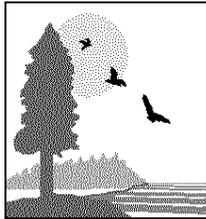


**CALIFORNIA STATE LANDS COMMISSION**

100 Howe Avenue, Suite 100-South  
Sacramento, CA 95825-8202

**CURTIS L. FOSSUM**, Executive Officer

(916) 574-1800 FAX (916) 574-1810

California Relay Service from TDD Phone 1-800-735-2929  
from Voice Phone 1-800-735-2922

**Contact Phone: (916) 574-2568**

**Contact FAX: (916) 574-1950**

June 9, 2011

File Ref: W9777.290

Ms. Stephanie Sanzone  
Designated Federal Officer  
EPA Science Advisory Board (1400R)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, N.W.  
Washington, D.C. 20460

**RE: Science Advisory Board Staff Office Notification of a Public Teleconference of the Chartered Science Advisory Board [FRL-9310-5]**

Dear Ms. Sanzone and Committee Members:

The Marine Invasive Species Program Staff of the California State Lands Commission (Commission) appreciates the opportunity to provide comment to the chartered Science Advisory Board on the near-final report, "Efficacy of ballast water treatment systems; A Report by the EPA Science Advisory Board (May 2011 Draft)."

Since 1999, California has been and remains a national and world leader in the development of effective science-based management strategies for preventing species introductions through vessel vectors. The Commission's Marine Invasive Species Program (MISP) pursues aggressive strategies to limit the introduction and spread of nonindigenous species (NIS), including recently establishing strict performance standards for the discharge of ballast water. California's performance standards serve to force the regulated industry to develop technology-based strategies to manage NIS in ballast water discharges.

California works cooperatively with the United States Coast Guard (USCG) and the EPA in order to advance a consistent, strong, enforceable, funded, national program that pushes technology and the science of vessel vector management forward, while ensuring that the state's existing, world-leading programs be allowed to continue. Based upon the MISP's extensive experience in the management and regulation of vessel vectors, Staff offers the following comments on the May 2011 Draft of the Science Advisory Board (SAB) report on ballast water treatment systems.

### General Comments

Overall, the May 2011 draft of the ballast water treatment report is an improvement over the March draft. Many of the specific comments noted in the Commission staff's March 14, 2011 letter to the SAB were addressed by the current version of the report. However, staff remains concerned that several key concepts discussed in our first comment letter are still not fully addressed by the May draft of the report.

#### **Comment 1 – Measurability does not necessarily equate to system performance limitations**

The report frequently confuses *measurability* (e.g. detection limits) with the *performance ability of BWMSs*. If the detection limits of current measurement methods are not sufficient to measure to standards stricter than the IMO D-2, conclusions should not be made about the ability or inability of systems to meet those standards, as the system's full potential cannot be known. Specifically, the report at times indicates that the detection limits of current testing methods precludes the ability to evaluate if systems can meet stricter standards, but then the report goes on to make conclusions that the stricter standards cannot be met. These two opposing statements will create substantial confusion for regulators and stakeholders.

#### **Comment 2 – Limited availability of system performance data**

The report makes broad conclusions about the ability and availability of ballast water treatment systems to meet a variety of ballast water treatment systems. These conclusions are based on a small subset of the available data on ballast water treatment performance. Out of 51 treatment systems identified as under development or available for purchase, only 9 reliable data sets were collected by the EPA, and only 8 data sets are for systems still on the market. As of May, 2011, sixteen ballast water treatment technologies have received Type Approval according to the IMO G8 Guidelines. An additional two or three systems have completed all land-based and shipboard testing and are awaiting review for Type Approval from their respective administrations. Therefore, the SAB report includes data for only half of the most advanced treatment technologies. Whole categories of treatment systems under development were not reviewed for this report. Therefore this report cannot be considered a comprehensive review of the current and foreseeable progress toward meeting ballast water discharge standards more stringent than IMO.

### Specific Comments

Pg 14, Table 2.1 –The California interim standard for organisms greater than 50 microns is “no detectable living organisms.” There is no volumetric requirement associated with this standard. The standard is not “no detectable living organisms” per cubic meter. Similarly the California Final Standard is set as “zero detectable living organisms for all organism size classes.” There is no volume or organism concentration associated with this standard.

Pg 19, line 8 – Recommend replacing “hull fouling” with “vessel fouling” or “biofouling.” Fouling organisms may be found on many wetted surfaces other than the hull (e.g. propeller, stabilizers...).

Pg 41, lines 37, 40-41 – What does a “decrease in total bacteria” vs. a “significant reduction” in total bacteria mean. These terms are ambiguous.

Ms. Stephanie Sanzone

June 9, 2011

Page 3 of 4

Pg 42, line 41-43 – The reviewers gave systems a ‘D’ if “any living organisms in any size class were found following treatment.” The 100x and 1000x standards are not set as “no detectable,” for all organism size classes, and therefore it seems inappropriate to state that any organisms in any size class warrants a ‘D’ for that system. As stated in lines 38-39, “current testing methods do not provide the resolution required to conclude that the 10x standards can be met.”

Therefore it would seem appropriate to state that current testing methods also cannot conclude that the 10X standard (as well as the 100x and 1000x standards) cannot be met. The current methods and detection limits do not allow for conclusive statements either way at this time.

Pg 44-45, Table 4.1 – Recommend adding that the information used to develop Table 4.1 is referenced in Appendix A.

Pg 46, line 10 – The report frequently states that 9 systems had reliable data for performance assessment. However, the panel only reviewed 8 of those data sets (see Table 4.1) because one system has been removed from the market. Therefore the report should be adjusted to note that the conclusions drawn were based on 8 data sets and not 9.

Pg 47, lines 25-33 – There is no note of whether or not the panel reviewed the ability of treatment systems to meet standards for human health indicator species. These species are important components of the IMO and CA standards and should be included in the analysis for this report.

Pg 47, line 38-39.- Given that only 8 of 51 systems were assessed for compliance with any of the existing or proposed standards, it seems a bit of a reach to say that “no current BWMS types can meet a 100x or 1000x discharge standard.” The authors have noted that “current testing methods do not provide the resolution required to conclude that the 10x standards [and presumably anything more stringent than the 10x standards] can be met.” Therefore, the best that can be said is that based on the data available for 8 ballast water treatment systems, the lower performance limit does not appear to indicate that the 100x and 1000x standards can be met. However, methods are not available and insufficient testing of systems has been conducted to verify this statement at this time.

Pg 78, lines 13-14 – The California standards are not “suggested”, they are established in statute. Additionally the California standards were not implemented through the Clean Water Act Section 401 certification process. They were enacted in separate California statute and then implemented via California regulation.

Pg 96, lines 1-21 -This is the only section in the report that addresses any aspects of the cost of treating ballast water. While we agree that a comprehensive comparison of the cost of onshore facilities vs. shipboard treatment systems is necessary, we recommend that this information be included in a separate white paper and not in this report, unless, discussions are included in other parts of the report to address costs associated with the different types of ballast water treatment systems and costs associated with testing, etc. This section would be improved if it focused solely on effectiveness.

Pg 102, lines 4-36 – We believe the main body of the report should reflect the majority opinion of the panel. The appendix could be used as an avenue to present competing opinions, but since this document will be utilized by many government regulators, researchers, and

Ms. Stephanie Sanzone

June 9, 2011

Page 4 of 4

stakeholders as the best available assessment of treatment systems, the panel should agree upon one thesis/set of statements for the main body of the report.

Pg 110, Section 6.7 – This section includes no summary of the information gathered from the review of system performance data. Instead it jumps from a summary of what is wrong with available data to alternatives to shipboard treatment. There is no recognition of the fact that great strides have been made in the development of shipboard ballast water treatment technologies. While only limited data was available for this analysis, it is still clear that shipboard treatment is substantially and significantly reducing the numbers of aquatic organisms in ballast water. This will result in a reduction in the number of organisms being discharged into US waters and will likely result in a decrease in the introductions of new species. This success should be celebrated.

Additionally, this section seems to have been hastily assembled. There are duplicative bullet points, and the charge questions – the reason for development of this report - are not referred to nor answered.

Pg 111, lines 19-28– It is inappropriate to focus on cost in this summary statement given that actual cost numbers are presented in the text, and no economic information is provided for shipboard systems in comparison to reception facilities. Additionally, the cost data that is presented in the text is out-of-date.

Thank you for consideration of these comments. If you have any questions, please do not hesitate to contact me.

Sincerely,

Maurya B. Falkner  
Marine Invasive Species Program Manager  
Marine Facilities Division

CC: Kevin Mercier, Acting Chief, Marine Facilities Division