



South Coast Air Quality Management District

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September 23, 2009

Mr. James Goldstene, Executive Officer
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Dear Mr. Goldstene:

South Coast AQMD Staff Comments Regarding
the California Air Resources Board Draft Report, *"Recommendations
to Implement Further Locomotive and Railyard Emission Reductions"*

This letter includes comments by the South Coast Air Quality Management District (SCAQMD) staff regarding the California Air Resources Board (CARB) staff's report *Recommendations to Implement Further Locomotive and Railyard Reductions* ("Recommendations Document"). We appreciate your staff's considerable effort in developing this document describing means to implement emissions and risk-reduction strategies, and the supporting document *Technical Options to Achieve Additional Emissions and Risk Reductions from California Locomotives and Railyards*. As described below, the SCAQMD staff generally supports the emission and risk reduction strategies in the Recommendations Document, but urges that CARB strengthen certain recommendations. In addition, we urge that CARB employ all available implementation mechanisms, including rulemaking for certain types of locomotives. Finally, we urge CARB to take action to identify and implement site-specific measures that could be expeditiously implemented to reduce public exposure to emissions from railyards that present the greatest health risks.

Background

Railyard Health Risks and Mitigation Plans and Need for Additional Controls. The South Coast Air Basin is home to the majority of the railyards for which CARB prepared health risk assessments, with the Burlington Northern Santa Fe (BNSF) San Bernardino Railyard having the highest maximum incremental cancer risk in the state at 2,500 in a million. The two Class I railroads, BNSF and Union Pacific (UP), have prepared mitigation plans in response to CARB's health risk assessments. In general, these mitigation plans do not propose to reduce emissions significantly beyond current rules and programs. (A notable exception is the Intermodal Container Transfer Facility near the San Pedro Bay ports, for which UP proposes wide-span electric gantry cranes as part of its request for approval of a railyard expansion).

Given the significant health impacts, it is imperative that additional efforts be taken by CARB to reduce railyard and locomotive emissions. Further controlling locomotive emissions is particularly important. Locomotives will in coming years be the largest source of local health risk. In addition, the SIP assumes substantial control of locomotive NO_x emissions to attain the federal PM_{2.5} standard by the 2015 deadline. Federal rules simply will not meet these needs. Indeed, CARB staff's analysis in Figures 3 and 4 of the Recommendations Document (Pages 10 and 11) shows only modest NO_x and PM benefits will occur in the next decade as a result of U.S. EPA's locomotive rules. More importantly, minimal and insufficient benefits will be realized by 2015, when the Basin must attain the federal annual PM_{2.5} standard. Given that locomotives may be used for 20 to 30 years, full benefits from U.S. EPA emission standards will not occur until about 2040.

CARB Staff's Recommended Control Actions and Implementation Approaches. CARB staff proposes a number of control actions, and recommends implementation approaches that primarily involve providing public funds to assist the railroads in controlling railyard sources, including acquiring new locomotives. CARB staff also recommends seeking more state authority over locomotives, and urging the Ports to control locomotive emissions. CARB staff does not recommend seeking a new agreement with the railroads, preferring to evaluate the success of other approaches first. CARB staff also does not recommend that CARB initiate any rulemaking.

AQMD Staff Comments on CARB Staff Recommended Actions and Implementation Approaches

All Implementation Approaches Proposed by CARB Staff Involve Substantial Uncertainty. As noted repeatedly in the Recommendations Document, all potential implementation strategies to control locomotive emissions have major uncertainties. For example:

- Providing government funding for a portion of the cost of controls would require billions of dollars, mostly for line-haul locomotives. The Implementation Document does not, however, identify funding sources that approach the needed amounts, and obtaining additional funding is uncertain. In addition, it is not known whether the railroads would agree to take all needed actions, even with partial government funding, especially since the railroads would need to commit substantial funds.
- Obtaining stronger authority for the state to regulate locomotives requires Congress to change federal statutes, obviously a challenging goal.
- Obtaining stronger U.S. EPA rules would require the federal agency to revisit rulemaking it completed just last year; again, a challenging goal. In addition, EPA's authority to regulate existing locomotives has some limitations.
- The railroads may not agree to actions that meet all the air quality needs of the region and California.

Given the Uncertainties, All Implementation Approaches Should Be Pursued Concurrently, Including Rulemaking for Medium Horsepower and Switch Locomotives. Given the above uncertainties, the severity of the health risks, and looming federal attainment deadlines, there is no time to attempt one approach and then move to another if the first is unsuccessful. The situation demands that CARB pursue all possible implementation strategies concurrently. To maximize the chances of success, CARB actions should include rulemaking to the maximum extent of the state's authority.

In particular, legal opportunities exist for regulating the substantial numbers of pre-1973 model year medium horsepower and switch locomotives that CARB determined are operated in the state.¹ Controlling the medium horsepower locomotives is particularly important because CARB staff has determined that controlling them to Tier 4 levels will achieve the emission reductions needed in 2014 to implement the SIP. We thus urge CARB to initiate rulemaking as soon as possible to require such locomotives to comply with Tier 4 emission levels by 2014.

¹ The CARB staff's legal analysis in Appendix A of the Recommendations Document supports this view. In particular, we agree with the basic conclusion that state authority to regulate locomotive emissions is limited, but is not completely preempted — particularly for locomotives other than interstate line-hauls (e.g. switchers and medium horsepower locomotives, which primarily operate in the state and many of which are not "new" under EPA's interpretation and thus not subject to preemption). We also agree that the law requires a fact-based assessment of impacts to interstate commerce and interstate rail operations, and that restrictions on state authority in the Interstate Commerce Commission Termination Act must be interpreted in harmony with the federal Clean Air Act. All of these factors lead us to conclude that a CARB rule for switchers and medium horsepower locomotives can be crafted that would avoid restrictions in federal law.

CARB Staff has Not Stated Sufficient Reasons to Forego Rulemaking. CARB staff has stated two reasons for not proposing rulemaking to control emissions from medium horsepower and switch locomotives. First, staff states that if CARB adopts a rule mandating that the pre-1973 medium horsepower locomotives (for which Clean Air Act preemption of state authority does not apply), the railroads might simply move such pre-1973 locomotives out of the state, and perform their functions with newer or remanufactured locomotives for which Clean Air Act preemption applies. Such newer locomotives, argues staff, would not likely meet the needed Tier 4 standards. AQMD staff's view on this argument is that, even if this occurs, we are better off than without the rule because the newer locomotives will be cleaner. The locomotives replacing the old units may not be Tier 4, but they will be cleaner than those moved out. *Moreover, nothing in this action by the railroads would affect CARB's ability to implement the staff recommendations. Specifically, CARB could still seek funding for Tier 4 locomotives, additional authority, or rules from the federal government, etc.*

The second argument CARB staff makes against adopting a rule is that, if CARB adopts a rule, the railroads could exercise their right to terminate the 1998 Memorandum of Understanding establishing a Tier 2 fleet average emission rate for 2010 and later. We understand that the railroads might attempt to exercise the termination clause should CARB establish locomotive emission standards. However, we believe it would be unlikely that the railroads would do so. We are approaching 2010, the year that the railroads must meet the MOU's fleet average emissions rate. Presumably, most compliance actions that will be taken by the railroads have already been initiated. In addition, the railroads have repeatedly cited the benefits of the MOU in public meetings and in seeking approval for railyard projects. Finally, the railroads know that substantially greater emission reductions than required by the 1998 MOU will soon be necessary. Under these circumstances, we find it highly unlikely that the railroads will terminate the agreement and reverse course regarding control measures.

Public Funding Should Be Utilized Only to the Extent Absolutely Necessary. The AQMD staff supports using public funds where it is appropriate and necessary, but railroads have substantial resources and there are many other needs for scarce air quality funds. The scarcity of public funds is one reason to seek emission reductions by adopting enforceable rules.

On a related point, we believe some of the CARB staff's cost estimates may be high. For example, for the accelerated introduction of Tier 4 interstate line-haul locomotives, CARB staff assumed that 5,000 Tier 4 locomotives would be needed nationwide, at \$3 million dollars each, for a total of \$15 billion. However, the railroads have in the past bought hundreds of new locomotives per year as part of their operations. After January 1, 2015, all new locomotives will have to be Tier 4. The government should not pay the railroads to purchase new locomotives that they would purchase anyway for their own purposes. We note that the 1998 MOU did not include public funding, and the railroads

have used their own resources to purchase Tier 2 locomotives to meet the MOU's fleet average provisions.

Further Risk Reductions Should Be Required at Railyards. CARB staff found extraordinary risks at certain railyards, with the highest risk at the BNSF San Bernardino yard — 2,500 in a million. These risk levels require that all concerned, including CARB, the railroads and local air districts, take all actions in their power to attain risk reductions at the earliest possible time. Such actions should include railyard-specific actions, such as providing distance between emission sources and the public. We urge CARB to adopt rules to ensure that all possible measures, including site-specific measures, are implemented at railyards with particularly high risks. Specifically, we urge the Board to direct staff to take the following actions:

1. ***Risk Reduction Rule.*** Commence developing a rule to reduce emissions and public exposure at the highest risk railyards. The rule should require: (1) periodic risk estimation and public notification, (2) needed risk reduction to be achieved by a date certain, and (3) submission of a plan by the railroad describing control measures, including site-specific measures, which would achieve the required risk reduction. The rule should require the railroad to implement the plan, except to the extent that the railroad establishes that the state is preempted from requiring a specific mitigation measure and there is no alternate, non-preempted, measure available.
2. ***Further Control Rule.*** Commence developing a rule to require the greatest achievable emission reductions from types of sources operating at high-risk railyards. Such rule should require, to the extent achievable, that gantry cranes, yard hostlers, trucks and other equipment be powered by electricity.
3. ***Local Air District Opt-In Applicability.*** In developing the above two rules, CARB staff could consider making the rules applicable, in a manner similar to CARB's opt-in provisions for local air districts in the SOON program, only to high-risk railyards for which the local air district has requested applicability and has committed to provide technical and legal support needed for adoption and implementation.

Electrification. The Recommendations Document does not propose any electrification of cargo handling equipment even though such electric railyard equipment currently exists. Electric wide-span gantry cranes are being proposed by the railroads for new railyard projects, and they should be considered for existing railyards to the maximum extent feasible. In addition to producing zero emissions, such cranes also eliminate the need for a large number of yard hostlers. For applications where yard hostlers are required, the San Pedro Bay Ports and AQMD have funded the development of a battery-electric truck and yard hostler. Finally, rail electrification is in use around the world today to move passengers and freight.

These technologies exist today and should be considered for implementation as part of the above-described rules, and through other programs. Electrification will serve multiple goals of reduced toxic emissions, helping to fill the substantial "black box" in the South Coast ozone attainment plan, implement AB 32 greenhouse gas reductions, and reduce petroleum dependence.

Tier 4 Locomotives Entering Port Property. CARB staff recommends supporting the San Pedro Bay Ports Clean Air Action Plan, including the Ports' efforts to accelerate the turnover of existing interstate line-haul locomotives to cleaner Tier 4 locomotives. Port actions are important because the ports have unique authority as landlords for facilities such as railyards. The Recommendation Document states that Tier 4 locomotives should be used "as expeditiously as possible" with a "goal" of 95% by 2020. AQMD staff urges that CARB describe this as a firm standard. Accelerating the introduction of the Tier 4 locomotives is a key risk reduction strategy. Achieving 95% entering port properties by 2020 is feasible as evidenced by the railroads' ability to meet the 1998 MOU Tier 2 fleet average requirements by turning over most of their fleet in South Coast over the same timeframe (five years from date EPA rules require new locomotives to meet the standard). While cleaner Port locomotives will benefit the entire South Coast Air Basin, CARB should also use all available tools to seek to establish a similar schedule for locomotives not entering Port properties.

Need to Commit to a Schedule of Actions. CARB staff should develop timelines of specific actions and commitments necessary to achieve stated emission reduction targets. As described, time is short, particularly for meeting the federal annual fine particulate ambient air quality standard. Firm timelines and commitments will ensure that the necessary emission reductions and health risk reductions are realized as early as possible.

In conclusion, we strongly urge CARB to include the AQMD staff recommended changes to strengthen the implementation plan and to take other actions described above. We look forward to working with CARB in this endeavor.

We appreciate the opportunity to comment on the CARB staff draft report. If you have any questions please call me or Mr. Peter Greenwald, Senior Policy Advisor, at (909) 396-2111.

Sincerely,



Barry R. Wallerstein, D.Env.
Executive Officer