



U.S. Coast Guard Ballast Water Management



U.S. Coast Guard
Office of Operating & Environmental
Standards (CG-OES)



Latest Outreach

- USCG Maritime Commons blog
 - Mr. Jeffrey Lantz, Director of Commercial Regulations and Standards, March 6, 2017
- North American Marine Environment Protection Association magazine article
 - RADM Paul Thomas, Assistant Commandant for Prevention Policy, January 17, 2017
- Code of Federal Regulations
 - 33 CFR Part 151 – Ballast Water Management
 - 46 CFR Subpart 162.060 – Type Approval



Program Updates

- Alternate Management Systems & Extensions to Compliance Dates
- USCG Type Approval of BWMS
- Comparison between USCG and IMO
- Compliance and Enforcement
- Next Steps



Options for Compliance



1. No BW Discharge



2. Coast Guard Approved Ballast Water Management System



3. Discharge to Facility Onshore or to Another Vessel for Purpose of Treatment



4. Use only water from a U.S. Public Water System



Two Temporary Compliance Alternatives



1. Alternate Management System (AMS) – Temporary Designation for up to 5 years



2. Receive an Extension to Vessel's Compliance Date - extension period will vary depending upon TA system availability





Temporary Compliance Alternate Management Systems



- A BWMS is accepted for use as an AMS based on its type approval by a foreign administration.
- More than 60 systems are now accepted as AMS for use in U.S. waters.
- Marine Safety Information Bulletin 010-16:
Harmonizes AMS with extensions policy
 - AMS may be used for 5 years after expiry of the vessel's extended compliance date



Temporary Compliance Extensions



- Marine Safety Information Bulletin 03-17, issued 06 March 2017, explains new extension requirements and time limits
- Vessel owners/operators must apply at least 12 months prior to their compliance date, or may be in jeopardy of being denied
- Failure to plan ahead may result in ship delays or lapse in eligibility to trade in waters of the U.S.



Temporary Compliance Extensions



- Current extension letters will be honored, and may be transferred to new owners
- Extensions granted after 06 March 2017 no longer align with scheduled dry docking dates
 - Letter now includes a specific “expiry date” based on availability of type approved systems and detailed installation plans
 - Final extension to vessel’s BWM compliance date
- Vessels with AMS will not get new extensions



Type Approvals

- First 3 Type Approval Certificates – Dec 2016
 - Optimarin – OBS
 - Alfa Laval – Pure Ballast 3
 - OceanSaver – BWTS MKII
- Applications currently under review
 - Sunrui - BalClor
 - Ecochlor – EcoChlor BWTS
- Additional manufacturers have submitted Letters of Intent stating they intend to apply



How Type Approval Works



Two options to follow (in accordance with [46 CFR](#)):

1. Evaluation of some/all existing test data and information from type approval testing for a foreign administration.
 - Applicant must include:
 - Data and information;
 - Explanation of how submission meets or exceeds Coast Guard type approval requirements.
 - Data and information must be reviewed by independent laboratory (IL).
 - Additional testing and evaluation by an IL may be required.
2. Evaluation of test data and information produced and submitted by an IL.



Independent Lab Program



USCG is working with ILs to ensure quality results, including regular teleconferences to discuss technical issues, certification reviews, and laboratory oversight. The IL program focuses on:

- Consistency in testing
- Best practices
- Lessons learned



Type Approval

- IMO G8 –v– US Type Approval
 - Similarities
 - Administrative Differences
 - Technical Differences



Type Approval Process

USCG v IMO



- Discharge standards are similar but not exactly the same - Viable (IMO) v. Living (USCG) organisms
- Differences between IMO and U.S. type approval testing (G8 revised in 2016, still non-mandatory)
 - Varying Flag Administration interpretations
 - Shipboard testing cycles (IMO: 3, USCG: 5)
 - O&M endurance test (IMO: No, USCG: Yes)
 - Many challenges remain: system scaling, and acceptance of alternate components
- Equivalence depends on Administration Req'ts



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Type Approval Similarities



- Readiness evaluation
- Land-based testing
- Shipboard testing
- Environmental/
Component testing
- Treatment system scaling

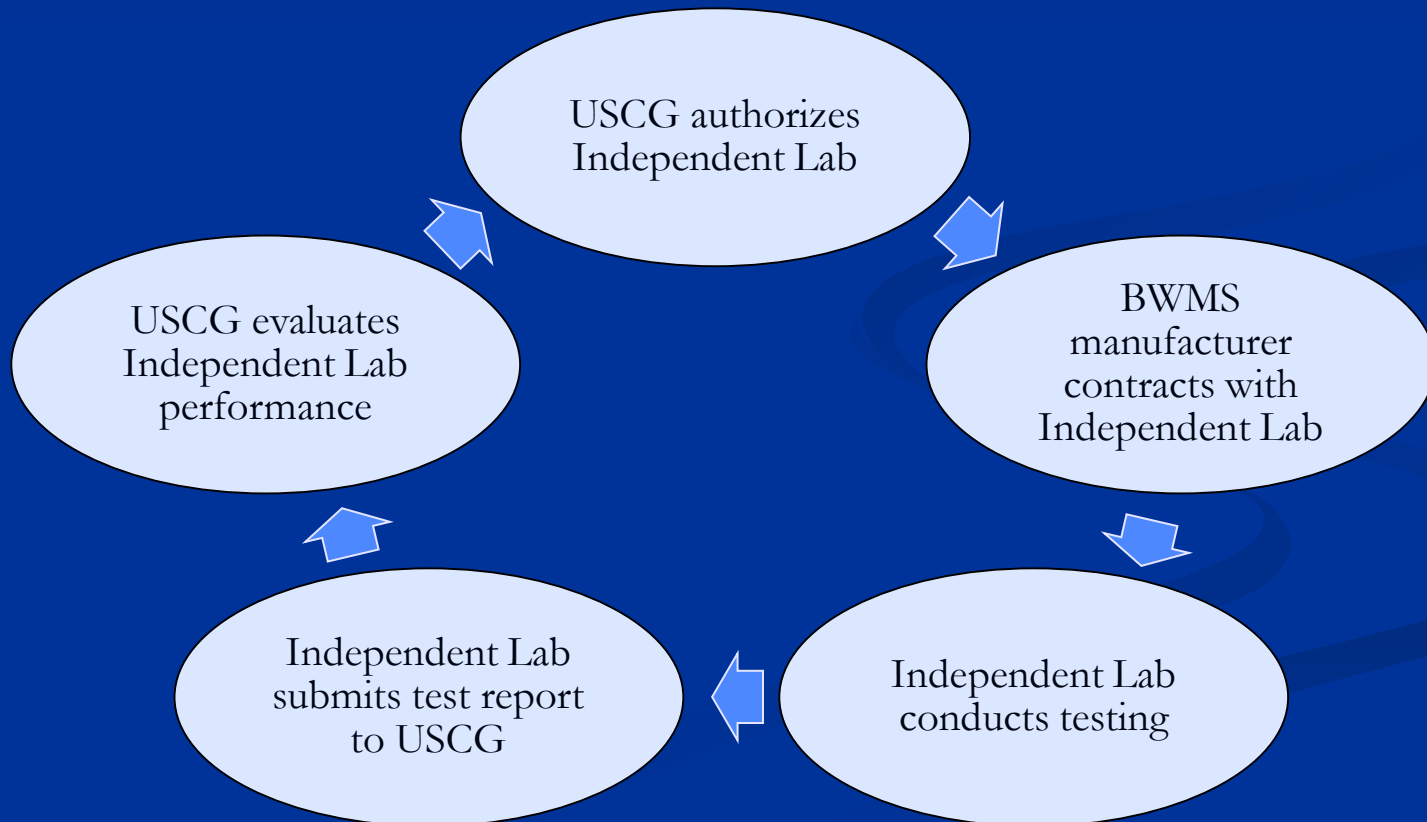




Administrative Differences



- Varying Flag Administration interpretations
- USCG use of 3rd party Independent Labs





Technical Differences



1. Discharge Standard
2. Shipboard Testing
3. Hold Time
4. Component /
Environmental
Testing





1. Discharge Standard



IMO G8

US

Discharge Standard

< 10 Viable Organisms

< 10 Living Organisms

Difference

- Consideration of organisms that are rendered unable to reproduce

Independent Lab Observation

- Some systems able to meet *viable* standard but not *living* standard



2. Shipboard Testing



IMO G8

US

Shipboard Testing

3 Test Cycles

5 Test Cycles

Differences

- Varying number of required consecutive successful test cycles
- Control of treatment system during testing

Independent Lab Observation

- Some systems able to log 3 tests but fail on 4th or 5th cycle



3. Hold Time



IMO G8

US

Hold Time

> 5 Days

> 24 Hours

Difference

- Time required to hold water in tanks before discharge & sampling

Independent Lab Observation

- Extended test program for systems where hold time is key parameter



4. Component/ Environmental Testing



IMO G8

US

Component /
Environmental Testing

2 Hour Endurance Test

4 Hour Endurance Test

Difference

- Length of time required for vibration endurance test

Independent Lab Observation

- Some components able to meet 2 hour test but fail 4 hour test



Summary of Technical Differences



IMO G8

US

Discharge Standard

< 10 Viable Organisms

< 10 Living Organisms

Shipboard Testing

3 Test Cycles

5 Test Cycles

Hold Time

> 5 Days

> 24 Hours

Component /
Environmental Testing

2 Hour Endurance Test

4 Hour Endurance Test



Compliance and Enforcement

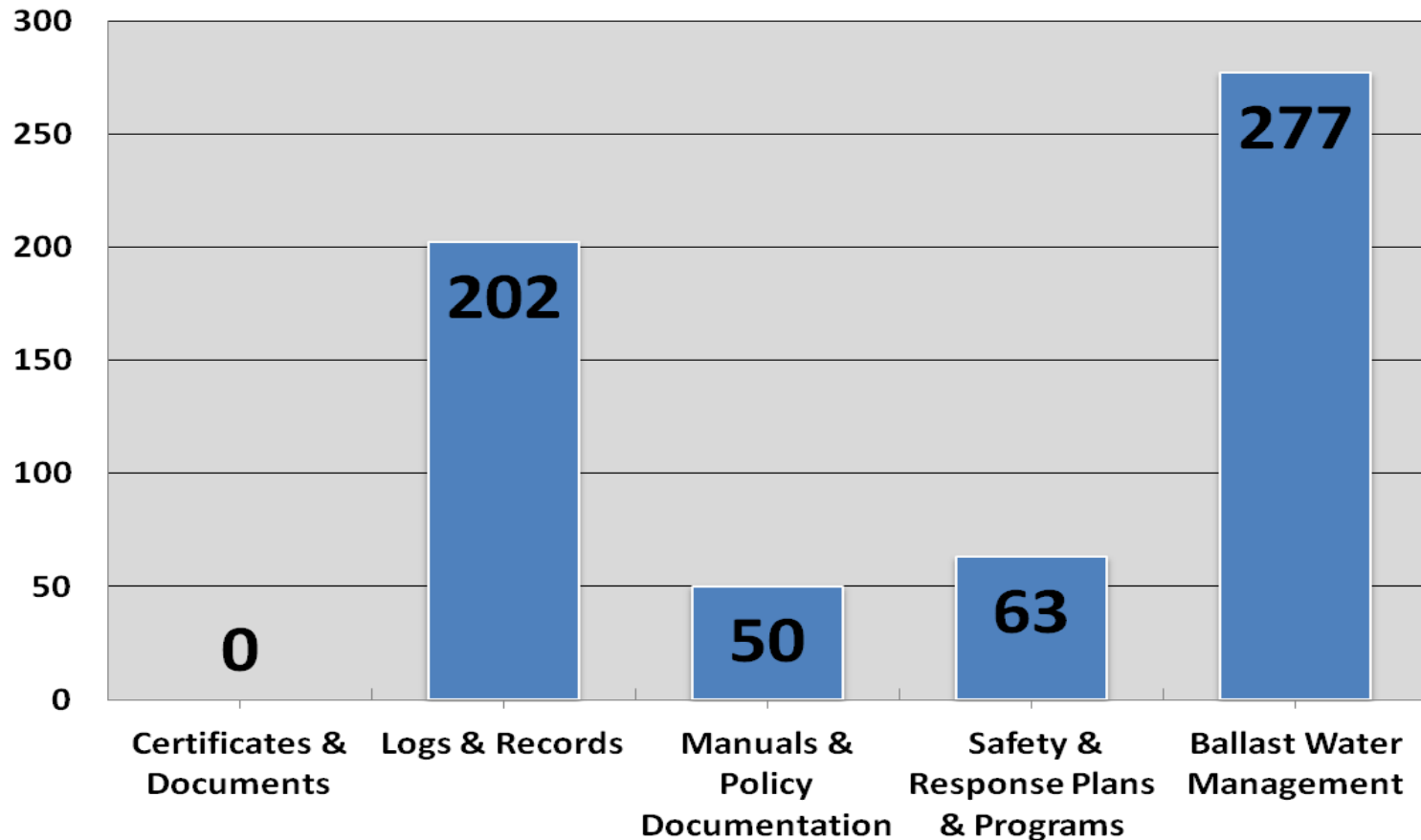
- Assess compliance during regular vessel inspections
 - BWM exams on foreign vessels: 9,300/year
- Follow existing compliance approach
 - Documentation and crew knowledge
 - Equipment condition and operation
 - Sample discharge, if warranted
- USCG R&D - Sampling and analysis method and tools in development
- New NVIC in development for field units, industry
- Deficiencies issued since 2012 Final Rule: 592
- Enforcement actions: 14 (warnings to \$5,500 fines)



Compliance and Enforcement



BWM Deficiencies since 2012





Research & Development



- Current focus is on BWM compliance assessment methods and tools
 - Evaluate 6 “rapid” analysis tools for organisms in 10-50 um size class
 - Improve guidance and specifications for sample ports and sample collection (integrated with ISO)
 - Support revision of ETV Protocol
 - Scaling procedures for BWMS type approvals
 - Investigate sampling during stripping operations
 - Develop draft protocol for standard test organisms 28



Next Steps



- Address challenges to type approval
 - UV systems & alternative methods
 - Modification of system components (filters)
 - Scaling (size, flow rates)
- Develop compliance NVIC, policies
- Remain engaged with stakeholders
 - EPA, IMO, ship owners, manufacturers and IL's



Next Steps (Continued)

- IMO Convention entry into force
 - Develop guidance on contingency measures, including role of BWM Plan
 - Expand trial period experience-building for Guidance on Sampling and Analysis
 - Collect data on treatment approaches that don't meet D-2 standard
 - Ensure that early adopters not penalized including Port State Control



Additional Information



Coast Guard Internet portal:

<http://homeport.uscg.mil/ballastwater>

Approved Labs and BWMS:

Coast Guard Maritime Information Exchange (CGMIX):

<http://cgmix.uscg.mil>

QUESTIONS?

Compliance: E-mail to the Office of Commercial

Vessel Compliance: CGCVC@uscg.mil

Extensions: environmental_standards@uscg.mil