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EPA Seeks to Create Emission Control Areas to Limit Vessel Air Emissions Along Coastline of United States

Environmental pressures continue to mount on the shipping industry, and soon virtually the entire U.S. coastline will have new emission requirements in place if the International Maritime Organization (“IMO”) approves a joint U.S.-Canada request to create Emission Control Areas (“ECA”). The new proposal was announced at a March 30, 2009 news conference by the Environmental Protection Agency (“EPA”), joined by officials from the U.S. Coast Guard and elected officials from New Jersey. But even if approved by the IMO and implemented in the U.S., can shipping companies comply with the new requirements?

Shipping Increasingly Viewed as Major Polluter

The EPA’s announcement comes on the heels of a report by EPA’s Inspector General (“IG”) urging the EPA to improve its efforts to reduce air emissions from large oceangoing ships at U.S. ports. The report, issued March 23, 2009, found that while EPA has issued air emissions regulations for most port sources, EPA’s actions to date have not achieved the goals for protecting human health. The report analyzed EPA’s efforts with respect to air emissions and offered recommendations for EPA to consider addressing the concerns raised by the IG. Among the recommendations from the IG are:

- Assess its authorities and responsibilities under the Clean Air Act (“CAA”) to regulate air emissions from foreign-flag vessels in U.S. ports and report any shortfalls to Congress;
- Assess the extent to which ECAs should be designated for U.S. coastal areas; and
- Revise its ports strategy to include a transformation plan.

The report goes on to say that the strategy that EPA has developed thus far to address air emissions at U.S. ports is not sufficiently developed. While the IG recognizes EPA’s efforts to reduce such emissions through a number of regulatory and voluntary programs, the report says that despite those efforts “EPA must work to establish ECAs for U.S. ports if significant emissions reductions are to be realized from oceangoing vessels.”

Also on March 30, the American Lung Association, Environmental Defense Fund, National Association of Clean Air Agencies and Puget Sound Clean Air Agency issued a report calling for the U.S. to apply to the IMO for ECAs, just as the EPA proposed.

The report, "Protecting American Health from Global Shipping Pollution," states that the four organizations strongly support the U.S.

Government's efforts to fully implement the pollution limits available under international law to reduce marine air pollution and called for the IMO to act promptly on the U.S. ECA application.

Senator Barbara Boxer (D-CA), the Chairman of the Senate Committee on Environment and Public Works, and a longtime advocate of emissions controls on oceangoing vessels, said in the EPA press release that "EPA's announcement...is music to my ears because it means the United States is stepping forward to take a strong leadership role on clean air around ports."

Establishment of ECA Zones

The U.S., along with Canada, has proposed a 200 nautical mile (approximately 230 mile) buffer zone around the coastlines of both nations – the ECA zone – in order to provide better air quality benefits as far inland as Kansas. According to the EPA, it is taking this action because an ECA zone would save up to 8,300 American and Canadian lives every year by 2020 by imposing stricter standards on oil tankers and other large vessels that emit harmful emissions into the air near coastal communities.

Under the EPA's proposal, large ships such as oil tankers and container ships that operate in ECAs will face stricter emissions standards designed to reduce the threat they pose to human health and the environment. The EPA asserts that its proposal would cut sulfur in fuel by 98 percent, particulate matter emissions by 85 percent, and nitrogen oxide emissions by 80 percent from the current global requirements.

In order to achieve such reductions, ships will be required to use fuel with no more than 1,000 parts per million ("ppm") sulfur beginning in 2015 and new ships would be required to use advanced emission control technologies beginning in 2016.

The EPA states that the costs of implementing and complying with the proposed ECA are expected to "be small in comparison to the health and welfare benefits and within the costs of achieving similar emissions reductions through additional controls on land-based sources." The agency estimates that the

total costs of improving ship emissions from current standards to ECA standards while operating in the proposed ECA will be approximately \$3.2 billion in 2020. EPA estimates that operating costs for a ship in a route that includes 1,700 nautical miles of operation in the proposed ECA would increase by about 3 percent, which would increase the cost of transporting a 20 foot container by approximately \$18.

The IMO will begin reviewing EPA's proposal in July and approval could come as soon as next year. Applications for ECA designation must be approved by the Parties who have ratified Annex VI to the International Convention on the Prevention of Pollution from Ships (commonly known as MARPOL), as an amendment to Annex VI.

The current proposal would apply to only the U.S. and Canadian coastlines; Mexico has not sought to establish ECAs. While certain U.S. ports and other shipping interests have expressed concerns about cargo diversion away from U.S. ports in favor of nearby ports not within the designated ECA zones, the EPA has said that it does not expect shipping lines to divert shipments.

Cost and Availability of Distillate Fuels Raise Questions

EPA has said that the increase in fuel costs associated with operating in an ECA zone is expected to be small compared with the total fuel costs of oceangoing vessels, since operating within the ECA would be an insignificant portion of the total operating time of the vessel.

The agency claims that the amount of distillate fuel used in an ECA would be small relative to its global availability. However, EPA acknowledges that establishment of ECA zones could increase demand for distillate fuel, which could increase ship operating costs. And while distillate fuel that would meet the 1,000 ppm fuel sulfur limit by 2015 is available in the U.S. and Canada, it is possible that the additional demand cannot be met with existing refining capacity.

Moreover, global demand for distillate fuel is projected to grow significantly over the time frame of the ECA standards. The U.S. Energy

Information Administration projects an annual growth in global demand for refined products of about 1.5 percent per year over the next five years, of which most of the growth is from developing economies such as India and China. EPA claims that refineries have planned and begun expanding substantially refinery capacity in response to the projected demand, and that increased demand as a result of a U.S.-Canada ECA would have a negligible impact.

An April 2008 study on low-sulfur marine fuel availability prepared for the Ports of Los Angeles and Long Beach found that the global supply of low-sulfur fuel to meet increasing demand “is not likely a technical issue, but rather an economic one.” However, the study also noted the overall investment for refineries to meet the projected increased demand for low-sulfur fuel is estimated at approximately \$126 billion and that industry experts understand that a complete changeover from residual oil to low-sulfur fuel will pose a difficult challenge to refiners.

Additional Regulation of Ship Emissions is Likely

The Clean Air Act (“CAA”) gives EPA the authority to regulate emissions from oceangoing vessels when the emissions cause significant harm to human health. EPA has acknowledged that human health has been significantly harmed by oceangoing vessels for several years but, so far, EPA has only regulated nitrogen oxide emissions from U.S.-flag vessels. To date, EPA has deferred on taking a position on whether it has the authority to regulate emissions from foreign-flag vessels.

EPA’s ECA proposal, which was submitted to the IMO on March 27, is only one part of a comprehensive EPA program to address emissions from oceangoing vessels under the National Clean Diesel Campaign and the Clean Ports Program. Other elements of EPA’s efforts to reduce vessel emissions include the adoption of a CAA rulemaking process, which EPA intends to finalize this year.

These actions also follow the establishment of new requirements for discharges incidental to the operation of a vessel, which for the first time gave

EPA broad new authorities to regulate and police vessel discharges. And with the use of new tools, such as ECA zones, EPA will likely continue to pursue actions to reduce the environmental footprint of the shipping industry.

On the legislative front, Congressman Henry Waxman (D-CA), Chairman of the House Committee on Energy & Commerce, and Congressman Ed Markey (D-MA), Chairman of the House Select Committee on Energy Independence and Global Warming, recently issued a discussion draft of a climate change bill they intend to move this year. That bill, the “American Clean Energy and Security Act,” includes provisions that, if enacted, impact the maritime industry, including:

- Greenhouse Gas Emissions Standards for the Maritime Industry. The discussion draft legislation would direct the EPA to set emissions standards for new marine vessels and for new marine engines by the end of 2012. The new limits would be based on “the greatest degree of emissions reductions achievable based on technology available when the standards take effect, taking into account cost, energy, and safety.”
- Cap-and-Trade Program. The draft legislation would also allow the EPA Administrator to establish a cap-and-trade program for mobile sources, including marine vessels. The proposed program would create a limit or “cap” on the total amount of greenhouse gas emissions that will be allowed, typically based in tons per year. The emissions allowed by the cap are divided into permits or credits that give the owner the right to emit certain amounts of greenhouse gases. Over time, the overall size of the cap is reduced as is the amount of greenhouse gases that may be emitted from each source.
- SmartWay Transport Partnership Program. The discussion draft would authorize the EPA to establish the “SmartWay Transport Partnership Program” with shippers and carriers of goods, which includes certifying the energy and

- greenhouse gas performance of participating freight carriers, including marine participants.
- Low-Carbon Fuel Standard. The draft would establish new low-carbon transportation fuel standards by requiring the reduction of the lifecycle emissions intensity of transportation fuels used in certain vehicles and engines. The EPA Administrator, under the proposal, would be given discretion to include fuel used in oceangoing vessels.

Hearings on climate change legislation are currently under way and Chairman Waxman has said he wants to send the legislation to the House floor by Memorial Day. House Speaker Pelosi (D-CA) has indicated that the discussion draft marks the beginning of negotiations and that it may take longer to reach consensus in the House. The Senate has not yet released a draft plan and Democrats in that chamber will likely have more difficulty coming up

with the votes necessary to pass climate change legislation.

More information on the EPA's ECA proposal can be found at:

<http://www.epa.gov/otaq/oceanvessels.htm>

The IG report can be viewed at:

<http://www.epa.gov/oig/>

The "Protecting American Health from Global Shipping Pollution" report may be viewed at:

http://www.edf.org/documents/9466_ECA_report_March2009.pdf

A draft of the American Clean Energy and Security Act is available at

http://energycommerce.house.gov/index.php?option=com_content&task=view&id=1560&Itemid=1.

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