



Catherine Witherspoon
Executive Officer
California Air Resources Board
1001 I Street
Sacramento, CA 95812

February 28, 2006

Subject: Comments on the “Draft Emission Reduction Plan for Ports and International Goods Movement in California”

Dear Ms. Witherspoon:

The Pacific Merchant Shipping Association (PMSA) appreciates this opportunity to comment on the “Draft Emission Reduction Plan for Ports and International Goods Movement in California”. PMSA wishes to acknowledge the tremendous efforts of the California Air Resources Board (CARB) for preparing a concise document on this very complex and somewhat controversial subject in such a limited amount of time. We appreciate the ability of the CARB staff to address many of the multifaceted elements of the intermodal freight sector of the maritime industry and to describe these activities in a manner that is clear and understandable to the average person. Given the tight schedule under which this document was created, its overall quality is a tribute to the efforts and dedication of all persons involved and you are to be commended for its completion.

PMSA and its member companies, representing approximately 90 percent of the container cargo that transits the west coast of the United States, are committed to efficiently dealing with the increased volumes of cargo, created by the demands of the people of California and the whole of the United States, in an environmentally responsible manner. We recognize that we are in a key position of providing services to a healthy, growing sector of the state and national economies which results in some adverse impacts to the environment. As a result, our industry believes that there is a very real need to balance the needs of the economy with those of the environment and we are committed to achieving that balance.

Our position echoes that of Governor Schwarzenegger, who has called for such balance in his endorsement of expanding our port capacity while at the same time achieving a reduction in harmful port emissions. PMSA is committed to achieving the Governor’s goals. We are making marine terminals more efficient to meet the ever increasing demand for imported goods and to providing efficient and affordable means for California business to export products abroad.

However, while we believe the CARB emission reduction plan is a sincere attempt to meet part of the Governor's plan, we find that there are serious flaws that preclude this plan in its current form from being a sound basis for such balancing and any subsequent public policy decision-making. There must be a concerted effort to improve the underlying assumptions on which this report is based prior to making the best long-term decisions that we can. At the same time, we fully support moving forward in implementing those preliminary measures that are available to reduce impacts while we continue to better understand the scope of the issue and how to address the impacts in the future. It is with a strong commitment both to ultimately improving air quality and maintaining an appropriate balance between emissions reduction and economic development in mind that we submit these comments.

The Scope of the Plan is too Limited

The most significant comment that we can offer in response to the request on the scope of the study is that it is far too narrow. "Goods movement" in California is much larger in context than Ports and international cargo. If this process was to achieve a balance between the need to improve California's infrastructure and to improve our quality of life, then the study has unfortunately failed to do so. Because it ignores the overwhelming majority of freight and goods moved throughout our state, especially the extensive distribution of goods throughout California that have nothing to do with Ports and international trade, the plan ultimately fails to address the overwhelmingly diverse impacts of freight transportation on California's air quality.

By focusing only on international goods the report inadvertently ignores the majority of the health impacts and air quality issues facing the freight, goods and cargo industries in California. Moreover, even taking the limited focus of this report at face value, the scope of the plan fails to properly assess significant international goods movement at California's airports, international borders, and international trade occurring across state boundaries. For this and the above reasons we appreciate that this report is not being proposed as the basis for any current or future rulemaking or regulatory procedures.

Lack of Nexus Between the Goods Movement Action Plan and Environmental Impacts

Of great concern is the lack of any attempt to quantify the benefits of constructing the infrastructure necessary to support goods movement in California. PMSA firmly believes that there is a cost to doing nothing with our transportation infrastructure and therefore there must be a benefit to moving forward with the proposed list of projects. In order to achieve the prime objective of the Goods Movement Action Plan by moving forward with infrastructure improvements simultaneously with environmental benefits, we would suggest that the study should be revised to show how both factors work together.

Without an analysis of the cost and benefits of improving the roads and rail lines that service the people of California it cannot be determined if the projects under consideration will assist or delay in improving the environment. The assumption seems to be that if we focus all of our efforts on improving the technologies and practices of maritime goods movement that we can solve all of California's air quality problems. It is simply shortsighted to assume that we will not be investing anything into the dilapidated

roads and rail lines which, because they are currently inadequate to service the increasing population of the state, contribute to congestion which results in additional emissions. There is no consideration of how much worse things will get without the infrastructure improvements in this report. More troubling, there is no nexus between the infrastructure improvements and the quality of life for the people of California.

There is a Lack of Credible Background Data for this Analysis

Last year PMSA was involved in the Port of Los Angeles' No Net Increase Taskforce and, as you are no doubt aware, we believe that process was significantly flawed because it was organized around achieving a pre-determined, politically-driven objective with inadequate data on an unrealistic timeframe regarding complex issues of international importance and scope. Unfortunately, we see some of the same issues arising in this report.

We remain hopeful that our comments will be received in the spirit of improving your analysis and achieving reasonable, honest strategies to reduce environmental impacts from the movement of goods within, and through, California. Again, PMSA is committed to reducing the emissions impacts from the maritime industry in a way that will allow for the economic development of the state, while improving the quality of life for us all at the earliest possible date. In order to achieve that goal we believe that the following must be addressed:

- A comprehensive emissions inventory on all goods movement sources throughout the state must be completed. Taking the limited data from the work done by the Port of Los Angeles' No Net Increase (NNI) Taskforce and extrapolating it to other parts of the state is inappropriate. Each and every sector of the goods movement chain varies depending on local conditions and population needs. Operations at the Port of Oakland cannot be extrapolated based on those at the San Pedro Bay ports. Operations in the Central Valley are driven much more by agriculture than by Ports and San Diego's freight profile is characterized by the challenges posed by cross-border traffic with Mexico.
- The growth estimates used are highly suspect. First and foremost the cargo forecasts used for the NNI process assumed that there were no constraints on cargo capacity. The basis for the Goods Movement Action Plan is an acknowledgement that the infrastructure servicing the Ports and other elements of the goods movement system are already constrained and are going to become more constrained unless something is done. Further, a cargo forecast for the San Pedro Bay Ports done several years ago to justify more expenditure in port development cannot be used to estimate statewide growth in other ports.
- The Plan does not demonstrate how the included reductions will meet the public health goals. It is understood that the plan will become a part of future State Implementation Plans, however it does not show what level of emission reduction is necessary from freight and cargo transportation to achieve the attainment

standards, or if the attainment standards can even be achieved if all the measures listed are implemented.

- There is no feasibility analysis or implementation strategy for the “New Reduction” measures included in the plan. Just as an example, the expanded use of shore power is listed, but CARB has not yet completed their feasibility study on this strategy (a study that was expected in the middle of 2005); yet the inclusion of cold-ironing in the plan implies that it is a feasible measure and emission benefits have already been assigned. Similarly, the assignment of a fleet of cleaner vessels is assumed yet there is no indication of how that would be done much less an evaluation of the technologies that are supposed to reduce NOx emissions by 90% and PM by 60%.

Because of these uncertainties we believe that it makes more sense to take the time to refine the current and future inventories, project future contributions based on realistically constrained growth projections within our industry and the inclusion of all other forms of freight and cargo movement, and use that information to determine the magnitude of emission reductions necessary to achieve the public health goals as a system. This will encourage a discussion based on a defined need, facilitate a cooperative dialog with the various sectors of the domestic and international freight and cargo transportation industry on what needs to be accomplished and encourage innovation among the industries to achieve a defined goal over a specific time frame. The unfortunate impressions one is left with from this report are that the Goods Movement Action Plan is an open ended process with no clear objective and the strategies to achieve the public health objectives have already been determined without any input from those that operate the vessels and equipment.

Recommendations

- Conduct a new and expanded cargo forecast for the entire Goods Movement Sector in California.
- Complete a source apportionment analysis of all freight transportation sources in California with the goal of assigning specific emission reduction goals to achieve the ambient air quality standards at the earliest possible date.
- Do the necessary work to better define the emission sources. Too much speculation is involved in the current emission inventories of the maritime trade sector. For ocean-going vessels there needs to be a more comprehensive listing of the types of engines in use and testing of the emissions from those engines. There also needs to be in-use profiling of how ships operate and the types of fuels they use when in California waters and in California ports. While we understand that there is a general reluctance to do this type of work it is critical to understand the sources in order to design control strategies that will most effectively enable this category to achieve defined goals.

- There needs to be an analysis of the benefits of the proposed infrastructure projects to improve goods movement. This analysis should not only quantify the benefits of the projects but should also quantify the impacts of not implementing those projects so we can all understand the importance of these effort to maintaining the vital economic growth benefits of trade while minimizing congestion impacts and how those projects will assist in achieving the public health goals.
- The goals of the Emission Reduction Plan need to be placed within the context of achieving the health based ambient air quality standards. This is necessary to understand what level of emission reduction is required and focus on those measures that can most effectively achieve those goals at the earliest possible date. There is also a need to develop criteria and metrics that will enable the Goods Movement sector to measure progress and make adjustments over time.
- The emission control measures should be characterized as a preliminary list subject to further review and development. The current approach implies that implementing the measures listed on the schedule provided will provide attainment. More flexibility is needed and cost-benefit analyses of multiple approaches to reducing emissions from specific sources, especially those operating under international and federal law, should be included. As we noted earlier some of the measures listed such as rescheduling of vessels and greater penetration of cold-ironing are premature and may fall short. The industry should be encouraged to work towards a goal without being told how to achieve that goal to encourage innovation and more effective solutions.
- Continue to implement those control strategies that are available today to reduce emissions. This should include a robust analysis of the potential effectiveness of implementing voluntary incentive programs to reduce emission reductions where regulations do not currently exist.

Again, PMSA wishes to thank you for the opportunity to provide comments on the Emission Reduction Plan, if you have any questions or would like to discuss this information request further please contact me at (562) 377-5677.

Sincerely,

T.L. Garrett
Vice President

Cc: Barry R. Sedlik, BT&H
Cindy Tuck, P.E., CalEPA

Comments on Emission Reduction Plan

Executive Summary

Emission Inventory – The fact that the growth forecast tracks with the Port of Los Angeles NNI report is of great concern. Let us be clear that the growth forecasts associated with the San Pedro Bay ports are in serious need of update. The majority of the information collected for the forecasts predates 1999. More importantly the “San Pedro Bay Long-Term Cargo Forecast (Mercer 1999, updated 2001)” was an unconstrained forecast that helped the Ports to justify their need to expand and to get a significant amount of federal funding to support that expansion. A realistic growth forecast that includes realistic constraints on the future port growth is necessary.

For cargo handling equipment short term historical data is used that exceed even the predicted increases in Mercer forecasts for reasons that are not explained. For harbor craft a two percent growth is assigned for reasons that have no supporting data.

For all ocean going vessels the growth is tied selectively to the Mercer container cargo forecast even though it is clear from the Mercer study and historical data that other types of cargo, including liquid bulk, dry bulk and break bulk are not expected to grow at anywhere near the rate of container growth. In some cases the growth is actually predicted to be negative. These decisions result in a major overestimation of ship emissions since roughly fifty-percent of ships calls are not container ships.

Even for container vessels this rate of growth makes no sense based on historic data as noted in the report “Forecast of Container Vessel Specifications and Port Calls within San Pedro Bay (Mercator Transport Group, February 2005). Although, container throughput has increased approximately 350-percent over the last fifteen years container vessel traffic has increased less than 30-percent over this same time frame. Economies of scale using larger, more modern vessels that result in less emissions per container transported is ignored by using the Mercer growth forecast for this source category. The growth forecasts provided by the recent Mercator container vessel forecast study was not used in the NNI work and appears not to be used in this plan for reasons that we do not understand. This overestimation of the ship emissions impacts the entire report. If you overestimate 50% of the emissions by such a large margin you are required the resulting emission reduction measures are equally overestimated.

The flaws in that report were commented on by the PMSA

In response to the question by CARB on whether dividing locomotive emissions between domestic and international operations is appropriate, the answer is NO. First we question the estimates of 35% and 40% for the Ports. We would point out that in the best case over 60% of the goods movement by rail is being excluded from this analysis. Not only does that underestimate the emissions from this category, it also minimizes the justification for improving rail infrastructure to serve the needs of California.

For trucks our response is the same. Not including the vast majority of trucks involved in goods movement underestimates the impacts of that category, the health benefits that can

be achieved in light of future regulations and strategies and minimizes the reasons to improve the roadways.

Emission Reduction Targets- Pg. ES-4.

It is interesting that the goal of achieving the 2001 level by 2010 is not included in this section. It is also interesting that achieving the ambient air quality standards by the attainment dates is also lacking. PMSA believe the objective is to aggressively reduce the source of all emissions to achieve the public health standards at the earliest possible date. We also recognize that the emissions goals specified in this plan fail to assure us that the emission reductions called for in the plan are either necessary or adequate to achieve the public health standards.

Emission Reduction Strategies.

Again, the goal of achieving 2001 levels by 2010 shows up with an acknowledgement that only ships fail to meet this goal. However, given all of the uncertainties of the projected growth, effectiveness of control strategies, and lack of any nexus between goods movement infrastructure improvements and public health standards, we believe that goal should be eliminated from the plan.

PG ES-4. The discussion of harbor craft includes a statement that shore power for harbor craft is under consideration. CARB should be aware that most harbor craft that spend any extended amounts of time at dock are either completely shutting their vessels down or are already utilizing shore power for tugboats and have been doing so for many years.

Cargo handling equipment control strategies should be updated to show that the proposed Cargo Handling Equipment Regulation was approved and the emission benefits of the regulation should be included in the baseline. The statement that the future goal is to achieve 85% reduction of PM should be clarified to show that is the level that will be achieved by yard tractors when they transition to on-road engine standards beginning in 2007 and that yard tractors represent the majority of the emissions from this category.

Truck control strategies that focus on fleet modernization are the appropriate way to go in our opinion. These benefits should not be limited to trucks that service the ports but to all goods movement trucks that operate in proximity to communities or sensitive receptors. One question that we would pose on this strategy is how much longer would it take to achieve the goals outlined just through normal turnover rates of replacement? The amount of resources dedicated to this effort should be based on the additional benefit beyond normal turnover rates and the associated cost benefit of pursuing the strategy. If 80% of the trucks in 2020 are going to meet 2007 standards then the effectiveness of putting resources to achieve the other 20% of the benefit should be considered in light of the duration of the benefit provided.

Table 3

Ships – Missing from the list of measures is the establishment of new international standards for ship engines and fuel quality. IMO Annex VI went into force in May 2005 and the emission standard for ocean going vessels is retroactive to January 2001. The

benefits of this measure should be included in the plan. Further, the objective of establishing more stringent and comprehensive international ship emission and fuel standards should also be included in the plan. It is at least as feasible as the full use of cleanest vessels in California. This comprehensive approach should not be ignored as the best strategy to achieve our goal.

Harbor Craft – Incentives for cleaner engines is ongoing and the status line should be revised to show that this strategy did not end in 2005. As stated above shore-side electrification has already been implemented for many harbor craft in service today and this measure should indicate that the measure's implementation dates back to the 1990's.

Cargo Handling Equipment – The table should reflect that the Cargo Handling Equipment Regulation was passed and will begin formal implementation in 2007 and that the rule requires that all equipment subject to the regulation meet Tier 4 standards, where available. The majority of the emissions are generated by yard tractors that will clearly achieve the 85% reduction in PM under the regulation. The other types of equipment will also largely meet that goal depending on the availability of control technology in the future.

Operational Efficiencies – Efficiency improvements and mode shifts are well established on-going measures implemented by the maritime industry and therefore it is inappropriate to list the status of these measures as new.

Health and Economic Impacts

As stated above we accept that an aggressive strategy is necessary to reduce the health impacts of Goods Movement in California. However, the assumptions inherent in the future level of health impacts and benefits of implementing the plan are based on flawed and incomplete assumptions of the growth, technology availability and penetration. There is also a lack of nexus to all other sources that also affect public health. Until these issues are addressed we believe the tables under this heading are premature and should be removed.

Chapter 1. Public Health Impacts

We note in this section that the current estimate attributes eight percent of health effects to the Goods Movement Section assessed here for all of California. We assume that CARB will be modifying this section as appropriate following the peer review of this methodology.

The future levels of health impacts are dependent on estimation of cargo volumes tripling by 2020. This is an unconstrained forecast that did not consider limitations resulting from limited terminal, roads, or railways. This also assumed continued growth of the Asian and U.S. economies that would be unabated. Many things have occurred since this forecast was originally completed in 1998, not the least of which was the disaster of September 11, 2001. In addition, fuel costs have more than doubled, congestion at the Ports in 2004 has resulted in lower than expected throughput this year, and other ports are taking more market share than was expected under the Mercer study. All of this makes

the Mercer projections uncertain and makes the case that an updated cargo forecast is long overdue.

Chapter II. Port and Goods Movement Emission Inventory

As stated above the focus on only international import and export goods is far too limited and should be expanded to include all goods movement in California. This analysis is further complicated by including all emissions generated by California ports, whether related to international trade or not. No goods movement sources should be excluded from any analysis.

We would refer to you for future reference the U.S. Department of Transportation, Bureau of Transportation Statistics' report "Freight in America" (January 2006). While this was admittedly published after the release date of this plan, it is a review of data already released under a 2002 commodity flow survey and related composite estimates of total trade flows. Briefly summarized, but to our point of contention, is the data that shows total domestic and non-import value of interstate and intrastate freight transported in California was approximately \$1.8 trillion in 2002. By comparison, containerized trade through the Ports of Long Beach, Los Angeles and Oakland by value was approximately \$270 billion. Of the \$924 billion worth of goods originating in California for domestic transport, \$366 billion was in interstate commerce, leaving 60% of the goods flowing intrastate. By value, twice the level of commerce generated by the entirety of the three largest ports in the state (i.e. not only intermodal cargo) and being delivered throughout the country is traveling in intrastate California commerce alone. By tonnage these staggering statistics are even more compelling as 91% of California's non-import commodity flow survey goods and freight are moving in intrastate commerce. Nationally, only 9% of total tonnage transported in the U.S. involved some form of waterborne transportation. And, while the maritime transportation system carried some 41% of the value of U.S.-international merchandise trade and 78% of the weight, the 1.7 billion tons of merchandise moved in and out of the United States in 2002 accounted for only 9% of the total 19 billion tons of total commercial freight transported on the nation's transportation systems.

The discussion on expected growth on page II-2 makes our point that the growth forecasts developed for the NNI taskforce are in need of revision. The SCAG estimate that cargo would double or triple over the next two decades and the Oakland estimate that cargo would double between 2002 and 2020 strongly argue that the estimates of emissions based on the NNI projects need to be adjusted to reflect a refined cargo forecast that considers the impacts of not improving the infrastructure and the potential impacts of cargoes finding other points of entry to the marketplace. There is a separate issue of cargo velocity at marine terminals and the ability of those terminals to utilize technology to handle additional cargo in an era that will see limited expansion of terminal size.

E. Future Refinements

All three major ports in California are currently in the process of updating their emission inventories. This update is particularly important for the Ports of Los Angeles and Long

Beach since it will enable a comparison of the actual growth in emissions against those that have been assumed under this Emission Reduction Plan and the No Net Increase Taskforce that generated the underlying assumptions. This comparison should be the first step in adjusting the emission and associated health impacts of the goods movement system. This section should also acknowledge the need to complete a comprehensive, state-wide forecast and to improve the emission estimates from the sources based on actual testing of the sources.

Chapter III. Emission Reduction Strategies

PMSA strongly supports the need to reduce emissions from Goods Movement sources. Many of the strategies included here are already underway and are clearly defined and should be implemented as aggressively as possible. However, other measures are based on speculation. As an example, rescheduling vessels may not be feasible due to the schedule of the vessels at their other ports of call. The feasibility analysis of cold-ironing by CARB has been delayed and not reviewed at this time. Retrofit technologies for ocean-going vessels are not defined but there is an assumption of the level of emission reductions that can be achieved. Without an analysis of the operational, legal, and cost impacts of these strategies we believe it is premature to list them. This does not mean we do not think that some of these measures cannot or will not be implemented, it just means that it is irresponsible to assume the effectiveness of measures that have not been assessed. Further, we do not want to leave the impression that only these measures are available. As stated above we think international standards could facilitate meeting the air quality attainment goals of the plan.

3. Emission Reduction Goals

These goals need to be put in context with the attainment of the ambient air quality standards. The Goods Movement sector needs to fully understand their role in achieving the public health goals of the Clean Air Act and that can only be done by putting this in context with all of the sources that contribute to unhealthy air quality in California.

B. Ships

We strongly support the suggestion to form an international coalition of environmental agencies, ocean-carriers, engine manufactures and port authorities to address the uncertainties in reducing emissions from ships. Many of these issues have been discussed above but an effective mechanism to resolve these issues does not currently exist and in our opinion is long overdue. This does not preclude the advancement of the measures listed here but will assist in resolving the level of implementation that is practical and the emission reductions that can realistically be achieved. More importantly, such a forum would encourage the development of additional measures that might achieve the air quality goals sooner and more effectively.

PMSA has strongly supported the ratification IMO Annex VI by the United States and the development of a North American Sulfur Emission Control Area (SECA). We sponsored Assembly Joint Resolution Number 8 in the California Legislature to this end and have lobbied California's United States Senators to support ratification of the convention. We also believe that an international approach to establishing more

comprehensive engine and fuel standards is a superior approach to state or regional efforts that will result in a patchwork of confusing and potentially conflicting measures.

D. Cargo Handling Equipment

PMSA largely supported the passage of the Cargo Handling Equipment Regulation that was approved by the CARB Board on December 8, 2005. This discussion should be updated to acknowledge not just the implementation of the regulation but also the efforts at California's ports to introduce after-combustion technologies and cleaner fuels in advance of the regulation.

G. Operational Efficiencies

PMSA and our members strongly support measures to improve the operational efficiencies at the Ports. Intermodal rail facilities have been in use at California's ports for over a decade and terminal operators are constantly working to improve the efficiencies of their facilities and the increased use of technology is a key part of that strategy. Extended gates hours were supported by the terminals in the Ports of Los Angeles and Long Beach through the implementation of the PierPass system to move trucks to off-peak hours but was not mentioned in this section. The concept is a good one and we believe is already contributing to significant emission reduction. The challenge for the Emission Reduction Plan is to quantify those benefits and work with industry to assist in the implementation of those that will not only improve air quality but also the velocity and flow of cargoes without creating unintended consequences.

J. Summary of Strategies, Table III-13

Vessel Speed Reduction Agreement - PMSA is a signatory to the VSR MOU and is in strong support of the program. We have been working with the Ports of Los Angeles, Long Beach and our members in an effort to improve the compliance level. Under the present system, a vessel is either in compliance if steaming at 12 knots or below and not in compliance if traveling at a faster speed. Since any reduction from full speed will provide emission reduction benefits we would suggest adjusting the compliance monitoring to reflect the actual emission benefits.

Main Engine Emission Standards – As stated above PMSA supports the ratification of IMO Annex VI and the development of a North American SECA. We also support an international effort to evaluate the development of more stringent and comprehensive international engine and fuel standards as the best approach to avoid a patchwork of regulations.

Cleaner Marine Fuels – While we support the concept of using cleaner fuels in all ocean-going vessel engines we do not support this California specific regulation because of the potential of creating a patchwork of regulations throughout the United States. International mechanisms are the preferred way to implement these types of requirements, but that does not preclude voluntary and incentive based programs to achieve early implementation of these measures. PMSA welcomes incentive programs that can facilitate the purchase and consumption of lower sulfur fuel prior to implementation of CARB's proposed auxiliary engine regulations or a SECA. There are

concerns over the availability of such fuel. The ports must work closely with ship owners to schedule any necessary fuel tank modification to coincide with dry dock schedules. We question how an incentive program can be written to include penalties of fees for non participating vessels.

Shore Based Power – Our members believe that shore based power is a proven technology in certain circumstances and suitable as an emission reduction strategy for certain qualifying vessels. Data indicates that it is not the most cost efficient method to achieve gross reduction benefits from the industry. There are also concerns within the industry in regards to the standardization and safety of this technology that need to be addressed.

Dedicate the Cleanest Vessels to California – Market forces have effectively brought larger, newer and cleaner vessels into the Trans-Pacific trade calling at the California ports. This will likely continue as smaller, older vessels are moved into different trade lanes. There will nonetheless be a population of smaller, older vessels calling at the port for the foreseeable future. Many of these vessels call infrequently or service specialized trades. In addition, carriers often need to charter vessels from the world market for short to extended periods of time in order to cover additional cargo demands or unscheduled fleet repairs. It is possible that the available vessels would not satisfy the requirements of this proposal. Because of these complexities and variability with companies, trade routes and cargo mix, any requirement to route newer, cleaner vessels would need to be analyzed on a case-by-case basis, as this poses the potential for interfering with international trade.

Creation of a SECA – The PMSA supports the EPA’s current efforts to collect data and petition the IMO for creation of a North American SECA. This will result in cleaner fuel being used in ALL U.S. ports and Canada and Mexico. By creating a North American SECA, California’s ports will not be placed in an uncompetitive position versus ports in other states or countries. Limiting a SECA to the West Coast could succeed in diverting cargo to other ports that would have to be railed or trucked back into the South Coast – resulting in higher emissions.

Retrofit Program – We support this concept and our members are already working closely with CARB and others on the demonstration of fuel treatment systems for emulsification and the testing of a selective catalytic reduction device on a ship auxiliary engine. To that end we also support incentive programs that encourage the development and demonstration of retrofit technology to be used on ocean-going vessels. At this time it is difficult to determine what technical options will be available and significant effort is needed to determine the feasibility and benefits of this concept.

Additional Measures – This concept need to be added to the list of measures to provide for flexibility and to provide means of achieving emission reduction shortfalls of the other listed measures. The creation of an international coalition of regulators, ocean-carrier lines, engines manufactures and the port authorities should be part of this concept.