U.S. Department of Homeland Security

United States Coast Guard

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CG-OES Policy Letter
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From: R. C. PROCTOR, CAPT
COMDT (CG-OES)

To: Distribution

Subj: OBTAINING AN ALTERNATE MANAGEMENT SYSTEM DETERMINATION FOR A FOREIGN TYPE-APPROVED BALLAST WATER MANAGEMENT SYSTEM

Ref: (a) Standards for Living Organisms in Ships' Ballast Water Discharged in U.S. Waters (Federal Register / Vol. 7, No. 57 / March 23, 2012 / page 17254)
(b) Guidelines for Approval of Ballast Water Management Systems (G8) – IMO Marine Environment Protection Committee Resolution MEPC.174(58)

1. PURPOSE. Reference (a) contains provisions allowing a vessel owner with a foreign type-approved ballast water management system (BWMS), which is installed prior to the vessel's compliance date for meeting the ballast water discharge standard (BWDS), to use that system to meet the requirements of 33 CFR 151.1510 and 151.2025. Under these provisions, the Coast Guard must determine the BWMS has been type approved by a foreign administration in accordance with the International Convention for the Control and Management of Ships' Ballast Water and Sediments (2004) and qualifies as an alternate management system (AMS) that can be used in lieu of ballast water exchange (BWE).

33 CFR 151.2026 allows the manufacturer of a BWMS approved by a foreign administration in accordance with reference (b) to request a Coast Guard determination that their BWMS is an AMS for the purposes of complying with U.S. ballast water management regulations. This policy letter provides instructions on how BWMS manufacturers may request this Coast Guard AMS determination.

2. ACTION. Area, District, and Sector Commanders, and Captain of the Ports shall ensure that the provisions of this policy are brought to the attention of the appropriate individuals in the maritime industry. Internet release is authorized.

3. DIRECTIVES AFFECTED. None.

4. BACKGROUND. The National Invasive Species Act of 1996 allows vessels to use alternate ballast water management methods that are determined by the Secretary of the Department under which the U.S. Coast Guard is operating to be at least as effective as mid-ocean ballast water exchange (16 U.S.C. §§4711 (c)(2) and (e)(1)(D).

Subj: OBTAINING AN ALTERNATE MANAGEMENT SYSTEM DETERMINATION FOR A FOREIGN TYPE-APPROVED BALLAST WATER MANAGEMENT SYSTEM

Since the 2004 adoption of the International Convention for the Control and Management of Ships' Ballast Water and Sediments (Convention), foreign flag administrations have been type approving BWMS in accordance with reference (b). The Coast Guard recognizes some of these systems will likely be installed on vessels which routinely discharge ballast water into U.S. waters before U.S. type approved BWMS are available for all ship types. 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 provisions were included in reference (a).

In developing reference (a), the Coast Guard determined that meeting the ballast water discharge standard (BWDS) should markedly decrease the risks of vessel-mediated introductions of NIS into U.S. waters, relative to the status quo of conducting BWE when safe and practicable. On that basis, the Coast Guard considers that use of BWMSs that have been demonstrated, in accordance with reference (b), to treat ballast water to meet the IMO ballast water discharge standard (which is equivalent to the ballast water discharge standard promulgated by the U. S. Coast Guard on March 23, 2012) should be at least as effective as conducting ballast water exchange in preventing introductions of aquatic nuisance species.

An applicant for an AMS determination must also submit a U.S. Coast Guard type approval application as described in 46 CFR 162.060-12. It is anticipated the manufacturer will pursue and obtain U.S. Coast Guard type approval; either using the data from the tests already completed as provided for in 46 CFR 162.060-12, or by undergoing tests designed specifically to comply with 46 CFR part 162.060.

The use of an AMS by a vessel will be allowed for up to 5 years after the vessel is required to comply with the BWDS in 33 CFR 151.1511 or 151.2030 in accordance with the respective schedule in 151.1512 or 151.2035.

5. PROCEDURE. Enclosure (1) describes the procedure for submission and review of applications for acceptance by the Coast Guard of a ballast water management system as an AMS and the required supporting documentation. Acceptance of a device as an AMS may entail analysis under applicable U.S. environmental laws.

6. DISCLAIMER. This guidance is not a substitute for applicable legal requirements, nor is it itself a rule. It is not intended to, nor does it impose legally-binding requirements on any party. It represents the Coast Guard's current view on this topic and may assist industry, mariners, the general public, and the Coast Guard, as well as other federal and state regulators, in applying statutory and regulatory requirements. An applicant may use an alternative approach for complying with this policy guidance if the approach satisfies the requirements of the applicable statutes and regulations. To request an alternative approach, please submit your proposal in writing to the Coast Guard Marine Safety Center as shown in Enclosure (1).

Enclosure: (1) Obtaining an Alternate Management System Determination

# Obtaining an Alternate Management System Determination

1. DOCUMENTATION. To meet the requirements and intent of 33 CFR 151.2026, a request for determination as an AMS should include English language versions of the following:
   a. The foreign type-approval certificate for the BWMS.
   b. Name, point of contact, address, and phone number of the authority overseeing the foreign type approval program.
      i. Contact information should also include the electronic mail address for the key person(s) responsible for overseeing the foreign type approval.
   c. Final test results and findings, including the full analytical procedures and methods, results, interpretations of the results, and full description and documentation of the Quality Assurance procedures (i.e., sample chain of custody forms, calibration records, etc.).
      i. Information on the testing and test results should include:
         1. Detailed descriptions;
         2. Complete copies of original data reports from the testing laboratory;
         3. Notations for any data requiring validation or estimation and the methods used to do so; and
         4. Detailed descriptions and documentation of the Quality Assurance/Quality Control procedures.
   d. A description of any modifications made to the system after completion of the testing for which a determination is requested.
      i. Description of any modifications made after a BWMS was tested;
      ii. Purpose for the modification; and
      iii. Any associated data needed to support the modification.
   e. A Coast Guard type approval application as described under 46 CFR 162.060-12.
   f. A completed Alternate Management System Review Checklist with column B completed and indicating clearly where in the submitted documentation the relevant sections of the Guidelines for approval of ballast water management systems (G8) are addressed.

2. SUBMITTING REQUESTS FOR AMS DETERMINATION.
   a. As stated in 33 CFR 151.2026(b), all requests for AMS determination must be submitted to:

      Commanding Officer
      U.S. Coast Guard Marine Safety Center
      2100 2nd St. SW., Stop 7102

Washington, DC 20593-7102

b. Two paper copies of the application should be submitted, and an additional copy may also be submitted in digital format on compact disk (CD) if desired to facilitate recordkeeping.

c. Upon receipt of a request, the Coast Guard will:

i. Issue a notice of receipt via e-mail;

ii. Review the request and make a determination of sufficiency;

iii. Concurrent with the review in (b), determine if the component technologies of the AMS are covered in the programmatic National Environmental Policy Act analyses or if additional information is required;

iv. Issue to the manufacturer a letter of acceptance as an Alternate Management System;

v. Post a notice of acceptance as an AMS for the specific BWMS on the Coast Guard's Environmental Standards Division web page: http://www.uscg.mil/hq/cg5/cg522/cg5224/.

3. REMOVAL OF AMS DETERMINATION. An AMS determination issued under this section may be suspended, withdrawn, or terminated in accordance with the procedures in 46 CFR 162.060-18. In the case of a suspension, withdrawal, or termination, the Coast Guard will:

a. Issue a letter to such effect to the holder of the original AMS determination;

b. Post a notice of such action of the Coast Guard's Environmental Standards Division web page identified above, and;

c. Issue a Safety Bulletin notifying the maritime industry that such action has been taken by the Coast Guard.

4. TO DISCUSS AN ALTERNATIVE APPROACH. Potential alternative approaches for complying with this policy guidance should be discussed with the Coast Guard prior to submission, by contacting:

Commanding Officer
U.S. Coast Guard Marine Safety Center
2100 2nd St. SW., Stop 7102
Washington, DC 20593-7102
Electronic mail: msc@uscg.mil
Telephone: 202-475-3402

| Alternate Management System Review Checklist | | | |
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| **A**<br>**Guideline (G8) Specification**<br>(G8 section noted in brackets) | **B**<br>**Cross Reference**<br>(Applicant to identify page, paragraph and/or table where this information is located) | **C**<br>**Adequacy**<br>(USCG to note Y/N/NA) | **D**<br>**Comments**<br>(Applicant – black; USCG – red) |
| **1. BWMS documentation [5]** | | | |
| 1.1 BWMS description, including diagrammatic drawing(s) showing typical pumping and piping arrangements (including a Bill of Materials and the specifications and standard/s which it meets), sampling facilities for control and monitoring systems, operational outlets for treated water and waste streams [5.1] | | | |
| 1.1.1 Control equipment automatically monitors and adjusts necessary treatment dosages, intensities or other aspects of the BWMS necessary for proper administration of necessary treatment [4.10] | | | |
| 1.1.2 Control equipment incorporates a continuous self-monitoring function when BWMS is in operation [4.11] | | | |
| 1.1.3 Monitoring equipment records the proper functioning or failure of the BWMS. [4.12] | | | |
| 1.1.4 Control equipment stores data on monitored functions and conditions for at least 24 months; stored data can be displayed or printed for inspection. [4.13] | | | |
| 1.2 Protections against interference [4.5 ] | | | |
| 1.2.1 Every access beyond requirements of 4.4 requires breaking a seal [4.5.1] | | | |
| 1.2.2 Visual alarm is activated whenever the BWMS is in operation for purpose of cleaning, calibration, or repair; such events recorded by control equipment [4.5.2] | | | |
| 1.2.3 Suitable emergency over-rides/by-passes to protect ship and crew [4.5.3] | | | |
| 1.2.4 By-passes activate an alarm and the event is recorded by the control equipment [4.5.4 ] | | | |
| 1.3 Audible and visual alarm signals in stations from which ballast water operations and ballast water management are | | | |

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| controlled [4.3 ] | | | |
| 1.4 Manufacturer's equipment manuals containing details of major components of the BWMS and their operation and maintenance [5.1.2] | | | |
| 1.5 Operation and technical manual for complete BWMS covering arrangements, operation, and maintenance of the BWMS as a whole, and specifically describing any parts not covered by manufacturers equipment manuals [5.1.3] | | | |
| 1.5.1 Operations section of the manual includes normal operational procedures [5.1.4] | | | |
| 1.5.2 Documentation of simple and effective means for operation and control [4.8] | | | |
| 1.5.3 Operations manual includes procedures in the event of a malfunction of the BWMS, including emergency actions necessary for securing the ship [5.1.4] | | | |
| 1.5.4 Operations manual contains maintenance procedures [5.1.3] | | | |
| 1.6 All working parts of the BWMS liable to wear or damage easily accessible for maintenance [4.4 ] | | | |
| 1.6.1 Means provided to check on drift of, repeatability by, measuring devices that are part of control equipment, and for re-zeroing control equipment meters. [4.14] | | | |
| 1.6.2 Facilities incorporated for checking the performance/calibration of components of BWMS that take measurements [4.6] | | | |
| 1.7 Operations manual describes methods for conditioning of treated water prior to discharge to control residual treatment chemicals, disinfection by products, and the general suitability of the treated water for discharge. [5.1.5] | | | |
| 1.8 Technical section of the manual includes adequate information (including description and diagrammatic drawings of monitoring and electrical/electronic wiring) to enable faultfinding. [5.1.7] | | | |
| 1.9 Technical section of the manual includes specifications defining, inter alia, requirements for location and mounting of components, arrangements for sampling by control and monitoring equipment, and arrangements for ensuring safe operation. [5.1.8] | | | |

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| 1.9.1 BWMS components, if intended for fitting in locations where flammable atmospheres may be present, comply with relevant safety regulations; certified by Administration as safe for use in a hazardous area [4.9 ] | | | |
| 1.10 Operations and technical manual contains a recommended test and checkout procedure, specifying all the checks to be carried out in a functional test following installation and a test by a surveyor when carrying out an onboard survey to confirm the installation meets the manufacturer's specific installation criteria. [5.1.9] | | | |
| 1.11 BWMS is robust and suitable for working in the shipboard environment , with design, construction and materials, including electronic and electrical components (including a Bill of Materials and the specifications and standard/s which it meets), adequate for intended service [4.7.1] | | | |
| **2. Type approval certificate** | | | |
| 2.1 Type approval certificate issued by, or on behalf of, the Administration [6.1] | | | |
| 2.1.1 Specification of any limiting conditions on the usage of the BWMS, including but not limited to ballast water volumes, flow rates, salinity, temperature, etc. [6.1. and 6.2] | | | |
| 2.1.2 Specification of the type and model of the BWMS, including identification of duly dated equipment assembly drawings bearing model specification numbers or equivalent identification details [6.5] | | | |
| **3. Environmental and public health impacts assessment documentation.** | | | |
| 3.1 Protections reduce to minimum danger to persons (i.e., hot surfaces, moving parts, exposure to chemicals, UV, etc) [4.7] | | | |
| 3.2 Complete application dossiers for IMO active substance basic and final approvals [Annex Part 1, 1.6.4] | | | |
| 3.3 Adequate arrangements for storage, application, mitigation, and safe handling of any substances of a dangerous nature [4.2] | | | |

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| **4 Quality Assurance (QA) and Quality Control (QC) [Annex Part 1, 2.1]** | | | |
| 4.1 Quality Management Plan (QMP) addressing the quality control management structure and policies of the testing body, including all subcontractors and outside laboratories) [Annex Part 2, 2.1.2.2] | | | |
| 4.2 Quality Assurance Project Plan (QAPP) describing the specifics of the BWMS, the test facility, and other conditions affecting the design and implementation of the test procedures [Annex Part 2, 2.1.2.3] | | | |
| 4.3 Shipboard Test Plan and Report [Annex Part 2, 2.2.2.1] | | | |
| 4.3.1 Documentation that treatment rated capacity of BWMS was appropriate for ship [Annex Part 2, 2.2.2.2] | | | |
| 4.3.2 Documentation that the volume and pumping rate of ballast water during test was consistent with normal ballast operations of ship [Annex Part 2, 2.2.2.3] | | | |
| 4.3.3 Documentation of all test cycles, demonstrating three valid consecutive test cycles showing discharge of treated ballast water meeting regulation D-2 standard [Annex Part 2, 2.2.2.4 and 2.2.2.8] | | | |
| 4.3.4 Tests meet minimum organism concentrations during uptake of more than 10 times the maximum permitted values in regulation D-2.1 [Annex Part 2, 2.2.2.5] | | | |
| 4.3.5 Documentation that sampling regime was appropriate, either by meeting G8 recommendations for control and treated ballast water including:<br>1) Control tank replicates;<br>2) Treatment tank replicates<br>3) Sample sizes; or<br>4) By documenting appropriate validation of sample volumes and numbers, per EPA ETV. [Annex Part 2, 2.2.2.6] | | | |
| 4.3.6 Documentation that test cycles completed over at least six months [Annex Part 2, 2.2.2.7] | | | |
| 4.3.7 Documentation of source water characterization for salinity, temperature, POC, and TSS [Annex Part 2, 2.2.2.9] | | | |

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| 4.3.8 Documentation of system operations, including:<br>1) Volume and locations of uptake & discharge volume;<br>2) Possible reasons for unsuccessful test cycle or failure of a cycle to meet D-2 standard;<br>3) Scheduled maintenance;<br>4) Unscheduled maintenance and repair;<br>5) Appropriate engineering parameters; and<br>6) Proper functioning of control & monitoring equipment. [Annex Part 2, 2.2.2.10] | | | |
| 4.4 Land-based Test Plan and Report [Annex Part 2, 2.4] | | | |
| 4.4.1 Description of test set-up, including:<br>1) Arrangement of BWMS (Annex part 2, 2.3.9);<br>2) Piping and pumping arrangements (Annex part 2, 2.3.9);<br>3) Tank specifications (treatment and control) (Annex Part 2 2.3.10);<br>4) Facilities for representative sampling (Annex Part 2, 2.3.12;<br>5) Augmentation facilities for DOC, POC, TSS and standard test organisms if used (Annex part 2, 2.3.12; and<br>6) Monitoring facilities for environmental parameters including pH, temperature, salinity, dissolved oxygen, TSS, DOC, POC, and turbidity. [Annex Part 2, 2.3.12] | | | |
| 4.4.2 Documentation system was operated at treatment rated capacity, or scaled as follows:<br>1) 200 M3/hr<TRC<1,000 M3/hr - downscaled no more than 1:5;<br>2) TRC>1,000 M3/hr - downscaled no more than 1:100; and<br>3) Documentation of mathematical modeling and/or calculations demonstrating downscaling used would not affect functioning and effectiveness onboard ship at full scale for which certification is intended. [Annex Part 2, 2.3.13] | | | |
| 4.4.3 Description of cleaning procedures for test set-up before starting testing, and between test cycles [Annex Part 2, 2.3.11] | | | |
| 4.4.4 Description of sampling and analysis procedures for organisms and environmental/water quality | | | |

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| parameters, including:<br>1) Identification of standard methods [Annex Part 2, 4.2];<br>2) Validation of non-standard methods [Annex Part 2, 4.3];<br>3) Validation of appropriateness of sample processing times (Annex Part 2, 2.3.34); and<br>4) Description and validation of facilities and procedures for collecting representative samples [Annex Part 2, 2.3.31; 2.3.32; 2.3.33; 2.3.28] | | | |
| 4.4.5 Results of all analyses for organisms, challenge conditions, and BWMS performance indicators [Annex Part 2, 2.3.23; 2.3.25] | | | |
| 4.4.6 Documentation the BWMS was operated, and performed as designed, within its specified parameters, including power consumption, flow rate, etc. [Annex Part 2, 2.3.4; 2.3.24] | | | |
| 4.4.7 Documentation of all test cycles, demonstrating 5 valid tests with treated water meeting the D-2 discharge standard for each salinity regime for which testing was conducted [Annex Part 2, 2.3.1; 2.3.17; 2.3.18; 2.3.19; 2.3.20; 2.3.36] | | | |
| 4.5 Environmental Testing [Annex Part 3] | | | |
| 4.5.1 Documentation of vibration tests [Annex Part 3, 3.4 – 3.7] | | | |
| 4.5.2 Documentation of temperature tests [Annex Part 3, 3.8 – 3.10] | | | |
| 4.5.3 Documentation of humidity tests [Annex Part 3, 3.11] | | | |
| 4.5.4 Documentation of heavy seas protection tests [Annex Part 3, 3.12] | | | |
| 4.4.5 Documentation of power supply fluctuation tests [Annex Part 3, 3.13] | | | |
| 4.5.6 Documentation of inclination tests [Annex Part 3, 3.14] | | | |