



Sixty years ago, N.S. *Savannah* would have sailed beneath the Francis Scott Key Bridge, entrance to Baltimore Harbor, to ports around the globe. Now the world's first nuclear-powered merchant ship floats alongside Pier 13 of the city's Canton Marine Terminal.

PHOTOGRAPH BY BILL NEWCOTT

HISTORY & CULTURE

This ship was supposed to usher in an age of nuclear-powered travel

The N.S. *Savannah* was built to introduce an atomic age of super-clean, hyper-efficient sailing vessels, but ended up a relic in Baltimore Harbor. Why?

STORY AND PHOTOGRAPHS BY **BILL NEWCOTT**

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The world had been living under the threat of nuclear war for the better part of a decade when President Dwight D. Eisenhower had an idea: Let's give atomic power a makeover. Ike came up with [Atoms for Peace](#), a three-pronged effort to rehabilitate our friend the atom as a harmless harbinger of unlimited possibility. Prong one: domestic nuclear energy. Prong two: nuclear medicine. Prong three: nuclear-powered transportation.

Well, two out of three ain't bad.

One recent morning I was welcomed aboard the only surviving relic of

world's first nuke-powered merchant vessel. Put into service in August 1962, the hybrid freighter/cruise ship plied the world's oceans for eight years, carrying trend-setting passengers and cargoes ranging from tobacco to cars, proclaiming to the world the dawning age of super-clean, hyper-efficient, nuclear-powered vessels.



Visiting the U.S. West Coast on her maiden voyage—following a transit of the Panama Canal—N.S. *Savannah* approaches San Francisco's Golden Gate Bridge November 18, 1962.

PHOTOGRAPH COURTESY MARITIME ADMINISTRATION, NARA

In those heady days, some 1.5 million people at ports of call around the planet toured *Savannah*, pushing up the gangway of the sleek white wonder, visiting its space-age control room, and marveling at its iconic logo: two electrons encircling a porthole standing in for the nucleus of an atom.

Too soon, however, the economics of operating a nuclear-powered commercial ship in an age of cheap fossil fuels caught up with *Savannah*—as did her relatively small size compared to the new container ships. Now, she floats at Pier 13 of the Canton Marine Terminal in a remote corner of Baltimore Harbor, ironically rendered obsolete by her advanced technology.

Still, a defiant *Savannah* gleams gloriously white against the blue sky and dark water, her stylized electrons still whirling merrily around their portholes. Over the past few years, cars jammed the dock as more than 80

pieces were wrapped up and transported by train to a deep grave somewhere in Utah, completing the job 52 years after the reactor's shutdown in 1971 and years ahead of the mandatory 2031 deadline.



Preferred guests would have been invited to the Captain's Table—flanked by "Fission," an expansive wall sculpture by French-born sculptor Pierre Bourdelle.
PHOTOGRAPH BY BILL NEWCOTT

Nicer than it had to be

"Very 'Jetsons,' isn't it?" observed Erhard Koehler, *Savannah's* senior technical advisor and the [U.S. Maritime Administration](#) official in charge of the ship. We were standing in *Savannah's* lobby, virtually unchanged since launch—a low-ceilinged rectangle bisected by a long, burnt-orange Naugahyde couch. In gold print on the Linoleum reception desk were the words: "The *Savannah* is a Joint Project of the Maritime Administration and the Atomic Energy Commission."

Some parts of the ship, like this lobby, appear to have arrived in the 21st century via a time vortex. The plush passenger dining room—with its miraculously intact original carpeting, atom-themed light fixtures, and a captain's table framed by a vast, curved wall sculpture called "Fission"—seems ready to welcome spiffed-up passengers any second.



Original place settings, emblazoned with the ship's atom-inspired logo, are preserved in a dining room display case.

On the upper deck, in the broad-windowed, brightly polished Veranda cocktail lounge, the bar is still dominated by its original, striking metallic blue, red, and yellow wine rack. Dramatically backlit, the rack was designed as an inside joke for nuclear science buffs who would have recognized it as representing the Trilinear Chart of Nuclides. Koehler and company have even found an original drink menu (“Atomic Cocktail: \$1”).

“We’ve tried to preserve as much of the original look as possible in the public areas,” said Koehler. Considering the wild abandon with which substances like asbestos and PCBs were used in those days, he adds, “It’s not always easy.”

Other sections, like the former passenger cabins, are in decidedly rougher shape, victims of water leaks and rot. Still, it’s clear that *Savannah* was built nicer than it had to be, with touches one would never have found on a mid-century freighter. That’s because, from its inception, *Savannah* was meant to be much more than a nuclear-powered workhorse.



Floating behind the ship's cocktail bar, a multicolored wine bottle rack cleverly mimics the trilinear table of the nuclides, depicting isotopes of the elements.

“The passenger cabins were placed right next to the reactor,” said Koehler as we headed down a stairway to the ship’s holds. Savannah could take 60 passengers—and some of them, I was surprised to learn, slept within 50 feet of a sustained nuclear reaction.

“It was all on purpose,” Koehler said. “Eisenhower wanted everyone to see how safe nuclear power could be.”

Throughout its near-decade as a working merchant ship—then during decades of mothballing, interrupted by a stint as a floating museum near Charleston, South Carolina—*Savannah* has remained under the ownership of the Maritime Administration. The agency oversaw maintenance of the ship while the Nuclear Regulatory Commission dismantled and disposed of *Savannah*’s nuclear power plant.

During the final days of the disassembly, Koehler offered to let me see how it was going. We climbed a series of stairways to a chamber at the top of the ship's nuclear reactor. A small window had been cut into plastic sheeting draped atop the wide steel silo that contained the reactor’s innards, some 30 feet below.

Peering through, I looked directly down into the core, where 32 pillars of uranium once generated enough radioactive heat to bring circulating water to about 570 degrees Fahrenheit, creating steam to power the ship’s engine. Instinctively, I glanced at the two radiation gauges clipped to my shirt. Of course, there was nothing to worry about. Still, even with the ship’s nuclear fuel long gone, the team took the hazards of radiation seriously: That morning I had to sit through a 30-minute safety training session just to be permitted this far.

I recalled what Koehler had told me as we walked past an ancient Radar Range microwave oven in *Savannah's* kitchen—a model that was so cavalier about the effects of microwaves that it could cook a hamburger with the door open.

“You’d get more radiation in the kitchen than you would standing near the reactor,” he chuckled.

Because of the flurry of workers below, I couldn’t visit the nuclear control room where three engineers monitored *Savannah's* nuclear power plant 24/7. A large photo of the control panel sprawled along a passageway wall, showing a seemingly endless array of analog dials, gauges, and switches. Built just before the dawn of digital miniaturization, the whole thing was run with an army of vacuum tubes hidden behind those panels.

That thought delights Bob Adams, president of the [N.S. Savannah Association](#), a nonprofit group of ship enthusiasts whose mission it is to tell the story of *Savannah* and assist in its preservation.

Adams, a self-described “tube head,” showed me around *Savannah's* radio room. On one array, positioned above a seven-inch TV monitor, some 40 tubes bristled at attention.

“The tubes aren’t hard to get,” said Adams, fiddling with the ship’s vintage audio entertainment system. He was playing a CD of steel band music over the speakers, but his ultimate goal was to fire up *Savannah's* old reel-to-reel tape player.

“That cabinet over there’s got the ship’s original reels of tape in it,” he said, like a kid anticipating Christmas.

On one wall of the cramped room, taped into place by some long-forgotten radioman, were yellowed sheets bearing broadcast frequencies for ports of call around the world: Portugal, Hong Kong, Okinawa. One of the complications faced by *Savannah* during her sailing years was the need for special clearances at each destination.

“Whatever the U.S. domestic regulations were for a nuclear power plant, you had to have reciprocity wherever you went around the world,” said Koehler. “A whole administrative structure had to be developed.”

In all, *Savannah* visited 45 foreign and 32 domestic ports. Only Australia, New Zealand, and Japan refused her entry.

A future that never happened

National Geographic magazine ran a lengthy article about *Savannah's* launch in August 1962. “If *Savannah* works,” writer Alan Viliers noted, “merchant shipping can be revolutionized.”

Savannah operated nearly flawlessly; it was the economics that didn't work. By 1971, *Savannah's* operating costs were outpacing income by \$2 million a year. With just a handful of nuclear-powered merchant ships on the high seas, it was becoming clear the world's shipping companies would prefer pouring tons of oil into their vessels to managing floating nuclear plants—even if those plants could propel their ships 300,000 miles on one load of nuclear fuel.

If the operators had held out for just two more years—when the price of fuel oil went from \$20 a ton to \$80—the story of nuclear-powered merchant ships might have been very different.

Savannah was listed on the National Register of Historic Places in 1982, but that by no means ensures her future. With the removal of her nuclear apparatus, by law the Marine Administration has three options: find someone willing to take *Savannah*, sell her for scrap, or scuttle her as an artificial reef.

Environmental concerns almost certainly rule out the last option, but Koehler hopes the ship will survive as a museum for generations to come.

“I think we'll find somebody,” he said. “We've taken good care of her; it's pretty much plug-and-play for anyone who wants to operate her as a museum.”

We took one last pass through the Veranda lounge. Outside the curving front windows, *Savannah's* bell hung above the boarded-over swimming pool. In a display case donated by the Smithsonian Institution, relics of *Savannah's* passenger-hauling heyday are on display, including a Bingo ball cage and a pair of wooden horses from an old Steeplechase deck game.

But my attention was drawn back to that magnificent metallic wine rack behind the bar. Koehler had turned on its lights, and it shone with an almost iridescent splendor, radiating optimism for a future that never happened.

It was sad—and at the same time subversively triumphant. I was reminded of the first steam-powered ship to sail across the Atlantic. In 1819 that commercial venture failed, and steam power seemed like a folly.

The ship's name: *Savannah*.

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