

THE GULF COAST JOURNAL

# OUR TOWN SUNDAY

SUNDAY, August 19, 2012

## From Nearly Rusted to Clearly Trusted

How Northrop Grumman's Gulf Coast Shipyard  
Turned around Its Own Ship of Fate

By Raymond T. Luiz

GULF COAST JOURNAL STAFF

PASCAGOULA, Miss.— Who knew? I've lived five miles from the Gulf Coast shipyard my entire life and never saw this coming. I knew the 1,200-acre facility, once considered the industry's best, had been faltering. Slow to recover after Hurricane Katrina had virtually destroyed it in 2005 by displacing most of its experienced workers, the shipyard had found it hard to attract new talent. Its biggest customer, the U.S. Navy, had held back on placing orders due to spiraling costs. The need for customization and facility improvements over recent decades had not only made costs prohibitive, it also had led to reduced capacity, declining productivity, high attrition rates, troublesome quality issues, and missed delivery dates. No longer a source of pride—for workers, customers, or the community—the Northrop Grumman Shipbuilding (NGSB), Gulf Coast shipyard seemed destined to go the way of the domestic steel factories on which it depended.

But in a little more than three years, the facility has gone from struggling for survival to celebrity status. It has reversed its own ship of fate.

The turnaround became clear last Tuesday when four separate news stories collided



**The USS Makin Island (LHD 8), the first large-deck amphibious ship propelled by a gas-turbine/electric-powered propulsion system**

on my desk. The headlines read: "U.S. Marines Deliver Critical Aid to Earthquake Victims in Nicaragua," "Timely Arrival of USS William P. Lawrence in Persian Gulf Prevents Armed Conflict," "High-seas Pirates Foiled by U.S. Coast Guard off Haiti's Coast," and "Ship Forged from World Trade Center Returns 'Home' for Fleet Week."

The ships involved in all four events were built at the Gulf Coast shipyard's two locations: Avondale, La., and Pascagoula, Miss. The USS Makin Island (LHD 8), the large-deck, multipurpose amphibious assault ship used by the Marines in Nicaragua, was designed and built at Pascagoula. The USS William P. Lawrence, the Navy's DDG 51 class destroyer (Surface Combatant) now stationed in the Persian Gulf, was built at Pascagoula.

The much smaller but highly modernized USCGC Waesche (WMSL 751) responsible for disrupting piracy in the Caribbean, is a National Security Cutter (NSC 2) designed at Avondale and built at Pascagoula. The USS New York (LPD 21), the fifth amphibious transport of the San Antonio class, serving as the command ship for the Fleet Week celebration in New York, was built at Avondale.

Irwin F. Edenzon, sector vice president and general manager, NGSB Gulf Coast, said, "We're proud to play a vital role in the security of our nation, whether it's helping our military defend this country, ensure peace throughout the world, keep our trade routes open, or provide critical aid to people displaced by natural disasters."

What made the transformation of NGSB Gulf Coast possible? Edenzon attributes the shipyard's success to a new portfolio strategy and the emphasis on operational excellence across the board: "The first thing we did was develop a strategic plan, which we called the Green Box Strategy, outlining what types of ships we were going to build. We decided to build fewer types of ships and use common hulls and serial production to speed things up, lower costs, and ensure financial predictability and a highly trained, experienced, and stable workforce. Those ships were, and still are, DDG 51s, LPD 17s, big-deck amphibious assault vessels, and National Security Cutters. We knew that the use of common hulls would reduce complexity in the shipyard and give us greater flexibility to meet the Navy's requirements while building for the Marines and Coast Guard as well.

"Once our portfolio strategy was in place, we focused on how we needed to operate to be successful. We identified the need to achieve first-time quality, strengthen key leadership behaviors, and make sure that everyone—from top leaders and business managers to engineers and quality inspectors to welders, pipe fitters, and electricians—had the opportunity to contribute to the improvement process."



**USS New York (LPD 21) under construction at Avondale, La.**



**Shipbuilders at Gulfport's Composite Center of Excellence putting the finishing touches on an AEMS mast for an LPD 17 class ship**

Edenzon knew from the beginning that it would take the commitment of everyone working together to pull it off. "Four years ago, our associates had no real ownership of the work, of the business. I don't mean just compliance with procedures. We wanted every worker to understand specifications, how to do the paperwork, what the procedures were for quality inspection, and then do their job. We wanted people to be proud of what they did. We knew if we could get every person to feel ownership of their work and be proud of what they left behind, then 99 percent of the problems we had would be solved. We could shift more responsibility for quality from inspectors to all employees, do



things right the first time, and reduce the number of inspectors we needed down the line. Effective first-time quality efforts would enable us to meet our schedules and budgets.

“To make it work, however, we all needed to master four key behaviors. First, we had to tell the truth about what we were facing, where we were going, and how we were doing. Next, we had to take individual ownership of our products and every aspect of our work. Third, we had to demonstrate our commitment by keeping our agreements with each other and our customers. And, fourth, we had to communicate openly and often about what we know while listening deeply to what others had to say.”

Life at the two shipyard locations began to shift. For the first time in a long time, resistance to change gradually gave way to possibilities as people started to see a clear, compelling vision of the future. Leaders at all levels began to demonstrate the four key behaviors. And slowly but steadily, people began stepping up their game, aiming for As rather than accepting Cs. They followed established standards and procedures and admitted mistakes. Instead of being “shot” for telling the truth, they were better trained and supported. Workers with long lists of errors were disciplined or let go, but the typical worker received kudos for taking responsibility to ensure that quality was built into every ship, one worker at a time.

Employees all over the shipyard were affected by these changes. One welder I spoke with told me: “I was working on a ship one day, just doing my job. I laid out a template and started burning holes. Before I knew it, I had put a hole in a fuel tank. So I checked with my supervisor, and he checked with field engineering for approval to pro-



**NGSB Gulf Coast welder on the job**

ceed. Then I reset the template, burned another hole, and welded closed the misplaced hole in the tank. When I was finished, my boss thanked me for admitting and fixing the mistake. And then he worked with engineering to make sure holes weren't set so close to fuel tanks in the future. It was amazing.”

As more deck-plate workers increased their vigilance on the job, the number of quality inspectors throughout the shipyard decreased. One quality manager explained: “We train and certify every worker to do self-inspections to make sure their work is up to standards. Then our inspectors re-check the work or follow people around and do surveillance audits. Instead of inspecting 300 welds, they inspect 50. If 49 of the 50 are okay, they move on. If half are no good, they go back in and inspect all 300. Because of the success of our first-time quality effort, there are fewer issues with the work being right the first time. We've been able to reduce the number of inspectors from 350 to 150 and are aiming for 100 by next year. The money we're saving is helping us figure out better, smarter, and faster ways of building ships.” Ships like the USS Makin Island, USS William P. Lawrence, USCGC Waesche, and USS New York.

Gulf Coast employees across the board—union and non-union, management and labor—changed the workplace. Empowered workers spoke up. Some received more training, some entered leadership pipelines. Supervisors, managers, and top leaders managed by walking around, helping to solve problems and making themselves more accessible. More women stepped into traditional male roles while the number of minority workers at all levels and in key positions grew. Seasoned veterans became mentors to new hires.

One union representative remarked, “We have a truly collaborative relationship with management these days. It took a conscious, dedicated effort from both company and union leaders to bring this about. It was our mutual interest in building quality ships while keeping costs in line that kept us focused. And it is our ongoing open communication and mutual respect that continue to make it work. The union is definitely recognized as an integral part of the company’s success.”

The cumulative effect of all the changes has been powerful. As one deck-plate supervisor put it, “The work environment feels different. We hear people talking about the company’s achievements and expressing pride in what we do. There’s pep in each employee’s step. We believe we’re doing important work and that we’re important to the company. Everyone feels good about the contribution he or she is making—to the shipyard and to the USA.”

A deck-plate electrician agreed, adding, “Our focus on first-time quality actually makes my job easier. I don’t have to worry about the work done before or after me any more. Everyone works hard to get it right the first time. And if someone makes a mistake, we own up to it, and report it if necessary, without fear of reprisal. We’ve got each other’s backs. It’s all about being a part of something that’s bigger than ourselves. We build ships we can be proud of, as a team, for our country.”

Workers and managers throughout the shipyard offered similar observations. They said things like, “We’re no longer craft or office; we’re all shipbuilders,” “Nobody’s blaming anybody anymore,” “Craft and engineering are sharing

ideas now,” and “We’re building great teams in the workplace and solid partnerships with our customers.” One mid-level manager commented, “It’s like we’ve cleaned up our act along with the shipyard. The leadership team is in sync for the first time in years. People are actually having fun at work. And because we were all actively involved in turning the shipyard around, we feel like co-owners somehow.”

Even community members, not always proud of the shipyard in their backyard, now have good things to say. Pascagoula’s mayor told me, “We’re seeing a boost in the economy with the increased production at the shipyard. Its \$8-10 million payroll per week is going straight into local businesses and keeping families in their homes. I’m especially proud of the shipyard’s improved environmental impact and recent VPP safety award. I would not have predicted this success five years ago, but NGSB Gulf Coast has again become a well-respected member of our community, even helping us recover from the impact of Katrina. It took a while, but the new state-of-the-art facility is starting to attract new families to the area. New businesses are beginning to crop up. And many shipyard employees are participating on local boards and economic development task forces.

Then he added thoughtfully, “You know, it’s really great to see the younger generation eager to build ships to safeguard our country’s freedom the same way my father and grandfather did, with the same sense of patriotism. I think the production of so many great ships a few decades ago actually helped end the Cold War. And now look at the good our ships are doing.”

A key factor in boosting the



**Aerial view of construction on  
USS New York (LPD 21)**



relationship between the shipyard and the community is the Shipbuilding and Metal Trades Academy launched in 2009. The school, created in partnership with local colleges and universities, is providing a valid career path into the shipyard and often to an associate or advanced degree. It offers students opportunities to get into a craft like welding or electrical work, or office work like planning or finance, and eventually into management. With enrollment on the rise, it's likely that more and more leaders making decisions about the waterfront in the future will have actually developed their careers on that very waterfront.

I spoke with a recent graduate of the Academy's Apprentice Program. He is excited about having a job where he can "help protect America," and is looking forward to mastering the craft. He's also studying "Spanish for Shipbuilders," plans to attend community college, get his associate's degree in engineering, and then apply to Mississippi State University. "Who knows? I might end up as a VP," he said.

His foreman mentor at the shipyard, a seasoned pipe fitter who is finishing his bachelor's degree through the Academy, advised his protégé to "keep at it. This has become a great place to work. We're like one big family. I wish things had been like this when my kids were starting out. It might have kept them closer to home."

The Academy is attracting enough new talent to the area to meet the needs of Gulf Coast and other local shipyards. And, as some facilities begin to specialize, competition will likely give way to increased collaboration. But competitors beware! NGSB Gulf Coast is on course to become the preferred provider for the Navy, Marine Corps, and Coast Guard.

One high-ranking Navy official noted that "NGSB Gulf Coast is better than ever. The use of common hulls and serial production is helping to lower the cost for our surface combatants, large-deck amphibious vessels, and Navy patrol ships. The shipyard is now



**The USS Waesche (WMSL 751), equipped with the latest command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) systems**

extremely competitive in terms of price, quality, and schedule. They've cut the man hours to build DDG 51s by one-third and are delivering ships on time and within budget. Plus, they've become a trusted partner and adviser; informing us of innovative options and helping us decide what ships to build to meet our needs while keeping down costs and man hours. We have complete confidence in them."

Members of the Marine Corps and Coast Guard have echoed the sentiment, adding that they've come to count on Gulf Coast for meeting their needs. When asked about last week's news events involving the four NGSB Gulf Coast ships, a high-ranking Coast Guard official remarked, "NGSB Gulf Coast is rapidly becoming a go-to company for high-quality ships."

Even Congress is taking note. A member of the Senate Appropriations Committee recently remarked that NGSB Gulf Coast has "come back stronger than before. Their increased capabilities and collaboration with the Navy and Coast Guard is evident in their budget proposals. And they're among the best thought leaders on next-generation ships. We've integrated them into our planning process to ensure that we have affordable and high-quality ships that will allow our Navy and Marine Corps to be the best in the world."

The shipyard's turnaround and the recent publicity about its ships is good news to Northrop Grumman corporate. Its VP of public affairs released the following statement following last week's headlines: "We are pleased to see the Gulf Coast shipyards recognized once again for excellent work. It is rewarding to see that our ships are being used, not just for military action, but also for humanitarian purposes. They are safeguarding global trade and commerce as well as American lives."

The Gulf Coast shipyard is revolutionizing the way it builds ships. Its "Green Box Strategy" has reduced the types of ships it builds and streamlined processes to increase the speed with which it can build them. It has replaced its "test as we go" model with "build to test," enabling it to deliver quality products on time and within budget. It has spurred innovation. And it has invested in its employees by providing opportunities for skills and knowledge training and career advancement.

These changes, coupled with a change in leadership philosophy, have generated notable results. They have (1) restored pride in the company among employees—it now has the lowest employee turnover rate in the industry—and the community, making Gulf Coast the local employer of choice; (2) improved the shipyard's standing with customers, capturing a significant percentage of the Navy's contracts for surface combatants; and (3) established solid and predictable pricing, quality, and schedule performance.

Where does the NGSB Gulf Coast go from here? According to Irwin F. Edenzon, sector vice president and general manager, "The next big initiative is to achieve fully outfitted, connectorized modules that further al-

low us to reduce the costs and risks associated with the more sophisticated systems we will be putting into our ships in the future. We hope to shorten the overall build cycle by doing an even better job of sequencing our work and testing more subsystems and systems earlier in the build process. Cutting construction and test time out of the build process will increase our profitability and save money for our customers."

Cutting costs and production time through modular shipbuilding will also make it easier for NGSB Gulf Coast to enter the international marketplace. It will be able to build ships to meet different customers' with needs with only minor modifications. Edenzon: "As we stabilize production, get the numbers right, and our performance right, we have the possibility of selling the same basic ship to customers here and abroad. We're on the right track, doing very well. And success breeds success."

The story of NGSB Gulf Coast is unlikely to fade from the headlines anytime soon. Edenzon will appear on the CBS "Sunday Morning" show this coming Sunday, August 26, and ABC will air the shipyard's transformative story on "20/20" on Friday, Oct. 5.

My neighborhood shipyard has indeed reversed its course. No longer in danger of rusting, sinking, or losing its way, NGSB Gulf Coast is America's shipyard once again.

---

**Raymond Luiz** is a freelance writer and occasional guest columnist for the Gulf Coast Journal. He will be doing a series of articles over the next few months delving more deeply into the factors contributing to the turnaround of NGSB Gulf Coast.