

OCEAN | HAILEY DESORMEAUX

Environmental compliance headwinds

The maritime industry must navigate through a sea of ever-changing and increasingly stringent environmental regulations worldwide.

To keep on top of these regulations and make them readily available to ship owners and operators anywhere in the world is Fort Lauderdale, Fla.-based Total Marine Solutions, an environmental solutions and services company that started operations in 2000.

Observing the voluminous amounts of environmental regulations now encountered by the global ocean carrier industry, Total Marine Solutions in March 2017 launched Ocean Guardian, a digital tool that provides ship operators with information on the latest regulations pertaining to a specific location.

“Today’s heightened regulatory environment has resulted in greater challenges for the maritime industry. Enforcement agencies are taking stronger action to hold those who violate environmental regulations accountable for marine pollution,” said Alexandra Anagnostis-Irons, founder and president of Total Marine Solutions. “In the last several years, we have seen record-breaking fines imposed. Ocean Guardian is designed to help companies facilitate consistent compliance throughout their fleet.”

The U.S. Justice Department announced in January 2017 that its Environment and Natural Resources Division “continued its robust program of prosecuting shipping companies and crew for the intentional discharges of pollutants from ocean-going vessels in U.S. waters.” By the end of fiscal year 2016, the department recorded total fines of more than \$363 million in cases involving environmental violations by ship operators. In some cases, senior officers on board these vessels were fined and sentenced to prison for environmental crimes.

The crackdown on polluting ships is being felt in the waters of most other maritime nations. *American Shipper* reported last summer that the Danish Environmental and Protection Agency has contracted the company Explicit to monitor sulfur emissions from ships, with the monitoring to be conducted from the air. Explicit developed “sniffer” technology, which allows it to sample exhaust plumes from vessels in waters around Denmark.

There is also the International Maritime Organization (IMO) Maritime Environmental Protection Committee’s Jan. 1, 2020 deadline to lower the global cap on the amount of sulfur in marine fuel from 3.5 percent to 0.5 percent.

In addition, many ship operators are already prohibited from burning fuel with a sulfur content of more than 0.1 percent in so-called Emission Control Areas (ECAs) since the start of 2015. ECAs include areas within 200 miles of the coast of the United States and Canada, Great Lakes, Caribbean, as well as the North Sea, Baltic and English Channels, with additional coasts around the world under similar consideration. Ocean carriers operating in the ECAs are closely monitored by national maritime authorities to ensure the emissions from their ships are in strict compliance

or they will face penalties.

These changing regulatory conditions while their ships are operating on the seas leaves owners, operators and crews continuously in jeopardy of running afoul of compliance.

Total Marine Solution’s Ocean Guardian tool works by fully integrating with a ship’s global positioning system. It is location-specific up to 0.25 nautical miles, removing the need to review various manuals, guides and environmental matrices to determine which regulations apply, the company said.

Ocean Guardian was specifically developed by North Bay Village, Fla.-based software solutions company Brenock, a long-time business partner of Total Marine Solutions.

After Ocean Guardian’s “soft” launch at the Connecticut Maritime Association’s annual shipping conference in March 2017, the tool underwent beta-testing aboard seven cruise ships, Anagnostis-Irons said.

Cruise ships were chosen for the tests due to their set itineraries and schedules, she explained.

“Using the feedback gained after the first several months, we developed new features, redefined the server platform, and launched what is now called Ocean Guardian 2.0 in December,” Anagnostis-Irons said.

Although Ocean Guardian started its beta tests aboard cruise ships, Anagnostis-Irons noted that the program caters to the overall shipping industry. “It is beneficial aboard cruise vessels, container vessels, cargo vessels, tankers, any vessel,” she said. “And not only for shipboard use. Shoreside command centers, port agents and port authorities have expressed interest in licensing the valuable rules databases maintained in Ocean Guardian.”

In January 2018, Anagnostis-Irons told *American Shipper* there were more than 1,700 international, national, regional and port regulations in Ocean Guardian.

There are many environmental issues facing the maritime industry today, ranging from exhaust emissions and ballast water to regional regulations governing the fouling of hulls, Anagnostis-Irons said. For instance,

effective May 1, vessels arriving in New Zealand ports will be required to have clean hulls.

“There are numerous governing bodies which regulate emissions and discharge for each country and region,” Anagnostis-Irons said. “The regulations are updated and modified regularly, making it difficult for onboard operators to ensure compliance with the most up-to-date rule and guidance.”

Regulations entered into the company’s database are first vetted by law firm Blank Rome.

“We ask them to not only vet what we’ve entered, but to identify any gaps in the international, national and regional rules in Ocean Guardian,” Anagnostis-Irons said. “Once a regulation is vetted, it is queued up for release to our clients. Our team here pushes updates to regulations, maps and any new features out to our customers at least once a month.”

Desormeaux is Associate Editor of American Shipper. She can be reached by email at hdesormeaux@shippers.com.



“In the last several years, we have seen record-breaking fines imposed. Ocean Guardian is designed to help companies facilitate consistent compliance throughout their fleet.”

*Alexandra Anagnostis-Irons,
president,
Total Marine Solutions*