor's Island, Md., St. Inigoes, Md., and Dahlgren, Va. In addition, the Group maintains two actively manned light stations at Thomas Point, Md., and Cove Point, Md.)

Another tenant unit at the YARD in the 1960's was the Field Testing and Development Center, established at Curtis Bay in 1947. This unit changed its name to Research and Development Center after moving to Groton, Connecticut from the YARD in July of 1972 after 25 years as a tenant. Its function is exactly what the name implies – it is the Coast Guard's consumer research laboratory. The Research and Development Center will test anything from a ball of sail twine to a 95-footer, and then let the "consumer" know if it is what they wanted.

The 1960's

In the sixties, the YARD continued to prosper through innovation and employee dedication.

Many of the YARD employees who started working at the YARD shortly after World War I were retiring. These men dedicated four decades of faithful service to the success of the YARD operations. During these ten or more years, the YARD underwent an extensive modernization of facilities and equipment programs. Most of the major Coast Guard ships on the East and Gulf Coasts were on availability here during this era. A schedule was put into effect which would bring ocean station vessels to the YARD once every two years. Usually only thirty days were allotted for all repair work, and anywhere from \$120,000 to \$150,000 were allotted for overhauls.

In the new construction side of the business, the YARD was assigned to build 210-foot medium endurance cutters, construct the 80-foot and 157-foot buoy tenders, and continue to build the 82-footers. The small boat construction continued to flourish with the building of steel 44-footers and 41-footers and many small plastic crafts ranging from 10-foot to 40-foot in size.

On April 14, 1962, the YARD completed construction on the prototype 44-foot steel motor lifeboat (MLB). During the next ten years, the YARD built 110 of these self-righting boats for the Coast Guard fleet. The 44-footers replaced the old wooden 36-foot MLB's which were built by the YARD in the early forties.

In the summer of 1963, the keel was laid for a new 157 foot buoy tender. In April of 1964, the CGC RED WOOD was launched, followed by the RED BEECH and the RED BIRCH. The RED CEDAR and the RED OAK, the fifth and final of its class to be built at the YARD, was commissioned in December of 1971.

The YARD strives to improve its facilities when funds are available. The sixties saw many new buildings started and/or completed, and many YARD facilities renovated. The YARD is unique in some aspects because it's an industrial shipyard besides a living quarters for the military. Because of the increase of repair work done at the YARD, more military were temporarily stationed here. Even though most of these men were quartered on board ships, improved messing and recreational facilities were desperately needed.

The First 210-Foot WMEC Is Launched

In May of 1965, the YARD sent its first 210 foot medium endurance cutter down the ways. The USCGC CONFIDENCE, built at the YARD, was launched. She was powered by two 1000 horse power gas turbines and two 1500 horse power diesel engines commissioned for service in January, 1966.

The Coast Guard YARD built five 210 foot medium endurance cutters in all – the CONFIDENCE, the RESOLUTE, the DURABLE, the DECISIVE and the ALERT.

Vietnam Era

The YARD never let down; it continued to play its part in maintaining the readiness of the Coast Guard fleet during the Vietnam era. New construction flourished during this period with the YARD building new cutters and small patrol boats.

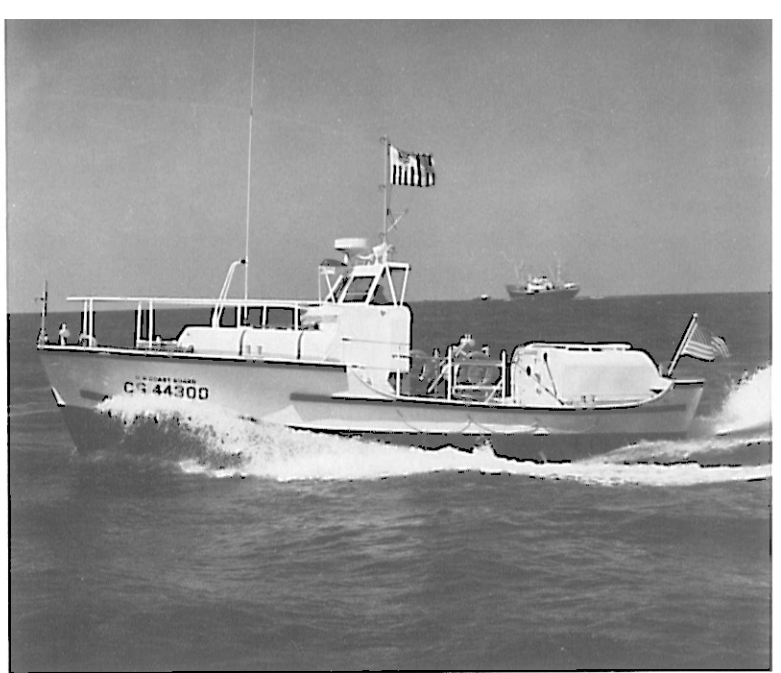
On April 28, 1967, another historical event took place at the YARD. The USCGC WESTWIND and her sister ship, the SOUTHWIND, made the YARD their home base when they returned from cruises in the Arctic and Antarctic.

In March, 1968, construction started on the 80-foot buoy tender TERN. The 80-footer was the first of this type vessel to be built by the YARD. It was designed to operate on rivers, using a stern loading gantry crane to handle buoys. The ship had a hydraulic bow thruster

The 44-foot self-righting steel motor lifeboat is pictured to the right.

The CGC DURABLE, a 210' WMEC, is launched down the YARD's shipways in 1967, as hundreds of guests look on (bottom left).

The CGC RED WOOD, pictured at bottom right, was the first YARD built 157' buoy tender.



and twin right angle drive diesel propulsion engines. The Cutter TERN was the first of the new class of inland buoy tenders to be launched. It was christened on February 7, 1969.

At the same time period, the Coast Guard invented a new weapon that was used by the U.S. Navy in Vietnam. It was called the "Piggyback." It consisted of a 81 mm mortar on the bottom and a 50 caliber machine gun on top. Besides its normal use, the machine gun with tracers could be used to accurately aim the mortar. They were utilized on small craft in Operation Markettime projects during the Vietnam war and were very successful.

During Fiscal year 1968 and 1969, the YARD constructed nine 46-foot stern loading buoy boats. Today, the craft are successfully operating in the New England waterways, the lower Chesapeake Bay, the Great Lakes, and the Mississippi tributaries.

Another large vessel began construction on July 1, 1969, the USCGC RED CEDAR. This 157-foot class cutter was the fourth similar to the others built at the YARD, except this vessel contained a complete sewage treatment plant. The RED CEDAR was launched at the YARD on August 1, 1970.

Birth of a New Decade: The Nineteen Seventies

The nineteen seventies brought with it many innovations in YARD organizational development besides an extensive modernization of facilities program. New construction continued its upward swing with the YARD being assigned to build more ships, increase its orders of small plastic crafts, and several more special miscellaneous projects. Repair work was a constant challenge for YARD personnel. YARD availabilities were scheduled in advance. When an unforeseen repair or replacement became necessary, YARD employees were called upon to perform the extra work.

Some of the noticeable facility changes in that time period were: the enlarging and enclosure of the Structural Shop, Bldg. No. 78; installation of a new electrical system throughout the YARD; a new Paint Shop Office, shower and locker room, Bldg. No. 32; construction of the Central Toolroom, Bldg. No. 77;

illumination increase with the installation of 368 new high output fluorescent lights; a new building constructed on the west side of Bldg. No. 78 to house the structural office staffs; the relocation of Graphic Arts, the Photography Lab, Reproduction, and the Public Works Department to the second floor of Bldg. No. 4; construction of the Electro Shop Bldgs. No. 40 and 40A which would house the Ordnance, Electrical and Electronics Sections; construction of a new BOQ and Dispensary Buildings; renovation of part of the second floor of Bldg. No. 8 to house a new cafeteria, and renovation of Bldg. No. 9 to house the YARD Bowling Recreation Lanes.

The 1970's began with major machinery modernization of the icebreaker CGC WESTWIND, now home based at the YARD. In 1971, the YARD began a multi-million dollar machinery modernization project and hull strengthening project. Extensive hull modifications were made to improve its icebreaking performance and extend its service life.

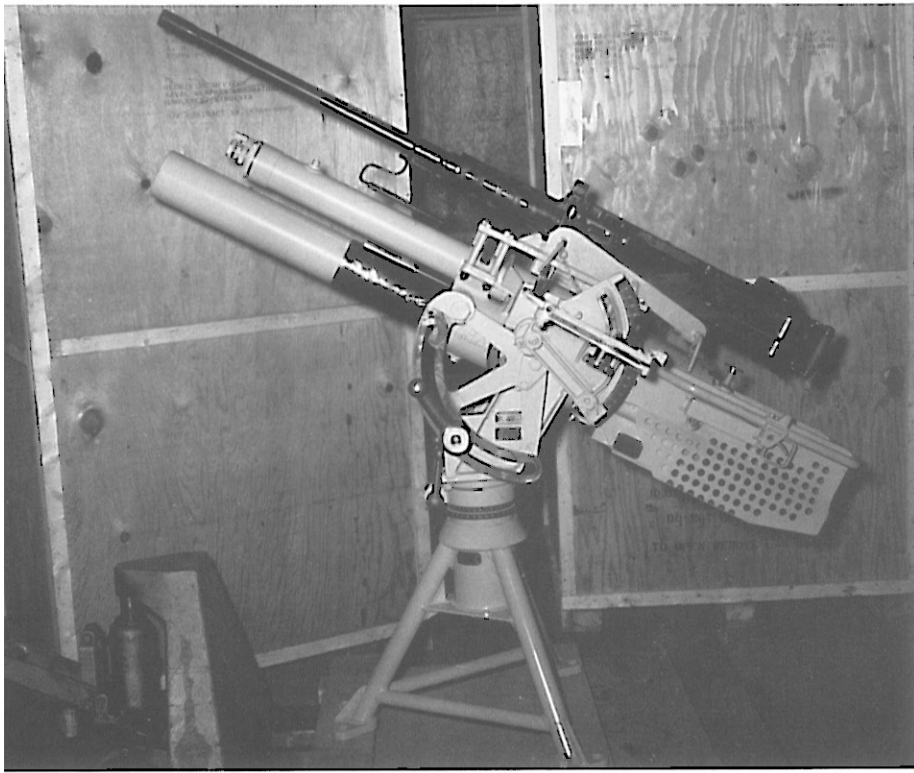
The YARD accomplished an impressive list of projects during the fiscal year '71 which are worth mentioning at this time: (a) over one weekend, a bow thruster repair on the CGC GALLATIN (b) reblading of the CGC CAMPBELL's main turbine engine in record time (c) first disassembly of the largest controllable pitch propeller in record time (d) reduction gear repair on the CGC ABSECON (e) fire damage repairs and main gas turbine reinstallation on the CGC SHERMAN (f) controllable pitch propeller repairs on the VIGILANT (g) propeller damage repair on the UNIMAK (h) a record breaking number of repair availabilities (i) a considerable number of repair projects for the U.S. Navy (j) completion and delivery of the RED CEDAR (k) launching of the RED OAK (l) delivery of 24 motor cargo boats (m) delivery of 26 motor self bailing surfboats (n) delivery of the aluminum prototype 42-foot utility boat.

A Flurry of Activity

In 1971, the YARD completed construction of a prototype boat designed by engineers at Coast Guard Headquarters in Washington, D.C. This prototype was destined to replace an aging fleet of Coast Guard forty foot steel hull utility boats. The new 41-foot boat had an



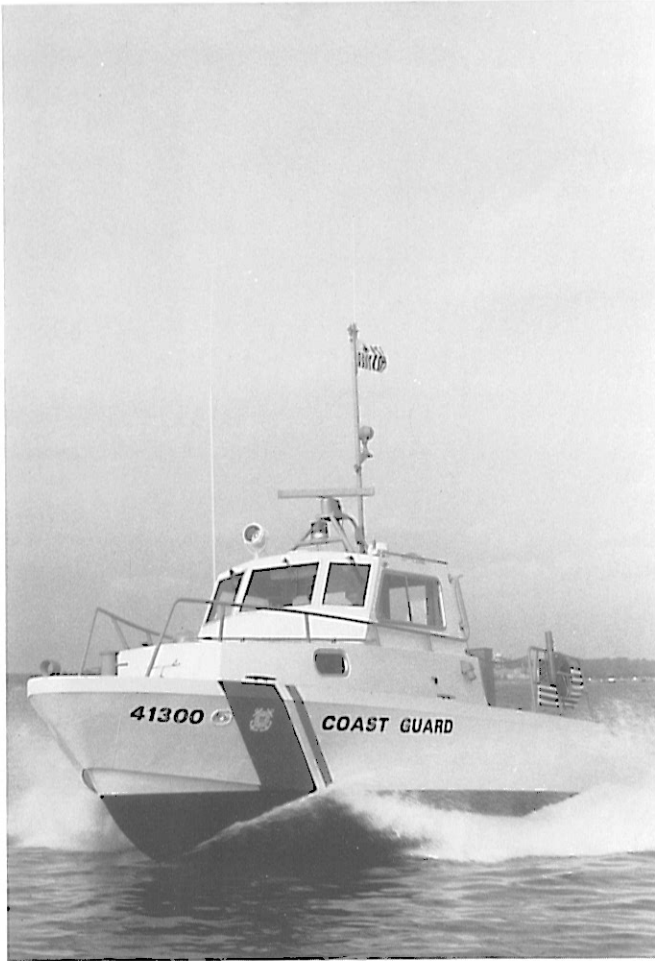
The CGC TERN, an 80-foot buoy tender (top), was launched at the YARD in 1969.



The YARD continued to design and manufacture pieces of ordnance equipment during the late sixties. The "piggyback," a gun successfully used in Vietnam, is pictured in the center left photograph.



One of the newly constructed 46' stern loading buoy boats takes a trial run in the Baltimore harbor (bottom).



The aluminum hull 41' patrol boat pictured above is one of the Coast Guard's most recognizable crafts to today's television viewers and movie goers. Remember, when you see one on "Magnum P.I.," it was made at the Coast Guard YARD!

aluminum hull and fiberglass superstructure. After a formal, six month operational testing period in competition with three commercially designed and built boats, the YARD built boat was adopted. The construction of the 41-foot class began with the first boat delivered in 1973. Coast Guard YARD personnel constructed thirty such vessels a year, from 1973 through 1979. In 1980, and 1981, fifteen boats were delivered each year. When the program ended in 1982, the YARD completed its 207th 41-foot UTB.

The 41-foot UTB, a trim white boat with the famous Coast Guard stripe on her hull, is well known to recreational and commercial boaters throughout the United States. The 41-footer is used primarily for search and rescue and has proven her merit many times under hazardous conditions.

In 1974, the YARD laid the keel for a 160-foot single unit construction tender, the CGC PAMLICO. The tender featured an enlarged work area and an all new hydraulic marine crane, insuring maximum usefulness of the vessel in assigned operations.

Throughout the late 1970's, the YARD constructed three more 160-foot construction tenders: CGC HUDSON, CGC KENNEBEC, and CGC SAGINAW. The vessels were designed to fulfill the primary requirements for construction, maintenance, repair and alterations of fixed structures in expanding marine areas. The ships were built to replace the 100-foot WLI's and replace or supplement the 75-foot WLIC pusher barge combinations.

An important segment of the YARD's history would be omitted if the construction of various sizes of small boats at the YARD during the 1960's and 1970's was not mentioned. The YARD was a leader in the fiberglass and aluminum small boat construction industry during that time period. Today, this industry is using many of the construction principles developed at the YARD.

During the 1960's, two hundred and six 25-foot 8-inch motor surfboats were constructed; forty-one 25-foot 8-inch motor cargo boats were built, and four 17-foot fiberglass motor launches were made. In the late 60's and throughout the 70's, twenty-two 31-foot port security boats were produced.

One more small boat project to mention is the construction of 28 fast delivery sleds between 1977 and 1981. Such a vessel is used in oil spill clean-up operations and can be brought to a spill site by fast deployment aircraft.

The YARD has proven over the years that a combination of versatility in engineering principles and expert, innovative craftsmanship can create successful experimental maritime projects. One such technical achievement in 1972 was the construction of a prototype Stable Semi-Submerged Platform (SSP), the SSP KAIMALINO. The ship used the SWATH concept—a small waterplane area twin hull. It can perform many functions requiring speed, maneuverability, and stability better than any conventional ship.

Unlike a conventional ship, the only portions of the ship below the water line are the steel pontoons and half of the struts connecting the pontoons to the aluminum hull. The flat bottom of the craft rides high and dry above the water. The SSP KAIMALINO now successfully operates in the 14th Coast Guard District, the Hawaiian Islands.

Commanding Officers of



CAPT Russell Glover
USRCS
1899 – 1903



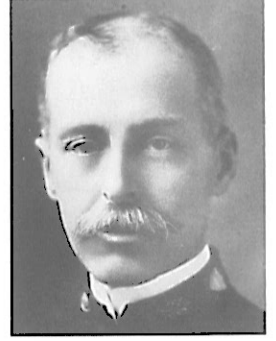
CAPT John Moore
USRCS
June, 1903 – May, 1905



CAPT Daniel Foley
USRCS
May, 1905 – May, 1908



CAPT James Brown
USRCS
May, 1908 – July, 1911



CAPT James Moore
USRCS (USCG)
July, 1911 – November, 1919



CAPT Leroy Reinburg
USCG
July, 1937 – January, 1946



COMO William Keester
USCG
Jan., 1946 – Sept., 1949



CAPT Milton Daniels
USCG
Sept., 1949 – Feb., 1951



CAPT Charles Dean
USCG
April, 1951 – March, 1953



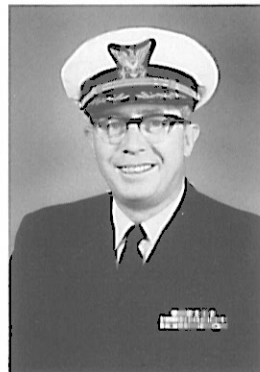
CAPT Charles Thomas
USCG
July, 1953 – January, 1955



RADM Ellis Perry
USCG
June, 1969 – June, 1970



CAPT Loy Renshaw
USCG
June, 1970 – June, 1972



CAPT Richard Goode
USCG
June, 1972 – June, 1974



CAPT Robert Duin
USCG
June, 1974 – May, 1975



CAPT Robert Sims
USCG
May, 1975 – July, 1975



CAPT Hugh Thomas
USCG
August, 1985 - July, 1989



CAPT Robert Yuhás
USCG
July, 1989 - June, 1993

the Coast Guard YARD



CAPT Bernard Camden
USCG
November, 1919 – April, 1923



CAPT Aaron Gamble
USCG
April, 1923 – April, 1926



CAPT Randolph Ridgely, Jr.
USCG
May, 1926 – October, 1929



CAPT James Hottell
USCG
January, 1930 – June, 1934



CAPT Henry Fisher
USCG
June, 1934 – July, 1937



CAPT George Hicks
USCG
April, 1955 – July, 1956



CAPT Vernon Day
USCG
July, 1956 – June, 1962



CAPT Charles Columbus
USCG
July, 1962 – June, 1965



CAPT Arthur Engel
USCG
July, 1965 – June, 1967



CAPT Charles Scharfenstein, Jr.
USCG
June, 1967 – June, 1969



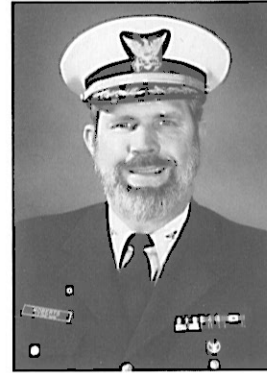
CAPT Benedict Stabile
USCG
July, 1975 – June, 1977



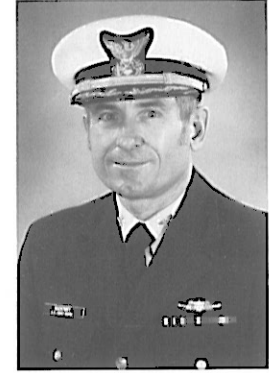
CAPT John Lobkovich
USCG
June, 1977 – June, 1980



RADM Robert Lucas
USCG
June, 1980 – May, 1981



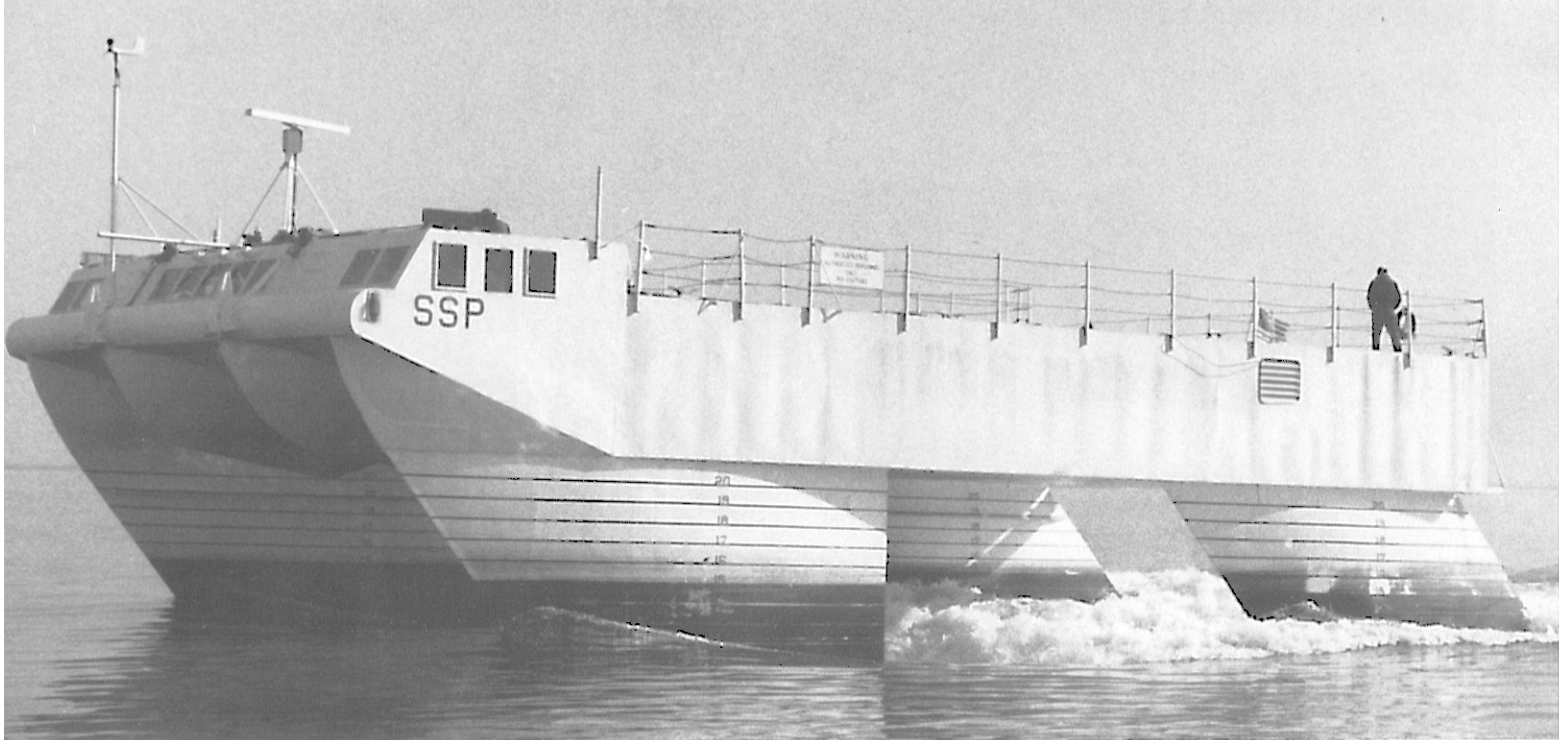
CAPT Barry Roberts
USCG
May, 1981 – November, 1983



CAPT Donald Nachtwey
USCG
November, 1983 - August, 1985



CAPT Ronald Marafiotti
USCG
June, 1993 -



A project in the field of experimental design and construction, the YARD built SSP KAIMALINO still successfully operates in the tropical waters of Hawaii (top).

The CGC PAMLICO, a 160' construction tender, was the first vessel of its class to be built at the YARD (center left).

The YARD built over two hundred 25'8" motor surfboats from the early 1960's to 1983 when the program ended (bottom).

In the late 70's, the YARD outfitted six 210-foot WMECs and three 378-foot WHECs with a modern sewage disposal system. Workers converted the existing salt water supply system to a modern, fresh water supply system and changed the gravity flush equipment to a vacuum flush system. The cost of the conversion was estimated at \$240,000 per ship.

From 1973 through 1980, the YARD completed major renovations of the B and C class 180-foot buoy tenders. Beginning with the CGC SLEDGE and ending with the CGC WOODRUSH, 14 vessels underwent extensive renovation. YARD personnel installed air conditioning systems, overhauled main engines and propulsion systems, completed installations of new electronics systems, and improved berthing and living areas. The cost of each renovation was \$5 million.

From 1979 to 1983, the YARD also constructed nineteen 25-foot 8-inch motor surfboats, small fiberglass vessels used as lifeboats and boarding party boats on medium and high endurance cutters.

Another mission at the YARD results from the fact that it has waterfront space to store decommissioned Coast Guard vessels until Coast Guard Headquarters initiates action to sell or scrap them. In the middle

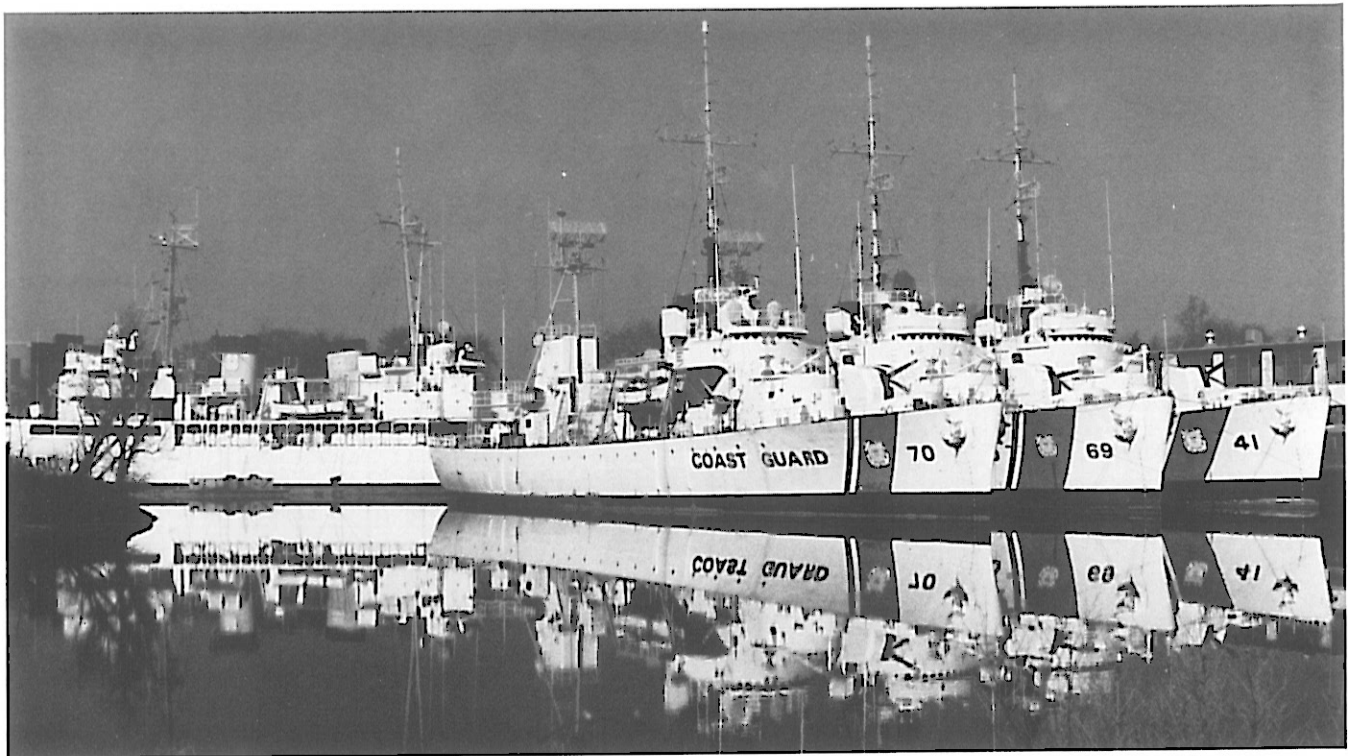
1970's, the YARD had a mothball fleet of three 255-foot high endurance cutters. In 1982, the last "mothball," the 327-foot cutter SPENCER, was sold for \$29,000.

YARD Becomes Home for the SICP

The Commandant established the Ships' Inventory Control Point in 1974 to bring together engineering and supply expertise which jointly strives for effective ships' support in the shortest possible time. Through the years, the SICP achieved this goal, and enhanced the YARD motto, "Service to the Fleet."

The SICP began operation at the YARD with a staff of 58 people. It opened under the supervision of CDR Jack Leatherwood. Its operating budget was \$738,000.

The SICP employed 129 people. Many were equipment specialists and were in the fields of supply cataloging and inventory management. The operating budget for the SICP was \$11,316,000.



The CGC SPENCER, (left background), and (left to right), the CGC PONTCHARTRAIN, the CGC MENDOTA, and the CGC CHAUTAUQUA are pictured in the mothball fleet above.

95-foot Patrol Boats Undergo Renovation

In 1977, the Coast Guard YARD initiated a program to renovate an expected twenty-six 95-foot patrol boats. Most were in need of repair and modernization. When the program ended in 1983, sixteen had come to the YARD for an average 36 week availability.

As previously mentioned, Coast Guard YARD personnel built all three classes of 95-foot patrol boats in the middle 1950's. Over 50 of the steel hull, aluminum superstructure vessels were constructed. Throughout the years, they have been used extensively at home and abroad. Many patrolled the waters of Vietnam two decades ago. Today, the boats scan North American waterways for search and rescue and law enforcement cases.

YARD workers devoted approximately 50,000 man-hours to each boat's renovation. The average cost for labor and materials was \$2.5 million. Among other items, the job order for each vessel called for an inside and outside hull survey, shell and bulkhead repair, an automatic pilot system, rehabilitation of the berthing area, installation of a new electronics package, and new engine room and noise reduction equipment. All asbestos was removed from the vessels and appropriate asbestos free insulation material was installed.

The YARD Enters the Eighties

The new decade began with a major reduction in force in 1981. Such action was mandated by the present Administration's efforts to control the federal budget. Dictated to reduce the civilian employee ceiling of the YARD to 800 positions, meaning a loss of 367 positions, the YARD completed its RIF by the end of the fiscal year.

In the experimental boat construction area, an operational, prototype vessel used to clean up oil spills on our nation's waterways was built by the YARD in 1982. The ZRV, Zero Relative Velocity Skimmer, today represents the best available technology in the Coast Guard's field of fast current pollution control research. The unique feature of the 46-foot skimming vessel is its aluminum catamaran hull embraced with two, large rotating belts positioned between the hulls. The belts, made of oil absorbing material, rotate in an endless loop much like the tracks on a bulldozer. They

act like sponges soaking up oil as contact is made. The belts are then squeezed as they pass through an on-board wringer. Collected fluid is transferred to storage tanks. The vessel was turned over to the Captain of the Port, Philadelphia, for operational use.

YARD Receives Unit Commendation Medal

In 1981, the Coast Guard YARD completed, within a 2-3 month time limit specified by Headquarters, a major renovation of two former Navy ocean-going tugboats, the UTE and LIPAN.

The 205-foot vessels, active in Naval operations during World War II, were towed from San Francisco to Baltimore in December, 1980. The ships had been temporarily moored at the Coast Guard Base in San Francisco.

The Navy transferred the ships to serve as an addition to the Coast Guard Fleet in the Caribbean. The Coast Guard had experienced a shortage of vessels because of acceleration of search and rescue activities in the Cuban boatlift and increased drug interdiction efforts in the early 1980's. The two ships are now homeported in the Coast Guard's Seventh District, Key West, Florida.

From December 1980 to March 1981, YARD personnel provided a total of 65,141 man-hours in preparing the UTE and LIPAN for Coast Guard service. Work on the ships included major repairs to the heating, fresh water, refrigeration, sanitary and drainage systems; inspection of all machinery; installation of naval engineering and electronic equipment packages; underwater structural repairs; blasting and painting of all machinery on deck as well as the exteriors of the ships; repair of decking in disturbed areas; the overhaul of ordnance and safety equipment, and the design and installation of a small boat cradle and new berthing areas.

As a result of this effort, coupled with an already heavy work load, the YARD for the first time in its history, received the Coast Guard Unit Commendation Medal. Admiral John B. Hayes, then Commandant of the Coast Guard, visited the YARD to present the medal.

The honor was bestowed on the YARD's military and civilian employees for "exceptional meritorious



The design and construction of the ZRV (above) experimented with the current technology in the Coast Guard's field of fast current pollution control research.

From a mothball fleet on the west coast, to the Coast Guard's east coast shipyard, the CGC UTE (below), a 205' medium endurance cutter, along with the CGC LIPAN, underwent extensive renovation at the YARD in the early 1980's.



service from July, 1980 through March, 1981 in support of the Coast Guard Fleet's readiness and modernization."

In presenting the medal, the Commandant said: "Epitomizing the motto 'Service to the Fleet', YARD personnel distinguished themselves by successfully accomplishing the repair of two icebreakers, five high endurance cutters, three medium endurance cutters, six buoy tenders, and one harbor tug. In continued support of law enforcement and search and rescue missions, YARD personnel constructed the new 41-foot utility boats and numerous motor surfboats to be used by major cutters, and in support of the aids to navigation program, by continued construction of the majority of buoys used to mark navigable waters of the United States."

"YARD personnel enhanced the capabilities and reliability of many cutters through major renovations such as the 95-foot patrol boat and 180-foot buoy tender projects. Their multi-phased and uniquely professional renovation of training ship EAGLE resulted in a safer, more dependable training platform. Additionally, personnel of the YARD carried out the administrative and logistical tasks of berthing, messing and transporting ships' crews during related availabilities."

"With rapid response, and faced with an abbreviated planning cycle, YARD personnel accomplished the reactivation of former Navy ships UTE and LIPAN. This work, which included outfitting and provisioning, was accomplished during a period of peak work load and reduced staffing levels. Despite the added work load, YARD personnel prepared the designs, drawings, specifications, and contracts for numerous projects and completed their associated equipment staging and stocking."

"The devotion to duty and outstanding performance of personnel of the YARD reflect great credit upon themselves, their unit and the United States Coast Guard."

Ships' Repair Availability

Ship repair availability was a major industrial assignment at the Coast Guard YARD in the early to mid 1980's. Several east coast Coast Guard vessels came into the YARD every two years for everything from minor to major repairs. Work took from a few weeks up

to a few months. Each calendar year, the YARD accomplished approximately 18 repair availabilities.

YARD Completes EAGLE's Renovation

For four years, 1979-1983, the Coast Guard Academy training barque EAGLE conducted its normal cadet training program during the summer and sailed to the YARD during the winter months. Here it underwent an extensive renovation and modernization program. The work done to the 47-year-old vessel was dubbed "mid-life."

Built in 1936 by Blohm Voss Shipyard in Hamburg, Germany, it was used to train German seamen for ten years as the Horst Wessel. The Coast Guard acquired Horst Wessel in 1946 as a war prize and renamed it EAGLE.

Throughout EAGLE's service in the Coast Guard, several arrangement and machinery modifications had been made. Most equipment was original retrofit machinery installed after acquisition from Germany. Structurally, no significant improvements had been done since its construction. After more than 40 years of sailing, deck plates were severely wasted, hull rivets weeped, and machinery was becoming obsolete.

To insure the safe training of Academy cadets, the Coast Guard decided to completely renovate EAGLE. The renovation was divided into three six-month repair phases to be completed in three consecutive years. Before starting the three phases, an emergency phase was completed in the winter of 1979-80. In addition to the major capital improvements, funding and repair for normal corrective and preventive maintenance continued. A synopsis of some of the major work accomplished during each phase is as follows:

Emergency Phase (1979-80):

Main weather deck replacement; overhaul foremasts; ballast area preservation; rivet repair; hull, bulkhead and deck repair.

Phase I (1980-81):

Install three transverse watertight bulkheads; replace forecastle deck; renew main deck; renew second deck; upgrade ventilation; upgrade electrical system; upgrade habitability; replace anchor windlass; renew refer box; ballast area preservation; overhaul main mast; replace watertight doors and hatches.



Phase II (1981-82):

Install three more transverse watertight bulkheads; replace poop deck; renew main deck; renew second deck; additional ventilation and electrical upgrade; install collision avoidance radar and Omega navigation receiver; replace charthouse; replace 25-foot motor surfboards; modify davits; overhaul mizzenmasts; replace auxiliary propulsion engine; replace support machinery; upgrade watertight fittings.

Phase III (1982-83):

Install teak decks; replace reefer machinery; replace sound powered phones; ballast area preservation; overhaul bowsprit; ventilation improvements; rewire mast and navigation lights.

More than 230,000 hours of work completely restored EAGLE to essentially new-ship conditions. The ship was divided into nine main watertight subdivisions making it a two-compartment ship. Its power and responsiveness were improved by installing a 1,000 horsepower Caterpillar D-3999 diesel engine and a Caterpillar 7271 transmission. It was completely rewired with a new power distribution system.

The ship's habitability was improved by providing modern furnishings for the crew. Safety was improved by overhauling all masts and riggings. The electronics equipment was upgraded, providing the ship with state-of-the-art equipment. This includes Tracor Omega, the latest version of the AN/SPS 64 radar with automatic radar plotting accessory and radio teletype equipment.

New air compressors and receivers, a new bilge pump, new Mark IV motor surf boats and new teak wood over all the decks were also added.

After \$9.1 million and four years of work, EAGLE is now a more reliable training platform for academy cadets. They will gain an appreciation of square-rigger sailing, yet still go to sea with all the conveniences of a modern cutter.

The YARD Upgrades Its Image

The early 80's saw the emergence of a new physical image for the YARD.

Newly renovated Bachelor Enlisted Quarters atop Fleet Hall opened for personnel in 1980.

The two top floors of Building 31 were formerly large, open berthing areas. Upon completion of the

renovation, there are now individual rooms capable of housing three to six persons. The improved habitability of the barracks include construction of recreation areas, TV lounges, private toilet facilities, and increased laundry rooms.

The BEQ is designed to house approximately 50 permanent personnel.

New Family and Guest Quarters for military personnel and their families in need of temporary housing opened the same year.

The Quarters consist of five basic units. Each unit contains a kitchenette with range, stove and refrigerator, combined dining and living room, and can be adapted to provide 1, 2, or 3 bedrooms based on need. All units are furnished with cooking and eating utensils and linens. They are individually air conditioned and heated. A separate, smaller unit serves as a laundry and storage room.

A new Security Building near the entrance of the YARD opened in 1982 and houses the YARD's Security Division. Since 1973, the Security staff had occupied temporary office space in a trailer. The new structure, offers needed privacy to conduct security related matters.

The YARD dedicated a multi-purpose activities building in January of 1983.

The building, Columbus Recreation Center, is named in honor of the late Captain Charles Columbus, former YARD Commanding Officer and member of the U.S. Coast Guard Academy's Athletic Hall of Fame.

It contains an AAU regulation basketball court, volleyball, handball and racquetball courts, lockers for both men and women, saunas, a weight room, showers and whirlpool. The building leads to a swimming pool and patio area and outside tennis courts. The Center is designed to provide recreational support for the military personnel stationed at the YARD and especially for crew members from visiting ships.

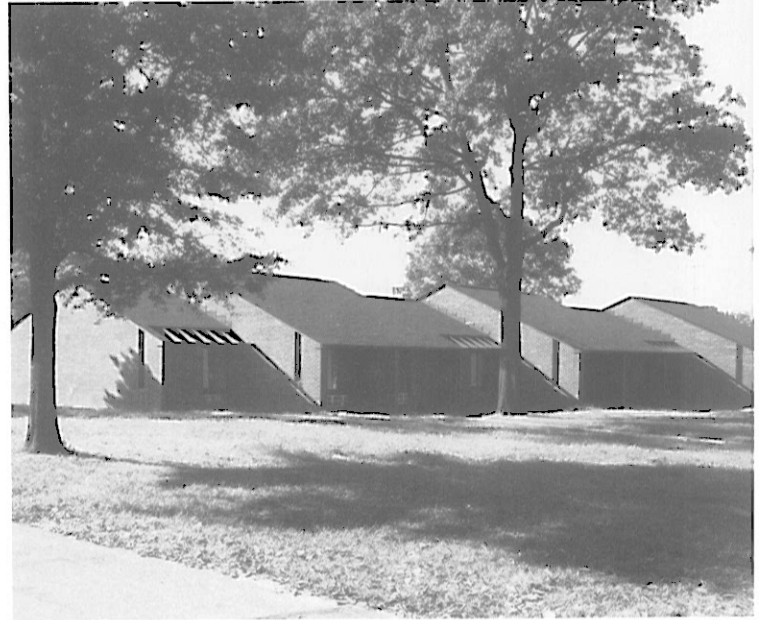
A Convenience Store began business in 1983 offering to Coast Guard personnel, items similar to what is found at the local mini-market. Customers can purchase bread, milk, eggs, snack items, ready-made sandwiches, canned goods and paper products, disposable diapers, personal hygiene and health care items, soda, beer, cigarettes, pet food, auto parts, and gasoline. The store is run by the YARD's Non-Appropriated Fund Activities.



Columbus Recreation Center



Convenience Store



Family Transient Quarters

Warehouse Complex



YARD Dedicates New Warehouse Complex

The YARD dedicated a new warehouse complex in 1984. It is one of the largest operating warehouse storage space facilities in the Coast Guard.

The project, which began in 1982, involved the renovation of two 1940 vintage warehouses and the construction of additional storage spaces. The work resulted in the enclosure and modernization of an area covering 50,000 square feet.

Of prime importance to the project was the centralization of materials distribution in the YARD. All shipping, receiving and warehousing functions were under one roof. In the past, because inside space was not available, many supply items were stored outside and in over 25 small buildings. Some were former boat sheds with dirt floors. The majority were so small and narrow, cubic storage was impossible. Now, under a common cover, the new warehouse complex offers the services of direct flow of goods from the receiving room, through the supply complex, to the customer.

The edifice was designed to accommodate bin, pallet, canteliver rack, and dehumidified storage. It is stocked with the most modern of warehousing equipment - two automated mini-trieves used for storage of small, fast moving items; a 23-ton overhead crane for handling large, bulky items; swing-mast and side-loading forklifts; hydraulic load lifters capable of transporting plate metals with a 20-ton capacity, and stretch wrap machines.

Today, the warehouse operates under the Coast Guard Supply Center Curtis Bay. It warehouses material for support of the Supply Center and the YARD.

Retrofits, Renovations and New Construction Top the Work List

270' Retrofit

The newly constructed Coast Guard Cutter BEAR, a 270' WMEC, arrived at the YARD in the early 80's to begin a change and upgrade retrofit. The project would eventually include 13 cutters of this class. YARD tradesmen performed retrofits on four "A" class 270's and nine "B" class vessels. These included: TAMPA,

HARRIET LANE, NORTHLAND, SPENCER, SENECA, ESCANABA, CAMPBELL, TAHOMA, THETIS, FORWARD and LEGARE. The project continued through the final retrofit of the Cutter MOHAWK in 1991.

HARRIET LANE's retrofit mirrored work accomplished on the "A" class 270's. The modernization package for the Cutter involved rebuilding the magazine deck as well as the deck beneath the gun. The gun was raised approximately 13 inches. The flight deck received additional visual landing aids and a glide slope indicator. YARD workers installed a complete electronics modification package. Refrigerated spaces and a refrigeration system were added.

Several man-hours were spent in the installation of a "chemical biological and radiological warfare washdown counter measure system," essentially, piping equipment designed to wash the ship of any fallout in a nuclear-biological-chemical confrontation. Personnel also installed a decontamination station involving the conversion of an existing shower, state room and passage way.

In addition to the repair of a small number of warranty items, the HARRIET LANE received towing equipment which the YARD did not install on the TAMPA nor the BEAR.

Actual man-hours on the HARRIET LANE were 88,127.

B" class retrofits concentrated more heavily on the upgrade of electronics and secure communication equipment.

Ferryboat Renovation

In 1985, the YARD completed a major renovation of a ferryboat for Coast Guard use on Governors Island, New York. The KULSHAN, a 30 year old vessel bought by the Coast Guard from the State of Washington's Ferry System, arrived at the YARD in the fall of 1982.

YARD personnel worked an estimated 150,000 production and engineering man-hours on the major renovation before expected delivery of the ferryboat to the Third District. The renovation cost was \$6.5 million.

The vessel received all new pumps and electric motors and hull repairs. The vehicle capacity of the ferryboat is up to 55 cars. The KULSHAN was converted from DC power to AC power and changed

from steam heat to electric heat. Renewal of the diesel generators and overhaul of two main propulsion motors were also accomplished. A major project was construction of a passenger house capable of holding up to 150 people. The KULSHAN was delivered to the Coast Guard in New York; it was renamed "GOVERNOR."

In 1988, the YARD completed the renovation of the COURSEN, a 180-foot ferryboat capable of transporting 1100 passengers and 42 vehicles. YARD tradesmen worked over 66,000 production and engineering man-hours in restoring the 32 year old vessel. COURSEN joined the GOVERNOR at Governors Island, bringing the total of operating Coast Guard ferryboats to four for the Manhattan-Governors Island runs.

River Barge Construction

In the late 1980's, the Coast Guard tasked the YARD with construction of several 130' river tender work barges intended for use by the Service on the Mississippi and Missouri Rivers. From 1987 to 1990, the YARD built six barges designed to replace aging work barges used by the buoy tenders of the Second District. The newly constructed barges were towed from the YARD to the Army Corps of Engineers' moorings in Memphis, Tennessee. There, the barges were outfitted and prepared for delivery to the District's aids to navigation section.

The project was transferred to Curtis Bay when the original Louisiana contractor filed for bankruptcy after completing only three barges on an 11 barge contract.

Structural items began arriving at the YARD during the winter of 1987. The YARD's Supply Department received and coordinated 51 truckloads of machinery, pipe fittings, electrical equipment, steel and outfitting pieces. In the Industrial Department, YARD tradesmen employed a unique construction method. Done in the Fabricating Shop, structural craftsmen built the barges on blocks in two separate sections: the basic hull and deckhouse assembly. Cranes launched the hull section into the water at a nearby pier. Personnel then installed machinery and finally, the deckhouse.

The first barge required 32,000 man-hours; the second barge used 28,000 man-hours. Through improved construction techniques, productivity measures and shop coordination, the learning curve reflected a savings of \$100,000 in the construction of the second barge.

The YARD completed the construction and launch of each barge on schedule. They were delivered to the Second District in pairs as a cost savings measure.

The work barge is connected to and pushed by a 65-foot or 75-foot buoy tender. A 20 member tender crew works the barges pulling aids to navigation, setting buoys and servicing lighted aids to navigation along the western rivers.

The new 130-foot barges are 30 percent more fuel efficient than their predecessors. Because of the unique new hull design which reduces fuel-consuming wave action and turbulence, the barges become faster and more efficient as weight is added. Shortened travel time between the aids to be serviced result in even greater fuel savings.

Several features of the barge's design reduce water resistance. It has a 15-foot stern notch, allowing for an easy mesh of the tug into the barge. The angle of entry of the barge is set at 7 degrees. A spoiler directs the flow of water from the bottom of the barge to the bottom of the towboat.

Redesigned watertight compartments allow the new barges to remain afloat even if the hull is punctured and one compartment becomes flooded.

The new barges offer an expanded cargo carrying capacity. They have articulated cranes which move the loads across the deck at shoulder height, allowing the loads to be controlled by the crew. The crane arrangement allows the barge to be nosed well into shore for loading and unloading. With a maximum working payload capacity of 100 tons, nearly double that of the old barges, the new barges are able to carry more materials -- permitting each to service more aids to navigation in one patrol.

The final two barges of this six barge project departed the YARD in June 1990, signaling the conclusion of a three year construction program.

The Five Year Phase Down

The dawn of 1988 brought unsettling news to YARD employees as the Commandant of the Coast Guard announced a plan to phase out the industrial work activities of the YARD over a five year period. A slow down of Coast Guard operations and programmatic reductions were proposed as a result of a \$100 million cut in the FY 88 budget. For the next nine months, the YARD family worked tirelessly to change the decision. With intense support from the Maryland Congressional



The Cutter HARRIET LANE, the third of the Coast Guard's new 270' WMEC class vessels, begins the YARD retrofit in the fall of 1984 (top photo).

The Ferryboat GOVERNOR, newly renovated at the YARD, undergoes final preparation to leave the YARD for New York. There, it will join its sister ships on the Manhattan-Governors Island runs (center photo).

Newly constructed Coast Guard Barge 73 awaits departure for its first assignment in Memphis, Tennessee. It was the second out of six river tender work barges built at the YARD (bottom photo).



delegation and the community, coupled with a supportive study by the Government Accounting Office, the Commandant announced on October 3, 1988, the YARD would stay in operation "for the foreseeable future." He cited the signing of the FY 89 DOT Appropriations Bill which contained language enabling the YARD's industrial functions to remain open. In addition, a floor of 654 permanent employees was established with the potential to hire additional temporary personnel. Sufficient industrial work would be assigned to sustain the YARD as a core logistics facility.

This crisis had come to a close.

40 Years of Buoy Production Concludes

For four decades, the YARD manufactured many of the buoys that provided navigational reference for travelers of the United States' waterways. Buoy production began during the Second World War at the YARD and was a major industrial program. The decision to halt buoy production came in the spring of 1988 and was based on manpower needs.

The Coast Guard's lighted buoys - large, heavy buoys needed for round-the-clock aid to navigation - were built here. The Coast Guard commercially procured unlighted buoys. These navigational aids mark waterways normally traveled by day, and they are lighter and smaller than lighted buoys.

Two types of buoys in the lighted class were made at the YARD - lighted reflector buoys with a variety of warning devices-whistles, bells, gongs, clappers, and lighted ice buoys designed for heavy ice conditions. The lighted reflector buoys ranged from size 3 1/2 X 8 feet weighing 1900 pounds to 8 X 26 feet weighing 11,380 pounds. They were made of steel products and steel structural shapes. Ice buoys were steel cone shaped structures; size, 7 X 20 feet, weighing 6,500 pounds.

The buoys were constructed in an assembly line mode. In the YARD's Fabrication Shop, loftsmen prepared templates for the buoys. The patterns were given to the shipfitters, flamecutters, and welders to begin a step by step building process. Plating, angle, and piping made of stainless and mild steel were cut, shaped, and welded to form the buoy's body and tower.

Over 150 pounds of welding wire were used on each buoy to produce the outer shell and inside structures. Counterweights and counterweight tubes were added along with flanges and battery pockets.

The Pipe Shop and Inside Machine Shop assisted in the project. They provided necessary piping material and machined items such as drilled lantern plates and beveled lifting eyes. Nuts, bolts, couplings, etc. were available from the YARD's supply system.

When fabrication of the buoys was completed, they were moved to the Paint Shop for sandblasting and primer preparation. From there, they were put on the buoy lot where they waited to leave the YARD by truck for their destination in the continental United States. The Coast Guard District requesting the buoys was tasked with outfitting them with operational appendages - lights, batteries, bells, gongs, etc. Final painting and markings on the buoys were done at the home district.

In its final production year, the YARD manufactured 111 lighted reflector buoys and six ice buoys.

Today, the Coast Guard's districts send their buoy requirements to Coast Guard Headquarters where bids are prepared to meet aids to navigation needs. Some buoys for stock are stored at the YARD, however. After receiving authorization from Headquarters, Supply Center Curtis Bay issues buoys directly from their supply system to the field.

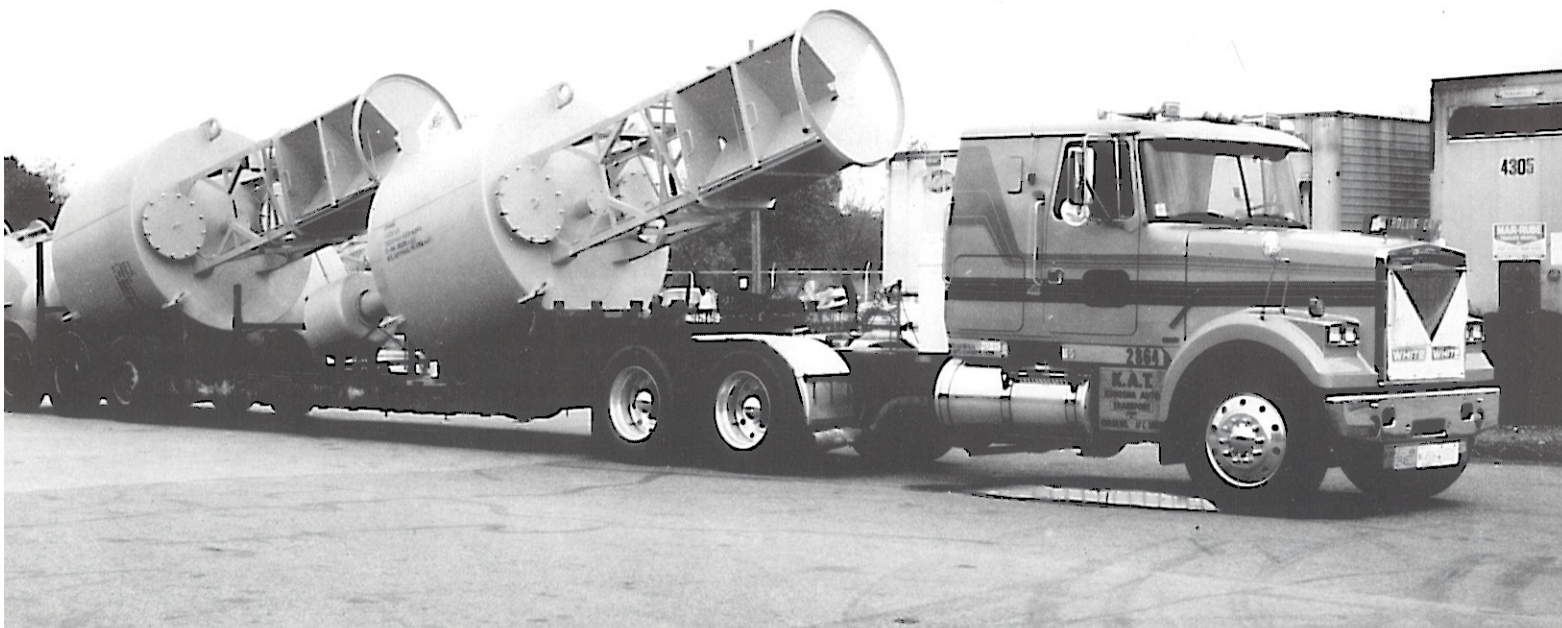
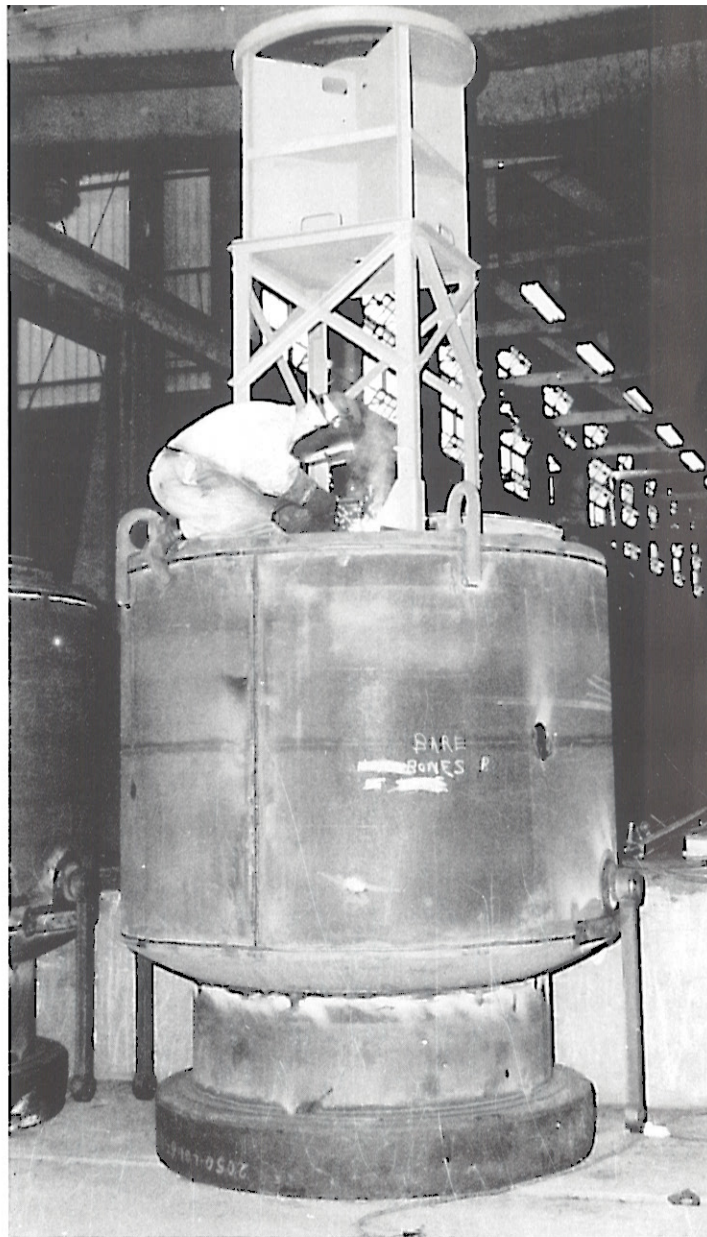
YARD Honored For Productivity Achievements

The United States Senate honored the YARD in the spring of 1988 with a "Certificate of Achievement" as one of three finalists in the 1988 U.S. Senate Productivity Awards. The shipyard also received the Award for "Excellence in Employee Involvement" sponsored by the Maryland Center for Productivity and Quality of Working Life.

United States Senators Paul Sarbanes and Barbara Mikulski nominated the YARD for the prestigious Productivity Awards in December 1987. The purpose of the Awards is to honor those organizations that have improved productivity while making the quality of working life better in the work place. Two areas are recognized: service and manufacturing. The competi-

A YARD welder works on one of the final orders of YARD manufactured lighted buoys (top photo).

Throughout the United States, tractor trailers transported YARD built buoys destined for their home district. (bottom photo).



tion is open to public and private sectors in the State of Maryland. The YARD's achieved strides in the Quality Circle Program, the Management Improvement Initiative, and the impact of these programs on the community provided the basis for nomination in the service area.

In February 1988, the YARD and other nominees, submitted comprehensive productivity/quality reports covering accomplishments for the last 3-5 years. Among 90 firms nominated, 28 submitted applications. A Senate screening panel reviewed the written submissions and narrowed the competitive field to seven finalists in the manufacturing and service areas. The YARD, Bendix Field Engineering Corporation in Columbia, Maryland, and Giant Food Inc. in Landover, Maryland, were the three finalists in the service area.

A distinguished Blue Ribbon Panel visited the finalists and conducted on-site reviews of their productivity efforts. The evaluation team included representatives from Maryland's business, labor, and educational communities.

Bendix Corporation emerged the winner in the service category. The YARD, along with Giant Food, received "Certificates of Achievement" for outstanding improvement in productivity.

The Maryland Center for Productivity and Quality of Working Life used the submitted written applications for the Senate Productivity Awards to select winners in four categories for their 1988 Productivity Awards.

The Center's Board of Advisors selected the YARD in the category of "Excellence in Employee Involvement." Three other Maryland businesses - JCB, Inc. in White Marsh, Maryland; Tio Sancho Plant-McCormick & Co. Inc. in Prince Frederick, Maryland, and Cambridge Instruments, Inc. in Sparks, Maryland - were winners of the "Production Management," "Entrepreneurship," and "Process Improvement" Awards, respectively. The four award winners demonstrated a unique, successful approach to improved productivity and quality.

YARD Installs Aerostat Communications Suites

In December 1988, the YARD was tasked with the unique construction and installation of communication suites aboard five Sea-Based Aerostat (SBA) platforms. The unique electronics package assists the Coast Guard

in drug interdiction and maritime law enforcement.

The Aerostat is a giant balloon that can be tethered into the air from land or from the sea-based platform. It is packed with radar and can interdict airplanes from miles in any direction. The sea-based Aerostat balloon is 109-feet.

The Coast Guard and U.S. Customs Service were working as a team to establish a "line" of Aerostats that would guard the southern borders of the United States. The Coast Guard is responsible for those Aerostats east of the Mississippi.

The floating platforms are contractor-operated vessels which have a civilian master and crew. The first platform to arrive at the YARD was the CARIBBEAN SENTRY on December 2nd. The ATLANTIC SENTRY, PACIFIC SENTRY, GULF SENTRY and WINDWARD SENTRY followed.

Each platform carries a trailer that houses the Aerostat operations center. Coast Guard military personnel run the operations center and live aboard the vessel alongside the civilian crew. The communications suites the YARD constructed were installed in the trailer.

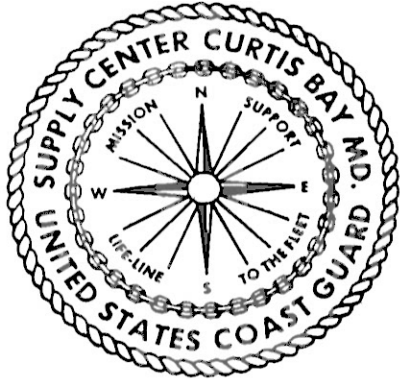
The project concluded in 1989 with the successful completion of the five SBA platforms.

Supply Center Curtis Bay Becomes New YARD Tenant

The U.S. Coast Guard established a new Supply Center at the YARD on April 7, 1989. The Coast Guard Supply Center Curtis Bay joined the Service's other non-aviation supply center, Supply Center Brooklyn (since, relocated to Baltimore, Maryland and renamed Supply Center Baltimore), in providing supply and logistics support to the Coast Guard Fleet worldwide.

The Supply Center was created from the YARD's former Ships' Inventory Control Point, the Procurement and Supply Departments, the Management Information Systems Department, and the Quality Assurance Staff. Such departmental support was needed to properly inventory supply and repair parts, to buy items, to stock materials and equipment, to assure parts were in good working condition, and to maintain necessary computer support of various automated systems.

The new command was responsible for coordinating hull, machinery, electrical, and ordnance support of Coast Guard ships. Technicians determine what supplies ships must carry onboard, and how to stock necessary engineering support. The Supply Center



handles logistics support of 24 different classes of cutters and boats, from small boats to ice breakers.

Today, the Supply Center Curtis Bay employs 200 civilian employees and 109 military personnel. The Supply Center manages \$98 million in inventory of ships' spare parts.

Ordnance Support

Tradesmen in the Ordnance Shop completed the repair of the last 5" 38 caliber single gun mount in the spring of 1990. This program began in 1975. During its operation, technicians refurbished 28 gun mounts for use in the Coast Guard fleet; one was prepared as a training aid for the Coast Guard's Gunnersmate School, Yorktown, Virginia. The YARD was the sole source for this particular weapon's overhaul and today remains as the only Coast Guard source for the major repair of naval weapons systems used by the Coast Guard fleet.

The 5" gun mounts, some which had seen nearly 50 years of naval service, were used on the Coast Guard's 378-foot Hamilton Class cutters. The Hamilton Class went through Fleet Rehabilitation and Modernization (FRAM) in the late 80's and early 90's; however, one aspect of FRAM was to replace the 5" gun mounts with the MK 75 gun mount, a newly advanced automated weapons system.

The 5" 38 caliber gun was a manually loaded slow firing naval gun. It required a crew of nine to 11 men

in the turret and an ammunition crew of eight men below decks to pass the ammunition up from the magazine. The 5" gun was capable of cycling at a rate of 40 times a minute, producing a rate of fire averaging 20 rounds per minute. The MK 75 is a fully automatic 76mm gun, firing up to 80 rounds per minute and requires no personnel to load and fire it.

When the 5" gun mount overhaul program began in the mid 1970's, YARD ordnance mechanics removed, repaired and installed each mount. The Hamilton Class cutters did not continue to routinely come to the YARD, however, as the decade progressed. As a result, trucks transported the ordnance equipment to and from Curtis Bay.

YARD tradesmen worked on each gun for about six months. They pulled off the guns' covers, stripped the guns, repaired, rebuilt, and painted them. Technicians covered the gun port shield, attached to the back of the barrel, with fiberglass to make it smoother and to help keep out water. This process also made it easier for the barrel of the gun to move horizontally across a smooth surface.

A crew of five Ordnance Shop employees performed the \$250,000 per gun refurbishments.

Accomplishing a variety of weapons' overhauls, shop personnel today devote the majority of their time to the overhaul of the sophisticated MK 75 76 mm weapons system.

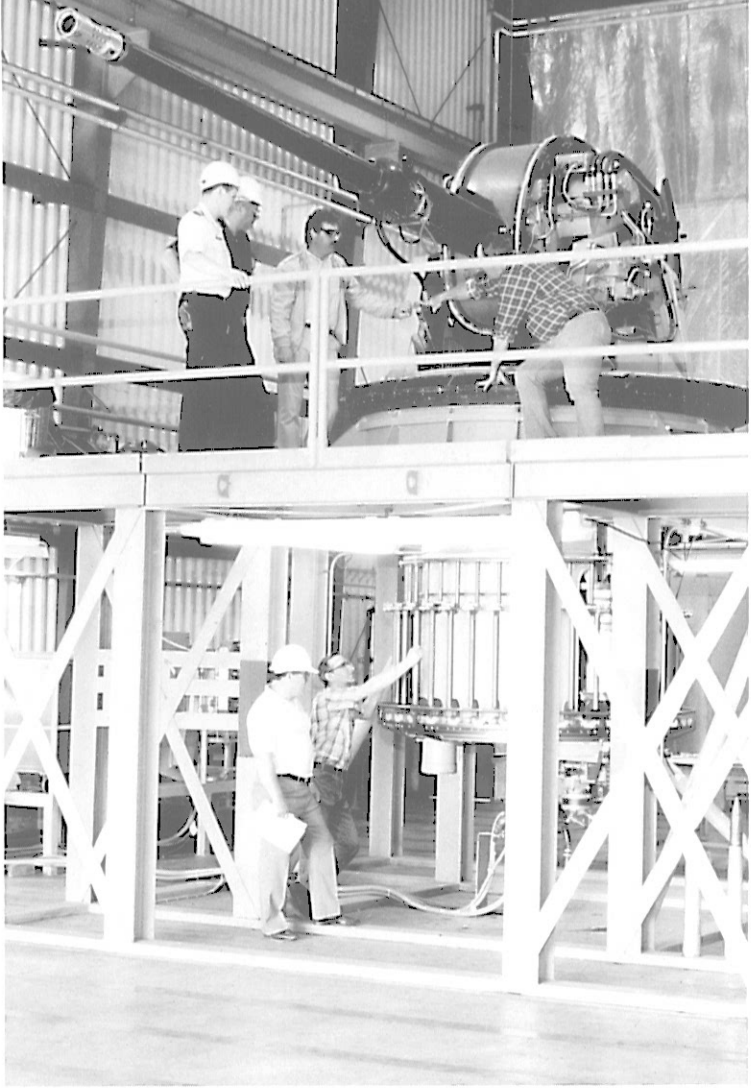
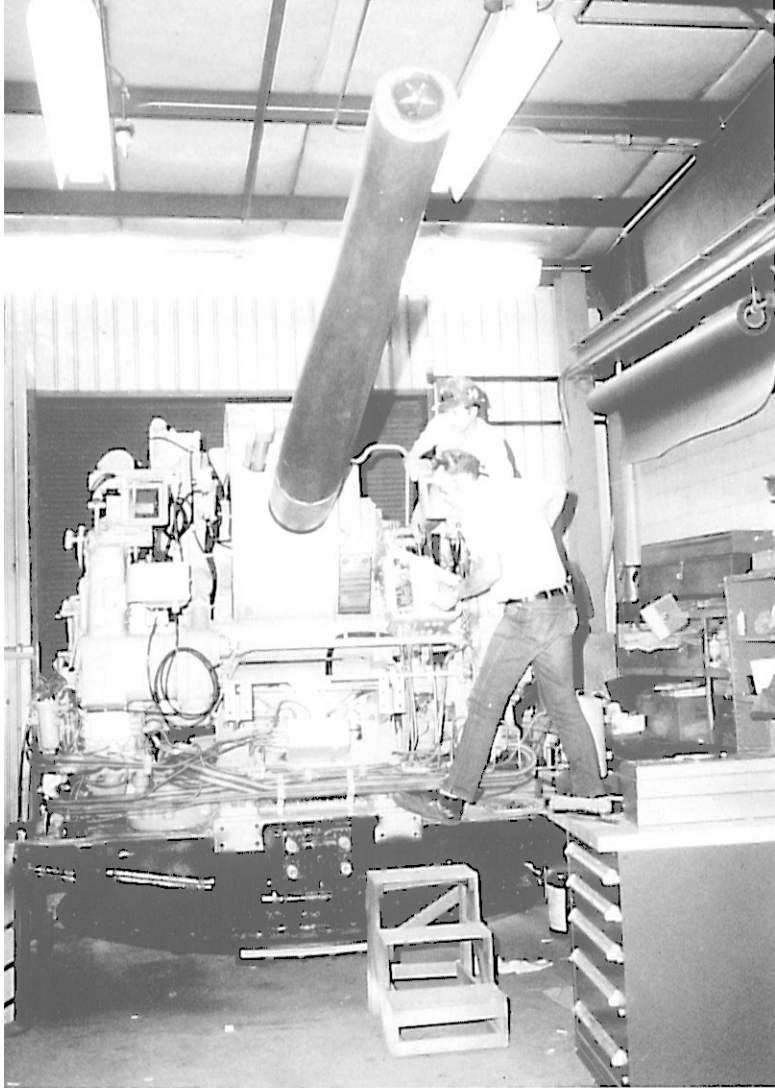
The Coast Guard mandates trained personnel overhaul the guns every five years. The advanced system is used on the Service's 270' WMECs and 378' WHECs.

A typical job list for each gun overhaul includes intensive inspection, parts' ordering, and actual repair work.

Shop tradesmen also respond to requests from the Coast Guard and the U.S. Navy to repair the MK 53 Combined Antenna System (CAS), part of the fire control system for the MK 75. The Shop accomplishes four overhauls of the MK 75 and MK 53 CAS, annually. In addition to work on this new gun system, Ordnance personnel repair the MK 38 machine gun system found on a variety of Coast Guard vessels.

"On-The-Road," Again!

The YARD's Electronics and Electrical Shops are cousins to the Ordnance Shop. Electronics mechanics and electricians overhaul, repair, install and test all shipboard electronic and electric equipment. Their



Ordnance Equipment Mechanics perform repairs on the Coast Guard's WHEC's 5" guns. From 1975 to 1990, technicians refurbished 28 gun mounts for use in the Coast Guard fleet (upper left).

YARD managers and mechanics inspect the progress of the first MK 75 overhaul in the new Ordnance Shop (upper right).

YARD technicians work on the installation of a Standard Work Station on board the Coast Guard Cutter BEAR in Portsmouth, Virginia. These YARD "On-the-Road" teams provide invaluable assistance to the Coast Guard fleet worldwide (center left).

work also encompasses major installations at remote locations, response to casualties, and providing technical assistance on the road.

From 1991 to 1993, YARD "On the Road Teams" replaced outdated teletype equipment with Standard Work Stations on over 50 Coast Guard cutters. Installation of the sophisticated computer systems took the YARD's experts to locations outside the continental U.S.

In November, 1993, the Coast Guard tasked the YARD with the design, fabrication and installation of a new 75 foot mast on several gulf and east coast inland construction tenders. In an effort to comply with current standard regulations affecting the configuration of masts and lights, eight of the WLIC class tenders were serviced by the YARD.

YARD engineers designed a unique forward and after mast. YARD tradesmen constructed the masts as well as the radar platform, mast stand, mast rest, running lights, stern lights and electrical wiring.

YARD technical representatives travelled to the cutters' homeports to install the newly manufactured equipment. Six man teams representing Electric and Electronics Shops, Shipfitting Shop, Welding and Woodworking Shops were out on the road for approximately 10 days.

The project, which began with a prototype installation on the Cutter SLEDGE, spanned five months. Completed jobs included the 75' mast installation on the Cutters AXE, HAMMER, MALLETT, ANVIL, CLAMP and HATCHET. The masts and assembly parts for the Cutter VISE were shipped and done commercially.

Late last year, the YARD completed the successful prototype installation of the propulsion controller on the Coast Guard Cutter COWSLIP homeported in Portsmouth, Virginia. The propulsion controller, a sophisticated computer and software program, controls seven major pieces of propulsion equipment, the speed of the diesel engine, generators and motors. The new prototype employed top of the line technology and replaced a 10 year old computer which limited the ship's control propulsion plant.

The intent of the prototype was three-fold. It provided the current SLEP Buoy Tender fleet with a propulsion control system which had increased reliability, was maintainable with commercially available parts, and provided the user with a simple graphical display and increased troubleshooting capability.

The project, organized into six phases from planning to installation to training, was the culmination of over three years of cooperation between six major Coast Guard commands. During the installation and testing phase, YARD "on the road teams" worked long hours, even on weekends, and provided the ultimate in customer satisfaction - an improved product with on time delivery!

The 120' Patrol Boat Prototype

Construction of a prototype 120 foot patrol boat, to be named the "Heritage Class," began in June of 1990. The basic hull was nearly complete, with the cutter approximately 35% complete, when the Commandant notified the YARD to stop work on the prototype in November of 1991.

Several reasons, including an easing of international tensions, increased involvement by the Navy in drug interdiction, and a reevaluation of Coast Guard mission requirements were among the factors leading to this decision. Another major reason was the need to replace some of the aging 82' WPB's with a coastal patrol boat of about the same size, i.e. 80 feet instead of 120 feet.

Although disappointed not to complete the patrol boat, the YARD gained valuable engineering and production experience and has applied the knowledge to other industrial projects.

The hull was eventually turned over to the Army for research and development projects at Aberdeen Proving Grounds, Aberdeen, Maryland.

New Facilities Increase YARD's Customer Service

Enclosed Sandblast Facility

The YARD opened a newly constructed enclosed industrial sandblast facility in the late 1980's. Engineers designed the building to improve the dusty work environment during sandblasting, and to reduce operating costs for the shipyard. The facility upgrades working conditions during preparations of equipment for painting.

The project involved alterations and additions to three existing buildings. Major renovations included: (1) an enclosed industrial abrasive blast room equipped with a grit blast booth designed to recycle and collect

steel grit; (2) an enclosed processing storage area built to protect pieces waiting to be painted from the weather, and (3) a monorail system designed to improve the handling of metal material.

This was the first project on which YARD engineers worked with the Coast Guard Facilities Design and Construction Center (FD&CC) in Norfolk, Virginia. The FD&CC was responsible for the design and, along with YARD personnel, monitored the construction work.

Ordnance Limited Repair Facility

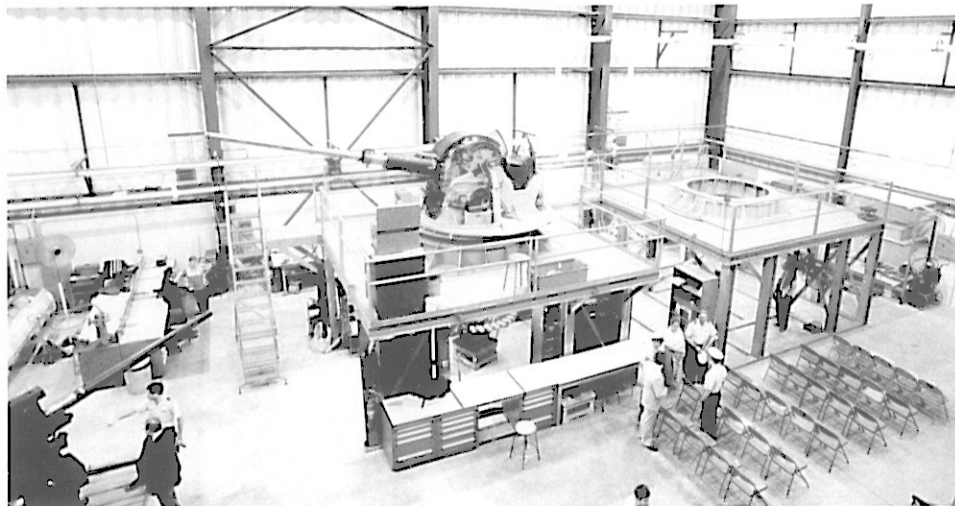
The YARD is the sole source for major repair of naval weapons systems used by the Coast Guard fleet. In 1990, the U.S. Coast Guard dedicated a new Ordnance Limited Repair Facility at the YARD. The \$1.3 million edifice provides over 9500 square feet of shop space for YARD personnel to accomplish a variety of

Material Handling Shop

The new Material Handling Shop opened in 1992. The pre-engineered metal building houses all of the equipment from the riggers' old shop. The floor is equipped with a test pull stand for load testing various cables and slings. This was previously performed on the waterfront with the use of a crane. It can now be done faster and safer inside.

The building also houses a five ton overhead crane and a dust collector for evacuating metal particles generated from some of the machinery. It has lean-to space around the east side of the building for housing some of the utility vehicles (forklifts, etc.).

The Facilities Design and Construction Center (FDCC) Norfolk, Virginia, designed the building. The YARD's Facilities Engineering Division inspected the construction project which cost \$340,000.



The new Ordnance Shop handles a variety of weapons' repairs and overhauls.

weapons' overhauls.

The YARD's previous Ordnance Shop did not meet the height requirement for necessary crane equipment used to refurbish the Coast Guard's new MK 75 gun mount. Use of the new facility's 30 ton and 10 ton auxiliary overhead cranes allows shop technicians to save time and manpower.

The new three story Ordnance Limited Repair Facility provides shelter for the Ordnance Shop to accomplish four overhauls of the Coast Guard's MK75 and MK 53 CAS, annually.

In addition to work on the new gun system, the YARD's Ordnance Shop will continue its traditional repair of the MK 38 machine gun system used on a variety of Coast Guard vessels.

Flammable Storage Building

The new 7500 square foot Flammable Storage Building replaces an aging facility constructed in 1943. The location of this new facility is adjacent to its primary customer, the YARD's Paint Shop, thus reducing transit time for material delivery. The facility has a connected storage area for the Paint Shop which allows for better scheduling of material delivery and minimizes production delays. In addition, the increased capacity permits the temporary storage of flammable material belonging to vessels visiting the YARD. The project cost was \$1.2 million.



Occupancy of the New Machine Shop completed seven years of planning, design and construction activity (above).

The new closed-cycle facility completes the YARD's Paint Shop complex located near the shipyard's west bulkhead (below).



Machine Shop

The YARD dedicated a new \$3 million Machine Shop in the fall of 1994. The 21,000 square foot shop replaces the cramped "inside" machine shop originally built at the YARD in 1932.

The new Inside Machine Shop provides all machining functions in support of the YARD's vessel repair, renovation, and construction. It also repairs and reconditions shafts, propellers, hubs, rudders, etc., for Supply Center Curtis Bay. The YARD's responsiveness to critical, emergency repairs is frequently exemplified by Inside Machine Shop personnel.

The 17,000 square foot first floor of the new edifice houses all major machine tools, including five computer numerically controlled (CNC) machines. Nine major pieces of machinery have been replaced over the last five years, some equipment received upgrades, and at least two large lathes are in the replacement process.

The new facility greatly improves productivity. In the past, riggers man-handled larger pieces of machinery in and around existing shop equipment due to space constraints. Work on adjacent equipment was halted during such evolutions due to spatial conflicts and safety. Lay down areas for larger pieces took up corridors and circulation areas making personnel movement difficult. With construction of the new building, such problems have been greatly reduced or eliminated. One worker can now rig and move large work pieces using overhead bridge cranes without affecting adjacent work and personnel.

The remaining 4000 square feet on the second floor of the new Machine Shop houses the engraving room, the calibration lab, the gauge room, jog and fixture storage, and the foreman's office. The new men's locker room serves 125 men from the mechanical group. It replaces the 1940's era shipways head house facility. The new women's locker room serves up to 25 women YARD-wide and replaces a trailer facility.

The construction project included renovation of 8000 square feet of existing pipe shop space and an additional 10,000 square feet of space created by "infilling" of the alley between the "outside" machine and pipe shops. The former alley (named Sexton Way) now houses group offices and the Pipe Shop tool room and equipment on the first floor. The second floor is designated for Engineering and Industrial Department use.

A Cutter Is Shrouded

To protect the environment from blasting pollutants, the YARD shrouded the Coast Guard Cutter VALIANT while in drydock undergoing 210' Major Maintenance Availability (MMA). This first-time trial project conducted in 1992 resulted from a study by the YARD's Total Quality Management (TQM) process. The shroud was the latest of several efforts to bring the YARD into compliance with the Federal Clean Water Act of 1990, the Federal Clean Air Act, and the Maryland Air Quality Regulations.

While driven by the desire to protect workers' health and the environment, the TQM initiative also reduced the cost of doing business. The new blasting operations on VALIANT resulted in a total cost avoidance of \$126,000.

Further fine tuning of the TQM recommendations offered continuous improvement of the YARD's blasting operations on future vessels. Improved quality of work life was now attainable. Satisfied customers were the beneficiaries of refined production scheduling and reduced operating costs.

The blue-green shroud is the most visible part of steps taken to control airborne dust during abrasive blasting and painting of the vessel.

The shroud is made of 30' X 50' and 30' X 75' sections of woven polypropylene fabric, designed specifically to catch blasting grit, paint flakes and other debris. A positive feature of the shroud is its translucency. The thin fabric allows sufficient light for normal work.

The Boat Joiner Shop installed the shroud's welded steel pipe frame work on VALIANT with wire cable supports. The materials, most of which are reused, cost \$14,000. The vessel's shrouding required 735 hours for installation and removal.

While YARD personnel blasted the exterior hull under the shroud, other shops had limited access to the interior of the vessel. Previous practices prohibited this access, lengthening the overall schedule of the work. Dust collectors on the dock floor collected dust during the exterior blasting. A measure of how well the shroud contained the dust was shown by the 4000 pounds of dust collected. That dust would have escaped into the air or water without this containment effort!

Related steps in improving environmental compliance were the use of the dust collectors for interior



Under The Big Top! The Cutter VALIANT is pictured under the shroud while in drydock undergoing 210' Major Maintenance Availability at the YARD.

blasting, the installation of curtains at the ends of the docks, and the use of closed cycle blast machines. The dust collectors were also used during the earlier interior blasting because of lead based paint found inside the vessel. YARD personnel collected five tons of lead-contaminated dust. In both cases, the employees and the environment benefited from this containment. The employees and the YARD's neighbors were spared breathing this dust. The lead contaminated dust went to a hazardous waste landfill for disposal.

Prior fabrication and use of removal curtains for the ends of the dry docks were the YARD's first steps in the containment learning process. The sectional curtains, made of .12" thick clear vinyl strips prevented the grit from escaping from the ends of the docks during exterior blasting.

The YARD also investigated more extensive use of "closed cycle" blasting machines. These machines blast, then immediately vacuum up the grit and resulting dust. The grit is then recycled. Each 210' MMA cutter following VALIANT has used the shroud protection. The results of this unique application continue to improve the environment and worker safety.

After a Decade, SLEP Ends

The U.S. Coast Guard recommissioned the Coast Guard Cutter BUTTONWOOD, a 180' seagoing buoy tender, at the YARD in February of 1993. The 50 year old vessel had completed renovation here under the Coast Guard's Service Life Extension Program (SLEP).

The Cutter's overhaul concluded the renovation program which began at the YARD a decade ago. Shipyard personnel renovated nine buoy tenders in the class throughout the past ten years. The restoration project aimed at extending the life of each vessel by another 20 years.

Work on these 1940 vintage cutters included a total renovation of all living spaces, upgraded messing facilities, a newly installed main propulsion system, new main engine and generator mufflers, upgraded electronics package, and the incorporation of structural modifications. Each vessel on an average took 18 months of work, used 210,000 man-hours, and cost approximately \$15 million. This was considered a significant savings to the taxpayer over an estimated \$40 million price tag placed on the new construction of a comparable boat.



The Cutter BUTTONWOOD, the last of the 180' buoy tenders to undergo SLEP at the YARD, departs Curtis Bay for its new homeport of San Francisco, California.

Under SLEP, the YARD "breathed new life" into: CGC SORREL, CGC GENTIAN, CGC COWSLIP, CGC CONIFER, CGC MADRONA, CGC LAUREL, CGC PAPAW, CGC SWEETGUM and CGC BUTTONWOOD. These modernized buoy tenders are now successfully servicing aids to navigation in seaways throughout United States.

YARD Tops In Quality

In July, 1993, the Commandant of the United States Coast Guard announced his selection of the YARD as the recipient of the First Annual Commandant's Quality Award. The YARD placed first among 15 other Coast Guard nominees. The shipyard's winning

evaluation was based on quality success stories and unique achievements attained through quality management. Capturing first place position offered the YARD nationwide recognition for its outstanding commitment to the Coast Guard's vision as a "Total Quality" organization.

The Award recognized a command which, through a commitment to customer satisfaction and continuous quality improvement, served as an example for other Coast Guard organizations in the quality arena. The Award's criteria required nominees to prove their dedication and drive for quality awareness, customer focus, innovation, and teamwork abilities.

The YARD received top marks in four of the seven categories: Leadership, Quality Assurance of Products and Services, Customer Focus, and Quality Results.

Top leadership qualifications at the YARD existed in management's desire to initiate total quality work ethics which encompasses every employee. By creating a Total Quality Management staff which reported to the Commanding Officer, an increased emphasis on process improvements and quality service assured full support to all customers. A strategic plan, including long and short term goals, was developed by top management and implemented at every level of the YARD's organization. To further support quality processes, management provided the opportunity for all employees to receive professional training in the quality area. Customer focus and quality assurance of products and services were demonstrated by the YARD through the continual use of customer surveys, the Idea Express Program, follow up letters, and Preliminary Acceptance Trial Reports.

Three months after the Commandant's presentation of the First Annual Quality Award, DOT Secretary Federico Pena, head of the United States Department of Transportation (DOT), presented the Secretary's Award For Quality to the YARD.

This Award is given in recognition of an outstanding organization which is customer-focused and committed to achieving excellence through continuous quality improvements.

In 1993, the YARD shared first place honors with the Office of Aviation Standards Systems, Federal Aviation Administration, Oklahoma City, Oklahoma.

The YARD's quality process, inaugurated in 1981, has developed into one of the most successful examples of achievement and excellence in quality management

in the United States government. The program stresses "customer focus," both internal and external, and supports active feedback measures to ensure service goals are being met.

This focus generated a larger volume of work, an expansion of the customer base, and the production of better quality products in a more efficient manner. "Hands on" involvement by all senior managers insured cooperation and communication, and goals were encouraged at all levels of the organization. The quantifiable return on investment from this continuous improvement effort has been substantiated as greater than 2 to 1.

Honored to be the recipient of the Commandant's Quality Award and the DOT Secretary's Award For Quality, the YARD has continued to improve quality standards throughout the organization. The pursuit of its goal, to provide better service to the Coast Guard fleet, was given unprecedented impetus by receipt of these highly regarded, premier Awards.

A Grateful Nation Remembers!

The United States Coast Guard saluted the YARD's World War II home front work force and Coast Guard veterans of the Second World War during a national World War II 50th anniversary commemoration held at



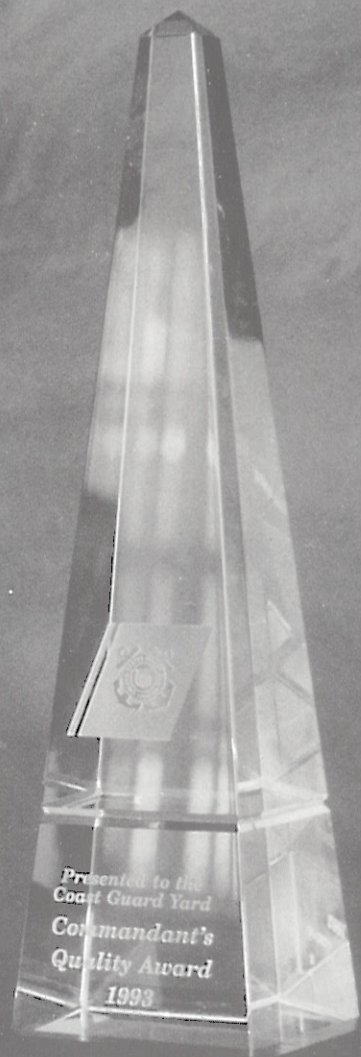
the YARD on April 25, 1994.

Scores of visitors, employees and retirees of the shipyard attended the gala event which celebrated the theme, "The Home Front and Industrial Production." This first-of-its-kind Coast Guard national celebration memorialized the 95th birthday of the Coast Guard YARD and the 50th anniversary of the launching of the



U.S. COAST GUARD YARD
United States Coast Guard

U.S. COAST GUARD YARD
United States Coast Guard



Coast Guard Cutters MENDOTA and PONTCHARTRAIN, the largest ships built at this shipyard during World War II.

Period fashion and music, patriotic songs, words of praise and recognition offered unique support to an event designed to appreciate and educate. The day's honorees were former and retired Coast Guard YARD civilian employees. These men and women, through their industrial production positions at the shipyard, worked on the construction of the MENDOTA and PONTCHARTRAIN in 1944. The 32 honorees in attendance represented the nearly 3600 civilian employees of the Coast Guard YARD during the war years.

Over 80 Coast Guard World War II veterans in attendance at the ceremony were also honored and proudly remembered for their contributions and sacrifices.

The Patrol Frigate Reunion Association unveiled a monument during the formal program to honor the Coast Guard crews of the 75 patrol frigates which served in the Asiatic and European theaters of World War II. And, to honor the nearly 1,038 Coast Guardsmen who were killed in the Second World War, members of the Destroyer Escort Sailors Association presented a memorial wreath to the comrades who "crossed the bar."

In the afternoon, guests enjoyed light refreshments, music from the "Big Band" era, and World War II exhibits in Columbus Recreation Center. Filled with historical YARD photographs, World War II art, and Coast Guard World War II films, visitors gained an education and appreciation of the lessons and history of World War II.

The Coast Guard's World War II 50th anniversary commemoration at the YARD offered unprecedented gratitude for the men and women who contributed to war's victory through their home front service, and for the thousands of veterans who fought on foreign land to assure freedom. The festivities of the day gloriously resounded the sentiment, "A Grateful Nation Remembers!"

Apprenticeships: A Proud Tradition

The YARD has supported a formal apprenticeship

program for more than 60 years. Including the current apprentice class, nearly 120 apprentices have been trained throughout these six decades in the various shipyard trades. The program ensures quality craftsmen are available in the pipeline as the YARD approaches its centennial.

The YARD's apprenticeship program is registered with the Department of Labor, the State of Maryland, Board of Apprenticeship, and the Veterans Administration.

The current four year apprenticeship program provides for 8000 hours of formal on-the-job training, trade theory instruction and academic classes developed to prepare each apprentice for the full performance Journeyman level.

After a nine year hiatus, 15 apprentices began their apprentice education in 1989. Eight YARD apprentices graduated on June 24, 1994. An additional 17 apprentices are currently pursuing their training.

The apprentices work in the following trades: Boatjoiners, Electronics Mechanics, Electricians, Marine Machinery Mechanics, Pipefitters, Sheetmetal Mechanics, and Shipfitters.

On an annual basis, the program is reviewed, revised and refined, if needed, to ensure program requirements remain current and in compliance with Department of Labor and State of Maryland guidelines. Losses in specific trades are monitored to ensure shortfalls are backfilled as resignations and retirements warrant.

Managers and general foremen at the YARD commit their full support to this worthwhile endeavor. They serve as talented trade theory instructors, participate as instructor personnel for various technical trade classes, and actively participate on an apprentice committee chartered to maintain program integrity. They provide additional support to the program by sacrificing production time and dollars to ensure program success.

There are nearly 90 apprentice alumni from several apprentice graduation classes still employed at the YARD and its tenant command, Supply Center Curtis Bay. The majority of these alumni hold high level wage grade and general schedule positions, a further testimony to the success of the YARD's apprentice program.

Seven Days In May

Personnel of the YARD, Supply Center Curtis Bay and Supply Center Baltimore in Curtis Bay, Maryland, tested the credibility of their respective mottos, "Service To The Fleet" and "Life-Line To The Fleet" with the commissioning of the Coast Guard Cutter VINDICATOR in May 1994. In seven days, skilled tradesmen and logistics specialists transformed a ten year old, 225 foot former Navy submarine surveillance ship into a Coast Guard Cutter. Their work was in response to a presidential directive to prepare the vessel for a national security and humanitarian mission in the Caribbean. The VINDICATOR joined a force of Coast Guard cutters conducting alien migration interdiction operations around Haiti.

The decommissioned ship had been in storage at the YARD since its turnover from the U.S. Navy in the summer of 1993. YARD engineers had performed structural and systems modification to prepare VINDICATOR for operational test and evaluation. The

evaluation was successful. Future plans had called for use of VINDICATOR and other vessels of the T-AGOS class as possible replacements for the Coast Guard's Mature-Class vessels.

But on Friday, May 13, 1994, the Commandant of the Coast Guard directed the YARD and Supply Centers to respond to a national policy requirement. The job called for teamwork to mechanically ready and outfit VINDICATOR for commissioning on Friday, May 20, 1994.

In his remarks during the commissioning ceremony, the Commandant said, "You put this ship together on one week's notice. You have moved a lot of mountains using good old fashioned ingenuity and innovation. We are extremely proud of your can-do spirit. VINDICATOR looks magnificent! You are an inspiration to all of us."

The YARD's industrial support involved all levels of hull, mechanical, electrical, and electronics functions. The job list called for the installation of Coast Guard electronics communication and navigation equipment, additional life rafts, a second small boat



In just seven days, teamwork transformed the former Navy ship VINDICATOR into a Coast Guard Cutter. The vessel is pictured leaving Baltimore on May 21, 1994, for a national security mission.

cradle, weather deck security gates, door locks, deck awnings and port-a-potty privacy screens. Tradesmen devoted hours to starting up and test running all machinery and systems. Ordnance preparations included modification of machine gun mounts and insulation of the armory overhead, in addition to the onload of weapons and ammunition.

Perhaps the most visible of the YARD's work products was the complete painting of the Navy gray VINDICATOR to Coast Guard white with appropriate identification markings. The job took four days; 23 painters working an average of 10 hours a day, applying over 165 gallons of exterior white silicone enamel paint with rollers and brushes.

The YARD's Military Support Operations staff devoted countless hours providing personnel and administrative support. On short notice, arrangements were made for berthing, meals, and health services for VINDICATOR's new crew. The YARD's Exchange Officer set up a store on board the Cutter. Goods were valued at nearly \$5000. The Morale Officer coordinated the donation of morale equipment, including two exercise bikes, for the fitness room.

Supply Center Curtis Bay expended over 600 man hours in VINDICATOR's preparation. Staging and outfitting team members selected and broke out items on board and assisted the crew in stowing \$361,835 of operating space items and general use consumables. The team coordinated the development of a SCAMP database, \$35,000 in emergency commercial procurements and transportation of goods from public sector and Coast Guard warehouses to VINDICATOR's staging area. Team members procured and sorted over 5,000 parts and searched excess inventories to complete the custom outfit for VINDICATOR. Despite constantly changing requirements, the team delivered 99% of the custom outfit and 100% of the crew-identified requirements for VINDICATOR by the commissioning date. The team performed in seven days what under normal circumstances requires six months of preparation and ten days of onload activity.

Supply Center Baltimore initially performed an inventory of electronic equipment installed onboard VINDICATOR. This inventory allowed for the production of an Electronics Repair Parts Allowance List to outfit the vessel. With the assistance of the crew, the Supply Center requisitioned additional parts and technical manuals necessary for the safe operations

of the Cutter. Despite the short timeframe, all critical electronic parts and manuals were delivered ahead of schedule. Supply Center Baltimore supplied needed hardware for a hurriedly installed computer system, coordinated the delivery of items warehoused in its Columbia, Maryland complex, and registered VINDICATOR in the Department of Defense address system.

The importance of worklife was not neglected during the hustle of the one week preparation. The YARD issued a general broadcast to its employees and Coast Guard personnel in the area for the donation of recreational items for the Cutter's crew. Supporters responded with numerous contributions of books, videos, playing cards, board games, and magazines.

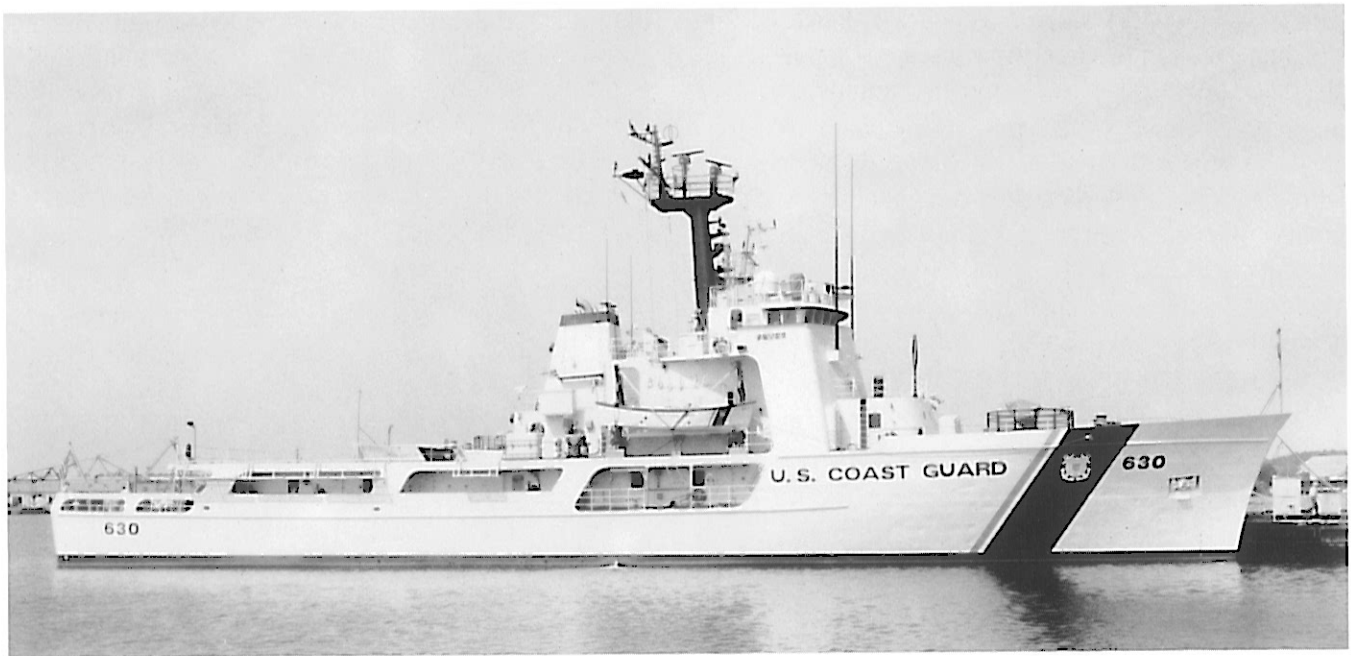
The Cutter VINDICATOR nobly performed its operational mission for OPERATION ABLE MANNER throughout the summer of 1994. It returned to the YARD in August 1994, was put back in decommissioned status, and is now awaiting direction from Coast Guard Headquarters for future operation.

The 10th Anniversary of MMA

In the fall of 1994, the Coast Guard celebrated the 10th anniversary of the Major Maintenance Availability (MMA) program at the YARD. With the recommissioning of the Cutter ALERT on September 2nd, the YARD marked an achievement milestone covering a decade of quality renovation work on nine 210' medium endurance cutters. Five additional 210's are expected to complete MMA before the program concludes in March 1997.

The 210' MMA is an essential project intended to overhaul and upgrade selected systems and equipment on cutters which have experienced nearly 30 years of service. The program aims to insure reliable performance by the cutters in the second half of their service life. Under MMA, the Coast Guard decommissions the vessel, and reassigns the crew. The YARD performs an extensive overhaul on each cutter. The work adds another 15 years of operation to the cutter. When recommissioned, the 210's are, with the exception of the hull, new.

ALERT's modernization was a special labor of pride, for over 25 years ago, shipyard workers built the cutter as the fifth and last YARD constructed 210'



The YARD built the ALERT in 1968. After 26 years of service, the Cutter returned for modernization under MMA. It now serves Coast Guard missions on the northwest Pacific Coast.

medium endurance cutter. (YARD tradesmen constructed the CONFIDENCE, RESOLUTE, DURABLE, DECISIVE and ALERT in the 1960's.) ALERT was christened on October 19, 1968, after receiving nearly 400,000 man-hours of molding, forming and assembly. Under MMA, the YARD used nearly 340,000 man-hours and delivered the Cutter on time and below budget.

The 18 month, \$21 million project included structural repairs, increased fire fighting capabilities, and a smaller flight deck. One of the biggest and most visible changes to MMA 210' cutters is the replacement of the horizontal exhaust pipes with vertical stacks and an enlarged superstructure to support the stack. Unique to ALERT's overhaul was the installation of a prototype oily water separator system, user friendly and modern environmental protection equipment.

Coast Guard YARD tradesmen overhauled engines and reduction gears, improved berthing and messing spaces, installed new refrigeration and air conditioning units, a new marine sanitation system, and new ships service generators.

Electronics and communications upgrades included a reconfiguration of the Combat Information Center making better use of existing space and installation of special navigation and plotting radar equipment.

The Major Maintenance Availability program began at the YARD a decade ago with the arrival and decom-

missioning of the Cutter ACTIVE on October 1, 1984. Since 1984, five "A" class 210' cutters and four "B" class ships have undergone renovation and upgrade. (The "A" and "B" class are vessel classifications based on engineering design.) The other MMA cutters include CONFIDENCE, RELIANCE, VIGILANT, DILIGENCE, VIGOROUS, VALIANT, STEADFAST and ALERT.

As YARD personnel completed each project, figures reflected a lower comparable cost on each cutter, even though increasingly more extensive renovation was needed. Overall cost avoidances on the last four cutters were \$800,000, \$1,700,000, \$2,200,000 and \$2,300,000 respectively, showing an active continuous improvement program.

Doing Business Better

The pursuit of total quality is a continuous process, a journey with no end. Much of the YARD'S talent and energy in the mid-1990's is directed towards the goal of doing business better. The intent of these quality efforts is to increase the YARD's value to the Coast Guard, to improve relationships with customers and partners, to improve the flow of work and support services for the waterfront employees, and to build on the strengths of Curtis Bay as a Coast Guard community and business center. Such a plan includes the

YARD's goal of ISO 9000 certification and the pursuit and achievement of the Malcolm Baldrige National Quality Award. The former objective is a set of international Quality Management and Quality Assurance standards which can be applied to any business firm to improve work processes and increase work quality. The latter objective is considered the premier award recognizing top quality performers among American businesses. Management lead teams have been formed to chart the path and make adjustments to the shipyard's continuing quality journey. The YARD's start is commendable; its future course, an intense, but challenging, goal!



In pursuit of the Malcolm Baldrige National Quality Award, the YARD participated in an intensive training and self-assessment course. Personnel used sophisticated computer software to help in the self-assessment exercise.

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Closing Remarks

The Coast Guard YARD has come a long way since LT Moore built the first wooden sheds on the banks of Arundel Cove. The YARD has made significant achievements throughout nearly a century of service.

In the history of the Coast Guard, there has been no finer group of people than the YARD family who has served with such pride and dedication. The hope now is for another 100 successful years as the U.S. Coast Guard moves into the 21st century. With a conscientious goal to satisfy its customers and a commitment to produce a competitive product, the YARD will continue to prosper and further build on its renowned reputation of quality "Service to the Coast Guard Fleet!"

Marketing the YARD to internal Coast Guard customers.

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*Early Arundel Cove photos courtesy of Coast Guard Academy Museum
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