The University of Mississippi
Oxford • Jackson • Tupelo • Southaven

National Sea Grant Law Center
Kinard Hall, Wing E - Room 262
Post Office Box 1848
University, MS 38677-1848
Office Phone: (662) 915-7775
Fax: (662) 915-5267
E-mail: sealaw@olemiss.edu

July 26, 2012

Dale Bergeron
Minnesota Sea Grant
147 Chester Park
31 West College Street
Duluth, MN 55812

Re: Technology-Based and Water Quality-Based Effluent Limitations (NSGLC-12-04-05)

This product was prepared by the National Sea Grant Law Center under award number NA09AR4170200 from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce. The statements, findings, conclusions, and recommendations are those of the author and do not necessarily reflect the views of NOAA or the U.S. Department of Commerce.

Dear Dale,

Below is the summary of research of the National Sea Grant Law Center regarding the question you posed to us about the State of Michigan's recommendation to the U.S. Environmental Protection Agency that strict numeric water quality-based effluent limitations be incorporated into the proposed 2013 Vessel General Permit (2013 VGP). The following information is intended for informational purposes only and does not constitute legal representation of Minnesota Sea Grant or its constituents. It represents our interpretation of the relevant laws, regulations, and cases.

Effluent Limitations

The Clean Water Act (CWA) prohibits the discharge of any pollutant from a point source unless that point source first obtains a National Pollutant Discharge Elimination System (NPDES) permit from the EPA. In order to achieve the desired pollution reductions, NPDES permits must contain technology-based effluent limitations (TBELs), which for non-conventional pollutions like invasive species are to be based on the Best Available Technology Economically Achievable (BAT).[1] In situations where the application of TBELs alone is not sufficient to ensure compliance with state water quality standards, the NPDES permit must also include more stringent, water quality-based effluent limitations (WQBELs).[2] WQEBLs, as the name suggests, are to be based on water quality criteria, not the availability of technology. In other words, WQEBLs are to be established at whatever limit is necessary to be fully protective of state water quality

[1] 33 U.S.C. § 1311(b)(1)(A) (effluent limits for point sources "shall require the application of the best practicable control technology currently available.").
[2] *Id.* § 1311(b)(1)(C).

standards. WQBELs can be expressed in narrative or numeric form. EPA regulations, however, state that non-numeric criteria (i.e., Best Management Practices) should only be used when "numeric effluent limitations are infeasible."[3]

Proposed 2013 VGP

On November 30, 2011, the EPA released its draft 2013 VGP which is scheduled to go into effect in December 2013 upon the expiration of the VGP released in 2008. One of the key differences between the 2008 VGP and the draft 2013 VGP is EPA's proposal to establish numeric TBELs at the IMO D-2 standard for ballast water discharges.[4] These numeric TBELs would replace the non-numeric limitations in the 2008 VGP. This change is based on the EPA's conclusion, following a study by its Science Advisory Board, that there are ballast water treatment systems available (or will soon be available) that can meet the IMO D-2 standards. The TBELs would not be immediately effective, but rather phased in according to a schedule consistent with the timelines in the IMO treaty (for existing vessels by the first drydocking after 2014 or 2016 depending on size).[5]

In addition, EPA "determined that, after application of the required TBELs, reasonable potential to cause or contribute to an exceedance of water quality standards exists."[6] This is a logical conclusion, considering that the TBELs are not required for all vessels, the TBELs will be phased in (and therefore cannot immediately reduce the risk of introduction) and even after the TBELs become effective there will remain some risk that organisms may be discharged. This finding triggered the requirement to include more stringent, WQBELs in the NDPES permit. EPA acknowledged this need in the draft 2013 VGP, but "determined that calculation of a numeric WQBEL is infeasible at this time" due to data limitations.[7] EPA's proposed narrative WQEBL is "Your discharge must be controlled as necessary to meet applicable water quality standards in the receiving water body or another water body impacted by your discharges."[8] In appears from the language in the draft 2013 VGP Fact Sheet that such control measures would include generally applicable BMPs.[9]

Criticisms of Proposed WQBELs

During the public comment period for the draft 2013 VGP, a number of states and organizations submitted formal comments criticizing the EPA's proposed narrative WQBEL. The State of Michigan, relying on some recent scientific modeling studies, recommended during the public comment period that EPA establish numeric WQEBLs "that are no less than 2 orders of magnitude more stringent than their corresponding IMO D-2 standard."[10] Recognizing that the technology industry needs time to develop treatment systems that can achieve these more stringent standards and that the shipping industry needs time to install such systems once developed, Michigan recommends an effective date of January 1, 2026.[11]

---

[3] 40 C.F.R. § 122.44(k)(3).
[4] U.S. ENVIRONMENTAL PROTECTION AGENCY, 2011 PROPOSED ISSUANCE OF NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) VESSEL GENERAL PERMIT (VGP) FOR DISCHARGES INCIDENTAL TO THE NORMAL OPERATION OF VESSELS, DRAFT FACT SHEET 122 (2011).
[5] *Id.* at 106.
[6] *Id.* at 120.
[7] *Id.*
[8] U.S. ENVIRONMENTAL PROTECTION AGENCY, VESSEL GENERAL PERMIT FOR DISCHARGES INCIDENTAL TO THE NORMAL OPERATION OF VESSELS (VGP), § 2.3.1.
[9] Draft Fact Sheet, *supra* note 4, at 120.
[10] State of Michigan Department of Environmental Quality, Comments on USEPA's Draft Vessel General Permit and Draft Small Vessel General Permit 3 (Feb. 21, 2012).
[11] *Id.* at 4.

A coalition of environmental NGOs, including the Alliance for the Great Lakes and the Natural Resources Defense Council, argued that EPA's proposed narrative WQBEL is "illegal, because it is not practically enforceable" and its determination that the calculation of a narrative WQBEL is infeasible at this time "is flawed."[12] The NGOs "believe that EPA must set *zero detectable* living organisms as the numeric goal, unless EPA is able to determine with confidence that there is a level of invasive species above zero that could be discharged into differing receiving water bodies without causing establishment of reproducing populations of the species."[13]

WQBELs and "Technology-Forcing"

The environmental NGOs are arguing for a zero discharge limit because they believe this "approach has the benefit of being 'technology-forcing,' i.e., it would encourage the development of technology to better protect aquatic ecosystems."[14] Scholars have made similar arguments.[15] Whether a zero-discharge limit would actually lead to the development of more effective ballast water treatment systems more quickly is debatable, but the CWA requires the imposition of WQBELs when TBELs alone are not sufficient to achieve state water quality standards or protect existing uses. If NGOs or states do not believe the WQBELs imposed by EPA are stringent enough, they may file a lawsuit claiming the EPA has violated the CWA's WQBEL provisions.

Regardless of how EPA chooses to address the WQBEL issue in the final 2013 VGP, individual states have the authority to impose state-specific WQBELs if necessary to ensure compliance with their state water quality standards. This raises the possibility that the patchwork regulation of ballast water in the Great Lakes will continue.

I hope you have found this information useful. If you need clarification or have follow-up questions, just let me know.

Sincerely,

Stephanie Showalter Otts

Stephanie Showalter Otts
Director, National Sea Grant Law Center

---

[12] Alliance for the Great Lakes et al., public comments re: proposed 2013 VGP, submitted Feb. 21, 2012, *available at* www.greatlakes.org/document.doc?id=1140.

[13] *Id.* at 22 (emphasis added).

[14] *Id.*

[15] "A zero-discharge limit, if imposed, will, in turn, have a significant technology-forcing effect, since none of the existing technologies can guarantee the complete elimination of ballast-borne organisms prior to discharge." Zdravka Tzankova, *The Political Consequences of Legal Victories: Ballast Regulation and the Clean Water Act*, 40 ENV. L. REP. 10154, 10163 (2010).