

SEPTEMBER 2003

Shipyard Prepares Cranes For Additional Sub Maintenance

The latest move to ensure that the Groton waterfront is prepared for an increase in submarine maintenance work occurred earlier this month when the 60-ton center wall crane was picked up in one piece and moved to the south wall of Graving Dock 1.

According to Jack Callinan, superintendent of lifting and handling, the transfer was completed in less than a day by a barge-mounted 1,000-ton crane hired out for that purpose. He described the move as part of an ongoing effort to consolidate, refurbish and replace the waterfront cranes, which are essential to the shipyard's operation.

With that crane now repositioned, the

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The 60-ton crane on the shipyard's center wall is prepared for its move to the south wall.

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The President's Corner

Mike Toner, President, Electric Boat

As we did at this time last year in the Electric Boat News, we're providing each employee with a copy of the company's Strategic Plan. Including this document in the company paper is important for two reasons – it demonstrates that we have clearly defined goals and specific plans to reach them, and it provides the rationale for the actions we take as a company.

I'm convinced that the better you understand where we're going and why, the more strongly you'll support our objectives. The importance of your support and contributions to the success of Electric Boat cannot be overstated.

The 2004 Strategic Plan is the result of several months of effort led by the Strategic Planning Group. This effort included incorporating input from a wide range of functional groups and individuals across the company. It also has been reviewed by the executive staff at our annual strategic planning meeting, and reflects the results of a comprehensive business environment analysis as well as the anticipated effect that environment will have on our future business.

You'll notice little if any change to our Mission and Vision, or to the underlying fundamentals of the plan. These elements and our operating principles do not necessarily change from year to year. You will find changes, however, in the Priority Actions that are required to achieve our Vision and Strategic objectives.

This plan provides us with a long-term outlook and a roadmap that ensures we effectively deploy our resources – our facilities, our investment capital and, most



importantly, you and your co-workers.

I strongly encourage you to take the time to familiarize yourself with this plan. It's also available on the EB web site, along with the annual Business Environment Assessment Report. I also encourage you to contact the Strategic Planning Department with any questions or comments.

Community Services Fall Campaign

Now that it's fall, we're gearing up for the annual Electric Boat Employees' Community Services Association annual fundraising campaign. This year, the Groton drive will run from Oct. 27 through Nov. 14.

At Quonset Point, the QP Employees' Community Services Association will run its drive from Nov. 17 through Nov. 21. With some 250 new employees now on the job, the goal of the QP campaign is to sign up as many new members as possible.

The leadership of the Groton campaign – MTC President Ken DeLaCruz, MDA-UAW President John Wrobey and HR VP Bob Nardone – has established a set of ambitious goals for this year.

■ Increase employee participation to 85 percent

■ Increase individual contributions by 10 percent

■ Contribute \$1.1 million of the total raised to the United Way of Southeastern Connecticut. This will require an employee donation of \$800,000; the difference will be provided by the company.

When you're approached by your department solicitor next month, keep in mind that this money is used to provide critically needed health and human-service assistance to community members who may include friends, relatives or neighbors. When you contribute to the Community Services Association, you're helping to maintain the quality of life for people in your community. That's a key point to keep remember.

If you're already a contributor to the Community Services Association, please consider increasing your donation. If you don't participate, I hope you'll give some thought to signing up for a weekly contribution.

I'm looking forward to what I know will be another successful fundraising campaign. 🍀

Shipyard Prepares Cranes For Additional Sub Maintenance

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center wall area is now clear for the assembly of a new 275-ton Clyde, said Callinan. Parts and components for that crane are scheduled to begin arriving in December.

Completion of the new crane and associated training is scheduled for mid-April, in time to support an extensive maintenance job on USS Springfield (SSN-761).

The overall modernization program began about three years ago with the identification of 40 underused cranes, which were taken out of service. Last year, three larger cranes were removed – from the north wall west, south wall and E Dock. As

part of the same overall project, the cranes on the Land Level were blasted and painted, with work on the 300-ton south wall crane finishing up now.

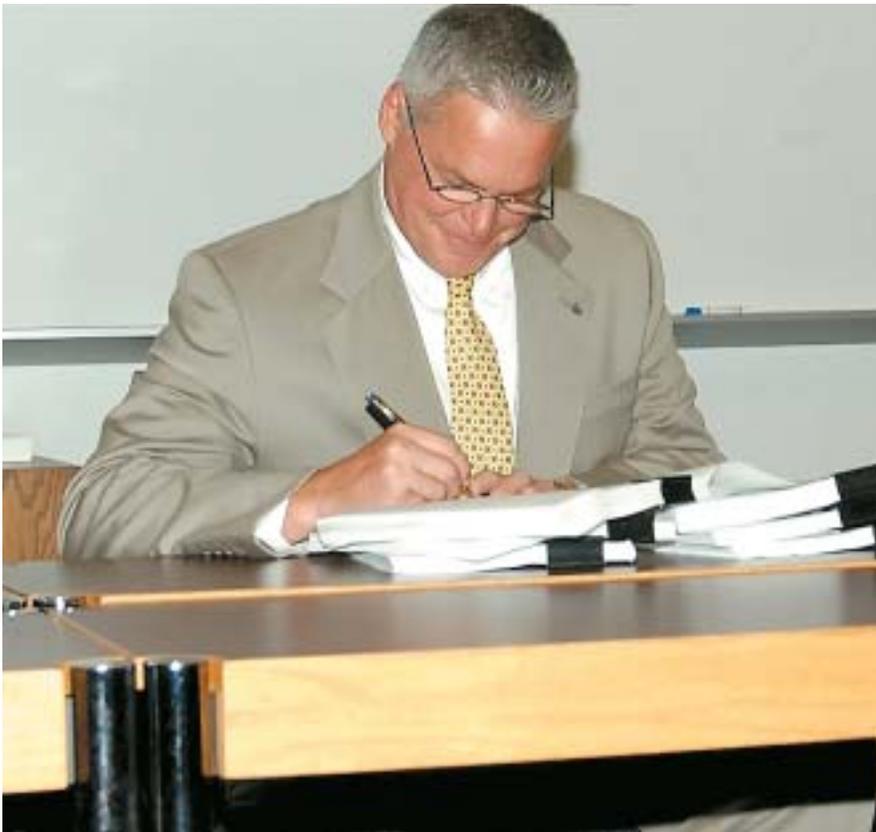
“All of this activity is helping Electric Boat maintain its commitment to the Navy that our graving docks are available to them 24/7 – anytime they need to bring a boat in,” said Callinan.

And throughout it all, the 33 men and women in crane maintenance and testing have risen to every challenge, he said. “They do a fantastic job. As more work comes in, the crane crews have really stepped up to the plate to get it done,” Callinan said. ♦



Earned Hours: Where We Stand

Signing Sub Procurement History



John Leonard, VP – Finance, signs documents awarding Electric Boat an \$8.7 billion block-buy contract for the construction of six Virginia-class submarines, the largest submarine order in U.S. history. The contract authorizes EB and its teammate, Northrop Grumman Newport News, to proceed with the construction of one ship per year from FY 03 through FY 06, and two ships in FY 07.

Electric Boat **NEWS**

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Safety—The “In Your Face” Approach

For a workplace safety program to be effective, it has to be on employees’ minds. What better way to keep it on their minds than to keep it in their faces?

That’s the strategy of a new team that calls itself, appropriately enough, In Your Face Safety.

Consisting of HR specialist Rick Kowalski of the Safety Office, foreman Steve Webb of the Pipe Shop and Mike Tomminello, an area superintendent for the Jimmy Carter (SSN-23) engine room, the team is trying to make Building 260 a safer place. They’re doing this by, among other things, evaluating injury statistics and then attacking the most prevalent problems through communication in specific work areas, both inside and outside the boats.

So far, the team is reporting positive results, including zero recordable injuries in the Jimmy Carter engine room since July 16, 2002. Admittedly, the injury-free period began before the In Your Face team was formed, but its members had been working to emphasize safety all along, and they say the engine room’s great safety record is a direct result.

As area superintendent Mike Tomminello, center, tacks up a new safety poster outside the Jimmy Carter (SSN-23) engine room, Rick Kowalski of the Safety Office, left, and Pipe Shop foreman Steve Webb discuss other safety messages they may post there.

“The people are our most important resource, and creating a safe environment for them to work has a twofold benefit: you meet your schedule commitments and cost objectives, and you’re taking care of priority number one, which is safety,” said Tomminello (200).

“People who are aware of their surroundings don’t get hurt,” said Webb (243). “They’ll look around. They’ll see something that could be a hazard. And then they’ll do something about it.”

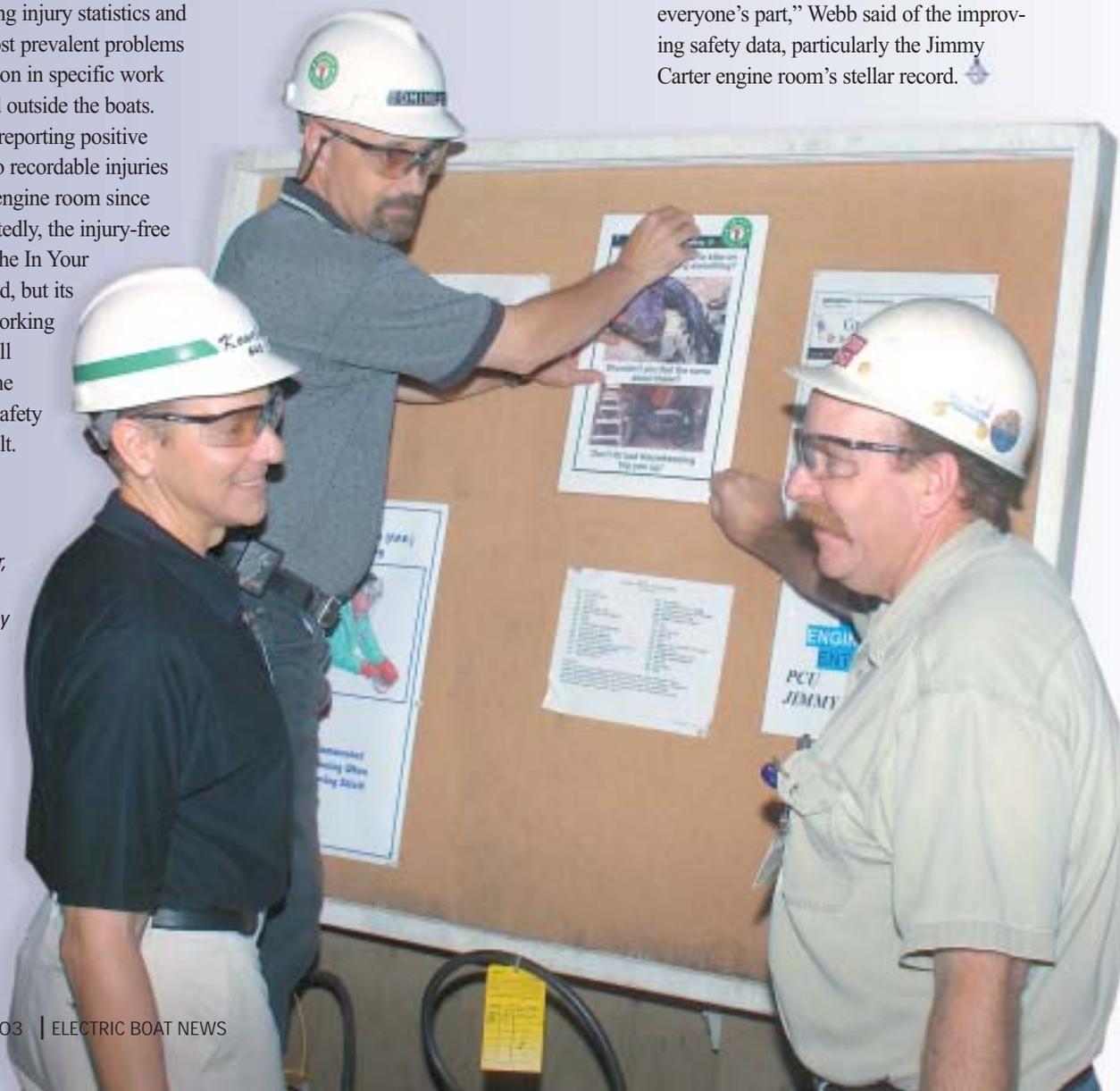
To help raise awareness, the team has begun placing safety posters, reminders and injury data in the areas where injuries are

most frequent. And to make the messages more valuable, they’re targeting them based on the injuries occurring in a given area.

“A lot of employees were getting foreign bodies in their eyes when taking off their personal protective equipment, so we made a poster showing the proper way to remove a face shield,” said Kowalski (645). “That’s how we’re targeting the situations.”

But the trio said their efforts wouldn’t be successful without the dedication of their co-workers, including MTC members, supervisors, a joint EB-MTC safety team, and everyone who works in Building 260.

“It does show total commitment on everyone’s part,” Webb said of the improving safety data, particularly the Jimmy Carter engine room’s stellar record. 🚩





The new AT&A devices are activated by EB proximity badges.

Installation Of New And Improved AT&A Machines Is Now Under Way

Beginning this month with a pilot program in the machine shop, all AT&A devices in Groton, Quonset Point and offsite locations will be replaced.

“Once the pilot program is complete, we’ll begin replacing about 50 devices per month over the next year, starting in mid-October,” said Guy Henry, manager of information technology.

According to Henry, the old devices are more than 10 years old – well beyond their expected life – and can no longer be repaired or purchased. The old AT&As will be replaced with a new device called the MT 9103.

“The MT 9103 is very different from the old devices,” Henry said, explaining that it

will perform the same AT&A, MRP and Smart Transactions functions.

“The badge swipe wedge is gone,” he continued. “The MT 9103 reads our new prox badges the same way they’re read at the turnstiles. The prox badge reader is built into the device and is located at the base of the screen. When your transaction requires the device to read your prox badge, it will use the term, ‘Present Your Badge;’ there won’t be any more swiping or wanding of badges,” he said.

Other features of the new device include the following:

- The keyboard is part of the touch-screen display.
- An alphanumeric keyboard, the AT&A

transaction keyboard or the MRP transaction keyboard will be displayed as required.

- AT&A and MRP (including Tandem Shop Floor) transactions have been put on separate screens.
- Buttons in the upper right corner of the screen toggle between the AT&A and the MRP (including Tandem Shop Floor) transaction keyboard.
- Transactions are identical in the old and new devices, except for Meetings (F26), Special Charges (SC) and Vacation or Sick Time (VAC/SICK).

With the old devices, Meetings (F26) and Special Charges (SC) require each employee to swipe his or her badge, then

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SHIPYARD TEAMWORK KEEPS VIRGINIA ON SCHEDULE

Last month's floatoff and christening of the Virginia (SSN-774) went off without a hitch, but it almost wasn't so.

In mid-June, just two months before the Navy's newest attack submarine was scheduled to hit the water for the first time, a problem was discovered while installing the boat's isolation coupling. The discovery threatened to delay not only the floatoff and christening but the rest of the Virginia's schedule as well.

However, as a result of the dedicated efforts and teamwork of some riggers, machinists and engineers, the problem was corrected faster than anyone thought possi-

ble, allowing all the key events of August to occur on schedule.

The problem came to light when outside machinist Adolphe "Kootie" Kmon (242) was getting ready to do some work on the coupling – a component not unlike a car's universal joint – and, as he explained, "It just didn't look right."

So he called his then-supervisor, area superintendent Gary Vogel (200), who took a look and confirmed Kmon's finding. That quickly led to a series of shipyard meetings on how to deal with the problem.

"It was a very difficult task," Vogel said of disassembling and then reassembling the

Above, some of the people who helped resolve a recent coupling problem on the Virginia (SSN-774) include, front row from left, Hiram San Antonio and Anthony Woodall, and back row from left, Kelly Bromley, Jack Burdick, Max Schultz, Ty Brumfield, Adolphe "Kootie" Kmon, Stirling Danskin, Dan Booker and Gary Vogel.

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STRATEGIC PLAN 2004

Electric Boat leads the design, engineering, manufacturing, systems integration, test, delivery, and life cycle support of the world's most advanced nuclear submarines.

We deliver the highest quality, affordable products and services to our customers through the commitment, technical excellence, and innovation of our workforce and the application of disciplined processes, while balancing the needs of our customers, shareholders, employees, and partners.

Electric Boat's
Markets

U.S. NAVAL SUBMARINES

Engineering

- Research & Development
- Engineering Analysis
- Concept formulation, capability insertion
- Design
- C4I system development oversight & platform integration
- GFE to CFE transition (Propulsion, HM&E & Combat Systems)

Construction

- Manufacturing
- Assembly, Outfitting and Test

Overhaul & Repair

Life Cycle Support

- Engineering & logistics services
- In-service Engineering Agent (ISEA)
- Navy Supply Support

US NAVAL SHIPBUILDING

- Engineering Analysis
- Design
- Manufacturing

PUBLIC SECTOR RATIONALIZATION

INTERNATIONAL NAVIES

(with domestic customer concurrence)

- Australia
- United Kingdom
- Taiwan

MARINE ENGINEERING & DESIGN SERVICES

- U.S. ship construction yards
- Liquefied Natural Gas containers (LNG)

ADVANCED MARINE PROPULSION SYSTEMS

Electric Boat Is a
"Values" Driven
Company –
Our Strong
Culture Is a
Competitive
Advantage

ELECTRIC BOAT'S VALUES

- Integrity
- Commitment
- Health & well being of our workforce
- Respect for our people
- Loyalty

ELECTRIC BOAT'S CULTURE IS DEFINED BY OUR COMMITMENT TO:

- Safety & Quality
- Schedule & Cost
- Continuous Process Improvement / Lean Design & Manufacturing

Electric Boat
Is Committed
to Basic
Principles –
Using Balanced
Management
Practices

ELECTRIC BOAT'S "BASIC PRINCIPLES"

- Focus on the situation, issue or behavior - not the person
- Maintain the self-confidence & self-esteem of others
- Maintain constructive relationships
- Take the initiative to make things better
- Lead by example

WE BALANCE THE NEEDS OF OUR WORKFORCE & BUSINESS

- Reward, Recognition & Incentive
- Recruiting, Retention & Performance Assessment
- Compensation & Benefits
- Training, Education & Development
- Communication & Information
- Facilities, Tools & Equipment

Electric Boat Has
Unique
Capabilities –
Core
Competencies

DESIGN & ENGINEERING

- Submarine Concept Formulation / CONFORM
- Integrated Product Development Environment (IPDE)
- Component Development / Procurement
- Design / Build Integrated Processes & Practices
- Engineering Analysis
- Submarine Design
- Systems Engineering & Integration
- Configuration Control
- Submarine Systems Software Development
- Technology / Capability Insertion

OVERHAUL & REPAIR

- Public-Private Workforce Integration

LIFE CYCLE SUPPORT (LCS)

- Design, Engineering and Logistics Support Services
- Logistic Technical Documentation
- Configuration Management
- Navy Supply Support

MANUFACTURING & CONSTRUCTION

- Modular Manufacturing, Assembly, Test Methodology & Continuous Process Improvements (all levels)
- Mold in Place Technology
- Final Assembly, Integration & Test
- Dimensional Control / Application in Modular Construction
- Submarine Pressure Hull Manufacturing
- Integrated Mechanical / Structural Assemblies
- Pre-Fab Assemblies & Fixtures
- Materials Joining
- Steel Processing / Dimensional Data

PROGRAM MANAGEMENT

- Disciplined EVMS Methodology Execution
- Customer Relationship Management
- Subcontractor Management
- Complex Design & Construction Integration

Electric Boat's
Vision

We will deliver and support the world's most advanced nuclear submarines.

We will apply our core competencies in Design & Engineering, Manufacturing & Construction, Overhaul & Repair, Life Cycle Support and Program Management.

We will provide high quality, affordable, best value products & services.

We will be distinguished by our innovative and highly competent employees and our commitment to our customers, employees and shareholders.

We will live our values every day.

Electric Boat's Strategy

We will maintain a strong foundation for growth by delivering our commitments and backlog with the highest quality and by being the industry's technology leader.

We will grow our business by leveraging our core competencies by supporting the Navy in increasing submarine design and procurement rates, establishing Electric Boat as a prime contractor when appropriate, driving enterprise rationalization toward centers of excellence, partnering with industry members, government and other GD companies to provide the best business, engineering and construction solutions in the marine sector, and pursuing international opportunities with customer support.

We will use acquisitions to penetrate selected market segments.

We will maintain a professional work environment that attracts the best engineering / technical and trades personnel, promotes diversity in our workforce, develops the skills and knowledge of our entire employee population and engenders teamwork and makes Electric Boat one company with common goals and objectives.

Objective 1:

Maximize & Recognize the Talents of Electric Boat's Workforce

- Develop plan to sustain Electric Boat's core competencies by 1/04
 - Approve plan for retention of critical design & engineering capabilities by 10/03
 - Develop a company-wide critical skills catalog
 - Identify critical mass requirements
- Conduct workforce attrition analysis to assess impact to critical skills and knowledge base
- Assess current methodology & processes used to accomplish internal deployment of personnel resources
- Execute off-site workforce recruiting and development plan to support SSGN and other off-site staffing requirements – ongoing
- Implement long-term comprehensive recruiting plan for engineering/technical and trades personnel – ongoing
- Continue leadership development and succession planning
 - Evaluate performance of Business Leaders Group 1
 - Initiate Business Leaders Group 2 in 1/04
 - Implement Future Leader and Professional Development Programs in 2004 and 2005
 - Continue Organizational and Management Development Communication Plan
- Evaluate Training and Education programs and initiate changes necessary to meet business requirements
- Provide a safe and secure work environment
 - Achieve or beat industry best practice levels of Recordable Injury Rate (RIR) & Lost Wage Injury Rate (LWIR) in 2004
 - Become OHSAS 18001 compliant for Health and Safety by 1/05
- Develop a prioritized, multi-year communications expansion plan by 1/04
- Monitor revised 2003 company-wide incentive program for performance to plan and assess future program changes

Objective 2:

Perform on the Backlog

- Complete design of SSGN to plan by 1/05
- Meet all Flight 1 VIRGINIA Class performance targets
 - All schedule and cost performance targets
 - Develop program plan and metrics to achieve performance improvements for SSN's 776, 777 and follow ships
- Meet all SSN23 performance targets
- Meet all KSO performance targets
 - Complete D1G and S3G Dismantlement in 2006
- Meet all Subase performance targets
 - NEMMI, NRMD, Shippingport, EB SRA (LMA)
- Meet all Ship Repair cost and schedule performance targets
 - SSN761 DMP/SSN21 SRA/SSN710 IDD
- Develop process improvement Quality, Cost, and Schedule objectives and metrics
 - Meet Process Improvement objectives for Innovation and Construction
 - ◆ Reduce Type D ER's for SSGN by 33% to 2.2 ER's per drawing
 - ◆ Reduce Type N ER's for SSN776 by 25% compared to SSN774
 - ◆ Reduce direct labor on recurring Virginia Class work packages to an 87% learning curve
 - ◆ By 1/06, achieve a War on Cost Design / Engineering drawing template equal to 25% of the Virginia 2000 year template baseline (a 75% reduction)
- Complete Development of Process Improvement metrics and objectives for Support Organizations processes by 1/04
- Develop Process Improvement metrics and objectives for Nuclear and Post Delivery processes by 3/04
- Conduct at least 100 Lean projects by 12/04 and 50 Lean Six Sigma projects by 12/04
- Achieve participation rates in Process Improvement teams of: 75% at Quonset Point by 1/05; 50% at Groton by 1/04 and 50% in Innovation by 1/05
- Establish methodology to transfer process improvement programs to off-site locations
- Collaborate with Naval Shipyards to share process improvements and lessons learned – ongoing

Objective 3:

Position Electric Boat to Develop and Capture New Business

- Achieve Best in Industry status in nuclear ship yard work
 - Achieve successful NavSea 08 annual audits
 - Benchmark USN shipyard processes and set EB performance improvement targets
 - Drive performance improvement through critical self-assessment
- Achieve industry best practices in SubSafe work
 - Achieve successful SubSafe ship and functional audits
- Maintain ISO compliance and certification
 - Maintain ISO/9001 certification
 - Achieve ISO/14001 certification of Electric Boat's Environmental Management System by 1/04
- Achieve and maintain at least SEI/CMMI Level 3
 - Achieve CMMI systems Level 3 by 6/04
- Complete transition to common life cycle support process across acquisition and planning yard product and process by 12/03
- Maintain leadership position in application of IPDE to design, engineering, construction & support of naval ships
 - Complete IPDE transition assessment (PLM and CAD) by 1/04
 - Develop / execute a focused plan to engage USN, OSD & Congressional customers with EB issues – ongoing
 - Engage senior USN and OSD decision makers to affirm submarine relevance and broaden support for submarine programs
- Develop a process to rapidly evaluate and advance technologies for capability insertion on a continuing basis
 - Complete development of Roadmaps to layout transition to Submarine Technology Insertion by 11/03
 - Develop strategy for USN support for Submarine Technology Insertion by 1/04
- Secure role as ship system integrator for submarine related emerging programs and technology insertion
 - Off-board vehicles (manned and unmanned)
 - C4ISR systems
 - National Missile Defense (NMD)
 - Technology Demonstrations and Experiments

Objective 4:

Grow Electric Boat's Business in Core and Adjacent Markets

DESIGN & ENGINEERING FOCUS

- Capture ship design work to sustain the design work force post-2004 – ongoing
 - VCS MMM
 - Submarine Technology Insertion
 - UK Programs
 - DD(X)
- Convert Submarine Payload and Sensors R&D to VCS and SSGN technology insertion programs
 - Secure FY04 \$25M plus-up for Payload and Sensor development
 - Work with PEO SUB-R to facilitate rapid insertion of advanced payload and sensors
- Increase participation in CVN21 program by 200 man-years/year during FY04-07 by 1/04
- Update and obtain approval of an Electric Drive business plan that addresses core and adjacent markets by 1/04
 - Achieve advanced power systems (E-drive) sales from 2003 to 2008 (does not include USN E-drive sales)
- Continue GFE to CFE transfer – increase sales by 1/06
 - Transfer Imaging by 1/06
 - Become Government C3I Procurement Agent by 1/06
- Utilize CONFORM process to identify and capture new work
 - Concepts working:
 - 1) VIRGINIA MMM,
 - 2) NMD,
 - 3) Adjuvant Vehicle Integration Aboard Submarines,
 - 4) SSGN Advanced Payload Integration,
 - 5) Submarines with Distributed Propulsion,
 - 6) SSGN04 Experiment,
 - 7) Access Experiment, and
 - 8) NR-2 concepts
- Continue collaborative initiatives with USN Labs – ongoing
 - NavSea labs (NUWC and NSWC)
 - Federally funded R&D labs (Penn State ARL and JHUAPL)
 - Pursue and develop others

CONSTRUCTION FOCUS

- Achieve authorization for 2-ships/year by 4th Quarter 2004
 - Ensure transition to 7 ship multi-year contract by 1/04

- Complete contract negotiations for SSGN conversions
 - Planning and First 2 conversions by 11/03
 - Second 2 conversions – award 3rd Quarter 2004
- Establish center of excellence for MIP installation by 1/04
 - Develop team to reevaluate MIP strategy and provide report
- Become a competitive supplier to other shipyards – ongoing
 - Fabrication, Manufacturing, and Assembly
 - Grow support to Naval Shipyards
- Grow use of COATS as C3I integration and test facility
 - Expand testing to include ship control and ECS by 2/04
 - Pursue opportunities to use CCSM and COATS to participate in upcoming FBE's (Assured Access and evaluation of elements and concepts regarding FORCEnet)
- Determine EB role regarding ASDS Program by 10/03

OVERHAUL & REPAIR FOCUS

- Capture a minimum of 3.1 million manhours of Overhaul and Repair work in 2003-2008
 - Continue to work with USN to demonstrate EB ability to accomplish SSN767 and SSN768 DMP's
 - Capture SSN22 SRA contract
 - Develop mid/long term plan for FY06/07 and beyond
 - Monitor BRAC activity
- Position EB to be Overhaul and Repair provider for VCS by 1/05
 - Work with VCS Program Office to review Class Maintenance Plan and identify opportunities to establish EB as choice for specific maintenance actions by 9/04
- Further EB participation in USN "One Shipyard" initiative
 - Identify EB resources available for USN site support
 - Develop Tiger Team expertise (i.e., Reverse Osmosis, RBP's)
 - Pursue teaming relationships with NSY's similar to EB/PNSY

Objective 4:
continued

Grow
Electric
Boat's
Business in
Core and
Adjacent
Markets

- Work with customer to secure Prime role in KAPL "Long-Term Maintenance Strategy" at KSO
- Work with customer to establish EB as Host Shipyard at KSO for MARF and S8G

LIFE CYCLE SUPPORT FOCUS

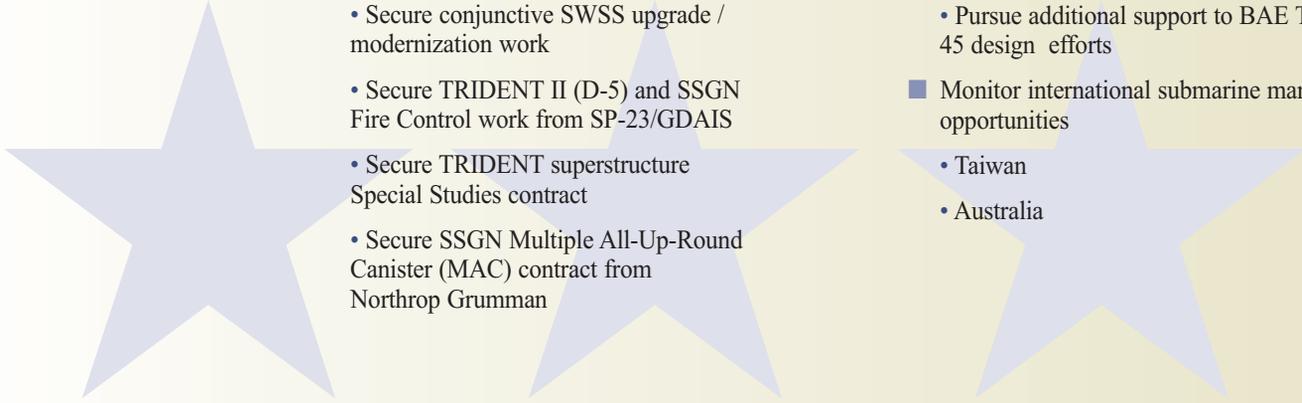
- Maintain LCS business through 2008 through growth in Planning Yard and Fleet Support business
 - Expand Omnibus and PY and Fleet Support work
 - Capture new LCS Work
 - Capture non-traditional post delivery LCS work
- Develop and grow TRIDENT, SSGN and Advanced Weapons Systems engineering, design, and technical services
 - Secure SSP Omnibus contract
 - Secure SWS Fire Control MOD 6/7 Shipalt development
 - Secure conjunctive SWSS upgrade / modernization work
 - Secure TRIDENT II (D-5) and SSGN Fire Control work from SP-23/GDAIS
 - Secure TRIDENT superstructure Special Studies contract
 - Secure SSGN Multiple All-Up-Round Canister (MAC) contract from Northrop Grumman

PROGRAM FOCUS

- SSN23 MMP
 - Continue role as MMP Prime Contractor for emergent systems after completion of MMS Design / Build Contract
 - Capture Port Payload Design / Build Contract
- SSGN
 - Obtain SSGN Post Conversion Test and Certification work. Develop plan to provide support for Post Conversion Test and Certification period on SSGN726

INTERNATIONAL FOCUS

- Expand participation in UK programs in engineering and design
 - Capture opportunities to expand scope of existing contract
 - Capture follow-on contract by 1/04 to sustain current workforce beyond 2005
 - Pursue additional support to BAE Type 45 design efforts
- Monitor international submarine market opportunities
 - Taiwan
 - Australia



Objective 5:

Increase the
Economic
Value of
Electric Boat

- Achieve financial targets
 - Sales
 - Earnings Before Interest And Taxes
 - Operating Margin
 - After Tax Cash Flow
 - Orders
- Maintain wrap rate at or below CAIG line target
- Achieve an IRR > 11% on all major investments

Glossary

ARL	Applied Research Laboratory	LNG	Liquefied Natural Gas
ASDS	Advanced Swimmer Delivery System	LWIR	Lost Workday Injury Rate
ATCF	After Tax Cash Flow	MAC	Multiple All-Up Round Canister
BAE	BAE Systems	MIP	Mold-in-Place
BRAC	Base Realignment & Closure	MMM	Multi Mission Module
C3I	Command, Control, Communications & Intelligence	MMP	Multi-Mission Platform
C4I	Command, Control, Communications, Computers & Intelligence	MMS	Multi-Mission Submarine
C4ISR	C4I Surveillance and Reconnaissance	MOD	Ministry of Defense (UK)
CAD	Computer Aided Design	NAVSEA	Naval Sea Systems Command
CAIG	Cost Analysis Improvement Group	NEMMI	New England Maintenance Manpower Initiative
CCSM	Command & Control Systems Module	NMD	National Missile Defense
CFE	Contractor Furnished Equipment	NRMD	Nuclear Regional Maintenance Department
CMMI	Capability Maturity Model Integration	NSY	Naval Shipyard
COATS	Command & Control System Module Off-Hull Assembly & Test Site	NSWC	Naval Surface Warfare Center
CONFORM	Concept Formulation	NUWC	Naval Undersea Warfare Center
CVN(X)	Nuclear Aircraft Carrier (Next Generation)	OHSAS	Occupational Health and Safety Assessment Series
CY	Calendar Year	O&MD	Organizational & Management Development
DMP	Depot Modernization Period	OSD	Office of the Secretary of Defense
EBIT	Earnings Before Interest and Taxes	PEO-SUB-R	Program Executive Office-Submarines Research & Development
ECS	External Communication System	PLM	Product Life Cycle Management
E-Drive	Electric Drive	PNSY	Portsmouth Naval Shipyard
EMS	Environmental Management System	PY	Planning Yard
ER	Engineering Revision	Qtr	Quarter
EVMS	Earned Value Measurement System	QP	Quonset Point
FBE	Fleet Battle Experiment	R&D	Research & Development
FY	Fiscal Year	RBP	Retractable Bow Plane
GDAIS	General Dynamics Advanced Information Systems	RIR	Recordable Injury Rate
GFE	Government Furnished Equipment	ROM	Rough Order of Magnitude
HM&E	Hull, Mechanical, & Electrical	SEI	Systems Engineering and Integration
IDD	Interim Dry Docking	SRA	Selective Restricted Availability
IPDE	Integrated Product Development Environment	SSN	Nuclear Attack Submarine
IRR	Internal Rate of Return	SSGN	Nuclear Guided Missile Submarine
ISEA	In-Service Engineering Agent	SSP	Strategic Systems Program
ISO	International Organization for Standardization	Subase	Submarine Base
JHUAPL	John Hopkins University Applied Physics Lab	SubSafe	Submarine Safety Program
KAPL	Knolls Atomic Power Laboratory	SWS	Strategic Weapons System
KSO	Kesselring Site Operation	SWSS	Strategic Weapons Support Systems
LCS	Life Cycle Support	UK	United Kingdom
LMA	Lead Maintenance Activity	USN	United States Navy
		VCS	Virginia Class Submarine

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coupling. "It had never been done before at this stage of completion." The Virginia's level of completion meant space was extremely tight, making the work of the riggers that much more complex.

But as rigging manufacturing representative Mark Mills (230) stressed, the riggers handled the task like the professionals they are.

"Once everybody said, 'Let's do it,' it just happened, and it happened real quickly and well," Mills said.

Also credited with making everything right are engineers Stirling Danskin, Dan Booker (both of 412) and John Mailly (435), who helped plan all the steps performed by the trades.

"You've got some smart riggers and some smart machinists," said Danskin. "They really worked hard."

Booker said once the tradespeople and engineers decided they were going to complete this task within the constraints of the ship's schedule, "they psychologically crossed that bridge and got it done."

Besides Kmon, Vogel, Mills, Danskin, Booker and Mailly, employees contributing to the team's success were riggers Jim Carson, Bob King, Joel Sadowski and Nicole Knoll (all of 230); outside machinists Anthony Woodall, Hiram San Antonio, Jack Burdick, Kelly Bromley, John Daley, Adam Bakanowsky, John Pearce and Preston Weaver (all of 242); machinist foreman Ty Brumfield (242); Max Schultz, a representative of Northrop Grumman Newport News, the coupling's vendor; and EB carpenters, who built temporary platforms for the project.

The team "handled the task with the precision of building a 4-ton Swiss watch," said Vogel. "That's what everything weighed." ♦



Engineer Jon Bell (462) mans the timing/video station at the International Human-Powered Submarine Races in Bethesda, Md., in June. The man at right is unidentified.

Human-Powered Sub Races Turn Up Fresh Talent For EB

As the leading designer and builder of nuclear submarines, Electric Boat has a keen interest in promoting the field of engineering, and scouting for fresh talent.

To those ends, EB sponsors the biennial International Human-Powered Submarine Races, which held its 7th competition recently at the Naval Surface Warfare Center's Carderock Division in Bethesda, Md.

Engineering Supervisor Dave Swedin (400) said EB has helped sponsor the races since 1993.

"It's tremendous that EB supports this event," he said. "It's just a great promotion of the undersea environment and the different industries and technologies that spin out of that."

While a handful of race contestants are private individuals, most are engineering students who are trying to gain some real-

world experience.

"It certainly gave a lot more meaning to what we learned in our fluid dynamics class," said senior engineer Scott Gregory (462). He participated in the event with Florida Atlantic University's team in 1993 before graduating and coming to work at EB, one of several race alumni to do so since the competition began in 1989.

Like Swedin, Gregory has served as an EB volunteer at the races. Neither of them were available this year, so engineer Jon Bell (462) stepped forward.

Bell had seen a TV show about the submarine races a couple years ago, so he was glad to fill in. While there, he manned the timing/video station at the event, and took advantage of down time by meeting with many of the student racers and describing career opportunities at EB. ♦

Retirees

- 274 David G. Birchell**
40 years
Ship Super Sr
- 333 Myron D. Hall**
38 years
Warehouseman W/L
- 403 Dale K. Spencer**
28 years
Supv Engrng Services
- 413 Frank T. Ricci**
34 years
Engineering Specialist
- 424 Richard H. Surprenant**
40 years
Manager of Quality
- 449 John C. Lyon**
38 years
Principal Engineer
- 495 Barbara A. Schuler**
34 years
Admin/Control Analys
- 604 William S. Gibbs**
34 years
Mgr Bus Sys
- 705 Richard E. French**
15 years
Planner Senior
- 911 Shirley E. Picanso**
27 years
Struct Fab Mech I
- 924 Franklin W. Nolan**
27 years
M/T Prod Supp III

Technical Lecture Series Begins In October

Electric Boat's Technical Lecture Program will kick off its fall schedule Oct. 2 when Virginia Program Manager Will Lennon provides a program update.

The Tech Lecture Program was developed to provide employees with the opportunity to become more familiar with the company's products, services and resources. The lectures are also intended to convey personal and professional pride in EB products and the role employees play in engineering, design support, and construction.

Program Structure

- Open to all employees.
- Lectures will be presented Thursdays at 2:30 p.m. and 4:00 p.m. in the Technology Center cafeteria. The lecture will be made available to all EB sites by videocassette.
- Attendance is voluntary; however, attendance is recorded. Employees who attend 60 percent or more of the lectures in a series receive a certificate and letter for commendable attendance.
- No charge numbers are provided.

Fall Program

Topic	Host(s)	Date
Virginia Program Update	Will Lennon	October 2
Unmanned, Off-Board Aerial Vehicles	Bob Lowell	October 9
Sea Trials Overview	Mike Ross and Rick Sears	October 16
Functional Process Owners	Dick Eddy and FPOs	October 23
Gulfstream G-IV	John McCann	October 30
EB Around the World	Millard Firebaugh	November 6
Submarine Participation in Seabasing of Missile Defense Capabilities	Andy Lightner and John Pavlos	November 13
Impacts of Technical Decisions on Ship's Operation	Al Ruditzky	November 20

For information, call Carol Stergio, ext. 32703, or Chris Colombo, 437-5519.

Navy Awards EB \$39.5M Contract Modification for Submarine R&D

The U.S. Navy has awarded Electric Boat a \$39.5 million contract modification for submarine research and development.

The award modifies a contract originally announced in March 2000 which, if all options are exercised and funded, has a total potential value of \$138 million over six years. Under the terms of the modification, Electric Boat will perform the research and development work on Seawolf- and Virginia-class submarines. The work is scheduled to be completed in September 2005.



Quonset Point Site Manager John Holmander, left, accepts a plaque honoring Quonset Point's participation in the 2003 Best Manufacturing Practices Survey from team chairman Larry Robertson.

LOOKING FOR BEST MANUFACTURING PRACTICES?

Check Out Quonset Point

The fast-paced world of submarine construction rarely allows the opportunity for an in-depth look at the processes that make Electric Boat the best. Recently, however, the Quonset Point organization took time for a close examination of the work it performs and how it performs it.

After months of preparation and three days of non-stop presentations, the Best Manufacturing Practices (BMP) survey is complete. The results are in and all the effort paid off. Of the 79 presentations made, 55 – or 70 percent – were determined to be best practices.

Presentations covered a variety of departments and topics – from small assembly to modular construction and human resources. The results were not concentrated in just one or two areas – all departments were represented.

“Our participation in this survey allows for a better assessment and understanding of our current business practices,” said Site Manager John Holmander. “In addition, we want to maintain a relationship with our customer with the hopes of identifying areas that will present opportunities for us.”

A best practice is a process, technique or innovative use of resources that has a proven record of success in improving cost, schedule, quality, performance, safety, environment or other measurable business activity.

“The BMP process validates and documents best practices within an industry, which are transferable to other companies,” said Don Hill, a technical advisor with BMP’s Indianapolis Field Office. “We’re looking for good things.”

The survey is a surprisingly simple process, consisting of presentations pro-

vided to survey teams of four BMP surveyors, who come from all areas of industry. The survey team examining Quonset Point included representatives from General Tool Company in Cincinnati, Ohio; the Office of Naval Research in Arlington, Va.; General Dynamics Armament & Technical Products in Burlington, Vt; and Naval Sea Systems Command in Washington, D.C.

“Our mission is to provide Best Practices, which will enable defense and commercial customers to operate at a higher level of competitiveness,” said Larry Halbig, a BMP technical advisor.

To determine best practices, more than 50 QP team members gave presentations to one of five BMP teams. Presentations included a brief PowerPoint display, many opportunities for the surveyors to ask questions and a tour of the area being profiled, if appropriate.

“The BMP team was impressed with QP’s total facility involvement in the survey,” said Carl Hiers (900), who coordinated the survey. “It was clear to the team that process improvements are part of our culture.”

“This survey gave me a sense of accomplishment – for me and my crew,” said Randy Shoemaker (904). “It was different and rewarding to get a pat on the back from someone outside the organization.”

The results of the survey directly reflected the considerable time and effort team members put into each presentation.

“We (the survey team) were very impressed with the level of enthusiasm displayed by each presenter,” said Hill. “This is clearly a progressive company that is focused on its people and its success. QP has a positive and successful personality.”

Installation of New And Improved AT&A Machines Is Now Under Way

continued from page 5

wand the activity code or shop order. The new devices will enable the activity code or shop order to be entered once, then allow multiple employees to present their badges, said Henry. “This will significantly speed up AT&A activity when large groups attend

a meeting and then have to document their attendance.”

Vacation or Sick (VAC/SICK) will now require employees to press the send button to submit their transactions. The old devices submitted the transaction once the number of hours was entered. This didn’t

give the employees the chance to review the number, and resulted in the submission of incorrect transactions.

Look for more information on the installation of the new devices over the coming weeks and months.

Classified

AUTOS/TRUCKS

BUICK REGAL LIMITED EDITION, 1988 – body is in good condition, needs some work, \$600. 443-3045.

EAGLE TALON, 1994 – starts and runs but smokes a little, 150k miles, will sell for \$500. 889-3340.

EXPLORER, 1998 – 4 door, all wheel drive, 5.0L V8 engine, auto, dark green exterior, split bucket w/leather interior, remote starter valued at \$450 stays, 77k miles (all highway), immaculate inside and out, runs excellent, \$11,500. 536-0519.

FIREBIRD, 1985 – 32k miles, one owner, excellent condition, always garaged, \$5,000 or best offer. 536-8255

FORD F150 XLT, 1997 – 4 x 4 extended cab, 4.6L V8, off-road and tow package, western plow frame, a/c, all power, 96k miles, \$10,800. 537-4952.

AUTO PARTS

ROOFTOP CARGO CARRIER – 36" w x 42" l x 20" deep, gray, \$25. 401-348-9133.

TRUCK CAP – Century, fiberglass, black, tinted windows, fits most 6 ft. truck beds, \$300. 460-9047.

BOATS

14 FT. RUNABOUT, 1970 – 33 Johnson Cox trailer, both in very good shape, \$1,200 or best offer. 437-8037.

BOAT MOTORS – 440 twin Chrysler engines, 50 hours on 1/100 hours on 1. Ready to drop

in! \$5,000 takes both, 456-0210 or 423-2607.

CANOE – 17 ft. fiberglass, paddles included, \$125. 822-8073.

KOKOTAT DRY SUIT – 2 pc., used twice, fits person 5'9" to 6'4", includes short and long pants, must go, \$300. 401-268-2628.

38 FT. NOV1 LOBSTER BOAT – offers. 535-3708.

SAILBOAT – 17 ft. Edel 540 mini cruiser, 8 ft. beam, 2'4" keel, custom trailer, 4 hp Suzuki, new main, lots of features, \$3,000. 443-5223.

WHITE WATER KAYAKS – Prijon Taifun, \$240; Dagger Response, \$350. 401-268-2628.

COMPUTERS

MICROSOFT – five button cordless mouse with a keyboard and totally washable; \$30. 886-1683.

MOTHERBOARD & PROCESSOR P4 – 1.6 ghz, 256 mb memory module, never used, cost over \$400. Best offer. 535-4676.

MISCELLANEOUS

AMERICAN GIRL DOLL CLOTHES and furniture, doll's wooden cradle, child's rocking chair, children's books, doll-house furniture, Fisher Price school house, Mickey Mouse collectibles, Crissy Doll. 401-596-5788.

ADULT'S ROCKING CHAIR – new air purifier, antique flat irons, Fostoria glassware, picture window draperies, stuffed chair, maple end table, afghan, crutches, beaded Indian headress, lamps. 401-596-5788.

Classified Ad Form

Name _____

Dept. _____

Ext. _____

One form per ad; 25 words per ad; two ad maximum per issue. No faxed or phoned-in ads.

Include item description, price and home telephone (List area code if outside 860)

Circle category:

Appliances	Computers	Pets	Real Estate /
Autos / Trucks	Furniture	Real Estate /	Sales
Auto Parts	Miscellaneous	Rentals	Wanted
Boats	Motorcycles		

Mail to Crystal Smith • EB Classifieds • Department 605 • Station J88-10

EQUIPMENT – Bandsaw Duracraft 12" wide, 2 speed; \$75. Yamaha RX11 Drum Machine, \$50. Heavy-duty stationary bike, \$10. 401-783-1273.

FREE COMPOSTED HORSE MANURE - great for yards and gardens, you pick up. 464-6425.

LIFESTYLE TREADMILL, 0 – 8 mph, 1.5 hp, Accusmart motivational fitness monitor – time, speed, calories, distance, safety key, on/off switch, \$400. 446-1095 or 447-0283.

MOTOR – for lawn tractor, Briggs & Stratton 14 h.p. I/C vert. shaft, good condition, \$125. MTD 2 bag grass catcher for lawn tractor, \$75. 401-596-4519.

MOTORCYCLES

HONDA SHADOW VT1100, 1988 – showroom condition, garaged, new battery, \$3,500 or best offer. 437-8037.

YAMAHA RADIANT, 1986 – good condition, low miles, new tires, includes 2 helmets, bike cover, shop manual, rain gear, cargo net, \$1,200. 444-0564.

REAL ESTATE

CONDO FOR SALE – by owner, 2 bedroom, 1 1/2 bath, carpeted, deck, private wooded view, pool, Jordan Commons, Waterford, Ct. 447-3938.

FURNISHED EFFICIENCY – New London, close to Pfizer, Mitchell College and beaches. Heat, hot water, electricity included, no pets, \$175/week. 449-8032.

FURNISHED ROOM – for rent, cable, parking, walk to EB. 445-6816.

LONGBOAT KEY, FL – for rent, 2B/2B condo, washer/dryer, cable & carport, on canal, next to park, 5 min to semi-private beach, \$500/week - \$1800/mon. 401-783-1273.

PAWCATUCK – room in farmhouse in private setting with pond, must like large dogs. Rent \$100 weekly minimum, negotiable depending on contributions to chores. 705-1114.

Service Awards

40 years

459 Ralph J. Lodyko
508 Kenneth T. Guarneri

35 years

100 Clifford T. King
229 Clifford L. Blair
241 Stephen F. Burnett
241 Gregory S. Provansano
248 Johnathan A. Bray
252 Donald C. Benney Jr
252 Gerard V. Hartman
272 Barry C. Musto
278 Russell W. Swanson
321 Lawrence D. Coburn
321 David C. Mazzella
423 Michael W. Smith
447 George P. Mackin
452 James F. Beyers
459 James W. Fletcher
633 Jacqueline C. Ricci

30 years

100 Raymond G. Karasevicz
100 Dennis A. Rogers
200 Daryl R. Judish
226 Norma-Jean A. Chandonnait
226 Everett E. Ferguson
226 Gary E. Martin
227 Norman C. Craig Jr
229 Ronald R. Brewer
229 Robert A. Charron
229 Robert M. Fisher
230 Gary L. Briggs
241 Philip J. Engratt
241 Shirley A. King
241 David W. Middleton
242 Thomas Sakowski
242 Ronald H. Szymanski
243 Michael R. Huffer
243 Norman D. Varney
244 Gary H. Haney
244 Ronald J. Poirier
244 John E. Sage Jr
252 Arthur E. McLeod Jr
330 Dorothy A. Stillman
355 Linda S. Dension
403 Pamela M. Edson
405 Ernest A. Vetelino Jr
412 Peter W. Stevens
417 Kevin J. Poitras
438 Kenneth K. Johnson
452 Sally D. Haddad
462 Arthur J. Lavallee
477 Edward N. Bradbury
494 Douglas G. Marshall
501 Gary P. Fontaine
501 Michael A. Gdula
501 David L. Hornik
508 Allan R. Peckham Sr

645 William F. Passero
650 Frederic L. Ward Jr
691 Christopher A. Smith
702 Jane E. Steele
740 George D. Niforos
902 Ronald P. Chambers

25 years

220 Donna O. Chaffee
241 Paul T. Warzecha
242 James A. Theroux
243 Alan D. Duperry
243 Kevin J. Godere
243 Richard A. Voyles
252 Timothy A. Brusseau Sr
252 Mark A. Nye
272 Edward A. Veprauskas
274 John T. Baker
278 Patrick W. Carty
405 Cynthia L. Richie
434 Charles E. Zebrosky
438 Sarah A. Flora
447 Frank E. Longo Jr
452 Bradley P. Smith
459 Robert W. Kingsborough
459 Gujebcan Mirsadschan
473 Robert D. Alling Jr
501 Vern E. McLean
615 David P. Lamb
626 Arthur F. Brogno Jr
691 William L. Parsons
795 Glean H. Rosenfeldt
915 Jesse M. Pacheco
951 Lawrence J. Drenswick

20 years

200 Robert F. Yost
241 William O. Bright
355 John F. Bolduc
412 Albert D. Menghi
425 Peter N. Turco
447 Darcelle L. Flanagan
459 Thomas R. Briggs
459 Russell L. Ricci
459 Anthony D. Voccio
463 William M. McCormick
472 Alfred J. Garceau
473 Gerald E. Egan
604 Lynne A. Pickette
911 James W. Floyd Sr
911 James J. Letarte
915 Brian W. Grundy
915 Anthony N. Lomastro Jr
962 Michael G. Rosiak



Jimmy Carter Mural



Left: Sheetmetal worker apprentice Treven Leonard (244) adds his name to the mural after it was put on display in Building 260 for employees to sign. The mural has since been sent to Quonset Point for additional signatures, after which it will be returned to Groton.

Below: EB sign painter/artist Dan Kerwin (505) puts the finishing touches on a mural commemorating the completion of the Jimmy Carter (SSN-23) pressure hull earlier this year. Missing from photo is fellow sign painter/artist Dennis Rolfe (505), who also worked on it.

