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and four issues of *THE NORTHERN MARINER/LE MARIN DU NORD:*
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In this issue of the *Argonauta*

Editorial

by Isabel Campbell / Colleen McKee

This winter issue is filled with gifts from our wonderful contributors. Tom Tulloch has created a beautifully illustrated, well-researched piece on the Halifax Graving dock and explosion which is based upon the paper he gave at an earlier Society conference. We are especially grateful that he took the time to track a myriad of references which greatly enhances the long term value of this piece for maritime history researchers who may wish to investigate this topic further. We also welcome another meticulous original research article on captured German U-boats in the U.S. Navy by Derek Waller which will serve as a reference work for many researchers in the field.

Doreen Larsen Riedel sent us a tribute to "one of Larsen's boys", Dean Hadley, who passed away last July. We look forward to more of Doreen's pieces as she and her brother carefully work at identifying the people and places in the many photos found in the fonds of their father, Henry Larsen, which are held at Library and Archives Canada. We hope that one of our members will nominate Henry Larsen for one of the North West Passage Hall of Fame Awards with calls to be made for next year's awards later at this link: http://www.nwphalloffame.org

Please join us in congratulating our President, Richard Gimblett, on the Meritorious Service Cross, a well-deserved tribute for his many years of service. Please also see Richard's President's Corner for other welcome news, including details about his Christmas cruise with Muriel. Richard is calling for nominations for the Executive and letting us know that *TNM* will soon be available on-line, though issues will be a bit delayed. I think we can all agree that this journal is always worth the wait!

Mark your 2019 calendars for the 22-24 August conference in Thunder Bay, Ontario and then consider the call for papers for the Society's next conference. The Society welcomes students, new scholars, and old friends at this annual gathering. We thank Executive member Michael Moir and Chris Madsen for their outstanding organizational work in putting together this call and organizing this year's conference. We hope it will be as successful as last year's was.

As usual this issue includes a number of other announcements, for NASOH (our sister organization), for the Naval Dockyard Society Conference, and related items which we hope you will find useful. Please send us your articles, book chapters, and book announcements, your research plans, and any other items of interest to other members. *Argonauta* is your quarterly and we aim to support the executive and all our members to best of our abilities.

Fair winds, Isabel and Colleen

President's Corner

by Richard Gimblett
richard.gimblett@me.com

Most of you will have seen my note emailed in mid-December, apologizing for the delay in distribution of *The Northern Mariner / Le Marin du nord*; for those not on the email distribution, it is reproduced for the record elsewhere in this publication. It is not my intention to dwell further on that subject in this space, other than to thank the several of you who sent me notes in response. Their overall tone of continuing support for our core mission, with some specific helpful suggestions to see us through this situation, gives me confidence that there exists a goodly measure of patience within the Society that "members' benefits" is not an end unto itself but rather a means to the promotion of nautical research. That said, to borrow an analogy, I do not take this as licence to sit back and listen to the orchestra play while the ship goes down — my priority for 2019 is enabling the timely distribution of the journal.

Moving on, I had indeed been planning to write on "anything else" for a change, and do have a couple of themes to explore in future columns, but I have decided to set them aside for now, to touch instead upon some more personal subjects to close the year out and launch into the new one.

I find myself putting the finishing touches to this Corner a week before Christmas, sitting in the Explorers' Lounge of the ocean-going *Viking Star*, embarked for a "holiday cruise" of twenty-one nights out of San Juan, Puerto Rico, going up the Amazon to Manaus and return. In all my years in the Navy, I somehow managed never to be away from home for Christmas. New Year's was a different story, what with pulling the occasional Officer of the Day Duty Watch, and memorably flying out from Halifax in 1991, bound for Dubai and the Gulf War that in due course would fix me on a career as an historian and lead to my engagement with the Society. It helps immensely that I am joined by Muriel, who — no offence to all the chaps with whom I bunked in the Wardroom — is proving to be the best cabin-mate I have ever had! Bonus (and this is not an advertisement for Viking) is that this "lounge" is more than a nod to its subject theme, in being a large and especially well-appointed library of volumes on exploration. It has, for example, many titles from the Hakluyt Society, and decorated with artefacts (admittedly reproductions) of Roald Amundsen and his Arctic explorations — I do feel quite at home!

I am inspired to make a record of this voyage by recent examples of Society members: George Bolotenko's memoir in the previous *Argonauta*, and the email-blogs that Faye Kert does of her travels. Knowing my several failed attempts to keep a diary, I am surprised to find myself turning to InstaGram. To the consternation of Sam McLean, I have never been intrigued by any of FaceBook, Linked-In or Twitter, but there is something that appeals to me in this visual format of literally making a picture worth a thousand words. And beyond the venue to share my own experiences, I am amazed at the number of maritime-related accounts that are out there, historical as well

as in the present. I am not sure how to harness this medium for the Society, but I urge any other sceptics out there to give it a try in broadening your horizons.
I expect still to be afloat when this number is published early January, and would be delighted to have any of you who are so inclined to “Follow” me, @notthatkindofdoctor01.

On a final very personal note, you will also see elsewhere in this number the notice that in November I was awarded the Meritorious Service Cross by Her Excellency the Governor-General Mme Julie Payette, mostly for a number of things I did beyond my pay-grade for the Navy, but also recognizing my service to the historical community including this Society. I am quite humbled by this honour, and want to record my debt to you, for the opportunities and support you have provided me over the years.

Thank you,

Richard H. Gimblett, MSC, CD, PhD, RCN (ret’d)
President
CNRSPresident@cnrs-scrn.org

(Editors’ note:)
President Richard H. Gimblett sends us his photos from the lounge of the *Viking Star*, taken at sea on 20 December 2018.

A photo of the *Viking Star* lounge, 20 December 2018. Courtesy of Richard Gimblett

Richard's photo of a model ship from the *Viking Star* Lounge, 20 December 2018. Courtesy of Richard Gimblett

We encourage you to join us on facebook (now over 500) and twitter where we post links to interesting articles and announcements from around the internet. Our social media channels are where you will find time sensitive notices that are not suitable for publishing here in the *Argonauta*.

Message from the President

Dear Members,

It is with deep regret that I write to advise you that the production of *The Northern Mariner / Le Marin du nord* continues to suffer from the longstanding delays due to the familiar litany of reasons. Despite all of our good intentions, I fear these are in danger of becoming systemic, so I want to assure you that I will be meeting with the Editorial Team and Council early in the New Year to assess options as to how to better our processes going forward. The intent will be to maintain a peer-reviewed open-access journal promoting high quality research on maritime subjects by and about Canadians; beyond that, all options are open for discussion! There is no North American equivalent to *TNM / LMN* in terms of peer review and scholarly impact, and its continued publication is so critical to the core mission of the CNRS that the future existence of the Society and its journal are closely entwined.

For the time being, I am advised that 2018 issue number 2 should be mailed out in the surface post very soon, hopefully to reach many of you by Christmas. The Editorial Team has sufficient material in hand to meet the quotient for numbers 3 & 4, and is confident for the future. The journal will go "open access" (ie, with no more embargo on past numbers) as planned in January 2019.

With that, I do encourage you to make your renewal for 2019 soon if you have not already done so. Recall please that not all your donations go just for the printing and distribution of the journal, but that there are many other good uses for the moneys going to our broader aims of promoting superior nautical historical scholarship in Canada. Please be generous in your thoughts and with your cheque book.

Wishing you and yours all the best for 2019,

Richard Gimblett
President
CNRSPresident@cnrs-scrn.org

The Halifax Graving Dock and the 1917 Explosion

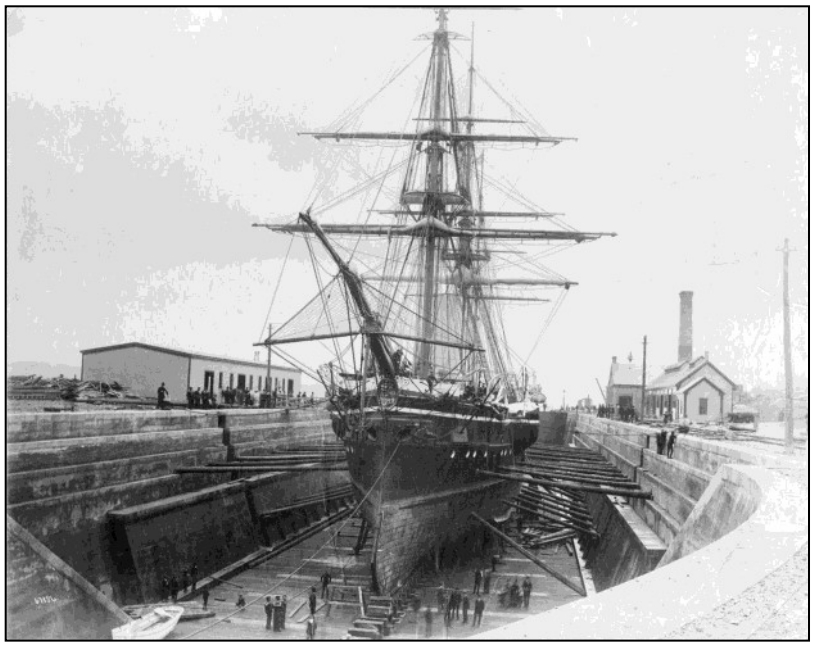
by Tom Tulloch

Introduction

The Halifax Graving Dock is today a National Historical Civil Engineering Site that was the largest dry dock on the Eastern seaboard of North America when built. It was constructed in an age of square rigged sailing ships but with an eye to the future, and it is the only remaining infrastructure of the Victorian-era navy in Halifax - it still performs the role for which it was designed over a century-and-a-quarter ago. The dry dock remarkably survived the disastrous Halifax Explosion in 1917, dramatically described as "a ravaging blast like the breath of a destroying angel."[1] The explosion was the largest man-made blast to that point in history and ground zero was a mere 300 yards from the dry dock. This essay will examine the genesis of the Halifax Graving Dock, the immediate impact of the explosion on the graving dock and shipyard, and what that event would mean for its future.

Origins

Work on the Halifax Graving Dock began in 1886. The dock received its first vessel in September 1889: the 2,770-ton *Comus*-class screw corvette HMS *Canada* – proving that RN Public Affairs was active even back then.

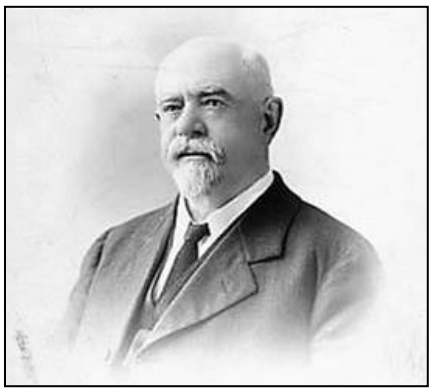


HMS *Canada* 1889 – a Royal Navy *Comus*-class screw corvette. The first vessel to use the newly built Halifax Graving Dock

The strategic vision to create such a large facility at that time is impressive. Although the industrial revolution of the 19th century and especially its advances in steam power and metallurgy had made larger steel-hulled steamships a possibility, wooden ships still dominated the international shipping trade in the 1870's. The vast majority of vessels operating out of Halifax Harbour during the 1860's and 1870's were wooden sailing vessels; picture the classic clipper ships like *Cutty Sark*, along with fishing schooners and various other wooden merchant vessels.

However, larger, steel-hulled ships were foreseen by some as the future, both in the Royal Navy, for which Halifax was the summer base for its North American and West Indies Station, and in the merchant service. The Chebucto Marine Railway Company, which opened at Dartmouth Cove in Halifax Harbour in 1859, could initially handle vessels up to 800 tons. Ships were docked by drawing them out of the water in a cradle along an inclined railway, hence the name. A larger marine railway was added in 1861 with a capacity of 1,500 tons, which was later increased to 2,500 tons in 1876. But by the 1880's larger ocean liners of over 300 feet long and displacing nearly 12,000 tons were beginning to see service, and pre-dreadnought battleships such as the *Admiral*-class would weigh in at 10,600 tons and stretched 330 feet long. These ships were far too big to be able to be accommodated in the facilities then existing in Halifax at Dartmouth Cove.

The Halifax Graving Dock Company was incorporated in 1885, under Chairman and Managing Director Samuel Manners Brookfield, a prominent Halifax entrepreneur, with its head office in London, England. In addition to private, primarily English capital investment amounting to £160,000 (about £14 million or $25.5 million CAD today), the Company secured an annual subsidy of $10,000 (about $270,000 CAD today) for twenty years from the British Admiralty which permitted the Admiralty to stipulate the capacity of the dry dock, as well as giving the Royal Navy docking priority over other vessels at the prevailing rates.[2] To this was added an additional $10,000 annual subsidy from each of the Dominion Government and the City of Halifax, also for twenty years.[3] The largest ship in the Royal Navy at the time was the ironclad battleship HMS *Inflexible* at 344 feet overall length and displacing 11,880 tons full load; the dry dock was designed to accommodate such a vessel comfortably.[4]



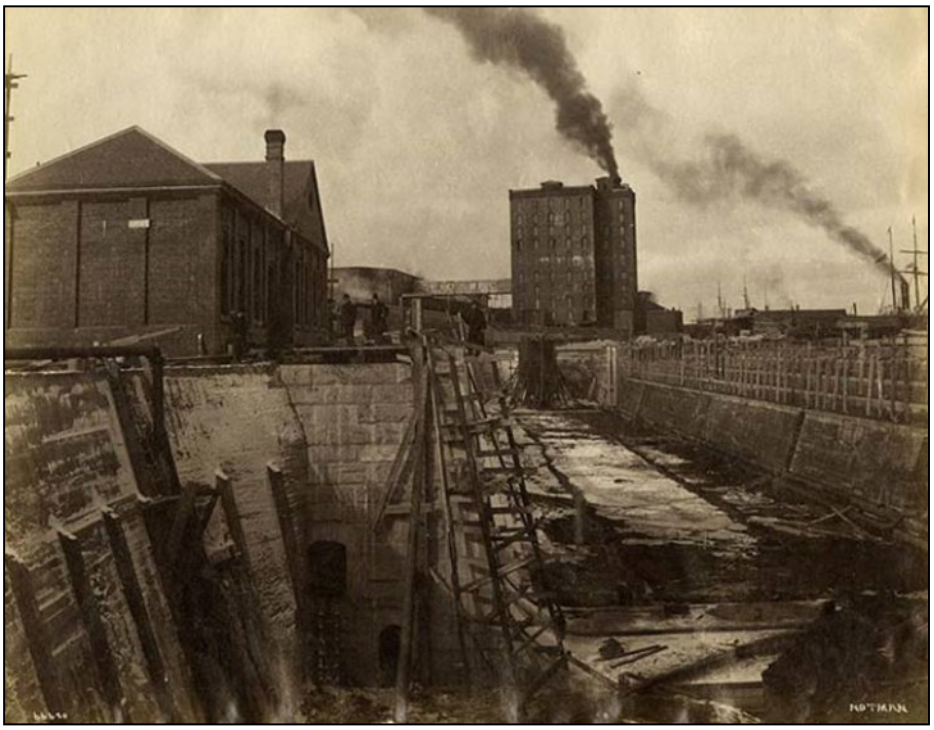
Samuel Manners Brookfield
Halifax Graving Dock Company Chairman and Managing Director

Halifax peninsula is comprised mainly of Cambrian -Ordovician slate bedrock, and the dock had to be blasted out of that solid rock using dynamite as well as manual labour. The dry dock was designed by the English engineer John Frederick La Trobe Bateman[5] with the work being done by Pearson and Son of London, in association with Samuel Brookfield's building firm in Halifax. The excavated rubble was used to create an embankment for a two-acre pier area where the machine shop would be located. The water side would

Portion of the original plan of the Halifax Graving Dock

have four wooden jetties each served by a rail siding, with an alongside depth of 30 feet.

The dock itself was lined with concrete with a minimum thickness of 3 feet; and ashlar, which is square-cut granite stone, was used for the entrance, altar tops (the steps in the wall) and coping (the top of the retaining walls). Unchanged today, the dock is 567 feet long at the top, which shortens to 549 feet at the floor as the landward end is stepped. The gate is 89 feet wide, with the dock itself being 102 feet wide at the top and tapering to 70 feet at the floor. The maximum draught of ship that can be accommodated is 27 feet, limited by the depth of water over the entrance sill at high water. The basin holds 9 million gallons of water, and the original pumps fitted were capable of emptying it in just less than 4 hours – a rate of 38,350 gallons per minute.[6]

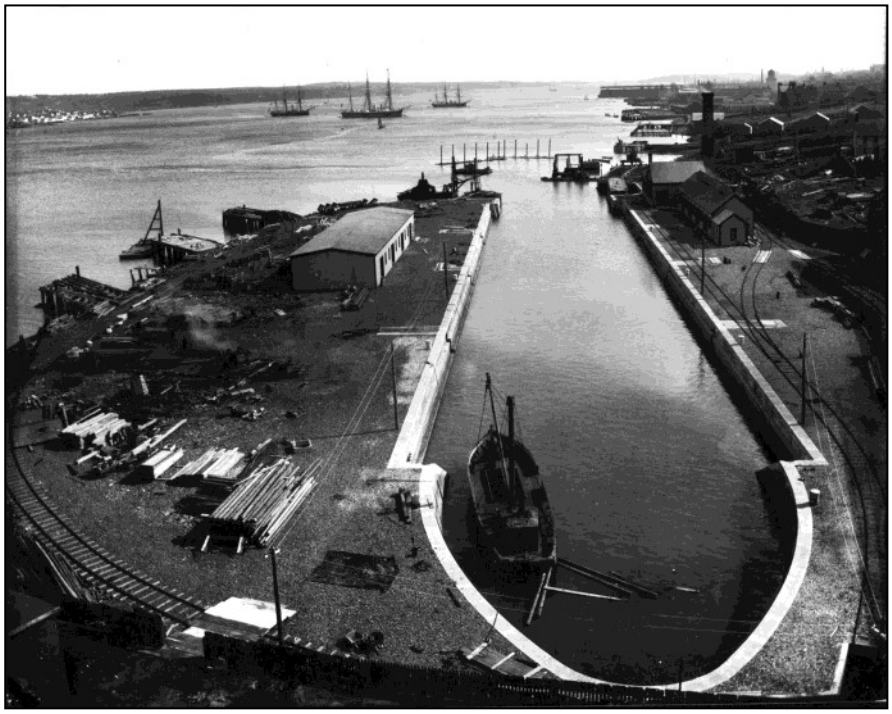


The Halifax Graving Dock under construction circa 1888-89

The original dock gate or caisson was constructed by David J. Dunlop & Company at the Inch Shipyard on the Clyde in Scotland. Designed as a ship caisson resembling the hull of a ship, it was transported to Halifax and assembled on site in 1888, within the dry dock itself. It measured 100 feet wide by 23 feet thick and 35 feet deep. In use it was floated into position at the dock entrance, and then flooded to settle it into the stone keyways at the sill, forming a watertight seal. Once in place the dock would be pumped out to land the ship on the granite keel blocks within, permitting work on the hull to proceed. When the dry dock was flooded and open, the caisson was moored in a specially built indentation in the adjacent quayside. The original Dunlop gate lasted over 100 years, eventually being replaced in the mid-1990s.[7]

The caisson or gate for the Halifax Graving Dock being assembled within the dock itself circa 1888-89

Upon completion in 1889 the Halifax Graving Dock was the largest such facility on the East Coast of North America. It could handle the Royal Navy's largest battleships at the time, up to the advent of the *Orion*-class dreadnoughts in 1911, at 581 feet long and drawing 31 feet. When the Halifax Graving Dock Company purchased the Chebucto Marine Railway Company in 1890, the combined facilities constituted one of North America's most modern ship repair yards.



The Halifax Graving Dock circa 1890-95

For the next two decades the dry dock would service many Naval and merchant vessels, with photographic evidence illustrating a wide range of vessels docked within it, including the S.S. *Mackay-Bennett* that recovered bodies from the *Titanic*; the U.S. Navy's first battleship USS *Indiana;* the first Halifax based ship of the newly created Royal Canadian Navy, the cruiser HMCS *Niobe*; and various flagships of successive Commanders-in-Chief of the North American and West Indies Station such as HM Ships *Blake* and *Crescent*.

HMCS *Niobe*, the first Halifax based ship of the Royal Canadian Navy circa 1911. Taken from the upper levels of the Acadia Sugar Refinery

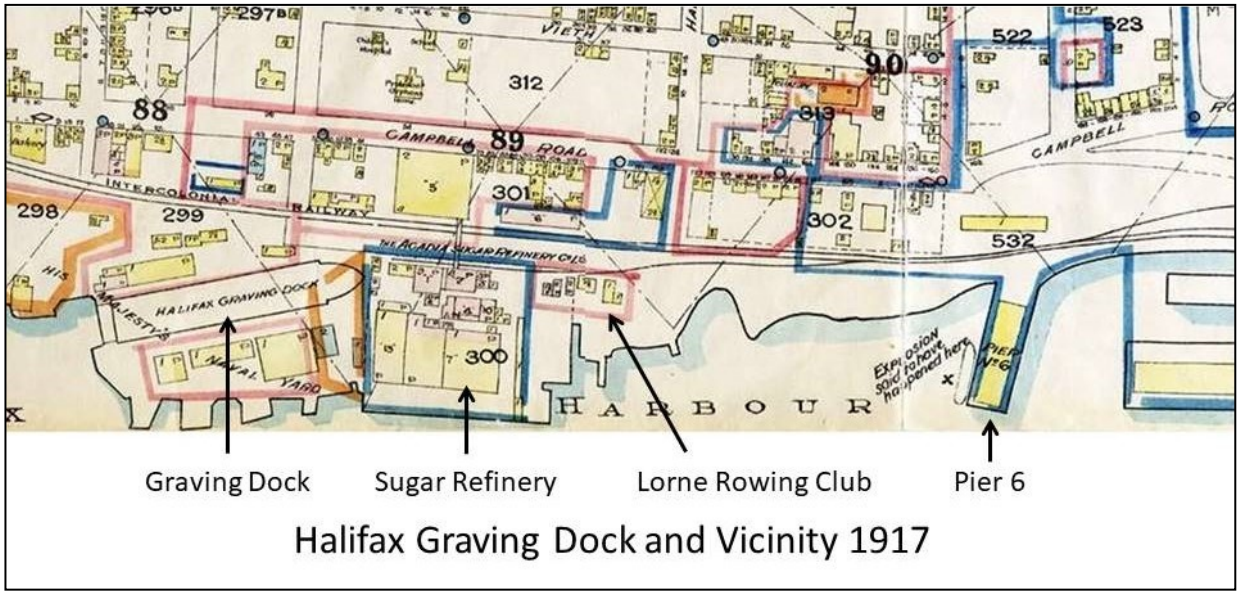
Immediately north of the graving dock was located the Acadia Sugar Refinery, a ten-story brick building and wharf facilities that was completed in 1884, five years before the dry dock was built. The tallest building in Canada east of Montreal, it too had been built by Samuel Brookfield. The upper floors of the refinery provided the elevation for many of the high angle images that we have of the graving dock's early years.

With the creation of the Royal Canadian Navy in 1910, the Canadian Government took on responsibility for maintaining the naval facilities in Halifax, including the commitment to the special agreement with the Halifax Graving Dock Company for its ongoing availability to the Royal Navy.[8] During the First World War the Graving Dock and the Chebucto Marine Railway (by then renamed the Dartmouth Marine Railway) were a key part of the maintenance and repair infrastructure for the trans-Atlantic convoys – a role they would repeat in the Second World War.

Explosion

Everything of course changed on 6 December 1917. The details of the Halifax Explosion itself are well known and I do not intend to repeat them, apart from those which directly relate to the Halifax Graving Dock.

SS *Mont Blanc*, abandoned by her crew shortly after the collision with SS *Imo*, was determined to have come to rest on the south side of Pier 6 before exploding. The pre-explosion geography of the immediate vicinity south of Pier 6 included a relatively vacant stretch of waterfront extending about 200 yards southeast of the pier; the boathouse and small piers of the Lorne Amateur Aquatic (Rowing) Club; then the Acadia Sugar Refinery; with the Graving Dock and its associated support buildings and offices immediately adjacent to the Sugar Refinery on its southern side. The railway line ran along the waterfront just on the landward side of these facilities, with sidings serving the refinery, the dry dock, and their respective piers. Campbell Road, now Barrington Street North, ran parallel to the railway tracks.

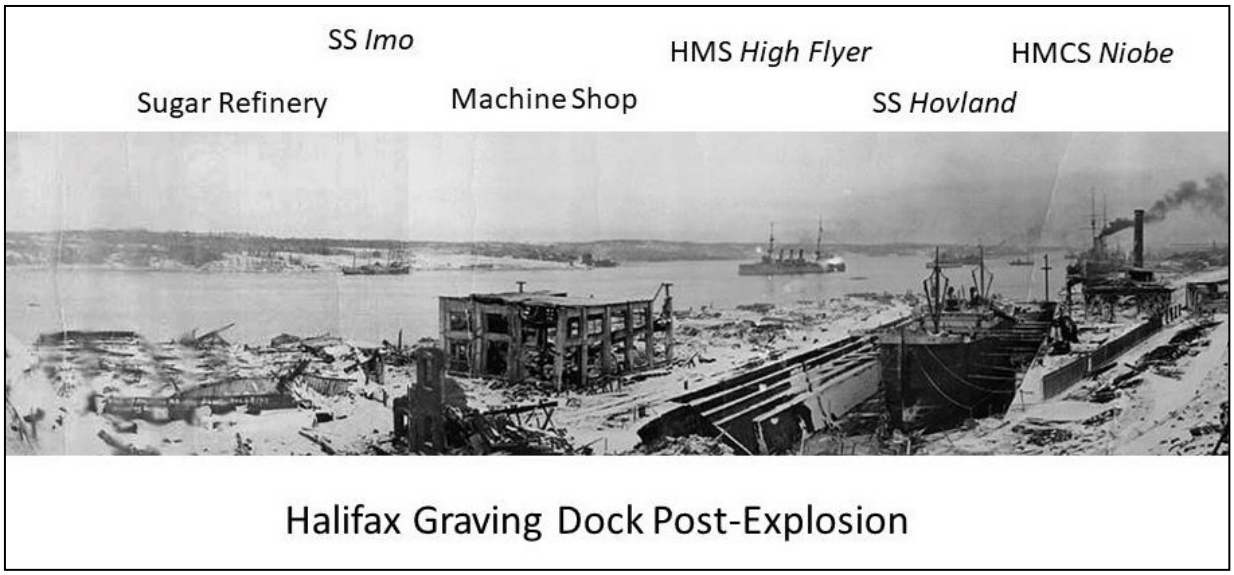


The Halifax Graving Dock and vicinity just before the Halifax Explosion 1917

Map of Graving Dock and Explosion Area

A number of vessels were in the vicinity of the Graving Dock that morning. The Sugar Refinery tug *Ragus* was at the Refinery wharf along with the steamer *Picton*, which was unloading, awaiting access to the Graving Dock. The RCN minesweeping trawler *Musquash* and the tug *Douglas H. Thomas*, along with another steamer, the *Middleham Castle* were at the Graving Dock wharf, *Middleham Castle* having just come out of the dock and being readied for return to service. Also at the Graving Dock wharf for repairs was the coal carrier *J.A. McKee*. Various tugs and harbour craft such as the *Stella Maris,* with two barges under tow, *Wasper B,* the Shipyard's own tug *Sambro* and others bustled about.[9] The 300-foot long Norwegian general cargo ship SS *Hovland* lay on the blocks inside the Graving Dock, with the caisson gate in place and the dock dry.

It is likely that the bulk of the Sugar Refinery building sheltered the Graving Dock somewhat from the blast, as it lay directly between ground zero and the Graving Dock. Also, some of the Graving Dock support buildings, most notably the large Machine Shop just northeast of it would too have had some sheltering effect. The Sugar Refinery itself was reduced to rubble in an instant, along with the Machine Shop and the other Graving Dock buildings.



The Halifax Graving Dock and surrounding area just after the Halifax Explosion 1917

Rear Admiral Bertram Chambers, the Royal Naval Principal Convoy Officer and Senior Naval Officer, Escorts in Halifax at the time described the scene: "The dry dock was in the heart of the worst area, and the large sugar refinery close by was merely a pile of bricks, amongst which fragments of bodies could be discerned, the dock labourers having used the building as a vantage ground to view the unusual spectacle of a ship on fire."[10] Over 40 Graving Dock employees were killed.[11] On board the *Picton* at the Sugar Refinery wharf, 53 of the 68 longshoremen that were unloading the ship were killed, and the ship set ablaze. *Wasper B* blew up, *Musquash* was set adrift and on fire, and the *Stella Maris* was driven ashore with 19 of 24 killed.[12] The tug *Sambro* was sunk. *Ragus*, at the Sugar Refinery wharf, was turned upside down, its entire crew of six killed. Pier 6 was gone.[13] The Lorne Rowing Club had vanished. Fires broke out throughout the area affected by the explosion, which were still raging fiercely in the vicinity of the dry dock and the sugar refinery at mid-day.

In the Graving Dock, the explosion swept across the upper deck of the *Hovland*, severely damaging masts, rigging and superstructure and killing five of the crew. The bottom of the dock itself was filled with about six feet of sand, mud and silt, which was washed into it from the harbour by the tsunami wave caused by the explosion.[14] The *Hovland*'s hull however was protected by being below the level of the coping of the Graving Dock and therefore out of the direct main blast. Rear Admiral Chambers described the *Hovland* the next day as follows: "Her decks were bulged in and funnel over the side, but she was not hopelessly damaged, nor had she suffered by the fire which had burnt itself out all around her."[15] The ship was therefore, remarkably, able to be repaired and returned to service just six weeks after the explosion, in response to wartime pressure to resume convoy duty as quickly as possible.

The Shipyard's tug *Sambro* was refloated, refitted and renamed *Erg*, only to be sunk again in 1943 during the Second World War in a collision with the Norwegian freighter *Norelg*, with a death toll of nineteen men. She was raised by crane later that year for body recovery, and laid to rest near Roach Cove in Bedford Basin, where she remains today.

Aftermath

The initial survey of the Graving Dock after the explosion suggested that both the dock and its associated repair facilities had been extensively damaged. As a result, Samuel Brookfield offered to sell the dock in its damaged condition to the Government of Canada for $1.25 million (about $20 million today) – an offer which the Government rejected after two weeks of deliberation. After further examination however, it was discovered that the damage was not as extensive as originally thought, and limited primarily to the above-ground facilities. The Graving Dock was therefore in operation again just two months after the explosion.[16] The $1.25 million estimate was an underestimation of its actual worth.

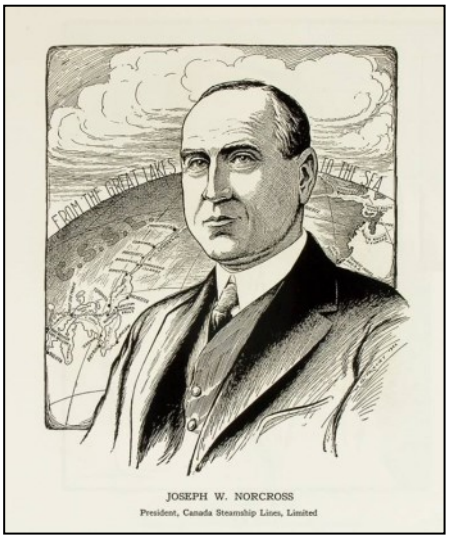
In early 1918 Brookfield applied to the Government of Canada for funding under the War Measures Act to repair and reconstruct the dry dock. The Government responded that the Halifax Graving Dock Company would be responsible for contributing $111,000 (the amount of the insurance it carried) towards the repairs, and that the Minister of Public Works would defray the balance of costs from the War Appropriation after determining the exact nature of the work required. However, although the Company initially responded favourably to these terms, Brookfield objected to the $111,000 required from Company funds, offering instead to sign over the Company's insurance policies to the Government. How this would have differed from simply paying the insurance settlement to the Government is unclear, however the arrangement was deemed unacceptable to the Government and the deal was never finalized.[17] Other plans were in the works.

The Halifax Graving Dock Company subsequently carried out some repairs to the facility, but the Minister of Public Works was dissatisfied by the progress. Meanwhile the Government was developing plans to create an integrated construction and repair facility for steel ships on the East Coast. The Government therefore decided to take advantage of the situation and to seize the Halifax Graving Dock facilities. This was done by expropriation, with $1.25 million offered to the Company in compensation - the same amount as the original offer by Brookfield to sell the dry dock to the Government when damages were thought to be more than they actually turned out to be.

Brookfield and the other shareholders of the Graving Dock Company contested the expropriation, but succeeded only in gaining a slight increase in the compensation, to $1.5 million.[18] The expropriation took effect in May 1918, five months after the explosion.

One month after the expropriation of the dry dock the Government leased and then sold the facility to a Montreal-based group of investors led by Roy Wolvin and Joseph Norcross, co-founders of Canada Steamship Lines and senior executives in the Collingwood Shipbuilding Company in Ontario. They established Halifax Shipyards Limited in the summer of 1918. Of particular note, Wolvin and Norcross had been behind two pre-expropriation offers to purchase the Graving Dock in January and in April 1918 for $1.0 million, both of which had been turned down by Samuel Brookfield.[20]

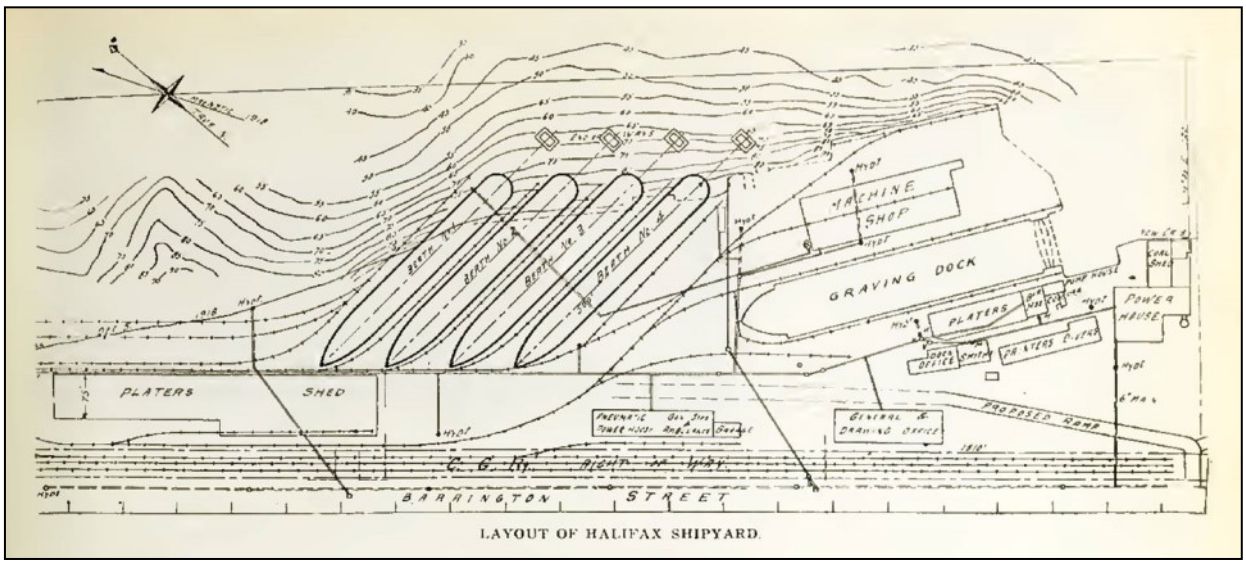
Roy Mitchell Wolvin, President of Halifax Shipyards, 1918



Joseph W. Norcross, Vice-President and Managing Director of Halifax Shipyards,

Wolvin had been approached by the Canadian Government Minister of Marine, C.C. Ballantyne, to establish a steel shipbuilding facility on the East Coast. He agreed on condition that he receive the damaged, expropriated dry-dock along with sufficient land to construct a shipbuilding plant, as well as contracts for four steel hulled Government ships.[21] It is unclear whether any negotiations had been going on before the explosion happened, however it is evident that the Canadian Government seized the opportunity to wrest control of the dry dock from the predominately London-based Graving Dock Company, with a view to placing it under Canadian ownership.

The destruction of the Sugar Refinery in the blast cleared the way for a series of four 500-foot long building slips, a mold loft and a plate shop to be built just north of the dry dock. This would permit the construction of steel hulled ships as envisioned by the Government and as discussed with Wolvin and Norcross. A new Machine Shop was built on the northeast side of the dry dock to replace the one destroyed in the blast, and

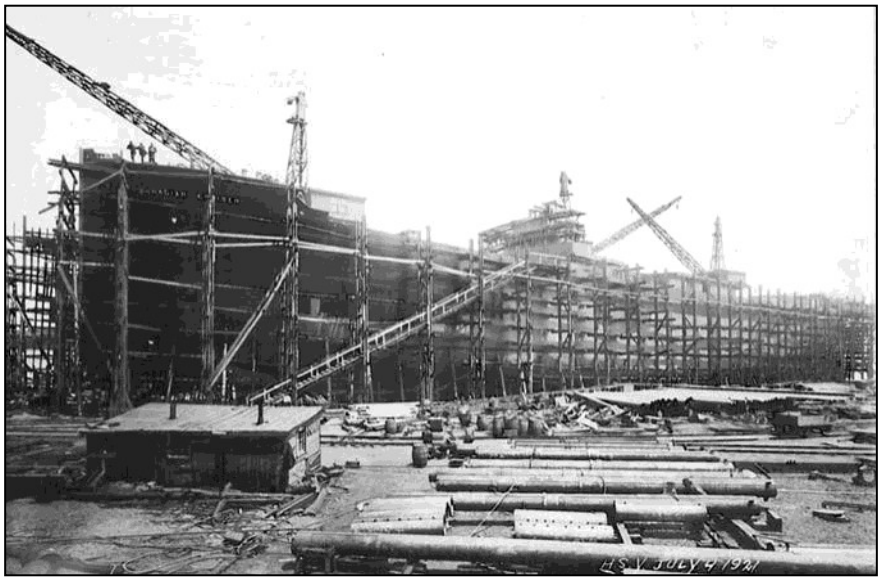


The planned layout of the Halifax Shipyard circa 1919 following the 1917 Halifax Explosion

a single wharf replaced the four piers that had previously existed there. An upgraded power generating facility was added, using eight water tube boilers to run three turbo generators.

The first steel-hulled ship was launched at the Halifax Shipyard in September 1920: the S.S. *Canadian Mariner*. The vessel was a 400-foot-long, 5,400-ton general cargo ship that was built for Canadian Government Merchant Marine Ltd. Her sister ship *Canadian Explorer* along with the 7,200-ton *Canadian Cruiser* and *Canadian Constructor* were launched the following year. They would remain the largest steel ships built in Canada until the end of the Second World War. These four vessels fulfilled the terms of the contract that the Government of Canada had signed with Wolvin and Norcross as part of their acquisition of the dry dock and adjacent lands in 1918. All four vessels were sold off by the Canadian Government in the 1930's, and the fate of each during the Second World War was both remarkable and violent. *Canadian Constructor* would serve in convoys during the Battle of the Atlantic and survive an attack by Stuka dive bombers before later being destroyed by fire; *Canadian Explorer* was scuttled in Genoa harbour by the retreating Germans after being sold to Italy and renamed *Achille Lauro*; *Canadian Cruiser* was sunk off the Seychelles by the German pocket battleship *Admiral Scheer*; and *Canadian Mariner*, having been sold to Japan and used for resupplying Japanese occupied islands in the Pacific, was sunk by the submarine USS *Kingfish* off Formosa.

The Halifax Shipyard in 1920, having been rebuilt after the Explosion. Submarines *CH-14* and *CH-15* are shown in the Graving Dock, SS *Canadian Mariner* is alongside the Machine Shop wharf, and the whaleback barge *Atikokan* is in the foreground. The new building slips can be seen just behind the Machine Shop.



SS *Canadian Cruiser* circa 1921 – one of the first four steel-hulled ships built at the Halifax Shipyard

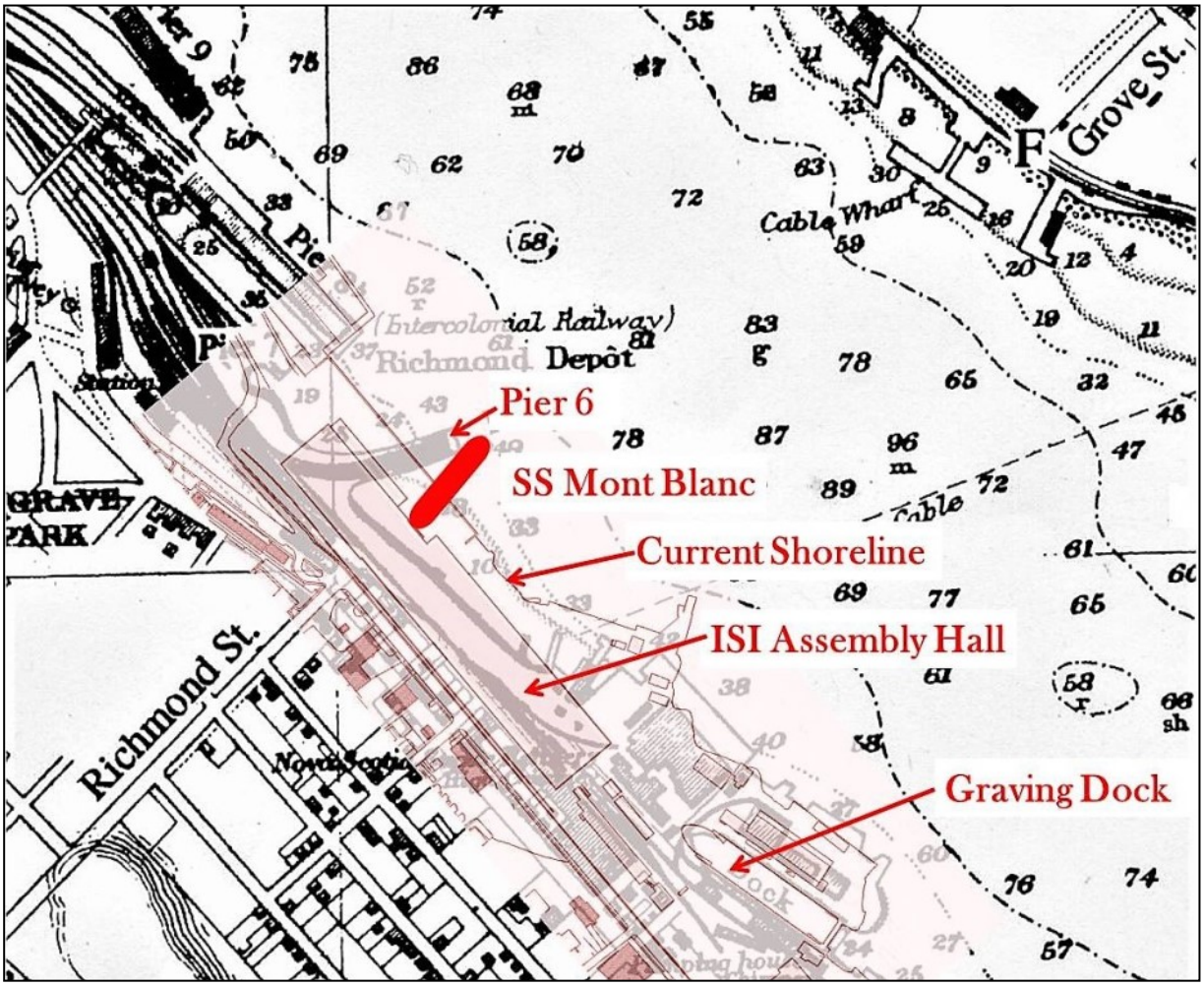
Having built these first four ships, in 1921 Wolvin and his associates merged the Halifax Shipyard with a number of coal mines and steel mills such as Dominion Steel, Nova Scotia Steel and Coal, Dominion Coal, and Dominion Iron and Steel to create the massive conglomerate, the British Empire Steel Corporation or BESCO. Ownership of the Shipyard would progress through a range of companies over the century, including Dominion Steel and Coal, A.V. Roe Canada and Hawker Siddeley Canada to finally being acquired by its current owners, Irving Shipbuilding, in 1994.

The four initial cargo ships were followed a decade later by the *N.B. McLean*, built at the Halifax Shipyard for the Department of Transport's Marine Service in 1930. This illustrates an early example of the boom-and-bust cycle that would plague Canadian shipbuilding throughout the 20th century – most recently evident in the saga of Saint John Shipbuilding and the *Halifax*-class frigates during the 1990's. The *N.B. McLean* was the first icebreaker to be built in Nova Scotia and, at 3,200 tons, one of the largest in the world at the time of launch. She would serve for 59 years. After the *N.B. McLean* there was a subsequent wait of 15 years until the next ships were built.

The four *Tribal*-class destroyers, *Micmac*, *Nootka*, *Cayuga* and *Athabaskan* were launched near the end and just after the Second World War and marked the beginning of warship construction at the Halifax Shipyard that continues today.

Under the National Shipbuilding Strategy, Irving Shipbuilding was selected in 2011 as one of two shipyards in Canada to build ships for recapitalizing the Government fleets. One of the conditions for this selection was that the Halifax Shipyard be modernized to be able to build technologically complex warships at that location. As such, a large new Assembly Hall was built in the area extending north from the dry dock past where Pier 6 had been located. Although some land was reclaimed during this process, the location of where the outer half of Pier 6 would have been has remained untouched. Likewise, the footprint of where the *Mont Blanc* was when she exploded – forming

'ground zero' of the explosion - lies outside the current Assembly Hall, with the eastern two-thirds of the ship's footprint in open water and the western third on the reclaimed pier area beside the Assembly Hall. Some historians have asserted that the new Assembly Hall was built on top of ground zero, obliterating it, however that is not the case. This is clearly illustrated by the Halifax Harbour chart from the period of the explosion, overlaid with the site plan of the current Halifax Shipyard.



British Admiralty Halifax Chart 1416 (in black) showing the locations of Pier 6, SS Mont Blanc and SS Imo, overlaid with a scale site plan of the current Halifax Shipyard (in red), illustrating their relative positions

Summary

The Halifax Graving Dock was the creation of a visionary group of investors that foresaw the need to be able to dock the larger, heavier ships of the future in one of the Royal Navy's most strategically important overseas bases. Geographically constrained by surrounding facilities, it would have likely remained purely a ship repair facility had the Halifax Explosion not occurred, which physically cleared the surrounding waterfront of existing structures and permitted the expansion of the shipyard to include large scale shipbuilding.

The robust nature of the composition and construction of the dry dock and its relatively sheltered location enabled it to survive the blast, while the ruthless opportunism displayed by the Government of Canada provided the impetus to capitalize on the disaster to establish a Canadian-owned shipbuilding and repair facility in Halifax that endures today.

The Halifax Explosion was therefore a pivotal event in the history of the Halifax Shipyard, directly affecting its role, footprint and fortunes in an enduring fashion. Meanwhile the dry dock prevails, and today continues to serve the purpose for which it was created 128 years ago.

The Halifax Graving Dock in 2017 showing HMCS *Ville de Quebec* in the dry dock

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19. James Pritchard, *A Bridge of Ships: Canadian Shipbuilding During the Second World War* (Montreal and Kingston: McGill-Queen's University Press, 2011), 57-59.
20. Settle, "Halifax Shipyards 1918-1978," 27.
21. Suzanne Morton, "Labourism and Economic Action: the Halifax Shipyards Strike of 1920," *Labour/ Le Travail* 22 (Fall 1988): 84.

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Title/ Caption	**Accreditation**
HMS *Canada* 1889 – a Royal Navy *Comus*-class screw corvette. The first vessel to use the newly built Halifax Graving Dock	*HMS Canada in dry-dock, Halifax Graving Yards, Halifax, Nova Scotia*, 1889, Notman Studio - Nova Scotia Archives, Accession No. 1983-310, Number 67386, Negative N-1289, Accessed 12 Aug 2018 (https://novascotia.ca/archives/Notman/archives.asp?ID=599)
Samuel Manners Brookfield - Halifax Graving Dock Company Chairman and Managing Director	Harry J. Moss / Library and Archives Canada / PA-030839 Restrictions on use: Nil Copyright: Expired Accessed 12 August 2018 (http://collectionscanada.gc.ca/pam_archives/index.php?fuseaction=genitem.displayItem&lang=eng&rec_nbr=3213112)
Portion of the original plan of the Halifax Graving Dock	Irving Shipbuilding Inc. Archives, Halifax.
The Halifax Graving Dock under construction circa 1888-89	*Halifax Graving Yard under construction, Halifax, Nova Scotia*, 1888-1889, Notman Studio/ Nova Scotia Archives, Accession No. 1983-310, Number 66419, Accessed 12 August 2018 (https://novascotia.ca/archives/notman/archives.asp?ID=587)
The caisson or gate for the Halifax Graving Dock being assembled within the dock itself circa 1888-89	*Halifax Graving Yard under construction, Halifax, Nova Scotia*, 1888-1889, Notman Studio/ Nova Scotia Archives, Accession No. 1983-310, Number 66418, Accessed 12 August 2018 (https://novascotia.ca/archives/notman/archives.asp?ID=586)
The Halifax Graving Dock circa 1890-95	*Dry-dock looking south, Halifax Harbour, Halifax, Nova Scotia*, contact print, Notman Studio/ Nova Scotia Archives, Accession No. 1983-310, Number 67518, Accessed 12 August 2018 (https://novascotia.ca/archives/notman/archives.asp?ID=602)

Map of Graving Dock and Explosion Area	Map image from Bing Maps. Accessed 12 August 2018. (https://www.bing.com/maps/aerial) Additional annotations provided by the author.
HMCS *Niobe*, the first Halifax based ship of the Royal Canadian Navy circa 1911. Taken from the upper levels of the Acadia Sugar Refinery.	*HMCS Niobe in drydock, Halifax*, 1910-11, Notman Studio Nova Scotia Archives, Accession No. 1983-310 20205, Negative No.: N-1649, Accessed 12 Aug 2018 (https://novascotia.ca/archives/RoyalNavy/archives.asp?ID=110)
The Halifax Graving Dock and vicinity just before the Halifax Explosion 1917	*Plan showing devastated area of Halifax City, N.S.*, 1918, Nova Scotia Board of Insurance Underwriters/ Nova Scotia Archives V6/240 - 1917 Halifax loc.4.2.3.2 / Negative: O/S N-111, Accessed 12 August 2018 (https://novascotia.ca/archives/explosion/archives.asp?ID=21)
The Halifax Graving Dock and surrounding area just after the Halifax Explosion 1917	*Vue nord-sud des dommages causés par l'explosion d'Halifax*, Library and Archives Canada / C-019944 Restrictions on use: Nil Copyright: Expired Accessed 12 August 2018, (http://collectionscanada.gc.ca/pam_archives/index.php?fuseaction=genitem.displayEcopies&lang=eng&rec_nbr=3623023&title=Vue+nord- sud+des+dommages+caus %C3%A9s+par+l%27explosion+d%27Halifax.+&ecopy=c019944)
Roy Mitchell Wolvin, President of Halifax Shipyards, 1918	Arthur George Racey, *Roy Mitchell Wolvin*, 1922, ink on paper – photoengraving, 30 x 22.5 cm, McCord Museum, Montreal QC, http://collections.musee-mccord.qc.ca/en/collection/artifacts/M20111.20
Joseph W. Norcross, Vice-President and Managing Director of Halifax Shipyards, 1918	Arthur George Racey, *Joseph W.Norcross*, 1922, ink on paper – photoengraving, 30 x 22.7 cm, McCord Museum, Montreal QC, http://collections.musee-mccord.qc.ca/en/collection/artifacts/M20111.79
The planned layout of the Halifax Shipyard circa 1919 following the 1917 Halifax Explosion	Layout of Halifax Shipyard in "Halifax Shipyards Embraces Old and New Industry," Marine Engineering of Canada IX (March 1919), 97. (no author listed)
The Halifax Shipyard in 1920, having been rebuilt after the Explosion. Submarines *CH-14* and *CH-15* are shown in the Graving Dock, SS *Canadian Mariner* is alongside the Machine Shop wharf, and the whaleback barge *Atikokan* is in the foreground. The new building slips can be seen just behind the Machine Shop.	Wallace R. MacAskill, *Halifax Shipyard*, 1920, in Then and Now: Photographs of Nova Scotia (Halifax, Nimbus Publishing Ltd., 2015), 42.
SS *Canadian Cruiser* circa 1921 – one of the first four steel-hulled ships built at the Halifax Shipyard	Image from Irving Shipbuilding Inc. Archives, Halifax.
British Admiralty Halifax Chart 1416 (in black) showing the locations of Pier 6, SS Mont Blanc and SS Imo, overlaid with a scale site plan of the current Halifax Shipyard (in red), illustrating their relative positions	BA Chart 1416 Halifax Shipyard site plan from Irving Shipbuilding Inc. 2017 Overlay constructed by author
The Halifax Graving Dock in 2017 showing HMCS *Ville de Quebec* in the dry dock	Author's personal collection

Biography

Tom Tulloch served for thirty-seven years in the Royal Canadian Navy, retiring as a Captain. He commanded HMC Ships at sea and held leadership roles at the Canadian Forces College in Toronto and on NATO operations. He deployed for UN embargo enforcement, for counter-terrorism and for counter-piracy operations throughout the Middle East and for NATO deterrence operations in the North Atlantic, being awarded the Meritorious Service Medal for his leadership in action against Somali pirates. His final appointment in the RCN was as the Canadian Naval Adviser to the United Kingdom. After leaving the Navy he was appointed Special Adviser to the President of Irving Shipbuilding and now serves as a command mentor for the RCN. He holds a Master's Degree in Defence Studies from the Royal Military College and a BA from Dalhousie University.

U-Boats in the US Navy - 1944 to 1954

by
Air Commodore Derek Waller RAF (Rtd)

Introduction

Thirteen ex-German U-boats saw some degree of service with the US Navy after the end of the Second World War. The US Navy captured its first submarine (*U-505*) at sea in June 1944. Five others (*U-234*, *U-805*, *U-858*, *U-873* and *U-1228*) had surrendered from sea to the US Navy in May 1945, and one (*U-889*) had surrendered from sea to Canada in May 1945. Two (*U-530* and *U-977*) had surrendered from sea near Argentina, one in July 1945 and the other in August 1945. A further four (*U-1105*, *U-1406*, *U-2513* and *U-3008*) had been transferred to the USA from Europe having surrendered there after the German capitulation.

The U-Boats which Surrendered from Sea in the USA

Even before any surrendering U-boats had arrived in a US port, the US Navy took early action to outline its approach to the use of any such U-boats, starting with a message from the Commander-in-Chief (COMINCH) to the Commander of the Eastern Sea Frontier (ESF) on 11 May 1945 which said:

> *As convenient deliver 1 each type surrendered U-Boat to Navy Yard Portsmouth remainder to CINCLANT* [Commander-in-Chief US Atlantic Fleet] *for Sub Base New London.* (**1**)

In the event, only five U-boats surrendered at sea to the US Navy:

U-234 - Surrendered on 12 May and arrived at Portsmouth, NH, on 19 May
U-805 - Surrendered on 9 May and arrived at Portsmouth, NH on 15 May
U-858 - Surrendered on 9 May and arrived at Fort Miles, DE, on 14 May
U-873 - Surrendered on 11 May and arrived at Portsmouth, NH, on 16 May
U-1228 - Surrendered on 9 May and arrived at Portsmouth, NH, on 17 May

The first of these five U-boats to signal its intention to surrender was *U-805*, which reported its position in the central North Atlantic at 0310 on 9 May. The destroyer-escorts USS *Otter* and USS *Varian* were ordered to intercept and escort *U-805* to Casco Bay, ME, where it arrived at 0800 on 15 May. There it was handed over to US Coast Guard cutter USCGC *Argo* for delivery to Portsmouth Navy Yard (PNY).

U-1228, was the next U-boat to report its position in the mid-Atlantic at 1022 on 9 May. The destroyer-escorts USS *Sutton* and *Neal A Scott* were ordered to intercept the U-boat on 11 May and escort it to the Casco Bay. *Sutton* and *Neal A Scott* effected the intercept at about midday on 11 May. After encountering bad weather during the transit, USS *Sutton* departed on other duties, and the U-boat and its remaining escort were ordered to proceed directly to Portsmouth Lower Harbour, arriving there at 0600 on 17 May.

U-858 was the third U-boat to report its position south east of Newfoundland on 9 May at 1610. On 10 May, the U-boat was first intercepted by the destroyer-escorts USS *Sutton* and USS *Neal A Scott* whilst on their way to find *U-1228*. The latter soon left the scene to continue their search. *U-858* was then joined by the destroyer-escorts USS *Carter* and USS *Muir*. Later the destroyer-escorts USS *Pillsbury* and USS *Pope* were ordered to escort *U-858* to the Delaware Capes, where they arrived at 0700 on 14 May. Subsequently the U-boat was moved to Fort Miles and, after the removal of its torpedoes, it was transferred up the Delaware River to the Philadelphia Navy Yard on 19 May.

The fourth U-boat to surrender to the US Navy was *U-873* which reported its position in the vicinity of the Azores at 0144 on 11 May. It was initially ordered to set course for Bermuda, and was met by the destroyer-escort USS *Vance* in the early hours of 12 May. The destination was then changed, first to the Delaware Capes, and then to Casco Bay. However, the latter order was changed yet again, and the pair was directed to Portsmouth Lower Harbour, where they arrived at 1400 on 16 May.

The fifth, and final, U-boat to surrender to US naval forces at sea was *U-234*, which reported its position in the mid-North Atlantic early on 12 May. A variety of US Navy and RCN warships were ordered to intercept *U-234*. Eventually, the destroyer-escort USS *Sutton* arrived on the scene in the late evening of 14 May. The initial instruction was to head for Casco Bay, but this was later changed to Portsmouth Lower Harbour. In the meantime, USS *Sutton* had been joined by the destroyer-escorts USS *Carter* and USS *Muir*, with all four vessels arriving in Portsmouth Lower Harbour early on 19 May.

After these surrenders, the Chief of Naval Operations (CNO) sent a message on 19 May with initial instructions for the inspection and testing of the U-boats which were now located in the USA. Dockyard inspections were to be supervised by the Commandant of the PNY, and operational tests were to be co-ordinated by Commander Submarines Atlantic (ComSubLant), the objective being to determine which of the five U-boats might be of any future use to the US Navy.

On 28 May 1945, a comprehensive policy letter titled '*Inspections and Tests of Surrendered German Submarines'* was distributed to a wide US Navy audience. In it, the Vice Chief of Naval Operations declared:

> *There are five surrendered German U-Boats of various types in East Coast Ports. At a later date additional U-Boats will be received, and it is expected that there will be two U-Boats of each major type in the custody of the United States. They will be available for inspections and tests.*
>
> *Tests will be scheduled in two distinct categories, namely underway operational tests and dockside research tests.*
>
> *Upon completion of the trials, tests and inspections, it is desired that the Navy Yard, Portsmouth compile reports for each design type so that the data may be readily available for reference in connection with future design work.* (**2**)

In response to this CNO policy letter, the US Navy's Bureau of Ships (BuShips), wrote a letter on 23 June 1945 titled '*Surrendered German Submarines - Recommendations for Trials and Tests'.* It discussed the five U-boats: *U-234* (Type XB), *U-805* (Type IXC/40), *U-873* (Type IXD2) and *U-1228* (Type IXC/40) at PNY, and *U-858* (Type IXC) which was located in the Navy's New London, CT, Naval Base, stating:

> *It is desired to conduct underway operational tests and trials on one vessel of each major design type available. Of the* [five U-Boats] *listed above, it is considered that the priority of underway trials, based upon the expected value of the results, should be in the order Type IXD2 (U-873), Type XB (U-234), and Type IXC (U-858). Type XB is a mine laying and "milch cow" design, but has a number of operational features not found in other submarines. In view of the fact that U-858 will apparently be ready for underway operations before U-873, it will be satisfactory to the Bureau to conduct trials on this vessel first, to be followed by trials on U-873 and U-234 in the order named.*
>
> *When U-858, U-873 and U-234 are cleaned, inspected and tested as necessary for underway operations, minimum preservative measures should be taken for preservation of tanks, hull interior and exterior, and operating equipment for a period of one year. U-805 and U-1228 should be used for spare parts required to maintain the three U-Boats mentioned above in an operating condition.*
>
> *In the case of any additional German submarines received, it is recommended that those selected for operation be treated similar to U-858, U-873 and U-234, and others similar to U-805 and U-1228.* (**2**)

So, less than two months after the end of the war in Europe, the US Navy had set out a clear policy for dealing with the surrendered German U-boats in its custody. PNY was to prepare formal design studies, perform tests and compile reports on one each of the three main types of U-boat then in United States' custody (Type IXC, Type IXD and Type XB). ComSubLant was to conduct any necessary underway trials, a process which would be replicated if and when any other major design types became available. The remaining U-boats were to be used as sources of spare parts.

Thus, the US Navy, without waiting for Allied authority, wasted no time in initiating the action necessary to make use of three of the U-boats which had surrendered to American forces. *U-234*, *U-858* and *U-873* were to be cleaned, inspected and tested as necessary for underway operations, but only minimum preservative measures were to be taken, the implication being that they were unlikely to be used for more than a year. The first essential action was to make *U-234*, *U-858* and *U-873* seaworthy and fit for use in the planned trials. Originally it was thought that these three U-boats could be made available for these initial trials quite quickly, but this proved to be optimistic, and the planned availability dates kept slipping to the right, particularly because of lack of spare parts.

The lead U-boat for the US Navy trials was *U-858.* The New London Submarine base (where it had arrived from Fort Miles on 5 June, via Philadelphia Navy Yard) undertook the work to make it serviceable. A great deal of work needed to be done by

both the base and the dockyard staff, including a 21-day spell in dry dock from the end of July until 18 August. Whilst *U-858* was being renovated at New London, similar action was being undertaken at PNY on the other two U-boats. On 7 September *U-234* and *U-873* were dry docked for a period of about 10 days. *U-858* re-joined the other two U-boats at PNY on 23 October, and the dockyard then concentrated on improving the serviceability of all three of this first batch of U-boats, *U-858* eventually left PNY for New London on 19 December 1945, with *U-234* and *U-873* following on 17 January 1946.

The U-Boats which Surrendered from Sea in Argentina

The Americans were allocated the two U-boats which surrendered from sea to Argentina. *U-530* (Type IXC) surrendered on 10 July 1945 in Mar del Plata after the crew had sabotaged its engines, and *U-977* (Type VIIC) surrendered on 17 August 1945 also in Mar del Plata. These two U-boats had chosen to escape to Argentina rather than to obey the Allied surrender instructions.

On 28 July, *U-530* was towed from Mar del Plata to Rio Santiago near Buenos Aires, arriving on 29 July, *U-977* was moved to Rio Santiago in late August. Almost immediately after *U-530*'s arrival in Buenos Aires, it was handed over to the US Navy, and arrangements were made for it to be scraped, tested and painted, and for the engines to be repaired in the Argentine Navy Dockyard. In contrast, there was no time for *U-977* to be docked or even painted prior to its departure for the USA after its US Navy crew had arrived in Argentina.

In the meantime, the US Navy's fleet tug USS *Cherokee* had been ordered to Buenos Aires to escort *U-530* and *U-977* to the USA, the three vessels comprising Task Group CTG 21.4. The two U-boats, with their US Navy crews, left the Rio Santiago Naval Base in Buenos Aires in company on 11 September. Initially USS *Cherokee* towed *U-530* and *U-977* sailed under its own power.

On their journey north to the USA, *U-530* and *U-977* stopped at Rio de Janeiro in Brazil from 16 to 20 September. After repairing the engines of both U-boats whilst at sea, the Task Group then stopped at Trinidad in the British West Indies from 2 to 5 October, where they were inspected by the Allied Tripartite Naval Commission (TNC) on 3 October. The Group left Trinidad on 5 October and after an uneventful transit arrived at the US Navy's Submarine Base at New London on 12 October 1945.

The US Navy's Search for the Latest High-Tech Kriegsmarine U-Boats

None of the Kriegsmarine's very latest high-tech U-boats, including the Types XXI and XVIIB U-boats, had surrendered from sea in the Western Atlantic at the end of the war. Nevertheless, the US Navy anticipated acquiring examples of these two new types of U-boat, and had set up a small secret organization in March 1945 called the US Submarine Mission in Europe (SubMisEu). Its key tasks were to locate examples of each of the Type XXI and XVIIB U-boat and move them covertly to the USA, irrespective of the Allied agreements concerning the disposal of the U-boats that had surrendered.

SubMisEu, was formally activated on 17 May 1945 as Task Group 120.2 (TG 120.2). It comprised some 150-200 officers and men. After forming in New London, they flew to Plymouth in south-west England. By late May 1945, they moved to Lisahally in Northern Ireland, one of the two locations being used by the Royal Navy for the assembly of most of the surrendered German U-boats. The latter were being held in the UK prior to allied decisions about their ultimate disposal, a topic high on the agenda of the forthcoming Potsdam Conference among the American, British, and Soviet leaders. Whilst the main SubMisEu party settled into its accommodation at Lisahally, its Engineering Officer (Cdr Fred Beltz) and its Operations Officer (Cdr Willard Loughan) travelled to Germany in order to locate the two examples of each of the Type XXI and Type XVIIB U-boats for transfer to the USA.

The Acquisition of *U-2513* and *U-3008*

Twelve Type XXI U-boats had surrendered in northern European ports, eleven in Norway and one in Germany, They were moved to Lisahally in June 1945 without the prior knowledge or agreement of the Russians. If the US Navy was to obtain two Type XXI U-boats, they would have to be selected from either the many damaged examples in the German shipyards, or those that had been scuttled by the Kriegsmarine just before the end of the war, or the 12 which were in Royal Navy custody. It was clear that any joint Allied decisions about their future were unlikely to be completed before the end of 1945. And so, the US Navy, with the active support of the Royal Navy, but without informing the Russians, decided to take unilateral action to transfer two of the Type XXI U-boats at Lisahally across the Atlantic just as soon as possible.

After the surrendered Type XXI U-boats began to arrive at Lisahally, *U-2513* was quickly transferred to US Navy control. This U-boat had surrendered in Horten (Norway) on 9 May and then been transferred to Oslo on 18 May. It departed from Oslo for Lisahally on 3 June, arriving on 9 June. During June further Type XXI U-boats arrived from Norway, as did *U-3008* which had surrendered at sea on 11 May and arrived in Kiel, Germany, on 21 May. It was then transferred for safe keeping to Wilhelmshaven, from where it sailed to Lisahally on 21 June, arriving on 27 June. The US Navy also took over *U-2506* which had arrived at Lisahally from Bergen, Norway, on 21 June, as well as *U-3008*, but it was decided that the latter, along with *U-2513*, would be the two Type XXIs to be moved to the USA.

Besides their general condition, one of the reasons for the selection of *U-2513* and *U-3008* was that the US Navy wished to obtain an example from each of the two German shipyards which had assembled the Type XXIs. These comprised eight separate pre-fabricated sections. *U-2513* had been built at the Blohm and Voss Yard in Hamburg, and *U-3008* had been built at the Deschimag Yard in Bremen. However, both needed to be cleaned, painted and restored to full serviceability before their planned Atlantic crossing.

The two Type XXI U-boats were ready to sail to the USA by mid-July 1945, but there was a short delay because the Potsdam Conference was still in session. It had not yet been decided that only 10 U-boats would be allocated to each of the Allies.

In the meantime on 19 July HM King George VI and HM Queen Elizabeth paid a visit to Lisahally. The King asked to see the surrendered U-boats and, at the time, *U-2513* and *U-3008* were the only ones that were fully operational, as well as being freshly painted. So His Majesty was invited to inspect an American Honor Guard, after which he and the Queen viewed the two U-boats and talked to the COs and the crews - although they did not board the boats.

The Potsdam Conference finished on 2 August 1945. Then, *U-2513* and *U-3008* were escorted by the US Navy tug/salvage vessel USS *Brant* across the Atlantic in poor weather. The trip was difficult because of the poor surface manoeuvring quality of the Type XXI U-boats, as well as a variety of defects in their steering systems, particularly for *U-3008*. Indeed, very shortly after first departing from Lisahally on 6 August, *U-3008* had problems with its steering gear and it had to be towed back to Lisahally for repairs. The Atlantic crossing resumed on 8 August, but by 10 August *U-2513* had problems with its reduction gear, and followed by more problems with *U-3008*'s rudder as well as flooding in the stern, requiring it to be towed by USS *Brant*.

By 18 August *U-2513* encountered engine problems, causing the rescue and salvage ship USS *Restorer* to rendezvous with the Task Group with orders to escort the U-boat into the US Naval Operating Base at Argentia in Newfoundland. On 20 August, *U-3008* was also taken into Argentia, where both U-boats were repaired. The three vessels then departed Argentia on 21 August. With no further mechanical problems, they finally arrived at the US Navy Submarine Base at New London on 25 August. After that, the U-boats were moved to the PNY, with *U-2513* arriving at Portsmouth on 5 September and *U-3008* on 13 September.

Following the arrival in the USA of these two U-boats, PNY wrote to the CNO on 18 September requesting authority:

> *To consider U-2513 in the same category as U-234, U-858 and U-873 (for trials), and U-3008 on the same basis as U-805 and U-1228 (for spares).* (**2**)

The decision concerning *U-3008* was later reversed, and it was subsequently taken into long-term use by the USN together with *U-2513*, albeit after being cannibalised for spares for six months.

The Acquisition of *U-1406*

The acquisition of *U-1406*, a small experimental high-speed Type XVIIB U-boat with a 'Walter' gas-turbine engine powered by high test peroxide (HTP), was the result of a secret and carefully orchestrated joint US/UK intelligence-led process which also began well before the end of the war. This process began with the capture of the *Walterwerke* factory and its staff in Kiel on 5 May 1945, even before the formal surrender arrangements had taken effect in the city.

The Americans and the British were determined that the Russians should not be allowed access to the HTP technology that was central to the high-speed ability of the Type XVIIB U-boats. Thus as soon as the war ended the search began. With the help of the Rear-Admiral Eberhard Godt who had been the Chief of Operations in the

Kriegsmarine's U-Boat High Command, *U-1406* and *U-1407* were located at Cuxhaven, where they had been illegally scuttled by a German naval officer on 7 May, having first been surrendered by their COs on 5 May. Such was the US and UK interest in them that *U-1406* and *U-1407* were raised with great haste and moved to a shipyard in Kiel at the beginning of July 1945, though not before a fire had started in *U-1406*, requiring its immediate re-immersion in Cuxhaven harbour.

After the SubMisEu's officers became aware that *U-1406* and *U-1407* had been located they advised Cominch that, in their opinion, just one Type XVIIB U-boat would be sufficient for US Navy research purposes. They nevertheless decided that it would be wise to survey all nine of the 'Walter' U-boats that had been built. By early August they surveyed all the Type XVII U-boats that had been located, several of which had previously been scuttled and then salvaged, advising Cominch on 5 August that:

> *Most people believe U-1406 is best* [for the US Navy].
>
> *U-1406 needs everything stripped out of it and then the parts preserved and reinstalled plus a new Walter engine plus a few other missing parts. … Work of tearing out and preserving to be done by German labour.*
>
> *Commander Beltz and* [Commander] *Loughan are most anxious for us to have Germans rebuild U-1406 alongside U-1407 per request of British.*
>
> *U-1406 now on quay wall at Deutschewerke Kiel was scuttled by Germans and critical elements of regulator, combustion chamber, and switchboard destroyed. When vessel was raised* [HTP] *fire developed and got beyond control necessitating immersion again. Finally raised after considerable interior damage due to fire and immersion. Hull in excellent condition.* (**1**)

By early August, despite possible Russian aspirations or objections, it became clear that the US Navy had earmarked *U-1406* and the Royal Navy had earmarked *U-1407* (the best example of this type). The latter owed its genesis to the fact that Kiel was located in the British zone of northern Germany. Even though there was the closest possible co-operation between the Royal Navy and US Navy forces in the area, the UK had, by definition, the first choice in respect of all the German material that was captured in the zone when the war ended, a fact that was readily acknowledged by the US Navy.

All that then remained to be done was to ensure that *U-1406* was formally allocated to the USA by the Allied TNC, and that a final decision was taken about where and how it was to be made serviceable. It was originally thought that both *U-1406* and *U-1407* might be repaired in a German shipyard, but it was quickly realised that this would not be possible. The UK Government was determined that all the German naval shipyards should never again be used for military purposes, and the proposal was therefore quickly dismissed for political reasons.

Thus *U-1406* was moved directly to the USA without waiting for the formal TNC agreement, without seeking prior permission from the Russians, and before the publication of the official TNC allocations. *U-1406* was towed from Kiel to Bremerhaven

in mid-August, where on 14 September it was loaded as deck cargo onto the US freighter SS *Shoemaker* before being transported to PNY, arriving at Portsmouth on 11 October 1945.

The Tripartite Naval Commission

The Potsdam Heads of State Conference (UK, USA, and USSR) took place in Berlin between 17 July and 2 August 1945. It established a Tripartite Naval Commission responsible for recommending which of the Kriegsmarine's thirty surviving U-boats were to be preserved and divided equally among them for experimental and technical purposes – with the remainder to be sunk no later than 15 February 1946.

The final result of the TNC's review was published in December 1945. They allocated 10 U-boats, *U-234*, *U-530*, *U-858*, *U-873*, *U-889*, *U-977*, *U-1105*, *U-1406*, *U-2513* and *U-3008*, to the USA. Of these, eight were already located in the USA, *U-889* was to be transferred from Canada, and *U-1105* was to be moved across the Atlantic from the UK. In the meantime *U-889* had been the subject of trials by the Royal Canadian Navy, and *U-1105* had been the subject of trials by both the Royal Navy and the Royal Air Force in the UK. *U-505* which had been captured by the US Navy off West Africa in 1944 was exempt from consideration by the TNC.

Thus the USA was formally allowed to retain 11 U-boats, and the TNC decision meant that two of the U-boats that had surrendered from sea to the USA, *U-805* and *U-1228,* were surplus to requirements and needed to be destroyed.

The Acquisition of *U-1105*

The Type VIIC U-boat, *U-1105,* was one of the first U-boats to surrender at sea. It surfaced and broadcast its position to the north-west of Ireland on 9 May and was instructed to head on the surface for the remote Loch Eriboll in north-west Scotland before being moved to Lisahally on 14 May. All three of the Allies wanted *U-1105* for testing after the war because the U-boat's schnorkel and hull were covered with rubber sheeting known as 'Alberich'. The British and American intelligence staffs had known about this development since 1944. They were uncertain as to its purpose, but thought that it was designed to help avoid detection by either radar or sonar, most probably the latter.

Both the Royal Navy and the Royal Air Force were keen to check the *U-1105*'s rubber coating. Nearly all surrendered U-boats were located in the UK, providing the British with a unique opportunity to initiate early trials with *U-1105* before the RNC allocated it to the USA. However, after initial trials in south-west Scotland, the TNC inspected *U-1105* in early September and reported that the rubber covering was in a bad state.

On 2 October *U-1105* was moved from Scotland to the Royal Navy's submarine base (HMS *Dolphin*), at Gosport near Portsmouth in the south of England. Whilst based there, it completed a final series of detection tests, prior to the planned hand over to the US Navy. There was then very nearly a major hiatus concerning its future*,* as in its first response to the initial draft TNC allocations the US Navy had incorrectly indicated that

it did not require *U-1105*, and this caused an urgent exchange of messages among the TNC's British, American and Russian Admirals. It was not until 1 November that the US Navy's Admiral Ghormley clarified that the USA wanted *U-1105.*

When the initial TNC allocation of *U-1105* to the US Navy was proposed on 10 October 1945, the U-boat, manned by its British crew, was still undertaking its UK detection trials. On 16 October, the Royal Navy's First Sea Lord personally wrote to Admiral H Kent Hewitt, USN, who was the London-based Commander of the US Naval Forces in Europe (ComNavEu), asking if the U-boat could be retained by the Royal Navy until December 1945. However, whilst Admiral Hewitt quickly agreed to this request, *U-1105* was by then suffering from a number of serious defects and was not fit to sail across the North Atlantic. Thus a somewhat embarrassed First Sea Lord wrote again to Admiral Hewitt on 30 October stating that the U-boat would first need a four week refit before it could be handed over to the US Navy.

The delay allowed the US Navy crew for *U-1105* to be transported to England in mid-November 1945 whilst *U-1105*'s refit was completed and the dates for the trans-Atlantic crossing were agreed. The warning order to move *U-1105* to the USA was issued on 12 December. The executive instruction on 15 December, stated that it was intended to sail the U-boat on 17 December by "*unrestricted surface navigation".* Eventually *U-1105* left Gosport on 19 December on its surface crossing of the Atlantic because, despite the fact that it had been used for both surface and submerged trials for the previous six months, its CO, Lt Cdr Hugh Murphy, USN, had specific orders that he was not to dive the U-boat because of the fear of a German booby trap.

The Atlantic storms which had caused the final postponement of the transit were still raging. After two days *U-1105* encountered very heavy seas, and by the fourth day was in the middle of a hurricane, which was not the best situation for an unescorted U-boat on the surface. At one stage the U-boat nearly rolled over, the radio failed and *U-1105* was out of contact for 10 days, causing the US Navy to fear the worst. Also, one of its engines failed and, although this was temporarily repaired, once *U-1105* was off Newfoundland a tug was despatched to help bring the U-boat into PNY. They finally arrived in Portsmouth on 2 January 1946. By then *U-1105* was not in a good state. The storm had bent the schnorkel, ripped the gun mounts off the deck, severely bent and rolled the decking and, most importantly, much of the remaining rubber coating had been torn loose and lost.

The Acquisition of *U-889*

U-889, was one of the two U-boats which had surrendered to Canada (the other was *U-190*). It had been intercepted by ships of the Royal Canadian Navy (RCN) on 10 May and escorted to the designated 'Surrender Point' outside Shelburne, Nova Scotia, where it arrived on 13 May. U-889 was moved to the RCN Base at Halifax in Nova Scotia two days later and was then, pending a decision concerning its long-term future, commissioned into the RCN.

U-889 was a new example of the Type IXC U-boats. It had been on its first operational patrol when it surrendered. Fitted with special hydrophone gear and acoustic torpedoes, it also had a schnorkel head with a radar-absorbing rubber coating.

The RCN initiated trials in order to gain knowledge of these latest developments in German submarine technology. However, first *U-889* took a publicity tour in the second half of August. With Lt E A D Holmes, RNVR, as her CO, the U-Boat's tour began in Halifax on 10 August. During 4 days there, over 10,000 people, visited the boat. *U-889* visited Saint John and St Andrews in New Brunswick, as well as Digby, Cornwallis, Yarmouth, Shelburne, Liverpool and Lunenburg in Nova Scotia, before returning to Halifax on 5 September. There was however no question of Canada being formally allocated either of the U-boats in its temporary possession. As a result, *U-889*, which had been inspected by the TNC on 12 September and assessed to be the only one of the seven U-boats that surrendered in North America to be in an operational condition (both on the surface and submerged) was allocated to the USA.

Thus after its trials in the RCN had been completed at the end of 1945, and in accordance with the TNC's recommendation, *U-889* could no longer remain in Canada. An RCN crew, escorted by the US Navy tug *ATR-7,* delivered it to PNY on 12 January 1946. However, it was in a non-operational condition when transferred to the US Navy. The RCN trials had taken their toll.

The Capture of *U-505*

In June 1944 the US Navy captured the Type IXC U-boat, *U-505*, in the Atlantic off the west coast of Africa. It was then towed by USS *Abnaki* to Bermuda where, in great secrecy - and renamed as USS *Nemo* - it was held for the remainder of the war. Initially *U-505* remained moored alongside USS *Abnaki* in Port Royal Bay, but after the tug was recalled to New York on 29 June, the U-Boat was moored to a buoy in the Bay. That same day, Cominch released a message setting out his views concerning *U-505*'s future use, viz:

> *Present intention* [is to] *retain Nemo at Bermuda until we have information that Germany knows of capture. At which time VCNO* [Vice Chief of Naval Operations] *will arrange that Nemo be rehabilitated, subjected to trials, and then placed in commission for employment as an anti-submarine training ship.* (**3**)

Events then moved on quickly and, on 11 August, the Commander of the US Navy's Naval Operating Base (NOB) Bermuda advised Cominch that:

> *Will dry-dock Nemo Sunday 13th estimated time 10 to 14 days. Will replace missing port bow plane* [which had been torn off during the capture]*. Suggest Naval Constructor experienced in submarine construction examine hull.* (**3**)

The repair of U-505 turned out to be a relatively simple task, and on 29 August, NOB Bermuda reported again to Cominch saying:

> *Undocked Nemo Monday 28th. Conditions most satisfactory. Request authority to operate on surface and submerged. Desire make stationary dive in harbour max depth 60 feet. Will then report readiness for other tests as desired*. (**3**)

This was followed two days later by yet another message, this time saying:

> *Nemo ready for surface operations* [and] *can make US port under own power. One Ensign, two Warrants and 30 men in crew.* (**3**)

So, by the end of August 1944 the US Navy was able return *U-505* to the water with an American crew. Exactly what happened to *U-505* whilst it was in Bermuda between August 1944 and May 1945 is difficult to discover. The most likely scenario is that a series of sea trials took place under the close supervision of the Navy's intelligence and engineering staffs who wished to learn as much as possible about the Type IXC U-boat's technology and operational capability. After this, most likely the US Navy used *U-505* as a training boat for the rest of the war, providing Allied naval operating forces with the opportunity to learn the characteristics of a German U-boat, and the anti-submarine experts with the opportunity to develop and improve their ASW tactics. Indeed, Admiral Samuel Morison, in his official *History of United States Naval Operations in World War II*, stated that after its capture U-505 served as a '*tame*' submarine for the rest of the war. (**5**). After VE Day, a US Navy Press Release on 16 May 1945 gave the American public their first indication of the capture and, on 20 May, U-505 left Bermuda for Philadelphia, where it arrived on 23 May.

***U-505*'s War Bond Tours**

Immediately after an astonished American public learned of its earlier capture, the US Treasury requested that *U-505* be sent on the first of two War Bond tours to raise funds for the on-going war against Japan. Thus, with its US Navy crew, *U-505*'s first (short) tour started in Philadelphia on 23 May. It visited New York, Boston, Baltimore, Washington and Norfolk, spending about 5 days in each before returning to New London on 7 July.

The success of the first War Bond tour led to a long second tour. Beginning on 1 August 1945*,* war bond purchasers were allowed to purchase tickets to tour *U*-505 in New York for a month, and then *U-505* was exhibited in New Haven, New London, Portland, Portsmouth (NH) and New Bedford.

U-505 returned to New London on 1 October. From there it headed south on the last leg of the second tour, which started on 8 October. The U-boat was displayed at the Centenary Celebrations of the US Naval Academy at Annapolis from 9 to 14 October, and then visited Wilmington, Portsmouth (VA), Charleston and Savannah. Thereafter, it visited five ports in Florida: Jacksonville, Miami, Key West, Tampa and Pensacola, followed by New Orleans and Mobile. After the visit to Mobile, *U-505* was ordered back to New London to await a decision about its final disposal. On the transit north, it called at the US Navy Base at Key West. On 9 January and whilst *U-505* was at sea, the CNO amended its final destination to the Naval Base at Boston.

***U-530*'s and *U-977*'s War Bond Tours**

Similarly, in the latter part of 1945, *U-530* and *U-977* prepared for War Bond tours of US East Coast and Caribbean ports. The two U-Boats had arrived from Buenos Aires in October, and were moored at the New London Submarine Base. Neither of them was in a good condition, but on 18 October the CNO authorised their preparation for the tours.

U-977 took part in a 5-week tour of seven US East Coast ports, starting in New London on 5 November and arriving back at New London on 13 December 1945. The U-boat visited Albany, Poughkeepsie, Newburgh, Wilmington, Lewes, Richmond and the American public in those places an opportunity to see a German U-boat and stimulating interest in the Victory Loan fund-raising drive.

Simultaneously, *U-530* took part in a 7-week tour to seven US ports in Texas. It travelled on the surface throughout, leaving New London on 5 November. After calling at the Key West Naval Base, it visited Port Arthur, Houston, Galveston, Corpus Christi, Brownsville, Beaumont and Orange. On the return journey north, *U-530* had overnight stops at both the Key West and Norfolk Naval Bases before it arrived back in New London on 22 December 1945.

US Navy Policy for *U-505*, *U-530* and *U-977*

After these War Bond tours had been completed, the US Navy decided that it had no further operational requirement for *U-505*, *U-530* and *U-977*. As a result, the CNO issued the following instruction on 9 January 1946:

> *Sail U-505, U-530 and U-977 to Naval Base Boston for care and preservation, place out of service and retain for explosive tests.* (**2**)

In the same week the general US Navy policy in relation to these three U-boats was set out by BuShips in a memo to PNY stating:

> *The U-505, U-530 and U-977 that were formerly on War Bond Tours have completed that duty and are now berthed at the Boston Shipyard.*
>
> *No further operations are expected from these submarines other than as possible targets for explosives tests.*
>
> *Permission is granted to take such material and equipment as is needed for spare parts for the operating U-Boats from these submarines.*
>
> *Removal of material should not be such that the submarines could not be towed to a target area and submerged in a static dive.* (**2**)

The Disposal of U-805 and *U-1228*

Despite having surrendered from sea, *U-805* and *U-1228* were both in poor condition. It was estimated that it would take at least three months to make them serviceable for use in trials and experiments. Also, another Type IXC/40 U-boat (*U-858*) had already been selected for US Navy trials. And so, even before the TNC had made its initial allocations in October 1945, PNY wrote to BuShips on 19 September saying:

> *The surrendered German submarines U-805 and U-1228 … are in ship keeper status to be utilised, by cannibalisation, for the operation of other surrendered German submarines.* (**2**)

Predictably, as a result of their poor condition, *U-805* and *U-1228* were neither bid for nor allocated to the US Navy by the TNC. The US Navy was meticulous in following the TNC's recommendations and, on 11 December, the CNO sent a message to CincLant directing him to:

> *Destroy by sinking in open sea depth not less than 100 meters prior to 15 February 1946 ex-German submarines U-805 and U-1228. Report destruction date and geographical location.* (**2**)

In view of the shortage of time, an urgent message from BuShips to PNY followed on 8 January 1946 stating that:

> *Removal of equipment from U-805 and U-1228 may be accomplished without restriction, other than not destroying the watertight integrity of the ships. Removal of any material from the two submarines should be expedited in view of early disposal.* (**2**)

On 4 February, the tug USS *Penguin* towed *U-1228* out of Portsmouth. It was sunk on 5 February by a torpedo fired from the submarine USS *Sirago*. The first torpedo missed (passing under the U-boat), the second torpedo hit *U-1228* near the stern and caused it to list to starboard, the third torpedo missed (passing under the target), and finally the fourth torpedo struck *U-1228* amidships, causing the U-boat to sink immediately to the north-east of Cape Cod.

Two days later, on 7 February, *USS Penguin* towed *U-805* of Portsmouth to the same position where, on 8 February it too was sunk by a torpedo fired from USS *Sirago*. On this occasion, the first torpedo missed (passing under the target), as did the second torpedo. The third torpedo hit and caused *U-805* to break into two pieces, and the fourth torpedo missed (passing over the target as the U-boat had already sunk).

By these actions the US Navy had carried out the requirements of the Potsdam Agreement, and the American Representative on the TNC formally advised his British and Russian colleagues on 14 February 1946:

> *I desire to inform you that, in conformity with paragraph 7 of Appendix 2 of the Report of the Tripartite Naval Commission, submarines U-805 and U-1228 were sunk in open sea at an approximate depth of 130 fathoms on 8 and 5 February respectively. Submarines U-805 and U-1228 were the only unallocated submarines in the territorial waters of the United States.* (**4**)

US Navy Trials with *U-234*, *U-858* and *U-873*

After their mini-refits, *U-858*, *U-234* and *U-873* undertook a series of tests. The Special Submarine Group (SSG) which was located at the US Submarine Base at New London took operational control of these U-boats. After the initial standardisation tests in late 1945 (with *U-858*) and early 1946 (with *U-234* and *U-873*), the SSG published a schedule of proposed trials for each starting on 25 February 1946, planning only to utilize these submarines only for a short time. Viz:

U-234

25 Feb	*Sound survey in New London area*
4 Mar	*Diving trials in New London area*
11 Mar	*Tests for Underwater Sound Lab in New London area*
18 Mar	*Uncompleted sound survey tests in New London area*
25 Mar	*Magnetic ranging*
1 Apr	*Further trials or disposition as directed* (**2**)

U-858

25 Feb-15 Apr	*Torpedo firing tests at Key West*
22 Apr-29 Apr	*Upkeep in New London area*
6 May	*Sound survey in New London area*
13-20 May	*Tests for Underwater Sound Lab in New London area*
27 May	*Schnorkel operations in New London area*
3 Jun	*Diving trials in New London area*
10 Jun	*Possible periscope and fire control equipment tests if not completed earlier at Key West*
17 Jun	*Further trials or disposition as directed* (**2**)

U-873

25 Feb	*Diving trials in New London area*
4 Mar	*Uncompleted Oceanographic Institute tests in New London area*
11 Mar	*Uncompleted sound survey tests in New London area*
18 Mar	*Magnetic survey*
25 Mar	*Further trials or disposition as directed* (**2**)

Indeed, by 27 March 1946, the trials with *U-234* and *U-873* were complete, and the CNO directed CincLant to:

> *Sail U-234 and U-873 to Portsmouth. Upon arrival report to Com 1. About 1 April place subject vessels out of service. Both shall be retained. U-234 for cannibalisation of spare parts. U-873 for preservation and use in explosive program.* (**4**)

As a result, *U-234* was transferred from New London to PNY on 2 April, followed by *U-873* on 3 April. Finally the trials with *U-858* completed, on 14 June it too was transferred from New London to PNY. Thus by the middle of June 1946, the US Navy had completed its planned trials with these three U-boats and all three were moored at PNY pending decisions about their final disposal. In respect of *U-234*, after the cannibalisation of its equipment and spare parts during the summer of 1946, BuShips advised the CNO on 27 September that *U-234* was ready for disposal. The original disposal plan for the other two U-boats was that *U-858* and *U-873* would be retained as targets for the US Navy's conventional depth charging programme. However, this plan was cancelled on 21 April 1947 as the result of a joint BuShips/BuOrd review, and *U-858* and *U-873* then became available either for use in torpedo tests or for sale as scrap.

The Way Ahead for the Remaining U-Boats in US Custody

The next indication of the US Navy's policy in respect of the U-boats then in its possession can be gained from the Minutes of the Submarine Officers Conference held in Washington on 26 March 1946, which recorded that:

> *Nine* [sic: this should be eight] *U-Boats are being retained for explosive programs.*
>
> *The U-2513 (Type 21) has been made available for OPDEVFOR.*
>
> *The U-3008 (Type 21) is being placed in service at Portsmouth with high priority.*
>
> *The U-1406 (Type 17-B) will not be placed in service, but the hull will be retained for the present.* (**1**)

This policy confirmed that, by the spring of 1946, the US Navy's long-term interests were concentrated on the single Type XVIIB U-boat (*U-1406*) and the two Type XXI U-boats (*U-2513* and *U-3008*), and that the remainder had been earmarked for early disposal. On 28 May, the CNO stated the US Navy's position, as follows:

> *In regard to German submarines, it is desired to retain the following:*
>
> | | |
> |---|---|
> | *U-858* | *for conventional depth charging* |
> | *U-873* | *for conventional depth charging* |
> | *U-2513* | *for operations* |
> | *U-3008* | *for operations* |
> | *U-1406* | *for indefinite retention* |
>
> *All other German submarines will be disposed of upon completion of exploitation of equipment, and cannibalisation of equipment and spare parts. The Chief of the Bureau of Ships and the Chief of the Bureau of Ordnance are requested to advise this office when U-234, U-505, U-530, U-889, U-977 and U-1105 are ready for disposal.* (**4**)

On 6 August 1947, BuShips slightly modified the policy regarding the remaining U-boats. First, it confirmed that the two U-boats previously retained as target vessels for the depth charge programme, *U-858* and *U-873*, had been released for disposal by the CNO. Second, it confirmed that *U-977* had already been disposed of by sinking in November 1946. Third, it confirmed that *U-1105* would be utilised for depth charge tests, and then disposed of by sinking on completion of those tests. Finally, it confirmed that the stripping of material from *U-234*, *U-505*, *U-530* and *U-889* had been completed, and that these U-boats were ready for disposal.

The BuShips letter summarised the situation:

> *The following ex-German submarines are now located in Portsmouth Naval Shipyard awaiting disposal by the Chief of Naval Operations: U-234, U-505, U-530, U-858, U-873 and U-889.*

Originally, BuShips had recommended that the vessels be sold as a hulk or be scrapped. Since then, the Bureau has determined it is in the best interests of the Government to sell surplus combatant vessels rather than to demolish in Naval Shipyards or by private contract. Accordingly, it is recommended that the above vessels by declared to the US Navy Vessel Disposal Office (NVDO) [located in the Naval Shipyard in Brooklyn, New York] *for sale*. (**4**)

***U-1406* in the US Navy**

As far as the 'Walter' U-boat *U-1406* was concerned, the TNC had informally accepted that it would be allocated to the USA. However, after its arrival at PNY on 11 October 1945, the US Navy neither repaired nor operated the U-boat. After a preliminary inspection, PNY estimated that it would cost $1 million and take 15 months to put it into service. Also, whilst the US Navy's initial intention was to use *U-1406* as a fast target, its hydrogen peroxide fuel presented a serious fire risk and was very costly to operate. In any case, it seemed probable that the U-boat's performance was unlikely to achieve the enhanced speeds and depths required. Thus, the plans to use it were rejected.

Instead, the US Navy concentrated on a study of the Mk 17B HTP-powered 'Walter' gas-turbine engine which had been fitted to *U-1406*, of which the US Navy had two examples, one from *U-1406* itself and one which had been found in the *Walterwerke* at Kiel and then shipped to the USA. Both of these Mk17B engines were taken for study to the US Navy's Experimental Engineering Establishment in the Severn River Naval Complex at Annapolis. While at the time the 'Walter' turbine was seen as the most effective means of achieving air-independent, high-speed, underwater propulsion, it was quickly overtaken by the advent of nuclear propulsion, and the US Navy's interest waned. In the meantime, *U-1406* remained moored at PNY without any plans for its future use.

***U-889* in the US Navy**

When the TNC inspected *U-889* in Canada in September 1945, it was fully operable, and in the best condition of all the U-boats that had surrendered from sea in the Western Hemisphere. However, the submarine was in a non-operational condition when transferred to the US Navy in January 1946. The CNO therefore quickly granted PNY permission to 'kill' the battery on *U-889*, particularly as by that time the US Navy was already conducting trials on the Type IXC/40 U-boat, *U-858.* Thus *U-889* remained moored at PNY for use as a potential source of spares, until BuShips advised the CNO on 27 September 1946 that the planned cannibalisation action was complete, and that *U-889* was ready for disposal.

***U-1105* in the US Navy**

After its very difficult solo trans-Atlantic surface crossing in the latter half of December 1945 and arrival at PNY in early January 1946, there was initially some indecision concerning the future of the rubber-covered *U-1105.*The US Navy had no specific requirement for a Type VIIC U-boat. The US Navy was nevertheless keen to

learn the secrets of *U-1105*'s Alberich coating. On 1 February 1946 BuShips ordered two nine square-foot sections of the remaining rubber coating to be removed. One was for the Naval Research Laboratory (NRL) in Washington and the other was for the Massachusetts Institute of Technology's (MIT) Acoustic Laboratory in Cambridge, Mass, both of which were keen to conduct research on the U-boat's unique sonar-reflecting skin.

Once the sections of anti-sonar rubber tiles had been removed from *U-1105*, the US Navy had no further use for *U-1105* other than in explosives tests. However the projected way-ahead for *U-1105* was amended. On 25 July, the US Navy's Bureau of Ordnance (BuOrd) proposed that only one of the surplus U-boats awaiting disposal should be used specifically for testing both live and dummy demolition equipment. Then, BuShips requested a U-boat on which it could evaluate new salvage equipment and methods.

The CNO approved these proposals and formally allocated *U-1105* to the joint BuShips and BuOrd project on 29 November 1946. He also directed that *U-1105* should be towed from Boston Navy Yard to the Mine Warfare Test Station at Solomon's Island, Maryland. However, instead *U-1105* was moved to the Naval Gun Factory in Washington to await the commencement of the planned tests. These progressed so slowly that they did not take place for another 18 months, during which time *U-1105* remained moored at the Naval Gun Factory.

US Navy Exploitation of the Type XXI U-Boats

After *U-2513* and *U-3008* had arrived in New London in August 1945 and before they were moved to PNY in September, it was decided that, in accordance with US Navy policy, only one of these two Type XXI U-boats (*U-2513*) would be subject to US Navy trials - which were planned to last for up to a year. At the same time, *U-3008* became an authorised source of spares, both for *U-2513* and the other U-boats allocated to the trials programmes.

A short time later, because of the US Navy's special interest in the design and technology of the Type XXI U-boat, an exception to the general policy arose. Instead, the US Navy would conduct extensive trials for more than a year with each of the Type XXI U-boats. The prospect was first discussed in October 1945, and was formally implemented when, on 7 March 1946, the CNO sent a message to PNY saying:

> *Overhaul and place in service U-3008. Report to CINCLANT for duty.* (**4**)

These two large, high-speed, ocean-going Type XXI U-boats were of particular interest to the US Navy, which was very keen to learn whatever it could about the German designs and associated technology. Both submarines were subjected to testing for as long as the spares situation and their battery lives allowed. This decision was supported by the results of PNY's formal Type XXI Design Study Report 2G-21 of July 1946, mostly carried out on *U-3008*, which stated:

> *This type of vessel is a radical departure in hull form and in certain mechanical and electrical respects from earlier types of German submarines, for the purpose of increasing submerged speed, and permissible submergence depth.*

The changes have been made at the expense of surface speed and other surface characteristics. Further, the design was not completely thought out before the beginning of construction, and has a number of shortcomings as a result.

Nevertheless, the results obtained indicate the need to exploit the possibilities of the type to the maximum. (**5**)

As described in the Design Study report, there were a number of drawbacks evident in *U-2513* and *U-3008.* The US Navy nevertheless embarked on a series of extended operational trials with these two U-boats, concluding that the German advances in design, propulsion and performance justified their replication in US submarines. They incorporated the best features of the Type XXI U-boat into two of the Navy's wartime *Tench* class fleet submarines in 1946/47, essentially converting them into look-alike Type XXIs, and calling them 'Guppies' in view of their **G**reater **U**nderwater **P**ropulsion **P**ower. Improvements included increasing the submarines' battery capacity, streamlining the boats' structures, adding snorkels and improving their fire control systems. Thereafter, the Guppy programme was itself extended and the best aspects of the German developments were designed into the US Navy's new *Tang* class of fleet submarines. These delivered the diesel-electric powered higher speeds and improved performance that had been envisaged by the German engineers when they designed the Type XXI U-boat.

U-2513

Once *U-2513* had arrived at PNY in September 1945 and been selected (initially) as the single trial Type XXI, the US Navy wasted no time in initiating the actions necessary to make use of it. The first essential action was to make *U-2513* seaworthy and fit for use in the planned US Navy trials. However, whilst it was originally thought that it could be made available for the initial standardisation trials quite quickly, this proved to be optimistic, particularly because of problems with the availability of spares. Delays were also caused by a considerable number of domestic modifications and improvements to the U-boat:

To provide a bare minimum health and safety factor for an American crew while operating this new type of German U-Boat. (**4**)

After its extensive overhaul in Portsmouth, *U-2513* was ready for sea, leaving PNY for New London on 17 January 1946, where it took part in trials in the New London area. On 10 March, it headed south to Key West to participate the development of submarine and anti-submarine tactics. On 5 November 1946 the CNO (Admiral Chester Nimitz visited this submarine, and on 21 November President Truman became the first American President to travel on a submarine when he visited *U-2513*.

On 15 March 1947 *U-2513* headed north from Key West to PNY for a major overhaul which lasted until September. In October it returned to Key West, where it remained until the summer of 1949. On 5 December 1947, Truman again visited *U-2513* but this time, he did not go to sea in it. In mid-June 1949, *U-2513* returned to

PNY, where it was de-commissioned and declared out of service on 8 July because there was no life remaining in its batteries. On 7 November 1950, the CNO certified that *U-2513* was no longer needed, but it remained at Portsmouth until 23 August 1951, when it was returned to Key West, this time under tow for final disposal as a target in surface warship weapons trials.

U-3008

In March 1946, the CNO directed PNY to overhaul *U-3008.* The submarine had suffered from considerable cannibalisation, but staff worked hard, completing the overhaul by mid-summer. *U-3008* was commissioned into the US Navy on 24 July.

U-3008 initially operated out of New London and Portsmouth. In March 1947 it departed for Key West and duty with the US Navy's Operational Development Force where, like *U-2513*, it was involved with the development of submarine and antisubmarine tactics. That deployment lasted until October 1947 when *U-3008* returned to Portsmouth. *U-3008* then conducted operations out of New London and Portsmouth until February 1948 when it left New London to return to Florida to resume duty with the Operational Development Force until early June. On 7 June 1948, it headed north once more and, on 18 June, with its battery life finally expended, *U-3008* was placed out of service at PNY, to be used as a source of spares for *U-2513*. It was formally declared as surplus to requirements by the CNO on 7 November 1950, but with the proviso that it should be preserved for explosive tests, a decision that was formally approved on 29 June 1951.

The End of the Line for the US Navy's U-Boats

After the TNC-directed the sinkings of *U-805* and *U-1228* in February 1946, the US Navy disposed of the remaining 11 U-boats during the course of the following 10 years, with all except *U-505* either being sunk in explosives tests or sold for scrap.

The Disposal of *U-977*

The first U-boat facing disposal was *U-977.* Berthed in an out-of-service condition at the Boston Naval Base since January 1946, it had been used as a source of spares. Declared ready for disposal on 1 August, it was towed via the Cape Cod Canal, arriving for a rendezvous with the submarine USS *Atule* effected a rendezvous with *U-977* and the yard tug USS *ATR-64* off Cape Cod on 13 November. *Atule* fired the Mk 23 torpedo which destroyed the U-boat.

The Disposal of *U-234*, *U-530*, *U-858* and *U-889*

The next four U-boats for disposal were *U-234*, *U-530*, *U-858* and *U-889*. Of these, *U-234* and *U-858* had been returned to PNY after their trials, for cannibalisation and to await disposal: *U-234* arrived on 2 April 1946 and *U-858* on 14 June 1946. Of the other two, *U-889* had been at PNY since 13 January 1946 and *U-530* since 2 May 1946. In November 1947 the four U-boats were towed to Provincetown Harbour at Cape Cod, and then to a torpedo firing area 40 miles north-east of the Cape by the

submarine rescue ship, USS *Tringa* and the yard tug *YTB-230*. They were sunk by torpedoes fired from four separate US Atlantic Fleet submarines on 20 and 21 November, 1947:

U-234	Sunk by US S/M *Greenfish* on 20 Nov 1947
U-530	Sunk by US S/M *Toro* on 21 Nov 1947
U-858	Sunk by US S/M *Sirago* on 21 Nov 1947
U-889	Sunk by US S/M *Flying Fish* on 20 Nov 1947

The Disposal of *U-873*

Then *U-873* which, after the completion of its trials in the New London area, was returned to PNY on 3 April 1946 to await a decision about its final disposal. Like the others, it was used as a source of spares. It had initially been retained as a target vessel for BuOrd's planned depth charge programme, but after review in April 1947, *U-873* was added to the CNO's list of U-boats awaiting disposal. The formal disposal decision was taken in late 1947. Rather than being sunk in torpedo tests off Cape Cod, *U-873* was instead sold for scrap to the Interstate Metals Corporation of New York. Finally *U-873* was towed out of PNY on 10 March 1948 and broken-up later in the year.

The Disposal of *U-1105*

The disposal of *U-1105* was a very long drawn-out process. Once it had been moved to the Naval Gun Factory in Washington at the beginning of 1947, the planned salvage and depth charge tests did not commence for another 18 months. Then, between August 1948 and September 1949 *U-1105* was sunk five times and raised four times. The process began in 1948 when *U-1105* was scuttled in shallow water off Piney Point on 17/18 August. The initial salvage and lifting tests on the sunken hulk were conducted from 24 to 26 August, but a hurricane was due to pass through the area and, for safety reasons, *U-1105* was flooded and returned to the seabed on 30 August. The tests then resumed when *U-1105* was raised on 2 September and continued until 21 September when the emphasis changed to towing exercises.

With the completion of the salvage and rescue tests, together with the towing exercises, the demolition test programme took priority. Thus, after being towed across Chesapeake Bay on 28 September, *U-1105* was sunk on 29 September off Point No Point on the east side of Chesapeake Bay in the first of two explosive tests designed to determine the effective range of depth charges. In the event, even though it had been sunk, *U-1105* was not fatally damaged by this first depth charge trial. Thus, after 29 September the salvage and rescue tests continued off Point No Point. However, *U-1105* was not raised to the surface, and on 13 November, with the onset of the winter weather, the flooded hulk was temporarily abandoned on the seabed off Point No Point, remaining there for the following nine months.

On 11 July 1949 another set of salvage operations began, but it was not until 18 August that the waterlogged *U-1105* was once more on the surface. On 19 August the

U-boat was towed back to the area off Piney Point in the Potomac River, before being sunk yet again. The final events marking *U-1105*'s time in the US Navy took place in September. First, it was raised from the seabed on 2 September. It was then moored on the surface whilst an Explosive Ordnance Disposal Team from the Naval Powder Factory suspended a newly-developed 250-pound depth charge 30 feet below the keel. Then, on 19 September, *U-1105* was towed to a position a mile offshore from Piney Point where the depth charge was detonated. This caused *U-1105* to sink in less than a minute in about 90 feet of water, where it remains today as a registered under-water monument and official dive-site.

The Disposal of *U-1406*

U-1406 remained at PNY throughout 1946 and 1947. On 2 January 1948, BuShips recommended to the CNO that it be declared surplus because of the emerging advantages of nuclear propulsion, as well as the ongoing cost of maintaining *U-1406*'s hull at PNY. The CNO authorised the U-boat's disposal in February 1948 and, in accordance with the disposal policy then in force, it was sold to the Interstate Metals Corporation of New York. Finally *U-1406* left Portsmouth under tow on 18 May 1948 and broken-up later in the year.

The Disposal of U-*2513*

On 2 September 1951 the CNO ordered that *U-2513* should be sunk by gunfire. Thus on 4 October the U-boat was towed to the Dry Tortugas project area to the west of Key West by USS *Petrel* and the tug *YTB-543*. The following day the three vessels were joined by the destroyer USS *Robert A. Owens*, and on 6 October both USS *Petrel* and USS *Robert B. Owens* attacked the U-boat with gunfire and rockets. The rockets were fired by the destroyer, as part of the US Navy's test programme for what was initially called 'Weapon Able', but later known as 'Weapon Alfa'. However, *U-2513* was not allowed to sink on 6 October and, instead, was kept afloat with its decks awash by the frequent blowing of its ballast tanks using a salvage hose from USS *Petrel*. *U-2513* was finally sunk on 7 October 1951 after being hit by 'Weapon Able' rockets from USS *Robert B. Owens.* Subsequently the underwater wreck of *U-2513* was used by the US Navy for sonar, diving and demolition exercises, as well as being used as a weapons test target.

The Disposal of *U-3008*

On 31 July 1951, *U-3008* was towed from PNY to Puerto Rico for full-scale tests of a new underwater explosive, under the control of the Underwater Explosion Research Division of the US Navy's BuOrd. A series of five demolition tests took place in Brewers' Bay in St Thomas in the US Virgin Islands, with the first being on 22 May 1952, the second on 19 September 1953 and the last in June 1954. The final test left *U-3008* so badly damaged that the CNO authorised it to be sold for scrap. *U-3008* was therefore raised in the summer of 1954, and towed to the US Navy Base at Roosevelt Roads, San Juan, Puerto Rico where it was put up for sale. It was sold to Loudes Iron & Metal Company on 15 September 1955, and Loudes took possession of it on 17 January 1956 prior to scrapping.

The Disposal of *U-505*

Whilst it was originally envisaged that *U-505* should be used for gunnery and torpedo target practice, this proposed fate came to the attention of Admiral Daniel Gallery (who had commanded the aircraft carrier USS *Guadalcanal* when *U-505* was captured) in early 1947. As a result of informal action by the Admiral, the authorities in Chicago, including the Director of Chicago's Museum of Science and Industry (MSI), asked both the Secretary of the Navy and the CNO on 6 October 1947 if consideration could be given to the installation of *U-505* as an historic exhibit at the MSI.

Early disposal of *U-505* was therefore put on hold, and so began a very long period between October 1947 and May 1954 when the U-boat remained at PNY, tied up to a jetty, rusting and neglected, whilst the possibility of it becoming an exhibit at the MSI was endlessly debated. Throughout all that time the US Navy was sympathetic to the idea of the transfer, whilst steadfastly committed to the idea that no Navy funds were available for the project, and during that time *U-505* featured on the US Navy's proposed disposal list on at least three separate occasions.

Finally, the authorities in Chicago accepted that, whilst the US Navy was prepared to donate *U-505* to the MSI, it was not prepared to fund the concept and, in 1953, they began to raise the necessary funds. The Secretary of the Navy signed transfer of the title of *U-505* from the US Navy to the Chicago MSI on 9 March 1954. *U-505*'s last day in US Navy custody was 14 May 1954 when two US Navy tugs towed the U-boat down the Piscatauqua River from the PNY to a buoy in the harbour at Kittery, Maine. The following day *U-505* started its journey to Chicago under tow by the civilian tug *Pauline L Moran*. After 8 long years of hard, if intermittent, lobbying, planning, work and fund raising, to bring the aspirations to fruition, the movement of *U-505* to Chicago still proved to be a monumental and expensive undertaking. The tug began towing the U-boat from Kittery on 15 May on its journey, which covered 3,000 miles, through 28 locks on the St. Lawrence River, and through four of the five Great Lakes. *U-505* finally arrived in Chicago on 26 June, and on 25 September 1954 it was dedicated as a war memorial and a permanent exhibit at the Museum of Science and Industry, where it remains to this day.

Conclusion

In summary, the 13 U-boats which saw service with the US Navy post-May 1945 were disposed of as follows:

U-234	Sunk on 20 Nov 1947 by US S/M *Greenfish* off Cape Cod.
U-505	Gifted to the Chicago Museum on 9 Mar 1954.
U-530	Sunk on 21 Nov 1947 by US S/M *Toro* off Cape Cod.
U-805	Sunk of 8 Feb 1946 by US S/M *Sirago* off Cape Cod.
U-858	Sunk on 21 Nov 1947 by a US S/M *Sirago* off Cape Cod.

U-873	Sold for scrap in New York in Mar 1948, and broken-up.
U-889	Sunk on 20 Nov 1947 by US S/M *Flying Fish* off Cape Cod.
U-977	Sunk on 13 Nov 1946 by US S/M *Atule* off Cape Cod.
U-1105	Sunk on 19 Sep 1949 by a depth charge in the Potomac River.
U-1228	Sunk on 5 Feb 1946 by US S/M *Sirago* off Cape Cod.
U-1406	Sold for scrap in New York in May 1948, and broken-up.
U-2513	Sunk on 7 Oct 1951 off Key West by USS *Robert A Owens.*
U-3008	Sold for scrap in Puerto Rico in Sep 1955. Broken-up in 1956.

Arundel, W. Sussex, UK *September 2018*

Specific Sources:

1. NARA Washington, RG 313 – Records of US Navy Commander Submarines Atlantic (ComSubLant) E 275, 370/41/12/5-6, Boxes 11 and 14
2. NARA Washington, RG 19 - US Navy Bureau of Ships (BuShips) E 1266, 470/9/6/3, Boxes 424 and 425, and 470/27/2/1, Box 767
3. NARA Washington, RG 38 – Navy Department and USS Guadalcanal Papers CNSG Library, A1030 – Box 198 -5750 (351)
4. NARA Washington, RG 333.4 - Records of the US Navy Element of the TNC, E 15, 190/31/19/01-02, Boxes 1 and 5
5. Portsmouth Navy Yard Museum and Archive, and on-line Internet website: http:// www.uboatarchive.net/ (accessed 3 December 2018)

Hadley, Edward Eugene "Dean" (RCMP Cst # 13013)

Wireless operator & clerk - RCMP MV *St. Roch* 1920-42
British Polar medal 1944

A Tribute to One of Henry Larsen's "Prairie Boys"
by Doreen Larsen Riedel

Dean Hadley was born in 1919 in Stoney Plain, Alberta, just west of Edmonton. His father was a watchmaker and jeweler. During the 1920's the family moved relatively frequently through a number of small towns in Western Canada. Dean's father had built the family's first radio and, following in his footsteps, Dean also became a ham radio operator. He attended Weyburn School of Commerce in Weyburn, Saskatchewan. At 18, while working for the Canadian Pacific Express and the Wincup Radio Service, he had the opportunity to join the RCMP which at the time was hiring men for their clerical branch. After learning about basic forensic analysis, he worked in the RCMP Crime laboratory in Regina. But his fascination with radio and wanting to get some ship experience led Dean to volunteer for the position in the RCMP's Arctic Division as Radio Operator and Detachment Clerk aboard the RCMP motor vessel *St. Roch*. Up until that time, all RCMP Radio operators had been civilians sworn in as special constables. He was transferred to the *St. Roch* in April 1940, becoming the youngest man on the ship. In July the ship proceeded North, loaded with supplies for Arctic detachments and with another eighteen months supplies for its own use.

RCMP-46.2 shows L-R Peters. Hadley, Larsen, Foster at Paisley Bay, spring? 1942
Courtesy of Doreen Larsen Riedel

At Dutch Harbor, "sealed orders" were opened and the crew learned that after delivering supplies to the Western Arctic detachments, instead of returning to Vancouver as usual, the ship was to proceed through the North-West Passage to Halifax on the east coast. That journey was expected to take only one season. Hadley said that all the crew were given the opportunity to be re-assigned or stay with the ship. No one elected to be re-assigned. In those days, in spite of the difficulties in Northern service, considerable prestige was achieved by gaining Arctic experience.

Although working as Radio Operator on *St. Roch*, Dean took his turn at the wheel, assisted in raising and lowering the heavy canvas sails (the ship lacked power winches), and took great interest in helping in the engine room. Dean had built and designed radios, learned code and had been a radio operator since he was a kid, and knew quite a bit about radio transmission. But he said that he didn't expect anything as primitive as what they had on *St. Roch*. He improved the ship's radio and built a second radio from various parts. Dean celebrated his 21st birthday board *St. Roch* while frozen in at Cambridge Bay in 1940.

Because of unusually heavy ice conditions, the journey took three summers and two winters to complete. Each member of the eight man crew was awarded the Polar Medal (Arctic) by King George VI and the names of the men appeared on the King's 1943 New Year's Honours list for their achievement in becoming the first ship to sail from Pacific to Atlantic through the Northwest Passage.

After *St. Roch* reached Halifax in 1942, Dean was transferred to Winnipeg, joining four other RCMP officers, all amateur radio operators, to operate and maintain the RCMP communications station there. His subsequent career was extensive and varied. He joined the Royal Canadian Air Force, studied engineering at the University of Toronto and surveyed for radioactive minerals in the Great Bear Lake area. In about 1948, Dean briefly returned to the RCMP again, in communications work in Manitoba and Ottawa then he joined the company Computer Devices.

Arrival Halifax in 1942 - after they had a chance to clean themselves up Oct 11 L- R Parry, Hunt. Hadley, Larsen, Farrar,Doyle (who joined then at Pond Inlet to replace Chartrand) , Foster, Peters. Courtesy of Doreen Larsen Riedel

At 32, Dean moved to the United States to work for the Solar Manufacturing Company in quality control and later in capacitor design. Working as an assistant engineer with Beckman Instruments, he became involved in military related instrumentation. His next move was to Hallamore Electronic Division of the Lear Siegler Company and thus in the American Aerospace industry where he was involved in the processing of telemetry data and control processes. Eventually he was involved in real estate, property management and clean energy.

Dean related the story of his active life in a small book entitled, "*What a Life*", (Xlibris Corp. 2008) and in 1993 he appeared along with Pat Hunt, also a veteran of that 1940-42 voyage, in the documentary film *Mission Northwest Passage*, (CineNova. Producer Jane Armstrong).

Hadley and Ken Burton following presentation of his Polar Medal which had been at the VMM
Courtesy of Doreen Larsen Riedel

The RCMP MV *St. Roch*, and Eugene Hadley, the ship's radio operator on that historic first East-ward voyage between the Pacific and Atlantic, were two of the first inductees into the Vancouver Maritime Museum's Northwest Passage Hall of Fame in October 2017. At the time he was a great storyteller, bright and endlessly interested in everything around him. During that October celebration Dean finally received his Polar Medal that had been granted for the 1940-42 voyage. Receiving his well earned medal at this celebratory event was fortunate, because in July 2018, Dean fell and fractured a hip, and while in hospital, passed away quietly on July 13 in his sleep.

Meritorious Service Cross

Richard Gimblett (left) is awarded the Meritorious Service Medal by Governor General Julie Payette (right), 5 November 2018. Courtesy of Richard Gimblett

We congratulate CNRS President Dr. Richard Gimblett who was presented the Meritorious Service Cross by Governor General Her Excellency Julie Payette at Rideau Hall on 5 November 2018.

The citation reads:

> Dr Richard Gimblett, MSC, CD, RCN, is recognized internationally as our country's premier post-Cold War naval historian. His research and advice contributed significantly to the creation of a national monument to the Royal Canadian Navy in Ottawa and to the re-introduction of the Canadian Naval Ensign for warships and other designated vessels. His analysis of past operations and partnerships has influenced the strategic direction of the navy's involvement in world maritime security.

Call for Papers
Canadian Nautical Research Society
Annual Conference and General Meeting

Thunder Bay, Ontario, 22-24 August 2019

Lower Lakes, Upper Lakes:
Connecting Maritime Heritage, Part 2

The Upper Great Lakes have been significantly impacted by transportation systems that merged water with land. The westerly movement of people, manufactured goods, and coal led to the easterly shipment of grain and iron ore. Settlements emerged where steamships could connect with railways, with an infrastructure of elevators, freight sheds, and port-related industries such as dry docks and shipbuilding. Shipping and port activities left a rich legacy of memory, artifacts, and documents that have begun to fade with the transition of these waterfront communities to residential and recreational uses. Proposals are invited for presentations that explore the maritime heritage of the Upper Lakes from a wide variety of perspectives. Topics of interest could include:

- Shipping, maritime commerce, and trade
- Ships and shipbuilding
- Ports and harbour management
- Maritime labour
- Development of urban waterfronts
- Environmental studies, including water levels and quality, and weather
- First Nations and indigenous peoples
- Marine archaeology and management of heritage resources, including vessels
- The Great Lakes in popular culture, including literature, film, and music
- Naval aspects of the Great Lakes

Proposals on other maritime topics from all time periods are also welcome. The Canadian Nautical Research Society is committed to making maritime history more accessible, and to fostering a culture of inclusion. We invite interdisciplinary proposals from speakers who will contribute to the diversification of our discussions and community. We also encourage publication of expanded versions of final papers in our journal, *The Northern Marine/Le marin du nord*, or in our quarterly publication, *Argonauta.*

Please send a working title, a brief abstract of up to 300 words, and a short biographical sketch no later than 1 March 2019 by email to conf2019@cnrs-scrn.org , or by regular mail to:

Chris Madsen
Canadian Forces College
215 Yonge Blvd.
Toronto, Ontario
M5M 3H9 Canada

Canadian Nautical Research Society / Société canadienne pour la recherche nautique

Nominations

Your Society needs you. Membership counts, but serving on Council is a terrific way to participate in the decisions that are needed to ensure we will remain an effective force in preserving maritime history and in giving an opportunity for authors to get published. We are among the few who, through our publications, *The Northern Mariner* and *Argonauta,* can provide this service.

Nominations

As the pro tem Chair of the Nominating Committee, I am looking for your help in suggesting names of potential new council members. As you will know from reading my President's Corner, we have a terrific group of council members now serving on our Executive (see the verso of the front cover of *Argonauta* for a list of those now serving). However, we also are facing the challenge of renewal in the senior leadership positions and need to develop a group of younger people willing to step forward and "take up the torch". If you are interested in Executive service in the long term, let me know. Also feel free to contact any other Executive members just to chat about issues or to find out what sort of duties are involved.

The by-law information pertaining to nominating Officers and Councillors at large is shown below, and the elections will be at the Annual General Meeting of 24 August. Please send your nominations to the CNRS Nominating Committee c/o myself at CNRSPresident@cnrs-scrn.org by 01 August 2019.

NOMINATING OFFICERS OF THE SOCIETY AND COUNCILLORS AT LARGE

37. There will be a nominating committee. Normally the past president will chair this committee with such other members as may be appointed by council. No officer or councillor or member standing for election or re-election may be a member of this committee. The nominating committee will nominate one candi- date for each position to be filled at the next annual general meeting.

38. Members may also propose the names of candidates in writing and with the signatures of three members. All proposals must include a written undertaking by the nominee to accept the position if elected. If such suggestions are not accepted by the nominating committee for incorporation within their report, the nominations not so included must be forwarded by the nominating committee to the annual general meeting in addition to their report, for the purpose of conducting an election for the contested positions. The chair of the nominating committee will close the nominating

list, which will include the proposals of the nominating committee and other proposals by members not later than 30 days prior to the annual general meeting.

39. A call for nominations shall be included in the January issue of *Argonauta* each year. Such notice must include the date on which nominations will close, to whom the nominations must be forwarded, and the date of the annual general meeting at which the nominating committee report will be received, or, if necessary, and election will be held.

40. Nominations from the floor are permitted at the annual general meeting only if there would otherwise be a vacancy for a position.

41. The council may fill any vacancy not filled by election at the annual general meeting in accordance with section 68, (Vacancy in Office).

We survive due to our slowly growing Membership and to the voluntary hard work of two significant teams: *The Northern Mariner* and *Argonauta.* These CNRS publications have a strong national and international audience and they have contributors ready with original editorial content. Everyone works hard including the Members of our Council.

Thank you, Rich

The James C. Bradford Dissertation Research Fellowship in Naval and Maritime History

Awarded by the
North American Society for Oceanic History

Amount:	$1,000
Closing Date for Applications:	15 March 2019
Send Application Materials To:	nasohbradfordfellowship@gmail.com
Announcement of Award:	15 May 2019

The North American Society for Oceanic History is offering one dissertation fellowship in North American naval and maritime history for 2019. The fellowship is named in honor of NASOH past-president Dr. James C. Bradford, in recognition of his distinguished contributions to the field of American naval history.

Eligibility: Applicants must have completed all requirements for the Ph.D. at the time of application and have an approved dissertation proposal on file at their degree-granting institution.

Topics in all periods of United States and North American naval and maritime history are eligible.

Naval topics include strategy, tactics, and operations; institutional development and administration; biography, personnel, and social developments; exploration, science, and technology; and policy and diplomacy;

Maritime (including oceans and inland waters) topics include commerce, the environment, exploration, biography, societies, fishing, labor, shipbuilding and technology, navigation, oceanography, and travel.

Application Documents: Applications should include:

1. A completed and signed application cover sheet (the blank application cover sheet is available at www.nasoh.org);
2. Curriculum Vitae;
3. Copy of approved dissertation proposal;
4. Description of the status of the project (not over 1,000 words);
5. Brief statement of proposed use of the fellowship funds;
6. The names and contact information for the dissertation committee chair and two other individuals asked to submit letters of recommendation.

Submission and Deadline: All application materials and letters of recommendations are due on 15 March 2019 and should be sent by e-mail with pdf attachments to: nasohbradfordfellowship@gmail.com

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Selection: Applications will be evaluated by a three-person committee of NASOH members and the recipient notified by 15 May 2019.

CALL FOR PAPERS

Connecting the Global and Local: The Sea and Maritime Cities

North American Society for Oceanic History
National Maritime Historical Society
New Bedford Whaling Museum
New Bedford Whaling National Historical Park
New Bedford Fishing Heritage Center
2019 Annual Conference
New Bedford, Massachusetts

Connecting the Global and Local: The Sea and Maritime Cities*,* the 45th Conference of the North American Society for Oceanic History held jointly with the National Maritime Historical Society and co-hosted by the New Bedford Whaling Museum, New Bedford Whaling National Historical Park and New Bedford Fishing Heritage Center will be held in New Bedford, Massachusetts, **May 15-18, 2019**.

The city of New Bedford, Massachusetts is a vibrant nexus in oceanic, maritime, and coastal history that has few parallels in North America. Though possessing immense cultural weight through its association with American whaling industry and Herman Melville's *Moby Dick*, New Bedford's maritime history did not begin or end with whaling. In the second decade of the 21st Century, the city remains the nation's most valuable fishing port and more than 5,000 people are employed in port-related jobs. Employment opportunities and the openness of the maritime sectors to immigrant laborers from the whaling era to the present have led to a racially and culturally diverse city and population with enduring ties to Portugal, the Azores, Cape Verde, Norway, and the Atlantic Maritimes. More recently immigrants from Vietnam, Mexico and Central America have found work in the fishing industry. This is readily apparent in aspects of everyday life such as food ways, ethnic clubs and small businesses. Centuries of dependence on the unforgiving sea fostered the creation of maritime charities, medical and other social service institutions such as the famous Seamen's Bethel & Mariners Home and the still active Shaw Fund for Mariner's Children. Multicultural in its composition, global in its historical connections with the sea, New Bedford captures maritime North American in all its dimensions.

We are looking forward to meeting in New Bedford, whose past and present are intertwined with the sea. Under the conference theme *Connecting the Global and Local: The Sea and Maritime Cities*, the program committee invites submissions of individual papers and full sessions (preferring panels with three papers) that identify and explore the dynamic social, cultural, environmental, economic and physical spaces that connects city and sea. Submissions on other topics in maritime history, archaeology and culture are also welcome. Session and individual paper proposals should include: A) title, not to exceed 10 words; B) abstract, not to exceed 250 words; C) a 200-word bio for the presenter; D) contact information including phone number, address, affiliation, and email. Please submit this information as a single Word document, single-spaced, 12-point Times Roman font, and not as a PDF. Accommodations for PowerPoint presentations will be provided; any other requirements, including audio-visual equipment, special outlets, or accommodations for disabilities should be included in the proposal. Please note that all participants must register for the conference.

Students may apply for a Chad Smith Travel Grant to assist in travel to present a paper at the conference. Additionally, each year NASOH bestows the Clark G. Reynolds Student Paper Award to the author of the best graduate student paper delivered at the conference. Please see the awards section of the NASOH website for details.

The deadline for proposal submission is **February 1, 2019**. Please submit proposal packets electronically to the Program Committee at NASOH2019CFP@gmail.com.

NASOH members and anyone interested in serving as panel chairs should send an email to the Program Committee at the same address.

Program Committee Members:

John Jensen, University of West Florida, Co-chair
Kurt Knoerl, Georgia Southern University, Armstrong Campus
Victor Mastone, Board of Underwater Archaeological Resources, Co-chair
Calvin Mires, Bridgewater State University
Laura Orleans, New Bedford Fishing Heritage Center

2019 McMullen Naval History Symposium
Call for Papers

19-20 September 2019
U.S. Naval Academy, Annapolis, MD #McMullen19

The year 2019 marks numerous anniversaries in naval history. It is the 75th anniversary of the Battle of Leyte Gulf, the 50th anniversary of the North Korean shootdown of *Deep Sea 129*, the 150th anniversary of the establishment of the U.S. Navy Good Conduct Medal, the 150th anniversary of the Japanese Battle of Hakodate during the Meji Restoration, and the 200th anniversary of U.S. Congress giving the Secretary of the Navy sole responsibility for the naming of ships. From operational history, to social history, to political history, and every approach in between, the naval and maritime history of the United States and the wider world remain rich areas of research and scholarship.

The History Department of the United States Naval Academy invites proposals for papers to be presented at the 2019 McMullen Naval History Symposium on *any topics related to American or world, naval and maritime history*.

Proposals should include a one page vita and an abstract of no more than 250 words which summarizes the research and its contribution to historical knowledge, *collated in a single PDF or Microsoft Word file*. Panel proposals (made up of three presenters, a chair, and a commenter) are highly encouraged, and should include all relevant material on the presenters, as well as a one page vita for the chair and commenter.

Proposal deadline: 15 February 2019.

Email proposals to navalhistorysymposium@gmail.com by midnight. The program committee anticipates announcing a draft program by the end of April 2019; papers are due to the committee and to panel chairs/commenters by 16 August 2019.

On-line registration for the conference will begin in the spring of 2019. A small number of modest travel stipends are available to graduate students and recent PhDs who do not hold a tenure-track position or full-time employment. Support for these grants comes from the generosity of the McMullen Sea Power Fund established in honor of Dr. John McMullen, USNA Class of 1940. The committee will prioritize graduate students for these funds. Please indicate your desire to apply for a travel stipend with your proposal. The committee will publish a volume of proceedings in the *New Interpretations of Naval History* Series, containing a selection of the best papers presented, at a future date.

Naval Dockyard Society Conference

March 30, 2019
National Maritime Museum, Greenwich, UK

The sentiment expressed in the chorus of 'O Canada', the Canadian national anthem written in 1880, could represent that of any naval base for its territory.

This one-day conference will examine the role of naval bases in North America, the North Atlantic and the Caribbean. Were bases built to defend colonies, to control colonies, or to act as springboards for attacking the enemy? How useful were bases in the 17th–20th centuries? Some bases expanded in the world wars. How much was this for local defence and how much to defend convoys?

An exciting and wide-ranging international programme features three papers focused on shore and air facilities in North American naval bases: the Upper Canadian hemp supply, naval dockyards on the Great Lakes and the Rush-Bagot Treaty, and shore facilities for maritime and naval aviation in the North Atlantic. These are followed by four papers examining specific naval issues: West Indies naval hospitals, historic defences at La Fortileza at Santo Domingo, the history and re-use of Brooklyn navy yard at New York, and heritage issues at Port Royal Jamaica.

Contact Info:

Dr Ann V. Coats, Chair *Naval Dockyards Society*

Contact Email: avcoatsndschair@gmail.com

URL: https://navaldockyards.org/

Undergraduate Essay Prize: The Merriman Prize 2018-19

By Marco Wyss

The Merriman Prize 2018-19

The Merriman prize is awarded for an outstanding undergraduate essay on any topic in the fields of international and/or military history from the ancient world to the present day. Offered by the Department of History at Lancaster University, it is open to current undergraduates at any UK or overseas university. The successful candidate will be awarded a prize of £250.

Possible themes may include, but are not limited to:

- The rise and fall of great powers
- The treatment of non-combatants
- Diplomacy and peace-making
- Strategy and tactics
- Battles and operations
- Wars of propaganda
- Weaponry
- Intelligence

Essays of 2,500 to 3,000 words (excluding footnotes and bibliography) should be submitted to Dr Sophie Ambler, s.ambler@lancaster.ac.uk, by 15 March 2019, together with a brief covering letter, which must include the name of your university and title of your degree, signed by a member of your faculty confirming that you are a current undergraduate.

For details of Lancaster's MA International and Military History, see lancaster.ac.uk/history/masters

Guidelines for Authors

Argonauta follows *The Chicago Manual of Style* available at this link: http://www.chicagomanualofstyle.org/home.html.

However, we utilize Canadian spelling rules, in lieu of American rules, unless referring to proper American names. Thus, the Canadian Department of Defence and the American Department of Defense are both correct.

For ship names, only the first letter of the names of Royal Canadian Navy ships and submarines is capitalized, and the name appears in italics. For example:

Her Majesty's Canadian Ship (HMCS) *Queenston*
Her Majesty's Canadian Ship (HMCS) *Châteauguay*

Class of ship/submarine: *Victoria*-class submarines (not VICTORIA Class submarines)

Former HMCS *Fraser* rather than Ex-*Fraser*

Foreign ships and submarines:
USS *Enterprise*
HMS *Victory*
HMAS *Canberra 3*

Because *Argonauta* aims to publish articles that may be easily understood by senior high school students and other non-experts, we encourage authors to include general introductory context, suggestions for additional reading, and links to relevant websites. We publish memoirs, humour, reviews of exhibits, descriptions of new archival acquisitions, and outstanding student papers. We also publish debates and discussions about changes in maritime history and its future. We encourage submissions in French and assure our authors that all French submissions will be edited for style by a well-qualified Francophone.

Although *Argonauta* is not formally peer-reviewed, we have two editors who carefully review and edit each and every article. For those producing specialized, original academic work, we direct your attention to *The Northern Mariner* which is peer-reviewed and appropriate for longer, in-depth analytical works.

All submissions should be in Word format, utilizing Arial 12 pt. All endnotes should be numbered from 1 consecutively to the highest or last number, without any repeating of numbers, in the usual North American Academic manner described in the *Chicago Manual* which also provides guidance on using the Word insert function at this link: https://www.ivcc.edu/stylebooks/stylebook5.aspx?id=14646. For technical reasons, we prefer that authors use endnotes rather than footnotes. Typically an article in *Argonauta* will be 4 to 6 pages long, though we do accommodate longer, informal pieces. We strongly encourage the use of online links to relevant websites and the inclusion of bibliographies to assist the younger generation of emerging scholars. The *Chicago Manual* provides detailed instructions on the styles used.

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https://www.rmcc-cmrc.ca/en/registrars-office/academic-regulations#ai

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- *Argonauta*, a quarterly on-line newsletter, which publishes articles, opinions, news and information about maritime history and fellow members.
- An Annual General Meeting and Conference located in maritime-minded locations, where possible with our U.S. colleagues in the North American Society for Oceanic History (NASOH).
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