

Ballast Water Management System Testing at Golden Bear Facility

Update

**Richard Muller, Associate Director and Engineering
Operations Manager, Golden Bear Facility
Pacific Ballast Water Group – April, 2017**

Golden Bear Facility

A Ballast Water Test Facility



Approved by the USCG in November 2013 to work as sub-laboratory to DNV-GL for land based and shipboard type approval Ballast Water Management System testing

Completed/Pending Projects



envirocleanse

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Panasonic

- IMO Shipboard
 - Balpure 2010
- IMO/USCG Shipboard
 - Trojan 2013 (submitted to USCG)
 - Ecochlor 2017 (submitted to USCG)
 - Envirocleanse 2017
 - Panasonic 2018-2019
- IMO/USCG Land-based
 - Ecochlor 2017 (Submitted to USCG)
 - Panasia 2017 (completed USCG brackish)
 - Panasonic 2018-2019
- Compliance Monitoring
 - Development 2014-2016
 - Goal to move forward to start in 2017
- R&D Projects
 - full and small scale

Challenges – Solutions - Successes

1. Full schedule. Adding new science program manager position to team.
2. Bill and Rich now full time Ballast.
3. Continued fostering of relationships with local sub-labs (WET, DBP, Bacteria, etc.).
4. Continued development in QA/QC monitoring and control (ISO 17025).
5. Our first FULL USCG application has been submitted for Ecochlor (only 5th received).

Facility - Successes

- Successful at testing a treatment system at the Golden Bear facility with Seawater and fresh water with ambient organisms.



Future Work



- Continuously improving and streamlining facility and operations
 - Freshwater collection and augmentation
 - Laboratory equipment
 - Storage
- Lots of inquiries for type approval testing
- Training students on operation and different types of BWMS
- Providing ground work for student knowledge of BWMSs



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Thank you!



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