



US Coast Guard Ballast Water Discharge Standard Final Rule



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Overview

- Coast Guard Regulatory Authority
- Current Ballast Water Regulatory Regime
- The Ballast Water Discharge Standard Final Rule
- Implementation of the Final Rule: Independent Labs; Type Approval; Enforcement & Compliance



Authorities for U.S. Coast Guard Regulations



1990 - Nonindigenous Aquatic Nuisance Prevention and Control Act

- Prevent or reduce the introduction and control the spread of NIS via the discharge of ballast water from those vessels entering U.S. waters of Great Lakes after operating outside the exclusive economic zone (EEZ).

1996 - National Invasive Species Act

- Extend Great Lakes regime to the nation.
 - Specific practices directed:
 - BWE Mid-ocean; Retention; Alternative BWE areas; USCG-approved, environmentally sound alternatives.



USCG Ballast Water Management Current Requirements



- **Currently in U.S. BW management required for arrivals from outside EEZ**
 - **Primarily mid-ocean BW Exchange, many vessels claim safety exemption as provided for in current regulation.**
 - **Reporting Requirements for vessels bound for ports or places of the U.S. including number of ballast tanks, volume of BW onboard, origin of BW to be discharged into waters of U.S.**
 - **Ballast Water Management Practices**



Drawbacks to Ballast Water Exchange



- **Ballast Water Exchange is less than desirable as a long-term approach to reducing or preventing introductions of NIS via BWD.**
 - **Structural and operational risks with BWE.**
 - **Design**
 - **Age**
 - **Load**
 - **Sea conditions**
 - **Effectiveness of BWE in removing NIS can be variable.**
 - **Tank design**
 - **Type of BWE**
 - **Salinity & temp differences between BW and ocean water**





The BW Final Rule



- Notice of Proposed Rulemaking - Aug 2009
- Public Comment Period ended – Dec 2009
 - NPRM received over 3,000 comments
 - Top 3 issues: (1) applicability; (2) availability of technology; and (3) unified Federal standard
- Final Rule Published – March 2012
 - Docket No. USCG-2001-10486



Changes from Proposed Rule



- Established “Phase –One” as standard, the same as IMO. Deferred Phase-Two Standard – Practicability Review to determine if higher standard feasible.
- Revised Applicability
 - (1) Vessels currently required to conduct Ballast Water Exchange (BWE); and (2) ocean-going vessels operating within EEZ, across multiple Captain of the Port (COTP) Zones and that are greater than 1,600 GRT
- COTP Zone exemption remains
- Land-based testing for type approval requires use of EPA Environmental Technology Verification (ETV) protocol
- Alternate Management Systems (AMS) and acceptance of existing data from foreign type approvals
- Date for “new construction” 12/1/2013



Independent Studies



- National Research Council – Assessed methods to evaluate risk of introductions associated with ballast water discharges
 - IMO provides significant reduction beyond exchange

- EPA Science Advisory Board - Evaluate existing/potential shipboard technologies and ability to meet different discharge standards
 - IMO achievable, study does not support Technology-Based Effluent Limit > IMO

 - Issue of detection/quantification stricter than IMO

The BW Final Rule

Requirement	BW Final Rule
Jurisdiction	U.S. territorial sea – 12 nautical miles
Applicability	Sea-going vessels that currently are required to conduct BWE and coastwise vessels that do not operate outside EEZ but are greater than 1,600 GT and transit between Captain of the Port Zones
Implementation Schedule Date are January 1 unless specified	New Vessels (Dec 1, 2013 keel laying) on delivery Existing Vessels (BW capacity in cubic meters): <1,500: 2016 1,500 - 5,000: 2014 >5,000: 2016
Lakers	Applies to Lakers that depart the Great Lakes, transit beyond the EEZ, return and pass upstream of Snell Lock.



Coast Guard BW Discharge Standard



Technical description	Large Organisms (> 50µm)	Small Organisms (>10µ and ≤50 µm)	Very Small Organisms (≤ 10µm)	Bacteria		
				Toxigenic <i>Vibrio cholerae</i> (O1 & O139)	<i>Eschericia coli</i>	Intestinal enterococci
Discharge Standard	< 10 per m ³	< 10 per ml	N/A	<1 cfu per 100 ml	<250 cfu per 100 ml	<100 cfu per 100 ml



The BW Final Rule

- Alternate Management Systems (AMS) – not type approval, a “bridging strategy.” Temporarily accepts the use of foreign type approved ballast water management systems in U.S. waters. Approval issued to BW system manufacturer, allows vessel to use system for up to 5 years after implementation date.
- Two routes to achieve Coast Guard type approval of Ballast Water Management Systems
 1. Use of existing test data used during type approval testing for a foreign administration. Applicant must submit data with explanation of how submission meets or exceeds Coast Guard type approval requirements.
 2. Use test data from an independent laboratory accepted by the Coast Guard.
- As noted in regulation, Coast Guard anticipates type approval program to be established by 2015.



Independent Labs

- Critical private sector entities necessary for USCG type approval process for marine pollution prevention technologies.
- Key aspects for acceptability:
 - Independent of BWMS vendors/manufacturers
 - Capacity and ability to conduct ETV test protocol
 - Rigorous QA/QC programs.
- “Availability” outside USCG control.



Availability of Technology/Type Approval



- IMO approvals and Flag Administration type approvals in accordance with Convention already taking place.
- CG type-approval requirements established in FR
- Test facilities in numerous countries
 - Netherlands, Singapore, Norway, Denmark, Republic of Korea, Japan, China, and USA
 - Ability of foreign facilities to meet U.S. test requirements unknown



Rule is Important for...



- Industry – certainty for maritime business
- Environment – enforceable numeric standard
- Coast Guard – statutory requirements
- U.S. – aligns with global standard with the International Maritime Organization (IMO) Convention, which may enter into force soon
- EPA – complements Vessel General Permit (VGP)



Development of Rule - Collaborative Effort



- Coordination with EPA
 - National Academies and EPA Science Advisory Board studies
- EPA VGP coordination
- Key partners in Great Lakes Ballast Water Collaborative
- Coordination with EPA and the Maritime Administration (MARAD) on maritime technology issues



Compliance and Enforcement

- Assess compliance during regular vessel inspections
 - Port State control for foreign flags
 - Domestic vessel inspection
- Follow existing compliance approach
 - Documents (certifications and records)
 - Crew knowledge
 - Equipment condition
 - Sample discharge if warranted
- Sampling and analysis methods and tools in development
- USCG and EPA signed an MOU on February 14, 2011 to cooperate on vessel compliance with VGP



Thank You



<http://www.uscg.mil/hq/cg5/cg522/cg5224/default.asp>

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