



US Coast Guard Ballast Water Discharge Standard Final Rule



U.S. Coast Guard
Environmental Standards Division
Washington, D.C.



Overview

- Coast Guard Regulatory Authority
- Prior 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 Prior Requirements



- Prior to March 23, 2012 final rule, BW management required for arrivals from outside EEZ:
 - 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, avoid uptake or discharge in sensitive areas, areas with infestations, clean tanks, rinse anchors & chains, etc.



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 diff's 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



The BW Final Rule



Requirement	BW Final Rule
Jurisdiction	U.S. territorial sea – 12 nautical miles
Applicability	Sea-going vessels previously required to conduct BWE <u>and</u> 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 Dates are January 1 unless specified (First regularly scheduled drydocking after compliance date)	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
Great Lakes	Applies to vessels that depart the Great Lakes, transit beyond the EEZ, return and pass upstream of Snell Lock, aka “Salties.”



USCG BW Discharge Standard



Organism size	Amount allowable in discharge
≥ 50 micrometers	Less than 10 organisms per cubic meter
$< 50 - \geq 10$	Less than 10 organisms per milliliter
Indicator microorganisms	
< 1 colony forming unit of toxicogenic <i>Vibrio cholerae</i>	per 100 mL
< 250 cfu of <i>Escherichia coli</i>	Per 100 mL
< 100 cfu intestinal enterococci	Per 100 mL



OPTIONS FOR COMPLYING WITH USCG BWM REQUIREMENT



Meet discharge standard using Coast Guard Approved Ballast Water Management System



Use water from a Public Water Supply



Alternate Management System (temporary use of foreign approved BWMS)

No BW Discharge



Discharge to Reception Facility





USCG Type Approval of BWMS



- Long-established USCG program for type approval of ships' equipment
 - All testing by independent laboratories (ILs)
 - ILs vetted by USCG
- Incorporation of EPA Environmental Technology Verification (ETV) Program land-based test protocols
 - consistent with IMO BW Management Convention



USCG Type Approval



Two paths

- Existing test data from type approval testing for a foreign administration.
 - Applicant must submit:
 - Data
 - Explanation of how submission meets or exceeds Coast Guard type approval requirements.
 - Subject to IL review
- Test data from an independent laboratory accepted by the Coast Guard.



Independent Labs

- Critical private sector entities.
- 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.
- FR states no type approvals likely until 2015
 - “From scratch’ with USCG accepted IL
 - CG goal is to establish process as soon as possible.



First USCG-accepted IL: July 3 2012



NSF Int'l, Ann Arbor, MI



Great Ships Initiative, Superior, WI



Maritime Environmental Resource Center, Baltimore, MD



Retlif Test Laboratories



Additional Provisions AMS



- Alternate Management Systems (AMS)
 - Foreign type-approved systems installed prior to vessel compliance date under FR
 - Bridging strategy to address fact that foreign type-approved systems are being installed prior to FR compliance dates
 - Must have been approved by foreign administration in accordance with IMO BW Convention
 - 5-year GF period after vessel compliance date



Additional Provisions Practicability Review



- Review practicability of implementing more stringent discharge standards
- Publish results by 1 January 2016
 - If find more stringent standard practicable, initiate rulemaking by 1 January 2017.
- Consider broad range of factors, including:
 - Capability and effectiveness of technology,
 - Compatibility with vessel design and operation
 - Safety (vessel, crew, environment)
 - Availability of measurement methods



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



Policy Update

- Alternate Management System Determination – Policy signed 15 June 2012. Provides guidance for BW management system vendors on submitting applications for AMS determination from CG.
- “To allow for the continued flow of waterborne commerce to and from the U.S., while providing the highest practicable level of environmental protection, the AMS provision was put into the BW Discharge Standard Regulation.”
- Policy Message for Implementation of BW Discharge Standard – released 21 June 2012. Describes CG’s enforcement & compliance posture for BW Discharge Standard.
- Frequently Asked Questions
- Documents available on CG-OES-3 webpage:
www.uscg.mil/hq/cg5/cg522/cg5224



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



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



Thank You

- For additional information or questions regarding the Coast Guard's National BW Management Program:
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