



Your Integration / Service Partner

A photograph of a ship's deck at sunset. The deck is green and has various pipes and equipment. The ship's white superstructure is visible in the distance against a dramatic orange and yellow sky. The ocean is visible on the right side of the frame.

Understanding EPA Proposed Performance Standards

Debra DiCianna, Senior Compliance Engineer

Significant Changes

- Structure of Regulation
- Graywater
- Exhaust Gas Emission Control Systems
- Environmentally Acceptable Lubricants (EALs)
- Biofouling Management
- Ballast Water
- No Discharge Zones

New Structure of 40 CFR Part 139

- Title: Discharges Incidental to the Normal Operation of Vessels
- Subpart A – Scope
- Subpart B – General Standards for Discharges Incidental to the Normal Operation of a Vessel
- Subpart C – Standards for Specific Discharges Incidental to the Normal Operation of a Vessel
- Subpart D – Special Area Requirements
- Subpart E – Procedures for States to Request Changes to Standards, Regulations, or Policy Promulgated by the Administrator.

PART 139—DISCHARGES INCIDENTAL TO THE NORMAL OPERATION OF VESSELS

Subpart A—Scope

Sec.

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139.2 Definitions.

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139.5 Biofouling management.

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Subpart C—Standards for Specific Discharges Incidental to the Normal Operation of a Vessel

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139.20 Gas turbines.

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139.22 Hulls and associated niche areas.

139.23 Inert gas systems.

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Subpart D—Special Area Requirements

139.40 Federally-protected waters.

Subpart E—Procedures for States To Request Changes to Standards, Regulations, or Policy Promulgated by the Administrator

40 CFR Part 139 – Subpart B – General Standards

- §139.4 – General operation and maintenance
- §139.5 – Biofouling management
 - Requirement of vessel-specific biofouling management plan
- §139.6 – Oil Management
 - Requirements apply to vessel equipment and operations that use of discharge oil or oily mixtures
 - (d) “An environmentally acceptable lubricant (EAL) must be used on any oil-to-sea interface unless such use is technically infeasible.”
 - Oil-to-Sea interface - “any seal or surface on ship-board equipment where the design is such that oil or oily mixtures can escape directly into surrounding waters. Oil-to-sea interfaces are found on equipment that is subject to submersion as well as equipment that can extend overboard.
 - No longer lists specific equipment. Need to determine applicability to hydraulic equipment on the deck.
 - Commented that further details are needed in the definitions.

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Underway means a vessel is not at anchor, or made fast to the shore, or aground. (source: 33 CFR 83.03).

Vessel General Permit (VGP) means the permit that is the subject of the notice of final permit issuance entitled “Final National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges Incidental to the Normal Operation of a Vessel” (78 FR 21938 (April 12, 2013)). (source: CWA section 312(p)(1)(Z)).

Vessel length means the horizontal distance between the foremost part of a vessel's stem to the aftermost part of its stern, excluding fittings and attachments. (source: 33 CFR 151.05).

Visible sheen means, with respect to oil and oily mixtures, a silvery or metallic sheen or gloss, increased reflectivity, visual color, iridescence, or an oil slick on the surface of the water.

Voyage means any transit by a vessel traveling from or destined for any United States port or place.

§ 139.3 Other Federal laws.

(a) Except as expressly provided in this part, nothing in this part affects the applicability to a vessel of any other provision of Federal law, including:

(1) Sections 311 and 312 of the Federal Water Pollution Control Act (33 U.S.C. 1321 *et seq.* and 33 U.S.C. 1322 *et seq.*), also known as the CWA;

(2) The Act to Prevent Pollution from Ships (33 U.S.C. 1901 *et seq.*);

(3) Title X of the Coast Guard Authorization Act of 2010 (33 U.S.C. 3801 *et seq.*), also known as the Clean Hulls Act;

(4) The Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 *et seq.*); and

(5) The National Marine Sanctuaries Act (16 U.S.C. 1431 *et seq.*) and implementing regulations found at 15 CFR part 922 and 50 CFR part 404.

(b) Nothing in this part affects the authority of the Secretary of Commerce or the Secretary of the Interior to administer any land or waters under the administrative control of the Secretary of Commerce or the Secretary of the Interior, respectively.

(c) Nothing in this part shall be construed to affect, supersede, or relieve the master of any otherwise applicable requirements or prohibitions associated with a vessel's right to innocent passage as provided for under customary international law.

Subpart B—General Standards for Discharges Incidental to the Normal Operation of a Vessel

§ 139.4 General operation and maintenance.

(a) The requirements in paragraph (b) of this section apply to any discharge incidental to the normal operation of a vessel subject to regulation under this part.

(b) Vessels must implement the following practices:

(1) Minimize discharges.

(2) Discharge while underway when practical and as far from shore as practical.

(3) Addition of any materials to a discharge, other than for treatment of the discharge, that is not incidental to the normal operation of the vessel is prohibited.

(4) Dilution of any discharge for the purpose of meeting any standard in this part is prohibited.

(5) Any material used onboard that will be subsequently discharged (e.g., disinfectants, cleaners, biocides, coatings, sacrificial anodes) must:

(i) Be used only in the amount necessary to perform the intended function of that material;

(ii) Not contain any materials banned for use in the United States; and

(iii) If subject to FIFRA registration, be used according to the FIFRA label. Proper use includes labeling requirements for proper application sites, rates, frequency of application, and methods; maintenance; removal; and storage and disposal of wastes and containers.

(6) Any toxic or hazardous materials onboard which might wash overboard or dissolve as a result of contact with precipitation or surface water spray must be stored in appropriately sealed, labeled, and secured containers and be located in areas of the vessel that minimize exposure to ocean spray and precipitation consistent with vessel design, unless the master determines this would interfere with essential vessel operations or safety of the vessel or would violate any applicable regulations that establish specifications for safe transportation, handling, carriage, and storage of toxic or hazardous materials.

(7) Containers holding toxic or hazardous materials must not be overfilled and incompatible materials must not be mixed in containers.

(8) The overboard discharge or disposal of containers with toxic or hazardous materials is prohibited.

(9) Prior to washing the cargo compartment or tank and discharging washwater overboard, any cargo

compartment or tank must be in broom clean condition or its equivalent, to minimize any remaining residue from these areas.

(10) Topsides surfaces (e.g., exposed decks, hull above waterline, and related appurtenances) must be maintained to minimize the discharge of cleaning compounds, paint chips, non-skid material fragments, and other materials associated with exterior surface preservation.

(11) Painting techniques on topside surfaces must minimize the discharge of paint.

(12) Discharge of unused paint and coatings is prohibited.

(13) Any equipment that may release, drip, leak, or spill oil or oily mixtures, fuel, or other toxic or hazardous materials that may be discharged, including to the bilge, must be maintained to minimize or eliminate the discharge of pollutants.

§ 139.5 Biofouling management.

(a) The requirements in paragraph (b) of this section apply to any vessel subject to regulation under this part.

(b) A vessel-specific biofouling management plan must be developed and followed with a goal to prevent macrofouling, thereby minimizing the potential for the introduction and spread of ANS. A biofouling management plan is a holistic strategy that considers the operational profile of the vessel, identifies the appropriate antifouling systems, and details the biofouling management practices for specific areas of the vessel. The plan elements must prioritize procedures and strategies to prevent macrofouling.

§ 139.6 Oil management.

(a) The requirements in paragraphs (b) through (d) of this section apply to vessel equipment and operations that use or discharge oil or oily mixtures.

(b) The following discharges are prohibited:

(1) Used or spent oil no longer being used for its intended purpose; and

(2) Oil in such quantities as may be harmful.

(c) During fueling, maintenance, and other vessel operations, control and response measures must be used to prevent, minimize, and contain spills and overflows.

(d) An environmentally acceptable lubricant (EAL) must be used in any oil-to-sea interface unless such use is technically infeasible.

40 CFR Part 139 – Subpart C – Discharge Specific Standards with Significant Changes

- §139.10 – Ballast tanks
- §139.18 – Exhaust gas emission control systems
- §139.21 – Graywater systems
- §139.22 – Hulls and associated niche areas
- §139.28 – Seawater piping



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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 139

EPA–HQ–OW–2019–0482; FRL–10015–54–OW]

RIN 2040–AF92

Vessel Incidental Discharge National Standards of Performance

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is publishing for public comment a proposed rule under the Vessel Incidental Discharge Act that would establish national standards of performance for marine pollution control devices for discharges incidental to the normal operation of primarily non-military and non-recreational vessels 79 feet in length and above into the waters of the United States or the waters of the contiguous zone. The proposed national standards of performance were developed in coordination with the U.S. Coast Guard (USCG) and in consultation with interested Governors. The proposed standards, once finalized and implemented through corresponding USCG regulations addressing implementation, compliance, and enforcement, would reduce the discharge of pollutants from vessels and streamline the current patchwork of federal, state, and local vessel discharge requirements. Additionally, EPA is proposing procedures for states to follow if they choose to petition EPA to issue an emergency order, to review any standard of performance, regulation, or policy, to request additional requirements with respect to discharges in the Great Lakes, or to apply to EPA to prohibit one or more types of vessel discharges proposed for regulation in this rulemaking into specified waters to provide greater environmental protection.

DATES: Comments must be received on or before November 25, 2020. Under the Paperwork Reduction Act (PRA), comments on the information collection provisions are best assured of consideration if the Office of Management and Budget (OMB) receives a copy of your comments on or before November 25, 2020.

ADDRESSES: Submit your comments to the public docket for this proposed rule, identified by Docket No. EPA–HQ–OW–2019–0482, at <https://www.regulations.gov>. Follow the online instructions for submitting comments.

All submissions received must include the Docket ID No. for this rulemaking. Comments received may be posted without change to <https://www.regulations.gov>, including any personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, see the “General Information” heading of the SUPPLEMENTARY INFORMATION section of this document. Out of an abundance of caution for members of the public and our staff, the EPA Docket Center and Reading Room are closed to the public, with limited exceptions, to reduce the risk of transmitting COVID–19. Our Docket Center staff will continue to provide remote customer service via email, phone, and webform. We encourage the public to submit comments via <https://www.regulations.gov> or email, as there may be a delay in processing mail and faxes. Hand deliveries and couriers may be received by scheduled appointment only. For further information on EPA Docket Center services and the current status, please visit us online at <https://www.epa.gov/dockets>.

FOR FURTHER INFORMATION CONTACT: Jack Faulk at (202) 564–0768; faulk.jack@epa.gov or Katherine Weiler at (202) 566–1280; weiler.katherine@epa.gov of the Oceans and Coastal Management Branch (4504T), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460.

SUPPLEMENTARY INFORMATION: This supplementary information is organized as follows:

I. Public Participation

A. How should I submit written comments?

II. Legal Authority

III. Executive Summary

IV. Background

A. Clean Water Act

B. Additional U.S. and International Authorities

C. Environmental Impacts of Discharges for Which Technology-Based Standards Would Be Established by This Rule

V. Scope of the Regulatory Action

A. Waters

B. Vessels

C. Incidental Discharges

D. Emergency and Safety Concerns

E. Effective Date

VI. Stakeholder Engagement

A. Informational Webinars and Public Listening Session

B. Post-Proposal Public Meetings

C. Consultation and Coordination With States

VII. Definitions

VIII. Development of National Discharge Standards of Performance

A. Discharges Incidental to the Normal Operation of a Vessel—General Standards

1. General Operation and Maintenance

2. Biofouling Management

3. Oil Management

4. Training and Education

5. Discharges Incidental to the Normal Operation of a Vessel—Specific Standards

1. Ballast Tanks

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3. Boilers

4. Cathodic Protection

5. Chain Lockers

6. Decks

7. Desalination and Purification Systems

8. Elevator Pits

9. Exhaust Gas Emission Control Systems

10. Fire Protection Equipment

11. Gas Turbines

12. Graywater Systems

13. Hulls and Associated Niche Areas

14. Inert Gas Systems

15. Motor Gasoline and Compensating Systems

16. Non-Oily Machinery

17. Pools and Spas

18. Refrigeration and Air Conditioning

19. Seawater Piping

20. Sonar Domes

C. Discharges Incidental to the Normal Operation of a Vessel—Federally-Protected Waters Requirements

D. Discharges Incidental to the Normal Operation of a Vessel—Previous VGP Discharges No Longer Requiring Control

IX. Procedures for States To Request Changes to Standards, Regulations, or Policy Promulgated by the Administrator

A. Petition by a Governor for the Administrator To Establish an Emergency Order or Review a Standard, Regulation, or Policy

B. Petition by a Governor for the Administrator To Establish Enhanced Great Lakes System Requirements

C. Application by a State for the Administrator To Establish a State No-Discharge Zone

X. Implementation, Compliance, and Enforcement

XI. Regulatory Impact Analysis

XII. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

B. Executive Order 13771: Reducing Regulation and Controlling Regulatory Costs

C. Paperwork Reduction Act

D. Regulatory Flexibility Act

E. Unfunded Mandates Reform Act

F. Executive Order 13132: Federalism

G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

H. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

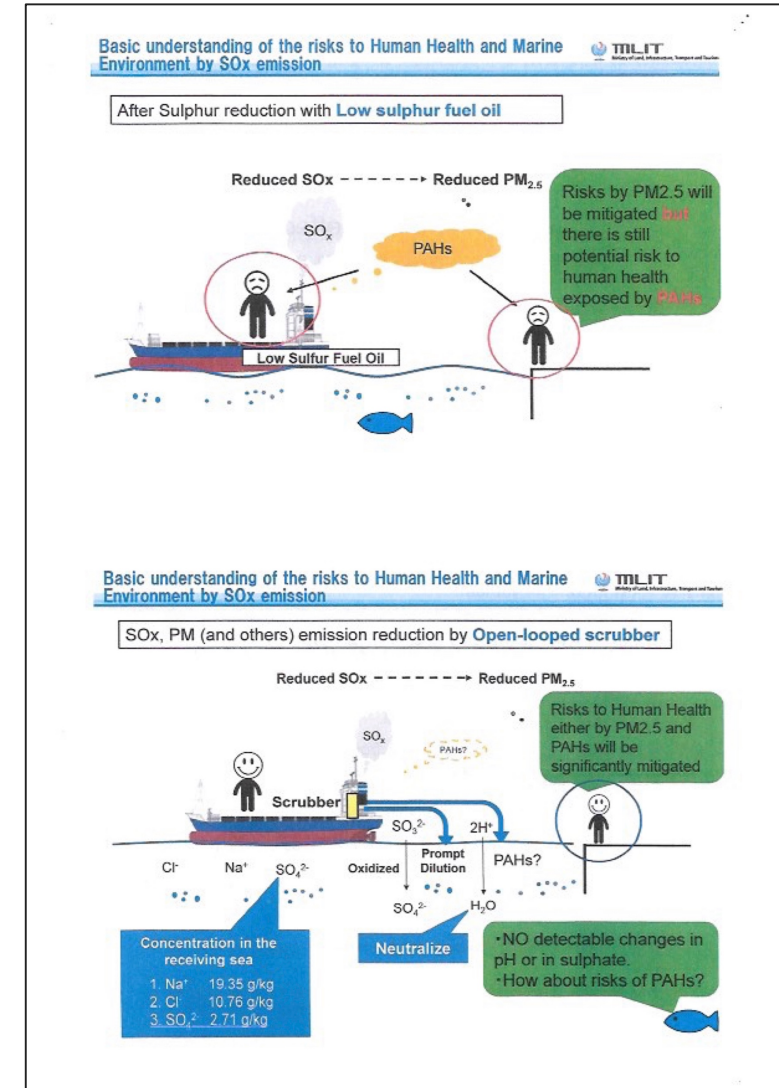
I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

J. National Technology Transfer and Advancement Act

K. Executive Order 12898: Federal Actions To Address Environmental Justice in

§139.18 – Exhaust gas emission control systems

- Attempts to align requirements with 2015 Guidelines for Exhaust Gas Cleaning Systems (Resolution MEPC.259(68)) and 2018 Guidelines for the Discharge of Exhaust Gas Recirculation (EGR) Bleed-Off Water (MEPC 307(73)).
- EPA should re-evaluate the lower limit in relation to the maximum difference of 2 pH units.
- EPA also needs to be aware that shipowners continue to have difficulty achieving the discharge standards in MEPC guidelines. Presentations have been given at IMO MEPC meetings regarding water quality impacts of scrubber effluent.



§139.21 – Graywater systems

- Prohibits the discharge of graywater from any vessel within 3 nm from shore that voyages at least 3 nm from shore.
- Comments:
 - While passenger vessels have graywater storage capacity, most existing commercial vessels do not have graywater storage capacity.
 - Limited shore facilities for the offloading of graywater
 - Some ships have installed expensive advanced wastewater treatment systems that are more effective at treating than shore-based systems.



§139.22 – Hulls and associated niche areas

§139.28 – Seawater piping

- Requirements are based on a fouling rating of FR-20
- Fouling rating system was developed by the US Navy.
- Issues with fouling rating system:
 - Mission and operational profile of vessels of the Armed Forces is extensively different from commercial vessels.
 - The development of a fouling rating system for commercial vessels was not evaluated in the US EPA *Regulatory Impact Analysis of the EPA Proposed Rulemaking for “Vessel Incidental Discharge National Standards of Performance”*.
 - Therefore, the financial impacts on shipowners would be difficult to assess.
- A system based on the known frequency of ship surveys would be more easily implemented and more effective.



Ballast Tanks (§139.10)

- BWMPs – EPA proposes not to continue the requirements to minimize or avoid uptake of ballast water in the specific areas.
- Comments:
 - Removal in BWMPs should not occur and would not be useful as these requirements are still required due to BWM Convention Guidelines (Resolution MEPC.127(53) Guidelines for ballast water management and development of ballast water management plans (G4)).
 - Uptake of ballast water in these areas impacts the operation of ballast water management systems (BWMS) and may result in damaged BWMS and non-compliance with ballast water discharge standards.



SCORPIO TANKER INC.
JENNINGS BAY
IMO No.: 9717773

BALLAST WATER MANAGEMENT PLAN

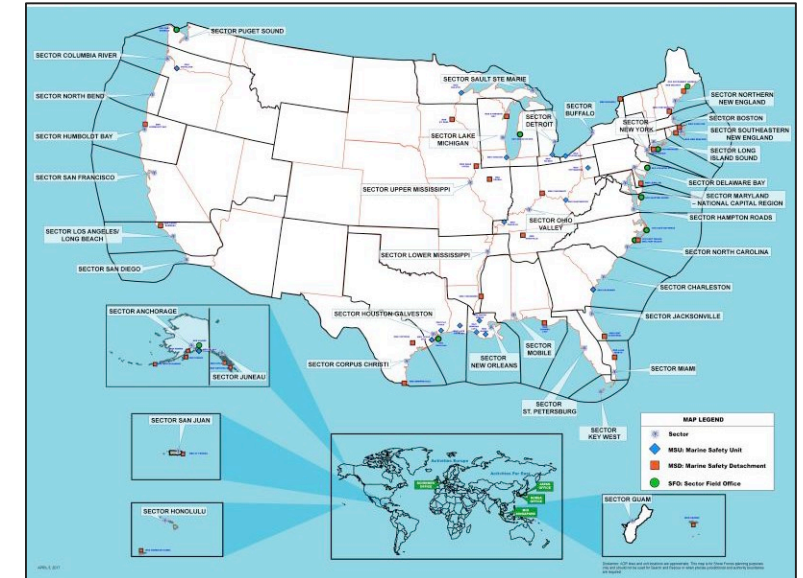
The JENNINGS BAY Ballast Water Management Plan has been developed to meet the requirements of:

- Regulation B-1 of the International Convention for the Control and Management of Ship's Ballast Water and Sediments, 2004 and Part B of IMO Resolution MEPC.127(53) "Guidelines for Ballast Water Management and Development of Ballast Water Management Plan (G4)" adopted 22 July 2005.
- USCG 33 CFR Part 151 Subparts C and D (Ballast Water Management for Control of Nonindigenous Species in the Great Lakes, Hudson River, and Waters of the United States)
- U.S. Environmental Protection Agency Vessel General Permit

Issued Date: 28 April 2020
Approved by: DNV GL
Approval Date:

Ballast Tanks - Exemptions (§139.10(d)(3))

- §139.10(d)(3)(iii) and (iv) – “Single Captain of the Port (COTP) Zone” and “does not travel more than 10 nm...”
 - Proposal was the opportunity to clarify these exemptions and possibly expand slightly.
 - Example: Vessels that operate in the Staten Island and Long Island area, two different COTP.
- §139.10 (d)(3)(v) – vessel that operate exclusively in the Great Lakes and the St. Lawrence River...
 - We support the proposal on the technical and design areas.
 - EPA should consider the impacts of new “lakers” that installed BWMS based on 2013 VGP requirements
 - Issues associated with filter clogging and UV intensity are not limited to the Great Lakes.
 - Inclusion of best management practices could be useful to all vessels.



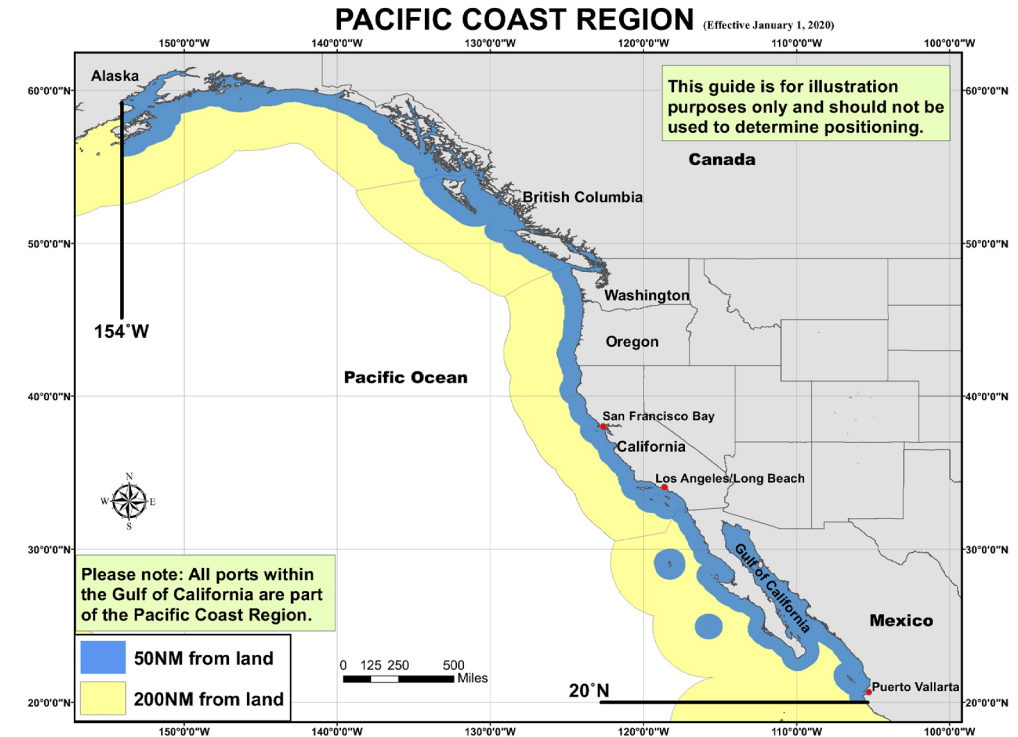
Vessels entering the Great Lakes – BWE (§139.10(f)(1))

- Vessels entering the Great Lakes would be required to conduct ballast water exchange (BWE) and treatment
- Comments – regulatory text needs to:
 - More clearly explain the proposed procedure
 - Take into account that BWE is not permitted in international waters after a vessel's compliance date for Regulation D-2 of the BWM Convention
 - While this is a remnant of the 2013 VGP, we have not identified any ships performing BWE + BWT



Pacific waters – low salinity ballast water (§139.10(g)(2))

- Exception of BWE requirements in (g)(2)(i) if vessel using a type-approved BWMS meeting more stringent discharge standards
- Comments:
 - Adds new testing and requirements that have not been previously undertaken



§139.52 “Application ... to establish a State No-Discharge Zone”

- Concern because No-Discharge Zones (NDZs) have been implemented for sewage and ballast water that impact ship operations
- History of NDZ reviews have heavily sided with regulatory authorities – not commercial ship owners
- Comments:
 - Standards need to include more specific details for adequate assessment of commercial shipping.
 - Advanced treatment systems should be taken into account.



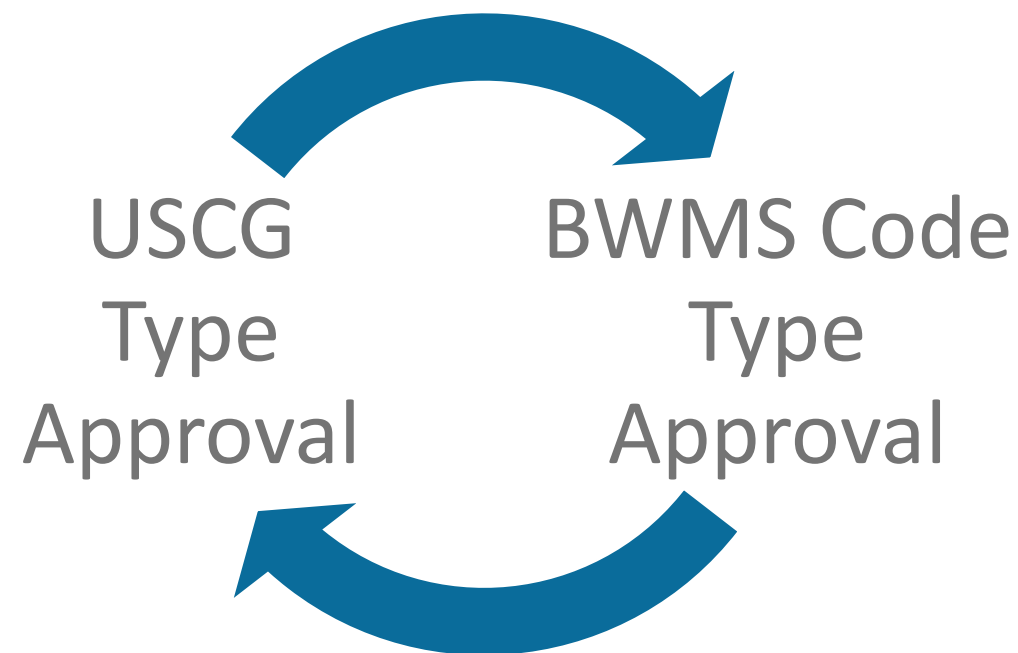
Important Points

- Important for shipowners to closely review the final EPA regulations to ensure that future USCG implementation regulations address all issues.
- Interact with the USCG during the comment period for the proposed implementation regulations



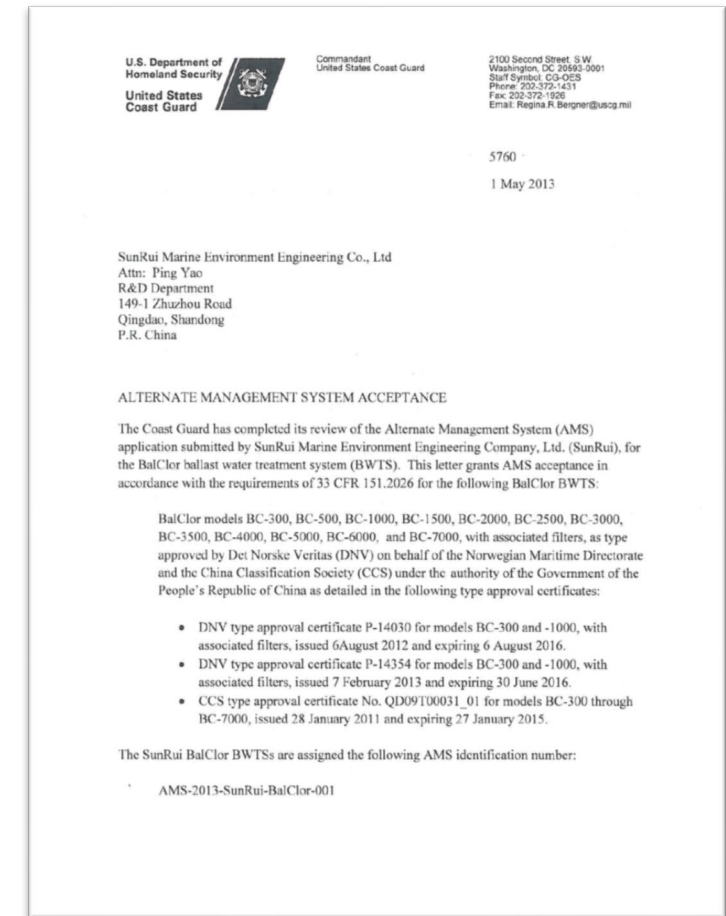
Notes to USCG for development of implementation standards

- Need to ensure type approval requirements are not more complicated and impact existing installations or BWMS approvals in accordance with the BWMS Code
- Need to include BMPs or guidance for inoperable BWMS that can be uniformly applied by the COTP for operating vessels



EXTRA: USCG Accepted AMS

- Many ships installed BWMS prior to USCG issuing type approval. These systems were USCG accepted Alternative Management Systems (AMS)
- A USCG accepted AMS can be used for 5 years from the U.S. compliance date of a ship.
 - Many AMS 5-year periods are expiring.
 - Review of vessel specific dates is suggested
- *Be careful* – some AMS upgrades to USCG type approved models are not covered by the existing type approvals in accordance with the BWM Convention.



U.S. Department of Homeland Security
United States Coast Guard

Commandant
United States Coast Guard

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5760
1 May 2013

SunRui Marine Environment Engineering Co., Ltd
Attn: Ping Yao
R&D Department
149-1 Zhuzhou Road
Qingdao, Shandong
P.R. China

ALTERNATE MANAGEMENT SYSTEM ACCEPTANCE

The Coast Guard has completed its review of the Alternate Management System (AMS) application submitted by SunRui Marine Environment Engineering Company, Ltd. (SunRui), for the BalClor ballast water treatment system (BWTS). This letter grants AMS acceptance in accordance with the requirements of 33 CFR 151.2026 for the following BalClor BWTS:

BalClor models BC-300, BC-500, BC-1000, BC-1500, BC-2000, BC-2500, BC-3000, BC-3500, BC-4000, BC-5000, BC-6000, and BC-7000, with associated filters, as type approved by Det Norske Veritas (DNV) on behalf of the Norwegian Maritime Directorate and the China Classification Society (CCS) under the authority of the Government of the People's Republic of China as detailed in the following type approval certificates:

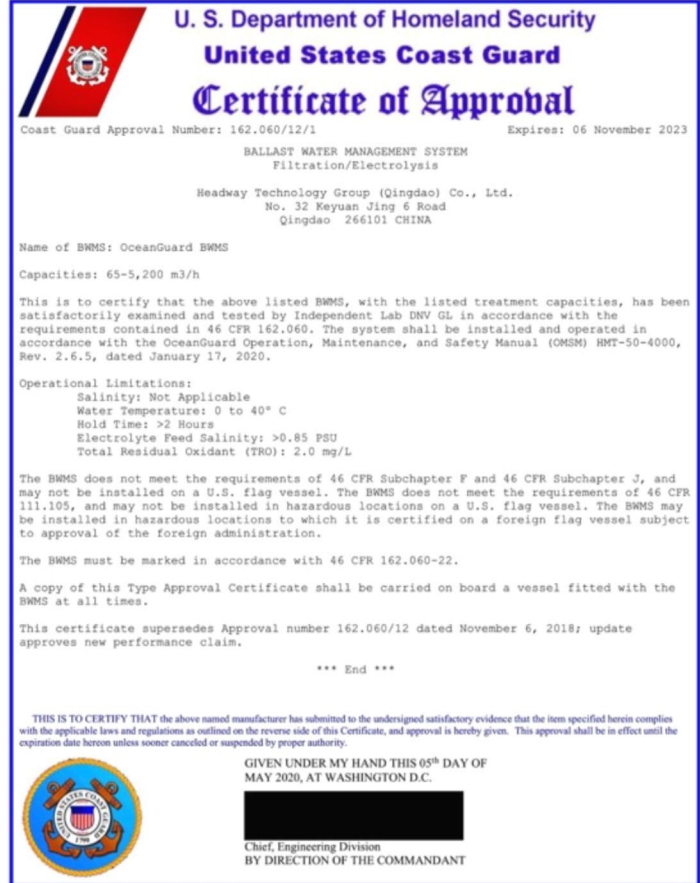
- DNV type approval certificate P-14030 for models BC-300 and -1000, with associated filters, issued 6 August 2012 and expiring 6 August 2016.
- DNV type approval certificate P-14354 for models BC-300 and -1000, with associated filters, issued 7 February 2013 and expiring 30 June 2016.
- CCS type approval certificate No. QD09100031_01 for models BC-300 through BC-7000, issued 28 January 2011 and expiring 27 January 2015.

The SunRui BalClor BWTSs are assigned the following AMS identification number:

AMS-2013-SunRui-BalClor-001

Upgrading from USCG AMS to Type Approved

- Upgrading from USCG accepted AMS to USCG Type Approved is not just a paper exercise
- Upgrading will include:
 - New operating and maintenance manual
 - Nameplate
 - IBWMC Certificate
 - Updated BWMP
- Upgrading may include:
 - New software
 - New major components (i.e., filters, electrochlorination units)
 - New screens, sensors and ancillary equipment
- The ship's Class Society should be consulted if a survey is needed
- The BWMS manufacturer is responsible for communicating and arranging the upgrade



U. S. Department of Homeland Security
United States Coast Guard
Certificate of Approval

Coast Guard Approval Number: 162.060/12/1 Expires: 06 November 2023

BALLAST WATER MANAGEMENT SYSTEM
Filtration/Electrolysis

Headway Technology Group (Qingdao) Co., Ltd.
No. 32 Weyuan Jing 6 Road
Qingdao 266101 CHINA

Name of BWMS: OceanGuard BWMS

Capacities: 65-5,200 m3/h

This is to certify that the above listed BWMS, with the listed treatment capacities, has been satisfactorily examined and tested by Independent Lab DNV GL in accordance with the requirements contained in 46 CFR 162.060. The system shall be installed and operated in accordance with the OceanGuard Operation, Maintenance, and Safety Manual (OMSM) HMT-50-4000, Rev. 2.6.5, dated January 17, 2020.

Operational Limitations:
Salinity: Not Applicable
Water Temperature: 0 to 40° C
Hold Time: >2 Hours
Electrolyte Feed Salinity: >0.85 PSU
Total Residual Oxidant (TRO): 2.0 mg/L

The BWMS does not meet the requirements of 46 CFR Subchapter F and 46 CFR Subchapter J, and may not be installed on a U.S. flag vessel. The BWMS does not meet the requirements of 46 CFR 111.105, and may not be installed in hazardous locations on a U.S. flag vessel. The BWMS may be installed in hazardous locations to which it is certified on a foreign flag vessel subject to approval of the foreign administration.


The BWMS must be marked in accordance with 46 CFR 162.060-22.


A copy of this Type Approval Certificate shall be carried on board a vessel fitted with the BWMS at all times.

This certificate supersedes Approval number 162.060/12 dated November 6, 2018; update approves new performance claim.

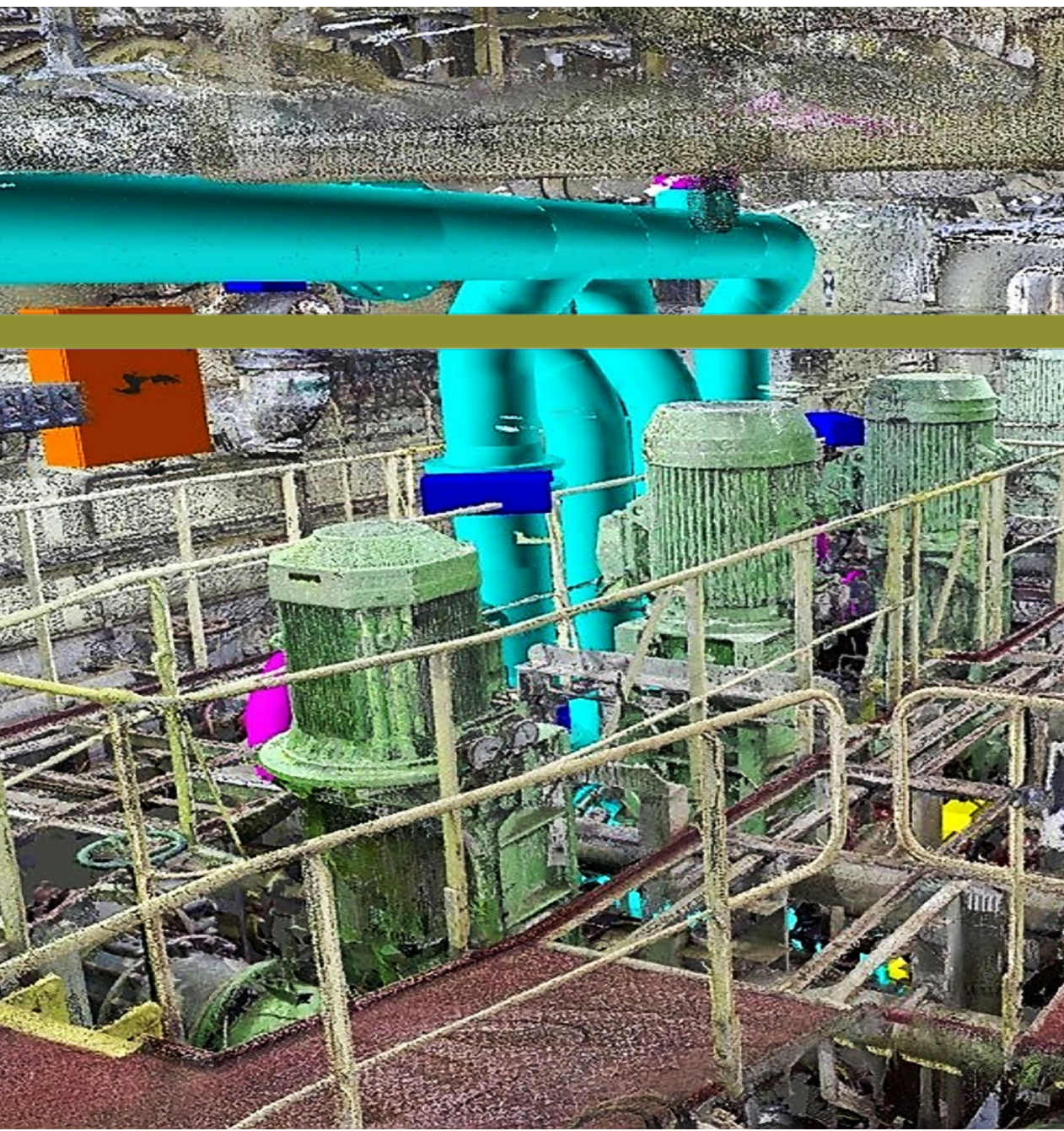
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THIS IS TO CERTIFY THAT the above named manufacturer has submitted to the undersigned satisfactory evidence that the item specified herein complies with the applicable laws and regulations as outlined on the reverse side of this Certificate, and approval is hereby given. This approval shall be in effect until the expiration date hereon unless sooner canceled or suspended by proper authority.

 GIVEN UNDER MY HAND THIS 05th DAY OF
MAY 2020, AT WASHINGTON D.C.


Chief, Engineering Division
BY DIRECTION OF THE COMMANDANT

DEPT. OF HOMELAND SECURITY, USCG, CGHQ-10030
(REV. 3-03)



Your Integration / Service Partner

ALL IN ONE BWMS SOLUTION

Fleet Evaluation

Feasibility Studies / BWMS Selection

Compliance/Regulatory Assistance

3D Laser Scans / Surveys

Design Engineering

Project Management

Installation Oversight

BWM Plans

Vessel Support Services

www.choiceballast.com