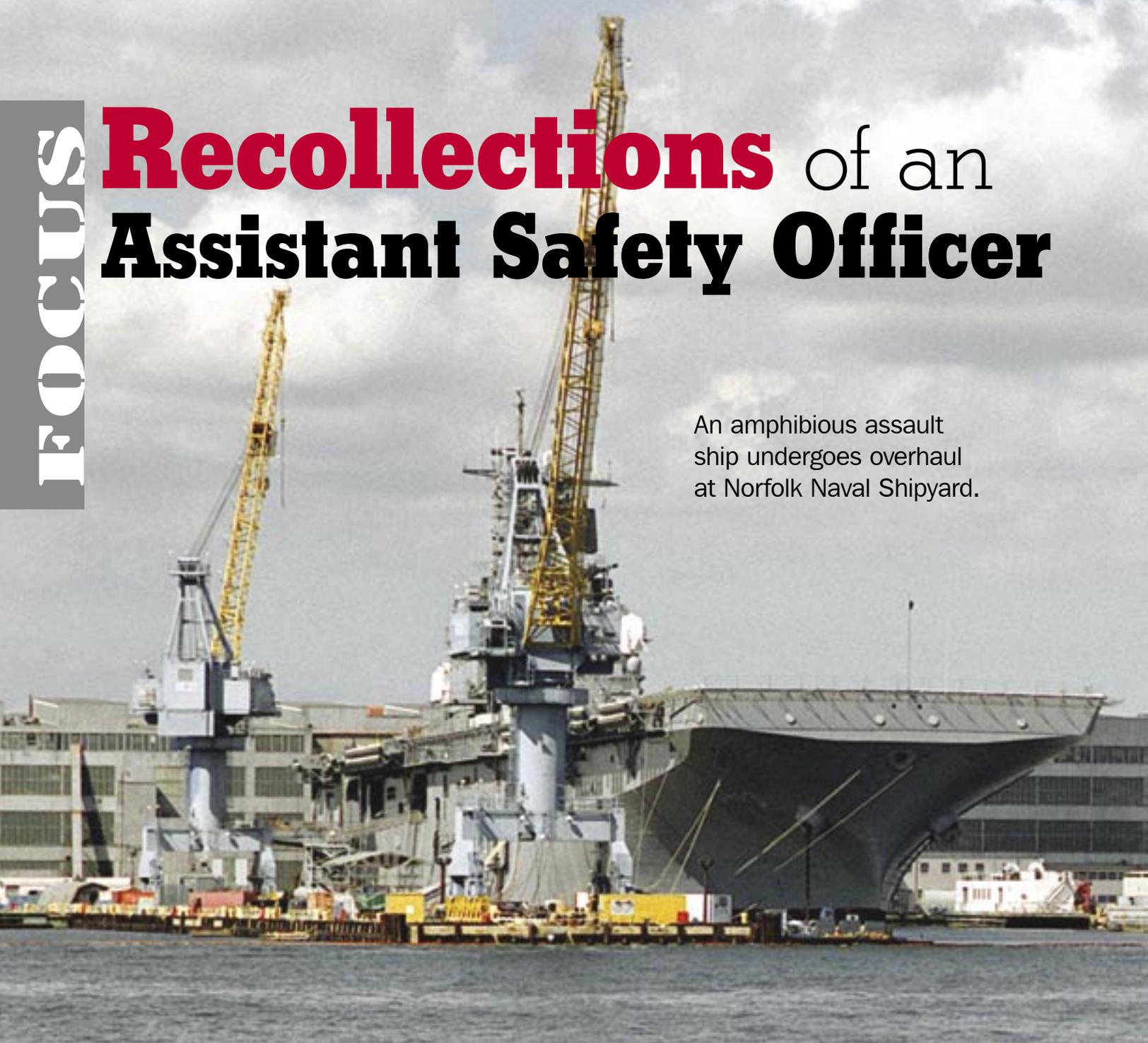


# Recollections of an Assistant Safety Officer

An amphibious assault ship undergoes overhaul at Norfolk Naval Shipyard.



Navy photo by Don S. Montgomery

By Ltjg. David Murvihill

**S**ometimes, finishing that last 5 percent of a task seems to require as much effort as the first 95 percent. Before you decide that 95 percent is good enough, though, consider what the stakes are and what you're betting on.

How do you judge a successful overhaul? In our case, we spent six months in a shipyard with no major mishaps, injuries, or equipment damage. Now, I didn't say we were hazard- or mishap-free, but that was our

goal. Trying to prevent all mishaps may seem unreasonable, but don't write off this goal as being too difficult. Your extra effort could neutralize a serious hazard and perhaps save a life.

Consider the lessons learned from some of the mishaps we had during our overhaul. A shipyard worker was welding a bulkhead in a fuel tank. On the other side of the bulkhead was another fuel tank. Both tanks were certified gas-free by the shipyard gas-free

engineer, but the other tank wasn't certified "safe for hot-work." Two pipefitters were working in the second tank when residual fuel in it ignited. The pipefitters quickly extinguished the fire and prevented any injuries or damage.

Our investigation revealed that the shipyard's fire-watch personnel used improper procedures. Fire watches must be able to see both sides of a bulkhead. A second fire watch is necessary when the first one can't see both sides of a bulkhead. These watches must check for and remove all fire hazards around the hot-work area on both sides of the bulkhead. They also should establish some means of communication to report a hazardous condition or to stop all hot-work.

Before another mishap, ship's-force personnel covered a deck with paper as part of the precautions for painting a passageway. Three decks above, a shipyard worker was welding when a spark fell the entire distance—despite intervening ladders—and ignited some wet paint on the paper. There was a lot of smoke but no damage. The fire didn't spread because the paper was fire-retardant.

Again, the shipyard's fire watch didn't check carefully for hazards, install a protective barrier (in this case, a welder's cloth), or close the hatch. He also didn't post hot-work-warning signs. The ship's-force painters shared the blame for the fire because they didn't post the required warning signs, saying "No Smoking—No Hot-Work." Before entering a shipyard, the crew should cover equipment to protect it. Fire-retardant paper and Herculite will not burn without another source of fuel, so use them instead of flammable plastics to cover your gear.

One day, fuel from a leaking line filled a void. The sounding and security watch found the problem early, but ship's-force personnel couldn't isolate the leak until the fuel tank was pumped out. A hydrostatic test of the fuel system would have prevented this mishap.

One other time, a plumb bob punched a hole through the hull at the bottom of a sounding tube. The water level did not get above the bilges, so there wasn't any damage. It took years of corrosion and dropping plumb bobs to penetrate the striking plate and hull. While you're in drydock is a good time to check and repair your sounding tubes and striking plates.

Here are some suggestions that will help you when your ship is in overhaul:

### Shipboard

Make sure the quarterdeck watch standers wear

hard hats. A bolt falling from a crane missed one of our OODs by less than a foot.

Make sure the quarterdeck watch standers have the telephone numbers for the fire department, hazmat-recovery team, police, and ambulance. It's also important that they know at which pier the ship is berthed.

Exercise the in-port fire party in hazmat-spill response and emergency-rescue procedures. The Safety and Occupational Health Program Manual for Forces Afloat (OpNavInst 5100.19E, Appendix B3-A and B3-B), provides detailed information on hazmat-spill response. You can find guidance on emergency-rescue procedures in the Naval Ships' Technical Manual (NSTM), Chapter 074, Vol. 4, Rev. 3, Section 20.

You will find that the shipyard's safety regulations are different from the Navy's. Their regulations comply with OSHA instructions, which may not be as strict as the Safety and Occupational Health Program Manual for Forces Afloat. For example, OSHA instructions don't require chafing gear for leads and cords passing through doorways and hatches. Instead, they only require that the sheathing on the cable remain intact. I found several leads and cords chafed to the copper and immediately threw them off the ship. Placing a hard rubber collar or stopper around the leads or cords will keep a door from shutting on them.

The supervisor of shipbuilding, conversion and repair; the shipyard; or both will have a pamphlet regarding safety in the shipyard. Use the pamphlet to train your crew. The Navy's "Guide to Safety in an Availability" is available online at <http://www.safetycenter.navy.mil/afloat/surface/downloads/availabilityguide.doc>.

Shipyards have many flatbed trucks and pickups with drivers who will offer rides to the crew. Teach your people about the regulations that prohibit accepting such offers.

Attend daily safety walkthroughs. If you can't go, send a ship's representative. Your attention will directly affect the attention the shipyard pays to your ship.

### Off Duty

If the shipyard is located away from your home port, the number of off-duty mishaps probably will increase. People are uprooted, families are located elsewhere, the ship is unpleasant (if not uninhabitable), and the crew works harder. Recreation becomes more important because the crew no longer can do the things they normally do after working hours.



A Sailor from a ship in overhaul shoots pool at a base recreation center during his off-duty time.

Navy photo by MCSA Joel Carlson

Upon arrival at the shipyard, ask for information about the areas with a high crime rate. Check with local Navy facilities for a list of off-limits areas. Our lack of familiarity with the unsavory section of an adjacent town resulted in several injuries to crewmen.

Alcohol-related crashes, involving both motor vehicles and pedestrians, also probably will rise. Increased awareness and education and alternative forms of transportation (such as welfare and recreation vans) will help the situation. Other forms of entertainment (e.g., picnics and tours) also will help keep people out of bars.

Automobile crashes may increase as crew members drive home or visit surrounding areas. A seven-hour trip back to home port after a long day of work creates unsafe driving conditions. We started knocking off at 1730 on weekdays and 1130 on Fridays so our people could drive during daylight hours. Education on the hazards of nighttime driving also helps.

Athletic injuries also may increase. Providing

protective equipment and educating everyone keeps problems to a minimum.

If the CO regularly addresses safety and sets the example himself, the rest of the crew is apt to pick up on it. Our CO's motto was this: "Safety is a big part of the ship's routine, but safety issues have head-of-the-line privileges for command attention." Find and promote activities that stir up your crew and keep them interested. ■

*When the author (current whereabouts unknown) wrote this article, he was serving aboard a ship that since has been decommissioned. His points still are valid, though.*

#### Resource

- Safety in an Availability Shipyard Links (SIMAs/Repair Facilities, Government Offices, Shipyards), <http://www.safetycenter.navy.mil/afloat/surface/shipyardlinks.htm>