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**BEFORE THE
SURFACE TRANSPORTATION BOARD**

UNITED STATES ENVIRONMENTAL)	
PROTECTION AGENCY – PETITION FOR)	Finance Docket No. 35803
DECLARATORY ORDER)	

**REPLY COMMENTS
OF THE
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

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In accordance with the Board’s Order served on February 26, 2014 in this proceeding, the South Coast Air Quality Management District (the “District”) submits these Reply Comments on the issues raised by the January 24, 2014 Petition for Declaratory Order filed by the U.S. Environmental Protection Agency (“EPA”) (“Petition”).

INTRODUCTION

In its February 14, 2014 Reply to the EPA Petition (“District Reply”) and its March 28, 2014 Supplemental Comments (“District Comments”), the District demonstrated that when the reliable facts of record are considered against the proper legal standard, the Board should respond to EPA’s Petition with a declaratory order confirming that District Rules 3501 and 3502 would not be preempted by the Interstate Commerce Commission Termination Act of 1996, 49 U.S.C. § 10101 *et seq.* (“ICCTA”), once they are incorporated by EPA into the California State Implementation Plan (“SIP”) under the Clean Air Act, 42 U.S.C. § 7401 *et seq.* (“CAA”). This conclusion, and the statutory,

judicial and administrative authorities that compel it, are endorsed and ably advocated separately in the Supplemental Comments submitted on March 28 by the State of California Air Resources Board (“CARB”), the state agency with plenary authority and responsibility for the development, modification and improvement of the California SIP which proposed the Rules to EPA; Earthjustice, a non-profit, representative coalition of organizations¹ dedicated to the promotion of full achievement of the goals of the CAA in California; and the Department of Environmental Protection of the Commonwealth of Massachusetts (“Mass DEP”), which for more than 40 years has administered a SIP which includes locomotive idling limits comparable to those in Rule 3502.

In these Reply Comments, the District will address and rebut the contrary claims advanced in the Supplemental Comments filed by the Association of American Railroads (“AAR Comments”), BNSF Railway Company (“BNSF Comments”), and Union Pacific Railroad Company (“UP Comments”).² Specifically, the District will (1) show that the Rules do not threaten to create a “patchwork” of inconsistent local regulations of locomotives across the county; (2) debunk the AAR canard that the Rules’ consistency with the CAA is “pretextual”; (3) confirm that the Rules do not impact the core interests of the ICCTA, as properly understood in the context of the harmonization of two (2) federal statutes; and (4) summarize why the Rules do not impose undue burdens on railroad operations or interstate commerce, again in the context of applicable

¹ Earthjustice represents the Center for Community Action & Environmental Justice, the East Yard Communities for Environmental Justice, the Natural Resources Defense Council, and the Sierra Club. *See* Earthjustice Comments at 2.

² AAR, BNSF and UP sometimes are referred to collectively as the “Railroads”.

law. Considered as a whole, the Railroads' objections reflect a basic antipathy toward *any* regulatory influence of any kind on their operational preferences, regardless of the actual impact of the action, or its consistency with core interests of the CAA and other federal environmental statutes. The arrogance of the Railroads' position is revealed in statements such as the remark offered by BNSF's witness Reilly:

The SCAQMD rules illustrate what happens when government entities that do not understand railroad operations try to tell railroads how to operate.

BNSF Comments, Reilly V.S., p. 2.

The District's Reply will not address again in detail various claims presented previously by the Railroads which relate to matters that are outside the scope of the Board's jurisdiction in this proceeding, and were covered in the District's Supplemental Comments. These include the Railroads' claims regarding past actions that they have taken to improve fuel efficiency or reduce air emissions;³ their previous compliance with voluntary agreements reached with CARB;⁴ the Railroads' criticism of the procedures through which the Rules were developed by the District and ultimately presented to EPA;⁵ or the Rules' compatibility with the CAA or statutes such as the Locomotive Inspection Act.⁶ The District previously showed these arguments to be

³ See BNSF Comments at 20-21, Lovenburg V.S.; UP Comments at 1-2, Schmid V.S.

⁴ *Id.*

⁵ AAR Comments at 12-15, Rubenstein Aff. ¶¶ 14-25.

⁶ BNSF Comments at 14-17.

unmeritorious, as well as irrelevant to the issues properly before the Board.⁷ As EPA reiterated in its own Comments submitted on March 25, 2014, the Petition concerns only whether “Rules 3501 and 3502, *if approved into the SIP*, would be preempted under 49 U.S.C. § 10501(b). Issues concerning EPA’s ability to approve the rules into the California SIP under the CAA are not relevant to that question.” EPA Comments at 1-2 (emphasis in original).⁸

ARGUMENT

I. **The Rules Do Not Threaten A “Patchwork” of Local Locomotive Regulations**

A prominent claim advanced by the Railroads is that inclusion of Rules 3501 and 3502 in the California SIP would lead to a “patchwork” of local locomotive regulations that would “balkanize” the interstate rail network. *See* AAR Comments at 4-11; BNSF Comments at 9-14. The Railroads’ arguments are long on citations to statutory authority and case law confirming the rather unremarkable proposition that one of the ICCTA’s purposes is to avoid conflicting state regulation of railroad operations,⁹ but woefully short on actual, fact-based examples of how emissions limitations such as those embodied in the Rules have led to such an outcome. The obvious reason is that no such

⁷ District Comments at 12-28.

⁸ The CAA itself vests review authority over EPA’s determinations regarding approval of SIPs exclusively in the U.S. Courts of Appeals. 42 U.S.C. § 7607(b).

⁹ *See, e.g., CSX Transp., Inc. – Pet. for Declaratory Order*, 2005 WL 584026*9. *See also, Tex. Cent. Bus. Lines Corp. v. City of Midlothian*, 669 F.3d 525, 532 (5th Cir. 2012).

evidence exists. The facts are that since the District's Rules initially were adopted in 2006, the only state to propose *any* new air emissions rules that could affect railroad locomotives in any fashion was Rhode Island,¹⁰ and since the Ninth Circuit clarified the status of approved SIP provisions for purposes of ICCTA preemption challenges in 2010, *no state* has proposed any such rules.

As the District showed in its Supplemental Comments (at 45-46), the process that would apply to any state or local agency's effort to include a new rule in a SIP would be multi-layered, public, and ultimately subject to evaluation, modification and final approval by EPA. *Inter alia*, as part of this process EPA would harmonize any potential conflicts with other federal statutes, including the ICCTA.¹¹ Interested parties (including, of course, railroads) would have ample opportunities to comment and seek adjustments where necessary or appropriate, just as the Railroads did during the development of Rules 3501 and 3502. The deliberative, coordinated federal procedures that apply to the adoption of amendments to SIPs under the CAA are a far cry from the "patchwork" of pre-1996 state regulation of railroads that the ICCTA was intended to displace. *See Fla. E. Coast Ry. Co. v. City of West Palm Beach*, 266 F.3d 1324, 1337 (11th Cir. 2001).

In an apparent effort to find a threat of piecemeal regulation somewhere, AAR references locomotive emissions and idling limitations that presently are included

¹⁰ The Rhode Island emissions regulations were approved by EPA for inclusion in that state's SIP in 2008. *See* 73 Fed. Reg. 16203.

¹¹ *Ass'n. of Am. R.R. v. S. Coast Air Quality Mgmt. Dist.*, 622 F.3d 1094, 1098 (9th Cir. 2010) ("Association of American Railroads").

(with EPA's approval) in the Massachusetts and Rhode Island SIPs. AAR Comments at 6-7. Revealingly, AAR first claims that even if the California, Massachusetts and Rhode Island rules were all the same, they still should be preempted as a "collective" rather than as "patchwork." It then goes on to highlight what it alleges are differences that illustrate the "burden" of compliance. However, the only examples of these differences that are offered focus on minutiae such as whether a locomotive undergoing essential maintenance can idle by virtue of a specific exemption (in the case of Rule 3502), or because such idling is "necessary" (in the case of the Massachusetts rule). AAR Comments at 7-8. Little wonder that AAR hedges its bet by claiming that similar state rules are as destructive to interstate commerce as different ones. In reality, consideration of the previously-approved Massachusetts and Rhode Island emissions limitations serves only to confirm that Rules 3501 and 3502 do not threaten the proliferation of conflicting state regulations of locomotives that would force railroads to change operating practices at every border. They are the only states other than California to seek inclusion of idling limits in their SIPs since the CAA was enacted; and measures easily available to, or already used by, the Railroads to comply with one state's rules (such as equipping locomotives with AESS technology) also ensure compliance with the others'.

Finally, it bears emphasis that the fragmentation that 49 U.S.C. § 10501(b) and decisions thereunder proscribe is that resulting from the "regulation of rail transportation" under different state laws, not different experiences under environmental or other laws that only incidentally affect railroads. *Fla. E. Coast Ry.*, 266 F.3d at 1331;

United States v. St. Mary's Ry. W., LLC, 2013 WL 6798560*3 (S.D.Ga.). As the District's witness Reistrup explained in his February 14, 2014 Verified Statement, railroads can and routinely do adjust various aspects of their operations in response to local conditions and circumstances. District Comments, Reistrup V.S., p. 3-4. Where, as here, there is no real evidence of a threat of piecemeal, conflicting *regulation of* locomotives by states or localities, the incidental impacts of the District's air emissions reduction provisions on the Railroads' operating preferences within the South Coast Region do not run afoul of 49 U.S.C. § 10501(b). *Cf. Ace Auto Body & Towing, Ltd. v. City of New York*, 171 F.3d 765, 769, 779 (2d Cir. 1999).

II. The Rules' Consistency With The CAA Is Not "Pretextual"

AAR claims that the proposed inclusion of the Rules in the SIP under the CAA is a "pretext" to justify the local regulation of railroad operations. AAR Comments at 12-16. Seizing on and amplifying a factually incorrect *dictum*¹² in a footnote to the 2006 District Court decision in *AAR v. SCAQMD*,¹³ AAR apparently seeks to delegitimize CARB's advancement of the Rules to EPA in order to deter the Board from harmonizing those federal requirements with the ICCTA. There are two (2) basic flaws in this argument: AAR is judicially estopped from advancing it; and the claim is without basis in fact.

¹² See District Comments at 6.

¹³ *Ass'n of Am. R.R. v. S. Coast Air Quality Mgmt. Dist.*, No. CV 06-01416-JFW, 2007 WL 2439499*6 n.6 (C.D. Cal. Apr. 30, 2007).

In arguments before the Ninth Circuit in *Association of American Railroads*, counsel for the Railroads (including AAR) asserted that the proper course for the District to follow in order to qualify the Rules for harmonization with the ICCTA was to submit them through CARB to EPA for inclusion in the SIP. No mention was made of any procedural obstacles, irregularities, “pretexts,” or any other issue that might conflict with this course. The Ninth Circuit accepted the Railroads’ argument in affirming the District’s Court’s preemption ruling. *Association of American Railroads*, 622 F.3d at 1098. When the District subsequently followed the path advocated by the Railroads’ counsel, the Railroads reversed course and filed a motion with the District Court seeking a contempt citation against the District. In rejecting the Railroads’ motion, District Judge Walter held that the Railroads were “playing fast and loose with the court,” and that they were judicially estopped from objecting to the legality of the District’s submission to CARB.¹⁴ AAR’s “pretext” claim is substantively indistinguishable from its contempt motion; both challenge the legitimacy of the District’s submission of the Rules under the CAA. As was the case with that motion, AAR is estopped now from contradicting its own stated position before the Ninth Circuit.

AAR’s “pretext” invention also is contradicted by the facts. It appears that AAR has pursued this line of argument in an effort to squeeze this case into the Board’s *Town of Ayer* ruling, which rejected a municipality’s invocation of the Clean Water Act to attempt to “interfere with interstate commerce by imposing a local permitting or

¹⁴ See Order Granting Defendants’ Motion to Vacate Order to Show Cause (Doc. 232), *Ass’n. of Am. RR. v. S. Coast Air Quality Mgmt. Dist.*, No. CV 06-1416-JFW (C.D. Cal. filed Feb. 24, 2012) (EPA Petition Exh. B).

environmental process...to hold up or defeat the railroad’s right to construct facilities,” where the railroad project posed no recorded threat to water quality. *Joint Pet. for Declaratory Order – Bos. & Me. Corp. and Town of Ayer, MA*, 5 S.T.B. 500, 509 (2001). However, the District’s Rules have nothing to do with railroad construction or other core considerations under the ICCTA, and use of the CAA to reduce dangerous emissions from unnecessary locomotive idling is squarely within the purposes of the statute and the SIPs that are designed to enforce it. 42 U.S.C. § 7410(a). In this case, unlike *Town of Ayer*, the Rules actively will contribute to achievement of compliance with the applicable National Ambient Air Quality Standards (“NAAQS”), and thus advance the core goals of the CAA, as CARB’s support for their adoption attests.

As supposed “evidence” of the pretextual nature of the District’s SIP submission, AAR and its witness Rubenstein point to the District’s stated concern about the carcinogenic effects of diesel locomotive emissions before EPA had identified those emissions as cancer-causing, claiming that this shows that the Rules were not motivated by compliance with the CAA.¹⁵ There is no logic to this argument; an otherwise proper CAA rule is not rendered a “pretext” because one of the pollutants that it reduces – in this case particulates – causes cancer as well as *other* adverse health impacts that *are* within the CAA’s regulatory structure. It is also factually unsound. The District Governing Board resolution approving the Rules expressly found that they were needed to *both* “reduce public health exposure to criteria air pollutants and toxic air contaminants” and “to meet state and federal ambient air quality standards.” *See Nakamura Reply V.S.*,

¹⁵ AAR Comments at 14-15, Rubenstein Aff. ¶¶ 19-21.

Exhibit B, p.4. Moreover, the District Governing Board found that “there is a problem that the rules will alleviate, continued exceedances of state and federal ambient air quality standards, and that the rules will promote the attainment of these standards.” *Id.* There is no legal basis in the Board’s precedents for concluding that these findings were “pretexts” merely because the Rules also serve the valid public purpose of reducing exposure to cancer-causing emissions. As District Director of Strategic Initiatives Susan Nakamura explains in her Reply Verified Statement (p. 3-5), the Governing Board, the Railroads and the public all clearly understood that “attaining the federal ambient air quality standards” is the *purpose* of a SIP under the CAA. 42 U.S.C. § 7410(a). Any reliance on the District or the Governing Board’s failure to use the exact words “the Clean Air Act” to argue that the Rules were not adopted pursuant to the CAA is a wholly unjustified splitting of hairs.

AAR also points to the fact that the District and CARB did not submit the Rules for inclusion in the SIP until 2012, claiming that this, too, is inconsistent with the Rules having been adopted to promote compliance with the NAAQS. AAR Comments at 15. However, the only consequence of an agency’s failure to submit a proposed rule to EPA within 60 days after adoption is that an affected party can seek a court order compelling their submission. No statute or regulation prevents EPA from approving a rule in 2014 that originally was developed in 2006. Moreover, in this case, the reasons for the time gap are clear and rational. AAR, BNSF and UP filed suit to enjoin the Rules’ effectiveness in March 2006. Wallerstein Reply V.S., p. 5-6. The ensuing litigation was not concluded with finality until 2010. Prior to that time, there was no purpose to be

served by the District attempting to initiate parallel and potentially inconsistent proceedings involving CARB and then EPA. Certainly, the hiatus was not indicative of a lack of commitment on the District's part to including the Rules in the SIP. The litigation concluded with the Ninth Circuit accepting the *Railroads'* position that the course the District should follow was presentation of the Rules for inclusion in the SIP and harmonization with the ICCTA,¹⁶ which the District then did.

The AAR's retained witness Rubenstein makes a number of claims which are not relevant to the issues properly before the Board, including criticisms of the manner in which the District adopted the Rules, and the process through which CARB considered and advanced them to EPA for inclusion in the California SIP.¹⁷ As EPA itself has confirmed, the scope of its Petition does not include an assessment of the Rules' consistency with the CAA, or whether they should be incorporated into the SIP.¹⁸ No further consideration should be given to these portions of Mr. Rubenstein's opinions. However, a brief rebuttal is appropriate with respect to his and AAR's claim that the Rules would have no cognizable, positive impact on public health. *See* AAR Comments at 14-15, Rubenstein V.S., p. 4-6.

With all due respect to Mr. Rubenstein, he has no basis or credential to pass qualitative judgment on whether a reduction in emissions of .03 tons per day – or .04 or .05 or .02 tons – contributes meaningfully to the cause of NAAQS attainment in Southern

¹⁶ Association of American Railroads, 622 F.3d at 1098.

¹⁷ AAR Comments, Rubenstein Aff. ¶¶ 14-25.

¹⁸ EPA Comments at 1.

California. Incremental progress undeniably is progress, and as the District's Executive Officer Dr. Barry Wallerstein explains in his Reply Verified Statement, numerous emissions limitations promulgated by the District at the time of release of the 2012 Air Quality Management Plan came with relatively small emission reductions estimates, yet still contributed to overall pollution control efforts and were verified as "necessary" by the District Governing Board pursuant to CHSC § 40727(b)(1). *See* Wallerstein Reply V.S., p. 2-5; Nakamura Reply V.S., p. 2-4. Dr. Wallerstein further explains how the reductions that can be expected to be achieved because of Rule 3502 have taken on even greater importance since the time of their initial development, as a result of intervening changes in EPA's standards for, *e.g.*, PM and ozone, which set even lower limits than those in effect in 2006. *Id.*

AAR's "pretext" arguments are foreclosed by its own, previous in-court statements and the Ninth Circuit's decision in *Association of American Railroads*, and are unsupported by the actual facts concerning the development of Rules 3501 and 3502. Its arguments and the opinions of its witness Rubenstein regarding interpretations of the CAA and/or California law and regulations regarding SIPs are entitled to no weight,¹⁹ and in any case are irrelevant to the limited issues properly placed before the Board by EPA's Petition. Similarly, Mr. Rubenstein's claims regarding the District and CARB data relied upon in the initial development of the Rules should be given no credence. As the District's witness Nakamura testifies in her Reply Verified Statement, the data used

¹⁹ *See WildEarth Guardians v. Public Serv. Co.*, 853 F.Supp.2d 1086, 1090 (D. Colo. 2012).

was the most recent available at the time, and both CARB *and* the Railroads accepted and relied upon it in entering into the 2005 MOU. *See* Nakamura Reply V.S., p. 2-3.

III. The Rules Do Not Impact Core Interests of the ICCTA

Federal precedent establishes that the “core interests” on which the ICCTA is focused are those matters related to “*direct* economic regulation” of railroads and rail operations,²⁰ as distinguished from actions having only an “incidental” impact on the rail industry.²¹ Where the ICCTA must be harmonized with another federal enactment, the inquiry looks to whether the latter intrudes “on matters that are directly regulated by the Board (*e.g.*, rail carrier rates, services, construction, and abandonment).” *Grafton & Upton R.R. Co. – Pet. for Declaratory Order*, STB F.D. No. 35779 (STB served Jan. 27, 2014), at 4. As the District demonstrated in its prior submissions, as components of the California SIP, the narrow and limited reporting requirements and idling limitations in Rules 3501 and 3502 do not come close to intruding on the ICCTA’s core purposes. *See* District Reply at 20-27; District Comments at 32-37.

BNSF attempts an argument that the Rules offend core interests of the ICCTA,²² but the components of that argument essentially consist of an assumption (without actual evidence) that the Rules “directly regulate” rail transportation by limiting

²⁰ *Fla. E. Coast Ry. Co.*, 266 F.3d at 1337 (emphasis in original). *See also*, *United States v. St. Mary’s Ry. W., LLC*, *4 (“laws that do not generally collide with the scheme of economic regulation (and deregulation) of rail transportation remain fully applicable unless specifically displaced.”).

²¹ *See, e.g.*, *Green Mountain R.R. Corp. v. Vermont*, 404 F.3d 638, 644 (2d Cir. 2005), *citing Ace Auto Body & Towing, Ltd. v. City of New York*, 171 F.3d 765 (2d Cir. 1999).

²² BNSF Comments at 9-20.

locomotive idling;²³ a reprise of its prior, irrelevant claim that the Rules are preempted by the CAA and the Locomotive Inspection Act;²⁴ and the conflation of a “core interests” analysis applicable to the harmonization of federal statutes with the standard preemption test used for local regulations.²⁵ BNSF’s first point is largely dependent on a semantic sleight-of-hand: because the District (correctly) described Rule 3502 as an “in use” or “operational” rule in the parlance of Section 209 of the CAA,²⁶ the carrier claims that the District has “admitted” that the Rule regulates operations. BNSF Comments at 15. To the contrary, as the court in *Engine Mfrs. Ass’n* made clear, CAA Section 209 prohibits state and local agencies from adopting locomotive “standards” or “requirements,” both of which relate to the emissions characteristics of the locomotive itself; *i.e.*, its design or components. Section 209 does not prohibit state or local regulation of the “use” or “operation” of an engine. To say that a rule affects “operation” of an engine in terms of idling as opposed to setting a preempted standard is very different from “admitting” that the rule regulates railroad operations in the sense argued by BNSF. A locomotive that is idling unnecessarily is not performing any railroad operating function. The Rules at issue here apply to locomotives that are functionally equivalent to the stationary sources whose emissions are controlled through the District’s rules of general applicability.

²³ *Id.* at 9-13.

²⁴ *Id.* at 14-17.

²⁵ *Id.* at 18-20.

²⁶ See District Comments at 24-26; *Engine Mfrs. Ass’n v. EPA*, 88 F.3d 1075, 1093-1094 (D.C. Cir. 1996).

The District already has explained why BNSF's second point is invalid,²⁷ and while Part IV of this Argument further demonstrates that the Rules do not unreasonably burden railroad operations, under *Association of American Railroads* and *United States v. St. Mary's Railway West, LLC*,²⁸ the Rules as part of a SIP are entitled to considerably greater deference than local regulations in a typical preemption analysis. In any event, the better evidence of record in this case clearly establishes that the Rules do not offend core interests of the ICCTA.

In contrast, the District has established (and CARB agrees) that Rules 3501 and 3502 do serve core interests of the CAA. Once approved by EPA as elements of the California SIP, Rules 3501 and 3502 will be part of the rubric of federal law regulating emissions of criteria pollutants, in order to meet the NAAQS set pursuant to the CAA.²⁹ The purpose of all SIPs is for states and local governments to identify measures, such as limits on idling, that can be taken to meet national primary and secondary ambient air quality standards.³⁰ Areas within the South Coast Region remain in NAAQS nonattainment status for ozone and PM, and the District therefore is required by federal

²⁷ District Comments at 24-31.

²⁸ See 622 F.3d at 1098; 2013 WL 6798560*5.

²⁹ See 42 U.S.C. §§ 7408-7409.

³⁰ See 42 U.S.C. § 7410. The CAA was established with the expectation that states and local governments participate and take action to reduce air pollution. 42 U.S.C. § 7401 (“[a] primary goal of this Act is to encourage or otherwise promote reasonable Federal, State, and local governmental actions, consistent with the provisions of this Act, for pollution prevention.”).

law to identify measures that can be taken to reduce these criteria pollutants.³¹ Rules 3501 and 3502 directly will address these deficiencies by regulating PM and nitrogen oxides (NOx), which are responsible for ground-level ozone.³²

As discussed in Part II, the fact that Rules 3501 and 3502 will reduce emissions of carcinogenic diesel-PM does not diminish the Rules' purpose and role as legitimate SIP components under the CAA, notwithstanding the Railroads' singular focus on PM as a toxic air contaminant. Applicable CAA regulations make clear that all rules which "may be necessary or appropriate to meet" the national primary and secondary ambient air quality standards are within the criteria for a SIP.³³ Rules 3501 and 3502 easily meet this standard, because they target pollutants for which NAAQS have been established by EPA, and which are subject to regulation under the CAA.³⁴

Rules 3501 and 3502 will reduce emissions of PM, NOx, sulfur oxides and carbon monoxide (CO), all of which have been designated as criteria pollutants subject to regulation under the CAA.³⁵ The Railroads highlight that the Rules also will help reduce diesel PM, which is a toxic air contaminant that is not regulated under the CAA.³⁶

However, diesel PM is still a type of PM; the fact that the Rules will be removing a

³¹ See 42 U.S.C. § 7410.

³² Tropospheric, or "bad" ground-level ozone, is generated when NOx reacts with volatile organic carbons (VOCs). See EPA, *Ground-level Ozone Basic Information*, (last updated Nov. 1, 2012), <http://www.epa.gov/groundlevelozone/basic.html>.

³³ See 42 U.S.C. § 7410(a)(2).

³⁴ See 42 U.S.C. § 7408.

³⁵ See EPA Office of Air & Radiation, *NAAQS Table*, <http://epa.gov/air/criteria.html> (last visited Apr. 9, 2014).

³⁶ See AAR Comments, Rubenstein Aff. ¶¶ 19-21.

carcinogenic type of PM is an added, albeit important benefit. Limiting locomotive emissions will reduce other non-criteria contaminants that likewise do not have NAAQS, such as carcinogenic compounds “including, but not limited to, arsenic, benzene, formaldehyde, 1-3-butadiene, and ethylene dibromide.”³⁷ Reducing these non-criteria pollutants still will contribute to reducing overall air pollution and promoting public health and welfare, which are primary goals of the CAA.³⁸

The Railroads claim that measures that they have undertaken voluntarily, including the installation of anti-idling devices, already have done more to reduce emissions than what would be accomplished by complying with Rule 3502. *See* AAR Comments at 19. As the District demonstrated previously, the fact that the Railroads agreed to idling limits with CARB and voluntarily installed automatic shut-off devices is probative evidence that the Rules do not unreasonably burden their operations. *See Twp. of Woodbridge v. Consolidated Rail Corp.*, 5 S.T.B. 336, 340 (2000). Additionally, however, the calculations performed and included in the District’s 2006 Staff Report took into account the impact that the Rule would have on emissions reductions *after adjustment* for anti-idling devices that had been installed. As stated in the 2006 Staff Report:

Based on the information submitted by the Class I railroads, the number of anti-idling device installations

³⁷ South Coast Air Quality Management District, Final Staff Report, District Reply, Nakamura Reply V.S., Exh. 1 at Exec. Summary, p.1 (“Final Staff Report”).

³⁸ *See* 42 U.S.C. § 7401(b) (“[t]he purposes of this subchapter are—(1) to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population...”).

already in place has been estimated (i.e., out of 2,145 switch and line haul locomotives in the District, of which approximately 1,005 are equipped with anti-idling devices). *The emission reductions based on the 2003 AQMP inventories are further adjusted to reflect this adjustment, as shown in Table 3-6.*³⁹

Even if most locomotives now are equipped with anti-idling devices, the Rules still provide an environmental benefit by limiting idling by unequipped units, or units not otherwise subject to EPA's regulation. Equally important, they serve to ensure the enforceability of EPA's regulation for the locomotives that are covered. *See* District Reply, Nazemi V.S. To take into account the presumed effect of additional anti-idling devices that the Railroads claim have been installed since 2006, the values previously reported for Rule 3502 conservatively were reduced by 90% in the following table. As shown below, implementation of Rule 3502 still will result in significant reductions in criteria pollutants that are regulated under the CAA, even if the enforcement benefits of Rule 3502 are not considered.⁴⁰

³⁹ Final Staff Report at 3-5 (emphasis added).

⁴⁰ Not all air pollution control measures will have a large effect on an individual basis, but it is the combined result of several measures that improve air quality. For example, the ozone measures under consideration by the District include CMB-03, *Reductions from Commercial Space Heating*. It is estimated that if implemented by 2018, it will reduce NOx emissions by 0.18 tons per day by 2023 and eventually by 0.6 tons per day. *See Appendix IV-A, Air Quality Management Plan* (Feb. 2013) available at <http://www.aqmd.gov/aqmp/2012aqmp/Final-February2013/AppIVa.pdf>.

Proposed Rule 3502 Emission Reductions				
Pollutant	Emission Reductions (TPD) with no Anti-Idling devices¹	Emission Reductions (TPD) with Installation rate of Anti-Idling devices = 47%²	Emission Reductions (TPD) with Installation rate of Anti-Idling devices = 90%³	Annual Emission Reductions with Installation rate of Anti-Idling devices = 90%³
PM	0.06	0.03	0.006	2.19
NOx	1.35	0.72	0.135	49.28
HC	0.23	0.12	0.023	8.40
CO	0.44	0.23	0.044	16.06

¹PR 3502 Emissions Reductions (tons per day) reported within Table 3-5, Final Staff Report.

²Emission Reductions were reduced based on information submitted by the Class I railroads, which reported that 1,005 out of 2,145 locomotives in the District were equipped with anti-idling devices. Based on this information, there was an installation rate of 47%.

³AAR's witness Rubenstein states: "over 90% of all locomotives owned by the two Class I railroads and operating in California are equipped with anti-idling devices." Rubenstein Aff. ¶ 11.

TPD = Tons per day

IV. The Rules Do Not Unduly Burden Railroad Operations

The Railroads and their witnesses argue that complying with Rules 3501 and 3502 will create myriad operational issues that will burden their operations unreasonably. As explained by the District's witnesses, Messrs. Reistrup, Johnson and Beall, the operational dilemmas offered up by the Railroads are not fatal to the District's Rules because the issues raised largely are non-existent or are vastly overstated.

A. Rule 3501 Is Not Unduly Burdensome

The Railroads suggest that the modest data collection called for under Rule 3501 will cripple the Railroads with wasteful data collection and verification.⁴¹ BNSF's witness, Mr. Reilly, goes so far as to suggest that the Rule creates safety concerns

⁴¹ See AAR Comments at 18; UP Comments, Hunt V.S., p. 3-4; BNSF Comments, Reilly V.S., p. 6-9.

because crew members will be distracted by the ongoing need to track idling time and record every idling incident at the moment it occurs.⁴² The Railroads' claims are unfounded.

As the District has repeatedly emphasized, Rule 3501 is a simple recordkeeping rule, requiring the Railroads to record locomotive idling events that last 30 minutes or more.⁴³ When that happens, the Railroad must include only five relevant data points: the Railroad's name, the locomotive's identifying number; the location, date, and time of the event; and the event's duration.⁴⁴ If the idling event exceeds two hours, the Railroad is required to add a brief reason for the delay.⁴⁵ However, all locomotives equipped with an anti-idling device set at 15 minutes will be exempt from most of Rule 3501's reporting requirements.⁴⁶ Thus, the reporting requirement is very limited in scope, because more than 95% of the locomotives operating in the Los Angeles Basin are equipped with anti-idling devices.⁴⁷

While this idling data easily can be reported manually at the end of a crew shift, the District's witnesses explain that much of the data also can be garnered from

⁴² See BNSF Comments, Reilly V.S., p. 8-9.

⁴³ See Rule 3501; Nakamura Reply V.S., p. 8-9.

⁴⁴ See Rule 3501(d).

⁴⁵ See *id.*

⁴⁶ See Rule 3501(k).

⁴⁷ See Reistrup Reply V.S., p.3 ("BNSF and UP have equipped over 95 percent of their locomotives operating in the Basin with AESS devices, and that the standard shut down time setting is 15 minutes").

locomotive event recorders and other sources that the Railroads already use, thereby making compliance faster and mostly automated. *See Johnson/Beall Reply V.S.*, p. 2-4.

Mr. Reistrup further explains how the Railroads already collect massive amounts of data during the course of operations. *Reistrup Reply V.S.*, p. 19; *District Reply, Reistrup V.S.*, p. 2-4. Indeed, the Railroads' data collection project concerning fuel savings and operator performance are well publicized.⁴⁸ Thus, as Mr. Reistrup explains, when the railroads need data for their own purposes they can collect it.⁴⁹ Compared to those efforts, the task of complying with Rule 3501 is *de minimus*.⁵⁰ More importantly, the recordkeeping should have no impact on the Railroads' operations, as such activities do not have to take place during actual train operations.

BNSF's witness Mr. Reilly expresses concerns that complying with Rule 3501 jeopardizes safety, a point that BNSF's argument raises in passing.⁵¹ However, Mr. Reilly proceeds from the incorrect assumption that crews must be constantly checking the clock and monitoring idle times so that they do not violate Rule 3502, and that they, in turn, make the necessary recordations to comply with Rule 3501.⁵² As explained below, and in Mr. Reistrup's testimony, Rule 3502 requires shutting down engines only in limited circumstances, and Rule 3501 has no requirement for contemporaneous recording

⁴⁸ *See* USDOT & FRA, *Best Practices and Strategies for Improving Rail Energy Efficiency*, No. DOT/FRA/ORD-14/02 12, 21-22, 34, 41-42 (Jan. 2014), <http://ntl.bts.gov/lib/51000/51000/51097/DOT-VNTSC-FRA-13-02.pdf> ("DOT Report").

⁴⁹ *District Reply, Reistrup V.S.*, p. 2-4.

⁵⁰ *See id.*, p. 4.

⁵¹ BNSF Comments, *Reilly V.S.*, p. 8-9.

⁵² BNSF Comment, *Reilly V.S.*, p. 7-8.

of events.⁵³ Thus, the crews need not be distracted in order to comply with Rule 3501, and neither safety nor railroads operations will be compromised.⁵⁴

B. Rule 3502 Will Not Interfere with Railroad Operations

The Railroads' witnesses devote most of their arguments to the idea that Rule 3502 is a burden on railroad operations, mostly in the form of alleged delays.⁵⁵ These delays, BNSF argues, will "have a substantial impact on train operations" in the Basin that in turn will "ripple" across they system.⁵⁶ As much of the traffic coming out of the Basin is high priority intermodal service, the Railroads worry that this time sensitive business may be disrupted or even lost to trucks if the Railroads have to comply with Rule 3502.⁵⁷ The Railroads' claims are without merit.

As Mr. Reistrup explains, the initial delays that would hold a train long enough to trigger Rule 3502 all are self-inflicted, and complying with Rule 3502 will not exacerbate them.⁵⁸ Most importantly, the Railroads have misinterpreted Rule 3502, particularly with respect to locomotives equipped with idling-reduction technology, such that the Railroads have imagined a parade of problems that simply do not exist for the vast majority of the operations in the Basin.

⁵³ Reistrup Reply V.S., p. 18-19.

⁵⁴ *See id.*

⁵⁵ *See* AAR Comments at 9; UP Comments, Hunt V.S., p. 6; BNSF Comments, Reilly V.S., p. 6, 12.

⁵⁶ *See* BNSF Comments at 19 (statement was directed at impact of both Rules 3501 and 3502).

⁵⁷ BNSF Comments at 3-5, 20.

⁵⁸ Reistrup Reply V.S., p. 9-10.

It is noteworthy that the Railroads voice their concerns over delays and their impact on their systems in broad generalizations. The Railroads do not quantify or otherwise describe the expected impacts on dwell times, crew hours, or other metrics that can measure train delays. Given the many years that the Railroads have been resisting the implementation of these Rules, one would expect that the Railroads would be able to present a detailed analysis of the impact of Rule 3502, sourced to reliable data that could be scrutinized and verified. However, no such analysis has been offered in this proceeding. The District submits that the Railroads avoid such details because the actual impacts, if any, are negligible, for the reasons Messrs. Reistrup, Johnson and Beall detail in their testimony.

1. Rule 3502's Safe Harbor

Rule 3502 provides a safe harbor for the Railroads. By definition, the Railroads are in compliance with the Rule if (1) a locomotive is equipped with an anti-idling device, such as an Automatic Engine Start/Stop (“AESS”) system; (2) the device is set to shut down the engine after 15 minutes of idling;⁵⁹ and (3) the device has not been tampered with by the railroad.⁶⁰ As over 95% of the locomotives currently operating in

⁵⁹ The AESS-equipped locomotives in the Railroads' fleets are normally set to shut down after 15 minutes of idling. *See* Trial Tr. at 79 (BNSF witness Mark Stehly) (Confirms in response to questioning that all new interstate locomotives are equipped with anti-idling devices and that he “believes” these are all set for 15 minutes). The Railroads also agreed as part of the 2005 MOU to install idling devices set at 15 minutes on 99% of their intrastate locomotives. CARB 2005 MOU C(1)(a)-(b) (requires that greater than 99% of the unequipped intrastate locomotives be equipped by June 30, 2008 with idling-reduction devices set for 15 minutes).

⁶⁰ *See* Rule 3502(c)(1), (d).

the Basin are equipped with such devices,⁶¹ the Railroads largely are complying with the Rule already without any changes to existing operations.⁶²

The Railroads inexplicably seem to misunderstand this Rule. As Mr. Reistrup explains, this misunderstanding has led them to falsely claim that they will violate the Rule when an AESS-equipped locomotive operates within its normal programming, which includes a variety of actions the device automatically will take to protect the locomotives, including re-starting (or not shutting down) the engine to charge the batteries, maintain the air brake pressure, or protect the engine from too many start/stop cycles in a particular time period.⁶³ Thus, for example, BNSF is concerned that it will violate the Rule if the engine re-starts to maintain the air brake pressure.⁶⁴ However, this operation does not violate the Rule because the locomotive is operating within the safe harbor.⁶⁵ As discussed below, the Rule allows anti-idling devices to re-start the engine if air brake pressure falls below an acceptable level.⁶⁶ The Rule is not unlike BNSF's coal train dust suppression rule, which provides a safe harbor for coal

⁶¹ See Reistrup Reply V.S., p. 3.

⁶² The Railroads also complain that the 15-minute shut down setting is inconsistent with the EPA regulations that permit a 30-minute limit, and that is difficult to reprogram the locomotives from 15 to 30 minutes and vice-versa. The Railroads did not raise an issue about this limit with CARB or the District when, *e.g.*, they were negotiating the 2005 MOU, and the Railroads use 15 minutes as the standard on all of their AESS systems. Thus, these arguments are irrelevant.

⁶³ Reistrup Reply V.S., p. 4.

⁶⁴ See Reilly V.S. at 18-19.

⁶⁵ Rule 3502(d)(1)(safe harbor provision of Rule 3502 applies when “a locomotive is equipped with an anti-idling device that is set at 15 minutes or less, engaged, and not tampered with....”).

⁶⁶ Rule 3502(c)(1), (d); Reistrup Reply V.S., p. 4.

shippers: if a shipper sprays an approved surfactant, it is deemed to be in compliance regardless of the amount of fugitive dust detected from the shipper's train. *See Reasonableness of BNSF Ry. Co. Coal Dust Mitigation Tariff Provisions*, STB EB 43537 (STB served Dec. 17, 2013).

2. Rule 3502 Will Not Cause Delays

As Mr. Reistrup has testified, the initial delays that might trigger the application of Rule 3502 in the first place usually are of the Railroads' own making; Rule 3502 itself does not cause a locomotive to idle to 30 minutes in the first instance. Thus, the only circumstances in which Rule 3502 might add any additional time to the movement of a train would occur when that train resumes operations after a hiatus. As Mr. Reistrup explains, the various scenarios that BNSF's witness Mr. Reilly has devised to demonstrate such delays are either implausible or inapplicable under Rule 3502.⁶⁷

The Railroads also have a serious disconnect in their arguments with respect to operations in the Los Angeles Basin.⁶⁸ While they tout the efficiency and tight coordination of their operations, such as BNSF's just-in-time service to its premium intermodal customers,⁶⁹ they posit a string of unlikely delays that would hit such trains that often involve a lack of crews.⁷⁰ Rule 3502 has nothing whatsoever to do with crew

⁶⁷ Reistrup Reply V.S., p. 11-17.

⁶⁸ Compare BNSF Comments at 4, 19 (efficiency and just-in-time), and BNSF Comments, Reilly V.S. p.12-16 (unlikely delays).

⁶⁹ BNSF Comments at 4, 19; Reilly V.S., p. 3-5; Farmer V.S., p. 6; Exhibit A, Bergant Decl. ¶ 11.

⁷⁰ BNSF Comments, Reilly V.S., p. 12-16.

deployment or management decisions. Mr. Reistrup also explains why Rule 3502 will not disturb operations or add to delays, even if such delays occur from time-to-time for other initiating reasons.⁷¹

C. Rule 3502 Does Not Conflict with Existing Federal Regulations and Normal Operational Procedures

The Railroads exaggerate small, insignificant discrepancies between the Rules and pre-existing federal regulations in an attempt to show that Rule 3502's definitions are vague and will cause confusion. For example, the Railroads continue to argue that the Rules' definition of an "unattended" locomotive is different from FRA's definition, and that this difference will cause unnecessary confusion.⁷² However, the Railroads already have been complying with the 2005 MOU, which defines an "unoccupied locomotive" as a locomotive that has "no personnel on-board." See 2005 MOU (C)(1)(e). Rule 3502 mirrors the 2005 MOU. Rule 3502(c)(16) ("[u]nattended means where no crew member is on board a locomotive"). Thus, the Railroads' confusion is unfounded, and their prior agreement precludes any complaint of unreasonable interference with operating procedures. *Twp. of Woodbridge, supra*.

The Railroads also argue that unlike EPA's regulations, Rule 3502 does not include an exemption for idling in order to maintain the brake pressure.⁷³ However, as Mr. Reistrup explains, the Rule has many exceptions that permit a locomotive to idle, such that air brake pressure can be maintained (*e.g.*, AESS systems automatically can re-

⁷¹ Reistrup Reply V.S., p. 9-10.

⁷² See AAR Comments at 8 and BNSF Comments, Reilly V.S., p. 15-16.

⁷³ See AAR Comments at 9 and UP Comments, Hunt V.S., p. 7.

start an engine or a lead locomotive can continue to idle while the crew is on-board during a delay).⁷⁴ During an extended delay, where the train is unoccupied, it is reasonable and in the Railroad's own interests to shut down the engines.⁷⁵

The Railroads claim that under the Rules, a locomotive cannot idle to maintain the battery charge at a sufficient level.⁷⁶ Again, the Railroads' arguments display a fundamental misunderstanding of the Rules. Rule 3502(j) includes a specific exemption that allows idling to maintain the battery charge at a level where the locomotive can be restarted. And under the Rule 3502 safe harbor, the AESS system can restart the locomotive to maintain necessary battery charge. Over 95% of the Railroads' locomotive fleets operating in the Basin already are covered by the Rule 3502 safe harbor, provided the Railroads have not tampered with those locomotives. For the few trains left that the Rule 3502 safe harbor might not cover, the Railroads have not provided any concrete evidence that compliance with the Rule would interfere with their operations. Instead, as Mr Reistrup has demonstrated, the Rule is consistent with sound operational practices.

⁷⁴ Rule 3502(c)(1), (d); Reistrup Reply V.S., p. 4.

⁷⁵ Reistrup V.S., p. 2; District Reply, Reistrup Reply V.S., p. 4.

⁷⁶ See BNSF Comments, Reilly V.S., p. 19 (citation omitted).

CONCLUSION

For the reasons set forth herein, in the accompanying Verified Statements and Exhibits, in the District's February 14, 2014 Reply and in its March 28, 2014 Supplemental Comments, the Railroads' objections to the proposed Rules should be overruled, EPA's Petition should be granted, and the Board should affirm that District Rules 3501 and 3502 are enforceable as part of the California SIP under the CAA, and are not preempted by the ICCTA.

Respectfully submitted,

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MANAGEMENT DISTRICT

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Filed: April 14, 2014

Attorneys and Practitioners

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

UNITED STATES ENVIRONMENTAL)	
PROTECTION AGENCY – PETITION FOR)	Finance Docket No. 35803
DECLARATORY ORDER)	
)	

**REPLY VERIFIED STATEMENT OF
BARRY R. WALLERSTEIN, D. Env.**

My name is Barry R. Wallerstein. I am the Executive Officer of the South Coast Air Quality Management District (the “District”). My responsibilities and qualifications are set forth in my Verified Statement filed with the District’s February 14 Reply to EPA’s Petition for Declaratory Order in this matter. The purpose of this Statement is to respond to certain claims and statements made by the Association of American Railroads’ (AAR) witness, Mr. Gary Rubinstein, concerning District Rules 3501 and 3502, which have been proposed to EPA for inclusion in the California State Implementation Plan (SIP).

Mr. Rubinstein claims that Rule 3502’s estimated particulate emission reductions of .03 tons per day is such a small amount that it is “not technically credible,” that the Rule is necessary to contribute to attainments of the national ambient air quality standards (NAAQS) for particulate matter (PM) in the State. (Rubenstein V.S., para. 8.) No basis is offered for his arbitrary conclusion, but as one who has worked for the last 30 years to support air quality improvements in Southern California and has managed

dozens of equally dedicated staff professionals, I can state unequivocally that he is not correct. It is quite common for the District – and other air quality management authorities – to adopt rules that have relatively small individual emission reduction estimates, yet still contribute to overall pollution reduction efforts. From a practical perspective, incremental gains often are the most realistic goals to set, as most emission reduction strategies require new compliance actions by affected individuals or industries. Specifically with regard to particulate matter, the District has adopted a number of necessary rules that when developed, were expected to produce relatively small emission reductions.

For example, District Rules already adopted at the time of the 2012 Air Quality Management Plan (AQMP) included Rule 1105.1 (Fluid Catalytic Cracking Units), which targeted a reduction of 0.07 tons per day (tpd) of particles less than 2.5 micrometers in diameter (PM_{2.5}); Rule 1118 (Refinery Flares), which produced a reduction of 0.06 tpd of PM_{2.5} (and similarly small amounts of other pollutants); Rule 1156 (Cement Manufacturing Facilities), which reduced PM_{2.5} by 0.01 tpd, and Rule 445 (Wood Burning Devices), which achieved a PM_{2.5} reduction of .63 tpd. (2012 AQMP Appendix III, p. III-2-7, attached hereto as Exhibit 1.) Each was found to be as necessary by the District's Governing Board, and both individually and collectively, all have moved the Region closer to NAAQS compliance.

The reductions that can be achieved once the District's locomotive idling limits are included in the SIP are even more necessary now than they were at the time

that Rules 3501 and 3502 were first developed. Since the Rules initially were authorized by the Governing Board in February 2006, the U.S. Environment Protection Agency (EPA) has twice adopted new, more stringent NAAQS for PM_{2.5}. On October 17, 2006, EPA lowered the daily PM_{2.5} standard from 65 micrograms per cubic meter (ug/m³) to 35 ug/m³. (See 71 Fed. Reg. 61144.) While the District adopted a plan to meet that standard (the 2012 AQMP), the EPA also lowered the annual average PM_{2.5} standard from 15 ug/m³ to 12 ug/m³ on January 15, 2013. (See 78 Fed. Reg. 3086.)

As explained by EPA, states will have until 2020-2025 to meet the latest lowered PM_{2.5} standard. (EPA Fact Sheet, attached hereto as Exhibit 2.) While this might appear to one not familiar with the field to be a long lead time, in actuality it reflects the challenge of broad emission reductions and the incremental nature of progress in this area. As shown by EPA's map, the large majority of the area in the U.S. that does not meet these new annual standards is located in California, including most of the District (except for Orange County). (See Exhibit 3 attached hereto.) Thus, EPA has reduced the allowable annual levels of PM_{2.5} by a further 20% beyond the 2015 goal of meeting the 15 ug/m³ standard. This will present a significant challenge for the District, even if EPA allows the District the 5-year extension to 2025 that is possible under the Clean Air Act.

EPA also has reduced the ozone standard since Rules 3501 and 3502 were developed, and is likely to further modify it downward in the future. On March 27, 2008, EPA lowered the 8-hour ozone standard from 0.08 parts per million (ppm) to 0.075 ppm.

(73 Fed. Reg. 16483.) This equates to a new standard of 75 parts per billion (ppb). As stated in the District's 2012 AQMP, it would be necessary to reduce nitrogen oxide (NO_x) by 65% to 70% beyond the levels prescribed by rules already in place just to meet the existing 1997 80 ppb standard by 2023. The latest EPA revisions require reductions far beyond the capability of measures that the District or the California Air Resources Board (CARB) currently have available. Thus, the 2012 AQMP—like its predecessors—contains a large “black box” of additional NO_x and volatile organic compounds (VOC) emission reductions which must be obtained from every feasible pollution reduction measure, whether presently listed in the AQMP or not. Diesel locomotive engine emissions reductions through reasonable idling limits are among these.

To meet the 2008 75 ppb standard for ozone (for which the District must submit a plan to EPA in 2016), it will be necessary to reduce NO_x by 75% beyond the levels allowed under currently adopted rules. Diesel locomotive engine emissions are a principal source of ozone constituents. In fact, by 2023 they will be the fifth largest source category for NO_x in the District. Finally, EPA is expected to lower the allowable standard for ozone still further—to somewhere between 60 and 70 ppb—sometime later this year or early next. This standard likely will need to be met by 2035, and in order to attain it, the District will have to reduce NO_x emissions by an additional 20% to 50% between 2032 and 2035—in just three years. This will be the greatest air quality challenge that our Region has ever faced. Indeed, if the level is set at 60 ppb, it will be very close to the District's “background” levels of ozone; that is, what would exist with

all man-made sources removed. (See 2012 AQMP, pp. 8-2, 8-3, attached hereto as Exhibit 4.)

None of the reductions described above can be achieved overnight. Because emissions have already been so significantly reduced, emissions can often only be lowered incrementally, and in small amounts. Cumulatively, all the measures that I describe above and discussed in my February 14, 2014 Verified Statement, including specifically Rules 3501 and 3502, gradually move the District closer to NAAQS compliance, even though individually, the measures of progress are modest. The AAR's witness is simply wrong to claim that such modest progress does not reflect both a commitment and a contribution to the goals of the Clean Air Act.

Mr. Rubinstein further states that there are no locomotive emissions control measures in either the 2007 or 2012 AQMPs, which he suggests indicates that Rules 3501 and 3502 were not genuinely adopted to promote the goals of the Clean Air Act. (Rubenstein V.S., para. 17.) This is incorrect. As I explained in my February 14 Verified Statement (at p. 7), the 2007 AQMP expressly stated that the District would submit Rules 3501 and 3502 into the SIP, and it included a control measure for the accelerated introduction of cleaner line-haul locomotives, to be implemented by EPA. The 2012 AQMP includes two control measures, one for freight locomotives (to be implemented by the ports, and the air agencies), and one for passenger locomotives (to be implemented by the Southern California Regional Rail Authority). (2012 AQMP, pp. 4-33, Table 4-6, attached hereto as Exhibit 5.) The District did not submit the Rules for inclusion in the

SIP within the 60 days of adoption provided for by EPA regulation because of the litigation initiated by AAR and the individual railroads. The Rules were adopted on February 3, 2006; BNSF & UP (“the Railroads”) sued on March 7, 2006, arguing that the Rules were preempted by the Interstate Commerce Commission Termination Act of 1995 (ICCTA); and by March 9, 2006, they had filed a motion for a preliminary injunction. The District therefore delayed the submission of the Rules for inclusion in the SIP pending the outcome of the litigation, since there would have been pointless confusion regarding the enforceability of the Rules if EPA approved them only to have the court subsequently enjoin them. Once the Ninth Circuit issued its decision in 2010, clarifying that the District could proceed with submission of the Rules to CARB and EPA, and that after approval by EPA as federal enactments the Rules would be harmonized with the ICCTA, the District consulted with CARB and submitted the Rules. Mr. Rubenstein takes issue with a submission delay that was of his sponsor’s own making due to the litigation started by AAR and the Railroads.

To conclude, at all times during the development process, Rules 3501 and 3502 were designed to and did serve both the purpose of helping to attain the federal ambient air quality standards for ozone and particulate matter, and reducing cancer risk to the community resulting from diesel particulates. The Governing Board, District Staff, and participating parties, including the Railroads, all were aware that “attaining the federal ambient air quality standards” is a mandate of the Clean Air Act, and that compliance with that mandate was the District’s principal purpose. The fact that public

notices may not have specifically referenced the SIP (Rubenstein V.S., para. 18) is irrelevant, because at the time the Rules were considered, the District's notices did not include statements regarding SIP submissions for *any* of its criteria pollutant rules. The District's recognized practice was that for any pollutant covered by a NAAQS, the District's rule would be submitted for the SIP. While the District never expressly so stated in public notices, EPA approved dozens of such District rules into the California SIP. This was explained in detail in a March 28, 2012 letter from the District to CARB, which is part of the District's Request for Official Notice included as part of its Reply submission.

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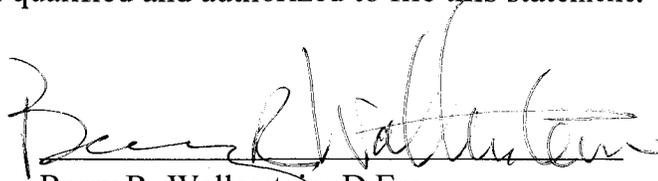
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VERIFICATION

I, Barry R. Wallerstein, verify that I have read the foregoing Statement, know the contents thereof, and that the same are known to be true of my own personal knowledge. Further, I certify that I am qualified and authorized to file this statement.



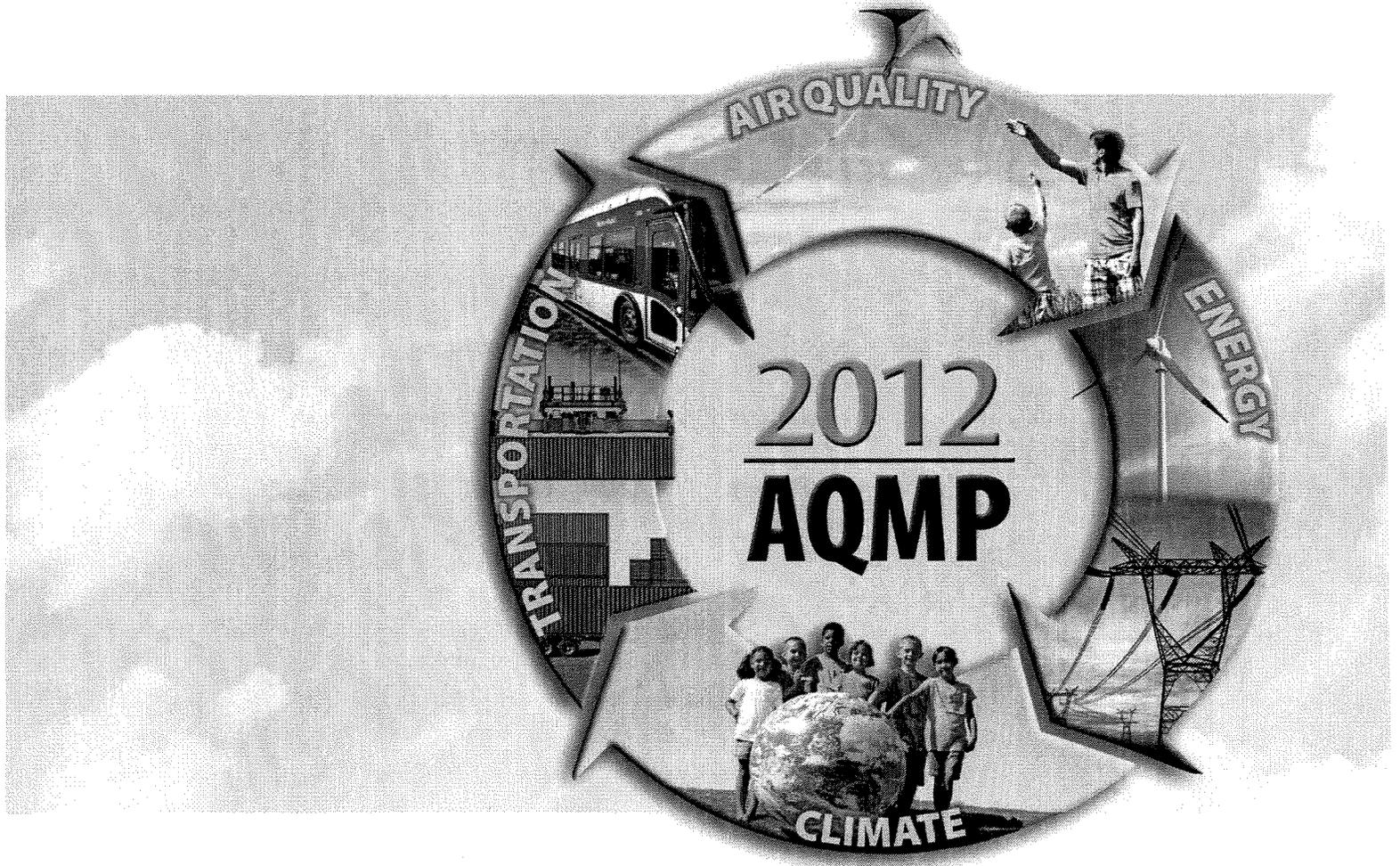
Barry R. Wallerstein, D.Env.

Executed on April 10, 2014

Exhibit 1

Appendix III

Air Quality Management Plan



Base and Future Year Emission Inventory

February 2013

South Coast Air Quality Management District

Cleaning the air that we breathe...™



TABLE III-2-2B
Emission Reductions (Tons per Day) in the Baseline by District Rules

RULES*	DESCRIPTION	2014				2023			
		VOC	NOx	SOx	PM2.5	VOC	NOx	SOx	PM2.5
1105.1	Fluid Catalytic Cracking Units (FCCUs)	-	-	-	0.07	-	-	-	0.07
1110.2**	Gaseous & Liquid Fuel Engines	0.47	5.61	-	-	0.44	5.43	-	-
1111	Natural-Gas-Fired, Fan-Type Central Furnaces	-	0.09	-	-	-	2.44	-	-
1113	Architectural Coatings	1.66	-	-	-	1.80	-	-	-
1118	Refinery Flares	0.03	0.13	0.11	0.06	0.04	0.13	0.11	0.07
1121	Residential - Natural-Gas-Fired Water Heaters	-	2.78	-	-	-	4.32	-	-
1133.2	Co-Composting & Related Operations	0.16	-	-	-	0.16	-	-	-
1133.3	Greenwaste Composting Operations	0.77	-	-	-	0.77	-	-	-
1143	Consumer Paint Thinners & Multi-Purpose Solvents	9.90	-	-	-	10.60	-	-	-
1144	Metalworking Fluids & Direct-contact Lubricant	3.72	-	-	-	3.96	-	-	-
1146	Large Ind/Comm Boilers, Steam Generator, & Process Heaters	-	1.11	-	-	-	1.71	-	-
1146.1	Small Ind/Comm Boilers, Steam Generators & Process Heaters	-	0.67	-	-	-	0.66	-	-
1146.2	Large Water Heaters & Small Boilers	-	3.17	-	-	-	3.48	-	-
1147	Nox Reductions from Miscellaneous Sources	-	1.57	-	-	-	2.20	-	-
1149	Storage Tank & Pipeline Cleaning & Degassing	1.45	-	-	-	1.53	-	-	-
1151	Motor Vehicle & Equip. Non-Assembly Line Coating	0.32	-	-	-	0.39	-	-	-
1156	Cement Manufacturing Facilities	-	-	-	0.01	-	-	-	0.01
1177	LPG Transfer and Dispensing	3.07	-	-	-	6.68	-	-	-
1178	Storage Tanks at Petroleum Facilities	0.12	-	-	-	0.13	-	-	-
445	Wood Burning Devices	-	-	-	0.63	-	-	-	0.63
TOTAL		21.68	15.13	0.11	0.76	26.49	20.38	0.11	0.77

*Adopted or amended as of June 2012. Only rules with emissions impact after 2008 are listed.

** Emission reductions from biogas are adjusted in Section of "SIP Set Aside Account".

*** Emission reductions are annual average emissions presented in sequence.

Exhibit 2

OVERVIEW OF EPA'S REVISIONS TO THE AIR QUALITY STANDARDS FOR PARTICLE POLLUTION (PARTICULATE MATTER)

- On Dec. 14, 2012, the U.S. Environmental Protection Agency (EPA) took important steps to protect the health of Americans from fine particle pollution by strengthening the annual health National Ambient Air Quality Standard (NAAQS) for fine particles to 12.0 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and retaining the 24-hour fine particle standard of $35 \mu\text{g}/\text{m}^3$. The agency also retained the existing standards for coarse particle pollution (PM_{10}).
- An extensive body of scientific evidence shows that long- and short-term exposures to fine particle pollution, also known as fine particulate matter ($\text{PM}_{2.5}$), can cause premature death and harmful effects on the cardiovascular system, including increased hospital admissions and emergency department visits for heart attacks and strokes. Scientific evidence also links PM to harmful respiratory effects, including asthma attacks.
- People most at risk from particle pollution exposure include people with heart or lung disease (including asthma), older adults, children and people of lower socioeconomic status. Research indicates that pregnant women, newborns and people with certain health conditions, such as obesity or diabetes, also may be more susceptible to PM-related effects.
- Particle pollution also causes haze in cities and some of our nation's most treasured national parks.
- Fine particles are 2.5 micrometers in diameter and smaller. They can be emitted directly from a variety of sources, including vehicles, smokestacks and fires. They also form when gases emitted by power plants, industrial processes, and gasoline and diesel engines react in the atmosphere. Sources of inhalable coarse particles, which have diameters between 2.5 and 10 micrometers, include road dust that is kicked up by traffic, some agricultural operations, construction and demolition operations, industrial processes and biomass burning.
- Emission reductions from EPA and states rules already on the books will help 99 percent of counties with monitors meet the revised $\text{PM}_{2.5}$ standards without additional emission reductions. These rules include clean diesel rules for vehicles and fuels, and rules to reduce pollution from power plants, locomotives, marine vessels and power plants, among others.
- EPA estimates that meeting the annual primary fine particle standard of $12.0 \mu\text{g}/\text{m}^3$ will provide health benefits worth an estimated \$4 billion to \$9.1 billion per year in 2020 – a return of \$12 to \$171 for every dollar invested in pollution reduction. Estimated annual costs of implementing the standard are \$53 million to \$350 million.

- For fine particles, EPA is:
 - **Strengthening the annual health standard (primary standard) for PM_{2.5}** by setting the standard at 12.0 µg/m³. The existing annual standard, 15.0 µg/m³, was set in 1997.
 - **Retaining the existing 24-hour health standard (primary standard) for PM_{2.5}**, at 35 µg/m³. EPA issued the 24-hour standard in 2006.
 - **Retaining the existing secondary standards for PM_{2.5}** to address PM-related effects such as visibility impairment, ecological effects, damage to materials and climate impacts. This includes an annual standard of 15.0 µg/m³ and a 24-hour standard of 35 µg/m³. The agency is relying on the existing secondary 24-hour PM_{2.5} standard to protect against visibility impairment, and is not finalizing the separate standard to protect visibility the EPA proposed in June 2012.
 - EPA had proposed to set a separate secondary 24-hour standard to provide protection against PM-related visibility effects; however, after considering public comment on the proposal and further analyzing recent air quality monitoring data, the agency has concluded that the current secondary 24-hour PM_{2.5} standard of 35µg/m³ will provide visibility protection that is equal to, or greater than, 30 deciviews, the target level of protection the agency is setting today. (A deciview is a yardstick for measuring visibility.)
- **For coarse particles, EPA is retaining the existing 24-hour PM₁₀ standards for health and environmental effects (primary and secondary standards).** These standards, set at a level of 150 µg/m³, have been in place since 1987.
- EPA examined thousands of studies as part of this review of the standards, including hundreds of new studies published since EPA completed the last review of the standards in 2006. The new evidence includes more than 300 new epidemiological studies, many of which report adverse health effects even in areas that meet the current PM_{2.5} standards. EPA also considered analyses by agency experts, along with advice from the Clean Air Scientific Advisory Committee and public comments.
- As part of EPA's commitment to a transparent, open government, the agency sought and received broad public input in setting this standard that provides critical health protection to tens of millions of Americans. EPA held two public hearings on the proposed standards, and received more than 230,000 written comments.
- The Clean Air Act requires EPA to review the particle pollution standards every five years. The revisions, which are a result of that review, also respond to a court remand of portions of the agency's 2006 decision on the PM_{2.5} standards.

More details about today's action:

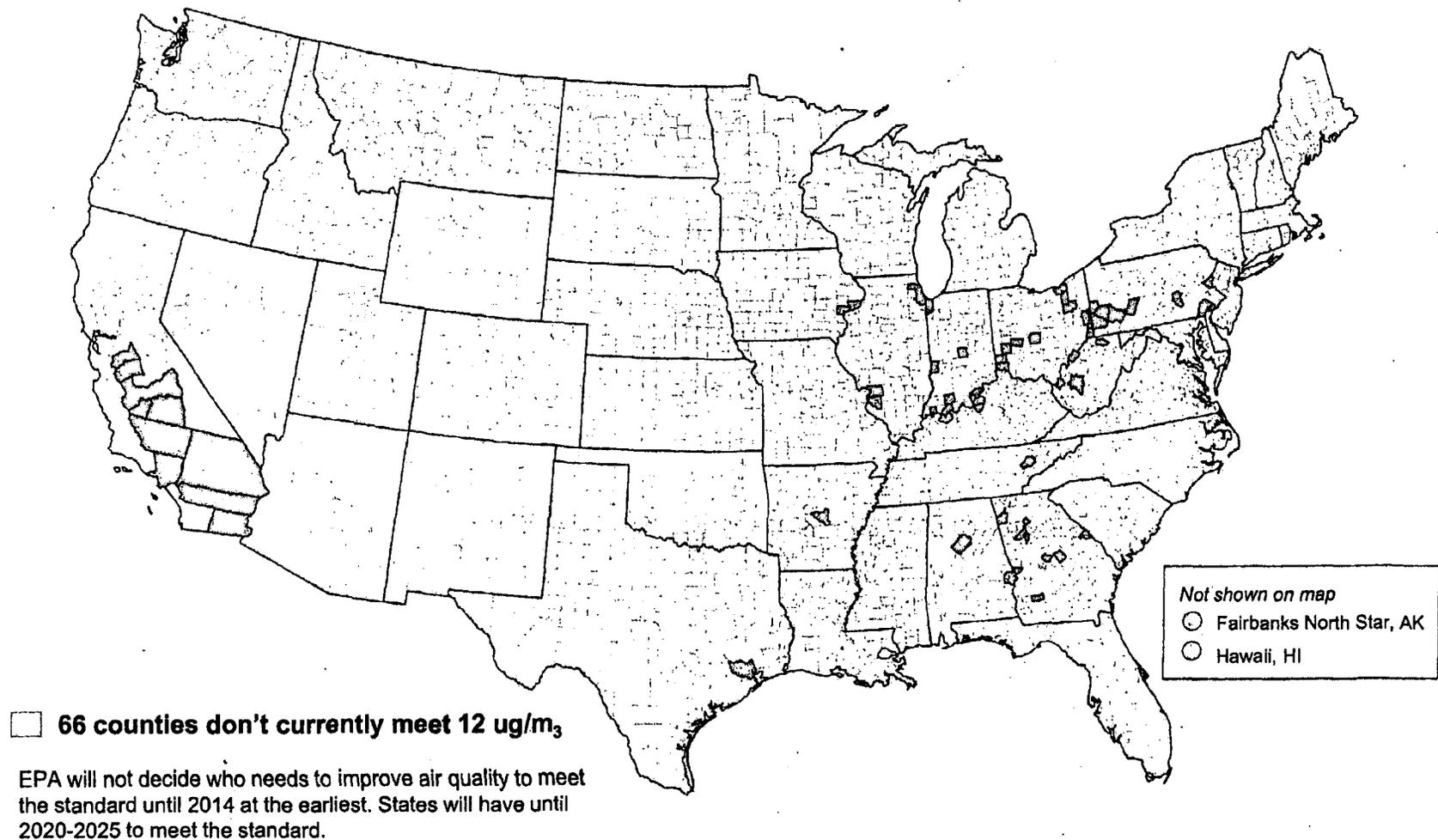
- Today's rule also addresses several issues related to implementation of the revised standards. Among them:
 - To ensure a smooth transition to the revised standards, EPA will grandfather pending preconstruction permitting applications if either:
 - The permitting agency has deemed the application complete. This must occur by Dec. 14, 2012.
 - The public notice for a draft permit or preliminary determination has been published prior to the date the revised PM standards become effective (60 days after publication in the Federal Register).
 - The agency is making updates and improvements to the nation's PM_{2.5} monitoring network that include relocating a small number of monitors to measure fine particles near heavily traveled roads in areas with populations of 1 million or more. These relocations will be phased in over two years (2015-2017) and will not require additional monitors.
 - In addition, EPA is updating the Air Quality Index (AQI) for PM_{2.5} to be consistent with the final health standards.
- EPA anticipates making initial attainment/nonattainment designations by December 2014, with those designations likely becoming effective in early 2015.
- States would have until 2020 (five years after designations are effective) to meet the revised annual PM_{2.5} health standard. Most states are familiar with this process and can build off work they are already doing to reduce pollution to help them meet the standards.
 - A state may request a possible extension to 2025, depending on the severity of an area's fine particle pollution problems and the availability of pollution controls.
- By law, EPA cannot consider costs in setting or revising national ambient air quality standards. However, to inform the public, EPA analyzes the benefits and costs of implementing the standards as required by Executive Orders 12866 and 13563 and guidance from the White House Office of Management and Budget.

FOR MORE INFORMATION

- To read the final standards and additional summaries, visit <http://www.epa.gov/airquality/particlepollution/actions.html>

Exhibit 3

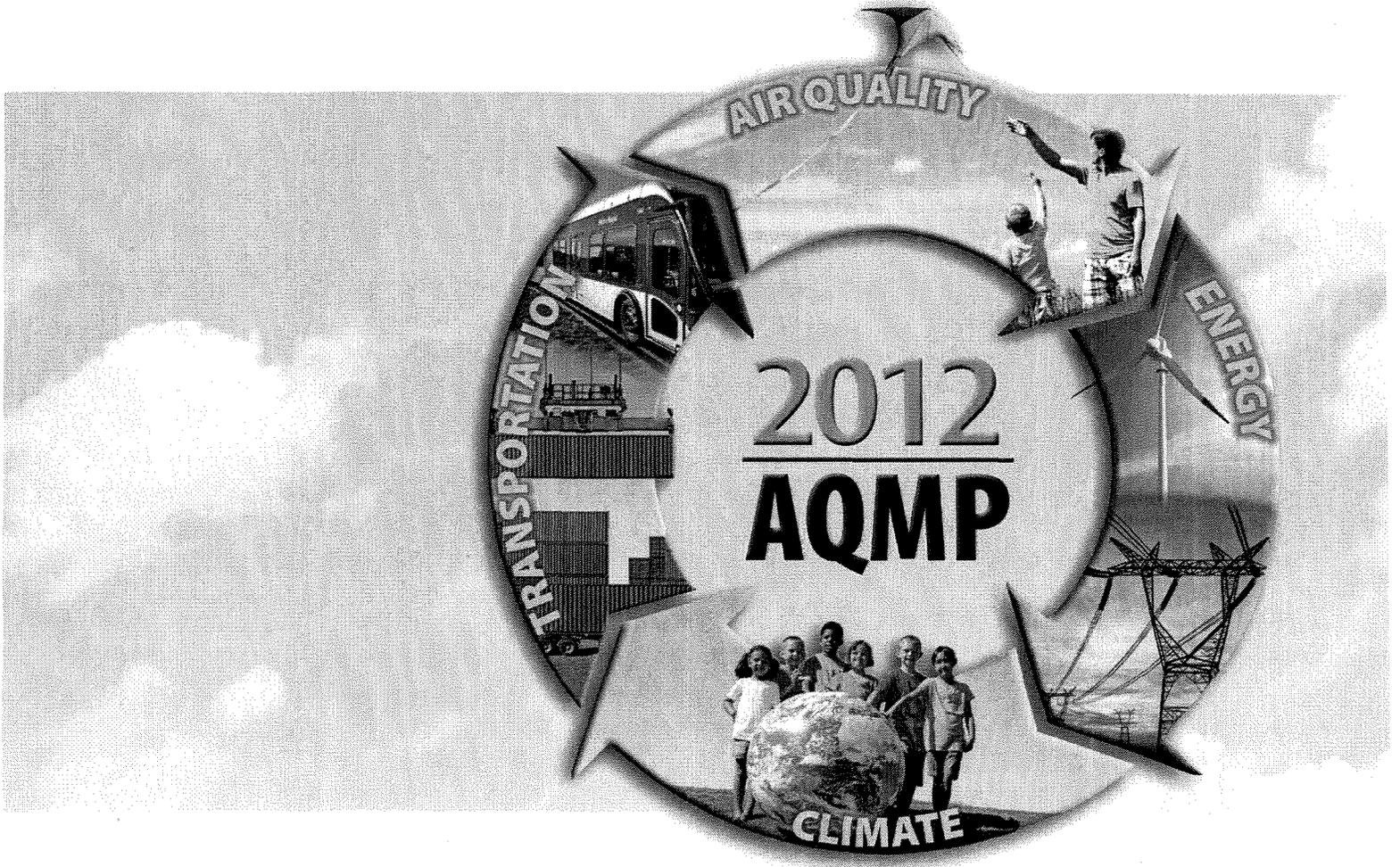
Most of the U.S. Already Meets the Annual Fine Particle Health Standard of 12 $\mu\text{g}/\text{m}^3$



Source: 2009-2011 air quality data as of July 15, 2012
For more information: www.epa.gov/pm

Exhibit 4

FINAL 2012 Air Quality Management Plan



February 2013

South Coast Air Quality Management District
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Figure 8-1 demonstrates that in order to meet the 80 ppb ozone level in 2023, an approximate 70% reduction (30% remaining) in NO_x emissions will be necessary beyond already adopted measures. VOC reductions are not as effective as NO_x reductions, but concurrent 60% VOC reductions would reduce the needed NO_x reductions to about 65%. Figure 8-1 also indicates that a 75% reduction in NO_x emissions is needed to meet the 75 ppb level in 2023. A full discussion of the emissions reductions needed to meet current ozone standards is included in Chapter 5 and Appendix V.

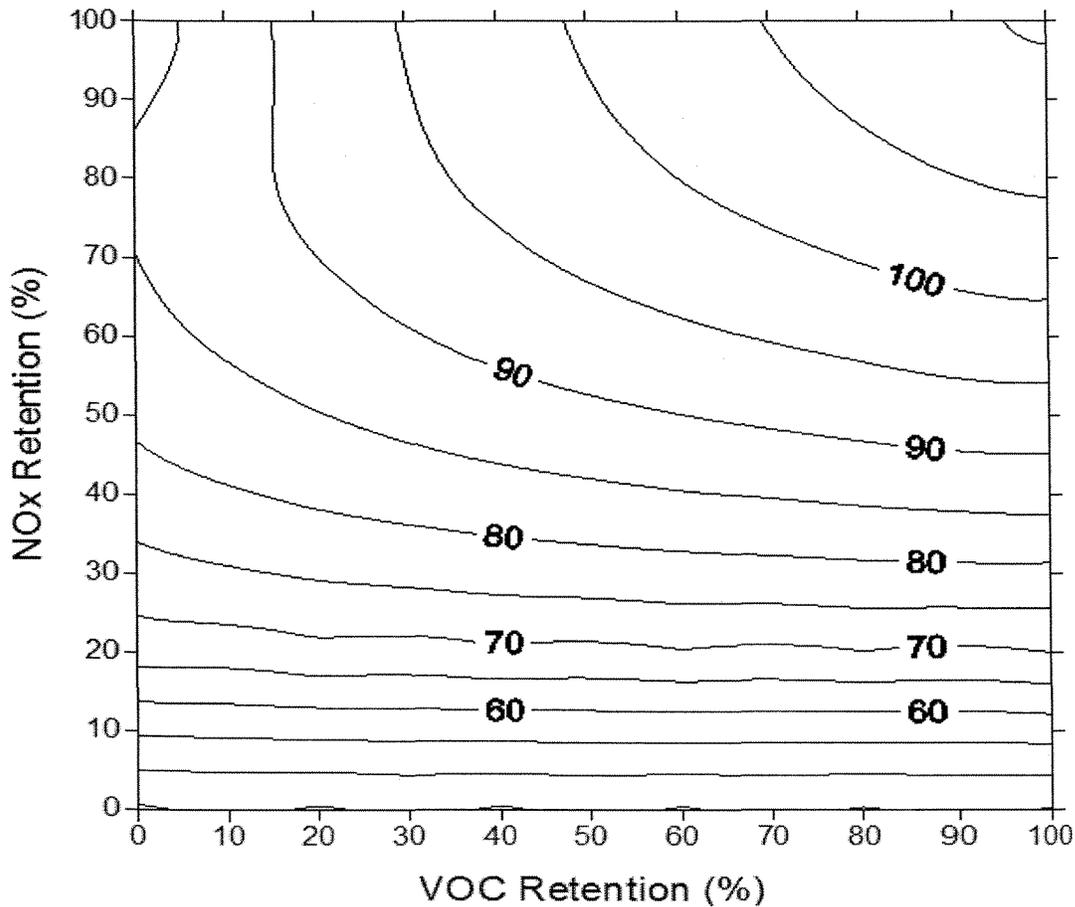


FIGURE 8-1

2023 Preliminary 8-hour Average Ozone Basin Design Value Isopleths at Crestline Monitoring Station

As stated above, it is anticipated that the 8-hour ozone standard may be lowered to a level between 60 and 70 ppb. Therefore, in order to demonstrate attainment in the 2035

time frame, an additional 80% to 88% NO_x emissions reduction below 2023 baseline would be needed. Assuming the 75 ppb standard is met in 2032 with a 75% NO_x reduction below 2023 baseline helps to illustrate the significant difference between a new 60 ppb 8-hour ozone standard and a 70 ppb standard. A 70 ppb standard represents an approximate 20% NO_x reduction between 2032 and 2035, while a 60 ppb standard requires a 50% NO_x reduction in that three year time span. A standard at 60 ppb is also within 12 ppb of the Basin background level of ozone, which has been estimated to be about 48 ppb by modeling the Basin with all man-made sources removed. Figure 8-1 also demonstrates that the effectiveness of NO_x emission reductions continues to be most effective at these lower ozone levels. It would be the greatest air quality challenge the region has ever faced relative to achieving additional NO_x emission reductions necessary to demonstrate attainment with these potential new standards and would further necessitate transformational technologies with zero or near-zero combustion emissions.

1-HOUR OZONE REQUIREMENTS

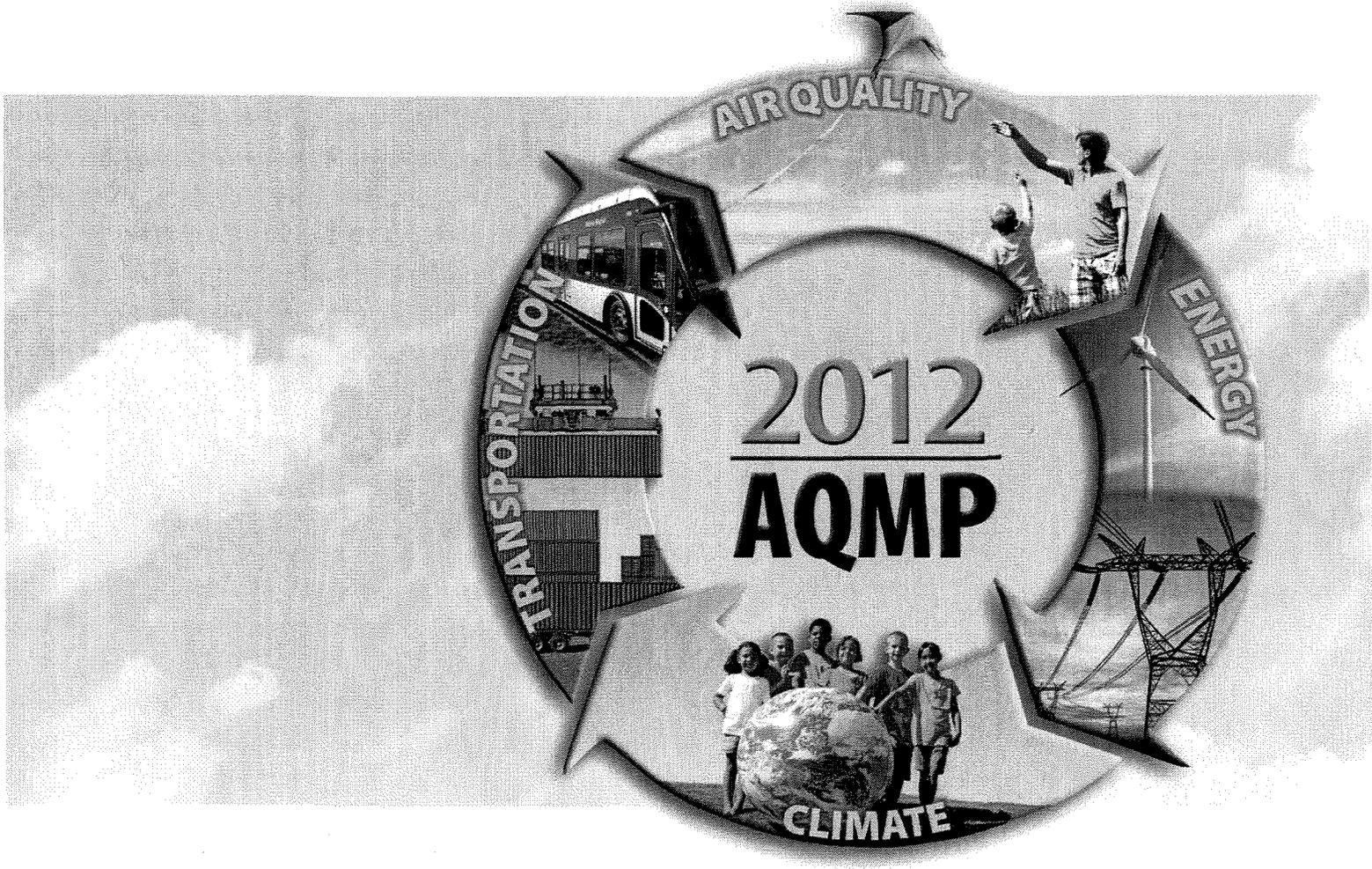
The federal 1-hour ozone standard was revoked when the 8-hour standard was established. U.S. EPA guidance indicated that while certain planning requirements remained in effect, a new SIP would not be required if an area failed to attain the standard by the attainment date. However, a recent court decision has led U.S. EPA to propose an action requiring a new 1-hour ozone attainment demonstration for the south coast Basin. The attainment demonstration would be due within 12 months of publication of the final action. The attainment demonstration would have to show attainment within 5 years with a potential 5-year extension, which would be a similar timeframe as is required for the 1997 8-hr ozone standard (deadline of 2023). However, many new technical issues such as modeling for the attainment demonstration and other CAA requirements would require U.S. EPA's guidance, since the previous preambles and guidelines are no longer directly applicable. Based on previous modeling estimates, the control strategies that are needed to attain the 8-hour ozone standard are nearly identical to those that would be needed to attain the 1-hour ozone standard.

PROPOSED CHANGES TO THE FEDERAL PARTICULATE MATTER STANDARDS

U.S. EPA revoked the annual PM₁₀ standard of 50 µg/m³ and lowered the 24-hour PM_{2.5} standard from 65 µg/m³ to 35 µg/m³, effective December 17, 2006. At the time,

Exhibit 5

FINAL 2012 Air Quality Management Plan



February 2013

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TABLE 4-6 (continued)

List of Adoption/Implementation Dates and Estimated Emission Reductions from Mobile Source 8-hour Ozone Measures

OFF-ROAD MOBILE SOURCES					
Number	Title	Adoption	Implementation Period	Implementing Agency	Reduction (tpd) by 2023
OFFRD-01	Extension of the SOON Provision for Construction/Industrial Equipment [NOx]	N/A	Ongoing	SCAQMD	7.5
OFFRD-02	Further Emission Reductions from Freight Locomotives [NOx, PM]	Ongoing	2015 – 2023	CARB, U.S. EPA, San Pedro Bay Ports	12.7 [NOx] ^c 0.32 [PM2.5] ^c
OFFRD-03	Further Emission Reductions from Passenger Locomotives [NOx, PM]	Ongoing	Beginning 2014-2023	SoCal Regional Rail Authority	3.0 [NOx] ^d 0.06 [PM2.5] ^d
OFFRD-04	Further Emission Reductions from Ocean-Going Marine Vessels While at Berth [NOx, SOx, PM]	2014	Ongoing	San Pedro Bay Ports, CARB, SCAQMD	TBD ^a
OFFRD-05	Emission Reductions from Ocean-Going Marine Vessels [NOx]	N/A	Ongoing	San Pedro Bay Ports, CARB, U.S. EPA	TBD ^a
ADVANCED CONTROL TECHNOLOGIES					
ADV-01	Actions for the Deployment of Zero- and Near-Zero Emission On-Road Heavy-Duty Vehicles [NOx]	N/A	2012 and on	SCAQMD, San Pedro Bay Ports, CARB, U.S. EPA	TBD ^e
ADV-02	Actions for the Deployment of Zero- and Near-Zero Emission Locomotives [NOx]	N/A	2012 and on	SCAQMD, San Pedro Bay Ports, CARB, U.S. EPA	TBD ^e
ADV-03	Actions for the Deployment of Zero- and Near-Zero Emission Cargo Handling Equipment [NOx]	N/A	2012 and on	SCAQMD, San Pedro Bay Ports, CARB, U.S. EPA	TBD ^e
ADV-04	Actions for the Deployment of Cleaner Commercial Harborcraft [NOx]	N/A	2012 and on	SCAQMD, San Pedro Bay Ports, CARB, U.S. EPA	TBD ^e

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

UNITED STATES ENVIRONMENTAL)	
PROTECTION AGENCY – PETITION FOR)	Finance Docket No. 35803
DECLARATORY ORDER)	
)	

REPLY VERIFIED STATEMENT OF SUSAN NAKAMURA

My name is Susan Nakamura. I am the Director of Strategic Initiatives for the South Coast Air Quality Management District (“SCAQMD” or “District”). In 2005–2006, I was the Planning Manager at the District responsible for the development of Rules 3501 and 3502 (the “Rules”), which are the subjects of this proceeding. My qualifications and the Rules’ development process are described in my Verified Statement filed February 14, 2014, with the District’s Reply to the U.S. Environmental Protection Agency’s (EPA) Petition for Declaratory Order. The purpose of this Statement is to respond to erroneous claims regarding the Rules and their development that have been raised by the Association of American Railroads (AAR) and their witness, Mr. Gary Rubenstein, as well as to explain how Rule 3502 was designed to ensure that locomotives could be idled where necessary for safety reasons, including to maintain adequate brake pressure, in response to criticisms made by AAR, the Union Pacific Railroad (UP), and BNSF Railway (BNSF).

Mr. Rubenstein takes the position that the District's estimation of those portions of total freight locomotive emissions that resulted from idling was based on a 1991 report prepared for the California Air Resources Board (CARB) that was "inherently unreliable" even at the time of the Rules' adoption. (Rubenstein V.S., para. 9.) Mr. Rubenstein further claims that the estimated emission reductions attributable to the Rules were sourced to a control efficiency from a 2004 CARB study, which in turn was based on results of an analysis of a single Northern California railyard. He argues that these data were both "stale" and "unrepresentative" of conditions at Southern California railyards. (Rubenstein V.S., para. 10.) However, he offers no facts or specific analysis to back up his claims of unreliability, and he fails to acknowledge that his sponsor previously accepted them. During the Rules' development process, neither the AAR nor BNSF/UP ("the Railroads") – who otherwise were active participants – raised any challenge to the bases of our emission estimates or anticipated benefits of the Rules. The information that the District used was the best available at the time, and the District used the same methodology that CARB staff had developed for the 2005 Memorandum of Understanding (MOU) with the Class I railroads to estimate idling emission reductions. (SCAQMD Rule 3502 Staff Report, attached hereto as Exhibit 1, p. 3-3.) The calculations that Mr. Rubenstein now criticizes as "unreliable" in fact were accepted and relied on by both CARB *and* the Railroads in crafting the 2005 MOU.

I also note that the emission reduction estimates used in the development of the Rules were conservative, as they assumed only the emission reductions that would be achieved within railyards and by locomotives arriving and departing the yards.

Additional idling reductions that would be attributable to other activity within the yard, such as queuing for fueling, and service and maintenance that does not require operation of the engine, or reductions attributable to trains that otherwise would idle unattended outside the yards, were not included. The AAR and the Railroads did not raise any concerns with respect to this issue, either.

The only comments made by the Railroads during development of the Rules that related to estimated emissions reductions raised the question whether increased emissions during startup would offset any reductions attributable to reduced idling. To test and address this concern, the District commissioned two studies, one by the Southwest Research Institute and one by Engine, Fuel, and Emissions Engineering, that tested four locomotives owned by UP, BNSF and Metrolink (the local transit agency). (Staff Report, pp. 2-1., 2-2.) Conservatively, the studies showed that emissions benefits would occur if an engine was shut down and not idling for any period beyond 8 minutes. *Id.* The Railroads later “acknowledged that startups would not cancel out the benefits of reducing idling.” (Staff Report, p. 2-1.)

Mr. Rubenstein claims that the administrative record for adoption of the Rules fails to document that the Rules would contribute to meeting the federal ambient air quality standards under the Clean Air Act. (Rubenstein V.S., para. 7.) This is incorrect. The District Governing Board’s adoption resolution, attached to my February 14 Verified Statement, contains several specific findings that the Rules will reduce exposure to criteria air pollutants and assist in attaining the federal ambient air quality standards. As I explained in that Statement, the Rules are an integral part of the

District's strategy to meet its responsibilities under the Clean Air Act, and the record of proceedings leading to adoption of the Rules is replete with references to expected emissions reductions. (Staff Report pp. 3-2 to 3-5, Exh. 9 to Wallerstein V.S.). The Staff Report also explained that diesel exhaust, in addition to being the largest contributor to cancer risk from air toxics in the District, has numerous additional adverse health impacts, including respiratory problems, immunological and genotoxic effects, and exacerbated heart disease. Children, the elderly, and people with chronic respiratory and heart disease are the most sensitive. (Staff Report, p. 1-2.) The legal analysis in the Staff Report further confirmed that the District was acting under its authority to regulate "emissions of criteria air pollutants in order to achieve and maintain state and federal ambient air quality standards," as well as air toxins. (Staff Report, p. 1-6.) The maintenance of "federal ambient air quality standards" is directly linked to the Clean Air Act, which is the source for the authority of EPA to set the standards in the first place, and the states' responsibilities to enforce them. AAR and Mr. Rubenstein focus solely on references in the record to "toxics" in advancing the claim that the Rules were directed nowhere else, and that the District's invocation of the Clean Air Act is just a "pretext." (Rubenstein V.S., para. 19.) However, the record's repeated references to federal ambient air quality standards contradicts that notion, and the Rules themselves show that a reduction in carcinogenic toxins was but one benefit, not the sole goal.

For example, under Rule 3502, a railroad may submit an emissions equivalency plan as a "safe harbor" to assure compliance with the Rules in lieu of limiting idling of individual locomotive engines. For the District to approve such a plan,

“equivalency is to be demonstrated specifically for diesel particulate matter *and* NO_x.” (Staff Report, p. 2-5. (emphasis supplied).) The District would not have insisted on equivalent NO_x reductions if its concern for attaining the national ambient air quality standards (NAAQS) were just a “pretext,” since NO_x is a criteria pollutant under NAAQS and has not been identified as a cancer-causing agent. The Staff Report devotes five pages (3-2 through 3-6) to explaining the calculations of emission reductions; it is not at all limited to cancer-causing diesel particulates.

The Staff Report goes on to explain that the Rules were intended to help implement the AQMP, even though they were not listed in the 2003 AQMP (AQMP). The Report states: “PR 3502 is not a measure in the Air Quality Management Plan. (AQMP). However, the AQMP does include a large ‘black box’ of VOC and NO_x reductions for which specific measures have not been identified. Therefore, the AQMP requires all feasible measures to be implemented. *Emission reductions will occur due to limits to locomotive idling.*” (Staff Report, p. 3-7 (emphasis supplied).) Additional references to Rules 3501 and 3502 being designed to advance the attainment of state and federal ambient air quality standards or to reduce criteria pollutants such as NO_x are found in the Responses to Comments portion of the Staff Report, pages A-2, A-3, and A-15 (reducing regional air pollutants).

As I testified previously in my February 14 Verified Statement, the Railroads were very involved in the development of Rules 3501 and 3502, and the District Staff both considered and substantively responded to their concerns, altering various elements of the proposed Rules in the process. The District’s accommodation of

the Railroads on the issue of idling to maintain air brake pressure was addressed in the Staff Report: “There are a number of reasons that a locomotive will need to idle such as for safety, to provide air pressure to railcar brakes, to provide voltage to the battery to start the locomotive, to provide comfort heating and cooling for the crew, etc. The District is not seeking to place restrictions on idling for those purposes.” (Staff Report, p. 2-3.) In prescribing the “safe harbor” for locomotives equipped with automatic idling controls, Rule 3502 specifically allows automatic restart and idling in excess of 15 minutes where necessary to maintain air pressure, or when other parameters cause the engine to restart (Rule 3502(c)(1)), and idling to maintain battery charge is among the individually named exceptions to the Rule’s general application. In other instances, the District concluded that an express exemption was unnecessary, because the Rule did not infringe on those uses in the first place. For example, where the train crew has been notified of a delay exceeding 30 minutes, only trailing locomotives’ engines in a multi-unit consist must be shut down. “There are no requirements for the lead locomotive under this circumstance, recognizing that the lead locomotive may need to operate to provide comfort cooling or heating, air pressure for the brakes, or other parameters addressed by the lead locomotive.” (Staff Report, p. 2-5.) Moreover, circumstances under which all locomotive engines must be shut down occur only when the train is unattended for more than the 30-minute period. Thus, provisions under Proposed Rule 3502 allow for the lead locomotive to idle if the locomotive is occupied, to provide comfort heating and cooling to the crew and air pressure for the railcar brakes. (Staff Report, p. 2-8.)

While the Rule requires all locomotives' engines to be shut down under specific circumstances when the entire train is unoccupied for more than 30 minutes, during the Rules' development, the Railroads never presented any evidence to show that this would interfere with adequate brake pressure or other alleged safety considerations. Certainly, they did not show how and why it was necessary to leave a train idling and unoccupied for more than four hours, which would trigger Federal Railroad Administration regulations requiring a brake test. However, because this portion of Rule 3502 applies only when the train is entirely unoccupied, if the train crew actually does believe it is necessary to idle the engine for more than 30 minutes solely to maintain brake pressure, a crew member can re-board the train and restart the idling time, since at that point the train would not be unattended and Rule 3502 would not apply.

Moreover, during more recent conversations with representatives of both UP and BNSF, I learned that both railroads use "yard air" at least to some extent in railyards within the District. To the best of my knowledge, the Railroads indicated that this was a common practice. "Yard air" means that the railroad uses electrically-operated compressed air packages to charge the air brake system without using an idling locomotive. This allows the air brake system to be tested and held at pressure until time for departure. This practice eliminates the need for idling to maintain air brake pressure. To the extent the Railroads are not already using such systems at their yards within the District, they could do so, saving fuel otherwise spent in idling.

Finally, many years before Rules 3501 and 3502 were developed, the Commonwealth of Massachusetts proposed a 30-minutes locomotive engine idling limit for railroads operating within the state. That rule was approved by EPA and included in the Massachusetts State Implementation Plan (SIP). The 30-minute limit prescribed in Rule 3502 is consistent both with the Railroads' expressed needs during the development process, and with the Massachusetts limit. (Staff Report, p. 2-4.) If other states' air quality agencies were to consider adopting idling limits, I would expect them to likewise seek consistency with the existing California and Massachusetts limitations.

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VERIFICATION

I, Susan Nakamura, verify that I have read the foregoing Statement, know the contents thereof, and that the same are true as stated to the best of my personal knowledge and experience. Further, I certify that I am qualified and authorized to file this Statement.



Susan Nakamura

Executed on April 9, 2014

EXHIBIT 1

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

**Final Staff Report
Proposed Rule 3502 - Minimization of Emissions from Locomotive Idling**

February 2006

Deputy Executive Officer
Planning, Rule Development, and Area Sources
Elaine Chang, DrPH

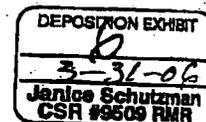
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BARRY R. WALLERSTEIN, D.Env.

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EXECUTIVE SUMMARY

BACKGROUND

PROPOSED RULE 3502 REQUIREMENTS

BACKGROUND

Rail operations, characterized primarily by activities associated with operation of diesel locomotives, are a significant source of diesel particulate matter (PM) emissions and other criteria pollutants such as oxides of nitrogen (NO_x), volatile organic compounds (VOC), carbon monoxide (CO), and oxides of sulfur (SO_x). The 2003 Air Quality Management Plan (AQMP) estimates freight locomotive particulate matter less than 10 microns (PM₁₀) emissions of 0.90 tons per day and emissions of particulate matter less than 2.5 microns (PM_{2.5}) of 0.82 tons per day, in addition to NO_x, VOC, CO, and SO_x emissions of 32.98, 1.70, 6.04, and 2.83 tons per day, respectively.¹ Diesel exhaust is a complex mixture of gases and fine particles emitted by diesel-fueled internal combustion engines. Diesel exhaust also contains many carcinogenic compounds, including, but not limited to, arsenic, benzene, formaldehyde, 1-3-butadiene, and ethylene dibromide.² In 1998, the California Air Resources Board (CARB) identified diesel exhaust as a Toxic Air Contaminant (TAC) based on its cancer causing potential.

Proposed Rule (PR) 3502 – Minimization of Emissions from Locomotive Idling establishes idling limits for freight locomotives operated in the District. The purpose of PR 3502 is to minimize emissions from unnecessary idling of locomotives operating in the District.

PROPOSED RULE 3502 REQUIREMENTS

PR 3502 is applicable to Class I freight railroads and switching and terminal railroads that operate in the District. There are two Class I freight railroads, Burlington Northern Santa Fe and Union Pacific and two switching and terminal railroads, Los Angeles Junction Railway (LAJ) and Pacific Harbour Line, Inc. (PHL) in the district. LAJ is wholly owned by BNSF.

Passenger railroads operating in the District, such as Amtrak and Metrolink, would not be subject to the requirements of PR 3502. Preliminary data indicates that these operations contribute less than ten percent of NO_x and PM emissions from rail operations. Passenger operations are different than freight operations because they are characterized by very little, if any, switching and cargo handling activities, in addition to considerably lower traffic volumes. In addition, in most cases commuter rail has the right of way over freight locomotives and thus is not required to idle as frequently as freight locomotives. Also, passenger railroads operate on a more predictable schedule such that crew changes and breaks can occur at specified time periods and locations to avoid delays and idling associated with such activities. District staff understands that federal law limits railroad workers to working 12 hour shifts to prevent fatigue, even if they have not reached their destination. Due to their lower emissions, passenger railway operations pose proportionally lower health risks than freight railroads. However, the District will continue

¹ South Coast Air Quality Management District, 2003. 2003 Air Quality Management Plan: Appendix III – Base and Future Year Emission Inventories.

² California Environmental Protection Agency, Air Resources Board and Office of Environmental Health Hazard Assessment, 1998. Executive Summary for the "Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant."

to evaluate passenger rail operations and idling. If warranted, passenger operations may be considered for regulation in the future.

PR 3502 would establish the following requirements:

- **Idling Requirement (effective six months from date of adoption)**
 - Unless a locomotive is equipped with an anti-idling device that is set at 15 minutes or less, engaged, and not tampered with, an operator shall not idle an unattended lead or trailing locomotive for more than 30 minutes if:
 - the crew of the locomotive consist has been relieved and the relief crew has not arrived;
 - the crew of the locomotive consist has left for a meal or personal break or for personal reasons;
 - the locomotive is within the railyard;
 - queuing of a locomotive for fueling, maintenance, or servicing; or
 - maintenance or diagnostics conducted on the locomotive that do not require operation of the engine.
 - Unless a locomotive is equipped with an anti-idling device that is set at 15 minutes or less, is engaged, and not tampered with, an operator shall not idle a trailing locomotive for more than 30 minutes if:
 - the dispatcher or yardmaster notifies the operator of a delay that will exceed 30 minutes; or
 - there is a locomotive failure or breakdown that will result in a delay of more than 30 minutes
- An Emissions Equivalency Plan, demonstrating equivalent or greater annual emission reductions to what would be achieved by not idling locomotives for more than 30 minutes for the events specified above in the same calendar years, can be submitted in lieu of complying with idling requirements. The methodology used to quantify emissions shall be consistent with the most recent revision to the District's Railyard Emissions Inventory Methodology (Attachment C).
- Exemption from idling prohibition allowed under specific conditions, such as locomotives used during emergencies, when ambient temperatures are at or below 40°F, and when idling is needed to maintain sufficient battery charge to start locomotives.

CHAPTER 1: BACKGROUND

INTRODUCTION

DIESEL PARTICULATE MATTER

REGULATORY HISTORY

REGULATORY AUTHORITY

INTRODUCTION

Rail operations, characterized primarily by activities associated with operation of diesel locomotives, are a significant source of diesel particulate matter (PM) emissions and criteria pollutants (oxides of nitrogen (NO_x), volatile organic compounds (VOC), carbon monoxide (CO), and oxides of sulfur(SO_x)). The 2003 Air Quality Management Plan (AQMP) estimates freight locomotive particulate matter less than 10 microns (PM₁₀) emissions of 0.90 tons per day and emissions of particulate matter less than 2.5 microns (PM_{2.5}) of 0.82 tons per day, in addition to NO_x, VOC, CO, and SO_x emissions of 32.98, 1.70, 6.04, and 2.83 tons per day, respectively.³ Diesel exhaust is a complex mixture of gases and fine particles emitted by diesel-fueled internal combustion engines. Diesel exhaust also contains many carcinogenic compounds, including, but not limited to, arsenic, benzene, formaldehyde, 1-3-butadiene, and ethylene dibromide.⁴ In 1998, the California Air Resources Board (CARB) identified diesel exhaust as a Toxic Air Contaminant (TAC) based on its cancer causing potential.

Proposed Rule (PR) 3502 – Minimization of Emissions from Locomotive Idling establishes idling limits for locomotives operating in the District. The purpose of PR 3502 is to minimize emissions from unnecessary idling of locomotives. PR 3502 would limit to 30 minutes the non-essential idling of unattended lead or trailing locomotives. Under PR 3501 paragraph (k)(1) a railroad would be exempted from compliance for any locomotive equipped with anti-idling devices that are set at 15 minutes or less, engaged, and not tampered with. A railroad would also be exempt from idling limits if the operator has received approval for an Emission Equivalency Plan for diesel PM and NO_x proposing alternative control strategies demonstrating no increase in total cancer potency-weighted emissions of toxic air contaminants as well as emission reductions greater than or equal to implementing idling prohibitions in PR 3502.

DIESEL PARTICULATE MATTER

Diesel exhaust is listed by the California Air Resources Board (CARB) as a Toxic Air Contaminant (TAC) and has the potential to cause cancer in humans. Long-term exposure to diesel PM poses the highest cancer risk of any toxic air contaminant evaluated by the Office of Environmental Health Hazard Assessment (OEHHA).⁵ The second Multiple Air Toxics Exposure Study (MATES-II), released in 2000, shows that approximately 70 percent of the cancer risk from air toxics in the Basin is due to diesel PM.⁶ Exposure to diesel exhaust can

³ South Coast Air Quality Management District, 2003. 2003 Air Quality Management Plan: Appendix III – Base and Future Year Emission Inventories.

⁴ California Environmental Protection Agency, Air Resources Board and Office of Environmental Health Hazard Assessment, 1998. Executive Summary for the "Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant."

⁵ Office of Environmental Health Hazard Assessment and The American Lung Association of California. Health Effects of Diesel Exhaust.

⁶ South Coast Air Quality Management District, 2000. Final Report – Multiple Air Toxics Exposure Study in the South Coast Air Basin – MATES – II.

irritate the eyes, nose, throat and lungs and can cause coughs, headaches, light-headedness, and nausea.³

In addition to cancer risks, exposure to diesel PM has been shown to increase susceptibility to allergens (e.g., dust and pollen) and can aggravate chronic respiratory problems, such as asthma. Diesel engines are major sources of fine particle pollution and can particularly affect sensitive people, such as the elderly and people with emphysema, asthma, and chronic heart and lung disease. Children, whose lungs and respiratory systems are still developing, are also more susceptible than healthy adults to fine particles. Exposure to fine particles is associated with increased frequency of illness and reduced growth in lung function in children.^{3,4}

Studies on diesel exhaust have focused on non-cancer health effects from short-term and long-term exposure, reproductive and developmental effects, immunological effects, genotoxic effects, and cancer health effects.² Overall, the available literature does not confirm whether exposure to diesel exhaust causes reproductive or developmental effects in humans.⁷ In terms of immunological effects, studies show that diesel exhaust exposure increases antibody production and causes localized inflammation of lung and respiratory tract tissues, particularly when exposure accompanies other known respiratory allergens.²

Diesel exhaust particles and diesel exhaust extracts have been determined to be genotoxic and may be involved in initiation of human pulmonary carcinogenesis. In terms of cancer health effects, over 30 epidemiological studies have investigated the potential carcinogenicity of diesel exhaust.² The National Institute of Occupational Health and Safety recommended in 1988 that diesel exhaust be regarded as a potential occupational carcinogen based on animal and human evidence. The Health Effects Institute (1995) and the World Health Organization (1996) also evaluated the carcinogenicity of diesel exhaust and found the epidemiological data to show associations between exposure to diesel exhaust and lung cancer.²

In 1998, CARB identified diesel exhaust as a TAC based on available information on diesel exhaust-induced noncancer and cancer health effects.^{3,5} As part of the TAC identification process, CARB concluded that based on information available on diesel exhaust-induced non-cancer and cancer health effects, diesel exhaust meets the legal definition of a TAC which is an air pollutant "which may cause or contribute to an increase in mortality and serious illness, or which may pose a present or potential hazard to human health" (Health and Safety Code Section 39655).² In addition, in 2001, pursuant to the requirements of Senate Bill 25 (Stats. 1999, ch. 731), OEHHA identified diesel PM as one of the TACs that may cause children or infants to be more susceptible to illness. Senate Bill 25 also requires CARB to adopt control measures, as appropriate, to reduce the public's exposure to these special TACs (Health and Safety Code section 39669.5).

⁷ Office of Environmental Health Hazard Assessment, 2000. Health Effects of Diesel Exhaust Fact Sheet, August 2000.

REGULATORY HISTORY

Federal Standards for Locomotive Engines

In April 1998, the U.S. EPA promulgated a rulemaking, entitled, "Emission Standards for Locomotives and Locomotive Engines." This rulemaking establishes emission standards and associated regulatory requirements for the control of emissions from locomotives and locomotive engines as required by the Clean Air Act section 213(a)(5). The primary focus of the emission standards, which became effective in 2000, is NO_x. In addition, standards for hydrocarbons (HC), carbon monoxide (CO), particulate matter (PM) and smoke were also promulgated. The rulemaking established a 3-tiered emissions limit matrix based on the year of locomotive manufacture: Tier 0 (manufactured from 1973 through 2001), Tier 1 (manufactured from 2002 through 2004), and Tier 2 (manufactured in 2005 and later). Within each tier are separate emission limits for a line-haul duty cycle and a switch duty cycle. With some exceptions, locomotives are required to meet both the line-haul and switch duty cycle emission-limits. A summary of the U.S. EPA limits is shown in Table 1-1.

Table 1-1
Summary of U.S. EPA Locomotive Emission Standards

U.S. EPA Tier	Line Haul Duty Cycle (g/bhp-hr)				Switch Duty Cycle (g/bhp-hr)			
	HC	CO	NO _x	PM	HC	CO	NO _x	PM
0	1.00	5.0	9.5	0.60	2.10	8.0	14.0	0.72
1	0.55	2.2	7.4	0.45	1.20	2.5	11.0	0.54
2	0.30	1.5	5.5	0.20	0.60	2.4	8.1	0.24

The U.S. EPA rulemaking also includes a variety of provisions, including certification test procedures and assembly line and in-use compliance testing requirements, to implement the emission standards and to ensure rule compliance. The rule also includes an emissions averaging, banking, and trading program to provide flexibility.

Ultra-Low-Sulfur Diesel Fuel for Locomotives

In November 2004, CARB approved amendments extending California standards for motor vehicle diesel fuel to diesel fuel used in intrastate locomotives. Under this rulemaking, effective January 1, 2007, intrastate diesel locomotives will be required to use ultra-low sulfur diesel fuel which meets the 15 parts per million by weight (ppmw) sulfur requirement currently in place for motor vehicles. Current U.S. EPA requirements, finalized in June 2004, specify that 15 ppmw fuel be used in locomotives in 2012. However, because the aromatic content in U.S. EPA's fuel specification (35 percent by volume) is higher than in CARB's specification (10 percent by volume), CARB staff has estimated that the use of CARB diesel will provide NO_x and PM emissions benefits of 6 and 14 percent, respectively, compared with U.S. EPA fuel. CARB's rulemaking requires the use of low-sulfur diesel fuel six years earlier than is required federally.³

³ California Environmental Protection Agency, Air Resources Board, 2004. Staff Report: Initial Statement of Reasons - Public Hearing to Consider Proposed Regulatory Amendments Extending the California Standards for Motor Vehicle Diesel Fuel to Diesel Fuel Used in Harbormcraft and Intrastate Locomotives.

Agreements with Class I Railroads

1998 CARB Memorandum of Understanding. California's 1994 State Implementation Plan (SIP) control measure M14 assumes that cleaner federally-complying locomotives will be operated in California and the Basin. As a result of measure M14, CARB staff developed a memorandum of understanding (MOU) with The Burlington Northern and Santa Fe Railway Company (BNSF) and Union Pacific Railroad Company (UP) that was signed in July 1998 (1998 CARB MOU). The 1998 CARB MOU includes provisions for early introduction of clean locomotives, with requirements for a NOx fleet average in the Basin equivalent to U.S. EPA's Tier 2 locomotive standard by 2010.⁹

2005 CARB Statewide Agreement. In June 2005, CARB staff developed a statewide agreement with BNSF and UP to establish a PM emissions reduction program at California railyards. Under this agreement, the railroads would reduce locomotive idling by installing idling-reduction devices on their intrastate locomotive fleets by June 2008. In addition, the railroads agreed to develop inventories of diesel emissions with CARB, in turn, conducting HRAs for most railyards statewide.¹⁰ CARB conducted a public hearing on October 27, 2005 to consider the 2005 statewide agreement and committed to revisit the item at its January 26, 2006 meeting, at which time the agreement may be upheld, modified, or rescinded.

REGULATORY AUTHORITY

The District's Authority to Adopt Rules Applicable to Emissions from Railroads and Locomotives, and Railyards

The authority to regulate air pollution in California is divided between the California Air Resources Board and the local and regional air pollution control districts. Under state law "local and regional authorities"¹¹ have the primary responsibility for control of air pollution from all sources, other than emissions from motor vehicles. The control of emissions from motor vehicles, except as otherwise provided in this division, shall be the responsibility of the State board." (Health & Safety Code §40000). Locomotives are not motor vehicles. The law defines "motor vehicle" as "a vehicle that is self-propelled." (Veh. Code §415(a)). A "vehicle" is "a device by which any person or property may be propelled, moved, or drawn upon a highway, excepting a device moved exclusively by human power or used exclusively upon stationary rails or tracks." (Veh. Code §670). Because they do not operate on the highway and because they operate on stationary tracks, locomotives are not "vehicles." Since they are not motor vehicles, they are under the jurisdiction of the districts. (Health & Safety Code §40000.) CARB was also granted authority to regulate locomotives by Health & Safety Code §43013(b), as amended in 1988. However, even after the enactment of this statute, the districts retain concurrent authority

⁹ Memorandum of Mutual Understandings and Agreements, South Coast Locomotive Fleet Average Emissions Program, 1998.

¹⁰ ARB/Railroad Statewide Agreement, Particulate Emissions Reduction Program at California Railyards, 2005.

¹¹ The term "local or regional authority" means the governing body of any city, county or district. Health & Safety Code §39037. "District" means an air pollution control district or air quality management district created or continued in existence pursuant to provisions of Part 3 (commencing with Section 40000). Health & Safety Code §39025.

to regulate nonvehicular sources, including locomotives. (Manaster & Selmi, *California Environmental Law and Land Use Practice*, §41.06 (2)).

District staff has determined that much of the non-locomotive equipment operated by railroads at their yards is also non-vehicular in nature. Accordingly, it also would be subject to the jurisdiction of the air districts, including the District.

The districts also have general authority under state law to regulate "indirect sources," which are sources that attract mobile sources.¹² This includes the authority to regulate railyards where trucks are used to deliver or distribute freight, locomotives are used to carry freight, and non-road equipment is used to handle freight. Pursuant to Health & Safety Code §40716(a)(1), a district may adopt and implement regulations to "reduce or mitigate emissions from indirect and areawide sources of air pollution." Therefore, under state law the district may regulate railyards to reduce or mitigate emissions resulting from the mobile sources associated with or attracted to the railyard.

State law generally grants districts the authority to "adopt rules and regulations and do such acts as may be necessary or proper to execute the powers and duties granted to, and imposed upon, the district by this division and other statutory provisions." (Health & Safety Code §40702). This statute grants broad authority to districts to adopt rules and regulations for sources within their jurisdiction. This statute also includes a limited exemption with respect to locomotives. It provides:

No order, rule, or regulation of any district shall, however, specify the design of equipment, type of construction, or particular method to be used in reducing the release of air contaminants from railroad locomotives. (Health & Safety Code §40702).

The provision makes clear that the legislature believed that districts had the authority to regulate locomotives by means other than specifying equipment design, construction, or other particular methods. (See Manaster & Selmi, *supra*, §41.06(2) n. 11 (this section impliedly recognizes district authority to regulate locomotive emissions)). PR 3502 does not specify any requirement respecting the design of equipment or type of construction of locomotives. Nor does it specify the particular method to be used. The reference to "particular method to be used" should be construed as referring to methods that are similar to those methods specifically enumerated in the statute, i.e. methods affecting the design or construction of locomotives. The Civil Code, §3534, states that "particular expressions qualify those which are general." The California Supreme Court has held that a general term is "restricted to those things that are similar to those which are enumerated specifically." (*Harris v. Capital Growth Investors XIV* (1991) 52 Cal. 3rd. 1142, 1160 n. 7, see also *Friends of Davis v. City of Davis* (2000) 83 Cal. App. 4th 1004, 1013 (same)). PR 3502 does not specify construction, design, or control equipment and thus does not specify a particular "method" to be used. Thus, it is not precluded by Health & Safety Code §40702.

¹² State law does not contain a definition for indirect source, but the federal Clean Air Act provides that the term "indirect source" means "a facility, building, structure, installation, real property, road, or highway which attracts, or may attract, mobile sources of pollution." 42 U.S.C. §7410(a)(5)(C).

Furthermore, even if the term "method" could be construed to refer to techniques that do not affect design or construction of locomotives, the rule does not specify a "particular method to be used." PR 3502 allows compliance either by reducing idling or by adopting technologies to achieve equivalent emission reductions.

One of the duties imposed upon the districts is the duty to enforce Health & Safety Code §41700. That section provides:

Except as otherwise provided in section 41705,¹³ no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

The district may regulate locomotives to prevent public nuisance (potential health impacts from toxic air contaminants or annoyance to neighbors) as well as to reduce the emissions of criteria air pollutants in order to achieve and maintain state and federal ambient air quality standards. The California Supreme Court has upheld the districts' authority to regulate air toxic emissions from sources within their jurisdiction. *Western Oil & Gas Assoc. v. Monterey Bay Unified Air Pollution Control Dist.* (1989) 49 Cal. 3rd 408.

The district may also regulate to require railroads to gather information regarding their emissions of both criteria and toxic pollutants. (Health & Safety Code §§41511, 41700). There is evidence that railyards may emit significant quantities of toxic air contaminants (especially diesel PM) as well as evidence that locomotives engage in substantial amounts of idling. According to the CARB's "Roseville Railyard Study" (October 14, 2004), locomotive idling accounted for 10.2-10.4 tons per year of diesel particulate at the Roseville yard (Table IV.3, p.34), amounting to about 45% of the total diesel PM emissions from the railroad operations. (p.14). Areas adjacent to the railyard experienced a maximum off-site cancer risk of 900 to 1,000 in a million from the yard alone, in addition to background concentrations. (p.54). Risk levels between 100 and 500 in a million occurred over about 700 to 1600 acres in which 14,000 to 26,000 people live, and risk levels between 10 and 100 in a million occurred over a 46,000 to 56,000 acre area in which about 140,000 to 155,000 people live. (p. 63). About 40 acres experience a cancer risk level between 500 and 1000 in a million. (p. H-6). Besides diesel PM, locomotives are significant sources of NOx, a precursor of PM_{2.5}, PM₁₀, and ozone. Since several railyards are located in urban areas, the District has a strong interest in identifying emissions and health risks imposed by railyards, and in reducing emissions from unnecessary idling.

¹³ Section 41705, relating to agricultural operations and compost-handling operations, is not relevant to the present context.

Preemption of District Authority to Adopt Rules Applicable to Emissions from Railroads, Locomotives and Railyards.

The railroads contend that PR 3502 may be prohibited by principles of federal preemption. PR 3502, however, does not establish or require installation of any control device. Moreover, the restriction on idling is limited to idling that is not essential to the safe and efficient operation of the railroad. Accordingly, PR 3502 is not preempted by federal law.

The federal Clean Air Act provides that no state or political subdivision may adopt or attempt to enforce "any standard or other requirement relating to the control of emissions" from new locomotives or new engines used in locomotives. (42 U.S.C. § 7543(e)(1)(B)). EPA has promulgated regulations setting forth what it believes is the scope of preemption under this section. EPA stated: "Any state control that would affect how a manufacturer designs or produces new (including remanufactured) locomotives or locomotive engines is preempted...." (63 Fed. Reg. 18978, 18994.) EPA's regulation states that among the types of state or local rules that are preempted are "emission standards, mandatory fleet average standards, certification requirements, aftermarket equipment requirements, and nonfederal in-use testing requirements." (40 CFR §85.1603(c)(2).) The EPA regulation provides that such rules are preempted whether they apply to new or other locomotives or engines. (*Id.*) The proposed rule is not preempted by the Clean Air Act because it does not regulate how the manufacturer designs or produces a locomotive or engine. Certainly PR 3502 does not affect the design or production of locomotives. A railroad may reduce idling without affecting the design or production of the locomotive, simply by limiting the length of time idling occurs under specified circumstances.

The Interstate Commerce Commission Termination Act (ICCTA), Title 49 U.S.C. §10501(b), provides that the jurisdiction of the federal Surface Transportation Board (STB) is exclusive over "transportation by rail carriers, and the remedies provided in this part with respect to rates, classifications, rules (including car service, interchange, and other operating rules) practices, routes, services and facilities of such carriers...." Section 10501(b) further provides that the remedies provided under the ICCTA are exclusive and preempt the remedies provided under federal or state law. While it has been held that the scope of preemption under this statute is "broad" (*City of Auburn v. U.S. Government*, 154 F. 3rd 1025, 1030 (9th Cir. 1998)), the Surface Transportation Board itself has ruled that not all state and local regulation is preempted. Citing an earlier decision, the STB stated: "In particular, we stated that state or local regulation is permissible where it does not interfere with interstate rail operations, and that localities retain certain police powers to protect public health and safety." *Borough of Riverdale Petition for Declaratory Order re The New York Susquehanna and Western Railway Corporation*, STB Fin. Docket No. 33466 (September 9, 1999), 1999 STB Lexis 531, p.4. In that decision, the STB noted that an environmental permitting requirement that set up a prerequisite to the railroads' use, maintenance, or upgrading of their facilities would be preempted because such requirements would of necessity impinge upon the federal regulation of interstate commerce. (*Borough of Riverdale*, p.5.)

PR 3502 does not impose any permitting or other "prerequisite" to rail operations. PR 3502 idling requirements do not interfere with railroad operations and the rule does not seek to limit

essential idling. Rather, the reasons specified in PR 3502 for which idling for more than 30 minutes would not be allowed are clearly not essential to railroad operations. As set forth by the decision of the Surface Transportation Board, PR 3502 would therefore not be preempted.

Case law also supports this view. In *Jones v. Union Pacific Railroad Company*, 79 Cal. App. 4th 1053 (2000), the Court of Appeal held that "state and local regulation of Union Pacific's trains is permissible if it does not interfere with Union Pacific's interstate rail operations." (*Jones, supra*, p. 1060.) In that case, the court stated that if idling was necessary to operate the railroads, attempts to control it would be preempted, but if the idling did not further rail operations, attempts to control it would not be preempted. (*Id.*) Thus, the District may require the railroads to reduce unnecessary idling unless the activities causing such emissions further rail operations. Based on conversations with rail operators, District staff believes that methods exist to reduce unnecessary idling without interfering with rail operations. Indeed, to comply with Proposition 65 the railroads have initiated a number of measures to reduce the amount of diesel exhaust generated by their operations. Accordingly, feasible measures exist to reduce rail emissions. The idling requirements of PR 3502 are reasonable because they do not burden the railroads or impede their ability to conduct their operations in a safe and efficient manner. For example, PR 3502 prohibits idling of locomotive consists for more than 30 minutes if left unattended for crew changes, meal breaks, or for any reason within railyards. District staff believes that this limit provides a reasonable time margin, while preventing excessive idling. Similarly, the PR 3502 prohibition of idling for more than 30 minutes while locomotives are queuing or undergoing services which do not require the engine to be running is intended to address situations where idling is clearly unnecessary, while providing a reasonable time margin. In addition, District staff believes that trailing locomotives should be shut down for delays exceeding 30 minutes. In this instance, lead locomotives would not be expected to be shut down in order to allow for crew comfort cooling and heating and to enable the lead locomotive to maintain brake pressure for attached railcars.

CHAPTER 2: SUMMARY OF PROPOSED RULE 3502

OVERVIEW

PUBLIC PROCESS

LOCOMOTIVE TESTING

PROPOSED RULE 3502 REQUIREMENTS

OVERVIEW

Proposed Rule (PR) 3502 – Minimization of Emissions from Locomotive Idling is applicable to Class I freight railroads and switching and terminal railroads in the District. The rule establishes idling limits for locomotives operating in the District. The purpose of PR 3502 is to minimize emissions from unnecessary idling of locomotives. PR 3502 would limit to 30 minutes the non-essential idling of unattended lead or trailing locomotives unless specifically exempted.

PUBLIC PROCESS

The District staff began development of PR 3502 in September 2004. To facilitate communication with affected parties, the Proposed Regulation XXXV Working Group was formed, consisting of District staff, CARB staff, freight railroads with operations in the District, environmental groups, and community groups. The District staff met with the Proposed Regulation XXXV Working Group four times – on February 9, 2005, March 23, 2005, October 6, 2005, and November 9, 2005 to discuss PR 3502. A public workshop to present rule concepts was held on March 8, 2005. A second public workshop and California Environmental Quality Act (CEQA) scoping session for Proposed Rule 3502 was held on October 12, 2005.

On September 15, 2005, the District staff released a Notice of Preparation (NOP) of a draft program environmental assessment (PEA) for PR 3501 and PR 3502 – Minimization of Emissions from Locomotive Idling. On September 16, 2005 the District staff released a revised version of PRs 3501 and 3502 and preliminary draft staff reports for each rule. The public comment period for the NOP closed on October 14, 2005.

Through the development of Proposed Rule 3502, the public and stakeholders provided comments through the Working Group Meetings, public workshops, and through written comments. Public comments from the workshop to the draft rules and draft staff reports are summarized in Attachment A.

LOCOMOTIVE TESTING

In developing rules to address idling by locomotive engines, the District funded two separate locomotive testing projects in support of PR 3502. The District staff received initial comments from the railroad industry that increased start-ups prompted by idling restrictions could result in a trade-off in emissions. Subsequently, the railroads acknowledged that startups would not cancel out the benefits of reducing idling. The railroads commented that they believe that cold starting of locomotives in the District is not an issue due to the typically warm temperatures and that emissions from District cold starts would be inconsequential.¹⁴

¹⁴ E-mail from Peter Okorowski, representing the Association of American Railroads, to Susan Nakamura (District), Mark Stehly (BNSF), Mark Elliot (Pillsbury, Winthrop, Shaw, Pittman), and Lanny Schmid (UP), October 19, 2005.

The studies, which were completed in November and December 2005, measured start-up and idling emissions from several locomotives (See Attachment B for a more detailed description of the source test results). One study was conducted by Southwest Research Institute (SwRI) using two locomotives, one owned by Union Pacific Railroad (EMD MP15AC, 1500 Hp, 2 stroke, 12 cylinder, 645 series engine) and one owned by Burlington Northern Santa Fe (GE DASH9-44CW, 4400 Hp, four stroke, 16 cylinder, turbocharged). The second study was conducted by Engine, Fuel, and Emissions Engineering, Inc. (EF&EE) on two locomotives owned by Metrolink (EMD SD 60, 3800 Hp, 2 stroke, 16 cylinder, 710 series engine; EMD F40, 3000 Hp, 2 stroke, 16 cylinder, 645 series engine), using EF&EE's Ride-Along Vehicle Emission Measurement (RAVEM) System.

In both studies, the locomotives were tested using specially designed test procedures to measure start-up emissions, since start-up emissions testing does not have an accepted test procedure protocol. The results from the SwRI and EF&EE locomotive tests show that there is an increase in emission from a locomotive start-up after a ½-, 1-, 2- and 4-hour shut down periods exhibited a spike in emissions for a period of less than 3 minutes, in most cases the spike lasted less than 15 seconds, at the beginning of the test, thereafter, the emission rates moved to levels that would be exhibited by a stabilized idling situation.

Conservatively, the emissions data shows that emissions due to start-up in relationship to stabilized idling mode are very low (i.e., start-up emissions would contribute very little to the overall emission when compared with stabilized idling). Therefore, a benefit to air quality would be had with the locomotive shut down and not idling for a period exceeding 8 minutes, and combined with a start-up whenever needed for operational necessities.

PROPOSED RULE 3502 REQUIREMENTS

PR 3502 establishes idling limits for locomotives operating in the District. The purpose of PR 3502 is to minimize emissions from idling of locomotives. PR 3502 would limit the non-essential idling of unattended lead or trailing locomotives to 30 minutes or less under specific conditions, which will be discussed later in this chapter. The PR 3502 idling limit would not apply to locomotives equipped with engaged anti-idling devices set at 15 minutes. Railroads would be exempt from idling limits for a number of operational reasons or if the operator has received approval for an Emission Equivalency Plan proposing alternative control strategies that can achieve emission reductions equivalent to implementing idling prohibitions.

Following is a summary of key elements of PR 3502.

Purpose

The District staff has received numerous complaints from the public regarding idling trains. Comments have been made directly to the District through its complaint hotline, through town meetings, and written comments. Between 2002 and 2005, the District has received approximately 300 complaints regarding locomotives and locomotive idling. During site visits at railyards during the rule development process for Proposed Rule 3502, District staff witnessed first hand unattended locomotives idling as they queued for service, maintenance and fueling. In

addition, there have been reports of locomotives idling for hours as crews would leave a locomotive for a break or waiting for a replacement crew to arrive. In San Diego, a train was left idling for 1½ hours due to a crew change. A representative from Burlington Northern Santa Fe commented that even if it takes hours for a crew change, a train is left idling.¹⁵

Locomotives idle for a variety of reasons. Some reasons for idling are necessary for the safety and operation of the locomotive, while some reasons are unnecessary. There are a number of reasons that a locomotive will need to idle such as for safety, to provide air pressure to railcar brakes, to provide voltage to the battery to start the locomotive, to provide comfort heating and cooling for the crew, etc. The District is not seeking to place restrictions on idling for those purposes. However, there are situations when it is not necessary for rail operations to idle the locomotive. The purpose of PR 3502 is to minimize emissions from unnecessary idling of locomotives. As a result, PR 3502 limits the idling of locomotives during specific situations where idling the locomotive is not necessary.

Applicability

PR 3502 applies to Class I freight railroads and switching and terminal freight railroads in the District. The proposed rule would affect two Class I railroad companies (BNSF and UP) and two switching and terminal railroads, Los Angeles Junction Railway (LAJ) and Pacific Harbor Line, Inc. (PHL) in the district. LAJ is wholly owned by BNSF.

Passenger railroad operating in the District, such as Amtrak and Metrolink, would not be subject to the requirements of PR 3502, as a preliminary data indicates that these operations contribute less than ten percent of NOx and PM emissions from rail operations. Passenger operations are also sufficiently different than freight operations because they are characterized by very little, if any, switching and cargo handling activities, in addition to considerably lower traffic volumes. In addition, in most cases commuter rail has the right of way over freight locomotives and thus is not required to idle as frequently as freight locomotives. Also, passenger railroads operate on a more predictable schedule such that crew changes and breaks can occur at specified time periods and locations to avoid delays and idling associated with such activities. Due to their lower emissions, passenger operations pose proportionally lower health risks than freight operations. However, the District will continue to evaluate passenger rail operations and idling. If warranted, passenger operations may be considered for regulation in the future.

Definitions

PR 3502 includes a series of definitions. Key definitions are discussed below in the discussion of rule concepts. Please refer to the attached proposed rule for a complete list of definitions.

Idling Requirement

Under PR 3502, beginning six months from date of rule adoption, except for locomotives equipped with anti-idling devices that are set at 15 minutes, engaged, and not tampered with, an operator shall not idle a lead or trailing locomotive for more than 30 minutes under specified

¹⁵ San Diego Union Tribune, July 9, 2005.

conditions. By definition under Proposed Rule 3502, an anti-idling device would "automatically restart the engine when parameters are no longer at acceptable levels". This means that the anti-idling device would check parameters before restarting instead of restarting the locomotive on time intervals to check parameters. Restarting the locomotive on time intervals to check parameters would restart the locomotive unnecessarily. Based on discussions with representatives from the railroads at Working Group meetings and site visits at railyards, it is the District staff's understanding that 30 minutes is sufficient time for the railroad personnel to shutdown the locomotive consist. In addition, the 30 minute idling requirement is consistent with other idling restrictions including those in the State of Massachusetts.¹⁶ Thus, under Proposed Rule 3502, an operator shall not idle an unattended locomotive for more than 30 minutes under the following conditions:

- The crew has been relieved and the relief crew has not arrived;
- The crew has left for a meal or personal break or for personal reasons;
- The locomotive is within the railyard;
- Queuing for fueling, maintenance, or servicing;
- Maintenance or diagnostics conducted on the locomotive that do not require operation of the engine. These activities include things such as changing air and oil filters, as well as those which are typically done in enclosed shops.

Limiting idling during these limited, well-defined, events has been determined by the District as an effective means to reduce overall idling-related emissions in the Basin while not interfering with the safe and efficient operation of the railroads. The idling requirement specified under Proposed Rule 3502 are based on information obtained from CARB's Roseville study, discussions with representatives from the railroads, site visits to railyards, environmental and community groups, and public complaints regarding idling. District staff believes that it is unnecessary for any locomotives in an unoccupied consist to be left running while no crew member is on board or for single locomotives to idle in railyards while unoccupied, or for idling of locomotives in railyards while queuing for fueling, maintenance, or service, or during maintenance or diagnostics activities which can be conducted while the locomotive is not running. Idling is unnecessary under each of those circumstances because there is no need for crew comfort cooling or heating and does not affect operations. If adopted, District Proposed Rule (PR) 3501 - Recordkeeping for Locomotive Idling could be used to identify additional reasons for operationally unnecessary idling.

At the September 22, 2005 Working Group meeting for PR3502, railroad representatives acknowledged that excessive idling is routinely not anticipated when it occurs. Examples were given or when a crew stops the train to go to lunch, which could unexpectedly take longer than anticipated, or where there is a crew change and the departing crew did not anticipate the arriving crew being stuck in traffic. Under PR 3502, in both cases the railroads would be in violation of the idling requirements if the idling events exceeded 30 minutes, regardless of whether the events were anticipated or not. In short, PR 3502 has been structured to not consider anticipated versus unanticipated idling events because this consideration is so vague and broad that it virtually

¹⁶ Title 310 of the Massachusetts Code of Regulations Section 7.11.

prevents effective enforcement unless the railroads admit that the idling beyond 30 minutes was intentional.

Also beginning six months from date of rule adoption, unless a locomotive is equipped with an anti-idling device that is set at 15 minutes, engaged, and not tampered with, an operator shall not idle an unattended trailing locomotive for more than 30 minutes if:

- The dispatcher or yardmaster notifies the operator of a delay that will exceed 30 minutes. Under this circumstance, it is assumed that trailing locomotives can be shut down and restarted following instruction from the dispatcher or yardmaster. There are no requirements for the lead locomotive under this circumstance, recognizing that the lead locomotive may need to operate to provide comfort cooling or heating, air pressure for railcar brakes, or other parameters addressed by the lead locomotive. During this time, it is assumed that the lead locomotive would continue to run, unless directed to be shutdown by the dispatcher or yardmaster; or
- There is a failure or breakdown of a locomotive or attached railcars that will result in a delay of more than 30 minutes. Failures or breakdowns may be either to the operator's train itself or to another train, resulting in the operator's train being impeded and delayed. Since in either instance, the operator's train would be stopped until replacement power could be brought in or a field repair made, District staff believes that all idling locomotives in the consist should be shut down for as long as the entire train cannot be moved.

Based on discussions with representatives of the railroads, it is District staff's understanding that in the situations presented above, air pressure is needed for the brakes for the railcars and allowing the lead locomotive to idle will provide the necessary pressure for the brakes.

Overall, the purpose of this requirement is to ensure that trailing locomotives are shut down for unnecessary idling events longer than 30 minutes. As described previously, records collected under PR 3501 could be used to identify additional situations where it is unnecessary to idle for more than 2 hours.

Submittal of Emission Equivalency Plan

Under PR 3502, a railroad may elect to voluntarily submit an Emission Equivalency Plan to be exempted from idling limitations. Under this alternative, the Emission Equivalency Plan is to be submitted within 90 days before its intended use. Under the Plan, equivalency is to be demonstrated specifically for diesel particulate matter and NOx. The Plan is to include the following information:

- Identify control technology(ies) to be implemented;
- Quantify locomotive emission reductions, demonstrating that:
 - the reductions are greater than or equal to the emission reductions that would be achieved by not idling locomotives for more than 30 minutes for the events specified in the rule in the same calendar year; and
 - there is no increase in cancer potency emissions of toxic air contaminants, and hazard index is less than or equal to 1 for acute and chronic health effects;
- Identify locomotive(s) to be included;
- Specify an implementation schedule; and

- Identify the mechanism to be employed to ensure that emissions reductions are enforceable.

The intent of the Emissions Equivalency Plan option is to allow railroads to implement emission reduction measures in lieu of complying with PR 3502 idling requirements. Measures may include things such as low emissions alternatives to conventional diesel locomotives (e.g., liquefied natural gas, emulsified diesel fuel, biodiesel, battery dominant hybrid systems with diesel engines, such as the RailPower's Green Goat). The methodology used to quantify emissions shall be consistent with the most recent revision to the District's Railyard Emissions Inventory Methodology. Estimates of acute and chronic noncancer health effects shall be consistent with the most recent revision to the District's Health Risk Assessment Guidance for Railyards and Intermodal Facilities. These documents, which were included with the October 7, 2005 Board package for Rule 3503 – Emissions Inventory and Health Risk Assessment for Railyards are included as Attachments C and D of this staff report. The cancer potency-weighted emission calculations would use OEHHA's adopted cancer risk value multiplied by total emissions for the compound in question.

Approval of the Emission Equivalency Plan

Under PR 3502, Emission Equivalency Plans will be approved or disapproved within 90 days. Plans will be approved if they demonstrate that equivalent emission reductions will be obtained over the same calendar year as would have been achieved through compliance with the PR 3502 idling requirement.

Fees and Right of Appeal

The Emission Equivalency Plan shall constitute a plan for the purpose of fees assessed under Rule 306 – Plan Fees. The disapproval of an Alternative Compliance Plan can be appealed to the Hearing Board under Rule 216 – Appeals and Rule 221 – Plans. If its appeal is denied, the operator must revise its Emission Equivalency Plan consistent with any direction of the Hearing Board, correcting any deficiencies, and resubmit the Plan within 90 days of the Hearing Board's decision.

Circumvention

Under PR 3502, the moving of locomotives solely for the purpose of preventing idling for more than the length of time for which recordkeeping is required shall be considered circumvention and a violation of this rule.

Penalties

Under PR 3502, failure to comply with any requirement, or any provision of an approved Emissions Equivalency Plan, is a violation of this rule and subject to penalties. Failure to comply with any requirement of this rule will result in a separate violation for each locomotive for each day of non-compliance.

The District intends to dedicate at least one full time employee for enforcement of Regulation XXXV rules, including PR 3502.

Exemptions

Under PR 3502, specific locomotive idling events are exempt from idling prohibitions under certain conditions. In order to be exempt, one or more of the following conditions must be met:

- The locomotive is being used in an emergency; or
- Ambient temperatures of 40°F or lower occur or are predicted. Since antifreeze is not used in locomotives, the railroads typically enforce rules against shutting down locomotives during freezing weather. Although temperatures in most Southern California locations with rail activity rarely drop below freezing, this exemption is provided to enable the railroads to idle during the winter months if ambient temperatures are expected to drop below 40°F
- Idling is required to maintain locomotive battery charge or voltage at a level sufficient to start the locomotive, as determined by the manufacturer.

In situations where a locomotive is being used in an emergency, the proposed rule exempts the railroad from the 30 minute idling requirement. The other two exemptions are to ensure that shutting down a locomotive would not interfere with railroad operations. The District staff

understands that the locomotive must be in a state where it can restart. Thus, to ensure that the locomotive that is shutdown can restart, the proposed rule exempts the railroad from idling requirements if the ambient temperature is predicted to fall below 40°F or of the battery voltage drops below a level where the engine could be restarted. Provisions under Proposed Rule 3502 allow for the lead locomotive to idle if the locomotive is occupied to provide comfort heat and cooling to the crew and air pressure for the railcar brakes.

Severability

If any provision of this rule is held by judicial order to be invalid, or invalid or inapplicable to any person or circumstance, such order shall not affect the validity of the remainder of this rule, or the validity or applicability of such provision to other persons or circumstances. In the event any of the exceptions to this rule are held by judicial order to be invalid, the persons or circumstances covered by the exception shall instead be required to comply with the remainder of this rule.

CHAPTER 3: IMPACT ASSESSMENT

SUMMARY OF DISTRICT RAIL OPERATIONS

EMISSION REDUCTIONS

CALIFORNIA ENVIRONMENTAL QUALITY ACT

SOCIOECONOMIC ANALYSIS

**DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY
CODE 40727**

COMPARATIVE ANALYSIS

SUMMARY OF DISTRICT RAIL OPERATIONS

Railroads and Locomotive Populations

Railroads are used to move more than 40 percent of the freight moved in the United States, on a ton-miles basis¹⁷. In 2002, there were 554 railroads in the United States, operating on approximately 142,000 miles of track.¹⁸ During this same period, 30 freight railroads operated over approximately 5,900 miles of track in California.¹⁹ Two railroads with operations in California, BNSF and UP, are categorized as Class I railroads by the U.S. Department of Transportation, Surface Transportation Board. Class I railroads are those with operating revenues of at least \$277 million (49 CFR Part 1201 Subpart A). The remainder of the railroads operating in California are classified as regional railroads (non-Class I line-haul railroads operating 350 or more miles of road and/or with revenues of at least \$40 million), local railroads (railroads which are neither Class I nor a regional railroads and engaged primarily in line-haul service), or switching and terminal railroads (non-Class I railroads engaged primarily in switching and /or terminal services for other railroads). There are currently four freight railroads with operations in the District, consisting of the two Class I railroads (BNSF and UP) and two switching and terminal railroads, Los Angeles Junction Railway (LAJ) and Pacific Harbor Line, Inc. (PHL). LAJ is wholly owned by BNSF. CARB estimates that BNSF and UP operate approximately 240 locomotives exclusively in the District, while LAJ and PHL operate approximately 25 locomotives exclusively in the District²⁰.

Railyard Site Visits

District staff visited several railyards as part of the PR 3502 rule development process. The railyards visited and date(s) of visits are as follows:

- BNSF
 - Commerce Diesel Maintenance Facility, Commerce (March 10, 2005 and August 17, 2005)
 - Commerce/Eastern Intermodal, Commerce (March 10, 2005 and August 17, 2005)
 - Los Angeles Intermodal/Hobart, Commerce (March 10, 2005 and August 17, 2005)
 - San Bernardino Yard, San Bernardino (August 25, 2005)
 - Watson Yard, Wilmington (August 18, 2005)
- PHL
 - Water Street Yard (September 30, 2005)
- UP
 - Aurant Yard, Alhambra (August 18, 2005)
 - City of Industry Yard, Rowland Heights (May 31, 2005 and August 25, 2005)

¹⁷ Association of American Railroads, 2004, Overview of U.S. Freight Railroads.

¹⁸ Association of American Railroads, 2004, Railroad Service in the United States - 2002

¹⁹ Association of American Railroads, 2004, Railroad Service in California - 2002.

²⁰ California Environmental Protection Agency, Air Resources Board, 2004, Staff Report: Initial Statement of Reasons - Public Hearing to Consider Proposed Regulatory Amendments Extending the California Standards for Motor Vehicle Diesel Fuel to Diesel Fuel Used in Harborcraft and Intrastate Locomotives.

- o Colton Yard, Colton (March 10, 2005 and August 25, 2005)
- o Commerce Intermodal, Commerce (May 31, 2005 and August 17, 2005)
- o Dolores Yard, Carson (August 18, 2005)
- o Intermodal Container Transfer Facility (ICTF), Long Beach (August 18, 2005)
- o LATC, Los Angeles (August 18, 2005)
- o Mira Loma Auto Distribution, Mira Loma (May 31, 2005 and August 25, 2005)

The site visits on August 17, 18, and 25 were conducted jointly with CARB staff.

Estimated District Emissions Contribution

The 2003 Air Quality Management Plan estimates NO_x emissions of 32.98 tons per day and particulate matter less than 10 microns (PM₁₀) emissions of 0.90 tons per day from freight locomotives. VOC, CO, SO_x, and particulate matter less than 2.5 microns (PM_{2.5}) emissions are estimated to be 1.70, 6.04, 2.83, and 0.82 tons per day, respectively.²¹ NO_x and VOC are the primary contributors to ozone formation. VOC, SO_x, and NO_x are precursors to PM₁₀ and PM_{2.5}. In addition, NO_x and PM affect visibility.

EMISSION REDUCTIONS

District staff has conducted an analysis to determine the expected emissions reductions due to PR 3502. Overall, PR 3502 is estimated to result in reductions in PM, NO_x, HC, and CO from restricting idling from implementing idling reduction strategies. Table 3-1 summarizes the estimated emissions benefits associated with PR 3502. The following provides a discussion of how these reductions were derived.

Table 3-1
PR 3502 Estimated Emissions Benefits

Pollutant	Reduction (tons per day)	Reduction from Freight Locomotive Baseline (percent)
PM	0.06	7
NO _x	1.35	4
HC	0.23	14
CO	0.44	7

Emissions Calculation Methodology

In the 2004 Roseville study,²² the CARB staff, in conjunction with UP, prepared an emissions inventory and health risk assessment of the Roseville Railyard in Northern California. For the purpose of PR 3502, staff used the idling emissions profile from the Roseville Study and the

²¹ South Coast Air Quality Management District, 2003 Air Quality Management Plan: Appendix III - Base and Future Year Emission Inventories.

²² California Environmental Protection Agency Air Resources Board. Roseville Rail Yard Study. October 14, 2004.

methodology CARB staff developed for the 2005 Statewide Agreement with the Class I railroads to estimate idling emission reduction potential.²³

The Roseville Study analyzed the specific operations at the railyard and included estimates of idling durations for each of these operations. Based on the Roseville study, idling events occurred at arrival, departure, fueling, servicing, maintenance, and hump and trim areas. Based on the provisions of Proposed Rule 3502 and consistent with methodology used by CARB staff for the 2005 Statewide MOU, District staff assumed that the idling requirements would directly apply for arrival and departure of trains only. The idling time for arrival of trains varied from 15 to 30 minutes. Thus, if the locomotive was equipped with an anti-idling device there could be a reduction in idling time from 30 to 15 minutes in some situations. For example, the idling duration in the Departure Yard was calculated to be 120 minutes. Since Rule 3502 requires that anti-idling devices be set at 15 minutes and that locomotives without anti-idling devices be shut down after 30 minutes of unnecessary idling, in the case of the Departure Yard, locomotive idling emissions under the rule would be expected to be reduced by 75 to 87.5 percent (e.g., instead of idling for 120 minutes, a locomotive would idle for 30 minutes; $30 \text{ minutes} / 120 \text{ minutes} = 25 \text{ percent}$, which is equivalent to a reduction of 100 minus 25 percent, or 75 percent).

Although it is expected that PR 3502 will reduce idling emissions in the other areas such as fueling, servicing, maintenance, and the hump and trim area, no emission reductions were assumed. It was unclear from the Roseville study the specific reason for idling in specific areas. For example, with idling associated with fueling, it is unclear if the idling is due to queuing while waiting to be fueled or while the locomotive was actually being fueled. Thus, the only areas where reductions in idling were assumed were for the arrival and departure of trains.

Estimated Emission Reductions

These percent reductions are then applied to the overall AQMP freight locomotive emissions inventory to estimate the emission reductions associated with implementing PR 3502. It should be noted that these emission reductions are conservative as they assume only the emission reductions associated with idling reductions within railyards as opposed to potential idling reductions that would occur outside of the railyard. Also, additional idling reductions are expected from other areas of the railyard that are not assumed in this analysis such as queuing for fueling, and service and maintenance that does not require operation of the engine.

Switching Locomotives

For switching locomotives without anti-idling devices meeting an idling limit of 30 minutes, District staff calculated that overall PR 3502 idling emissions reductions, if applied at the Roseville railyard, would be approximately 27 percent.

²³ California Environmental Protection Agency Air Resources Board, 2005. Public Meeting to Consider the ARB/Railroad Statewide Agreement. October 13, 2005.

Line Haul Locomotives

For line haul locomotives without anti-idling devices meeting an idling limit of 30 minutes emissions reductions would be 35 percent due to PR 3502.

Overall Emission Reductions

When using the Roseville railyard idling emission profile, the overall estimated emissions benefits due to PR 3502 are 27 to 35 percent, depending on the type of locomotive.

Emissions Calculations and Results

The estimated PR 3502 reductions, as calculated for the Roseville Railyard, were then applied to the locomotive emissions inventory from the 2003 AQMP for freight locomotives to determine the estimated emissions benefits expected from PR 3502. The baseline emissions inventory for freight locomotives is summarized in Table 3-2. Table 3-2 also shows emissions from idling, using data from a 1991 study conducted for CARB by Booz-Allen and Hamilton,²⁴ showing that idling produces 18, 12, 38, and 33 percent of inventories for PM, NO_x, HC, and CO, respectively. Baseline idling emissions were calculated by multiplying baseline emissions by the applicable percentage. The baseline emissions assumed no existing anti-idling devices installed.

**Table 3-2
District Freight Locomotive Baseline Emissions**

Pollutant	Locomotive Service	Baseline Emissions (tons per day)	Baseline Idling Emissions (tons per day)	Baseline Non-Idling Emissions (tons per day)
PM	Switching	0.08	0.02	0.06
	Line Haul	0.81	0.15	0.66
NO _x	Switching	3.48	0.42	3.06
	Line Haul	29.50	3.54	25.96
HC	Switching	0.18	0.07	0.11
	Line Haul	1.51	0.58	0.93
CO	Switching	0.52	0.17	0.35
	Line Haul	5.52	1.82	3.70

Next, percentage reductions calculated from the Roseville Study data were used to estimate the emissions inventory reductions under PR 3502. For switching locomotives, the multiplier was 0.73 (1 minus the 0.27 reduction due to anti-idling devices), while for line haul locomotives, the multiplier was 0.65. Table 3-3 shows the idling emissions inventory resulting from implementation of PR 3502.

²⁴ Booz-Allen and Hamilton, Inc., 1992. Report on Locomotive Emission Inventory: Locomotive Emissions by County. Locomotive Emissions Study, p. 4-20. August 1992.

Table 3-3
District Freight Locomotive Idling Emissions with PR 3502

Pollutant	Locomotive Service	Idling Emissions with PR 3502 (tons per day)
PM	Switching	0.01
	Line Haul	0.10
NOx	Switching	0.31
	Line Haul	2.30
HC	Switching	0.05
	Line Haul	0.37
CO	Switching	0.12
	Line Haul	1.33

Table 3-4 summarizes the estimated freight locomotive emissions with PR 3502.

Table 3-4
District Freight Locomotive Emissions with PR 3502 Based on 2003 AQMP Inventories

Pollutant	Baseline Non-Idling Emissions (tons per day)	Idling Emissions With PR 3502 (tons per day)	Emissions with PR 3502 (tons per day)
PM	0.72	0.11	0.83
NOx	29.02	2.61	31.63
HC	1.04	0.42	1.46
CO	4.05	1.55	5.60

Table 3-5 summarizes overall emissions reductions from PR 3502.

Table 3-5
District Locomotive Emissions Reductions from PR 3502 Based on 2003 AQMP Inventories

Pollutant	Baseline Emissions (tons per day)	Emissions with PR 3502 (tons per day)	PR 3502 Emissions Reductions (tons per day)	PR 3502 Emissions Reductions (percent)
PM	0.89	0.83	0.06	7
NOx	32.98	31.63	1.35	4
HC	1.69	1.46	0.23	14
CO	6.04	5.60	0.44	7

Based on the information submitted by the Class I railroads, the number of anti-idling device installations already in place has been estimated (i.e., out of 2,145 switch and line haul locomotives in the District, of which approximately 1,005 are equipped with anti-idling devices). The emission reductions based on the 2003 AQMP inventories are further adjusted to reflect this adjustment, as shown in Table 3-6.

**Table 3-6
Adjusted PR 3502 Emission Reductions**

Pollutant	Emissions Reductions (tons per day)
PM	0.03
NOx	0.72
HC	0.12
CO	0.23

CALIFORNIA ENVIRONMENTAL QUALITY ACT

In accordance with CEQA, the District, as the Lead Agency, has reviewed PR 3502. Consistent with CEQA Guidelines §15168(a)(4), the District has decided to prepare a Program Environmental Assessment (PEA) for PR 3502 and PR 3501 – Recordkeeping for Locomotive Idling since the proposed project is carried out with the same authorizing statutory or regulatory authority having generally similar environmental effects which can be mitigated in similar ways. Therefore, pursuant to state CEQA Guidelines §15252, District staff has prepared a Draft PEA to analyze the potential adverse environmental impacts from the proposed project.

SOCIOECONOMIC ANALYSIS

A socioeconomic analysis will be conducted and will be released for public review and comment at least 30 days prior to the District Governing Board hearing on PR 3502.

DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE SECTION 40727

Requirements to Make Findings

California Health and Safety Code Section 40727 requires that prior to adopting, amending or repealing a rule or regulation, the District Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the staff report.

Necessity

A need exists to adopt PR 3502 to minimize emissions from locomotive idling.

Authority

The District Governing Board has authority to adopt PR 3502 pursuant to the California Health and Safety Code Sections 39002, 40000, 40001, 40702, 40716, 40725 through 40728, 41508, and 41700.

Clarity

PR 3502 is written or displayed so that its meaning can be easily understood by the persons directly affected by the rule.

Consistency

PR 3502 is in harmony with and not in conflict with or contradictory to, existing statutes, court decisions or state or federal regulations.

Non-Duplication

PR 3502 will not impose the same requirements as any existing state or federal regulations. The proposed amended rule is necessary and proper to execute the powers and duties granted to, and imposed upon, the District.

Reference

By adopting PR 3502, the District Governing Board will be implementing, interpreting or making specific the provisions of the California Health and Safety Code Sections 40702 (rules to carry out duties), 41700 (nuisance), and 40001 (rules to attain state and federal ambient air quality standards)..

Health and Safety Code Section 40727.2

Health and Safety code section 40727.2 requires a comparative analysis. This analysis is in a subsequent section of this staff report.

Rule Adoption Relative to Cost-effectiveness

PR 3502 is not a control measure in the 2003 Air Quality Management Plan (AQMP) and thus, was not ranked by cost-effectiveness relative to other AQMP control measures in the 2003 AQMP. Cost-effectiveness in terms of dollars per ton of pollutant reduced is not applicable to rules regulating TACs. PR 3502 is expected to result in both emission reductions and cost savings. As a result of the cost savings, cost effectiveness is not applicable.

AQMP and Legal Mandates

PR 3502 is not a measure in the Air Quality Management Plan (AQMP). However, the AQMP does include a large "black box" of NOx and VOC reductions for which specific measures have not been identified. Therefore, the AQMP requires all feasible measures to reduce these pollutants be implemented. Emission reductions will occur due to limits to locomotive idling.

COMPARATIVE ANALYSIS

PR 3502 establishes idling limits for locomotives used in the District. As part of the rule development process for PR 3502, District staff will seek consistency with federal and state requirements. The following comparative analysis has been completed pursuant to Health and Safety code section 40727.2.

Existing Federal Requirements

As described in Chapter 1, in April 1998, the U.S. EPA promulgated a rulemaking, entitled, "Emission Standards for Locomotives and Locomotive Engines". This rulemaking establishes emission standards and associated regulatory requirements for the control of emissions from locomotives and locomotive engines as required by the Clean Air Act section 213(a)(5). The primary focus of the emission standards, which became effective in 2000, is NO_x. In addition, standards for HC, CO, PM and smoke were also promulgated. The rulemaking also includes a variety of provisions, including certification test procedures and assembly line and in-use compliance testing requirements, to implement the emission standards and to ensure rule compliance. The rule also includes an emissions averaging, banking, and trading program to provide flexibility. The U.S. EPA rulemaking describes types of state and local requirements relating to the control of emissions from new locomotives and new locomotive engines which the U.S. EPA believes are preempted pursuant to §209(e) of the Clean Air Act.²⁵ The federal regulations do not address the quantification of idling emissions or risk from railyard operations. A summary of the U.S. EPA emissions standards is shown in Table 1-1.

Existing State Requirements

In November 2004, CARB approved with 15-day changes "Proposed Regulatory Amendments Extending the California Standards for Motor Vehicle Diesel Fuel to Diesel Fuel Used in Harborcraft and Intrastate Locomotives". This rulemaking requires that beginning January 1, 2007, diesel fuel sold, supplied, or offered for sale to California intrastate locomotive operators statewide be required to meet specifications for vehicular diesel fuel, as specified in Title 13, California Code of Regulations, Sections 2281, 2282, and 2284. These specifications include maximum sulfur levels of 15 parts per million by weight and aromatics level of ten percent by volume. Current U.S. EPA requirements, finalized in June 2004, specify that 15 ppmw fuel be used in locomotives in 2012. The CARB rulemaking requires the use of low-sulfur diesel fuel six years earlier than required federally.²⁶

As described previously in Chapter 1, CARB has adopted two agreements with BNSF and UP. The first, which was entered into in 1998, applies within the District and includes provisions for

²⁵ United States Environmental Protection Agency, 1998, 40 CFR Parts 85, 89 and 92: Emission Standards for Locomotives and Locomotive Engines; Final Rule.

²⁶ California Environmental Protection Agency, Air Resources Board, 2004, Staff Report: Initial Statement of Reasons – Public Hearing to Consider Proposed Regulatory Amendments Extending the California Standards for Motor Vehicle Diesel Fuel to Diesel Fuel Used in Harborcraft and Intrastate Locomotives.

early introduction of clean locomotives, with requirements for a NOx fleet average in the Basin equivalent to U.S. EPA's Tier 2 locomotive standards by 2010. In the second agreement, CARB staff developed a June 2005 statewide agreement with BNSF and UP to establish a PM emissions reduction program at California railyards. Under this agreement, the railroads committed to reduce locomotive idling by installing idling-reduction devices on their intrastate locomotive fleets. In addition, the railroads agreed to develop inventories of diesel emissions with CARB, in turn, conducting health risk assessments for most railyards statewide. This agreement is currently in effect in the District. Table 3-6 is a comparison between the 2005 CARB Agreement and PR 3502. The comparative analysis addresses only areas which are covered by both the 2005 CARB Statewide Agreement and PR 3502. Specific areas of common coverage include the applicability of idling requirements, the idling requirements themselves, exemptions from idling requirements, and penalties.

Existing District Requirements

District Rule 3503 – Emissions Inventory and Health Risk Assessment for Railyards, adopted on October 7, 2005, requires railroad operators to develop criteria pollutant and toxic emissions inventories for railyards in the District and to conduct health risk assessments to estimate the cancer and noncancer risks caused by emissions at railyards. In addition, Rule 3503 requires railroad operators to notify the public regarding such health risks. The rule is applicable to railyards operated by Class I freight railroads and switching and terminal railroads in the District.

In addition, two existing District rules address emissions from locomotives. District Rule 401 – Visible Emissions, most recently amended on November 9, 2001, prohibits the discharge into the atmosphere of any air contaminant, including any from locomotives, for a period of three minutes in one hour if it is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, or if it is of such opacity as to obscure an observer's view as much as or more than smoke designated as No. 1 on the Ringelmann Chart. District Rule 402 – Nuisance, adopted on May 7, 1976, prohibits the discharge from any source, including locomotives, of air contaminants which cause injury, detriment, nuisance, or annoyance to the public or which endangers the comfort, repose, health or safety of the public or which causes injury or damage to business or property.

**Table 3-6
Applicable Key Elements of the 2005 CARB Statewide Agreement and PR 3502**

General Requirements	CARB Statewide Agreement	PR 3502
Applicability	<ul style="list-style-type: none"> • Intrastate and interstate locomotives • BNSF and UP 	<ul style="list-style-type: none"> • Intradistrict and interdistrict locomotives • BNSF, UP, LAJ, PHL
Anti-Idling Devices	<ul style="list-style-type: none"> • Installation required for 99% of intrastate locomotives 	<ul style="list-style-type: none"> • Installation not required, but allowed as an alternative method of compliance
Idling Requirements (Operating Parameters and Work Practice Requirements)	<ul style="list-style-type: none"> • 15 minutes if equipped with anti-idling device • 60 minutes if not equipped with anti-idling device (See exemptions) 	<ul style="list-style-type: none"> • Exempt if equipped with anti-idling device set at 15-minutes • No idling for more than 30 minutes for the following reasons: <ul style="list-style-type: none"> ○ Unattended consist due to crew change; ○ Unattended consist due to meal break; ○ Unattended locomotive in a railyard; ○ Queuing for fueling, maintenance, servicing; ○ Maintenance/diagnostics not requiring engine operation; ○ For trailing locomotives, notification of delay that will exceed 30 minutes; ○ For trailing locomotives, locomotive failure or breakdown will lead to a delay of more than 30 minutes.
Alternative to Idling Requirements (Monitoring, Reporting, and Recordkeeping Requirements, Including Test Methods, Format, Content, and Frequency)	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Emissions Equivalency Plan to demonstrate equivalent NO_x and PM benefits to what would be achieved by meeting idling requirement, consistent with the District's "Railyard Emissions Inventory Methodology" and "Health Risk Assessment Guidance for Railyards and Intermodal Facilities."
Exemptions to Idling Requirements	<ul style="list-style-type: none"> • Essential idling: <ul style="list-style-type: none"> ○ Ensure adequate supply of air for air brakes; ○ Other safety purpose; ○ To prevent freezing of engine coolant; ○ To ensure cab temperatures stay within federal guidelines ○ To engage in necessary maintenance activities, including but not limited to fueling, testing, tuning, servicing, and repairing; ○ For unoccupied locomotives not 	<ul style="list-style-type: none"> • Locomotive being used in an emergency; • Ambient temperatures of 40°F or lower occur or are expected to occur where the locomotive operates; • Idling is required to maintain battery charge or voltage at a level sufficient to start the locomotive.

General Requirements	CARB Statewide Agreement	PR 3502
	equipped with anti-idling devices when anticipated idling will be less than 60 minutes.	
Averaging Provisions, Units, and Other Provisions Associated with Emission Limits	• None	• None

ATTACHMENT A: PUBLIC COMMENTS

PUBLIC COMMENTS

An April 25, 2005 comment letter to Proposed Regulation XXXV, which included specific comments to PR 3502, was received from the Association of American Railroads. On October 12, 2005 a public workshop was held at District headquarters to solicit information and suggestions from the public regarding PR 3502. Approximately 10 people attended, with four individuals providing comment at the meeting. One written comment letter was received prior to the October 21, 2005 close of the public comment period for PRs 3502. Two comment letters were received after the close of the public comment period. A summary of the verbal and written comments, as well as staff responses, is given below.

Written Comments – April 25, 2005

1. **Comment:** The proposed rule is preempted by the Clean Air Act, the California Health and Safety Code, the ICC Termination Act, federal rail safety laws, and the Commerce Clause of the U.S. Constitution. The U.S. Congress and the California Legislature have delegated exclusive authority over locomotive and rail emission to the federal and state agencies that can effectively and efficiently regulate in this area.

Response: The District has fully discussed its legal authority under state law to promulgate PR 3502, as well as discussed why neither rule is preempted under federal law, in our response to the railroad's written legal comments, dated November 14, 2005, included below.

2. **Comment:** The District is required by law to prepare and disclose its CEQA Initial Study and prepare and EIR. The CEQA analysis should include alternatives to the project and should consider the potential for increasing emissions elsewhere because of the requirements to reduce idling emissions. For example, truck traffic may be increased and congestion at the ports may be increased which would undermine the efforts of the Ports of Los Angeles and Long Beach to reduce emissions. It should consider all cumulative impacts of the project and should address all other initiatives to control railroad emissions in the SCAB.

Response: The District prepared and circulated an Initial Study for a 30-day public comment and review period from September 15, 2005 to October 14, 2005. The Initial Study identified environmental topic areas that may be adversely affected by the proposed project. The District has evaluated the environmental impacts from the proposed project and will be releasing the results in a Program Environmental Assessment in accordance with CEQA Guidelines §15252. The analysis considered potential direct and indirect

impacts from the project. For example, increased congestion at the Ports is not expected because, according to the Port of Los Angeles, 50 percent of the containerized cargo received at the Port is destined for the regional or domestic market, within 350 miles and up to 950 miles. This containerized cargo is already shipped by truck. Further, the environmental analysis concluded that project-specific impacts are not significant and, therefore, are not cumulatively considerable. Since the purpose of the alternatives to the project would be to avoid or substantially lessen any significant effects of the project and the proposed project does not generate significant impacts, alternatives to the project are not required.

3. **Comment:** The Railroads assert that under CEQA the District must analyze the relationship between its proposed railroad rules and "all other relevant District and other plans and programs." Specifically, the railroads state that the District must look at how these proposed rules relates to: (1) the District's portion of the California SIP; (2) the District's toxic air contaminant program; (3) the 1998 ARB-Railroad MOU; and (4) current proceedings at the ports of Los Angeles and Long Beach regarding diesel vehicles.

Response: As part of the rulemaking process, the District prepared a PEA for PR3501 and PR3502. The PEA, which has been made available to the public for comment, concluded that these two rules would not result in any significant direct or indirect environmental impacts. Instead, enactment of these rules will be environmentally beneficial due to anticipated reductions in criteria pollutants such as NOx and PM, as well as in TACs. As part of the PEA, the District was required to "discuss any inconsistencies between the proposed [rules] and applicable general plans and regional plans," including any applicable air quality or regional transportation plans. CEQA Guidelines § 15125(d). The District, however, has not found any inconsistency between PR 3501 or PR 3502 and any of the plans and programs identified by the railroads.

With respect to the District's Air Quality Management Plan (AQMP) (which is incorporated into the California SIP), this plan sets forth the policies and measures to achieve compliance with the federal and state standards for all criteria pollutants, including NOx and PM10. The AQMP strategy includes measures that target stationary, mobile, and indirect sources. These measures are based on feasible methods of attaining ambient air quality standards. The proposed rule is not inconsistent with the AQMP, but instead will assist the District in its efforts to attain the state and federal PM10 air-quality standards. Similarly, the District's Air Toxics Control Plan (ATCP) includes control measure AT-MBL-09 -

Control of Locomotive Idling Emissions. PR 3502 implement this control measure, which will reduce toxic risk to local residents. Thus, PR 3502 is consistent with, and will help implement, the AQMP and ATCP²⁷.

With respect to the 1998 ARB-Railroad MOU, that agreement achieves additional reductions in NOx emissions from locomotives by expediting the dates that the railroads must achieve EPA Tier 2 standards within the District. The 1998 MOU contains a termination clause that would allow the railroad to escape its obligation, but only under very limited circumstances. In relevant part, the agreement states that the railroad may terminate if "the State of California or any political subdivision thereof takes any action to establish (i) locomotive emission standards, (ii) any mandatory locomotive fleet average emission standards, or (iii) any requirement applicable to locomotives or locomotive engines and within the scope of the preemption established in the final EPA national locomotive rule."

PR 3502 will further the aim of reducing NOx, and are not inconsistent with the goals and objectives of the 1998 MOU. Further PR 3502 is not inconsistent with the termination clause and does not establish any type of emission standard. Moreover, for reasons fully discussed in the District's response to the railroad's written legal comments, dated November 14, 2005, neither rule is within the scope of Clean Air Section 209 preemption, as established in the final EPA locomotive rule.

Finally, with respect to the current proceedings at the ports of Los Angeles and Long Beach regarding diesel vehicles, the District is uncertain exactly what proceedings the commenter is referencing. Therefore, the District cannot analyze this issue further. If the railroads are referring to the Port of Los Angeles Draft No Net Increase Plan, these proceeding are not sufficiently developed for the District to fully analyze. Courts have stated that an agency is not required to consider proposed or draft plans (or rules) when evaluating a present project under CEQA. *Chaparral Greens v. City of Chula Vista*, 50 Cal. App. 4th 1134, 1145 (1996); see also *Sierra Club v. City of Malibu*, 205 LEXIS 8359 (Sept. 15, 2005)(unpublished). These courts have noted that nothing in CEQA suggests that an agency must "speculate as to or rely on proposed or draft regional plans in evaluating a project." *Chaparral Greens*, 50 Cal. App. 4th at 1145. In other words, unless the other rule or plan is already adopted, an agency need not evaluate whether its proposed project is in conflict. However, the District also believes that PR 3502 will not be inconsistent with any future

²⁷ The railroads also assert that PR 3501 and PR 3502 may result in an intermodal switch in freight traffic from rail to truck, which would result in localized toxic hot spots. However, as explained in the PEA, the District found no support for the railroads' position that such an intermodal switch would be likely to occur.

program by the ports to further reduce locomotive emissions. The railroads have not presented any information to the contrary.

4. **Comment:** The District must perform an assessment of the socioeconomic impacts of the rules including the range of probable costs, including costs to industry and the emission reduction potential of the rules.

Response: The District has conducted an assessment of the socioeconomic impacts of the proposed rules (PR 3501 and PR 3502). The assessment includes costs/savings and emission reductions. PR 3501 is a recordkeeping and reporting rule and would not result in emission reductions. Overall, PR 3502 would result in savings. As such, the cost-effectiveness analysis is not performed.

5. **Comment:** The cost effectiveness analysis must consider the number of reporting events per day; hours and cost to collect, consolidate, translate, and transmit reports; hours to develop training materials; hours to train railroad employees involved in collection and reporting of data; delays while crews record idling events longer than 15 minutes; delays while obtaining from the dispatcher regarding reasons holding the train; cost of idling reduction devices resulting from the rule; and emission reductions resulting from the reporting and retrofit components of the rule over time. It should address the cost of delay to shutdown and restart, including increased labor costs. It should also address increased costs to roads due to modal shift.

Response: The socioeconomic analysis of PR 3501 and 3502 has considered a gamut of cost parameters associated with the proposed rules' requirements. For example, the recordkeeping cost for PR 3501 includes the costs of system set up, data entry/weekly reporting, and annual reporting. PR 3502 is expected to result in a cost impact from training personnel and a potential savings associated with reducing unnecessary idling. Implementation of PR 3501 and 3502 would result in an overall savings. Therefore, a modal shift away from railroads is not expected.

6. **Comment:** The District proposal may actually increase emissions and cause safety concerns. Idling is an integral part of railroad operations and there are many reasons why idling over 15 minutes is necessary. In some cases, more emissions may be caused by stopping and starting the engine than would be caused by idling a few more minutes. It can take 15 to 30 minutes or more to shut down and start up. Pulling a large number of locomotives out of service with start/stop technology would lead to significant system delays and greater overall emissions.

Response: Proposed Rule 3502 has been modified to identify specific situations in which shutting down the locomotive would not interfere with railroad operations. In addition, the proposed rule includes exemptions for locomotives used in an emergency, ambient temperature of 40°F or lower occurs or is predicted, or idling is required to maintain battery charge or voltage at a level sufficient to start the locomotive. The railroad had made a comment that increased start-ups from idling restrictions could result in a trade-off in emissions. In order to clarify this situation, the District commissioned two source testing companies, Southwest Research Institute and Engine, Fuel, and Emissions Engineering to test start-up emissions from locomotives. The results show that, based on the testing data, idle shutdown periods longer than about eight minutes, followed by a start-up-idle event, result in reduced emissions; the longer the shutdown, the more substantial the emission benefits based upon the idle emission rates.

Public Workshop Comments

7. **Comment:** What is the relationship between development of District railroad rules under Regulation XXXV and the 2005 CARB Statewide Agreement, particularly with regard to release clause language in the Agreement?

Response: It is District staff's understanding that although the Agreement provides the means for the railroads to opt out of elements of the Agreement, if a local agency adopts requirements directed toward the same goal as that requirement it is ultimately up to the railroads to decide whether to do so. The District's Governing Board has directed staff to continue development of rules under Regulation XXXV, including PRs 3501 and 3502 and Rule 3503 – Emissions Inventory and Health Risk Assessment for Railyards, which was adopted on October 7, 2005.

8. **Comment:** PR 3502 idling requirements that limit idling of lead locomotives equipped with anti-idling devices to 15 minutes are unnecessary, since the devices should be allowed to dictate the duration of idling based on need-based parameters such as low battery voltage and maintenance of brake pressure.

Response: District staff understands that occupied lead locomotives with anti-idling devices may need to idle, as dictated by parameters monitored by the anti-idling devices (e.g., operator comfort cooling, battery charge, brake pressure). As a result, PR 3502 does not address idling of occupied lead locomotives equipped with anti-idling devices, because it is assumed that those locomotives will idle for 15 minutes or less, or to the extent dictated by the anti-idling devices.

PR 3502 has been modified to specify that locomotives with anti-idling devices that are set at 15 minutes, engaged, and not tampered with are not subject to idling requirements. Idling requirements under PR 3502 are directed at those locomotives that are not equipped with anti-idling devices.

9. **Comment:** A trailing locomotive equipped with an anti-idling device that idles for longer than 15 minutes does so because the anti-idling device deems it necessary.

Response: District staff agrees with this statement. As discussed previously, PR 3502 idling requirements have been structured to not apply to locomotives equipped with anti-idling devices. However, the rule does not prohibit idling for longer than 15 minutes when parameters cause the anti-idling device to re-start the engine.

Written Comments – Received Prior to October 21, 2005

10. **Comment:** PR 3502 IS needed. The danger to public health from diesel engine emissions is already well-known and based on research. Particulates in emissions are hazardous to the lungs. Idling limitations are urged, as well as future regulations specifying zero emissions standards.

Response: District staff believes that Proposed Rule 3502 is needed to protect public health by limiting longer-duration idling events. The District is receptive towards advanced strategies, such as liquefied natural gas locomotives, which do not rely on diesel fuel and, as a result, do not produce diesel PM emissions.

Written Comments – Received After October 21, 2005

11. **Comment:** The railroads question the ultimate need for PR 3502 in light of the June 30, 2005 CARB Statewide Agreement, which provides all of the benefits of PR 3502. Therefore, duplicating the requirements of the CARB Statewide Agreement under a parallel regime as part of Regulation XXXV would not result in additional emissions reductions or any other air quality benefit.

Response: District staff believes that the CARB Statewide Agreement has several deficiencies relative to PR 3502. For example, the Statewide Agreement includes exceptions to idling limits which are much less clearly defined, and as a result significantly less stringent, than proposed in PR 3502. In

addition, the District questions the enforceability of the Statewide Agreement. For these reasons, District staff is unclear whether the Statewide Agreement will result in true air quality benefit, while PR is structured to ensure enforceable benefits.

12. **Comment:** Although it might appear as though PR 3502 is more protective than the 2005 CARB Statewide Agreement because it would limit non-exempt idling to 30 minutes instead of 60 minutes as allowed by the Statewide Agreement, in fact the overall benefits that will be achieved under the 2005 Statewide Agreement as a whole are at least equivalent to, and likely are greater than, those that would result from implementation of PR 3502.

Response: The commenter has provided no data to validate that the 60 minute threshold in the Statewide Agreement would result in benefits which are equivalent to or greater than what would be achieved under the PR 3502 limit of 30 minutes. Under PR 3502, idling requirements are very specific. PR 3502 has been modified to identify distinct situations where idling over 30 minutes would be prohibited. As a result, the exemptions to these situations are very limited. District staff believes that this approach is very clear and enforceable and will lead to greater emission reductions than the 2005 CARB Statewide Agreement.

13. **Comment:** PR 3502 should not exclude passenger train operations. If the objective of PR 3502 is to reduce idling emissions from diesel-powered locomotives, reducing idling emissions from passenger locomotives furthers this objective. No explanation is provided as a basis for excluding locomotives used to transport passengers from the proposed rules.

Response: As explained in the PR 3502 staff report, passenger railyards operating in the District would be excluded from the requirements of PR 3501 based on a preliminary data analysis indicating that they contribute less than ten percent of NOx and PM emissions from rail operations. Passenger railyard operations are sufficiently different than freight yards because they are characterized by very little, if any, switching and cargo handling activities, in addition to considerably lower traffic volumes. In addition, in most cases commuter rail has priority over freight locomotives, further reducing the possibility of idling events. Also, passenger railroads operate on a more predictable schedule such that crew changes and breaks can occur at specified time periods and locations to avoid delays and idling associated with such activities. As a result, passenger railyard operations have proportionally lower idling emissions than freight railyards. If warranted, passenger operations may be considered in the future.

14. **Comment:** The definition of "anti-idling device" in PR 3502 should be redrawn more generally for universal application. As drafted, the proposed definition does not account for the fact that parameters vary from model to model.

Response: The intent of the comment is unclear. As currently written, the definition lists in general terms what an anti-idling device is. In this regard, the definition achieves what the commenter is requesting. Although the definition does not specifically state that parameters vary from model to model, it does provide a list of possible parameters, such as engine water temperature, ambient temperature, battery charge, and railcar brake pressure, which might be monitored as part of an anti-idling device. The list of parameters is given as an example, essentially allowing for the fact that the parameters vary from model to model. Given the context of the definition, it is difficult to determine how the addition of explicit language stating that parameters vary from model to model will improve the definition.

15. **Comment:** For consistency with the CARB Statewide Agreement, the definition "idling" or "idling event" should be revised to include fueling as a permitted idling event.

Response: PR 3502 has been revised to identify the specific circumstances in which a locomotive cannot idle for more than 30 minutes. Fueling of a locomotive is not one of the situations that would be subject to the idling prohibition. However, queuing for fueling, as specified under subparagraph (d)(1)(D) would be restricted from idling for more than 30 minutes.

16. **Comment:** The PR 3502 definition of "operator" must be reconciled with the definition of "railroad." As proposed, the definition of "railroad" could include commercial passenger carriers as well as freight. However, the definition of "operator" is understood only to mean Class I freight carriers. Because inclusion of the term "railroad" within the otherwise more limited definition of "operator" could have the unintended consequence of broadening the scope of PR 3502, the definitions should be clarified and consistent.

Response: To respond to this comment, PR 3502 definitions of "operator" and "railroad" have been revised for consistency with the same definitions in PR 3501. The definitions are now consistent in referring only to freight transport.

17. **Comment:** PR 3501 and 3502 define "railroad" differently. The definitions should be identical

Response: The PR 3502 definition of "railroad" has been amended for consistency with the same definition in PR 3501.

18. **Comment:** The PR 3502 definition of "emergency vehicle" refers to the California Vehicle Code definition of the term. This is an improper definition given that rail operations are generally beyond the constraints of the Vehicle Code.
- Response:** In response to this comment, the definition of "emergency vehicle" has been deleted from PR 3502. To address the use of locomotives in emergency situations, PR 3502(i)(1) has been amended to allow use of a locomotive during an emergency, with "emergency" defined in subdivision (c) as "any sudden, unexpected occurrence involving a clear and imminent danger, demanding immediate action to prevent or mitigate the loss of, or damage to, life, health, property, or essential public services."
19. **Comment:** PR 3502 defines "trailing locomotive" as "any locomotive in a consist of locomotives, including consists made up of switching locomotives and locomotives not connected to railcars, that is not the controlling locomotive."
- Response:** Correct.
20. **Comment:** PR 3501(f)(2)(D) requires a statement to be included in an Alternative Compliance Plan that each anti-idling device be set at 15 minutes or less. This requirement fails to acknowledge a number of other factors that necessarily affect a decision than an idling control device automatically should shut off the locomotive's engine. Consistent with the CARB Statewide Agreement, PR 3501 should be revised to account for instances in which adherence to such a limit would cause premature component failure. Such a revision would be consistent with parameters listed in the PR 3501 definition of "anti-idling device." This concern also applies to PR 3502(d), which generally requires that locomotives equipped with anti-idling devices be shut down after 15 minutes of continuous idling.
- Response:** The staff report includes clarification regarding the statement for setting the anti-idling device. This statement is to ensure that the anti-idling device is set at 15 minutes or less to shut the engine down provided all of the parameters, such as air pressure, voltage, water temperature, ambient temperature, etc. are met. However, if one or more of the parameters drops below a specified level the engine would automatically restart, irrespective of the anti-idling device being set at 15 minutes.
21. **Comment:** It is unclear whether an approved Alternative Compliance Plan submitted under PR 3501(f) constitutes compliance with idling requirements in PR 3502(d) for the same locomotives.

Response: No, unless one or more of the following conditions are met: (1) the locomotive propulsion strategies proposed under the PR 3501 Alternative Compliance Plan include anti-idling devices; or (2) the criteria for exemption from PR 3502 idling requirements, as specified in PR 3502, subdivision (j) are met; or (3) a PR 3502 Emissions Equivalency Plan has been submitted by a railroad and approved by the Executive Officer.

It is important to note that alternative technologies used within an approved PR 3501 Alternative Compliance Plan could likely also be used to meet the requirements of the PR 3502 Emissions Equivalency Plan. However, an approved PR 3501 Alternative Compliance Plan in the absence of an approved PR 3502 Emissions Equivalency Plan will not satisfy the requirements of PR 3502.

22. **Comment:** In lieu of compliance with idling limitations PR 3502(e) allows an operator to prepare and submit an Emissions Equivalency Plan demonstrating emission reductions greater than or equal to those that would be achieved by not continuously idling locomotives for more than 15 minutes. PR 3502 is silent on a number of relevant issues, including the methodology to be used in quantifying baseline emissions and subsequent emission reductions, procedures for making the required demonstration, and the baseline condition to be used for the comparison.

Response: Proposed Rule 3502 has been modified to provide additional clarity regarding information needed for operators that elect to submit an Emissions Equivalency Plan. The proposed rule has been modified such that quantification of emission reductions should demonstrate that the reductions are greater than or equal to the annual emission reductions that would be achieved by not idling locomotives for more than 30 minutes for all events in the same calendar year, except as exempted pursuant to subdivision (i) and there is no increase in toxicity.

The methodology to quantify emissions shall be consistent with the most recent revision to the District's Railyard Emissions Inventory Methodology. Estimates of cancer risk and acute and chronic noncancer health effects shall be consistent with the most recent revision to the District's Health Risk Assessment Guidance for Railyards and Intermodal Facilities. These documents, which were included with the October 7, 2005 Board package for Rule 3503 – Emissions Inventory and Health Risk Assessment for Railyards are included as Attachments B and C of the Draft Staff Report for Proposed Rule 3502.

23. **Comment:** The list of bases for exemption from PR 3502 idling requirements is incomplete. PR 3502(j) should be modified to clarify that the subdivision

is not intended to be an exclusive list, or at least to include: (1) All specified parameters fail to continuously meet the acceptable levels identified in PR 3502(c)(1) for the applicable idling duration; and (2) The locomotive that is idling is a trailing locomotive that is also in motion.

Response: Regarding the first recommendation, under Proposed Rule 3502, a locomotive that is equipped with an anti-idling device that is idling to maintain specific minimum operating parameters such as engine water temperature, railcar brake pressure, battery charge, and battery voltage is not subject to the idling requirements.

Regarding the second recommendation for the definition for "idling or idling event" states that idling is the operation of the locomotive's diesel internal combustion engine(s) used for locomotive motive power during which the engine is not used to move the locomotive. It shall not be considered idling when the engine is operating while the locomotive is being slowed or moved by gravity. In a situation where the locomotive is a trailing locomotive where the locomotive is in the idle throttle notch and the reverser handle is not centered, because the consist is working, this situation would not fit the definition of an idling event.

24. **Comment:** In light of the numerous, serious technical and legal flaws inherent in the promulgation of PR 3502, the railroads urge the District to terminate the rulemaking process.

Response: District staff disagrees with the assessment of inherent technical and legal flaws. Every effort has been made to address all technical issues raised and changes have been made to the proposed rules based on comments received. District staff has also designed the rules to avoid federal preemption. From the staff's perspective, the proposed rules are necessary, with PR 3502 establishing limits on idling from locomotives. For this reason, the staff believes that continuing the rulemaking process is warranted.

25. **Comment:** The PR 3502 definition of "maintenance or diagnostic purposes" should be clarified. As written, the railroads may interpret the exemption associated with this definition too broadly and the rule might provide an easy means for the railroads to undermine the effectiveness of the rule.

Response: Proposed Rule 3502 restricts idling to 30 minutes or less if a mechanic is idling the locomotive for maintenance or diagnostic purposes which can be conducted on the locomotive that does not require operation of the engine. An operator shall not idle a locomotive for more than 30 minutes if the

locomotive is queuing prior to or following these activities and for fueling or servicing a locomotive.

26. **Comment:** The District should provide more clarification about where money from penalties will go. It is suggested that it would be appropriate to use the funds to improve air quality in the community where the violation occurs. In addition, the District should make sure that the penalty money does not go back to the railroads for mitigation measures.

Response: If penalties are collected from implementation of Proposed Rules 3501 and 3502, the District staff will evaluate appropriation of these funds. The District staff will take into consideration implementation costs associated with implementing and enforcing Proposed Rules 3501 and 3502. In addition, as part of its consideration, the District staff will consider use of funds to improve air quality in local communities, specifically the areas where violations occur.

27. **Comment:** The railroads argue that idling prohibitions constitute a "requirement" which the state or district is preempted from adopting by section 209(e)(1) of the Federal Clean Air Act.

Response: The railroads ignore the fact that their interpretation has already been rejected by the courts. In *Engine Manufacturers Association v U.S. Environmental Protection Agency* (D.C. Cir. 1996) 88 F 3d. 1075 at page 1093, the Court of Appeals held that EPA had properly interpreted the term "requirements" as used in section 209(e) to refer to only "certification, inspection, or approval" requirements of the same type preempted in section 209(a) and (c), and that section 209(d) shows that "requirement" does not include use restrictions. The Court of Appeals upheld EPA's interpretation, so that use restrictions, such as idling limits, are not preempted "requirements." While it is true that the regulation upheld in this case does not apply to locomotives, it is the exact same provision, section 209(e), that applies to locomotives as applies to the other nonroad engines that were the subject of the rule in this case. EPA could not interpret the same exact section of the statute—the word "requirements"—differently as applied to locomotives and as applied to other nonroad engines. To do so would be arbitrary and capricious, in violation of section 307 of the Clean Air Act.

28. **Comment:** The railroads also argue that Proposed Rule 3502 is a "transparent retrofit requirements" and therefore would be preempted under the Clean Air Act.

Response: This assertion is incorrect. PR 3502 does not require retrofits of locomotives. These proposed rules require recordkeeping of idling events

and limitation of unnecessary idling. In addition, engines that use anti-idling devices or alternative technologies are either exempt from the rule's requirements or can be used as an alternative method of compliance with the rules, which is essentially the same as an exemption. The Clean Air Act does not prohibit states from exempting certain cleaner locomotives from otherwise-valid use restrictions. The railroads appear to be impliedly making an argument that the proposed rules are so burdensome that they effectively do not give the railroads any choice but to retrofit their locomotives. They supply no facts to support such an argument. Moreover, any such argument is belied by the fact that the railroads have agreed to limit unnecessary idling in their MOU with CARB, which shows that idling restrictions are not overly burdensome. The MOU sets forth types of idling which the railroads believe is necessary, which does not include the circumstances in which idling is limited by PR3502. Also, the recordkeeping requirements have been adjusted to address the railroads' concerns by only requiring reasons for idling events over two hours and by allowing a delay between the conclusion of the weekly recordkeeping period and the date the reports are due to the District.

29. **Comment:** The railroads argue that the proposed rules would impermissibly conflict with, interfere with, contradict or duplicate the EPA regulatory program for locomotives.
- Response:** Since the railroads fail to cite any provision of the federal regulations to which this argument applies, there is no basis for this claim.
30. **Comment:** The railroads argue that anti-idling requirements "squarely impinge upon rail operations" and thus are preempted under the ICCTA.
- Response:** The railroads first cite the proposition that environmental permitting or pre-clearance requirements are preempted. However, neither proposed rule imposes any permitting or pre-clearance requirements. Next, they cite *Village of Ridgely Park v New York, Susquehanna & Western Railway*, 750 F. 2d. 57, 67 (N.J. 2000) for the proposition that a locality's action to enjoin a nuisance from a railroad facility was preempted by the ICCTA. However, this does not mean that any rule limiting idling would be preempted by the ICCTA. The court stated that to adjudicate the common-law nuisance claim would infringe on the Surface Transportation Board's exclusive jurisdiction over the location and operation of railroad facilities. Presumably, this is because idling which was necessary to further rail operations could still constitute a public nuisance, and therefore it would interfere with rail operations if such activity were enjoined. However, that case recognized that nondiscriminatory police power regulations that do not interfere with rail operations may still be enforced. The proposed rules

are designed so as not to interfere with rail operations, allowing idling in all cases where it serves a legitimate operational need, and only limiting idling in cases where the idling is unnecessary. Idling limits do not discriminate against railroads because there is already a CARB rule limiting idling to five minutes for trucks and buses. Indeed, since the railroads have already agreed in the CARB MOU to limit unnecessary idling, they have acknowledged that such a requirement does not interfere with rail operations. Hence, it is not preempted. Moreover, the *Village of Ridgely Park* decision acknowledges, as does the Surface Transportation Board, that whether a regulation interferes with rail operations is a fact-bound question. Here, the railroads have cited no facts to support an argument that either of the proposed rules interferes with rail operations. As also stated in the cited case, police power regulations are presumed valid, and it is the railroads' burden to present proof that a regulation interferes with rail operations.

31. **Comment:** The railroads assert that the proposed rules will have adverse impacts on the environment.
- Response:** The railroads cite no facts to support this claim; and the District's CEQA analysis revealed no significant environmental impacts.
32. **Comment:** The railroads argue that the proposed rules are unnecessary because they have entered into an MOU which limits idling and some of their members have corporate policies to limit idling, in order to reduce fuel consumption and emissions.
- Response:** However, the rules are still necessary because they limit unnecessary idling to 30 minutes, rather than 60 minutes as stated in the MOU, and, more importantly, because the rules are enforceable via injunctive relief and substantial penalties, whereas the CARB MOU specifically prohibits CARB from obtaining injunctive relief or specific performance, and provides only small penalties compared with the penalties available under the state law for violation of district rules.
33. **Comment:** As the Railroads' Rule 3503 comments explained in detail, it is improper to segregate the environmental review of PR 3501 and PR 3502 from Rule 3503 and future PR 3504. The District improperly defines PR 3501 and PR 3502, exclusive of Regulation XXXV and the accompanying rules, as the project for purposes of CEQA. The District improperly ignores the history of Regulation XXXV and the interrelationship between the rules. Because the rules in Regulation XXXV "were intended, collectively, to regulate the railroad operations and emissions in the South Coast Air Basin" and because District Staff initially proposed to bring the rules in

Regulation XXXV to the District Board for a single approval, the District must now consider the cumulative effect of Regulation XXXV as a whole in a single CEQA document.

Response: The District does not agree with the railroads that merely because a set of proposed rules relate to a similar industry, or because they may be promulgated within a relatively similar time frame, that under CEQA they must be considered cumulatively in a single document. District staff did initially propose a single CEQA assessment for all four rules contained in Regulation XXXV. However, as explained in response to the railroads' comments on Rule 3503, during rulemaking District staff determined that a single CEQA review was neither necessary nor appropriate for two primary reasons.

First, it was determined that PR 3501 and PR 3502 are sufficiently different in purpose and affect from PR3503 that it was not necessary to adopt these rules at the same time. The District found that the causal link between Rule 3503 on one hand and PR3501 and PR3502 on the other was lacking, and, therefore, all three rules were not required to be treated as a single project for purposes of CEQA. See *Kaufman & Broad-South Bay, Inc. v. Morgan Hill Unified Sch. Dist.*, 9 Cal. App. 4th 464, 474 (1992)(requiring a causal link between the creation of a community facility district and future construction of new schools before CEQA applied); *Fullerton Joint Union High School Dist. v. State Bd. of Ed.*, 32 Cal. 3d 779, 798-97 (1982)(recognizing that CEQA applies when it is shown that the government action constitutes an essential step culminating in future action which may impact the environment).

Here, PR3501 and PR3502 focus on evaluating and actually reducing emissions associated with unneeded locomotive idling in the basin. This function stands independent of Rule 3503, which is solely an information gathering rule intended to advise the District and public about the type of, amount of, and risks from, air pollution emissions associated with railyard facilities. Also, idling controls reduce *regional* air pollutants and, thus has an additional independent purpose from gathering information about *localized* health risks from railyards. Therefore, like in *Kaufman*, adoption of Rule 3503 did not create any need to adopt rules relating to locomotive idling. Nor was adoption of Rule 3503 required for the district to proceed with PR3501 and PR3502. Under such circumstances, the District properly went forward with Rule 3503 separate from PR3501 and PR3502.

Second, the District decided to forgo adoption of PR 3504 until additional information could be gathered from railroads under Rule 3503 to assist the District in best fashioning any future rule regarding railyard risk reduction plans. Based upon future information provided from the railroads, either

from the Interim Railyard Emission Inventory Reports, the railyard-wide criteria pollutant and toxic air contaminant emissions inventory, or the health risk assessments, the District will further consider the scope of PR3504. Depending on the level of risk, the District may consider different applicability, requirements, or compliance schedules, or even propose an entirely different approach to limit railyard risk. Indeed, if risks are determined to be at acceptable levels and likely to be maintained at such levels, the agency may not move forward with promulgation of PR3504 at all. Accordingly, CEQA review at this time of PR3504 would be premature because no definite plan has been formulated as to when or how to proceed with the rule. See *Kaufman & Broad-South Bay, Inc. v. Morgan Hill Unified Sch. Dist.*, 9 Cal. App. 4th 464, 474-75 (1992); *Berkeley Keep Jets Over The Bay Committee v. Board of Port Commissioners of the City of Oakland*, 91 Cal. App. 4th 1344, 1362 (1991); *Lake County Energy Council v. County of Lake*, 70 Cal. App. 3d 851, 854-55 (1977).

Because any action on PR3504 remains uncertain and unspecified, the decision not to prepare a CEQA analysis of that rule is distinguishable from those court cases cited by the railroads that found improper piecemealing of a project. Those cases overwhelmingly involve government agency approvals which the court found strong evidence were part of larger construction or development projects, or that directly created the need for future action or approvals. Thus, in *Laurel Heights* the Court was able to find a "myriad of facts" revealing that at the *very time* the University of California was approving the acquisition of an office building, it already had future plans to significantly expand the use of that *very same building*. See *Sacramento Old City Ass'n. v. City Council of Sacramento*, 229 Cal. App. 3d 1011, 1026 (1991) (explaining and distinguishing the holding *Laurel Heights*). In *Bozung v. LAFCO*, 13 Cal. 3d 263 (1975) the court found that none of the parties made "any bones about the fact" that the impetus for the action – approval of a land annexation plan – was part of a larger project to allow an individual landowner to subdivide his 677 acres of agricultural land into residential lots). In *Orinda Association v. Board of Supervisors*, 182 Cal. App. 3d 1145 (1986) (the court found that the administrative record showed from the "outset" that future demolition of two buildings was considered part the larger construction project approved by the agency). Finally, in *McQueen v. Board of Dir. Mid-Peninsula Regional Open Space Dist.*, 202 Cal. App. 3d 1136 (1998) (the court found that the agency had defined its project – the purchase of two parcels of land – too narrowly by failing to mention the agency's nearly simultaneous adoption of a land use and management plan for the newly acquired land).

34. **Comment:** As discussed in the railroad letter of September 7, 2005 regarding Rule 3503, the District's exemption of PR3503 from CEQA and its conclusion that the rule may be segregated from the rest of Regulation XXXV directly violates California law.

Response: To the extent that this comment again challenges the Notice of Exemption for Rule 3503, the District has previously explained in detail that Rule 3503 is categorical CEQA exemption under Guidelines Section 15306 which the project "consists of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource." Before its adoption, the railroads failed to explain why Rule 3503 "goes far beyond information gathering." While Rule 3503 contains an information reporting requirement, that is the public noticing requirement, this provision did not remove Rule 3503 from the exemption in section 15306. See *City of Ukiah v. Mendocino*, 196 Cal. App. 3d 47 at 54-55 (1987). Moreover, Rule 3503 was exempt from CEQA pursuant to Guidelines section 15262, as Rule 3503 involves information gathering and reporting as a feasibility or planning study to evaluate possible future actions, and Guidelines section 15061(b)(3), which exempts a project if it can be seen with certainty that there is no possibility that it may have a significant effect on the environment. The railroads also failed to provide any information to support their claim that these two Guideline sections could not be applied to Rule 3503.

To the extent that the railroads are asserting that potential impacts from Rule 3503 must be considered under CEQA as part of the PR3501 and PR3502 rulemaking process, the District disagrees for two reasons. First, the railroads have yet to provide any information that Rule 3503 would have any direct or indirect impact on the environment which needs to be evaluated under CEQA. Accordingly, the District does not believe that further consideration of Rule 3503 would require a change to the scope of the CEQA document for PR3501 and PR3502. Second, as previously stated, the District does not believe there is any casual link to between these rules requiring them to be considered together under CEQA. Given this, the District is required only to consider the direct and indirect physical changes to the project associated with PR3501 and PR3502. See CEQA guidelines section 15064(d).

35. **Comment:** The District does not have the authority under state law to regulate locomotives. The authority relied on by the District to justify this rule does not support the District's position that it has the requisite authority under state law. Neither Health & Safety Code Section 43013, 40716, 40702, 41511 nor 41700 confer any authority to the District to regulate

locomotives, including the requirement of health risk assessments and public notice.

Response: A thorough discussion of this issue appears in the Staff Report at pages 1-5 through 1-7.

As previously stated in the District's response to comments to the Railroads September 7, 2005 letter and in the Staff Report, state law confers upon the local air districts the primary responsibility to regulate air pollution from all sources, except for motor vehicles over which the state Air Resources Board (ARB) has exclusive jurisdiction. Health & Safety Code §40000. Additionally, Health & Safety Code §40412 states that "(T)he south coast district shall be the sole and exclusive local agency within the South Coast Air Basin with the responsibility for comprehensive air pollution control..." Unless there are specific statutes which limit this broad district authority, the districts can adopt rules and regulations to control all non-motor vehicular sources of air pollution.

Locomotives are nonvehicular sources, not motor vehicles²⁸, thus it is the districts that have the authority to regulate locomotives, unless the state legislature restricts this authority. See Staff Report at 1-5.

Health & Safety Code §43013

While the commenter cites Health & Safety Code §43013 as authority for the proposition that the Air Resources Board has exclusive jurisdiction over locomotives, neither section grants such exclusive authority. The state legislature, while granting authority to the Air Resources Board to regulate "off-road or non-vehicle engine categories" (§43013(b)) such as locomotives, did not revoke or limit the existing District authority to regulate these sources. Health & Safety Code §40702 places limitations on the District's authority to regulate locomotives, but does not revoke it entirely. (See discussion below) Utility engines, which are also included under this Section 43013(b), are typically regulated by districts. The legislature took the further step under Section 41750 et. seq. (added 1995) of the code to limit the existing authority of the districts after the legislature had already given the ARB authority to regulate these sources under Section 43013 (added 1988). If the Legislature had intended that §43013 be an exclusive preemptive grant of authority, as the commenter suggests, there would have been no need for the legislature to take measures to limit District authority by adopting the portable equipment

²⁸ Pursuant to Health & Safety Code §39039 a motor vehicle has the same meaning as defined in Section 415 of the Vehicle Code, which is "a vehicle that is self-propelled." "A vehicle is a device by which any person or property may be propelled, moved or drawn upon a highway..." Vehicle Code §670. (Emphasis added.)

regulations, Section 41750, et. seq.²⁹ Section 43013 cannot impliedly repeal the District's pre-existing authority to regulate nonvehicular sources absent "undebatable evidence" of such intent. Western Oil & Gas Assn. v. Monterey Bay Unified APCD, 49 C.3d 408 (1989). The railroads have failed to prove such intent.

Health & Safety Code §40716

Health & Safety Code §40716 does confer authority to the District to mitigate emissions from indirect sources such as railyards. See Staff Report at 1-5. An indirect source is a source that does not necessarily emit air pollutants independently, but rather draws other sources such as trucks, yard hostlers, automobiles and a variety of other nonroad sources that pollute in and around the indirect source. The citations provided by the commenter to the Clean Air Act and the Air Resources Board definitions of these sources explain that indirect sources include those that attract any kind of mobile sources, not just vehicles. Classic examples are stadiums, office buildings and ports. While the commenter concludes that the District is defining a locomotive as an indirect source, it is the railyard that is the source. A railyard draws to it a variety of polluting sources such as locomotives, trucks, loaders and forklifts. Thus, the District has the authority to regulate pollution from railyards. The District disagrees that Section 40716 is limited to the authority to adopt rules to reduce the number or length of vehicle trips, found in §40716(a)(2). Section 40716(a)(1) provides separate statutory authority to adopt regulations to "reduce or mitigate emissions from indirect or areawide sources..."

Health & Safety Code §40702

The commenter clearly misinterprets the language of Health & Safety Code §40702. As thoroughly explained in the draft Staff Report at pages 1-5 through 1-6, this statute confers upon the District the duty to adopt rules and regulations to execute the powers and duties granted to it. Additionally, this statute places a limitation of that broad authority granted the District by narrowly restricting the District's ability to "specify the design of equipment, type of construction or particular method to be used in reducing the release of air contaminants from railroad locomotives." Here, the proposed rules neither specify the design of equipment, the type of construction, or any particular method in reducing air pollution from locomotives. The District's statutory interpretation is not absurd, but rather the most logical interpretation. If the legislature had meant to completely prohibit the districts from regulating locomotives it could have

²⁹ §41750(a) "Existing law authorizes each district to impose separate and sometimes inconsistent emission control requirements..."

easily said so, rather than stating specific limits on authority as it did in §40702.

Health & Safety Code §41511

The commenter's arguments that Section 41511 limits districts to determine the amount of emissions only from "stationary sources" is contradicted by the wording of the statute, which allows districts to collect such information from "any air pollution emission source" Locomotives are clearly air pollution sources, and Proposed Rule 3501 is clearly a reasonable way of obtaining information to help the District to determine the amount of emissions from both locomotives and railyards. See Staff Report at page 1-6 for further analysis.

Health & Safety Code §41700

As explained in the Staff Report at pages 1-7, this section of the Health & Safety Code is directly enforceable by the District and the District may adopt rules and regulations to ensure the compliance of sources with statute. The statute does not limit the term "source" to stationary sources, as the commenter states. Rather this statute clearly states it applies to *any source*. While there is clearly the potential for health risks from smoke, toxic diesel and other air contaminant emissions from idling that could be termed an endangerment to public health as prohibited by Section 41700, an actual nuisance in this instance, as explained in the Staff Report at page 3-3, the District need not wait until an actual nuisance has occurred, rather the District may adopt rules and regulations to ensure that the likely nuisance will not occur. Here the railyards are emitting large amount of diesel particulate matter, which endanger the public's comfort health and safety.

The commenters' conclusion that Section 41700 does not support Rules 3501 and 3502 is based upon its prior incorrect argument that Section 40702 completely preempts the District's authority over locomotives. As explained above, this argument is incorrect. Thus, the District also has the authority to regulate locomotives pursuant to Section 41700.

BEFORE THE
SURFACE TRANSPORTATION BOARD

UNITED STATES ENVIRONMENTAL)	
PROTECTION AGENCY – PETITION FOR)	Finance Docket No. 35803
DECLARATORY ORDER)	
)	

**REPLY VERIFIED STATEMENT
OF
PAUL H. REISTRUP**

My name is Paul H. Reistrup. I am the same Paul Reistrup that submitted a Verified Statement in this proceeding on February 13, 2014. As explained in my previous statement, I have direct experience handling locomotives, particularly in my formative years as a railroader, and I occasionally “drove” the trains, even while serving as President of a railroad. More importantly, I have extensive experience managing railroads as at an executive level, including managing railroad equipment assets, ensuring the smooth running of the railroad, and managing staffing and all of the other operational elements that make a successful railroad.

I have been asked by the South Coast Air Quality Management District (District) to reply to the verified statements of Kenneth H. Hunt and Michael E. Iden of the Union Pacific Railroad and the verified statements of Rob M. Reilly and Katie M. Farmer of the BNSF Railway. These witnesses address a number of operational issues associated with the District’s Rules 3501 and 3502. To varying degrees, the railroads’ witnesses disagree with my earlier verified statement concerning the feasibility of implementing the Rules at issue in this proceeding, arguing that the Rules will so disturb

their operations that the Board must act to prevent the implementation of these Rules. As I explain below, the railroad witnesses have missed the mark. The District's Rules are not an impediment to the railroads' operations. Rather the Rules are largely consistent with the railroads' own operating practices, and most of the railroads' perceived problems arise from a misreading of the Rules. Finally, the minor modifications that the railroads might make to comply with these Rules should not impact the fluidity of their operations.

My reply statement does not address all of the railroads' argument. Mr. Tom Johnson and Mr. Richard Beall will address certain items in a separate reply verified statement filed today.

I.
The Railroads are Misreading Rule 3502

In my initial comments on Rule 3502, I noted that in my 50+ years of operating railroads, including as President of several railroads, I have observed that good operating practices should include reasonable locomotive handling rules. Given today's modern locomotives and their ever improving systems, the need to conserve fuel, and the need to protect the air we breathe, I concluded that the District's Rule 3502 was simply good policy that the railroads have largely incorporated into their own train handling rules. In addition, I determined, based on my long history of managing railroad operations, that the District's Rule would not interfere with railroad operations.

The railroads have taken issue with my initial comments. They insist that Rule 3502 poses a threat to the smooth operation of their systems in the Los Angeles

Basin and that compliance with the Rule would put employees and train operations at risk. However, upon closer examination of the railroads' worst case-scenario arguments, I determined that the railroads' concerns and complaints seem to stem, in large part, from a fundamental misreading of Rule 3502, which I explain below. Once the railroads' incorrect assumptions about the Rule are put in the proper context and corrected, the circumstances return to those that I laid out in my initial comments (*i.e.*, the Rule will not interfere with railroad operations and represents good practices that the railroads should follow regardless of the Rule).

Under Rule 3502, a railroad has met the requirements of Rule 3502 if: (1) a locomotive is equipped with an anti-idling device, such as an Automatic Engine Start/Stop ("AESS"); (2) the device is set to shut down the locomotive after 15 minutes; and (3) the device has not been tampered with by the railroad. Rule 3502(c)(1). I understand that BNSF and UP have equipped over 95 percent of their locomotives operating in the Basin with AESS devices, and that the standard shut down time setting is 15 minutes. Thus, the railroads have already complied, by default, with the Rule for most of the locomotives operating in the area, provided they have not been tampered with by the operator.

Yet, Mr. Reilly and Mr. Hunt continue to express concerns that the railroads will violate the Rule if an otherwise compliant AESS-equipped locomotive does not shut down after 15 minutes of being left unattended. From these unfounded concerns, the railroads argue that my conclusions about the feasibility of complying Rule 3502 are incorrect. I disagree with the railroads as explained below.

Under Rule 3502, an AESS-equipped locomotive is permitted to operate “normally” when the AESS is active (*i.e.*, the train has remained at idle for 15 minutes). Rule 3502(c)(1), (d). “Normal” in this context means that the locomotive’s AESS system can carry out any function that it is designed to do. For example, an AESS-equipped locomotive will restart the engine if the air brake pressure is not being properly maintained. If that happens, the railroad has not violated the Rule. An AESS-equipped locomotive will restart the engine if the battery levels are too low. If that happens, the railroad has not violated the Rule. An AESS-equipped locomotive will restart the engine if the engine may freeze. If that happens, the railroad has not violated the Rule. An AESS-equipped locomotive will not shut down the engine if too many start/stop cycles have occurred within a certain time period. Again, if that happens, the railroad has not violated the Rule.

Notwithstanding the above explanation, Mr. Reilly and Mr. Hunt’s statements are littered with baseless concerns that the railroads will violate the Rule when the AESS performs as programmed. Reilly at 17-19; Hunt at 5-6. Simply put, I understand that Rule 3502 is a safe harbor. So long as the railroad’s employees have not tampered with the systems, the railroad has nothing to worry about if the AESS system performs any tasks it is programmed to do. As more than 95% of the percent of the locomotives have AESS systems, the railroads indeed have little to worry about.

The railroads have also misread Rule 3502 with respect to handling of locomotive consists during extended delays in which the crew remains on the locomotives. Messrs. Reilly and Hunt insist that Rule 3502 requires the crew to shut

down the trailing locomotives as soon as the 30-minute idle limit is reached. Reilly at 8-9; Hunt at 2-4. In other words, in the railroads' opinion, the crew must act like timekeepers that are constantly checking to make sure that they shut down the trailing locomotives as soon the 30-minute limit is reached. Thus, they posit that in some cases the crews would have to start shutting down the locomotives as soon as they stop at a signal light because it might take more than 30 minutes to complete the shut down operation, and if they are delayed and have not completed the shut down in 30 minutes they will have violated the Rule. Reilly at 9. The railroads' concerns are, in my opinion, not valid, and again they stem from a misreading of the Rule.

Under Rule 3502(d)(2), a crew operating a train must shut down the trailing locomotives when they have been *informed* by a *yardmaster* or *dispatcher* of "a delay that will exceed 30 minutes."¹ Under the Rule, the crew need not stare at a stopwatch nor must they dash about shutting down trailing locomotives in anticipation of the 30-minute limit being reached by an idling, trailing locomotive. The only time the crew must act to shut down the trailing locomotives is when it has been specifically informed that an extended delay will occur. Thus, all of the locomotives on a train could idle for longer than 30 minutes, especially when a delay is unexpected and its length unknown in

¹ The crew is also required to shut down the trailing locomotives if there is a locomotive failure or breakdown that will result in a delay of more than 30 minutes. This requirement is within control of the crew, but a locomotive breakdown that prohibits a train from resuming operations is a much bigger operational problem and complying with Rule 3502 will not add any additional delay time as the crew must wait for running repairs to be completed or additional power to be added if the train cannot otherwise resume operations.

advance. Moreover, I understand that the time it takes to shut down the locomotive is not counted as “idling” time for purposes of the 30-minute limit. And again, if the locomotives are equipped with AESS systems, the crew need not take any specific action because the AESS will shut down the engine after 15 minutes except if its parameters require it to restart the engine. And as most of the locomotives are equipped with AESS systems, the frequency of such events must, by definition, be very limited (the railroads’ did not bother to quantify the likelihood of such an occurrence).

Lastly, I note that the crew may keep the lead locomotive idling while it is occupied. Mr. Reilly suggests that the crew could not keep the lead locomotive idling to maintain the air conditioner or heaters, etc. Reilly at 18. This is incorrect. Only the trailing locomotives must be shut down during a *known*, extended delay. Rule 3502(d)(2).

The railroads also suggest that Rule 3502 has no exceptions for maintaining the air brake pressure and that this lack of an exception jeopardizes safety. Reilly at 6-7; Hunt at 2, 7. Again, the railroads have missed understood the Rule. When the train is occupied the lead locomotive can idle, thereby maintaining the air brake pressure. When the locomotives are unattended, the AESS-equipped locomotives will operate, as needed, to maintain the air brake pressure.

There are only two other instances where the air brake pressure issue raised by the railroads would even come into play. First, on the rare occasions when an older locomotive that does not have an AESS system is on a train (as opposed to running light during switching duty, maintenance queuing or fueling operations) and the train is left

unattended, the operator must shut down the locomotive. If the locomotive happens to be maintaining the air brake pressure for the train, the air pressure will *slowly* dissipate. However, an unattended train must have its handbrakes properly set regardless of whether the air brakes are on, so the train will not “runaway” just because the air brake pressure might drop as Mr. Reilly suggests. Reilly at 7, 14-15.

The locomotives on a train can be left unattended and shut off for up to four hours before the operator even needs to perform another air brake test. And if a railroad is going to leave a train with the power still attached for more than four hours, it should be shutting down all the engines as a matter of course and properly tying up the train in accordance with the railroads’ train handling rules.

The railroads’ own operating rules suggest that they have overstated the air brake problem for these trains because the railroads generally require that locomotives be shut down when unattended for extended periods. However, both railroads permissively allow a lead locomotive to continue operating when “necessary to maintain the air supply” (UP Handling Rule 31.8.7). If the air supply is not immediately needed (i.e., a train will be left unattended for some longer period) there are no railroad operating rule requirements that the lead locomotive continue to idle.

The second scenario in which the railroads’ air brake concerns might be relevant is during distributed power operations. Because the AESS systems are disabled during distributed power operations, a manual shut down of the locomotives, similar to that in the first scenario, would result in the air brake pressure slowly dissipating (the handbrakes would still be set as on any other unattended train). However, unlike the

previous example, the distributed power unit and the lead locomotive could be unlinked during extended delays and the AESS would reengage. Of course, if the DP configured train were left unattended for an extended period, the locomotives should be shut down and the train properly tied up, including setting all the necessary handbrakes. The railroads' did not quantify the likelihood of such an occurrence, and as I explain below, the distributed power example described above should be a decidedly infrequent occurrence, and one that the railroads can avoid with proper planning.

II. Rule 3502 Will Not Disrupt Railroad Operations

A. Operations in the Los Angeles Basin

BNSF's witnesses Mr. Reilly and Ms. Farmer devote some (Reilly) or all (Farmer) of their statements emphasizing the time-critical nature of the BNSF's operations in the Los Angeles Basin. Ms. Farmer, for example, notes that "[m]any of our customers in this market segment use 'just-in-time' inventory methods that require timely and dependable deliver[ies] . . . to stock their stores and keep their manufacturing operations running efficiently." Farmer at 6. To accomplish this goal, Ms. Farmer explains that BNSF provides specific "train schedules . . . designed to allow customers to optimize supply chain efficiencies," including "expedited services that have transit times that average 800 miles per day." Farmer at 6. Mr. Reilly, building on Ms. Farmer's points, states that because intermodal traffic "can be handled by rail or truck, it is particularly important for railroads to provide efficient and reliable service," and that railroads have been successful at attracting this traffic because they provide "increasingly

high quality transportation service.” Reilly at 3-4. Thus, both witnesses firmly establish that the largely intermodal operations in the Basin are high priority operations that demand the utmost attention from the railroad.

I agree with their assessment. Thus, it is puzzling to me why Mr. Reilly then goes on to argue, in various forms, that Rule 3502 is putting the fluidity of this traffic in jeopardy.² By all accounts, these high priority trains will not be left idling for extended periods of time. Instead, the dispatchers, crew callers, hostlers, yard superintendents, and every other railroader on the BNSF (and the UP) will be making sure that these trains do not sit idling.

B. Rule 3502 is Not the Source of Delays

Even to the extent intermodal trains might occasionally idle long enough to invoke Rule 3502, the fluidity of the railroads’ system are not in jeopardy because of the Rule. Managing delays is a key element of any successful railroad, and any train that might be left unattended will necessarily require the crew to attend to certain duties such as setting handbrakes. BNSF Train Handling Rule 102.1.1. Likewise, when the unattended train is set to resume operations, the railroad must call a crew, the crew must be briefed, and the train must be prepared to leave, including releasing the handbrakes. Thus, any activities that the crew needs to undertake on restart will necessarily need to be scheduled in by the railroad.

² Mr. Hunt also expresses concerns over delays, but his statement does not emphasize any particular time-sensitive shipments. Hunt at 2.

As for operational delays that cause train delays, the Rule itself did not cause the initial delay that held the train, and the Rule need not delay a restart. Indeed, for the AESS-equipped trains, the Rule would not impact timing in any way. For the limited non-AESS trains that would be left unattended or where trailing locomotives might be shut down, the Rule should not impact the departure of a train provided the railroad handles it properly (i.e., the railroad crew starts at a suitable time to ensure an on time departure, or the railroad uses yard personnel to prepare the train prior to the crew's arrival – just as the railroad does for many other trains, including newly made up trains).

As a long time railroad operations manager, I have personally been in charge of assuring that trains depart yard facilities on time. Closely coordinating train activities is the key to this process. There are a myriad of variables in this process. For example, trains have to be made up, locomotives have to be repositioned, fueled, or serviced; locomotive consists have to be assembled; and ultimately road crews must be called to go on duty. To the limited extent that any additional activity would even be necessary under Rule 3502 – again the potential items would have to differ from what the railroads normally do under their own train handling rules, which as I have explained is not correct– the minor steps needed could easily be scheduled in to the process just as all of the other necessary activities are scheduled. The railroads' witnesses ignore the normal operational handling that would occur in those limited circumstances, and instead they simply declare such activities as “delays” that will be “bolted on” to the departure time. This is far too simplistic. The reality is that the delays that force a Rule 3502

idling event to occur in the first place are all railroad induced, and Rule 3502 is not, in turn, the further cause of delays.

C. BNSF's Examples of Problems that Would Be Caused by Rule 3502 are Nonsensical

Mr. Reilly's statement includes eight specific examples of operational problems that would "be created by the SCAQMD rule [3502] for locomotives that must be shut down and restarted manually." Reilly at 12. Mr. Reilly reluctantly acknowledges that the "number of these manual shut-down locomotive has declined," but he suggests that there are still many BNSF locomotives that are not AESS-equipped. Reilly at 12. Mr. Reilly does not quantify the number, and as I understand it, almost all of the BNSF (and UP) locomotives operating in the Basin are AESS-equipped.³ Thus, Mr. Reilly's eight scenarios, even if they were valid, are unlikely to occur. Indeed, it is telling that Mr. Reilly does not quantify the likelihood of such occurrences. Regardless, in order to demonstrate the extreme nature of Mr. Reilly's examples (and his incorrect assumptions), I address each in turn below.

1. **Scenario 1:** "Assume that a train has been constructed in a yard but the road crew has not yet arrived. All of the locomotives that are to be used on the train are "unattended" because the train is not yet ready for movement out of the yard. If it takes more than 30 minutes for the road crew to arrive, the SCAQMD rules would require that all of the unattended locomotives must be shut down. Under BNSF's operating rules, the trailing locomotives in the train would be shut down after one hour, but the lead locomotive would remain operating to retain air pressure in the train's brake pipe.

³ In passing, Mr. Reilly mentions that some run-through power locomotives may not be equipped with AESS systems. However, UP, CSX and NS have all adopted AESS and most of their primary road locomotives (the locomotives that would likely be used in run-through power) are already equipped with AESS systems.

Complying with the SCAQMD rules would require shutting down all locomotives, which would mean that the air pressure in the brakes would start to bleed out since there is no locomotive power available to retain the air pressure. And if the locomotives are shut down for an extended period of time, it would become necessary to conduct additional inspections and air brake tests. These inspections and tests could take over an hour to complete, potentially interfering with the ability of the constructed train to leave when the crew arrives and a main line slot becomes available.”
Reilly at 12-13

Response: This scenario is operationally illogical. Mr. Reilly assumes that a switch crew has constructed a train, performed all of the necessary train inspections, hooked up the locomotives, hooked up the brake pipes, and performed an air brake test, and all other necessary actions, but then no crew is scheduled for the train? This makes no sense. Ms. Farmer and Mr. Reilly have gone to great lengths to make the case that the Los Angeles Basin traffic is time sensitive. It might take several hours to make up the train, and we are left to believe that the rare train that is not equipped with an AESS system will be left idling in the yard. Mr. Reilly further compounds the problem by suggesting that the all of the locomotives must be shut down because the train is “unattended.” This problem is easily avoided by having a switch crew attend the train while waiting for the road crew, which must be unavoidably delayed because why else would the railroad have failed to call a crew for a train that it knew was being made up. If a train is going to be held for a very long time due to a lack of crews, besides being an operational failure, the railroad should shut down the locomotives as a matter of good practice because it saves fuel and reduces the likelihood of a catastrophic event, such as a locomotive fire, going unnoticed. But in any event, if the railroad chooses to leave the lead locomotive unoccupied, and it shut down the locomotives, it would only have to perform another air brake inspection after four hours, at which point, were I the yardmaster, dispatcher, or regional superintendent, I would be far more worried that my newly made-up train was still sitting around in my time-sensitive district. Thus, as I noted in the prior section, the Rule did not “create” the delay.

2. **Scenario 2:** “Assume that the train is fully assembled and a crew is ready to depart. However, departure from the yard has been delayed due to a problem on the mainline, or due to some other reason that requires that the train remain in the yard. It may be unclear when the signal will be given to go ahead, but the delay is approaching the 30-minute limit. The SCAQMD rules would require that the crew begin shutting down the trailing locomotives in advance of the 30-minute limit. As I described above, the

shut-down process takes 5-10 minutes per locomotive, and the start-up, when the go ahead signal comes through, also takes 5-10 minutes per locomotive. If the problem that kept the train in the yard gets resolved, the train will not be able to promptly leave the yard because it would either be in the middle of the shut-down process or it would need to go through the time-consuming start-up process once again. In the meantime, the train is blocking the exit for trains that would otherwise be able to depart.” Reilly at 13.

Response: Mr. Reilly misconstrues Rule 3502. As I explained above, the Rule does not require that the locomotives on a train that is attended be shut down unless the crew is specifically notified by a dispatcher or yardmaster that the delay will exceed 30 minutes. Thus, the crew need not sit with a stopwatch to check whether 30 minutes is approaching, and the crew does not have to start shutting down the locomotives in anticipation of the 30-minute mark. Again, the time taken to shut down the locomotives is not considered part of the 30 minute limit on idling.

- Scenario 3:** “BNSF uses distributed power on many trains operating in Southern California. In a distributed power train, a link needs to be established between the lead locomotive and the remote locomotive consist. If the locomotives are of the type that need to be manually shut down and restarted, shutting down the remote locomotives breaks the link, which would require someone to go to the back of the train to reestablish the distributed power link before the train could proceed. If the locomotives are equipped with idling-reduction devices, shutting down the first locomotive of the remote consist could result in the loss of the link during a restart of the locomotive, which would similarly require a reestablishment of the link. Assume that a distributed power train is on the main line track. A delay becomes apparent that requires that the train wait until the track clears up ahead. Given the nature of the delay, the crew expects that the delay will last more than 30 minutes. Under these circumstances, shutting down all of the locomotives on a distributed power train would jeopardize the ability to restart when the train is ready to move. If the link needed to be restored, a crew member would have to walk back to the remote locomotive consist and carry out a relatively complex set of steps necessary to restore the linkage with the lead locomotive. This process would take substantial time, thereby delaying the ability of the train to move when the congestion eased and holding up other trains on the line. In addition, the process would subject the crew member to the risk of injury that would be incurred by walking back to the remote locomotive consist to perform the necessary relinking process.” Reilly at 13-14.

Response: Mr. Reilly again misconstrues Rule 3502. The crew does not need to decide whether it thinks a delay will last 30 minutes. The crew need only take such steps when notified by the dispatcher that the delay will exceed 30 minutes. A crew member may need to attend to the distributed power unit, but this is no different than many other actions that crew members take when operating such trains, including switching out cars at industry, setting out bad order cars, or inspecting cars after receiving a warning from a defective equipment detector. All of these activities require walking along the train, and in this case the train will be parked. Thus, the crew need only act when specifically notified. Moreover, it should have reasonable warning about how long a delay it will be and when they will need to restart. Moreover, the Scenario incorrectly assumes that all the locomotives must be shut down, where in this case, assuming the train is not unattended, only the trailing locomotives need to be shut down.

4. **Scenario 4:** “Assume a distributed power train in a yard. A yard crew would typically establish the link between the remote locomotives and the lead locomotive. But assume that the road crew has not yet arrived. Indeed, for any number of reasons, the road crew might be delayed in arriving for more than 30 minutes. If all of the locomotives were shut down, the unnecessary delays and potential safety risks discussed above also would be experienced in the yard.” Reilly at 14.

Response: The distributed power trains operating in the Basin are largely high priority intermodal trains. Thus, the trains should not be waiting for crews because, as Mr. Reilly and Ms. Farmer explained, this is sensitive just-in-time traffic. And while Mr. Reilly posits that there are “any number of reasons” a road crew might be delayed, the problem here is not Rule 3502. Regardless, even if the units needed to be shut down, the easiest thing to do would be to wait to establish the distributed power link. This way the locomotives would work in AESS mode (because virtually all of the road locomotives for distributed power trains, such as ES44DCs, are equipped with AESS). When the train crew finally arrives it can establish the link (a simple procedure) as described by Messrs. Johnson and Beall in their Verified Statement of March 28, 2014 at 19. Once again, the initial delay is not caused by Rule 3502, nor must the departure be delayed by Rule 3502. Also, the Scenario assumes that the yard crew would have to walk the entire length of the train to restart the engines. There is no reason why, if large distances are to be covered, the crew could not use a shuttle vehicle to accomplish this task. Finally, the activity here is no more of safety risk than many of the activities that the crews perform, such as a set-out bad order cars, switching cars at industry, or making up a train.

5. **Scenario 5:** “Assume a train on the main line track where there is a grade. The crew needs to leave the train (for example to comply with hours of service regulations), but another crew has not yet arrived. Under BNSF’s rules, the lead locomotive would remain running to ensure that adequate brake pipe pressure will be maintained. Hand brakes would also be set on the locomotives and on a certain number of the cars to ensure that the train is secured. It is much better to have both the air brakes and the hand brakes set in this circumstance. But the SCAQMD rules would require that the lead locomotive be shut down after 30 minutes. The result would be that the train is secured only by the hand brakes. But hand brakes could be tampered with, creating a serious risk of a runaway train. Having a maintained brake pipe with the air brakes set on an unattended train, in parallel with handbrakes, would mitigate this concern.” Reilly at 14-15.

Response: Mr. Reilly’s scenario is absurd. First, why would a crew purposely stop the train on a grade? Any crew, recognizing that it needs to stop in order to comply with the hours of service rules, would pick a location just short of a grade. Regardless, even if the train has to stop on the grade and set and handbrakes, etc., Mr. Reilly again assumes that the crew must immediately shut down all of the locomotives. This is incorrect. The crew need only shut down the trailing locomotives when a delay is specifically reported by the dispatcher. Here, the crew need not shut down the lead locomotive because even though the crew’s shift has expired they cannot “leave” the train in this scenario. Instead, the crew must wait around for a crew van to pick them up, and normally the relief crew will be on the van that is picking up the expiring crew. So the train is not yet unattended, and the lead locomotive could stay on. If for some reasons the relief crew was not going to arrive for a long period, and the expiring crew were picked-up, shutting down the locomotives is not unsafe. The whole purpose of setting the hand brakes is that you cannot assume that an unattended locomotive will maintain the air brake pressure. Mr. Reilly’s fantasy of someone tampering with the handbrakes is highly unlikely as setting the hand brakes on cars is not a simple task for an amateur. . Besides, even if you left the locomotives on, the train could be tampered with just as easily as if the locomotives were shut off. Indeed, leaving the locomotives running and unattended would invite even more nefarious activities if the train were taken and driven by unauthorized person (i.e., the person could crash the train at high speed). Once again, Rule 3502 did not cause the delay in a relief crew arriving, and compliance with the Rule is no more of a risk than leaving the train unattended with the engines on.

6. **Scenario 6:** “Assume a train on the main line that has entered a siding because of congestion that is expected to produce a long delay. Once again,

assume that the crew must leave the train before a replacement crew is available. The SCAQMD rules would require that all locomotives be shut down, raising the safety concerns I described above. Also assume that the delay lasts more than 4 hours, and brake pipe pressures do not remain at the required levels. The new crew would now have to inspect the train and perform a new air brake test. The new test may find that the shut-down and start-up of the locomotives and restoration of air brake pressure did not work on one or some of the cars. (This is not such a remote possibility since the possibility of having a failure after restoring air pressure is the entire reason for having to perform the test in the first place.) The failed car or cars would then need to be set out, requiring a substantial additional delay in getting the train back into service. Another possibility is that a locomotive may not restart due to many possible causes, including loss of battery power needed to produce a successful restart.” Reilly at 15.

Response: Once again, Mr. Reilly’s scenario is puzzling. Under his twisted example, the crew leaves the locomotive, but there is no relief crew in tow. In other words, the railroad has failed to properly schedule the crew pick-up/drop-off, and now the train is sitting on a siding for more than four hours, but still the crew has not arrived. Of course, if they had arrived before four hours they could have started the lead locomotive. Instead, this massive extended delay, which was not caused by Rule 3502, is about to clear, but the railroad has not bothered to get the crew there with enough time to check the train recognizing that an air brake test is necessary. Thus, the crew has to perform an air brake check, and now it might have to set out some cars, even though the train consist passed the air brake test when it was made up in the first place. Mr. Reilly blames Rule 3502 for adding to such an unlikely delay. This is nonsensical. Moreover, this highly unlikely circumstance would only occur when no crew was brought to the train within four hours **and** the locomotives are not AESS-equipped. In short, here the railroads assert the unlimited right to idle for more than four hours in all cases when the train is left unattended, with no good business reason.

7. **Scenario 7:** “Assume a train that has been constructed in the yard and is waiting for fuel, maintenance or another servicing requirement. The crew leaves the train, but the crew remains in the vicinity of the train such that they could readily control the brake system. This example illustrates the difference between FRA’s definition of “unattended equipment” and the SCAQMD’s definition of an “unattended” locomotive. Under the SCAQMD rules, the locomotives would be considered unattended because no crew member is physically on board a locomotive, and all locomotives would have to be shut down. Under BNSF’s rules, the lead locomotive would remain idling to maintain the air brakes, and the hand brakes would

not need to be set because of the crew's ability to readily control the brake system. However, if the lead locomotive must be shut down as required by the SCAQMD rules, the hand brakes must be set on a certain number of cars. In some cases, setting the hand brakes on a car can be difficult. For example, on some grain and intermodal trains, the employee must climb a ladder 10-15 feet up and exert pressure to secure the hand brake while holding onto the side of the railcar. Weather could affect the difficulty of the maneuver." Reilly at 15-16.

Response: Mr. Reilly's scenario is spurious. All that is needed to comply with the Rule is for one crew member to stay on the train, or at least enter the cab once every 30 minutes while queuing. Thus, there would be no need to go through all the steps that Mr. Reilly describes. I also note that Mr. Reilly's example is flawed from an operational perspective. Mr. Reilly says that the train has just been "constructed in the yard" and it is waiting for "fueling, maintenance or another servicing requirement." Why is a newly constructed train awaiting fueling? In constructing a train, the normal procedure I would use would have the locomotives already fueled since they often have to run light to reach a yard fueling facility. Mr. Reilly does not specify what servicing or maintenance would be required on a newly constructed train, but again that is irrelevant because the train is not unattended and therefore not subject to the idling limits.

8. **Scenario 8:** "Occasionally trains in Southern California need helper service. Assume that the train needing helper service has a crew in the lead locomotive, but the train is delayed. The helper locomotive has its own crew. The SCAQMD rules would define the helper as a trailing locomotive, and it would therefore have to shut down if the delay exceeds 30 minutes. However, the locomotive must operate to maintain heat and air conditioning in the cab. An FRA regulation requires occupied locomotive cabs to be heated to a certain temperature. 49 C.F.R. § 229.119(d)." Reilly at 16.

Response: Mr. Reilly misreads the Rule. The helper locomotive is not a trailing locomotive because it is independently manned and controlled by the operator. Moreover, the helper locomotive is not an unattended locomotive. Crew safety and comfort in an occupied locomotive would take precedence even if the locomotive were considered a trailing unit. Thus, it does not need to be shut down.

D. Reprogramming AESS Systems

UP mistakenly interprets my earlier verified statement in this proceeding. Specifically, UP's witnesses Messrs. Hunt and Iden incorrectly assumed that I stated that the railroads could, with the "flip of a switch," change the AESS shut down time from 15 to 30 minutes. Hunt at 4-5; Iden at 5-6. What I intended was that the railroad could either comply with the Rule by shutting down the locomotives in 30 minutes or equip the locomotives with AESS devices that automatically shut down in 15 minutes. Messrs. Iden and Hunt spend a number of pages rebutting a point that I did not make.

III. Compliance with Rule 3501 is Feasible

In my initial verified statement, I explained that the reporting requirements for Rule 3501 were not onerous or disruptive, particularly in the context of the mountains of data that the railroads collect. Reistrup at 5-8. While Messrs. Johnson and Beall address the details of the railroads' concerns over Rule 3501, I respond below to two general general criticisms raised by the railroads: crew distraction and the burden of reporting.

Mr. Reilly suggests that the crews will be distracted by the need to constantly monitor the 30 minute time clock in order to report an idling event under Rule 3501. He suggests that this constant vigilance will distract the employees and endanger the safety of the crews. Interestingly, while UP is concerned that Rule 3501 is a burden, it raises none of the same safety concerns.

Rule 3501 should not be the source of crew distraction. First, as I explained above, the Rule does not require the crew to monitor the idle time on a constant basis. There are only limited circumstances where the locomotive must be shut down, and there are few locomotives to which the Rule even applies. Thus, the crews need not be distracted. On the off chance that an idling event arises, the crew will have ample time to record and report such an event because it only arises in the case of a railroad-caused delay that has already held up operations. In other words, the crew will be on a train – waiting. They can write down the event without jeopardizing safety. Finally, the crew can always report the event once they have exited the locomotive. There is no requirement for contemporaneous reporting.

As for the burden of reporting, as I indicated in my earlier statement, the railroads collect a massive amount of data about every activity on the railroad. The railroads have been particularly aggressive about tracking the performance of crews and locomotives. Thus, the railroads have no problem tracking data when it suits their needs. They can do so here as well. To be sure, some initial work may be needed to get the reporting automated, but after that point, the burden should be minimal, especially since the number of events ought to be minimal. Messrs. Johnson and Beall address this issue in more detail.

CONCLUSION

As I noted in my initial verified statement, the District has a clear interest in improving the historically problematic air quality of the Basin, and the railroads, as a big part of that community, should play a part. Rules 3501 and 3502 are, as I have explained,

not burdensome. Rule 3502 is consistent with good operating practices and not very different from what the railroads are already doing today. Finally, Rule 3501's reporting requirements are a critical tool for the District to understand how locomotives are impacting the Basin's air, and the data collection requirements represent an inconsequential extension and/or repackaging of data that the railroads already collect. Thus, in my opinion, the Rules will not interfere with the railroads' operations.

VERIFICATION

I, Paul H. Reistrup, declare under penalty of perjury, that the foregoing Statement is true and correct, and that I am qualified and authorized to file this Statement.


Paul H. Reistrup

Executed on: April 14, 2014

**Reply Verified Statement of
Thomas E. Johnson and Richard C. Beall**

We are Thomas E. Johnson and Richard C. Beall. Together we have over 70 years of locomotive-related experience in a variety of disciplines. Our relevant experience was detailed in our verified statement of March 28, 2014. The South Coast Air Quality Management District (“District”) has asked us to respond to the verified statements of the railroads’ witnesses Reilly, Hunt and Iden in this proceeding, specifically the reporting requirements of Rule 3501. As we explained in our initial verified statement, there are no extraordinary or disruptive measures that locomotive engineers would need to take to comply with Rule 3502. Likewise, as we explain here, compliance with Rule 3501 is not a burden on railroad operations.

I. Rule 3501

Rule 3501 has a very straightforward reporting requirement. When operating in the Los Angeles Basin, BNSF and UP must report idling events that exceed 30 minutes. However, the report only requires five known data points: (i) the Railroad’s name; (ii) the locomotive’s identifying number; (iii) the location; (iv) date and time of the event; (v) and the event’s duration. Finally, if the event exceeds two hours, a short explanation of the delay must be provided.

As Mr. Reistrup has previously explained and reemphasizes in his reply verified statement filed today, the railroads collect a large volume of data covering all aspects of railroad operations. Reistrup at 5-8; Reistrup Reply at 18-19. We detail below that Rule 3501 data is already collected by the railroads (except for the explanation if needed). And even if the railroads did not collect such data, a simple computer entry or paper form could be devised to record such events. The entry could be performed in less than two minutes at the end of a shift, even if automated systems were not used.

The railroads have differing arguments with respect to the burdens of the Rule. BNSF argues the general burden of having to record anything, as well as concerns about safety due to crew distraction. Mr. Reistrup addresses in detail that BNSF’s crew distraction complaint is without merit. Reistrup Reply at 18-19. Mr. Beall, who has operated locomotives for more than 30 years, agrees with Mr. Reistrup that the crew need not be distracted by this minimal activity, especially since any necessary recording could be completed at the end of a shift. As for BNSF’s general burden argument, the record keeping involved here is very minimal as we described above.

UP, on the other hand, does not raise any safety concerns over the data collection. Instead, UP argues that the reporting requirements are so onerous that they would be forced to place anti-idling devices on every locomotive. Iden at 10. UP’s onerous claims hang on its theory that

they must manually record every idling event that exceeds 30 minutes and that they have no such system in place to record such events. Hunt at 4. In addition, UP argues that the locomotive event recorders, which do keep track of such idling events, are not adequate because the data provided by such recorders is not reliable enough for this purpose (e.g., a trailing locomotive in idle may not adequately describe what is actually occurring with the engine). Iden at 9. UP's arguments are without merit for the reasons we describe below.

Initially, we note that having to record an idling event is not so onerous that the railroad has no option but to install an AESS device on every locomotive. Even if all the reporting had to be made by hand, the crew need only record idling events occurring in the Basin. This is, in Mr. Beall's experience, no different than all the other paperwork that a crew must keep track of during a shift. Second, we both are familiar with the computerized systems that railroads use for recording almost every activity on the railroad, including train movements, car movements, crew calling, train handling, MOW and other similar tracking systems. The fact that UP does not currently have a system for such reporting is no impediment to carrying out that activity. Simply put, a small amount of computer database set-up by the IT department could easily allow for the simple tracking that Rule 3501 requires. Likewise, the periodic reports that the railroad need to provide to the District could easily be produced by designing a report that the railroad could run whenever necessary. This is no different from the thousands of other reports that the railroads automatically generate from their massive data storehouses.

The locomotive event recorder shortcomings identified by Mr. Iden are also misleading. First, Mr. Iden suggests that the data is only available for a limited time and such data is routinely overwritten. Iden at 8. However, Mr. Iden conveniently ignores the fact that virtually all event recorders are equipped with memory cards capable of recording weeks of data. For example, Mr. Johnson was involved in an STB proceeding (TMPA v. BNSF) in which long periods of event recorder data were tracked, and that was more than 10 years ago. Today, the railroads have developed sophisticated methods for regularly downloading such event recorder data because it is a critical component of the locomotive fuel conservation data tracking systems, as well as the operator evaluation programs that each railroad implements.

Second, Mr. Iden's conclusion that the event recorder data is inadequate is again misleading. Today's locomotive event recorders record a large volume of data, which are described by the FRA's regulations:

- (i) Train speed;
- (ii) Selected direction of motion;
- (iii) Time;

(iv) Distance;

(v) Throttle position;

(vi) Applications and operations of the train automatic air brake, including emergency applications. The system shall record, or provide a means of determining, that a brake application or release resulted from manipulation of brake controls at the position normally occupied by the locomotive engineer. In the case of a brake application or release that is responsive to a command originating from or executed by an on-board computer (e.g., electronic braking system controller, locomotive electronic control system, or train control computer), the system shall record, or provide a means of determining, the involvement of any such computer;

(vii) Applications and operations of the independent brake, if so equipped;

(viii) Applications and operations of the dynamic brake, if so equipped;

(ix) Cab signal aspect(s), if so equipped and in use;

(x) Emergency brake application(s);

(xi) Wheel slip/slide alarm activation (with a property-specific minimum duration);

(xii) Lead locomotive headlight activation switch on/off;

(xiii) Lead locomotive auxiliary lights activation switch on/off;

(xiv) Horn control handle activation;

(xv) Locomotive number;

(xvi) Locomotive position in consist (lead or trail);

(xvii) Tractive effort;

(xviii) Brakes apply summary train line;

(xix) Brakes released summary train line;

(xx) Cruise control on/off, if so equipped and used; and

(xxi) Safety-critical train control data routed to the locomotive engineer's display with which the engineer is required to comply, specifically including text messages conveying mandatory directives and maximum authorized speed. The format, content, and proposed duration for retention of such data shall be specified in the Product Safety Plan or PTC Safety Plan submitted

for the train control system under subparts H or I, respectively, of part 236 of this chapter, subject to FRA approval under this paragraph. If it can be calibrated against other data required by this part, such train control data may, at the election of the railroad, be retained in a separate certified crashworthy memory module.

In addition, to the FRA mandated information, railroads have requested, and EMD & GE have provided, additional custom data collection as well. The custom data requests have resulted in an additional 60-80 channels that are chosen by each railroad and reported on an event recorder. Even during my career with GE, I was charged with coming up with 24 channels just for diesel engine data, and the list has only grown over the years. Also, in an effort to measure and improve reliability the railroads and GE/EMD have greatly expanded the number of variables recorded in the fault logs and data packs to measure reliability by calculating measurements like MDBF (Mean Days between Failures) and locomotive availability. These measurements are even detailed in locomotive purchase and lease agreements.

It is significant that the basic data required under Rule 3501 is captured by the event recorder. However, Mr. Iden suggests that this data alone is insufficient. Iden at 8-10. Mr. Iden is technically correct. The data, unanalyzed, is not immediately useable. However, the data becomes far more useful once it is queried. By using "tag points" to determine time spans to be captured in the analysis, one can setup the event recorder software to gather any subset of data from the huge amount that is being gathered by the locomotive's on board computer. These data are stored in the event recorder downloads, fault logs, data packs and other various systems in the locomotive's on-board computer. Messrs. Johnson and Beall have performed many queries from hundreds of event recorder downloads for a variety of analyses.

The railroads perform many similar analyses. For example, they use such data to compare the locomotive performance versus contract reliability requirements with the locomotive manufacturers and to measure and reward all of their engineers for fuel saving actions on their known routes, comparing each locomotive engineer with each other. Once set up, the Rule 3501 analyses could be gathered automatically.

Mr. Iden also ignores that the railroads can combine the event recorder's data with other railroad-collected data if such were needed. For example, the railroads have train event data that identifies the location of trains almost anywhere along the route of movement – this can be particularly useful when tracking foreign locomotives or matching up the event recorder data to actual movements. Likewise, most locomotives include GPS transmitters that are tracked by the railroad – Mr. Iden's cleverly notes that some locomotive event recorders do not track GPS data (Iden at 8), but he ignores that the railroads already track such data through GPS and other data collection means.

Mr. Iden's concerns over the ability of the railroads to comply with Rule 3501's very modest reporting requirements are also belied by the level of sophistication that the railroads can apply to locomotive activity tracking when it suits their needs. For example, according to a BNSF data management consultant, back in 2004 BNSF already had the ability to:

sav[e] money by eliminating the overpayment of taxes in California. BNSF must pay taxes on new locomotives. The tax is based on time spent in the state during the first 90 days of operation. By tracking the movement of each piece of equipment, BNSF can accurately substantiate sales tax exemption. Previously, BNSF substantiated exemptions through intensive, manual processes that only provided estimated results. Tax is assessed at approximately eight percent of the equipment's value, so a \$1.5 million locomotive costs \$120,000 in taxes.¹

Surely, the railroads can manage to comply with a reporting requirement that tracks only a few data points.

Mr. Iden also proposes that a few minor operational issues with event recorders will make it impossible for the railroads to fully comply with Rule 3501. Iden at 9-10. For example, Mr. Iden suggests that the reporting might be inaccurate because, for example, a locomotive could be set to notch 2 but the throttle could be set to "isolate," which means the locomotive would not be running. Iden at 10. Besides positing a somewhat absurd example, Mr. Iden ignores that the event recorder is capturing both train speed and tractive effort. Thus, if the locomotive were not actually "doing anything" the event recorder data would point this out. Likewise, Mr. Iden notes that the locomotive software that UP uses might shift the operating load to only certain locomotives thereby conserving fuel on other locomotives on the consist, but the event recorder might not differentiate between the locomotives (i.e., it might not show that one locomotive was idling). Of course, Mr. Iden's example assumes the train is moving. There is no need to record that incident in the first place.

In our opinion, Rule 3501 imposes a very modest reporting requirement. Moreover, the railroads are fully capable of implementing the recording procedures and data reporting necessary to comply with Rule 3501. Once the reporting capability is put in place, it should be a simple matter for the railroads to provide the requested data to the District.

II. Rule 3502

We addressed the specific procedures that are required to comply with Rule 3502 in our March 28, 2014 verified statement. As we concluded, Rule 3502 is not a burden on railroad

¹ <http://www.teradata.com/case-studies/Burlington-Northern-Santa-Fe-eb3082/?type=cs>.

operations, and nothing in the verified statements of Messrs. Riley and Hunt changes our initial conclusions. We note that Mr. Reistrup has provided a detailed response to Riley and Hunt (Reistrup Reply at 11-17), and we join in the specifics of his Reply as well as his conclusion that complying with Rule 3502 is straightforward and not burdensome – particularly because so many of the locomotives operating in the area are already covered by the safe harbor provision of Rule 3502 (i.e., they have an AESS system installed).

VERIFICATION

I, Thomas E. Johnson, declare under penalty of perjury, that the foregoing Statement is true and correct, and that I am qualified and authorized to file this Statement.

A handwritten signature in cursive script that reads "Thomas E. Johnson".

Thomas E. Johnson

Executed on: April 14, 2014

VERIFICATION

I, Richard C. Beall, declare under penalty of perjury, that the foregoing Statement is true and correct, and that I am qualified and authorized to file this Statement.


Richard C. Beall

Executed on: April 14, 2014

CERTIFICATE OF SERVICE

I hereby certify that on this 14th day of April, 2014, I served copies of the forgoing Reply Comments of the South Coast Air Quality Management District on all known parties of record to this proceeding by first class U.S. Mail, postage prepaid.

A handwritten signature in black ink, appearing to read 'Kelvin J. Dowd', is written over a horizontal line.

Kelvin J. Dowd

