K&L GATES

Maritime Alert

March 2010

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EPA Issues Preliminary Study on Vessel Discharges for Fishing Industry and Smaller Cargo Vessels

Why is this study important?

In an apparent major step forward toward performance-based regulation of vessel discharges, the Environmental Protection Agency (EPA) has sent to Congress a draft report on the discharges from fishing vessels of all sizes and non-recreational vessels less than 79 feet in length.

In December 2008, the EPA issued its first Vessel General Permit (VGP), which regulated the discharge of everything from deck runoff to chain effluent on large commercial cargo and tankers.[1] At the time, fishing vessels and non-recreational vessels under 79 feet were exempt, pending a further study.[2] Unlike when EPA issued its requirements for the VGP,[3] the EPA conducted its own testing of discharges from these currently exempt vessels to provide a foundation for Congress to determine whether to continue a two-year moratorium from VGP requirements on discharges for fishing vessels and these smaller vessels.

What does the study say?

The draft study concludes that runoff from a variety of on-board sources contributes to water pollution. The EPA sampled a total of nine discharge types from the tested vessels, including bilgewater, stern tube packing gland effluent, deck runoff/washdown, fish hold effluent (both refrigerated seawater effluent and ice slurry), effluent from the cleaning of fish holds, graywater, propulsion and generator engine effluent, engine dewinterizing effluent, and firemain. The study also reviews findings on antifouling hull coatings to conclude that contaminants, such as copper, are discharged from the coatings' leachate and contribute to contamination in some major harbors.

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[1] For more information on the EPA's issuance of the first VGP, see "EPA Issues Final Clean Water Act Permit for Incidental Discharges From Vessels," Jan. 9, 2009, http://www.klgates.com/newsstand/Detail.aspx?publication=5211. *See also* http://www.klgates.com/practices/vessel_discharge_resources/#item11.

[2] This study is the result of Pub. L. 110-299 (Jul. 31, 2008), which ordered EPA to conduct a study of the relevant discharges from commercial vessels under 79 feet long and report to Congress on its findings. The law also imposed a two-year moratorium on permitting of discharges from these vessels. Recent legislation passed by the House would extend this moratorium for an additional three-and-a-half years to end on December 18, 2013. Coast Guard Authorization Act of 2010, H.R. 3619, § 1324.

[3] 73 Fed. Reg. 79,473 (Dec. 29, 2008). 73 Fed. Reg. 34,296 (Jun. 17, 2008).

The EPA estimates that the potential fleet to be covered by any new regulations for commercial vessels could total over 140,000, including 70,000 commercial fishing vessels and 21,000 passenger vessels, such as charter fishing boats, dinner boats and harbor cruise ferries. If new performance-based regulations that require periodic testing and reporting of discharges are imposed on these vessels, significant new costs could be imposed on these entities, many of which are small businesses, as they adjust their operations to comply with a new regulatory scheme.

If this study is any indication, the EPA is likely to focus on levels of two particular substances in any potential new VGP rulemaking: arsenic and copper, which it said posed the "greatest risk for contributing to an environmental effect or water body impairment." Among discharge types, the study suggests that bilgewater contained total arsenic and dissolved copper concentrations above conservative screening benchmarks, including total arsenic concentrations at "nearly 1,000 times the safe human health standard." It also claimed that fish hold effluent contained biochemical oxygen demand (BOD_5) and chemical oxygen demand (COD) levels several times higher than typically found in raw domestic sewage. In addition, according to the study, the effluent contained levels of ammonia nitrogen at concentrations "acutely toxic to aquatic life." The study reported that graywater contained high levels of aluminum, thought to be from metal washing off decks, as well as BOD_5, phosphorous and residual chlorine, likely from detergents and disinfectants. It also reported that graywater contained pathogens from all three pathogen groups (fecal coliforms, enterococci, and *E. coli*).

What does the study mean?

This study is the first of its kind that seeks to quantify the presence of specific pollutants in discharge streams from commercial vessels. It may signal a move away from "best management practices" as a means of managing the discharge of pollutants in favor of quantitative limits on actual pollutants contained in these discharges. This in turn could mean periodic sampling and potential collection and treatment of those discharges, despite the difficulty of doing so while in open water. It could also form the foundation for a future VGP or other regulatory mechanism that will require very different compliance obligations for permit holders as compared to the best management practices currently required.

There appear to be gaps in the study, and it is unclear whether EPA plans on doing further studies, or whether third parties, be they industry-related or environmental groups, will do so. For example, it is unclear whether the study adequately considered background pollutant concentrations already present in the water. By way of example, the study notes that "between 20 to 100 percent of the total arsenic measured in the various vessel discharges can be attributed to ambient water." Despite this, the EPA seems to suggest that arsenic discharged by vessels posed one of the greatest threats to human health and one of the greatest environmental concerns to the agency. Further studies might illustrate that the relative contribution of arsenic by vessels may be barely a fraction of the total arsenic present. This information would inform the agency of the extent to which regulatory limits imposed on vessels would have any meaningful environmental impact.

In addition, the study further notes that higher incidence of pollution related to discharge is likely more prominent in areas of low flushing, such as the Chesapeake Bay. The EPA concluded that "many of the pollutants in the vessel discharges were at end-of-pipe concentrations that exceeded a [water quality standard], and therefore have the potential to contribute to an exceedance of water quality standards at a more localized scale." Again, studies could demonstrate more specifically the extent to which those pollutants from vessels are present vis-à-vis similar pollutants from other sources. This could inform the agency's decision to regulate, and if so, to what extent.

In either example, if additional studies are not done, it is entirely possible that the agency will infer or assume the need for stricter regulatory standards without having data to support that assumption.

What does this mean for the maritime industry?

In preparing the report, the EPA noted specifically that "none of the trade associations or individual companies contacted was able to provide pollutant data for vessel discharges." As such, interested

industry groups, regulated entities, or others should consider whether additional studies should be undertaken now, in advance of any announcement of a formal regulatory process such as a proposed VGP for this sector. Without such information, the agency may not have a full and complete understanding of the nature and scope of pollutants in these discharges. If presented, such studies would have to be considered by the agency. Should additional studies not be completed before a new VGP is proposed, the limited time frame given for commenting on such a proposal could render it impossible to develop further studies that might support alternative, and perhaps less burdensome, regulatory action.

Comments on the report can be submitted to the EPA until April 7, 2010. Commenters may discuss any aspect of the draft report, but the EPA specifically requested answers to seven questions posed in its recent Federal Register announcement. Those are:

- Are there additional existing data or data sources which EPA should incorporate into or analyze in the final report? If so, please provide the specific data sets, papers, and/or citations EPA should consider.
- Did EPA accurately summarize how these vessels generate these discharges, and accurately summarize how mariners and fishermen manage the discharges (*e.g.*, fishermen in the Northeast holding bilgewater discharges until they are more than 3 nm from shore)?
- Did EPA present the information clearly and concisely? Do you have suggestions to better present these data for both technical and non-technical audiences?
- Should EPA consider other approaches to summarizing the data collected for this study, and if so, what specific alternative approaches are suggested?
- Are there additional data sources that identify specific environmental impacts that result from discharges incidental to normal operation of commercial fishing vessels and other non-recreational vessels less than 79 feet in length (other than ballast water)? If so, please provide the specific data sets, papers, and/or citations EPA should consider.
- Are there any additional existing data sources outlining usage patterns and discharge locations of commercial fishing vessels and other non-recreational vessels less than 79 feet in length that EPA should consider? If so, please provide specific data sets, papers, and/or citations for EPA review.
- Has EPA sufficiently analyzed the extent to which the discharges are currently subject to regulation under Federal law or a binding international obligation of the United States? Does the report appropriately convey which discharges and vessel types are already regulated and unregulated?

The full report is available at the K&L Gates Vessel Discharge Resource Library, online at http://www.klgates.com/practices/vessel_discharge_resources/.