



Tow Bitts



Reed Clark

Carolyn Lakewold, for whom Foss' new hybrid tug is named, raises her arms in victory after successfully breaking a bottle of champagne over the vessel's bow to christen it.

SOUTHERN CALIFORNIA WELCOMES WORLD'S FIRST HYBRID TUG

The world's first hybrid-powered tugboat, the *Carolyn Dorothy*, went to work in Southern California in February after festive ceremonies in Long Beach and San Diego and hearty welcomes from state and local officials.

At an unveiling in Long Beach on Jan. 23, leaders from the ports of Long Beach and Los Angeles, the state of California, and Foss gathered with business, government and media representatives to welcome the tug.

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INSIDE *Tow Bitts*

Tow Bitts: The Green Edition

This edition of *Tow Bitts* begins with an article on the cover about the new Foss Hybrid Green Assist™ tug and includes a package of articles and photos on inside pages about the new tug and other “green” initiatives by the company and its employees.

Cover and pages 6-13

The Green Culture of Foss

President and COO **Gary Faber** explains that the new hybrid tug is part of a broader commitment by the company to reduce its emissions profile and move toward a goal of “zero trace.”

This page

Tuning up Safety Program

New life is being pumped into Foss Shipyards’ behavioral safety program, which has been a key to improving the safety records of the facilities. The program is based on the notion that most accidents are caused by unsafe behaviors, not equipment.

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Slow Boat From China

The *Corbin Foss* recently completed a trip from China to Bellingham, Wash., towing a submersible barge at a maximum speed of 5.5 knots. And in a “Look Aft” column, Foss historian **Mike Skalley** chronicles the company’s first trip to China in 1946.

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Woodworking Artist

When Foss Capt. **Blaine Hall** isn’t at the controls of the *Benjamin Foss*, you might find him in his woodshop crafting tables from line spools discarded by the company. Woodworking has been his hobby for 32 years.

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Hawaiian Sister Company

Tow Bitts profiles Hawaiian Tug and Barge/Young Brothers Ltd., a Foss sister company based in Honolulu. In addition to ship assist services and other harbor work, HTB/YB operates a state-regulated freight service throughout the islands.

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Commitment to the Environment Is Deeply Rooted in our Culture

With the introduction of the Hybrid Dolphin tug in January, it is our hope at Foss that its success will mark the beginning of a significant trend in our industry. We believe the groundbreaking vessel can set an example that will encourage others to find creative solutions to difficult challenges that lie ahead, environmental and otherwise.



Gary Faber

Internally, however, the Hybrid Dolphin is a natural progression of our efforts to reduce our emissions profile and to move toward our ultimate goal of zero trace. It also lines up with our belief that a commitment to the environment is fully compatible with a sustainable business model.

Our environmental policy calls for us to operate our business based on responsible management through continuous improvement in our environmental performance and efficiency in our use of natural resources, both renewable and non-renewable.

Also, in recognition of our obligation, both globally and locally, to present and future generations, we are committed to participate in the development of sound policies and solutions to environmental problems faced by our industry as a whole.

Meeting these values is particularly challenging for Foss, because we are both privileged and burdened to operate in some of the most environmentally sensitive areas in the world. This places us under additional scrutiny and intensifies the sense of urgency to address the negative environmental

impacts of our business.

The hybrid tug is not a flavor-of-the-month project designed to hit the current market hot buttons. It is the culmination of a concept that began at Foss and succeeded because our commitment to the environment is rooted deeply in our culture.

The hybrid was built at our yard in Rainier, Ore., on the Columbia River. The challenges of design, fabrication and assembly of this prototype tug were daunting, but in the tradition of finding innovative solutions, we persevered.

You will read elsewhere in this issue of *Tow Bitts* about how the hybrid tug works and the performance, reduced emissions and lower fuel consumption we are expecting from it.

In this space, I would like to say we were very fortunate to have found like minded partners who believed in our vision. I am grateful to the ports of Long Beach and Los Angeles and the South Coast Air Quality Management District for their financial support and their unwavering commitment to provide the citizens of their port communities with clean air.

There is a big difference between being environmentally aware and being environmentally proactive. Foss believes we must recognize and address our environmental impacts through effective and sustainable solutions.

Carolyn Dorothy, welcome to our company and our fleet.

President and Chief Operating Officer



To submit articles for *Tow Bitts*, please contact Bruce Sherman, editor, sherman.b@comcast.net, or Meagan O’Shea, coordinator of production, meaganoshea@foss.com. The *Tow Bitts* graphic designer is Barbara Hoberecht. *Tow Bitts* is published quarterly by Foss Maritime for employees, customers and friends. Changes to the *Tow Bitts* mailing list should be referred to the Marine Personnel office in Seattle, (206) 281-3821/3958.

Delta Mariner Takes Launch Stand to Tiny Atoll in Pacific; Direct Delivery Saves 5 Days, Delights Government Officials

The *Delta Mariner* made its first trip to the Western Pacific this winter, delivering missile defense cargo to the Marshall Islands. The vessel, known as the Foss Rocket Ship, also saved the U.S. government time and money by delivering the launch stand directly to its ultimate destination, a tiny harbor officials thought they'd have to access with a barge.

The *Delta Mariner* is under long-term charter to the United Launch Alliance to carry Delta IV rocket components, mainly from the Mississippi River to Cape Canaveral, Fla. When not required by United Launch Alliance, the charter arrangement allows Gulf Caribe to seek other work for the ship, such as the Marshall Islands job.

The Marshall Islands are a chain of atolls, half way between Hawaii and Australia, that were granted independence in 1979 by the United States, which maintains military operations and a missile testing range there.

Gulf Caribe Maritime, the Foss subsidiary that operates the *Delta Mariner*, began discussions with the Missile Defense Agency (MDA) in July 2008 about moving the launch stand and attendant hardware for target missiles from Decatur, Ala., to the Marshall Islands. The 312-foot ship left Decatur on Dec. 22.

Billy Pepper of Gulf Caribe, said the ship arrived in Hawaii on Jan. 20, "and the folks at Foss sister company Hawaiian Tug and Barge/Young Brothers offered their support with fueling, supplies and crew changes."

The government's original plan was to transload the cargo from the *Delta Mariner* to a barge at Kwajalein Island and then tow it 20 miles to its final destination, Meck Island. But a Gulf Caribe official arrived in the Islands ahead of the ship, flew by helicopter to Meck and determined that the *Delta*



The *Delta Mariner* at the pier on tiny Meck Island in the Western Pacific.

Mariner could get into its dock, with a few alterations.

The pier at Meck was only 38 feet wide, too narrow for the *Delta Mariner's* 72-foot-wide cargo ramp. Using heavy equipment barged to the island, workers submerged a cargo container topped by a big Yokohama fender next to the pier to support the starboard edge of the ramp.

The *Delta Mariner* arrived outside the atoll on the evening of Jan. 29, and three pilots boarded the ship and brought it into the pier the next morning. Cargo operations were completed at 1 p.m. on Jan. 31, and the ship departed at 2:30 p.m.

"The vessel arrival and cargo operations went off without a hitch," Pepper said. "Taking the vessel directly into Meck Island saved five days of work for the MDA and Army crews there to support the arrival of the launch stand,

"The vessel arrival and cargo operations went off without a hitch. Taking the vessel directly into Meck Island saved five days of work..."

Billy Pepper

so we left them a very happy group of folks."

Before departure, the government presented the *Delta Mariner* crew with a certificate of appreciation bearing an aerial photo of the ship at the Meck pier.

Shipyards Tune Up Behavioral Safety Program; New Procedures Streamline Effort to Eliminate Injuries

Foss continues to build the behavioral safety program at the company's two shipyards, with safety and shipyard managers viewing the program as a key component of their effort to reach a goal of zero injuries.

The behavioral safety effort, originally initiated in the shipyards early this decade, is based on the notion that worker behavior is the cause of most accidents. Through the program, employees are trained to observe co-workers doing their jobs and to identify unsafe behaviors so they can be corrected.

"The program had lost a little bit of life and effectiveness," said Shipyards and Engineering Vice President **Andy Stephens**. "We're trying to invigorate it."

The current effort started in 2007 with the hiring of Ojai, Calif.-based Behavior Safety Technology, which conducted a study of the company's safety climate and culture. Subsequently, BST helped Foss re-think its approach to behavioral safety.

Shipyards Health and Safety Coordinator **Ron Sykes** said observers are using a new checklist that is more user friendly and less complex than the old one.

"We don't have to take a lot of time doing the observations, and we're able to cover more ground than before," Sykes said. "We've also completely changed the procedure for training, and we're going to start using a new database to track what we learn from the observations."

Sykes said one worker from each of the shipyards' crafts was initially trained to implement the new system. They are laborer **Manning Webb**, shipwright **Mark Inabnit**, welder **Bob Wenzel** and electrician **Mike Pearson**. **Mike Ostoj** was trained to implement the program at Foss Rainier Shipyard.

The second group trained included outside machinist **David Holt**, painters **Sam McCanless** and **Curt Wahl**, Riggers **Brandon Gipson** and **Jim Fox**, Terminal Manager **Spencer O'Grady**, Superintendent **Bill Fiamengo**, Production Manager **Hap Richards**, welders **Sheldon Murry**, **Brian Ebert**, **Mike Kamer**, **Bo Dalby**, and **Linh Trahn** and shipwrights **Tom Fainrich** and **Paul Paroline**.

The two-day training sessions last fall and winter included both classroom work and practice observations in the shipyard.

Shipyards Production Manager **Hap Richards** said workers believe the training is much improved and that the new system for performing observations is more thorough.

"They don't do as many as before, but that's a plus because they're not rushing to get them done," Richards said. "Overall, I think it has been a positive move in the right direction."

Shipyards Manager **Gene Henley** said he believes the new program is helping to make people more aware of their surroundings and to be more pro-active in addressing unsafe situations.

"Prevention is the key to having a successful safety program, so you want to be out ahead," he said. "What we've been preaching is that we want to be in a position where people can identify unsafe and hazardous situations before they become an event."

Rainier Shipyard New Construction Manager **Tim Stewart** said "there's no doubt" that the behavioral safety



Shipyards Health and Safety Coordinator **Ron Sykes**, right foreground, and shipwright **Mark Inabnit** conduct an observation of welding operations on the Washington state ferry *Rhododendron* as part of the company's behavioral safety program.

program has improved safety there.

"For example, at our shipyard you will find things cleaner, with less clutter that people can trip on," he said. "And people are all harnessed up and doing things right."

Stewart said behavioral safety is part of an effort to "change the paradigms" people bring with them to Foss.

Said Stephens, "Ultimately, we will be successful if each of the skilled craftsmen out there is thinking not just about performing a job, but is also taking a look at the environment, thinking about their personal safety and the safety of others as they prepare to do the job."

He added, "We've made some important strides in reducing injuries, but we're nowhere near where we need to be. If there's one recordable injury, that's one too many."

ALWAYS SAFE

Injury Rates Plunge at Foss Seattle and Oregon Shipyards; Lost-Time and Recordable Mishaps also Drop on Boats

Injury rates on Foss vessels and in the company's shipyards plunged to what are believed to be historic lows in 2008.

Credit for the improvement was given to an enhanced safety culture at Foss, stepped up safety training and communication. Those efforts were directed by **Al Rainsberger**, director health and safety; **Jim Peschel**, manager quality service, **Merridith Chumbley**, manager health and safety, and **Ron Sykes**, shipyard health and safety coordinator.

The establishment last spring of the Marine Assurance Group (MAG), led by John Marcantonio and Kent Salo, also helped lower injury rates.

On the marine side, the recordable injury rate in 2008 was 3.64 per 100 workers per year, compared to 5.13 for the 12 months of 2007. The lost-time injury rates were 2.06 for 2008 and 3.48 for 2007.

In the shipyards, the recordable injury rate was 12.28 per 100 workers per year in 2008, compared to 20.58 for 2007. The lost-time injury rate was 3.91 in 2008, compared to 11.05 in 2007.

Recordable injuries are injuries requiring medical assistance beyond first aid. Lost-time injuries are injuries that require a worker to miss time

on the job.

"These rates are way below where we've been in the past," said **Frank Williamson**, vice president for safety, quality and general counsel. "But

"These rates are way below where we've been in the past, but they're still too high. We haven't reached our goal until there are no lost-time injuries."

Frank Williamson

they're still too high. We haven't reached our goal until there are no lost-time injuries. We will continue to work at achieving an incident free workplace and stress it as our number-one priority."

Through February 2009, Foss was below industry benchmarks for lost-time and recordable injuries in the shipyards and in marine operations.

A key to the improvement in the injury rates, according to Williamson,

was establishment of the MAG, which is part of the Foss Operations department and works directly with marine personnel.

The group helps mariners implement safety programs on a daily basis and backs them up during investigations and preparation of reports.

"When safety issues come up, the MAG representatives can work on them, bring them to the safety group when appropriate, and work toward a solution," Williamson said.

Another factor in the improved safety rates has been an increased emphasis on behavioral safety training, in which employees are taught to recognize unsafe behaviors and situations and are given the authority to stop a job or report the problem. The consulting group BST is assisting Foss with the training.

Williamson said safety committees, new procedures for job safety analyses, and the Flex and Stretch program that is now fully implemented, also are helping to lower injury rates.

"The recent improvements build on the efforts started with the Operational Excellence Program," Williamson said. "There has been a lot of progress based on a greater commitment to safety awareness that started with that program in 2007.

LINE SERVICE GROUP WINS WASHINGTON AREA SAFETY AWARD

Foss Line Service's low rate of lost-time injuries in 2008 recently landed the group a Washington Area Award from the Pacific Maritime Association (PMA). The award was the group's third in a row, and 2008 also was the third year in a row Foss Line Service placed ahead of its chief Washington competitor.

"Three consecutive years is quite an accomplishment," said

Mike O'Connor, line service manager. "It shows me that our safety efforts are working."

The awards were presented at the PMA Safety Awards Banquet March 4 in Tacoma. The PMA is a waterfront employers group.

O'Connor noted that his group had experienced two lost-time injuries in 2008, one more than 2007, but had experienced none so far in 2009.

"We need to press forward, increasing our efforts in enforcing the safety policies and procedures we have implemented over the last few years," he said.

O'Connor credited line superintendents for helping the group "come leaps and bounds in PFD and other PPE enforcement and helping us to be consistent with our regular safety meetings in Seattle and Tacoma."

Part of Foss Efforts to Be a Green Company Also Includes Barges, Low-Sulfur Fuel and Yard Improvements

“Foss Green” has always been the company color but is taking on new meaning as the firm devotes increasing resources to its environmental programs and strives to leave “zero trace” in its marine and shipyard operations.

Development of the hybrid tug is part of that effort, but it goes much farther and over the last year has been turning heads, both in the industry and among ports and governmental agencies.

Foss has the largest double-hull tankbarge fleet on the West Coast,

with four in operation on San Francisco Bay and three in Southern California. The newest of the Southern California barges was to be delivered to Long Beach in March from its construction yard in Texas.

The company also has converted all of its tugs to ultra-low sulfur diesel fuel, even though



The Carolyn Dorothy arrives in Long Beach

HYBRID UNVEILING *(Continued from cover)*

In San Diego on Feb. 19, the tug's sponsor **Carolyn Dorothy Lakewold**, broke the traditional bottle of champagne over the bow to officially bring the boat into the fleet. Lakewold is the wife of Fred Goldberg, one of the shareholders of Saltchuk Resources, owner of Foss parent company Marine Resources Group.

A key event at the January unveiling was a special awards presentation by Foss to the San Pedro Bay ports and the South Coast Air Quality Management District to thank them for their generous support of the development of the Green Assist™ as the hybrid is being called.

“The hybrid tug is the culmination of a concept that began at Foss and succeeded because our commitment to the environment is rooted deeply in our culture,” said **Gary Faber**, Foss President and COO. “We were very fortunate to have found like-minded partners who believed in our vision, and we are grateful to the South Coast Air Quality Management District and the ports of Long Beach and Los Angeles.”

To help defray the added costs of development and construction of the first hybrid tug, the Port of Long Beach, the Port of Los Angeles and the South Coast Air Quality Management District contributed to the project.

The Hybrid Tug was built by Foss at its Rainier Shipyard on the Columbia River in Oregon. Foss partnered with Canada-based Aspin Kemp & Associates and their affiliate XeroPoint to develop the unique hybrid power management system.

Billie Greer, Director of the Los Angeles Regional Office of Gov. Arnold Schwarzenegger, heralded the arrival of the tug at the Long Beach ceremony: “To borrow one of Gov. Schwarzenegger’s favorite adjectives, Foss Maritime, you are fantastic . . . What is not to love about the world’s first hybrid tug?”

Long Beach Port Commissioner **Mario Cordero** said, “We are very proud that with the help of our many partners, such as Foss, we are making substantial progress toward our clean-air goals here at the Port of Long Beach and at the mutual

ports of Long Beach and Los Angeles.”

S. David Freeman, Commission President of the Port of Los Angeles said, “We’ve passed laws and laws and laws, but without technology, L.A. still doesn’t have clean air and no other city does . . . My hat is really off to Foss, because they set an example.”

Dr. Henry Hogo, Assistant Deputy Executive Officer of the South Coast Air Quality Management District, said the hybrid tug features “new and exciting technology that will help reduce air pollution faster.” He added, “I truly believe we have added another tool to our arsenal to clean up the air of southern California.”

The hybrid tug design was awarded the EPA’s Clean Air Excellence Award for Clean Air Technology in 2008. Along with less pollution, the Hybrid Tug offers improved fuel economy and lower maintenance costs. It is also quieter than its Dolphin sister tugs, when operating on batteries that can be recharged using shore power.



EPA requirements for the transition will not be implemented until 2012.

“We realized that based on our typical fuel consumption, we are able to reduce our fleet’s sulfur dioxide numbers by almost 29 tons a year and particulate matter emissions by approximately two and a half tons per year,” said President and COO **Gary Faber**. “It was simply the right thing for us to do.”

At Foss Rainier Shipyard on the Columbia River in Oregon, the company has invested more than two million dollars in a capital improvement program that strengthens environmental controls and safe work practices.

The Seattle shipyard shares the Lake Washington Ship Canal with kayakers, recreational boaters and migrating salmon.

“We have survived in this location because we have taken the initiative to control our destiny by remaining one step ahead of the regulations by simply behaving as custodians of the environment,” Faber said.

Environmental awards received by Foss over the last year include:

- The Coast Guard’s William H. Benkert gold-level award for marine environmental protection. The award is the Coast Guard’s highest environmental honor.
- A Clean Air Action Plan Award

from the ports of Long Beach and Los Angeles for development of the Hybrid Dolphin and other environmental initiatives.

- The Environmental Protection Agency’s Clean Air Excellence Award for Clean Air Technology. It was the first time the award had gone to a maritime operating company.
- Chamber of Shipping environmental awards to 56 Foss vessels for operating at least two years without an environmental incident. (See Article on Page 11.)
- In addition, Foss is the first company accepted into the EPA’s SmartWay Transport program for its marine operations.

Carolyn Dorothy, the Person, Considers Herself a Lucky Lady

After **Carolyn Dorothy Lakewold** christened the hybrid tug in San Diego on Jan. 19 and held her hands high in the air to mark her bottle-breaking success, the crew of the boat declared her to be the most enthusiastic sponsor they’d ever seen.

Lakewold is the wife of **Fred Goldberg**, one of the shareholders of Saltchuk Resources, owner of Foss parent company Marine Resources Group.

The christening was held at the San Diego Maritime Museum, and was attended by representatives of Foss, Saltchuk and MRG, customers and members of the Goldberg and Lakewold families and their friends.

In addition to the praise she received from the tug crew, Lakewold, a winery owner, also received a compliment from Saltchuk Principal **Mike Garvey** at a dinner following the christening.

Garvey said he had been skeptical about whether a Washington winery could produce a good red, but her Donedei wine, which was served at the gathering, was “one of the best



Carolyn Lakewold at the controls of the hybrid tug, with Capt. **Mike Lonich** supervising.

I ever tasted.”

Lakewold also is a former college professor, in the field of English as a second language, and was a top-level fast-pitch softball coach. In recent years, she has turned a winemaking hobby into a second career as the owner and winemaker at Donedei Wines, based in Olympia, Wash.

She spends her time away from the

winery fly fishing, playing tennis and traveling with her husband.

“All in all, I am a very lucky lady,” she said of having a tug named in her honor. “We will be forever proud to see the *Carolyn Dorothy* sailing in the family of Foss vessels. Thank you to the quality craftsmen and women of the Foss Shipyard in Rainier, Ore. They should share in our pride.”

HOW THE HYBRID WORKS

Flexible Power System Cuts Emissions; Extends Engine Life

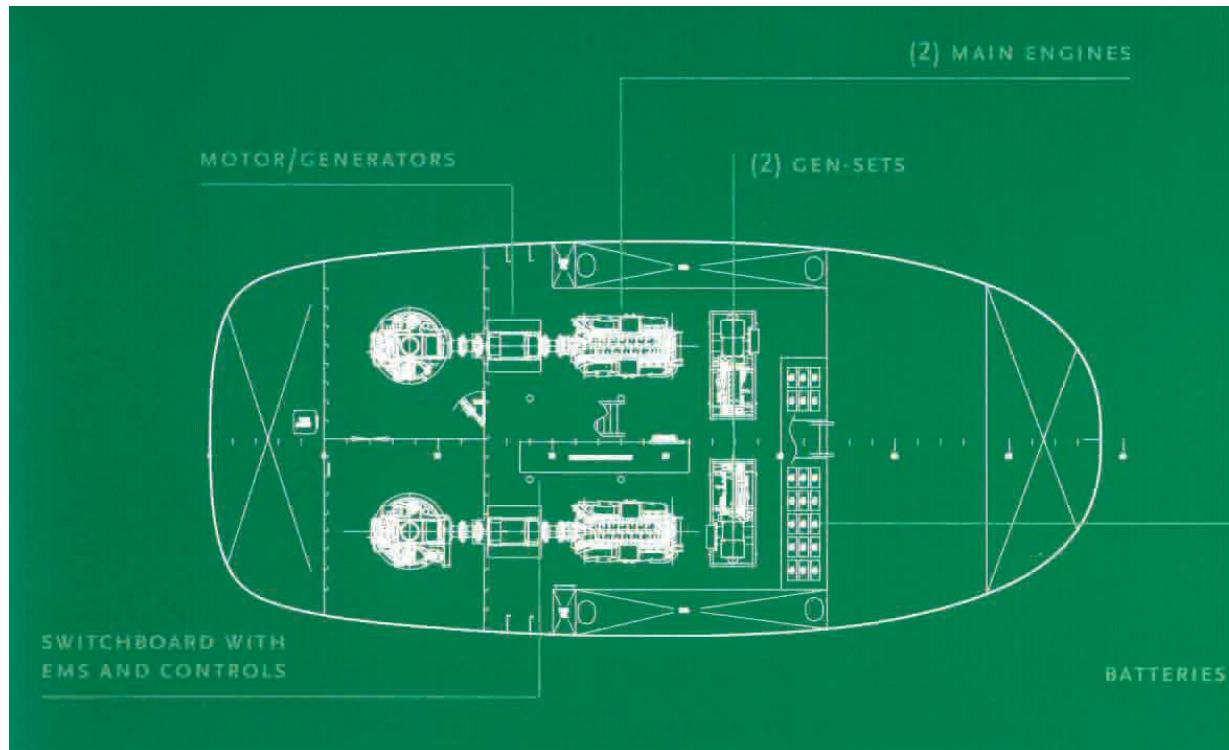
The hybrid tug provides the same high power and bollard pull as its conventional sisters, but does so with a power management system that can bring on the main diesel engines when they're needed for ship assists or towing, and shut them down when they're not needed.

The tug uses smaller diesel engines than Foss' other Dolphins, about 1,800 horsepower each compared to 2,500 horsepower. Between the smaller diesels and the propellers, however, are electric motors that can bring the total power into the range of the other Dolphins.

The diesels can be taken off-line by disengaging a clutch that separates them from the electric motors. This enables the tug to be operated on the electric motors alone, appropriate for times when power needs are low, such as transiting to a job or standing by for a ship arrival.

The hybrid uses 18,000 pounds of storage batteries to deliver electricity for low-power operations and provide maximum power when needed. The batteries can be charged with the hybrid's larger-than-normal service generators, or they can be charged by putting the electric drive motors in power-generation mode and turning them with the main diesel engines.

"The tug's Energy Management System uses power sources in the most efficient configuration possible to meet propulsion and auxiliary needs and recharge the batteries," said



Rick McKenna, engineering project manager for the hybrid.

The smaller, Tier-2 main engines produce emission benefits. Further reductions in emissions are possible by re-charging the batteries with shore power. The hybrid's particulate and nitrogen oxide emissions are estimated to be 44 percent lower than those of its sisters.

Carbon dioxide and sulfur oxide reductions will line up with fuel consumption savings, conservatively estimated at 30 percent.

In addition to fuel savings, the hybrid tug achieves cost benefits through reduced life-cycle costs. Because the main engines will not be operated as much, the time between overhauls will lengthen considerably.

The design is flexible and can take advantage of technology developments such as new battery types and hydrogen fuel cells as they become practical. The technology also is appropriate for retrofits of existing tugs.

"The tug's Energy Management System uses power sources in the most efficient configuration possible to meet propulsion and auxiliary needs and recharge the batteries."

Rick McKenna



Employees also On Board in Effort to Create Green Culture at Foss

Efforts by Foss and its employees to protect and enhance the environment aren't limited to its tug, barge and shipyard operations.

Employee volunteer efforts coordinated by the company tend toward green; Foss is upping its contributions to environmental causes; the company provides incentives to get people out of their cars; and beginning with this issue, *Tow Bitts* is being printed on re-cycled paper.

"It's a philosophy and a culture here," said Human Resources Administrator **Tina Wissmar**, who has mustered Foss volunteers to help restore an urban forest in Seattle, clean up a park and pick debris from the Lake Washington Ship Canal.

"I never got into these causes until I started working here," said Wissmar. She also coordinates Foss corporate giving and said there is an increased focus on contributions to environmental groups.

"Since we put our boats in the

environment, we're inclined to help maintain and improve it," she added.

The company's commute-trip-reduction program, coordinated by Benefits Assistant **Jennifer Winchester**, offers a number of incentives encouraging employees not to drive to work alone.

People who share rides to work are guaranteed a ride home, even in a cab if necessary, and van pools are subsidized at the rate of 50 percent. The company provides a 100 percent subsidy for employees who buy bus passes, ride Sounder trains, or walk, bike or carpool on ferries.

The company has covered bike racks for employees who cycle to work, plus lockers and showers, which also are available to walkers. People who bike, walk or carpool at least 12 times a month also can get a \$20-a-month subsidy.

Foss also participates regularly in commute-trip-reduction promotional events, including one last fall that



Tina Wissmar, who coordinates Foss volunteer efforts, shows off a hemlock tree she planted as part of a re-forestation project in a West Seattle park.

netted free bikes for seven employees.

"These programs are very popular and have made significant reductions in our commute trips," Winchester said. "People who participate feel like they're making a difference."

FOSS HYBRID DOLPHIN TECHNICAL SPECIFICATIONS

Class:	Dolphin	Auxiliary Power :	Two Siemens Motor-Generators, Two Cummins QSM II Diesel Generators, Batteries	Bollard Pull:	64.5 Tons Ahead, 62 Tons Astern:
Dimensions:	Length, 78 Feet, Breadth, 34 Feet, Depth, 14 Feet	Propulsion:	Rolls-Royce US205 Azimuthing Stern Drives	Fuel Capacity:	9,500 Gallons
Operating Draft:	15 Feet, 6 Inches	Horsepower:	5080 HP	Fresh Water:	500 Gallons
Tonnage:	144 GRT, 98 NRT			Bow Winch:	Markey DEPGF-42
Main Engines:	Two Cummins QSK50 Tier 2				

Troutman Uses Solar Power to Keep Vintage Bikes Warm

Columbia-Snake River Port Engineer **Mark Troutman** has a hybrid of his own, but it's not a tug. Troutman's hybrid is a solar-electric heating system for the motorcycle shop he built next to his home near Portland three and a half years ago.

Troutman embedded more than 500 feet of piping in the concrete floor slab of the 24-by-36 foot shop. He supplies heated water to the pipes with a tank that draws from a solar panel on the roof.

The water in the tank also can be warmed up with electric immersion heaters when there isn't much sun, which is often the case in Portland between October and March.

Troutman has been interested in alternative energy sources ever since taking a course in the subject at the University of New Mexico in the 1970s. "I like things that are efficient, and then there's the money you save

with this kind of system," he said.

He describes the heating system in his shop as "pretty basic," and says his knowledge of heat exchangers and evaporators on tugs made designing the system easier.

Troutman is a long-time motorcycle enthusiast and says he has "thinned down" his collection to 18 motorcycles, mainly vintage Hondas, BMWs, "and the odd British bike here and there."

"Keeping the moisture down keeps these restored classic bikes from



Mark Troutman built the hybrid system that heats his shop. Above his head is the storage tank for the heated water that circulates through the floor.

rusting," he said. "This heating system was a one-time investment that is now pretty much non-invasive and low-cost."

ENGINEER FOLLOWS COMPANY'S LEAD, BUYS GREEN CAR FOR COMMUTE

For **Merle Norquist**, a Foss marine engineer based in Long Beach, the switch from his Chevrolet Suburban to a Global Electric Motorcar four months ago was a no-brainer. He's not only helping to improve the environment, he's saving money, and plenty.

Registering the car was \$58, and insurance is just \$99 a year. Combine that with the cost of charging it, about 1.2 cents per mile, and annual operating costs add up to about \$200. He spent that much every few weeks to put gas in the Suburban.

"I was talking with one of my neighbors about the hybrid tug, and she told me she had an electric car in her yard that she never drove," said Norquist. "It's 100 percent street legal, as long as you don't go on a street with a speed limit over 35 miles an hour."

Global Electric Motorcars are manufactured in Fargo, N.D., and sold through Chrysler dealerships. Norquist's four-year-old model is equipped with six 12-volt batteries and an on-board 110 amp charger that he plugs into an outlet in his garage.

The range of the car is about 30 miles, which makes it a perfect commuter car for Norquist, who lives in Long Beach, just four miles from Foss headquarters on Pier D. The car's top speed is 25 miles an hour, which is fine for the surface streets he uses for the trip.

"Basically, it's a street-legal go-cart,"



Merle Norquist and his electric car in Long Beach, with the hybrid tug in the background.

he said, "Foss took the initiative to give more to the environment. If my company's going to do it, I'll jump into it, too."

Industry Group Recognizes Foss Environmental Record

Fifty-six Foss vessels were recognized by the Chamber of Shipping of America (CSA) on Nov. 14, 2008, for operating for at least two years without an environmental incident. The Foss vessels were among 873 vessels from 51 companies receiving the awards.

“These awards celebrate the dedication to environmental excellence of our seafarers and the company personnel shore-side who operate our vessels to the highest standards,” said **Joseph J. Cox**, President and CEO of CSA. “In today’s world, it seems our industry only gets front-page news when spills or other environmental problems occur.”

He added, “It is encouraging to see how many vessels go for years achieving environmental excellence. It should be clear to the American public that we in the maritime industry take our stewardship of the marine environment very seriously.”

Many of the Foss award recipients logged many more than the minimum two years without an incident. Fifteen Foss boats were listed as being incident free for 16 years.

The Foss vessels and the number of years they were incident free were:

American River, 3, *Andrew Foss*, 10, *Arrow No. 2*, 14, *Arthur Foss*, 16, *Barbara Foss*, 5, *Benjamin Foss*, 4, *Betsy L*, 4, *BMC 10*, 14, *Brynn Foss*, 2, *Campbell Foss*, 2, *Cap Evans*, 3, *Caribe*



Foss Capt. **Doug Hajek**, second from right, represented the company at a banquet in Washington, D.C., on Nov. 14, as 56 Foss vessels received Environmental Achievement Awards from the Chamber of Shipping of America. In the photograph are, from left, **Joseph A. Byrne**, U.S. Maritime Administration associate administrator for environment and compliance, Rear Adm. **Mary Landry**, U.S. Coast Guard director of governmental and public affairs, Hajek and **Tim Keeney**, National Oceanic and Atmospheric Administration deputy assistant secretary for oceans and atmosphere.

Alliance, 3, *Corbin Foss*, 2, *Daniel Foss*, 11, *Diane Foss*, 6, *Dorothy L. Sylvester*, 9, *Drew Foss*, 16, *DS-10*, 5.

Also, *Edith Foss*, 16, *FDH 35-1*, 3, *Foss 185-P1*, 16, *Foss 185-P3*, 16, *Foss 248-P2*, 4, *Foss 248-P3*, 16, *Garth Foss*, 5, *Henry Foss*, 16, *Howard Olsen*, 8, *Iver Foss*, 10, *Jeffrey Foss*, 11, *Jim Moore*, 14, *Justine Foss*, 16, *Keegan Foss*, 4, *Kivalina*, 5, *Lewiston*, 6, *Lindsey Foss*,

3, *Lynn Marie*, 3, *Marshall Foss*, 6, *Morgan Foss*, 3.

Also, *Noatak*, 16, *Pacific Knight*, 16, *Pacific Queen*, 14, *Pacific Viking*, 5, *Peggy Foss*, 16, *Piper Inness*, 2, *PJ Brix*, 16, *Pointe Fermin*, 9, *Sam Foss*, 16, *San Joaquin*, 7, *Sandra Foss*, 11, *Shelley Foss*, 2, *Sidney Foss*, 7, *Stacey Foss*, 16, *Wedell Foss*, 16, *William R*, 7, *WT 25*, 9, *WT 30*, 9.

FOSS IMPLEMENTS NEW CLEAN-WATER REGULATIONS

Foss and other vessel-operating companies scrambled during the winter to implement new requirements of the federal Clean Water Act that went into effect on Feb. 6, just one day after the Environmental Protection Agency released details of the regulations.

The new requirements apply to 26 types of vessel discharges and mandate detailed record-keeping, inspection and housekeeping procedures. They were

issued in response to a ruling in a lawsuit brought by environmental groups, resulting in the short time frame for implementation.

“This was a very quick implementation program, and we would have liked to have had more time,” said Foss Manager of Security, Compliance and Contingency Planning **Ross McDonald**. “But the reality is that because this was the result of a

lawsuit, the EPA didn’t have options either.”

The regulations are called the National Pollution Discharge Elimination System. NPDES covers such liquids as ballast water, bilge water, gray water, and other substances previously considered incidental to vessel operation and exempt from the Clean Water Act.

Foss Welcomes Carolyn Dorothy; The World's First Hybrid Tug



Carolyn Dorothy Lakewold smashes a bottle of champagne on the bulwarks to christen her namesake tug. With her at the ceremony were, from left, Saltchuk shareholder and Lakewold's husband **Fred Goldberg**, his daughter **Jamie Goldberg-Bowers**, and son **Paul Goldberg**, Lakewold's brother **Eric Lakewold** (behind her), Goldberg's son **Blake Goldberg**, Lakewold's parents **Claude** and **Dorothy Lakewold** and Foss Senior Vice President Operations **Scott Merritt**.

Reed Clark



During a bollard-pull test on Jan. 6 in Tacoma, the *Carolyn Dorothy's* pulling power proved to be in the same range as its diesel-powered sisters.



Rick McKenna, Foss Engineering Project Manager, gives Pricing Director **Leiv Lea** a tour of the controls in the *Carolyn Dorothy's* pilothouse.



Right: The Hybrid Dolphin tug passes through the Hiram Chittenden Locks in Seattle on the way to Foss headquarters in early January.



Saltchuk Principal **Mike Garvey** spoke to those gathered for the hybrid's christening in San Diego Feb. 19.



Foss Vice President Harbor Services **David Hill** was at the podium during the hybrid's unveiling ceremony Jan. 23 in Long Beach.

At Left: From left at the Long Beach unveiling were **David Hill**, Foss Vice President Harbor Services, **Billie Greer**, Director of the Los Angeles Regional Office of Gov. **Arnold Schwarzenegger**, and Foss Chairman **Paul Stevens**.



At Right: Saltchuk shareholder and the tug sponsor's husband **Fred Goldberg**, right, is joined in a toast by **Charlie Hogan**, a guest at the christening festivities in San Diego.



A Los Angeles fireboat gives the *Carolyn Dorothy* a water-cannon salute after the unveiling in Long Beach.



The Garth Foss, left, and Lindsey Foss, work with the submersible barge Lucky Angel after it's arrival from China in Bellingham Bay.

Jeff Sololik

Corbin Foss Home from China after Slow Pacific Trip; Voyage was Foss' Second to China in Under Six Months

By Meagan O'Shea

The *Corbin Foss* finished towing the semi-submersible barge *Lucky Angel* from China to Bellingham, Wash., on Jan 3. The barge, previously used to service oil rigs, was purchased by Bellingham's Fairhaven Shipyard to be converted into a dry-dock.

"This is a big deal for Foss," said **Jim Van Wormer**, Manager, Marine Transportation Operations. "We competed against foreign towing companies and won the bid."

The *Corbin Foss* actually encountered some bad luck during a storm on the voyage to China when half of its mast broke off, damaging navigation systems and lights. Crewmembers devised a plan to repair the damage upon arrival in China, and fixed it themselves using parts provided by Foss.

"The crew's quick thinking and ingenuity enabled them to do a phenomenal job of repairing the mast

without assistance from a Chinese shipyard," said Van Wormer.

After departing from China, the *Corbin* took on fuel and stores in Busan, Korea, and then headed for Dutch Harbor, Alaska. In both ports,

Mike Skalley provides a look back at Foss' first trip to China, in 1946, on page 23.

instead of anchoring or docking, Foss hired tugs to hold the barge, while the *Corbin* took on fuel and replenished stores.

Van Wormer gave credit to Foss' agent, Inchape Shipping, for successfully arranging the port calls in China and Korea.

The return trip was slow, never

exceeding 5.5 knots, and the *Corbin* and its tow encountered rough seas with 18-20 foot swells on the voyage but sustained no damage.

"Our performance on this job shows that our Marine Transportation Division has the capabilities to compete globally and deliver successfully," Van Wormer said.

This particular tow was also noteworthy due to its size, 493 feet long by 132 feet wide.

The *Corbin's* trip marked the second time Foss had been to China in less than six months. In the summer of 2008, the *Sidney Foss* delivered two deck barges from Liujiagou to Vancouver, B.C.

Corbin crewmembers included Capt. **Clare Nelson**, Mates **Brian Hole** and **Chuck Hammer**, Engineer **Chris Mack**, Able-Bodied Seamen **Jim Garmoe** and **Steve Winter** and Cadet **Michael Mann**.

Merchant Marine Documents: Don't Leave Without Them

By Meagan O'Shea

Drive your vehicle without your license, proof of insurance and registration; you are likely to get a ticket. Board a vessel destined for foreign waters without your passport and equally important merchant mariner documentation, and you may be fined and turned away at the port of entry.

"There is no excuse for missing or expired documents," said **Jim Van Wormer**, Manager, Marine Transportation Operations. "Merchant Mariners, specifically the Marine Transportation division, sailing without proper documentation could result in fines for the company, or be disallowed entry to the port of call."

Sailing with missing or expired documents creates huge problems for the company. "It takes time to deal with these situations on our end as well as at the consulate in the respective country," said Van Wormer. "If we

can't get in, we can't do our jobs."

In the past, Merchant Marine documents were suitable evidence of identification, but that is no longer the case. Custom agents around the world now require official passports as well as Merchant Marine documents to satisfy entry regulations.

"We are even experiencing this on our entries into Canada," Van Wormer said.

Mariners should carry all of their Merchant Marine documents and licenses, TWIC, passport, STCW certificate, vaccination shot records, GMDSS documents, and Radar-Observers endorsements on every voyage regardless of the geographic region where they are sailing.

Van Wormer warns that the renewal



Be sure to bring your Merchant Marine documents, shown above, and your passport when destined for foreign waters.

process for Merchant Mariner documents, licenses and STCWs is lengthy and advises planning ahead. Mariners should start the renewal processes at least six months in advance of the expiration date to ensure they avoid problems on the water.



BARGE ON THE MOVE IN PORTLAND

The tugs PJ Brix and Betsy L had a busy day Dec. 5, moving and spotting two new barges on the Columbia River. In the photo above, the Betsy L stands by as the PJ Brix heads to Astoria with the Barge E.P. Paup (400 by 100 feet). They were met in Astoria by the Sidney Foss, which towed the Gunderson-built barge to the Gulf of Mexico. The PJ Brix crew included Capts. Dave Nicklous and Jim Bauserman, and Deckhands Clyde Montgomery and Mike Pass. The Betsy L assisted with Capt. Donald Butcher and Deckhand Dustin Everson.

Two-Week Job Concludes with Christmas Eve Lift; Ice and Snow Add to Challenges of Holiday Job

Working in icy and snowy conditions on a job that required coordination with two other companies, Foss on Christmas Eve helped complete the salvage of a sunken, derelict barge that had been blocking Tacoma's Hylebos Waterway since before Thanksgiving.

The barge was the BMC 33, which had passed through a couple of owners since Foss sold it about four years ago. The barge parted its lines and slid into the Hylebos shipping channel in late November, forcing the Coast Guard to close the waterway.

The U.S. Army Corps of Engineers issued a contract to remove the barge to Global Diving and Salvage, which hired Foss for the tug-and-barge work and General Construction for the heavy lifting.

Removal of the barge took two weeks, as divers working in about 50 feet of water cut it into two pieces, which were then rigged and hoisted by the General Construction derrick. Lifting the pieces was particularly challenging because of the deteriorated condition of the barge.

The tugs on the job were the *Andrew Foss*, *Henry Foss*, *Wedell Foss*, *Benjamin Foss* and *Shelley Foss*.

"They worked in harsh, snowy, icy conditions and did a lot of work that they should get credit for," said Pacific Northwest Regional Operations Manager **Paul Gallagher**.

The barge was cut up and delivered to Schnitzer Steel for scrapping.



The *Andrew Foss* assists after the second of two pieces of a derelict barge was salvaged from Tacoma's Hylebos Waterway on Christmas Eve.

Photos:
Jim Sherman



The *Andrew Foss* tows a barge carrying the remnants of the BMC 33 after it was salvaged from Tacoma's Hylebos Waterway.



THE VIEW FROM THE HOME DOCK

The tug Point Fermin was tied up at the Foss home dock in Richmond, Calif., at dusk recently, with the San Francisco city skyline sparkling in the background. The tower house was added to the tug last year at Foss Shipyard in Seattle, enabling operators to see over the high sides of the company's new double-hull tankbarges.

Warren Smith



Jim Russell

HEADED FOR NUCLEAR PLANT

The tug Edith Foss in early January towed a new 300-ton generator from San Pedro Bay to Oceanside harbor, where it was unloaded and transported over land to the San Onofre nuclear power plant, about half way between Long Beach and San Diego. The Mitsubishi-built generator and another like it were unloaded from a ship in Long Beach after being transported from Japan. Southern California Edison is the majority owner of the nuclear plant.

MARITIME UNIONS, FOSS SAFETY TEAM, AND BAY AREA CREWS SHARE CREDIT FOR COMPLETING YEAR WITHOUT A LOST-TIME INJURY

The San Francisco Bay Area division of Foss on Jan. 28 completed an entire year without a lost-time injury, an accomplishment that drew praise for employees, union leaders, safety and environmental staff and the company's Marine Assurance Team.

The most recent lost-time injury (LTI), defined as an injury that requires a worker to miss time on the job, was on the same date in 2008, when a leverman in Foss' sand dredging operation injured his hip.

The LTI-free year represented 350,000 man hours. It was one-day longer than normal, because 2008 was a leap year and had 366 days.

"When we talk about a push to zero, if there is any question of our ability

to achieve it, we need only look at the men and women of the San Francisco Bay Region to know it can be done," said Senior Vice President Operations **Scott Merritt**.

He gave credit to the leadership of the Inlandboatmen's Union and the Sailors' Union of the Pacific "who have embraced our vision of a place where injuries are not accepted as a cost of doing business." Merritt also congratulated Foss safety, environmental and Marine Assurance personnel.

"While this success comes at the beginning of our journey, not the end, it serves as clear evidence we are on the right path," Merritt declared.

San Francisco Regional Operations Manager **Dan Massey** said the Bay

Area team "pulled together to achieve the common goal of sending everyone home safe after the job is done."

He added, "This is no small task and relied on vessel masters, crews, labor unions and our alliance partners, the marine assurance group, the risk department and our local shoreside staff to work collectively with one goal in mind, 'Always Safe.'"

Employees received a jacket embossed with the Foss logo recognizing the year without a LTI. San Francisco was also one of two regions, Marine Transportation being the other, that finished 2008 with a lost-time injury rate of less than 1, earning them satellite television service for all the regularly crewed tugs, Merritt said.



LINE BOAT GOES FOR A SPIN

The hull of a new line boat was flipped into the upright position in late February, above, at the Foss Rainer Shipyard. The 65-foot boat, to be completed this spring, is being built to service tankers at Chevron's El Segundo Moorings in Southern California. To be operated by Foss, the boat will carry lines from arriving tankers to mooring buoys. It will be equipped with two line reels forward and a reel for oil containment boom aft. The boat will be powered by two GM 60 series main engines and will have a 60 horsepower bow thruster. In the photo at right, shipyard workers position a strut to support the boat.



Jerome Ruhl

SEA FISHER FIXES

A yard crane loaded equipment on to the 236-foot factory trawler *Sea Fisher* while it was drydocked for hull repairs during a six-week stay at Foss Shipyard that ended Feb. 4. The yard also performed steel work topside, including replacing sections of the main deck and the port stack house. While Foss was working on the ship, owner Cascade Fishing of Seattle called in a crew of workers from Japan to work on the ship's Japanese-made engines, hydraulics and refrigeration system. "Between the Japanese vendor and the Foss crew that was on board, we had 69 people working on the ship at one time," said Foss Ship Repair Superintendent Jim Leupold, who was in charge of the job.



Captain's Woodworking Skills Born of Necessity; Blaine Hall Makes Tables From Discarded Rope Spools

Blaine Hall's passion for woodworking got its start shortly after he was married, 32 years ago. Young, poor and in need of a tool box, he picked up his Skill saw, a couple of tools that were the only ones he had, and built one.

"I still have it," says Hall, a 30 year veteran of Foss who is now the captain of the *Benjamin Foss*. Since the original chest, Hall has built all manner of things out of wood, including chart tables and shelves for the *Benjamin* and other Foss tugs, a music stand for his daughter, and what has become his specialty: tables made from rope spools.

"I really enjoy doing this," Hall said recently. It's calming for me but frustrating at the same time. I get something in my head, visualize it, and it's a puzzle to accomplish it."

One of his proudest pieces is a table completed early in 2008, which like the other four, he made from a spool discarded by Foss. His brother-in-law, an architect, commissioned Hall to build the table for a good customer.

On the table top is a chart of the Gig Harbor area with an inlaid compass rose tipped with purple heart, a dark wood from Latin America that is popular with woodworkers.

To draw the chart, Hall laid carbon



Capt. **Blaine Hall** with one of his proudest pieces, a rope-spool table bearing a chart of the Gig Harbor area.

Mike Stork

paper on the table, put a chart over it, and traced the shorelines and other features. Then he used tape as a mask while applying different stains to delineate land, water, and shallow water.

The table was professionally finished with polyurethane, and Hall edged it with quarter-inch oak, inlaid with a strip of purple heart, and covered it with three-eighth-inch glass.

"It's not fancy, but it sure looks

nice," Hall said.

When he's done small projects on tugs, Foss has reimbursed him for the wood. Unlike his younger days, Hall now has a shop in his Gig Harbor garage equipped with a variety of saws and other woodworking tools.

"I'm not really good at it—I call myself a wood butcher," he said. "But it's a rewarding feeling when I finish something."

READY TO RISE

The Tractor-Plus tug *Henry Foss* went into drydock at Foss Shipyard on Jan. 30 to have its starboard Voith drive unit inspected. Pacific Northwest Port Engineer **Greg Schaut** said water had been getting into the unit, and the problem was diagnosed and repaired. Also during the dry-docking, semi-annual maintenance and repairs were performed on the tug.



Hawaiian Tug and Barge/Young Brothers Ltd. (HTB/YB) Provides Critical Links in the Islands' Transportation System

THE BUSINESS

Hawaiian Tug and Barge (HTB) performs ship assists and other harbor work in the Port of Honolulu and ports of the neighbor islands. Young Brothers Ltd. (YB) is a tug-barge operation that uses tow wire to move marine cargo between Honolulu and the neighbor islands through a hub-and-spoke system. The cargo operation runs on a set weekly schedule and is regulated by the state Public Utilities Commission. Hawaiian Tug and Barge/Young Brothers is operated as a single company with two distinct lines of businesses. The companies were acquired by Saltchuk Resources in 1999 and are now part of its tug-barge holding company, Marine Resources Group (MRG). Foss Maritime also is part of MRG.



The Dolphin-Class tug *Mikioi*, the first built at Foss Rainier Shipyard, was assigned to Hawaiian Tug and Barge and is shown here assisting a Matson ship in Honolulu harbor.

AREA OF OPERATION

An estimated 98 percent of the consumables that come to Hawaii arrive on ships in Honolulu, and Young Brothers is the principal link between those ships and the outer Islands. It serves two ports on the Big Island of Hawaii, Hilo and Kawaihae, and Maui's Port of Kahului. Young Brothers also serves Nawiliwili on the island of Kauai, Kamalapau on the Island of Lanai and Kaunakakai on the island of Molokai. Hawaiian Tug and Barge performs harbor work in Honolulu, Kahului, Nawiliwili and Hilo.

EQUIPMENT

Hawaiian Tug and Barge operates four tractor tugs out of Honolulu and one in Kahului, including two 5,020 horsepower Dolphin-Class boats. The dolphins are the *Mikioi*, the first in the class built at Foss Rainier Shipyard in Oregon, and the *Pi'ilani*. The *Pi'ilani* originally was the *Morgan Foss*, based in Long Beach, and was transferred to

Honolulu last December. The other tractors are the 3,300 horsepower *Mikiala* and the 2,800 horsepower *Eleu*. The tugs in the neighbor ports are the 3,300 horsepower tractor Mamo (in Kahului), the 2,200 horsepower *Moana Hele* and the 1,800 horsepower *Mahi*. Young Brothers operates six primary towing tugs in the 4,000 horsepower range. Young Brothers also operates seven flat-deck barges including three new ones built at U.S. Barge in Portland and a fourth due to arrive in July. The company also operates an auto-carrying barge, the *Kaholo*, which can carry up to 500 standard sized vehicles on three decks.

MANAGEMENT

Glenn Hong has been president of the company since before the acquisition by Saltchuk, and **Mark Houghton**, formerly with Foss, has been vice president maritime operations since 2002. **Matt Humphrey** is vice president and general manager of Young Brothers, joining the company

in 2007 after being with Maersk Line in Southern California. **Dean Kapoi** is vice president, human resources, **Bruce McEwan** is vice president for risk management and administration, **Jeff Chawenson** is chief financial officer and **Roy Catalani** is vice president, strategic planning and government affairs.

QUOTE

"With regard to Young Brothers, our people take a great deal of pride in that critical service, and it's also why our owners decided to invest nearly \$100 million to buy these new barges, new cargo-handling equipment and improve shoreside infrastructure. As for Hawaiian Tug and Barge, we have a constant flow of cargo from the U.S. mainland and abroad that comes into the islands, principally Honolulu Harbor. These ships need assists to ensure safe navigation, and they rely on HTB to fulfill that requirement."

Mark Houghton, Hawaiian Tug and Barge /Young Brothers

PHOENIX RISING

The tug *Phoenix*, operated by Boston-based Foss subsidiary Constellation Maritime, was photographed in November while tied up at shipbuilder Bath Iron Works in Maine. The tug was supporting a project in which Constellation moved 13 ship modules on barges from Bath to a Northrop-Grumman yard in Pascagoula, Miss., to be used in construction of LPD-17 amphibious dock ships for the U.S. Navy. The Constellation tugs *Cygnus* and *Volans* made the long-distance tows, traveling a total of about 13,000 miles. The job began in September and concluded in February. In the background of the photo are new Arleigh-Burke-class guided-missile destroyers being outfitted at the Bath shipyard.

Fred Fox



Dave Dumont

STRUCTURE WILL HELP RESTORE FISH RUNS

Crews from the Dix Corporation of Spokane on Jan. 10 lowered the "Selective Withdrawal Top," part of a fish collection and temperature control station, into position in Lake Billy Chinook above Round Butte Dam on the Deschutes River in central Oregon. Harbor Marine Group (HMG), a division of Foss, provided naval architecture services to Dix, and HMG Director **David Dumont** was on site for the project milestone. "It was a boring operation, which is what we aim for in these sensitive operations," Dumont said. "The lowering process went exactly according to plans and matched the calculations and drawings." The fish collection station, which measures 150 feet long by 90 feet wide by 50 feet tall and weighs 2,700 tons, is part of a 273-foot tall structure that will help restore salmon and steelhead runs on the river system. The \$130 million project is a joint effort by the Confederated Tribes of Warm Springs and Portland General Electric.

ACTC Moves Big Generators Bound for Afghanistan; Shipment is Part of U.S. Effort to Rebuild Infrastructure

Foss subsidiary America Cargo Transport Corp. (ACTC) this winter joined in the U.S. effort to rebuild the infrastructure of Afghanistan, transporting six generators and associated cargo weighing 1,894 metric tons from Bremen, Germany, to the United Arab Emirates (UAE), where the cargo was off loaded by ACTC's Middle East Operations group.

From the UAE port of Hamriyah, the cargo was to be transported to the local airport and loaded on a Russian built Antonov, which by some measures is the largest aircraft ever built. It then was to be flown to Afghanistan for delivery to a power plant in Kabul.

ACTC Director of Cargo Operations **Rob Wagoner** said his company met the U.S.-flag requirements for the job and also was able to provide the customer with roll-on, roll-off capability, eliminating the heavy lift challenges that would have existed if a ship had been used for the job.

The 624-foot ACTC articulated tug-barge *Strong Mariner* made the one-month voyage through the

Mediterranean Sea and Suez Canal. Military roll-on, roll-off cargo was loaded during a stop in Marseilles, France.

The barge, the *Mariner*, has five decks, three of them entirely under cover and the upper deck half covered with the spar deck open to weather. The bow visor of the barge opens and a ramp deploys to enable cargo to be rolled on and off.

Jim Greenke of ACTC was the project planner and manager for the job. Also present during the cargo loading in Bremen were Wagoner and ACTC's **Dave Bishop**. **Herb Gazeley** (formerly a Foss senior captain) handled vessel and crew issues.

ACTC's customer was Agility Project Logistics; the power plant construction project in Kabul is funded by USAID, and the engineering and construction is managed by Black & Veatch.

A generator on a 100-ton Mafi heavy-lift trailer is rolled through the open bow of the barge *Mariner* in Bremen, Germany, on Jan. 17.



PEOPLE NEWS

PROMOTIONS

Lisa Sulock
HR Manager to HR Director

PASSINGS

Richard Mundell
Social Captain

RETIRED

Thom Hurlburt
PNW Mate

Les Holtzworth
Marine Transportation Able-Bodied Seaman

Gil Graham
Vice President Human Resources



SATISFACTION GUARANTEED

If you promise the moon,
be able to deliver it.

— From *Satisfaction Guaranteed*
By Byrd Baggett

Company Made History with First Trip to China in 1946

By Mike Skalley

In early June of 1946, Foss Launch & Tug Co. entered into a contract with the Pacific Vegetable Oil Corporation of San Francisco to repair, equip, supply, and crew, the ex-Army tug, *LT-215* for a voyage from San Francisco to Shanghai, China. In the contract, Foss was to be responsible for determining the manner and method by which the *LT-215* would tow six, 130 by 30 foot barges, purchase all supplies en route, arrange for payment of the 14-man Foss crew, and handle the repatriation back to America at the conclusion of the safe delivery of tug and barges to the China Vegetable Oil Corporation in Shanghai.

The *LT 215* would be used in towing the barges loaded with tung oil down the Yangtze to tidewater for discharge aboard ocean-going tankers. Previously, much of China's Tung Oil set for export had been moved in unwieldy wooden Chinese junks capable of handling only 60 tons per load versus 600 tons per load on each of the 130 foot barges.

This new method of transport would be a huge cost savings to China Vegetable Co. which would then pass the savings on to their customer, Pacific Vegetable Oil Company.

Long time Foss captain **Oscar Rolstad** was given the assignment of preparing the tug and the six barges for the trans-Pacific voyage. The *LT-215* was a 117-foot, 1380 horsepower, twin screw miki-miki class tug that had just recently been declared surplus by the Army Transport Service. The barges would be piggybacked on top of each other in a triple-tow configuration.

After a hectic nine days of outfitting and repairs, the tug and tow departed San Francisco at 110 hours on June 22. In addition to the 28,300 gallons of diesel aboard the *LT-215*, an additional 38,500 gallons of diesel was stored in the barges, as well as 100 5-gallon

buckets of emergency fresh water. The commissary order included 14 cases of cigarettes, one case for each member of the crew. A case of cigarettes brought \$100 U.S. dollars on the streets of Shanghai, providing spending money for the crew.

The 17-day, 2,150-mile trip to Honolulu was uneventful, and they arrived safely July 9, having maintained an average speed of 5.1 knots and consuming 18,715 gallons of diesel. After refueling, re-supplying the galley needs and making some minor repairs, tug and tow departed Honolulu on July 14 for the 1,140 mile run to Midway Island.

The first engine problems developed five days into the voyage when the port engine was shut down. They had to pull two pistons, and replace broken rings. Underway once again, they maintained an average speed of 4.75 knots, arriving in Midway on July 24. While waiting for dockage at the Naval facility the crew made repairs to the starboard engine. Finally arriving at the pier, they topped off the diesel, and fresh water, paying cash for both. By late evening of July 25 they were underway again for the long haul to Shanghai with a brief stop off at Okinawa.

At last, at 0900 on August 28 they arrived at the entrance buoy of the Yangtze River and picked up the local pilot. Twenty-four hours later the deep sea pilot departed the vessel. Late in the day two steam powered tugs also arrived to relieve the *LT-215* of four of the barges.

The tug and the remaining two barges remained at anchor off



The ex-Army tug *LT-215*, delivered by Foss to China in 1946, was a miki-miki class boat, like the one in the photo above.

Woosung until Sept. 3, awaiting clearance from the port authorities to proceed upriver. At last, at 0900, clearance was given, the river pilot boarded the tug, and seven hours later the tug and barges were all fast at the China Vegetable Oil Corp. dock. The owners of the tug and barge treated the entire thirteen man crew to a celebration dinner at the Seventh Heaven Restaurant in downtown Shanghai.

The grand totals for the voyage were summarized as 6,700 miles at an average speed of 4.6 knots. The total voyage lasted 74 days, and fuel consumption was 57,000 gallons for the voyage. The successful completion of this voyage went into the annals of tugboating as the longest tow of its kind in maritime history (as of 1946).

Capt. Rolstad, and three additional crewmen signed a contract with China Vegetable Oil Corp to remain in their service in Shanghai for six months, training new Chinese crewmen, and watching over the maintenance and repair of the tug.

Sixty years later to the day, September 3, 2006 the *Corbin Foss* arrived in Shanghai. Since then the *Sidney Foss* (spring 2008) & the *Corbin* (not in Shanghai, but in Zhangjiang) in Fall 2008 have been in the People's Republic of China.

Editor's Note: Mike Skalley is the Foss company historian and author of "Foss, Ninety Years of Towboating."



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Brian Dal Balcon

CRANE SHIP ASSIST

The Foss tugs Wedell Foss, bow, and Pacific Star helped the Zhen Hua 24 into the Port of Tacoma's Washington United Terminals on Wednesday, Jan. 28. The bright orange cranes, owned by WUT, are the largest at the Port of Tacoma—and among the largest in the world. Each measures 273-feet tall and can reach across 24 containers. Once installed, WUT will feature six cranes. A seventh is slated to arrive next year. Shipping lines calling the terminal include Hyundai, MOL and APL.