



NATURAL RESOURCES DEFENSE COUNCIL

Via Facsimile and Electronic Mail
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February 28, 2006

Sylvia Oey
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California Air Resources Board
1001 "I" Street
Sacramento, CA 95814

Re: Comments on the Draft Goods Movement Emission Reduction Plan (ERP)

Dear Ms. Oey:

Thank you for this opportunity to submit comments on the Draft Goods Movement Emission Reduction Plan (ERP). We are submitting these comments on behalf of the Coalition for Clean Air, the Natural Resources Defense Council, the San Pedro and Peninsula Homeowners Coalition, the East Yard Communities for Environmental Justice, the Coalition for a Safe Environment and the Environmental Health Coalition. These comments are specifically targeted at the emission reduction strategies chapter of the ERP (Chapter 3). We would like to commend ARB for preparing a significant list of emission reduction strategies that can be applied in the short, mid and long term. However, as outlined below, many of the proposed measures should be strengthened, and additional measures should be included to further decrease air emissions generated by present and future goods movement operations.

Additionally, we have significant concerns that the vast majority of the measures do not identify an implementation mechanism (regulation, incentive program, etc.), which is critical to ensuring that emission benefits are realized. Thus, ARB has failed to identify which, if any, of these measures will be implemented and how. Finally, as our organizations described in the letter from our allies on the Integrating Working Group dated February 22nd, we have serious concerns that the emission reduction strategies as they are currently presented will fall well short of the key goals outlined in the ERP. See Letter from Andrea Hricko, Director, Community Outreach and Education Program Southern California Environmental Health Sciences Center at Keck School of Medicine, USC, et al. to Secretary McPeak, Cal BT&H, et al. at 2-4 (Feb. 22, 2006)(hereinafter "IWG Letter").

In our comments below, we have first highlighted overarching comments that apply across all emission reduction strategies identified in Chapter 3 of the Draft ERP. We then discuss each of the measures proposed in more detail. We have structured our comments to follow the sequence of emission reductions strategies as presented in the reduction strategy chapter. We have referenced specific measures developed during the Port of Los Angeles NNI plan or prior comment letters to ARB as appropriate.

I. OVERARCHING COMMENTS

We have a number of overarching concerns that impact the substantive discussion of the entire chapter:

- 1) Although we agree with the suite of implementation mechanisms presented on page III-4, to ensure effectiveness, these mechanisms must be identified and applied to specific emission reduction strategies. IWG Letter at 14-16. Without corresponding mechanisms applied to each specific emission reduction strategy, potential emission reductions have no backing due to lack of accountability, enforcement, or incentive. At this juncture, every emission reduction strategy should have a primary and secondary mechanism identified (e.g. state regulation, lease requirement, incentive program, etc.). We have included in our comments below our recommendations for how each of the mechanisms should be applied to specific measures. For further detail on this issue, please refer to Part 3, section I of our IWG letter submitted on February 22nd.
- 2) Some of the emission reduction strategy descriptions (e.g. shore-side power) discuss high monetary costs but do not mention the related health impacts from their respective sources. ARB must balance this with the true benefits from the proposed measures or the impacts from a particular source. In the case of shore side-power for example, ARB's own diesel PM risk assessment found hoteling emissions to be the number one source of elevated cancer risk from on-port sources.
- 3) The document should include tables that compare related or alternative measures to each other so that stakeholders can easily identify the measures that result in the greatest emissions reductions. By way of example, for measures dealing with marine vessel fuel, the document should include a table that sets forth the emissions reductions achieved by using fuel with a sulfur content of, for example, 15,000 ppm, 5,000 ppm, 2,000 ppm, and 1,000 ppm. Similarly, where the document proposes installation of retrofit technology, the document should include a matrix that details the emissions reductions achieved by utilizing different pollution controls.
- 4) The document should disclose any assumptions made to estimate emissions reductions for various measures. Additionally, an explanation and specific figures should be provided for any emissions reductions assumed from the specific strategies in this plan. Further, ARB should not assume emissions reductions from measures that are not mandatory conditions within lease agreements or enforceable regulations. Voluntary programs and proposed rules are not always implemented.

- 5) Where an emission reduction strategy involves a proposed or anticipated rulemaking, the document should disclose a realistic range of emissions reductions and time frames in which the rule may be implemented and emissions reductions realized. The document should base any emissions reductions from such strategies on the “worst case” (least aggressive) implementation scenario, and apply the most aggressive emissions reductions *only* to measures that will be imposed as part of state or local regulations. Further, ARB should, as a backstop, commit to adopting these measures as lease conditions if the proposed rulemakings do not materialize or fall short of original expectations.
- 6) Where the implementation of an emission reduction strategy depends on adequate funding, the emission reduction strategy should include an identified source of funds, or be based on an established and adequate funding source. It may make most sense to identify up front the predominant funding streams that ARB will pursue or support.
- 7) A number of measures in the document rely on technology not yet commercially available or verified by ARB. While we highly commend ARB for proposing “technology-forcing” emission reduction strategies, such measures should be strengthened to ensure that emissions reductions are achieved. For instance, such measures should:
 - a. Include a commitment to fund one-year demonstration projects relating to those technologies in 2006, and commit to review the feasibility of those technologies by the first quarter of 2007. Further, the demonstration projects should be devised to provide manufacturers of control technologies that participate in the programs “in-use” hours towards ARB verification.
 - b. Include a backstop emission reduction strategy that will achieve the same estimated emissions reductions from the targeted source if the technology proves infeasible.
- 8) As you are aware, the domestic portion of California’s goods movement system was omitted from this report. For a full discussion, please refer to Part II section V.A of our February 22nd IWG letter. On page III-3 of Chapter 3, Table III-1 should include all sources of the goods movement system in California including domestically related goods movement.
- 9) ARB should provide an explanation for the emission reduction goals identified for the South Coast Air Basin on the bottom of page III-3. ARB should explain what overall level of emission reductions are necessary in the South Coast Air Basin to achieve attainment and how the goods movement specific goals will ensure these attainment levels are met. Additionally, the ERP should not solely focus on the South Coast Air Basin and statewide reductions. Other basins in California are currently striving to meet attainment standards and are significantly impacted by goods movement emissions. The ERP should include specific goals for the Bay Area and the San

Joaquin Valley as well. Currently, these areas are significantly impacted by goods movement emissions, and the impact is projected to increase.

10) We assume that any estimated gains for the recently passed goods movement related regulations will be accounted for in the next iteration of the ERP.

II. SPECIFIC COMMENTS ON IDENTIFIED EMISSION REDUCTION STRATEGIES

Specific comments on the emission reduction strategies for each of the sources of pollution identified in Chapter III are provided below. For each source, we have also identified additional emission reduction strategies that should be evaluated in an effort 'to close the gap' between the goals set forth in the ERP and the inadequate emission reductions expected resulting from the current suite of emission reduction strategies. Moreover, we believe that all of the recommendations we make below are technically feasible and can be cost effective. We would be happy to provide supporting information upon request.

A. SHIPS

Comments on strategies proposed by 2010

i. ARB Rule for Ship Auxiliary Engine Fuel

We commend the ARB staff and Board for developing and passing their auxiliary engine rule for ocean-going vessels. We anticipate implementation and enforcement of the 5,000 ppm sulfur requirement as planned by January 1, 2007. ARB has the opportunity to avoid the catch-22 of potentially inadequate clean marine fuel supplies in 2010, by securing the use of cleaner marine fuels early. It is our strong sentiment that ARB must aggressively pursue demonstration of the 1,000 ppm sulfur requirement in auxiliary engines, well in advance of the 2008 technology review for lower sulfur fuels. Further, ARB must begin to take the steps necessary to ensure suppliers of marine fuel and shippers themselves will begin preparing for the January 2010 deadline to ensure this important opportunity to achieve further emission reductions from this significant source is not lost. These activities and this commitment should be clarified in the ERP.

In sum, we recommend ARB pursue the following with regard to this strategy:

- By January 1, 2007, ensure 100% compliance and enforcement of the 5,000 ppm requirement for auxiliary engines
- By January 1, 2010, take necessary steps to ensure 100% compliance and enforcement of the 1,000 ppm requirement for auxiliary engines.

ii. Cleaner Marine Fuels

We are pleased that ARB has included a reduction strategy for main engines of ocean-going vessels ahead of the 2010 timeframe. Kjeld Aaabo, Senior Manager with MAN B&W publicly stated during the Faster Freight Conference earlier this month that main propulsion engines on ocean going vessels, such as container ships, can run on lower sulfur fuels at or below 1,000 ppm sulfur content. He further pointed to an example of where they are using these levels currently. Given a) the magnitude of the emissions from main engines, b) the current availability of a feasible strategy to significantly reduce PM and SO_x from propulsion engines, and c) the significant shortfall which has thus far been identified in the ERP to meet the stated emission reduction goals of the ERP, it is imperative that ARB investigate and pursue lower sulfur distillate fuels in main engines.

The strategy as currently scripted does not indicate what sulfur content of marine fuel in main engines would be specifically targeted. It also does not identify an implementation mechanism that will be utilized to ensure the emission reductions will be realized. Similar to the auxiliary engine rule and in the absence of statewide port requirement, ARB should pursue the development of a regulation in the near term targeting significantly cleaner fuels in the main engine.

Specifically, main engines, at a minimum, should meet the same requirements as adopted under the auxiliary engine rule this past December. By 2010, main engines should be required to use 1,000 ppm fuel.

iii. Emulsified Fuels

This strategy currently lacks specifics as to which vessels and how many would be targeted. Further, no implementation mechanisms are identified that would help secure emission benefits. Although this strategy may be applicable in addition to the above two strategies (Auxiliary Engine Rule and Cleaner Marine Fuels), we are also concerned about the potential increase in PM emissions.

iv. Expanded Vessel Speed Reduction Programs

ARB should *not* assume emissions reductions resulting from high rates of compliance with this strategy given that, to date, vessel speed reduction programs have relied on “voluntary” participation. The ERP should disclose the percentage of ships that would participate in the program to achieve the reductions assumed under this strategy (if any).

We are happy to see ARB is considering a mandatory program to ensure vessel speed reductions, and we are in agreement that mandatory VSR programs would ensure higher compliance rates and provide revenue for other mitigation programs through fines to those who violate the measure.

ARB should pursue *mandatory* speed reduction programs that require shipping companies, through lease terms or regulation, to reduce their cruising speed to no more than 12 knots within 40 miles of the San Pedro breakwater. Finally, ARB should consider and disclose whether speed reduction programs will result in any increases in PM or NO_x emissions both within and outside of the VSR zone. Please refer to OGV15 (Expanded VSR Program) in PoLA's NNI Plan for additional details and compliance schedule that falls in line with our recommendations.

v. *Install Engines in New Vessels that Exceed IMO Standards*

We absolutely agree that new vessels provide a very significant opportunity to ensure they are accommodating the cleanest technologies, including cleaner engines and emission control devices such as SCR. Hundreds of vessels are annually slated to come on line. It is our understanding that the marine subgroup of the EPA West Coast Diesel Collaborative is currently strategizing an approach to ensure shippers are incorporating the cleanest technologies in all new vessels. Unfortunately, the strategy as currently outlined in Chapter 3 does not identify a time frame, implementation mechanisms, targeted percentage of the vessel fleet, or methods that ARB plans to use to bring potential emission reductions to fruition.

In addition to new vessels, we would like to see the goals outlined that target the fleet as a whole. We recommend the following standards and timeline for OGV vessel engines serving ports in California:

- 25% of OGVs must meet "Blue Sky Series" Category 3 ship engine standards (those are 80% below current IMO NO_x standards) by 2010, either OEM or through SCR, or other add-on controls.
- 50% of OGVs must meet "Blue Sky Series" Category 3 ship engine standards (those are 80% below current IMO NO_x standards) by 2015, (OEM or add-on).
- 100% of OGVs must meet Blue Sky Series standards by 2020 (OEM or add-on).

vi. *Dedicate the Cleanest Vessels to California Service*

As described in Part II, section II of our February 22nd letter, we support requiring that only the cleanest vessels visit California until the emission goals identified in the ERP are achieved. The strategy as currently drafted does not provide an enforceable implementation mechanism yet assumes 20% of the ships calling on California's ports by 2010 will achieve 30% lower emissions than current IMO standards.

Our recommendation, which can be combined with our Blue Sky Series vessel engine recommendations immediately above, is as follows:

- 50% of all ships must meet current IMO NOx standards by 2007 either OEM (original engine manufacturer/2000 or newer ships) or through the use of add-on controls like SCR.
- 100% of ships must meet IMO NOx standards by 2010 (OEM or add-on controls).

vii. Shore-Based Electrical Power

As described in Part 3, section I of the IWG Letter February 22nd letter, we generally support some of the shore-side power specific goals identified for the 2010, 2015, and 2020 timeframes (20%, 60% and 80% of all vessels, respectively); however, no assurances are provided that these goals will be met by requiring this strategy through an enforceable rule, regulation, or lease. We recommend that ARB lead the effort to develop a statewide regulation or work closely with key air districts to develop local rules that require significant usage of shore based power.

Ultimately, ARB should develop a schedule to require 70% to 80% of all ships – both frequent and non-frequent visitors – to use shore-side power at every terminal by 2010 as exemplified by the China Shipping terminal and Berths 206-209 at the Port of Los Angeles. This requirement should apply to all ocean-going vessel types (e.g. tankers, container vessels, etc.). Further, we recommend that all cruise liner ships cold-iron regardless of frequency of calls.

Under such a strategy, shipping companies have the flexibility to determine how best to achieve this percentage while ensuring lower emissions. Further, shipping companies should be required to comply with this requirement within two years of entering a new lease or renewing a lease. Alternatively, ports could mandate cold-ironing through a port-wide rule.

Although a ‘frequent visitor’ (FV) approach for targeting specific OGVs appears to be a good one, we are concerned that this approach in practice will not prove successful for four primary reasons:

- 1) FVs, if defined as five or more visits per year, capture less than 50% of calls at some of California’s ports. As an example, FVs (5 or more visits) at the Port of Long Beach cover 14% of total vessels or 47% of total calls.¹ Not only does this capture an insufficient percentage of OGV visits, each port will have different levels of emission benefits depending on their OGV frequency distribution;

¹ Vessels which paid 3 or more visits per year to the Port of Long Beach account for 26% of the total vessels or 64% of the total calls. ‘Cold Ironing Cost Effectiveness Study – Volume I - Report, prepared for the Port of Long Beach by ENVIRON International Corporation, March 20, 2004, Table 1-1, Section 1 page 2.

- 2) Because of the necessary resources needed to comply with a frequent visitor approach and the potential for shipping companies to alter their vessel visit frequencies, the opportunity exists for shippers to avoid meeting a FV threshold;
- 3) FVs identified in one specific year will not necessarily remain FVs and meet a minimum usage requirement in subsequent years. Therefore, the emission benefits are unpredictable; and
- 4) Due to changes in logistics, such as routes serviced or shifts in cargo carrying capacity requirements, or natural turnover of ships, a requirement for a FV to continue visiting a port may actually reduce a shipping company's flexibility to run their most efficient routes with the most applicable vessels.

By requiring a uniform strategy, we believe this allows flexibility to accommodate shifts in shipping logistics and demands and, simultaneously, would hold all ports to the same standard, in turn locking in emission reductions.

In sum, we recommend that ARB propose and adopt a regulation as soon as possible requiring that at least 70% to 80% of ship calls utilize shore-side power within two years at terminals where a new lease is entered or an existing lease is renewed. Additionally, this regulation should require 70%-80% of total OGV calls for all ship types (e.g. container, reefer, tanker, etc.) at every terminal, to use shore-side power by a 2010 compliance deadline. An interim schedule should also be included in the ERP. Finally, 100% of cruise vessels in California should use dockside power by 2010.

Comments on strategies proposed by 2015

i. Extensive Retrofit of Existing Engines

If available, ARB should provide more specifics on the potential emission benefits from this measure. Additionally, an implementation mechanism should be identified. Further, any strategies that promote the use of control devices must be coupled with a mandate for ships to use low sulfur diesel fuel. In fact, as you are aware, certain after-treatment technologies will not work if the sulfur content of the fuel is too high. For example, 2,000 ppm sulfur fuel (ideally lower) should be used with SCR, and 500 ppm sulfur fuel must be used with DOCs. Further, 15 ppm sulfur fuel must be used with DPFs.

ii. Highly Effective Emission Controls on Main Engines and Auxiliary Engines

We support ARB installing emission control devices such as SCRs on ocean-going vessels. We encourage ARB to complete any demonstration testing as soon as possible and strongly recommend that ARB develop an implementation mechanism and schedule for applying this technology to vessels visiting California. We believe emission control devices could be one strategy used to comply with the goals we recommend in our comments on strategies (v) and (vi) as proposed under the 2010 timeframe.

iii. SECA

Since EPA is merely investigating the possibility of adopting this measure, ARB should not assume emissions reductions prior to adoption (if they were assumed).

Further, while we support the creation of a SECA zone, as noted above, ARB should pursue adopting a mandatory clean fuel measure for main propulsion engines as outlined above.

iv. Expanded Use of Cleanest Vessels in California Service

Please refer to our comments on strategies (v) and (vi) as proposed under the 2010 timeframe.

v. Expanded Shore Power and Alternative Controls

Please refer to our comments on strategy (vii) as proposed under the 2010 timeframe.

Comments on strategies proposed by 2020

i. Full Use of Cleanest Vessels in California Service

Please refer to our comments on strategies (v) and (vi) as proposed under the 2010 timeframe.

ii. Maximum Use of Shore Power or Alternative Controls

Please refer to our comments on strategy (vii) as proposed under the 2010 timeframe.

Additional Emission Reduction Strategies for Further Evaluation

- Creation of a graduated harbor fee system that requires more polluting ships to pay higher fees upon entering the port. For example, discounts could be given to ships utilizing pollution controls such as cleaner fuels, retrofit technologies, and AMP. The fees collected could be used to subsidize or incentivize other air quality measures.
- Creation of a container fee to serve as a dedicated source of funding for air quality mitigation programs.
- Creation of a program that allows cleaner ships to dock first, and requires dirtier ships to await entry into the port at a distance that does not pose health risks to people on-shore.

B. COMMERCIAL HARBOR CRAFT

Comments on strategies proposed by 2010

i. ARB Rule to Clean Up Existing Engines

Our organizations strongly support ARB's development of a proposed regulation for harborcraft that operate in state coastal waters. We agree that the regulations should apply to all in-use commercial harbor craft having engine model years 2007 and older that do not meet EPA Tier II standards for marine engines, 2004-2007. We strongly encourage ARB to expedite this development process given the auxiliary engine and cargo handling rules have been adopted.

In addition, we recommend that the ARB consider standards for new marine engines in the event that the US EPA's new regulatory process for commercial marine vessels does not produce satisfactory results. The state would then be in a position to quickly implement state regulations.

We urge ARB to develop regulatory language requiring harbor craft to meet EPA Tier II standards with an implementation schedule based on engine model year and the type of vessel operation (similar to option 1 in the Draft Regulatory Concepts). In addition, ARB should develop an implementation schedule for moving beyond Tier II by requiring further reductions of nitrogen oxides and particulate matter from specific types of harbor craft.

We believe requiring harbor craft engines to meet Tier II standards will be more protective of public health and more effective at reducing harmful particulate matter than allowing the use of level 1 or level 2 retrofit technology. Currently, there are no verified emission control technologies for harbor craft, and there is no guarantee that level 1, 2, or 3 devices will be available for a wide range of vessel types and model years. Even if a level 1 retrofit device such as a diesel oxidation catalyst were verified, it still would not achieve nearly the same amount of PM reductions as would be achieved by a rebuild or repower to US EPA Tier II standards. The relatively small number of engines affected by this proposed regulation may also present a challenge for getting companies to verify retrofit technology with the ARB.

We also urge ARB to incorporate measures that go beyond the Tier II standards for harbor craft with newer engines and those that present the greatest health risk to individuals. These vessels may include passenger ferries, excursion vessels, charter fishing vessels, or other vessels that operate almost exclusively near the shore and carry groups of people. The more stringent measures could also apply to engines year 2000 and newer and those that have been repowered within the last five years. Please refer to our joint comments submitted in February 2005 to ARB on the proposed regulatory concepts for Commercial Harbor Craft for more detail on non-goods movement related harbor craft.

With respect to retrofit technologies, fuels and technologies are commercially available to reduce emissions up to 85 percent below EPA Tier II standards. A number of technologies and fuels could be employed to go beyond EPA Tier II including use of non-diesel fuels, installation of particulate matter traps and/or oxidation catalysts, water injection, selective catalytic reduction, conversion to battery-electric, and other methods. In particular, use of emulsified fuels combined with exhaust gas recirculation and an oxidation catalyst was recommended by marine engineers as a viable and immediate option for quickly reducing ferry emissions.

To ensure the availability of retrofit technology, ARB should require large fleets to conduct at least one control technology demonstration project beginning this year and implement that control technology throughout the fleet upon successful completion of a demonstration. Upon an unsuccessful demonstration of technology, that fleet should be required to test a new type of technology and apply it to their fleet, or install technology demonstrated successfully on another fleet. The fleets should be restricted to a limit of two consecutive demonstration projects before applying a proven technology to their fleet.

As you are aware, EPA is expected to develop Tier III standards for marine engines within the next two years. ARB could require engines to meet EPA Tier III standards once they are adopted. If EPA does not set Tier III standards, or they are inadequate, then ARB should adopt its own set of emissions standards for new marine engines operating in California and require post-2000 engines to meet the standard within a reasonable timeframe.

ii. Shore-Based Electrical Power

We support ARB pursuing shore-based power for harbor craft. We encourage ARB to complete any demonstration testing as soon as possible, if necessary, and strongly recommend that ARB develop an implementation mechanism and schedule for applying this technology to vessels active in California's ports. This strategy should be included in the upcoming harbor craft rule given this regulatory opportunity, specifically targeting tugs on the same schedule as we propose for OGVs. Finally, estimated emission reductions should be calculated from this potential strategy.

Comments on strategies proposed by 2015

i. New Engine Emission Standards

Please refer to our comments on strategy (i) as proposed under the 2010 timeframe.

Comments on strategies proposed by 2020

- i. *Incentive programs to accelerate early introduction of complying engines(paraphrased)*

This strategy was not explicitly defined; however, we support the concept of incentivizing early introduction of engines that comply with future established standards. ARB should also consider such a mechanism in their upcoming Harbor Craft rule.

C. CARGO HANDLING EQUIPMENT

Comments on strategies proposed by 2010

- i. *ARB Rule for Diesel Cargo Handling Equipment*

We commend the ARB staff and Board for developing and passing their cargo handling rule. However, ARB must ensure that this rule is fully enforced and that the projected emission reductions are achieved on the schedule finalized in the regulation.

ARB should also actively encourage and provide incentives for the use of alternative fuel and/or zero emission technology to be used on cargo handling equipment.

- ii. *ARB Rule for Gas Industrial Equipment*

We support ARB in adopting the most stringent LSI rule possible in the upcoming Board hearing later this year.

D. TRUCKS

Comments on strategies proposed by 2010

- i. *Port Truck Modernization*

We strongly support this approach as a cost-effective means of achieving substantial emission reductions from the trucking fleet. However, we recommend a modified version of what is proposed in this plan. The trucks serving ports and other goods movement facilities tend to be much older than average, especially when compared to long distance haulers and large corporate fleets. Therefore, we recommend that all pre-1994 drayage (short haul) trucks serving port terminals, rail yards, distribution centers, and air-cargo facilities (collectively, Goods Movement Facilities) be replaced with 1999 and newer models.

All 1994 and newer trucks are able to be retrofitted with advanced emission controls. Therefore, all trucks serving Goods Movement Facilities should be retrofitted with the highest level of PM and NOx controls available. All truck replacements and retrofits should be prioritized by cleaning up the oldest vehicles first. Specifically, the truck replacement program must move forward ahead of any retrofit program. We concur with the conclusion of this report that engine repowers are not a practical approach to cleaning up emissions from trucks.

We are concerned that the number of drayage trucks serving Goods Movement Facilities and in need of replacements and retrofits may easily overwhelm existing administrative systems such as Gateway Cities, the Carl Moyer Program, and SECAT. We urge ARB to make every effort to ensure that sufficient administrative infrastructure for these programs are established in order to efficiently process the thousands of trucks that will need to be replaced and retrofitted.

The plan is not clear on which mechanism will be used to accomplish fleet modernization. We believe that a mandatory approach is necessary to ensure that fleet modernization occurs. However, it is clear that small businesses, especially independent owner-operator truckers will need access to funding to accomplish these goals. Nevertheless, a fleet rule for private trucks is called for to ensure emission reductions from this sector. Further, we believe that larger fleets, particularly corporate fleets serving individual facilities, should be required to finance their own fleet modernization through a private truck fleet rule.

At a minimum, all pre-1987 trucks should be replaced by 2005; all pre-1994 trucks should be replaced by 2010; and all pre-2007 trucks should be retrofitted by 2015.

ii. Enhanced Enforcement of Truck Idling Limits

We are pleased that ARB recently adopted stringent idling standards for all trucks in California. However, enforcement of these rules remains problematic as residents report continued violations of these rules within their communities. ARB must improve its commitment to enforcing these important rules. We recommend that a task force be formed to accomplish improved enforcement. This task force should include at a minimum, interested community members, air district representatives, and local and state law enforcement personnel.

iii. International Trucks Meet U.S. Emission Standards

We support this strategy as stated.

E. LOCOMOTIVES

Comments on strategies proposed by 2010

i. Upgrade Engines in Switcher Locomotives

The plan fails to commit to how many switching locomotives will be upgraded and how the upgrades will be accomplished. We believe that ARB must adopt a mandatory requirement for all switching locomotives operating at major California rail yards to meet Tier II or cleaner standards by 2010. As we have commented in past letters, switching locomotives are among the oldest and dirtiest diesel sources, posing significant health risks to hundreds and possibly thousands of Californians living near rail yards. These major sources of diesel pollution must be cleaned up immediately.

ii. Retrofit Diesel PM Control Devices on Existing Engines

The commitment to test just two to four locomotives with retrofits in 2006 is inadequate. Every major rail yard in California should begin pilot programs right away to test advanced emission controls. Both active and passively regenerated diesel particulate filters must be tested in a variety of configurations from a range of manufacturers to ensure that the most compatible controls are selected for future use.

iii. Use of Alternative Fuels

We support the use of alternative fuels in locomotives. However, the replacement of old switching locomotives must be the first priority before alternative fuels are considered.

iv. Idle Limiting Devices on New and Rebuilt Engines

This measure is listed as a 2015 strategy. However, we believe that all locomotives operating in California must immediately reduce unnecessary idling. Requiring automatic idling controls on each locomotive would also be helpful, but it is the responsibility of the railway companies to furnish these devices for their locomotives.

F. OPERATIONAL EFFICIENCIES; LAND USE DECISION-MAKING AND PROJECT AND COMMUNITY SPECIFIC MITIGATION

We support these strategies and urge ARB to form working groups to further explore them.

II. SPECIFIC COMMENTS ON EMISSION INVENTORY AND MODELING

Specific comments on the emission inventory and modeling approach used within the Health Risk Assessment (“HRA”) in Appendix A are provided below.

A. EMISSION INVENTORIES MUST BE REFINED

The HRA should not have relied on a statewide inventory to estimate emissions from goods movement. Goods movement facilities have highly localized emissions and impacts that cannot be averaged over a city, county or air basin, much less the entire state. Using statewide estimates not only leads to a crude allocation of impacts, but also likely leads to vast underestimations of the impacts concentrated in specific communities.

The allocation of ship emissions is of particular concern. It is not clear why the three mile boundary was selected as a cut off point between port emissions and the “outer continental shelf air basin.” It is also not clear why particle sulfates were excluded from the analysis (see page A-5), especially given the fact that shipping fuels are known to contain extremely high sulfur levels, and therefore, emissions of particle sulfates are expected to be significant. Further, we are concerned that the 90% discount factor for emissions from the outer continental shelf air basin may not be an accurate assumption, and ARB has not provided sufficient background information to determine whether this assumption is warranted.

The harbor craft inventory used for the purposes of this report should not have included fishing vessels and other non-goods movement related vessels. The inclusion of non-goods movement related vessels appears to have significantly skewed the data. For example, Table II-1 of the emissions inventory shows that harbor craft release more diesel PM than trucks and four times more diesel PM than cargo handling equipment. According to the same table, NO_x emissions from harbor craft are almost as high as that from ships. These counter-intuitive comparisons may be related to the fact that, according to harbor craft rule development documents,² fishing vessels and ferries account for the majority of NO_x and PM emissions. This is surprising given the high activity of other harbor craft, such as tugboats. However, these comments are focused on goods movement. If ARB continues to use these estimates, more explanation is necessary.

Emissions from goods movement related trucking constitutes a substantial portion of overall trucking emission in California, contrary to the premise used in this document (see page A-29). The plan’s arbitrary distinction of goods movement related trucking as international only, vastly underestimates emissions from this sector. This approach entirely excludes distribution centers and airports and appears to exclude most if not all railyards. If the percentage of goods movement related heavy trucks ranges from 4% to 40% (according to Table A-6), one has to wonder what the majority of trucks in California are carrying if not “goods”.

Transportation refrigeration units, mentioned only as a footnote to Table A-2, are conspicuously missing from this analysis. These significant emission sources are commonly used at ports and distribution centers and by many of the trucks serving goods

² For example, see materials from the Harbor Craft Workgroup Meeting, August 5, 2004, presentation slide number 22.

movement facilities. Lack of time to evaluate this source is not an adequate reason for excluding it. Further, the fact that this source is missing from the analysis should not be buried in a footnote to a table in an appendix.

B. HEALTH IMPACT ASSESSMENT METHODOLOGIES REQUIRE IMPROVEMENT

We submitted detailed comments on ARB's Draft Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach. Most of these comments have gone unaddressed and therefore apply to this HRA. To summarize, our November 22nd, 2005 letter concluded:

“Specifically, future health assessments should cover all adverse public health outcomes, a wider array of pollutants known to cause adverse health impacts, and all significant sources known to emit these pollutants within the context of the assessment. Other issues that must be discussed and fully incorporated into future analyses include cumulative risk, increased vulnerability of sensitive populations, and risks to exposed workers (in addition to residential populations). Modeled parameters should also reflect the realities of the goods movement system. Finally, future assessments must include a public input process, and we suggest that health assessment and modeling experts be convened to form an advisory group to the process.”

While we are encouraged that ARB is incorporating a peer review process into this analysis, we are concerned that the process is rushed and limited in scope and the number of reviewers. We strongly recommend that ARB reconvene its Community Health Modeling Working Group to discuss the issues that we and other groups have raised with this assessment.

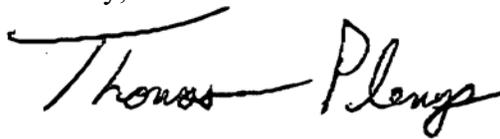
We are particularly concerned with several specific aspects of this assessment, which have been raised in our letter. See IWG Letter at 8-14. As stated in that letter, the studies used to establish mortality and health incidence endpoints related to ambient PM levels should be based as closely on local California data as possible. Moreover, the discounting of ship emissions over the ocean by ninety percent bears much further validation and explanation.

It is also of concern that this assessment concluded that nitrates as secondary PM are responsible for many more premature deaths than primary diesel PM. The Plan states that (see page A-53) *“when the relative contributions of primary and secondary PM are examined, the secondary PM appears to be the major contributor, accounting for more than 60% of the total estimated annual premature deaths.”* This surprising outcome, given how much more toxic primary PM is thought to be, bears further explanation. In fact, Professor Michael Jerrett raised this concern in his comments (see page A-127) when he wrote, *“we might expect the primary diesel to elicit a higher concentration-response.”*

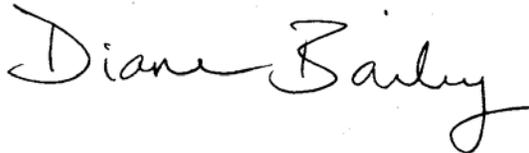
We share many other concerns raised by peer reviewers as described at the end of Appendix A. In particular, Professor Constantino Sioutas of USC raised several compelling points that we want to highlight. We share his concern over the use of county level exposure estimates given the fact that many goods movement related pollutants – diesel PM in particular – are known to concentrate close to where they are released, instead of being homogenously distributed over large areas. ARB must better account for these pollutant concentrations or toxic hot spots in the HRA. Professor Sioutas also raises concerns over the tracer studies that were relied on to estimate ship emission dispersion. We question whether these studies have been published and how well the inert gases used represent diesel PM. We strongly urge ARB to take ambient pollutant measurements to confirm these models.

We look forward to reading and commenting on the next iteration of the ERP. Please feel free to contact us if you have questions about the comments provided.

Sincerely,

A handwritten signature in black ink that reads "Tom Plenys". The signature is written in a cursive, flowing style.

Tom Plenys
Research and Policy Manager
Coalition for Clean Air

A handwritten signature in black ink that reads "Diane Bailey". The signature is written in a cursive, flowing style.

Diane Bailey
Scientist, Environment & Health Program
Natural Resources Defense Council

Cc: Catherine Witherspoon,