

REQUIRE LOW-SULFUR FUELS

A Simple Solution To Ship Pollution



THE ISSUE

Large commercial vessels entering Virginia's ports must meet emission standards of 0.10% sulfur, which can be achieved by burning low sulfur distillate fuel.¹ But a regulatory loophole allows ships to continue burning dirty, high sulfur heavy fuel oil in combination with Exhaust Gas Cleaning Systems, or "scrubbers" to achieve compliance. These systems use seawater sprayed into the exhaust stacks to "wash" sulfur oxides and other contaminants from the exhaust; more than 80% of these units are "open-loop," meaning they dump the resulting toxic sludge directly into the Atlantic Ocean and the Chesapeake Bay. **This ship discharge contains heavy metals, carcinogenic and persistent compounds such as PAH's, and is highly acidic, threatening marine ecosystems and the seafood economy, while failing to address injurious air pollution that poses a direct health threat to port communities.**

¹ US Environmental Protection Agency (EPA). (2010). *Designation of North American Emission Control Area to Reduce Emissions from Ships (EPA-420-F-10-015)*.

WHAT'S AT STAKE?

PUBLIC HEALTH – OUR SEAFOOD ECONOMY – FISH & WILDLIFE

Community & Health Impacts: Clean water is vital for public health, fishing, cultural practices, recreation, and sustenance. Scrubber washwater endangers human health as the toxic byproducts (heavy metals & PAHs) persist and concentrate, or bioaccumulate, up the food chain. Additionally, ships burning heavy fuel oil with scrubbers release significantly more soot with fine particles than ships using low-sulfur distillate fuels, worsening health issues like asthma, cardiovascular disease, and cancer. Fine particles in ship exhaust are also linked to Alzheimer's disease and stillbirths.

Virginia's Seafood: Virginia's seafood is a \$1.2B economic engine supporting more than 10,000 Commonwealth jobs. Acidic washwater impacts crab and oyster growth and development. Heavy metals and PAHs bioaccumulate up the food chain to the watermen's catch and to your dinner plate.

Food Web Disruption: Exhaust scrubber discharge is highly toxic to zooplankton and phytoplankton, which form the base of the aquatic food web. Plankton support everything from forage fish to filter feeders like oysters, as well as larger fish and birds, and even marine mammals such as whales and dolphins.

THE OPPORTUNITY

Legislative action requiring ships to use cleaner distillate fuels – already a requirement in 45 countries and two US states - is the simple, effective solution we need to keep Virginia's waters, wildlife, and communities healthy and safe. Most ships can switch to low-sulfur distillate fuels without new or modified engines, thereby eliminating the need for these highly polluting scrubber systems. This puts the responsibility for solving the pollution problem directly on the shipping industry.

Support Responsible Shipping Practices



ACT NOW to protect Virginia's billion-dollar seafood industry and Chesapeake Bay ecosystems.



Fine particle emissions from dirty fuels pose major risks to public health, including impacts on pregnant women and increased rates of stillbirths.



Even concentrations as low as 0.001% of toxic scrubber discharges can kill plankton, the base of the food web for Virginia's fish and other aquatic wildlife.