



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

JAN 24 2014

235353
FD 35803

OFFICE OF THE
REGIONAL ADMINISTRATOR

Ms. Cynthia T. Brown
Chief, Section of Administration, Office of Proceedings
Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

ENTERED
Office of Proceedings
January 24, 2014
Part of
Public Record

Dear Ms. Brown:

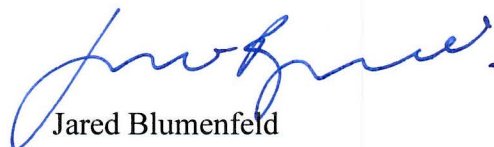
The United Environmental Protection Agency (EPA) Region IX is forwarding the enclosed petition requesting that the Surface Transportation Board (STB) institute a declaratory order proceeding. The purpose of this petition is to address whether two rules concerning locomotive idling issued by the South Coast Air Quality Management District (SCAQMD) would be preempted by the Interstate Commerce Commission Termination Act, if those rules were approved into the California State Implementation Plan under the Clean Air Act.

Communities adjacent to the rail yards are deeply concerned about the health impacts from idling locomotives. We have included their testimonials along with all the correspondence from other stakeholders.

We respectfully request an expedited proceeding due to a statutory deadline of February 28, 2014 for EPA to take action on the SCAQMD rules. In addition, pursuant to 49 CFR §1002.2(e)(1), we request waiver of the applicable filing fee.

Thank you for considering this petition to institute a declaratory order proceeding. Please contact Nina Spiegelman of our Office of Regional Counsel, at (415) 972-3899, or Elizabeth Adams, Deputy Director of the Air Division at (415) 972-3183, if you have any questions or require any additional information.

Sincerely,



Jared Blumenfeld

Enclosures

- (1) Petition for a Declaratory Order
- (2) Appendix 1 South Coast AQMD Locomotive Idling Rules 3501 and 3502 Correspondence

cc: See next page **FILING FEE WAIVED**

cc: Barry Wallerstein, South Coast Air Quality Management District
Richard Corey, California Air Resources Board
Michael Rush, Association of American Railroads
Melissa Hagan, Union Pacific Railroad Company
Russell J. Light, BNSF Railway Company
Gideon Kracov, East Yard Communities for Environmental Justice

FILING FEE WAIVED

**Docket # FD 35803, United States Environmental Protection
Agency—Petition for Declaratory Order**

**DOCKET #35803, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY-
PETITION FOR DECLATORY ORDER**

Pursuant to 5 U.S.C. § 554(e) and 49 U.S.C. § 721, the United States Environmental Protection Agency (EPA), Region IX, hereby petitions the Surface Transportation Board (STB) to institute a declaratory order proceeding. The purpose of this petition is to address whether two rules concerning locomotive idling issued by the South Coast Air Quality Management District (SCAQMD or “the District”) would be preempted by the Interstate Commerce Commission Termination Act (ICCTA), 49 U.S.C. § 10101 et seq., if those rules were approved into the California State Implementation Plan (SIP), under the Clean Air Act (CAA), 42 U.S.C. § 7401 et seq. As explained further below, EPA must decide whether to approve these rules into the California SIP. In order to make this decision, EPA seeks guidance from the STB regarding whether the State would be prohibited under ICCTA from carrying out the Rules, if they were approved into the SIP.

Due to a statutory deadline of February 28, 2014 for EPA to take action on the SCAQMD rules, EPA respectfully requests expedited handling of this petition.

BACKGROUND

The factual and legal background for this petition is set out in detail in a series of attachments to this petition and summarized briefly here.

Under CAA section 109, 42 U.S.C. § 7409, EPA sets National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. States and local agencies are then required to develop SIPs to implement these NAAQS, including specific measures for each area designated nonattainment for a NAAQS. See generally CAA Title I, section 110, 42 U.S.C. § 7410, and Part D, 42 U.S.C. § 7501, et seq. These SIPs are submitted to EPA for approval under CAA section 110. If approved by EPA, SIPs “have the force and effect of federal law.” *Safe Air for Everyone v. EPA*, 488 F.3d 1088, 1091 (9th Cir. 2007).

The South Coast Air Basin is an extreme ozone nonattainment area for the 8-hour and 1-hour ozone NAAQS, as well as a nonattainment area for the fine particulate (PM_{2.5}) NAAQS. Under California State law, SCAQMD has authority to issue regulations governing certain types of air pollution sources and to propose air quality management plans for the South Coast Air Basin of California. Cal. Health & Safety Code §§ 40001, 40460. If approved by the California Air Resources Board (CARB), these plans become part of the statewide air quality management plan. CARB then submits the statewide air quality management plan to the EPA, as part of California's statewide SIP under the CAA. *Id.* § 40460(d); 42 U.S.C. § 7410.

The CAA also provides EPA with authority to set nationally applicable standards for emissions from new locomotives and new engines used in locomotives. CAA section 213(a)(5), 42 U.S.C. § 7547(a)(5). EPA has found that diesel engines, including locomotive engines, generate significant emissions of fine PM_{2.5} and nitrogen oxides (NO_x) that contribute to nonattainment of the NAAQS for PM_{2.5} and ozone.¹ Accordingly, EPA has promulgated emission standards that apply to newly manufactured and remanufactured locomotives.²

Additional measures have also been implemented to address locomotive emissions in California. In particular, CARB has entered into two Memoranda of Understanding (MOUs) with the Burlington Northern and Santa Fe Railway Company (BNSF) and Union Pacific Railroad Company (UP).³ A 1998 MOU provided for early introduction of clean locomotives in the South Coast Air Basin. A 2005 MOU included idling limits, installation of anti-idling devices on hundreds of California-based locomotives, early use of ultra-low sulfur diesel fuel, and preparation of health risk assessments for major rail yards.

In 2006, the SCAQMD enacted two rules concerning locomotive idling: Rules 3501 (Recordkeeping for Locomotive Idling) and 3502 (Minimization of Emissions from Locomotive Idling) (collectively “the Rules”).⁴ The Rules apply to Class I (as classified by the STB in 49 CFR Part 1201 Subpart A) freight railroads and switching and terminal freight railroads that operate locomotives in the South Coast Air Basin.

The stated purpose of Rule 3501 “is to record idling events to identify opportunities for reducing idling emissions and to assist in quantifying idling emissions.” Rule 3501 requires railroad operators to record specific, detailed information for certain incidents of idling as defined by the Rule, and to report those idling events to the District on a weekly and an annual basis. Instead of recording idling events, a railroad may elect to implement an approved Alternative Compliance Plan that provides a schedule for installation of anti-idling devices or use of alternative technologies on the railroad’s fleet.

Rule 3502 (Minimization of Emissions from Locomotive Idling) requires the railroads to limit idling of unattended locomotives to 30 minutes or less in certain circumstances. Alternatively, the railroads can equip their locomotives with anti-idling devices, or submit an emissions equivalency plan to the District for approval. The Rule also provide specific exemptions from the idling limitations, which are intended to ensure that shutting down a locomotive would not interfere with railroad operations. Both rules provide penalties for noncompliance.

Subsequently, the Association of American Railroads, BNSF Railway Company, and Union Pacific Railroad Company (collectively, “the Railroads”) challenged the Rules in the U.S. District Court for the District of California. Among other arguments, the Railroads argued that the Rules are preempted under ICCTA’s express preemption provision, 49 U.S.C. § 10501(b). The district court agreed and entered a permanent injunction against SCAQMD and its governing

¹ See 73 Fed. Reg. 37096, 37097 (June 30, 2008).

² See 63 Fed. Reg. 18978 (April 16, 1998); 73 Fed. Reg. 37096 (June 30, 2008).

³ The MOUs are available at: <http://www.arb.ca.gov/railyard/railyard.htm>.

⁴ Please see the August 2008 SIP Submittal from SCAQMD for the text of the rules.

board from enforcing the rules. *Association of American Railroads v. SCAQMD*, 2007 WL 2439499 (C.D.Cal., April 30, 2007).

SCAQMD appealed to the U.S. Court of Appeals for the Ninth Circuit, which affirmed the district court's decision in relation to ICCTA preemption. *Association of American Railroads v. South Coast Air Quality Management Dist.*, 622 F.3d 1094 (9th Cir. 2010). Citing to previous STB and other Circuit Court decisions, the Court explained that a different preemption standard applies to federal laws, as opposed to state and local laws: "If an apparent conflict exists between ICCTA and a *federal* law, then the courts must strive to harmonize the two laws, giving effect to both laws if possible." *Id.* at 1097. By contrast, no such harmonization is required for state and local laws that conflict with ICCTA. Such laws are preempted by ICCTA, unless "they are laws of general applicability that do not unreasonably interfere with interstate commerce." *Id.*

The Court noted that:

The STB has explained that this system preserves a role for state and local agencies in the environmental regulation of railroads in at least two ways. First, to the extent that state and local agencies promulgate EPA-approved statewide plans under federal environmental laws (such as "statewide implementation plans" under the Clean Air Act), ICCTA generally does not preempt those regulations because it is possible to harmonize ICCTA with those federally recognized regulations. Second, to the extent that state and local agencies enforce their generally applicable regulations in a way that does not unreasonably burden railroad activity, ICCTA does not preempt such regulation, despite the fact that the regulation does not have the force and effect of federal law.

Id. (internal citations omitted).

With respect to the SCAQMD Rules, the Court found that:

Because the District's rules have not become a part of California's EPA-approved state implementation plan, they do not have the force and effect of federal law, even if they might in the future. Accordingly, there is no authority for the courts to harmonize the District's rules with ICCTA.

Because the District's rules have the force and effect of *state* law, ICCTA preempts those rules unless they are rules of general applicability that do not unreasonably burden railroad activity. The District's rules plainly cannot meet that test.

Id. at 1098.

Following the Ninth Circuit's decision, SCAQMD submitted the Rules to CARB, which, in turn submitted the rules to EPA for approval into the statewide SIP. SCAQMD has also provided several letters to EPA explaining its views regarding whether EPA may allow the Rules to be added to the SIP, and the effect adding the Rules to the SIP would have on ICCTA preemption of the Rules. SCAQMD believes that the Rules would not be preempted under ICCTA if they were

added to the SIP. The Railroads have also sent letters to EPA, which oppose adding the Rules to the SIP. Pursuant to CAA section 110(k), EPA is required to act on this submittal by February 28, 2014. Due to this statutory deadline, EPA respectfully requests an expedited handling of this petition.

ISSUE PRESENTED

EPA is required to decide whether to approve the Rules into the SIP. In making this decision, EPA must determine whether the Rules, as submitted, comply with CAA section 110(a)(2)(E)(i), which requires all SIPs to provide: “. . . necessary assurances that the State . . . is not prohibited by any provision of Federal or State law from carrying out such implementation plan or portion thereof) . . .” 42 U.S.C. § 7410(a)(2)(E)(i).

In order to evaluate whether the Rules comply with this requirement, EPA seeks a declaratory order from the STB addressing whether the Rules, if approved by EPA into the SIP, would be preempted by ICCTA.

ADDITIONAL INFORMATION AND PARTIES

As noted above, both SCAQMD and the Railroads have submitted materials to EPA addressing whether the Rules would be preempted by ICCTA. EPA has also received correspondence from representatives of the Federal Railroad Administration (FRA) and East Yard Communities for Environmental Justice (EYCEJ), which represents individuals who live adjacent to the railroads. We have attached these and other relevant materials for the STB’s consideration. In particular, we wish to draw the Board’s attention to the following items:

- Letter from Gideon Kracov, Counsel for EYCEJ, to Jared Blumenfeld, Regional Administrator, EPA Region 9 (January 7, 2013), including attachments.
- Letter from Barbara Baird, Chief Deputy Counsel, SCAQMD, to Jared Blumenfeld, Regional Administrator, EPA Region 9 (August 7, 2013), including enclosed memorandum and attachments.
- Letter from Joseph C. Szabo, Administrator, Federal Railroad Administration, to Jared Blumenfeld, Regional Administrator, EPA Region 9 (September 27, 2013).
- Letter from Michael J. Rush, Associate General Counsel, Association of American Railroads, et al., to Jared Blumenfeld, Regional Administrator, EPA Region 9 (October 1, 2013), including attachments.

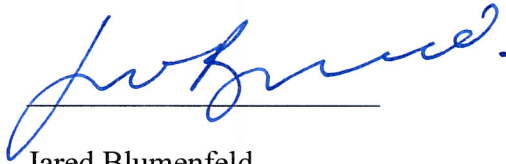
EPA expects that the Railroads, SCAQMD, FRA and EYCEJ may wish to participate in any proceeding resulting from this petition.

CONCLUSION

EPA respectfully requests that the STB grant this petition, and issue a declaratory order addressing whether the Rules, if approved by EPA into the California SIP, would be preempted by ICCTA.

1-24-14

Dated:

A handwritten signature in blue ink, appearing to read "J. Blumenfeld", written over a horizontal line.

Jared Blumenfeld
EPA Regional Administrator, Region 9

Appendix 1

South Coast AQMD Locomotive Idling Rules 3501 and 3502 Correspondence

2012-08-30 CARB SIP Submittal: State Implementation Plan revisions of South Coast Air Quality Management District Rule 3501, Recordkeeping for Locomotive Idling, and Rule 3502, Minimization of Emissions from Locomotive Idling (includes, CARB Executive Order S-12-007 and 12 attachments: 1a-1m supporting documents).

- 1a. CARB SIP Completeness Checklist Form Completed by SCAQMD for Rules 3501 and 3502
- 1b. CARB Rule Evaluation Form Completed by SCAQMD Rules 3501 and 3502
- 1c. SCAQMD 3501 and 3502 Resolution NO. 06-6, February 3, 2006
- 1d. Clean Copy of SCAQMD Rule 3501, adopted February 3, 2006
- 1e. Clean Copy of SCAQMD Rule 3502, adopted February 3, 2006
- 1f. SCAQMD Rules 3501 and 3502 Proof of Publication, January 26, 2006
- 1g. SCAQMD Rule 3501 Staff Report, dated February 2006
- 1h. SCAQMD Rule 3502 Staff Report, dated February 2006
- 1i. SCAQMD Office of District Counsel: ICCTA Does Not Preempt SCAQMD Rules 3501 and 3502, dated November 2, 2011
- 1j. SCAQMD Office of District Counsel: State Law Authority revision to the November 2, 2011 Memorandum (dated March 28, 2012)
- 1k. SCAQMD Reference Rules 216, 221, and 306
- 1l. SCAQMD SIP Submittal (Rules 3501 and 3502) to CARB, dated, November 2, 2011
- 1m. SCAQMD Supplemental SIP Submission letter to CARB, dated June 28, 2012
- 1n. SCAQMD Supplemental SIP Submission letter to CARB, dated August 9, 2012

South Coast AQMD Locomotive Idling Rules 3501 and 3502 Correspondence

- 2012-09-12** Letter from AAR, BNSF and UP to EPA re Request for Prompt EPA Determination of Incompleteness
- 2012-09-14** Letter from AAR, BNSF and UP to EPA Supplement to the 2012-09-12 Letter (includes attachments)
- 2012-10-11** Letter from AAR, BNSF and UP to EPA re Supplements September 12 and 14 letters
- 2012-10-19** Letter from SCAQMD to EPA re response to September 12 and 13, 2012
- 2012-11-19** Letter from AAR, BNSF and UP to EPA re Response to Oct 19 Letter from SCAQMD
- 2013-01-07** Letter from Gideon Kracov on behalf of EYCEJ to EPA in Support to Approve Rule 3501 and 3502
- 2013-08-07** Letter from SCAQMD to EPA re Follow up from call with EPA 1 of 3
- 2013-08-07** Letter from SCAQMD to EPA re Follow up from call with EPA 2 of 3 (19 page MEMO)
- 2013-08-07** Letter from SCAQMD to EPA re Follow up from call with EPA 3 of 3
- 2013-09-27** Letter from FRA to EPA re Locomotive Safety and Operations
- 2013-10-1** Letter from AAR, BNSF and UP to EPA re SCAQMD Submittal regarding incorporation of Rule 3501 and 3502 into SIP
- 2013-11-08** Letter from Gideon Kracov on behalf of EYCEJ to EPA re Follow up Letter dated Jan 7 2013
- 2013-11-14** Letter from SCAQMD to EPA re Response to the FRA Letter dated Sep 27 2013
- 2013-11-15** Fax from SCAQMD to EPA forwarding November 13, 2013 letter from Raillex, Inc to Barbara Baird

Appendix 1

South Coast AQMD Locomotive Idling Rules 3501 and 3502 Correspondence

2012-08-30 CARB SIP Submittal: State Implementation Plan revisions of South Coast Air Quality Management District Rule 3501, Recordkeeping for Locomotive Idling, and Rule 3502, Minimization of Emissions from Locomotive Idling (includes, CARB Executive Order S-12-007 and 12 attachments: 1a-1m supporting documents).

- 1a. CARB SIP Completeness Checklist Form Completed by SCAQMD for Rules 3501 and 3502
- 1b. CARB Rule Evaluation Form Completed by SCAQMD Rules 3501 and 3502
- 1c. SCAQMD 3501 and 3502 Resolution NO. 06-6, February 3, 2006
- 1d. Clean Copy of SCAQMD Rule 3501, adopted February 3, 2006
- 1e. Clean Copy of SCAQMD Rule 3502, adopted February 3, 2006
- 1f. SCAQMD Rules 3501 and 3502 Proof of Publication, January 26, 2006
- 1g. SCAQMD Rule 3501 Staff Report, dated February 2006
- 1h. SCAQMD Rule 3502 Staff Report, dated February 2006
- 1i. SCAQMD Office of District Counsel: ICCTA Does Not Preempt SCAQMD Rules 3501 and 3502, dated November 2, 2011
- 1j. SCAQMD Office of District Counsel: State Law Authority revision to the November 2, 2011 Memorandum (dated March 28, 2012)
- 1k. SCAQMD Reference Rules 216, 221, and 306
- 1l. SCAQMD SIP Submittal (Rules 3501 and 3502) to CARB, dated, November 2, 2011
- 1m. SCAQMD Supplemental SIP Submission letter to CARB, dated June 28, 2012
- 1n. SCAQMD Supplemental SIP Submission letter to CARB, dated August 9, 2012

South Coast AQMD Locomotive Idling Rules 3501 and 3502 Correspondence

- 2012-09-12** Letter from AAR, BNSF and UP to EPA re Request for Prompt EPA Determination of Incompleteness
- 2012-09-14** Letter from AAR, BNSF and UP to EPA Supplement to the 2012-09-12 Letter (includes attachments)
- 2012-10-11** Letter from AAR, BNSF and UP to EPA re Supplements September 12 and 14 letters
- 2012-10-19** Letter from SCAQMD to EPA re response to September 12 and 13, 2012
- 2012-11-19** Letter from AAR, BNSF and UP to EPA re Response to Oct 19 Letter from SCAQMD
- 2013-01-07** Letter from Gideon Kracov on behalf of EYCEJ to EPA in Support to Approve Rule 3501 and 3502
- 2013-08-07** Letter from SCAQMD to EPA re Follow up from call with EPA 1 of 3
- 2013-08-07** Letter from SCAQMD to EPA re Follow up from call with EPA 2 of 3 (19 page MEMO)
- 2013-08-07** Letter from SCAQMD to EPA re Follow up from call with EPA 3 of 3
- 2013-09-27** Letter from FRA to EPA re Locomotive Safety and Operations
- 2013-10-1** Letter from AAR, BNSF and UP to EPA re SCAQMD Submittal regarding incorporation of Rule 3501 and 3502 into SIP
- 2013-11-08** Letter from Gideon Kracov on behalf of EYCEJ to EPA re Follow up Letter dated Jan 7 2013
- 2013-11-14** Letter from SCAQMD to EPA re Response to the FRA Letter dated Sep 27 2013
- 2013-11-13** Fax from SCAQMD to EPA forwarding November 13, 2013 letter from Railex, Inc to Barbara Baird



Matthew Rodriquez
Secretary for
Environmental Protection

Air Resources Board

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov



Edmund G. Brown Jr.
Governor

August 30, 2012

Mr. Jared Blumenfeld
Regional Administrator
U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, California 94105

Dear Mr. Blumenfeld:

Enclosed are revisions to the *State of California Implementation Plan for Achieving and Maintaining the National Ambient Air Quality Standards* (SIP). Two compact discs and two paper copies, each containing the revisions in their entirety, are enclosed. The revisions consist of South Coast Air Quality Management District (District) Rule 3501, *Recordkeeping for Locomotive Idling*, and Rule 3502, *Minimization of Emissions from Locomotive Idling*. These two rules were adopted by the District on February 3, 2006.

The Air Resources Board (ARB) Executive Order S-12-007 adopting the District's rules as revisions to the SIP is also enclosed. The District is authorized to adopt and enforce the rules by California Health and Safety Code (H&SC) sections 39002, 40000, 40001, 40702, and 41511. ARB is authorized to adopt the rules as revisions to the SIP by H&SC sections 39602 and 41650 through 41652.

To meet the U.S. Environmental Protection Agency (U.S. EPA) criteria for determining that rule submittals are administratively and technically complete, we have enclosed evaluations of the effects of the rules on emissions, evaluations of the rules' consistency with 40 CFR Part 51, and other supporting documentation provided to us to date by the District. We have made every reasonable effort to obtain from the District all documentation necessary to comply with U.S. EPA's SIP Completeness Policy.

We understand that, according to section 110(k)(1)(B) of the federal Clean Air Act, U.S. EPA will determine within 60 days of the Administrator's receipt of a SIP revision, but no later than six months after the date, if any, by which the State is required to submit the revision, whether the rule packages within the revision are adequately complete to review for approvability.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Printed on Recycled Paper

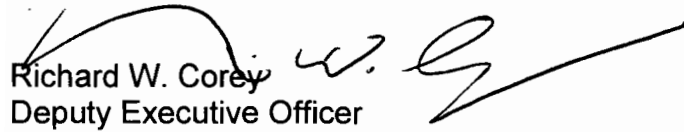
Mr. Jared Blumenfeld

August 30, 2012

Page 2

If you have any questions or would like to discuss this SIP revision, please contact Ms. Cynthia Marvin, Chief, Stationary Source Division at (916) 324-0062 or cmarvin@arb.ca.gov.

Sincerely,


Richard W. Corey
Deputy Executive Officer

Enclosure(s)

cc: Dr. Barry Wallerstein
Executive Officer
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, California 91765-4182

Cynthia Marvin, Chief
Stationary Source Division

California Environmental Protection Agency

**State of California
AIR RESOURCES BOARD**

EXECUTIVE ORDER S-12-007

WHEREAS, Rule 3501, *Recordkeeping for Locomotive Idling*, and Rule 3502, *Minimization of Emissions from Locomotive Idling* of the South Coast Air Quality Management District (District) have been adopted by the District;

WHEREAS, the District is authorized by California Health and Safety Code (H&SC) sections 39002, 40000, 40001, 40702, and 41511 to adopt and enforce adopted Rules 3501 and 3502;

WHEREAS, the rules have been submitted to the Air Resources Board (ARB) for inclusion in the *State of California Implementation Plan for Achieving and Maintaining the National Ambient Air Quality Standards* (SIP);

WHEREAS, pursuant to its certified regulatory program under the California Environmental Quality Act (CEQA), the District prepared a Program Environmental Assessment (PEA) for Rules 3501 and 3502;

WHEREAS, the PEA concluded that no significant adverse environmental impacts would result from implementing Rules 3501 and 3502;

WHEREAS, the Deputy Executive Officer has reviewed and considered the PEA prepared by the District and finds that it meets the requirements of CEQA;

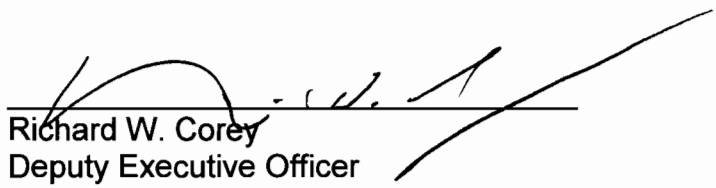
WHEREAS, ARB has determined that these rules are necessary to meet the requirements of the federal Clean Air Act; and

WHEREAS, ARB is authorized by H&SC sections 39601, 39602, and 41650 through 41652 to adopt district rules as revisions to the SIP.

THEREFORE, IT IS ORDERED that ARB hereby adopts Rules 3501 and 3502 as revisions to the SIP.

I certify, pursuant to 40 CFR 51.102(f), that Rules 3501 and 3502 of the South Coast Air Quality Management District were adopted after notice and public hearing as required by 40 CFR 51.102(a) and 51.102(d).

Executed in Sacramento, California, this 29th day of August, 2012.



Richard W. Corey
Deputy Executive Officer

CALIFORNIA AIR RESOURCES BOARD

SIP COMPLETENESS CHECKLIST
(Electronic Format)

***** TO BE COMPLETED BY DISTRICT AND RETURNED TO ARB *****

All rules submitted to the EPA as State Implementation Plan (SIP) revisions must be supported by certain information and documentation for the rule packages to be deemed complete for review by the EPA. Rules will not be evaluated for approvability by the EPA unless the submittal packages are complete. To assist you in determining that all necessary materials are included in rules packages sent to the ARB for submittal to the EPA, please fill out the following form and include it with the rule package you send ARB. See the ARB's Guidelines on the Implementation of the 40 CFR 51, Appendix V, for a more detailed explanation than is provided here. Adopted rules and rule amendments should be checked against U.S. EPA's Guidance Document for Correcting Common VOC & Other Rule Deficiencies (Little Blue Book, August 21, 2001) to ensure that they contain no elements which will result in disapproval by EPA.

District: South Coast Air Quality Management District

Rule No: 3501 & 3502

Rule Title: 3501 – Recordkeeping for Locomotive Idling; 3502 – Minimization of Emissions from Locomotive Idling

Date Adopted or Amended: Adopted February 3, 2006

ADMINISTRATIVE MATERIALS

Note: All documents should be in electronic format. Items that have signatures, initials, or stamps may be scanned.

<u>Attached</u>	<u>Not Attached</u>	<u>N/A</u>	
☒	☐	☐	<u>COMPLETE COPY OF THE RULE:</u> Provide an unmarked copy of the entire rule as adopted or amended by your District Board.
☐	☐	☒	<u>UNDERLINE AND STRIKEOUT COPY OF THE RULE:</u> If an amended rule, provide a complete copy of the rule indicating in underline and strikeout format all language which has been added, deleted, or changed since the rule was last adopted or amended.
☒	☐	☐	<u>COMPLETE COPY OF THE REFERENCED RULE(S):</u> For any rule which includes language specifically referencing another rule, a copy of that other rule must also be submitted, unless it has already been submitted to EPA as part of a previous SIP submittal.
☒	☐	☐	<u>PUBLIC NOTICE EVIDENCE:</u> Include a copy of the local newspaper clipping certification(s), stating the date of publication, which must be at least 30 days before the hearing. As an alternative, include a copy of the actual published notice of the public hearing as it appeared in the local newspaper(s). In this case, however, enough of the newspaper page must be included to show the date of publication. The notice must specifically identify by title and number each rule adopted or amended.
☒	☐	☐	<u>RESOLUTION/MINUTE ORDER:</u> Provide the Board Clerk certified resolution or minute order. This document must include certification that the hearing was held in accordance with the information in the public notice. It must also list the rules that were adopted or amended, the date of the public hearing, and a statement of compliance with California Health and Safety Code Sections 40725-40728 (Administrative Procedures Act).
☒	☐	☐	<u>PUBLIC COMMENTS AND RESPONSES:</u> Submit copies of written public comments made during the notice period and at the public hearing. Also submit any written responses prepared by the District staff or presented to the District Board at the public hearing. A summary of the public comments and responses is adequate. If there were no comments made during the notice period or at the hearing, please indicate N/A to the left.

(See Staff Report pgs. A-1 to A-20)

CALIFORNIA AIR RESOURCES BOARD

SIP COMPLETENESS CHECKLIST
(Electronic Format)

TECHNICAL MATERIALS

<u>Attached</u>	<u>Not Attached</u>	<u>N/A</u>	
☒	☐	☐	<u>RULE EVALUATION FORM:</u> See instructions for completing the Rule Evaluation Form and the accompanying sample form.
☐	☐	☒	<u>NON-EPA TEST METHODS:</u> Attach all test methods that are referenced in your rule that do not appear in 40 CFR 51, 60, 61, 63, or have not been previously submitted to EPA. EPA methods used in other media such as SW846 for solid waste are not automatically approved for air pollution applications. Submittal of test methods that are not EPA-approved should include the information and follow the procedure described in Region 9's "Test Method Review & Evaluation Process."
☐	☐	☒	<u>MODELING SUPPORT:</u> Provide if appropriate. In general, modeling support is not required for VOC and NOx rules to determine their impacts on ozone levels. Modeling is required where a rule is a relaxation that affects large sources (≥ 100 TPY) in an attainment area for SO ₂ , directly emitted PM ₁₀ , CO, or NO _x (for NO ₂ purposes). In cases where EPA is concerned with the impact on air quality of rule revisions which relax limits or cause a shift in emission patterns in a nonattainment area, a reference back to the approved SIP will be sufficient provided the approved SIP accounts for the relaxation and provided the approved SIP used the current EPA modeling guidelines. If current EPA modeling guidelines were not used, then new modeling may be required.
☐	☐	☒	<u>ECONOMIC AND TECHNICAL JUSTIFICATION FOR DEVIATIONS FROM EPA POLICIES:</u> The District staff report or other information included with the submittal should discuss all potential relaxations or deviations from RACT, RACM, BACT, BACM, enforceability, attainment, RFP, or other relevant EPA requirements. This includes, for example, demonstrating that exemptions or emission limits less stringent than the presumptive RACT (e.g., a CTG) meet EPA's 5 percent policy, and demonstrating that all source categories exempted from a RACM/BACM rule are de minimus according to EPA's RACM/BACM policy.
☒	☐	☐	<u>ADDITIONAL MATERIALS:</u> Provide District staff reports and any other supporting information concerning development of the rule or rule changes. This information should explain the basis for all limits and thresholds contained in the rule.

(Staff Report)

CALIFORNIA AIR RESOURCES BOARD

APCD/AQMD RULE EVALUATION FORM – Page 1
(Electronic Format)

I. GENERAL INFORMATION

District: South Coast Air Quality Management District

Rule No(s): 3501 & 3502 Date adopted/Amended/Rescinded: Adopted February 3, 2006

Rule Title(s): 3501 - Recordkeeping for Locomotive Idling; 3502 - Minimization of Emissions from Locomotive Idling

Date Submitted to ARB: November 2, 2011

If an Amended Rule, Date Last Amended (or Adopted): N/A

Is the Rule Intended to be Sent to the U.S. EPA as a SIP Revision? ☒ Yes ☐ No (If No, do not complete remainder of form)

District Contact: Susan Nakamura Phone Number: (909) 396-3105 E-mail Address: snakamura@aqmd.gov

Narrative Summary of New Rule or Rule Changes: ☒ New Rule ☐ Amended Rule

The purpose of Adopted Rule 3501 is to require Class I freight railroads and switching and terminal freight railroads operating in the District to record and report locomotive idling events in order to assist the AQMD in quantifying locomotive idling emissions. The purpose of Adopted Rule 3502 is to minimize emissions from continued idling of freight locomotives operating in the District.

Pollutant(s) Regulated by the Rule (Check): ☒ ROG ☒ (NOx) ☐ SO2
☒ (CO) ☒ PM ☐ TAC (name): _____

II. EFFECT ON EMISSIONS

Complete this section ONLY for rules that, when implemented, will result in quantifiable changes in emissions. Attach reference(s) for emission factor(s) and other information. Attach calculation sheet showing how the emission information provided below was determined.

Net Effect on Emissions: ☐ Increase ☒ Decrease ☐ N/A

Emission Reduction Commitment in SIP for this Source Category: N/A. Rules 3501 and 3502 do not implement any control measures of the 2003 AQMP.

Inventory Year Used to Calculate Changes in Emissions: Year 2003 for Freight Locomotive Emissions (2003 AQMP)
Area Affected: South Coast Air Basin

Future Year Control Profile Estimate (Provide information on as many years as possible):

Anti-Idling requirements of Rule 3502 became effective on August 3, 2006.

2003 AQMP		Control Factor		Idling Emissions		Total		Final	
Freight Locomotive		for R3502		Reduction by		Emissions		Emissions	
Freight	Emissions from Idling	Anti-Idling Req.		Freight Type		Reduction	Adjustment	Factor*	Reduction
Type	(tons/day)	(%)		(tons/day)		(tons/day)	(%)		(tons/day)
PM	Switching	0.02	x	27%	=	0.01			
PM	Line Haul	0.15	x	35%	=	0.05	0.06	x	53% = 0.03 PM
NOx	Switching	0.42	x	27%	=	0.11			
NOx	Line Haul	3.54	x	35%	=	1.24	1.35	x	53% = 0.72 NOx
HC	Switching	0.07	x	27%	=	0.02			
HC	Line Haul	0.60	x	35%	=	0.21	0.23	x	53% = 0.12 ROG
CO	Switching	0.17	x	27%	=	0.05			
CO	Line Haul	1.82	x	35%	=	0.64	0.69	x	53% = 0.37 CO

*In 2006, 53% of 2,145 locomotives in the South Coast Air Basin were not equipped with anti-idling devices.

CALIFORNIA AIR RESOURCES BOARD

APCD/AQMD RULE EVALUATION FORM - Page 2
(Electronic Format)

Baseline Inventory in the SIP for the Control Measure:	PM10:	0.89 tons/day (0.17 idling; 0.72 non-idling)
	NOx:	32.98 tons/day (3.96 idling; 29.02 non-idling)
	ROG:	1.69 tons/day (0.67 idling; 1.02 non-idling)
	CO:	6.04 tons/day (1.99 idling; 4.05 non-idling)

Emissions Reduction Commitment in the SIP for the Control Measure: N/A

Revised Baseline Inventory (if any): N/A

Revised Emission Reduction Estimate (if developed): N/A

Note that the district's input to the Rule Evaluation Form will not be used as input to the ARB's emission forecasting and planning.

III. SOURCES/ATTAINMENT STATUS

District is: ☐ Attainment ☒ Nonattainment ☐ Split

Approximate Total Number of Small (<100 TPY) Sources Affected by this Amendment: 14

Percent in Nonattainment Area: 100%

Number of Large ($\geq$ 100 TPY) Sources Controlled: N/A Percent in Nonattainment Area: N/A%

Name(s) and Location(s) (city and county) of Large ($\geq$ 100 TPY) Sources Controlled by Rule (Attach additional sheets as necessary): N/A

IV. EMISSION REDUCTION TECHNOLOGY

Does the Rule Include Emission Limits that are Continuous? ☒ Yes ☐ No

If Yes, Those Limits are in Section(s) 3502 (d) of the Rule.

Other Methods in the Rule for Achieving Emission Reductions are: Compliance with an Emissions Equivalency Plan pursuant to Rule 3502 (e).

V. OTHER REQUIREMENTS

The Rule Contains:

Emission Limits in Section(s): N/A Work Practice Standards in Section(s): Rule 3502 (d)

Recordkeeping Requirements in Section(s): Rule 3501 (d) Reporting Requirements in Section(s): Rule 3501 (e)

APCD/AQMD RULE EVALUATION FORM - Page 3
(Electronic Format)

VI. IMPACT ON AIR QUALITY PLAN

☐ No Impact ☐ Impacts RFP ☒ Impacts attainment

Discussion: Rule 3501 is not expected to result in emission reductions as it only imposes requirements for recordkeeping and reporting of idling events at Class I freight railroads and switching and terminal freight railroads. Rule 3502 is expected to result in locomotive idling emission reductions of 0.03 PM tons/day, 0.72 NOx tons/day, 0.12 ROG tons/day, and 0.37 CO tons/day. Rule 3502 is not a control measure of the 2003 AQMP, however, reductions in ROG and PM will help the Basin achieve state and federal requirements and further progress toward attainment of the standards for ozone and PM 2.5.

RESOLUTION NO. 06-6

A Resolution of the South Coast Air Quality Management District (AQMD) Governing Board certifying the Final Program Environmental Assessment for the Proposed Rules 3501 – Recordkeeping for Locomotive Idling and 3502 – Minimization of Emissions from Locomotive Idling

A Resolution of the Governing Board adopting Rules 3501 Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling.

WHEREAS, the Governing Board has determined that the Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling are a “project” pursuant to the terms of the California Environmental Quality Act (CEQA); and

WHEREAS, the AQMD has had its regulatory program certified pursuant to Public Resources Code §21080.5 and has conducted CEQA review pursuant to such Program (AQMD Rule 110); and

WHEREAS, AQMD staff has prepared a Draft Program Environmental Assessment (PEA) pursuant to its certified regulatory Program and state CEQA Guidelines §15252 setting forth the potential environmental consequences of the Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling; and

WHEREAS, the Draft PEA was released for a 30-day public review and comment period from December 22, 2005 to January 20, 2005. During the 30-day public review and comment period, the AQMD did not receive any comment letters on the Draft PEA; and

WHEREAS, it is necessary that the adequacy of the Final PEA for the Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling be considered by the Governing Board prior to its adoption; and

WHEREAS, no significant adverse environmental impacts were identified from implementing the Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling and, thus, a Mitigation Monitoring Plan, pursuant to Public Resource Code §21081.6, has not been prepared since no mitigation measures are necessary; and

WHEREAS, a Statement of Findings and Statement of Overriding Consideration pursuant to state CEQA Guidelines §§15091 and 15093, respectively, has not been prepared since no significant adverse environmental impacts were identified from implementing the Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling; and

WHEREAS, the AQMD Governing Board voting on these proposed rules have reviewed, considered, and hereby certifies the Final PEA for the Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling; and

WHEREAS, the Governing Board has determined that the socioeconomic reports and staff report of the Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling is consistent with the Governing Board March 17, 1989 and October 14, 1994 resolutions and the provisions of Health and Safety Code Sections 40440.8, 40728.5 and 40920.6; and

WHEREAS, the Governing Board has reviewed and considered the staff's findings related to cost and employment impacts of Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling, as set forth in the socioeconomic reports, and hereby finds and determines that cost and employment impacts are as set forth in that assessment; and

WHEREAS, the Governing Board has determined that staff has actively considered the socioeconomic reports and made a good faith effort to minimize any socioeconomic impacts; and

WHEREAS, the Governing Board obtains its authority to adopt, amend, or repeal rules and regulations from Sections 39002, 40000, 40001, 40702, 40725 through 40728, 40910 through 40920.5, 41508, 41511, and 41700 of the California Health and Safety Code; and

WHEREAS, the Governing Board is given specific authority under §41511 of the California Health and Safety Code relative to adopting rules and regulations to require the owner or the operator of any air pollution emission sources to take such action for the determination of the amount of such emissions from such source, and prohibiting discharges from sources of air contaminants which are a nuisance or annoyance to the public or which endanger the health and safety of the public under §41700 of the California Health and Safety Code; and

WHEREAS, the Governing Board has determined that a need exists to adopt Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling to obtain information concerning idling and emissions, to reduce public health exposure to criteria pollutant and toxic air contaminants, to meet state and federal ambient air quality standards and to meet the intent of the AQMD’s Air Toxics Control Plan control measure AT-MBL-09; and

WHEREAS, the Governing Board has determined that Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling as proposed is written or displayed so that its meaning can be easily understood by the persons directly affected by the proposed rule; and

WHEREAS, the Governing Board has determined that Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling as proposed is in harmony with, and not in conflict with or contradictory to, existing federal or state statutes, court decisions, or regulations; and

WHEREAS, the Governing Board has determined that Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling as proposed does not impose the same requirements as any existing state or federal regulation and the proposed rules are necessary and proper to execute the powers and duties granted to, and imposed upon, the District; and

WHEREAS, the Governing Board has determined that Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling, as proposed, references the following statutes which the AQMD hereby implements, interprets or makes specific: H&S Code Sections 40001 (rules to achieve ambient air quality standards), 41511 (rules to gather information regarding emissions for both criteria and toxic pollutants), 41700 (prevent endangerment of public health and nuisance to public); and

WHEREAS, the Governing Board has found that there is a problem that Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling will help alleviate, namely continued exceedances of state and federal ambient air quality standards, and that the rules will promote the attainment of these standards; and

WHEREAS, a public hearing has been properly noticed in accordance with the provisions of Health and Safety Code Section 40725; and

WHEREAS, the Governing Board has held a public hearing in accordance with all provisions of law; and

WHEREAS, the AQMD specifies the Manager of Rules 3501 and 3502 as the custodian of the documents or other materials which constitute the record of proceedings upon which the adoption of these proposed rules are based, which are located at the South Coast Air Quality Management District, 21865 Copley Drive, Diamond Bar, California; and

NOW, THEREFORE, BE IT RESOLVED that the Governing Board does hereby certifies the final PEA for Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling, which was completed in compliance with CEQA and Rule 110 provisions; and find that the Final PEA was presented to the Governing Board, whose members reviewed, considered, and approved the information therein prior to acting on Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling; and

BE IT FURTHER RESOLVED that because no significant adverse environmental impacts were identified as a result of implementing Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling, a Statement of Findings, a Statement of Overriding Considerations, and a Mitigation Monitoring Plan are not required; and

BE IT FURTHER RESOLVED, that the Governing Board does hereby approve the Socioeconomic Report for Proposed Rules 3501 and 3502; and

BE IT FURTHER RESOLVED, that the Governing Board does hereby adopt, pursuant to the authority granted by law, Proposed Rules 3501 – Recordkeeping for Locomotive Idling and Rule 3502 – Minimization of Emissions from Locomotive Idling, as set forth in the attached and incorporated herein by reference; and

BE IT FURTHER RESOLVED, the Governing Board hereby directs staff in considering penalties that are collected through implementation and enforcement of Proposed Rules 3501 – Recordkeeping for Locomotive Idling and 3502 – Minimization of Emissions from Locomotive Idling, after implementation and enforcement costs are considered, to consider using the remaining available penalties to improve air quality in local communities, specifically in the areas where violations occur; and

BE IT FURTHER RESOLVED, that the Governing Board hereby directs staff to develop fees as part of Regulation III amendments to recover potential costs associated with implementation of Regulation XXXV – Railroads and Railroad Operations; and

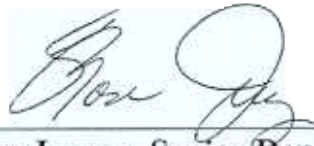
BE IT FURTHER RESOLVED, that the Governing Board hereby approves allocation of one full-time position to enforcement of District Rules 3501 and 3502.

AYES: Antonovich, Burke, Carney, LaPisto-Kirtley, Loveridge, Pulido, Silva, Verdugo-Peralta, and Yates.

NOES: None.

ABSENT: Ovitt, Perry, and Wilson.

Feb. 3, 2006



Rose Juarez, Senior Deputy Clerk

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted February 3, 2006)

RULE 3501 RECORDKEEPING FOR LOCOMOTIVE IDLING

(a) Purpose

The purpose of this rule is to record idling events to identify opportunities for reducing idling emissions and to assist in quantifying idling emissions.

(b) Applicability

This rule shall apply to Class I freight railroads and switching and terminal freight railroads that operate locomotives in the District.

(c) Definitions

(1) **ALTERNATIVE TECHNOLOGY** means a locomotive propulsion strategy by which NO_x and diesel PM emission reductions of 85 percent or greater, on a gram per brake horsepower-hour (g/bhp-hr) basis, as compared to emission levels for conventional diesel locomotives operating on a comparable duty cycle (switch or line-haul), can be achieved and verified. Strategies include battery dominant hybrid systems with diesel internal combustion engines, locomotive motive power fueled with natural gas, propane, ethanol, methanol, hydrogen, electricity, fuel cells, advanced technologies that do not rely on diesel fuel, and any of these fuels used in combination with each other or in combination with non-diesel fuel.

(2) **ANTI-IDLING DEVICE** means a device installed on a diesel locomotive designed to automatically shut-off the main diesel internal combustion engine used for locomotive motive power after a specified time period when specified parameters (e.g., engine water temperature, ambient temperature, battery charge, railcar brake pressure, etc.) are at acceptable levels, and then automatically restart the engine when parameters are no longer at acceptable levels.

(3) **CLASS I FREIGHT RAILROAD** means a Class I railroad, as classified by the Surface Transportation Board in 49 CFR Part 1201 Subpart A, that primarily transports freight rather than passengers.

(4) **DISTRICT** means the South Coast Air Quality Management District's geographical area of jurisdiction, consisting of the four-county South Coast Air Basin and the Riverside County portions of the Salton Sea Air

Basin (SSAB) and the Mojave Desert Air Basin (MDAB). The South Coast Air Basin, which is a subarea of the District, is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east and includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The Riverside County portion of the SSAB and MDAB is bounded by the San Jacinto Mountains in the west and the Palo Verde Valley in the east.

- (5) ENGAGED means the condition in which a locomotive's controls (e.g., reverser handle, throttle handle, brake handle, etc.) are set in such a way while idling that an installed anti-idling device can automatically shut-off and restart the main diesel internal combustion engine used for locomotive motive power.
- (6) FOREIGN POWER means a locomotive that is not owned or leased by the operator but operated in the District by the operator.
- (7) IDLE OR IDLING OR IDLING EVENT means the operation of a 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.
- (8) INTERDISTRICT LOCOMOTIVE means, for the purpose of this rule, a diesel locomotive that is not foreign power that operates within the District for any period of time, and is not an intradistrict locomotive.
- (9) INTRADISTRICT LOCOMOTIVE means, for the purpose of this rule, a diesel locomotive that is not foreign power that operates within the District for which at least 90 percent of its annual fuel consumption, annual hours of operation, or annual rail miles traveled occur within the District.
- (10) LOCOMOTIVE means, for the purpose of this rule, a self-propelled piece of on-track equipment designed for moving or propelling railroad cars that are designed to carry freight, passengers or other equipment, but which itself is not designed or intended to carry freight, passengers (other than those operating the locomotive) or other equipment. The following equipment is not a locomotive: equipment designed for operation both on highways and rails; specialized railroad equipment for maintenance, construction, post-accident recovery of equipment, or repairs; and vehicles

propelled by engines with rated horsepower of less than 750 kW (1006 hp).

- (11) LOCOMOTIVE IDENTIFIER means a numeric or alphanumeric sequence that is used by a railroad to uniquely identify individual locomotives such as the road number displayed on the front, back and sides of locomotive exteriors.
- (12) OPERATOR means, for the purpose of this rule, a railroad responsible for operations associated with movement of freight within the District.
- (13) RAILROAD means, for the purpose of this rule, a commercial entity that operates locomotives to primarily transport freight.
- (14) RESPONSIBLE COMPANY OFFICIAL means, for the purpose of this rule, a president, chief executive officer, secretary, treasurer, chief financial officer, head of operations, or vice president of a railroad in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the railroad, as approved by the Executive Officer.
- (15) SWITCHING AND TERMINAL RAILROAD means a non-Class I railroad engaged primarily in switching and/or terminal services for other freight railroads.
- (16) TAMPER OR TAMPERED WITH means for the purpose of this rule, the modification or disabling of an anti-idling device that would circumvent its normal operation such that even if specified parameters (e.g. engine water temperature, ambient temperature, battery charge, railcar brake pressure, etc.) are at acceptable levels, the main diesel internal combustion engine used for locomotive motive power will not automatically shut-off after a specified time period.
- (17) UNCONTROLLED INTERDISTRICT LOCOMOTIVE FLEET means the portion of the interdistrict locomotive fleet that is not equipped with either anti-idling devices or is not operating exclusively using an alternative technology as of February 3, 2006, including any locomotives added to the interdistrict locomotive fleet after February 3, 2006 that are not equipped with anti-idling devices or are not operating exclusively with alternative technologies.
- (18) UNCONTROLLED INTRADISTRICT LOCOMOTIVE FLEET means the portion of the intradistrict locomotive fleet that is not equipped with either anti-idling devices or is not operating exclusively using an

alternative technology as of February 3, 2006, including any locomotives added to the intradistrict locomotive fleet after February 3, 2006 that are not equipped with anti-idling devices or are not operating exclusively with alternative technologies.

(d) Recordkeeping Requirements

- (1) Effective August 3, 2006, the operator shall record the following information for each idling event of 30 minutes or more:
 - (A) A description of the idling event, including:
 - (i) Name of locomotive operator and name of owner, if different; and
 - (ii) Locomotive identifier; and
 - (iii) Specific location of idling event, including specification of milepost information; and
 - (iv) Date and time of idling event onset; and
 - (v) Duration of idling event.
 - (B) For idling events of more than two hours an operator shall provide an explanation of the reason for the idling event.
- (2) An operator required to conduct recordkeeping pursuant to paragraph (d)(1) shall maintain for a period of not less than two years and make available to the Executive Officer within this period, upon request, all information necessary to verify and substantiate records addressed under paragraph (d)(1), such as dispatch center files, locomotive operational logs, locomotive position information from any electronic system that can be used to verify location, maintenance and repair records, and any methods or techniques identified under subparagraph (e)(2)(L).
- (3) An operator exempt from paragraph (d)(1) due to the installation of anti-idling devices shall maintain for a period of not less than two years from the date of installation of the anti-idling device and make available to the Executive Officer within this period, upon request, all information necessary to verify the installation of anti-idling devices and that the anti-idling devices were set at 15 minutes or less and were engaged when idling. This information may include records from anti-idling device event recorders.

(e) Reporting Requirements

- (1) Beginning the first Wednesday following August 3, 2006, and each Wednesday thereafter, the operator shall submit the records specified in paragraph (d)(1) to the Executive Officer for each recorded idling event that occurred over the seven day period terminating on the preceding Friday.
- (2) On or before April 4, 2006, and every year thereafter, the operator shall submit an annual report to the Executive Officer that includes for each interdistrict and intradistrict locomotive operated in the District within the past calendar year, if not previously reported or if different from the most recently submitted annual report, the following information:
 - (A) locomotive identifier and whether the locomotive is an interdistrict or intradistrict locomotive; and
 - (B) a description of the type of service the locomotive performed (e.g., line haul service, local service, yard switching, road switching); and
 - (C) number of engines; and
 - (D) manufacturer, model classification, year(s) of manufacture and repower, if applicable, and EPA emissions tier or other measure of locomotive emissions for EPA pre-Tier 0 locomotives, when available; and
 - (E) engine horsepower for the year(s) of manufacture (and repower, if applicable); and
 - (F) whether equipped with an anti-idling device, and if so, with the following additional information:
 - (i) description of the anti-idling device, including the manufacturer, model number, and year of installation; and
 - (ii) written statement specifying whether the anti-idling device is set at 15 minutes or less, is engaged when idling, and will not be tampered with; and
 - (G) whether operated exclusively using an alternative technology; and
 - (H) description of any emission control devices; and
 - (I) statement whether or not the locomotive is equipped with a Global Positioning System (GPS); and

- (J) locomotive identifiers of locomotives that are no longer operated in the District that were previously reported; and
 - (K) a timetable, or similar document, showing operator's rail routes in the District, including milepost designations for stations and sidings; and
 - (L) The method or technique used to record idling event information required pursuant to paragraph (d)(1).
- (3) All reports shall be submitted electronically in a format approved by the Executive Officer.
- (A) Weekly reports shall be sent as attachments to e-mail messages to the Executive Officer, or an appointed designee.
 - (B) Annual reports may be sent either as e-mail message attachments to the Executive Officer, or an appointed designee, or on storage media (e.g., CD, DVD) mailed via U.S. Mail or delivered by courier service.
- (4) All reports shall include the name, title and signature of the responsible company official certifying the accuracy of the records submitted.
- (f) **Alternative Compliance Plan**
- An operator may comply with an Alternative Compliance Plan that is submitted to and approved by the Executive Officer, in lieu of complying with the requirements of paragraphs (d)(1), (d)(2), (e)(1), for those fleets covered by its Alternative Compliance Plan. The Alternative Compliance Plan may apply to an operator's intradistrict locomotive fleet, interdistrict locomotive fleet, or both.
- (1) The Alternative Compliance Plan shall be submitted at least 90 days before its intended use, but no later than June 30, 2006 if intended for use for the operator's intradistrict fleet and not later than January 1, 2008 if intended for use for only the operator's interdistrict fleet.
 - (2) The operator shall comply with recordkeeping and reporting requirements pursuant to paragraphs (d)(1), (d)(2), and (e)(1) until the Executive Officer approves the Alternative Compliance Plan.
 - (3) The Alternative Compliance Plan shall contain the following information, as applicable:
 - (A) A schedule to equip all locomotives in the intradistrict fleet with anti-idling devices or to operate exclusively using alternative

technologies, or any combination thereof, to meet the following timelines:

- (i) 50% of the uncontrolled intradistrict locomotive fleet on or before December 31, 2006; and
 - (ii) 100% of the uncontrolled intradistrict locomotive fleet on or before December 31, 2007.
- (B) A schedule to equip all locomotives in the interdistrict fleet with anti-idling devices or to operate exclusively using alternative technologies, or any combination thereof, to meet the following timelines:
 - (i) 50% of the uncontrolled interdistrict locomotive fleet on or before June 30, 2008; and
 - (ii) 100% of the uncontrolled interdistrict locomotive fleet on or before June 30, 2010.
- (C) Details of the locomotive fleets subject to the Alternative Compliance Plan that include the following:
 - (i) specific locomotive identifier;
 - (ii) total number of locomotives subject to the Plan; and
 - (iii) number of locomotives subject to the Plan to be equipped with anti-idling devices or to begin operating exclusively using alternative technologies; and
 - (iv) projected dates of installing anti-idling devices or use of alternative technology .
- (D) If anti-idling devices are to be installed, a statement that each anti-idling device will be set at 15 minutes or less, will be engaged when idling, and will not be tampered with.

(g) Plan Approval

- (1) Within 90 days of submittal of an Alternative Compliance Plan, the Executive Officer will approve or disapprove the Plan. The Executive Officer shall approve the Plan if it is complete and meets the requirements under subdivision (f).
- (2) If the use of an alternative technology is requested, the NO_x and diesel PM emissions baseline for the conventional diesel locomotive shall be based upon the applicable U.S. EPA emissions tier specified in 40 CFR, Part 92, Section 92.8, unless the locomotive is manufactured prior to 1973.

In that case the operator shall establish baseline emission levels using the U.S. EPA specification for the Tier 0 emissions level, as specified in 40 CFR, Part 92, Section 92.8.

(h) Fees and Right of Appeal

- (1) The Alternative Compliance Plan shall constitute a plan for the purpose of fees assessed under Rule 306 – Plan Fees.
- (2) The operator may appeal the disapproval by the Executive Officer of an Alternative Compliance Plan to the Hearing Board under Rule 216 – Appeals and Rule 221 - Plans. If the Hearing Board denies the appeal, the Alternative Compliance Plan shall be revised, consistent with the findings and rulings by the Hearing Board and resubmitted within 90 days after the Board’s decision. The revised submittal shall correct all deficiencies identified by the Hearing Board.

(i) Circumvention

The moving of a locomotive for the purpose of preventing idling for more than the length of time for which recordkeeping is required under paragraph (d)(1) or to prevent an anti-idling device from shutting off a locomotive’s main propulsion engine shall be considered a violation of this rule.

(j) Penalties

Failure to comply with any requirement of this rule or any provision of an approved Alternative Compliance Plan will result in a separate violation for each locomotive for each day of non-compliance and subject to penalties under Health and Safety Code Section 42400 et seq.

(k) Exemptions

- (1) An operator shall be exempt from the requirements of paragraphs (d)(1), (d)(2), and (e)(1) for any locomotive, including foreign power, which is equipped with an anti-idling device that is set at 15 minutes or less, engaged when idling, and not tampered with. This exemption shall be in effect as of the date the locomotive is first operated in the District using the anti-idling device.
- (2) An operator shall be exempt from the requirements of paragraphs (d)(1), (d)(2), and (e)(1) for any locomotive, including foreign power, which is equipped to operate exclusively using an alternative technology. This

exemption shall be in effect as of the date the locomotive is first operated in the District using the alternative technology.

- (3) An operator that submits an Alternative Compliance Plan prepared pursuant to subdivision (f) shall be exempt from recording and reporting idling events pursuant to paragraphs (d)(1), (d)(2), and (e)(1) for the intradistrict and interdistrict locomotive fleets addressed in an approved Alternative Compliance Plan.

(l) 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.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted February 3, 2006)

RULE 3502 MINIMIZATION OF EMISSIONS FROM LOCOMOTIVE IDLING

(a) Purpose

The purpose of this rule is to minimize emissions from unnecessary idling of a locomotive.

(b) Applicability

This rule shall apply to Class I freight railroads and switching and terminal freight railroads operating in the District.

(c) Definitions

- (1) ANTI-IDLING DEVICE means a device installed on a diesel locomotive designed to automatically shut-off the main diesel internal combustion engine used for locomotive motive power after a specified time period when specified parameters (e.g., engine water temperature, ambient temperature, battery charge, railcar brake pressure, etc.) are at acceptable levels, and then automatically restart the engine when parameters are no longer at acceptable levels.
- (2) CLASS I FREIGHT RAILROAD means a Class I railroad, as classified by the Surface Transportation Board in 49 CFR Part 1201 Subpart A, that primarily transports freight rather than passengers.
- (3) CONTROLLING or LEAD LOCOMOTIVE means the locomotive within a consist of locomotives, including consists made up of switching locomotives and locomotives not connected to railcars, that is arranged as having the only controls over all electrical, mechanical and pneumatic functions for one or more locomotives.
- (4) DISTRICT means the South Coast Air Quality Management District's geographical area of jurisdiction, as defined in California Health and Safety Code Section 40410 consisting of the four-county South Coast Air Basin and the Riverside County portions of the Salton Sea Air Basin (SSAB) and the Mojave Desert Air Basin (MDAB). The South Coast Air Basin, which is a subarea of the District, is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto

Mountains to the north and east and includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The Riverside County portion of the SSAB and MDAB is bounded by the San Jacinto Mountains in the west and the Palo Verde Valley in the east.

- (5) EMERGENCY means 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.
- (6) IDLE OR IDLING OR IDLING EVENT means the operation of a 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.
- (7) LOCOMOTIVE means, for the purpose of this rule, a self-propelled piece of on-track equipment designed for moving or propelling railroad cars that are designed to carry freight or other equipment, but which itself is not designed or intended to carry freight, passengers (other than those operating the locomotive) or other equipment. The following equipment is not a locomotive: equipment designed for operation both on highways and rails; specialized railroad equipment for maintenance, construction, post-accident recovery of equipment, or repairs; and vehicles propelled by engines with rated horsepower of less than 750 kW (1006 hp).
- (8) LOCOMOTIVE CONSIST means a collection of two or more locomotives connected to each other.
- (9) LOCOMOTIVE ENGINE means the diesel internal combustion engine or engines incorporated into a locomotive or intended for incorporation into a locomotive and used to provide locomotive motive power.
- (10) MAINTENANCE OR DIAGNOSTIC PURPOSES means activities including repairs, testing and adjustment of systems, preventative maintenance, and associated activities such as problem troubleshooting, in which a mechanic is working on a locomotive to conduct such activities, excluding queuing before or after these activities.
- (11) OPERATOR means, for the purpose of this rule, a railroad responsible for operations associated with movement of freight within the District.

- (12) RAILROAD means, for the purpose of this rule, a commercial entity that operates locomotives to primarily transport freight.
 - (13) SWITCHING AND TERMINAL RAILROAD means a non-Class I railroad engaged primarily in switching and/or terminal services for other freight railroads.
 - (14) TAMPERED OR TAMPERING means for the purpose of this rule, the modification or disabling of an anti-idling device that would circumvent its normal operation such that even if specified parameters (e.g. engine water temperature, ambient temperature, battery charge, railcar brake pressure, etc.) are at acceptable levels, the main diesel internal combustion engine used for locomotive motive power will not automatically shut-off after a specified time period.
 - (15) TRAILING LOCOMOTIVE means 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.
 - (16) UNATTENDED means where no crew member is on board a locomotive.
- (d) Idling Requirement
- (1) On and after August 3, 2006, 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 of a locomotive shall not idle an unattended locomotive for more than 30 minutes for any of the following reasons:
 - (A) the crew of the locomotive consist has been relieved and the relief crew has not arrived; or
 - (B) the crew of the locomotive consist has left for a meal; or
 - (C) the locomotive is within the railyard; or
 - (D) the locomotive is queuing for fueling, maintenance, or servicing; or
 - (E) maintenance or diagnostics are being conducted on the locomotive that does not require operation of the engine.
 - (2) On and after August 3, 2006, 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 of a locomotive shall not idle a trailing locomotive for more than 30 minutes for the following reasons:

- (A) the dispatcher or yardmaster notifies the operator of a delay that will exceed 30 minutes; or
 - (B) there is a locomotive failure or breakdown that will result in a delay of more than 30 minutes.
- (e) Submittal of Emissions Equivalency Plan
 - (1) In lieu of complying with the idling requirements pursuant to subdivision (d), at least 90 days before its intended use, the operator may submit to the Executive Officer and comply with the provisions of an Emissions Equivalency Plan for diesel particulate matter and oxides of nitrogen for a locomotive demonstrating that the locomotive will achieve equivalent reductions in emissions over a calendar year as will be required under this rule. The submitted Emissions Equivalency Plan shall:
 - (A) identify the locomotive control technology(ies) to be implemented;
 - (B) quantify locomotive emission reductions, demonstrating that:
 - (i) there is no increase in total cancer potency-weighted emissions of toxic air contaminants; and
 - (ii) the reductions are greater than or equal to the annual emission reductions that would be achieved by complying with paragraphs (d)(1) and (d)(2)
 - (C) identify each locomotive(s) to be included; and
 - (D) specify an implementation schedule; and
 - (E) identify the mechanism(s) to be employed to ensure that emission reductions are enforceable for each locomotive.
 - (2) The operator shall comply with idling requirements pursuant to subdivision (d) until the Executive Officer approves the Emissions Equivalency Plan.
 - (3) Locomotives not included in an Emissions Equivalency Plan are subject to the following subdivisions of this rule: (a), (b), (c), (d), (h), (i), (j) and (k).
- (f) Approval of the Emissions Equivalency Plan

Within 90 days of submittal of an Emissions Equivalency Plan pursuant to subdivision (e), the Executive Officer will approve or disapprove the Emissions Equivalency Plan. The Executive Officer shall approve the Emissions Equivalency Plan if it meets the requirements of subdivision (e).

(g) Fees and Right of Appeal

- (1) The Emissions Equivalency Plan shall constitute a plan for the purpose of fees assessed under Rule 306 – Plan Fees.
- (2) The operator of a railyard may appeal the disapproval by the Executive Officer of an Emissions Equivalency Plan to the Hearing Board under Rule 216 – Appeals and Rule 221 - Plans. If the Hearing Board denies the appeal, the Emissions Equivalency Plan shall be revised, consistent with the findings and rulings by the Hearing Board and resubmitted within 90 days after the Board’s decision. The revised submittal shall correct all deficiencies identified by the Hearing Board.

(h) Circumvention

- (1) Tampering with an anti-idling device shall be considered a violation of this rule.
- (2) The moving of a locomotive for the purpose of preventing idling for more than the 30 minutes or to prevent an anti-idling device from shutting off a locomotive’s main propulsion engine shall be considered a violation of this rule.

(i) Penalties

Failure to comply with any requirement of this rule, or any provision of an approved Emission Equivalency Plan will result in a separate violation for each locomotive for each day of non-compliance and subject to penalties under Health and Safety Code Section 42400 et seq.

(j) Exemptions

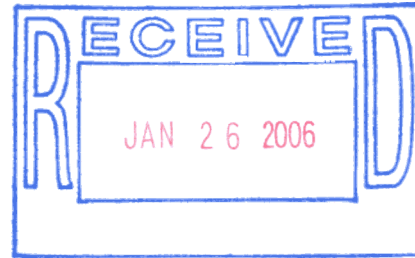
- (1) An operator is exempt from provisions of paragraphs (d)(1), (d)(2), and (d)(3) if the operator demonstrates the following conditions are met: the locomotive is being used in an emergency; or
- (2) ambient temperatures of 40°F or lower occur or are predicted for the next 24 hours in the area where the locomotive is operated; or
- (3) idling is required to maintain battery charge or voltage at a level sufficient to start the locomotive.

(k) 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.

INLAND VALLEY
DAILY BULLETIN
(formerly the Progress Bulletin)

2041 E. 4th Street
Ontario, CA 91764



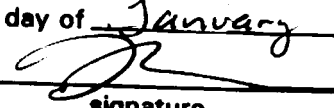
PROOF OF PUBLICATION
(2015.5 C.C.P.)

STATE OF CALIFORNIA
County of Los Angeles

I am a citizen of the United States, I am over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am the principal clerk of the printer of INLAND VALLEY DAILY BULLETIN, a newspaper of general circulation printed and published daily for the City of Pomona, County of Los Angeles, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Los Angeles, State of California, on the date of June 15, 1945, Decree No. Pomo C-606. The notice, of which the annexed is a true printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

1/4/06

I declare under penalty of perjury that the foregoing is true and correct.

Executed at Ontario, San Bernardino Co. California
this 4 day of January 20 06

signature

NOTICE OF PUBLIC HEARING
PROPOSED ADOPTION OF, OR
AMENDMENT(S) TO, THE RULES AND
REGULATIONS OF THE SOUTH COAST AIR
QUALITY MANAGEMENT DISTRICT
RE: Proposed Rules 3501 - Recordkeeping for
Locomotive Idling and 3502 - Minimization of
Emissions from Locomotive Idling

NOTICE IS HEREBY GIVEN that a public hearing on the matter of adoption of rules and regulations for the South Coast Air Quality Management District (AQMD) will be held on Friday, February 3, 2006 in the Auditorium, AQMD Headquarters, 21865 Copley Drive, Diamond Bar, CA, at 9:00 a.m., at which time evidence will be taken and all interested persons will be heard by the AQMD Board.

NOTICE IS FURTHER GIVEN that the AQMD is considering adoption of Proposed Rule 3501 - Recordkeeping for Locomotive Idling and 3502 - Minimization of Emissions from Locomotive Idling. The purpose of Proposed Rule 3501 is to record idling events to identify opportunities for reducing idling emissions and to assist in quantifying idling emissions from freight locomotives operating within the jurisdiction of the AQMD, and Proposed Rule 3502 is to minimize emissions from unnecessary idling of freight locomotives operating within the same area.

NOTICE IS FURTHER GIVEN that Proposed Rule 3501 requires affected railroads to maintain records, submit weekly reports on locomotive idling events, and annual reports of affected locomotives. In addition, Proposed Rule 3501 provides two types of exemptions. First, an individual locomotive can be exempt from the recordkeeping and weekly reporting requirements if that individual locomotive is equipped with an anti-idling device set at 15 minutes or less, or if it uses an alternative technology. Second, if the railroad receives an approved Alternative Compliance Plan for their intra- and/or inter-district fleet of locomotives, the entire affected fleet would be exempt from recordkeeping and reporting of weekly idling events.

NOTICE IS FURTHER GIVEN that Proposed Rule 3502 requires locomotives not idle more than 30 minutes for specific reasons. A locomotive will be exempt from the idling requirements of the rule if the locomotive is part of an approved Emissions Equivalency Plan, or is equipped with an appropriately set anti-idling device.

NOTICE IS FURTHER GIVEN that the air quality objective of Proposed Rule 3501 is to identify opportunities for reducing locomotive idling events and to quantify idling events; the objective of Proposed Rule 3502 is to reduce unnecessary locomotive idling events. Implementation of Proposed Rule 3502 is expected to result in NOx and PM emission reductions and reductions in diesel particulate by limiting idling to 30 minutes under specific conditions.

NOTICE IS FURTHER GIVEN that the AQMD has prepared documents, for consideration by the AQMD Board, including:

Proposed Rule 3501 - Recordkeeping for Locomotive Idling
Proposed Rule 3502 - Minimization of Emissions from Locomotive Idling
Draft Staff Reports for Proposed Rules 3501 and 3502
Draft Socioeconomic Reports for Proposed Rules 3501 and 3502
Draft Program Environmental Assessment for Proposed Rules 3501 and 3502
Comparative Analysis Required by Health and Safety Code Section 40727.2

The above documents and materials are available for review at the AQMD Public Information Center, or may be obtained by contacting:

Ms. Lourdes Cordova-Martinez
South Coast Air Quality Management District
21865 Copley Drive Diamond Bar, CA 91765
(909) 396-2039

NOTICE IS FURTHER GIVEN that at the conclusion of the public hearing, the AQMD Board may make other amendments to Proposed Rules 3501 and 3502 which are justified by the evidence presented, or may decline the rule proposal.

Information about Proposed Rules 3501 and 3502 can be obtained by contacting Andrew Lee, Program Supervisor, Planning, Rule Development and Area Sources, South Coast Air Quality Management District, 21865 Copley Drive, Diamond Bar, CA 91765, (909) 396-2643.

Interested persons may attend and submit oral or written statements at the Board Hearing. Twenty-five (25) copies of all written materials must be submitted to the Clerk of the Board. Individuals who wish to submit written comments for review prior to the hearing must submit such comments to the Clerk of the Board, 21865 Copley Drive, Diamond Bar, CA, 91765, (909) 396-2500, or to cob@aqmd.gov on or before Tuesday, January 24, 2006. Electronic submittals will only be accepted if no more than 10 pages including attachments and submittals in MS Word, plain or HTML format.

DATED: December 28, 2005

SAUNDRA McDANIEL, Clerk of the Board

1/4/06CNS-909412#

INLAND VALLEY DAILY BULLETIN/

LA

201357

(When required)

RECORDING REQUESTED BY AND MAIL TO

LOS ANGELES DAILY JOURNAL
~ SINCE 1888 ~

915 E FIRST ST, LOS ANGELES, CA 90012
Mailing Address: P.O. Box 54026, Los Angeles, California 90054-0026
Telephone (213) 229-5300 / Fax (213) 680-3682

SAUNDRA McDANIEL
SCAQMD/HEARING BOARD
21865 COPLEY DRIVE
DIAMOND BAR, CA - 91765-4178

PROOF OF PUBLICATION

(2015.5 C.C.P.)

State of California)
County of Los Angeles) ss

Notice Type: HRG - NOTICE OF HEARING

Ad Description: RULES 3501 & 3502 PUBLIC HEARING

I am a citizen of the United States and a resident of the State of California; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer and publisher of the LOS ANGELES DAILY JOURNAL, a newspaper published in the English language in the city of LOS ANGELES, county of LOS ANGELES, and adjudged a newspaper of general circulation as defined by the laws of the State of California by the Superior Court of the County of LOS ANGELES, State of California, under date 04/26/1954, Case No. 599,382. That the notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

01/04/2006

Executed on: 01/04/2006
At Los Angeles, California

I certify (or declare) under penalty of perjury that the foregoing is true and correct.



Signature

This space for filing stamp only



DJ#: 909414

NOTICE OF PUBLIC HEARING
PROPOSED ADOPTION OF, OR
AMENDMENT(S) TO,
THE RULES AND REGULATIONS OF
THE
SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT

RE: Proposed Rules 3501 -
Recordkeeping for Locomotive Idling
and 3502 - Minimization of Emissions
from Locomotive Idling

NOTICE IS HEREBY GIVEN that a public hearing on the matter of adoption of rules and regulations for the South Coast Air Quality Management District (AQMD) will be held on Friday, February 3, 2006 in the Auditorium, AQMD Headquarters, 21865 Copley Drive, Diamond Bar, CA, at 9:00 a.m., at which time evidence will be taken and all interested persons will be heard by the AQMD Board.

NOTICE IS FURTHER GIVEN that the AQMD is considering adoption of Proposed Rule 3501 - Recordkeeping for Locomotive Idling and 3502 - Minimization of Emissions from Locomotive Idling. The purpose of Proposed Rule 3501 is to record idling events to identify opportunities for reducing idling emissions and to assist in quantifying idling emissions from freight locomotives operating within the jurisdiction of the AQMD, and Proposed Rule 3502 is to minimize emissions from unnecessary idling of freight locomotives operating within the same area.

NOTICE IS FURTHER GIVEN that Proposed Rule 3501 requires affected railroads to maintain records, submit weekly reports on locomotive idling events, and annual reports of affected locomotives. In addition, Proposed Rule 3501 provides two types of exemptions. First, an individual locomotive can be exempt from the recordkeeping and weekly reporting requirements if that individual locomotive is equipped with an anti-idling device set at 15 minutes or less, or if it uses an alternative technology. Second, if the railroad receives an approved Alternative Compliance Plan for their intra- and/or inter-district fleet of locomotives, the entire affected fleet would be exempt from recordkeeping and reporting of weekly idling events.

NOTICE IS FURTHER GIVEN that Proposed Rule 3502 requires locomotives not idle more than 30 minutes for specific reasons. A locomotive will be exempt from the idling requirements of the rule if the locomotive is part of an approved Emissions Equivalency Plan, or is equipped with an appropriately set anti-idling device.

NOTICE IS FURTHER GIVEN that the air quality objective of Proposed Rule 3501 is to identify opportunities for reducing locomotive idling events and to quantify idling events; the objective of Proposed Rule 3502 is to reduce unnecessary locomotive idling events. Implementation of Proposed Rule 3502 is expected to result in NOx and PM emission reductions and reductions in diesel particulate by

limiting idling to 30 minutes under specific conditions.

NOTICE IS FURTHER GIVEN that the AQMD has prepared documents, for consideration by the AQMD Board, including:

Proposed Rule 3501 - Recordkeeping for Locomotive Idling
Proposed Rule 3502 - Minimization of Emissions from Locomotive Idling
Draft Staff Reports for Proposed Rules 3501 and 3502
Draft Socioeconomic Reports for Proposed Rules 3501 and 3502
Draft Program Environmental Assessment for Proposed Rules 3501 and 3502
Comparative Analysis Required by Health and Safety Code Section 40727.2

The above documents and materials are available for review at the AQMD Public Information Center, or may be obtained by contacting:

Ms. Lourdes Cordova-Martinez
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765
(909) 396-2039

NOTICE IS FURTHER GIVEN that at the conclusion of the public hearing, the AQMD Board may make other amendments to Proposed Rules 3501 and 3502 which are justified by the evidence presented, or may decline the rule proposal.

Information about Proposed Rules 3501 and 3502 can be obtained by contacting Andrew Lee, Program Supervisor, Planning, Rule Development and Area Sources, South Coast Air Quality Management District, 21865 Copley Drive, Diamond Bar, CA 91765, (909) 396-2643.

Interested persons may attend and submit oral or written statements at the Board Hearing. Twenty-five (25) copies of all written materials must be submitted to the Clerk of the Board. Individuals who wish to submit written comments for review prior to the hearing must submit such comments to the Clerk of the Board, 21865 Copley Drive, Diamond Bar, CA, 91765, (909) 396-2500, or to cob@aqmd.gov on or before Tuesday, January 24, 2006. Electronic submittals will only be accepted if no more than 10 pages including attachments and submittals in MS Word, plain or HTML format.
DATED: December 28, 2005
SAUNDRA McDANIEL
Clerk of the Board
1/4/06

DJ-909414#

THE PRESS-ENTERPRISE

3512 Fourteenth Street
Riverside CA 92501-3878
951-684-1200
951-368-9018 FAX

PROOF OF PUBLICATION
(2010, 2015.5 C.C.P.)

Publication(s): Press-Enterprise

PROOF OF PUBLICATION OF

Ad Desc.: PROPOSED Rules 3501,3502/909411

I am a citizen of the United States. I am over the age of eighteen years and not a party to or interested in the above entitled matter. I am an authorized representative of THE PRESS-ENTERPRISE, a newspaper of general circulation, printed and published daily in the city of Riverside, County of Riverside, and which newspaper has been adjudicated a newspaper of general circulation by the Superior Court of the County of Riverside, State of California, under date of April 25, 1952, Case Number 54446, under date of March 29, 1957, Case Number 65673 and under date of August 25, 1995, Case Number 267864; that the notice, of which the annexed is a printed copy, has been published in said newspaper in accordance with the instructions of the person(s) requesting publication, and not in any supplement thereof on the following dates, to wit:

01-04-06

I Certify (or declare) under penalty of perjury that the foregoing is true and correct.

Date: Jan. 4, 2006
At: Riverside, California

CALIF NEWSPAPER SERV BUREAU
PO BOX 60460
LOS ANGELES CA 90060

Ad #: 7366425
PO #: CNS909411
Agency #: _____

Ad Copy:

NOTICE OF PUBLIC HEARING PROPOSED ADOPTION OF, OR AMENDMENT(S) TO,

THE RULES AND REGULATIONS OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RE: Proposed Rules 3501 - Recordkeeping for Locomotive Idling and 3502 - Minimization of Emissions from Locomotive Idling

NOTICE IS HEREBY GIVEN that a public hearing on the matter of adoption of rules and regulations for the South Coast Air Quality Management District (AQMD) will be held on Friday, February 3, 2006 in the Auditorium, AQMD Headquarters, 21865 Copley Drive, Diamond Bar, CA, at 9:00 a.m., at which time evidence will be taken and all interested persons will be heard by the AQMD Board.

NOTICE IS FURTHER GIVEN that the AQMD is considering adoption of Proposed Rule 3501 - Recordkeeping for Locomotive Idling and 3502 - Minimization of Emissions from Locomotive Idling. The purpose of Proposed Rule 3501 is to record idling events to identify opportunities for reducing idling emissions and to assist in quantifying idling emissions from freight locomotives operating within the jurisdiction of the AQMD, and Proposed Rule 3502 is to minimize emissions from unnecessary idling of freight locomotives operating within the same area.

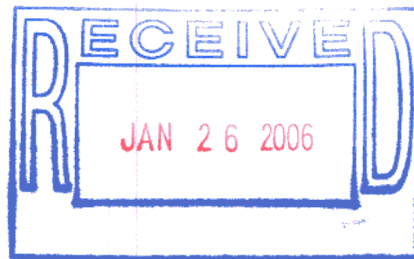
NOTICE IS FURTHER GIVEN that Proposed Rule 3501 requires affected railroads to maintain records, submit weekly reports on locomotive idling events, and annual reports of affected locomotives. In addition, Proposed Rule 3501 provides two types of exemptions. First, an individual locomotive can be exempt from the recordkeeping and weekly reporting requirements if that individual locomotive is equipped with an anti-idling device set at 15 minutes or less, or if it uses an alternative technology. Second, if the railroad receives an approved Alternative Compliance Plan for their intra- and/or inter-district fleet of locomotives, the entire affected fleet would be exempt from recordkeeping and reporting of weekly idling events.

NOTICE IS FURTHER GIVEN that Proposed Rule 3502 requires locomotives not idle more than 30 minutes for specific reasons. A locomotive will be exempt from the idling requirements of the rule if the locomotive is part of an approved Emissions Equivalency Plan, or is equipped with an appropriately set anti-idling device.

NOTICE IS FURTHER GIVEN that the air quality objective of Proposed Rule 3501 is to identify opportunities for reducing locomotive idling events and to quantify idling events; the objective of Proposed Rule 3502 is to reduce unnecessary locomotive idling events. Implementation of Proposed Rule 3502 is expected to result in NOx and PM emission reductions and reductions in diesel particulate by limiting idling to 30 minutes under specific conditions.

NOTICE IS FURTHER GIVEN that the AQMD has prepared documents for consideration by the AQMD Board, including:

Proposed Rule 3501 - Recordkeeping for Locomotive Idling



Proposed Rule 3502 - Minimization of Emissions from Locomotive Idling
Draft Staff Reports for Proposed Rules 3501 and 3502
Draft Socioeconomic Reports for Proposed Rules 3501 and 3502
Draft Program Environmental Assessment for Proposed Rules 3501 and 3502
Comparative Analysis Required by Health and Safety Code Section 40727.2

The above documents and materials are available for review at the AQMD Public Information Center, or may be obtained by contacting:

Ms. Lourdes Cordova-Martinez
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765
(909) 396-2039

NOTICE IS FURTHER GIVEN that at the conclusion of the public hearing, the AQMD Board may make other amendments to Proposed Rules 3501 and 3502 which are justified by the evidence presented, or may decline the rule proposal.

Information about Proposed Rules 3501 and 3502 can be obtained by contacting Andrew Lee, Program Supervisor, Planning, Rule Development and Area Sources, South Coast Air Quality Management District, 21865 Copley Drive, Diamond Bar, CA 91765, (909) 396-2643.

Interested persons may attend and submit oral or written statements at the Board Hearing. Twenty-five (25) copies of all written materials must be submitted to the Clerk of the Board. Individuals who wish to submit written comments for review prior to the hearing must submit such comments to the Clerk of the Board, 21865 Copley Drive, Diamond Bar, CA, 91765, (909) 396-2500, or to cob@aqmd.gov on or before Tuesday, January 24, 2006. Electronic submittals will only be accepted if no more than 10 pages including attachments and submittals in MS Word, plain or HTML format.

DATED: December 28, 2005
SAUNDRA McDANIEL
Clerk of the Board
1/4/06
CNS-909411#
THE PRESS ENTERPRISE

SAN BERNARDINO COUNTY SUN

399 D ST, SAN BERNARDINO, CA 92401
Telephone (909) 386-3960 / Fax (909) 381-3976

SAUNDRA McDANIEL
SCAQMD/HEARING BOARD
21865 COPLEY DRIVE
DIAMOND BAR, CA - 91765-4178

PROOF OF PUBLICATION

(2015.5 C.C.P.)

State of California)
County of SAN BERNARDINO) ss

Notice Type: HRG - NOTICE OF HEARING

Ad Description: RULES 3501 & 3502 PUBLIC HEARING

I am a citizen of the United States and a resident of the State of California; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer and publisher of the SAN BERNARDINO COUNTY SUN, a newspaper published in the English language in the city of SAN BERNARDINO, county of SAN BERNARDINO, and adjudged a newspaper of general circulation as defined by the laws of the State of California by the Superior Court of the County of SAN BERNARDINO, State of California, under date 06/20/1952, Case No. 73084. That the notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

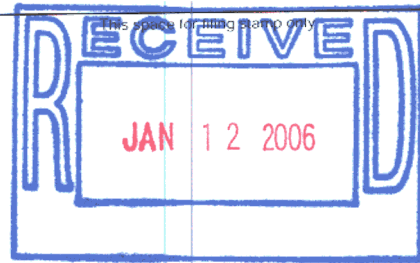
01/04/2006

Executed on: 01/04/2006
At Los Angeles, California

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Helen Tang

Signature



SBS #: 909413

**NOTICE OF PUBLIC HEARING
PROPOSED ADOPTION
OF, OR AMENDMENT(S)
TO,
THE RULES AND
REGULATIONS OF THE
SOUTH COAST AIR
QUALITY MANAGEMENT
DISTRICT**

**RE: Proposed Rules 3501
Recordkeeping for
Locomotive Idling and
3502 - Minimization of
Emissions from
Locomotive Idling**

NOTICE IS HEREBY GIVEN that a public hearing on the matter of adoption of rules and regulations for the South Coast Air Quality Management District (AQMD) will be held on Friday, February 3, 2006 in the Auditorium, AQMD Headquarters, 21865 Copley Drive, Diamond Bar, CA, at 9:00 a.m., at which time evidence will be taken and all interested persons will be heard by the AQMD Board.

NOTICE IS FURTHER GIVEN that the AQMD is considering adoption of Proposed Rule 3501 - Recordkeeping for Locomotive Idling and 3502 - Minimization of Emissions from Locomotive Idling. The purpose of Proposed Rule 3501 is to record idling events to identify opportunities for reducing idling emissions and to assist in quantifying idling emissions from freight locomotives operating within the jurisdiction of the AQMD, and Proposed Rule 3502 is to minimize emissions from unnecessary idling of freight locomotives operating within the same area.

NOTICE IS FURTHER GIVEN that Proposed Rule 3501 requires affected railroads to maintain records, submit weekly reports on locomotive idling events, and annual reports of affected locomotives. In addition, Proposed Rule 3501 provides two types of exemptions. First, an individual locomotive can be exempt from the recordkeeping and weekly reporting requirements if that individual locomotive is equipped with an anti-idling device set at 15 minutes or less, or if it uses an alternative technology. Second, if the railroad receives an approved Alternative Compliance Plan for their intra- and/or inter-district fleet of locomotives,

the entire affected fleet would be exempt from recordkeeping and reporting of weekly idling events.

NOTICE IS FURTHER GIVEN that Proposed Rule 3502 requires locomotives not idle more than 30 minutes for specific reasons. A locomotive will be exempt from the idling requirements of the rule if the locomotive is part of an approved Emissions Equivalency Plan, or is equipped with an appropriately set anti-idling device.

NOTICE IS FURTHER GIVEN that the air quality objective of Proposed Rule 3501 is to identify opportunities for reducing locomotive idling events and to quantify idling events; the objective of Proposed Rule 3502 is to reduce unnecessary locomotive idling events. Implementation of Proposed Rule 3502 is expected to result in NOx and PM emission reductions and reductions in diesel particulate by limiting idling to 30 minutes under specific conditions.

NOTICE IS FURTHER GIVEN that the AQMD has prepared documents, for consideration by the AQMD Board, including:

Proposed Rule 3501 - Recordkeeping for Locomotive Idling
Proposed Rule 3502 - Minimization of Emissions from Locomotive Idling
Draft Staff Reports for Proposed Rules 3501 and 3502
Draft Socioeconomic Reports for Proposed Rules 3501 and 3502
Draft Program Environmental Assessment for Proposed Rules 3501 and 3502
Comparative Analysis Required by Health and Safety Code Section 40727.2

The above documents and materials are available for review at the AQMD Public Information Center, or may be obtained by contacting:

Ms. Lourdes Cordova-Martinez
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765
(909) 396-2039

NOTICE IS FURTHER GIVEN that at the conclusion of the public hearing, the AQMD Board may make other amendments to Proposed Rules 3501 and 3502 which are justified by the evidence presented, or may decline the rule proposal.

Information about Proposed Rules 3501 and 3502 can be obtained by contacting Andrew Lee, Program Supervisor, Planning, Rule Development and Area Sources, South Coast Air Quality Management District, 21865 Copley Drive, Diamond Bar, CA 91765, (909) 396-2643.

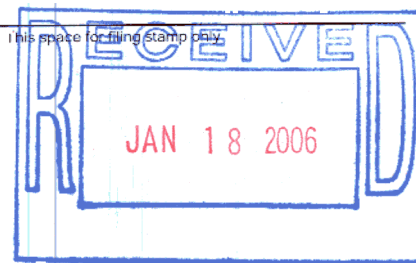
Interested persons may attend and submit oral or written statements at the Board Hearing. Twenty-five (25) copies of all written materials must be submitted to the Clerk of the Board. Individuals who wish to submit written comments for review prior to the hearing must submit such comments to the Clerk of the Board, 21865 Copley Drive, Diamond Bar, CA, 91765, (909) 396-2500, or to cob@aqmd.gov on or before Tuesday, January 24, 2006. Electronic submittals will only be accepted if no more than 10 pages including attachments and submittals in MS Word, plain or HTML format.

DATED: December 28, 2005
SAUNDRA McDANIEL
Clerk of the Board
1/4/06

SBS-909413#

THE REGISTER

625 N GRAND AVE, SANTA ANA, CA 92701
Telephone (714) 796-7000 / Fax (714) 796-6058



PROOF OF PUBLICATION

(2015.5 C.C.P.)

State of California
County of ORANGE

) ss

Notice Type: HRG - NOTICE OF HEARING

Ad Description: RULES 3501 & 3502 PUBLIC HEARING

I am a citizen of the United States and a resident of the State of California; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer and publisher of THE REGISTER, a newspaper published in the English language in the city of SANTA ANA, county of ORANGE, and adjudged a newspaper of general circulation as defined by the laws of the State of California by the Superior Court of the County of ORANGE, State of California, under date 11/19/1905, Case No. A21046. That the notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

01/04/2006

Executed on: 01/04/2006
At SANTA ANA, California

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Signature

CNS#: 909407

NOTICE OF PUBLIC
HEARING
PROPOSED ADOPTION
OF, OR AMENDMENT(S)
TO
THE RULES AND
REGULATIONS OF THE
SOUTH COAST AIR
QUALITY MANAGEMENT
DISTRICT

RE: Proposed Rules 3501 -
Recordkeeping for
Locomotive Idling and
3502 - Minimization of
Emissions from
Locomotive Idling

NOTICE IS HEREBY GIVEN that a public hearing on the matter of adoption of rules and regulations for the South Coast Air Quality Management District (AQMD) will be held on Friday, February 3, 2006 in the Auditorium, AQMD Headquarters, 21865 Copley Drive, Diamond Bar, CA, at 9:00 a.m., at which time evidence will be taken and all interested persons will be heard by the AQMD Board.

NOTICE IS FURTHER GIVEN that the AQMD is considering adoption of Proposed Rule 3501 - Recordkeeping for Locomotive Idling and 3502 - Minimization of Emissions from Locomotive Idling. The purpose of Proposed Rule 3501 is to record idling events to identify opportunities for reducing idling emissions and to assist in quantifying idling emissions from freight locomotives operating within the jurisdiction of the AQMD, and Proposed Rule 3502 is to minimize emissions from unnecessary idling of freight locomotives operating within the same area.

NOTICE IS FURTHER GIVEN that Proposed Rule 3501 requires affected railroads to maintain records, submit weekly reports on locomotive idling events, and annual reports of affected locomotives. In addition, Proposed Rule 3501 provides two types of exemptions. First, an individual locomotive can be exempt from the recordkeeping and weekly reporting requirements if that individual locomotive is equipped with an anti-idling device set at 15 minutes or less, or if it uses an alternative technology. Second, if the railroad receives an approved Alternative Compliance Plan for their intra- and/or inter-district fleet of locomotives,

the entire affected fleet would be exempt from recordkeeping and reporting of weekly idling events.

NOTICE IS FURTHER GIVEN that Proposed Rule 3502 requires locomotives not idle more than 30 minutes for specific reasons. A locomotive will be exempt from the idling requirements of the rule if the locomotive is part of an approved Emissions Equivalency Plan, or is equipped with an appropriately set anti-idling device.

NOTICE IS FURTHER GIVEN that the air quality objective of Proposed Rule 3501 is to identify opportunities for reducing locomotive idling events and to quantify idling events; the objective of Proposed Rule 3502 is to reduce unnecessary locomotive idling events. Implementation of Proposed Rule 3502 is expected to result in NOx and PM emission reductions and reductions in diesel particulate by limiting idling to 30 minutes under specific conditions.

NOTICE IS FURTHER GIVEN that the AQMD has prepared documents, for consideration by the AQMD Board, including:

Proposed Rule 3501 - Recordkeeping for Locomotive Idling
Proposed Rule 3502 - Minimization of Emissions from Locomotive Idling
Draft Staff Reports for Proposed Rules 3501 and 3502
Draft Socioeconomic Reports for Proposed Rules 3501 and 3502
Draft Program Environmental Assessment for Proposed Rules 3501 and 3502
Comparative Analysis Required by Health and Safety Code Section 40727.2

The above documents and materials are available for review at the AQMD Public Information Center, or may be obtained by contacting:

Ms. Lourdes Cordova-Martinez
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765
(909) 396-2039

NOTICE IS FURTHER GIVEN that at the conclusion of the public hearing, the AQMD Board may make

other amendments to Proposed Rules 3501 and 3502 which are justified by the evidence presented, or may decline the rule proposal.

Information about Proposed Rules 3501 and 3502 can be obtained by contacting Andrew Lee, Program Supervisor, Planning, Rule Development and Area Sources, South Coast Air Quality Management District, 21865 Copley Drive, Diamond Bar, CA 91765, (909) 396-2643.

Interested persons may attend and submit oral or written statements at the Board Hearing. Twenty-five (25) copies of all written materials must be submitted to the Clerk of the Board. Individuals who wish to submit written comments for review prior to the hearing must submit such comments to the Clerk of the Board, 21865 Copley Drive, Diamond Bar, CA 91765, (909) 396-2500, or to coq@aqmd.gov on or before Tuesday, January 24, 2006. Electronic submissions will only be accepted if no more than 10 pages including attachments and submittals in MS Word, plain or HTML format.

DATED: December 28, 2005
SAUNDRA Mc DANIEL
Clerk of the Board
1/4/06
CNS-909407#
THE REGISTER

ATTACHMENT H

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Staff Report **Proposed Rule 3501 - Recordkeeping for Locomotive Idling**

February 2006

Deputy Executive Officer

Planning, Rule Development, and Area Sources
Elaine Chang, DrPH

Assistant Deputy Executive Officer

Planning, Rule Development, and Area Sources
Laki Tisopulos, Ph.D., P.E.

Planning and Rules Manager

Planning, Rule Development, and Area Sources
Susan Nakamura

Author:	Christopher Abe - Air Quality Specialist
Technical Assistance:	Mike Bogdanoff – Program Supervisor Cheryl Marshall – Air Quality Specialist
Reviewed by:	Barbara Baird – Principal Deputy District Counsel Peter Greenwald – Senior Policy Advisor Mike Harris – Senior Deputy District Counsel Frances Keeler – Senior Deputy District Counsel Andrew Lee, P.E. – Program Supervisor Kurt R. Wiese – District Counsel William Wong – Senior Deputy District Counsel

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
GOVERNING BOARD**

Chairman: WILLIAM A. BURKE, Ed.D.
Speaker of the Assembly Appointee

Vice Chairman: S. ROY WILSON, Ed.D.
Supervisor, Fourth District
Riverside County Representative

MEMBERS:

MICHAEL D. ANTONOVICH
Supervisor, Fifth District
Los Angeles County Representative

JANE W. CARNEY
Senate Rules Committee Appointee

BEATRICE J. S. LAPISTO-KIRTLEY
Mayor Pro Tem, City of Bradbury
Cities Representative, Los Angeles County, Eastern Region

RONALD O. LOVERIDGE
Mayor, City of Riverside
Cities Representative, Riverside County

GARY OVITT
Supervisor, Fourth District
San Bernardino County Representative

JAN PERRY
Councilmember, City of Los Angeles
Cities Representative, Los Angeles County, Western Region

MIGUEL PULIDO
Mayor, City of Santa Ana
Cities Representative, Orange County

JAMES W. SILVA
Supervisor, Second District
Orange County Representative

CYNTHIA VERDUGO-PERALTA
Governor's Appointee

DENNIS YATES
Mayor, City of Chino
Cities Representative, San Bernardino County

EXECUTIVE OFFICER:

BARRY R. WALLERSTEIN, D.Env.

TABLE OF CONTENTS

TABLE OF CONTENTS	i
EXECUTIVE SUMMARY	
BACKGROUND	ES-1
PROPOSED RULE 3501 REQUIREMENTS	ES-1
CHAPTER 1: BACKGROUND	
INTRODUCTION	1-1
DIESEL PARTICULATE MATTER	1-1
REGULATORY HISTORY	1-3
REGULATORY AUTHORITY	1-4
CHAPTER 2: SUMMARY OF PROPOSED RULE 3501	
OVERVIEW	2-1
PUBLIC PROCESS	2-1
PROPOSED RULE 3501 REQUIREMENTS	2-2
CHAPTER 3: IMPACT ASSESSMENT	
SUMMARY OF DISTRICT RAIL OPERATIONS	3-1
CALIFORNIA ENVIRONMENTAL QUALITY ACT	3-2
SOCIOECONOMIC ANALYSIS	3-2
DRAFT FINDINGS UNDER CALIFORNIA	
HEALTH AND SAFETY CODE 40727	3-3
COMPARATIVE ANALYSIS	3-4
APPENDIX A: PUBLIC COMMENTS	A-1

EXECUTIVE SUMMARY

BACKGROUND

PROPOSED RULE 3501 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) 3501 – Recordkeeping for Locomotive Idling establishes recordkeeping requirements for locomotives operating in the South Coast Air Quality Management District (District). The purpose of PR 3501 is to record idling events to identify opportunities for reducing idling emissions and to assist the District in quantifying idling emissions. The District anticipates that information gathered under PR 3501 can assist the District in determining whether additional locomotive idling restrictions are needed, including amendments to PR 3502 – Minimization of Emissions from Locomotive Idling.

PROPOSED RULE 3501 REQUIREMENTS

PR 3501 is applicable to Class I freight railroads and switching and terminal freight railroads that operate locomotives 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 Harbor Line, Inc. (PHL) in the district. LAJ is wholly owned by BNSF.

Passenger railroads operating in the District, such as Amtrak and Metrolink, would be excluded from the requirements of PR 3501. Preliminary data analysis indicates that idling of passenger train locomotives contribute less than ten percent of NO_x and PM emissions from rail operations. Passenger operations are 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

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.”

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 after 12 hour shifts to prevent fatigue, even if they have not reached their destination. Due to issues such as delays associated with loading and unloading freight, long routes, system delays, etc. it is more likely that a crew on a freight locomotive may require a crew change before it reaches its destination as compared to a crew on a passenger locomotive where the timetable for arrivals and departures are more definitive. As a result, passenger operations have proportionally lower idling emissions 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.

The following summarizes key requirements for PR 3501. For a more detailed discussion of the requirements for PR 3501, please refer to Chapter 2 of this Draft Staff Report. PR 3501 would establish the following requirements:

- Operators must begin recordkeeping for idling events of 30 minutes or more starting six months after rule adoption unless meeting certain exemption criteria.
- Recordkeeping must include the following information:
 - Name of locomotive operator and name of owner, if different;
 - Locomotive identifier;
 - Specific location of idling event, including specification of milepost information;
 - Date and time of each idling event onset;
 - Duration of each idling event; and
 - For idling events of more than two hours, an explanation for the idling event.
- An owner or operator of a railroad may elect to implement an approved Alternative Compliance Plan, excluding foreign power locomotives that are operated in the District but not owned by the railroads, in lieu of recording idling events. Foreign power must continue to comply with recordkeeping requirements. The Alternative Compliance Plan will specify the railroad's commitment to install anti-idling devices or use alternative technologies on its entire interdistrict and/or intradistrict locomotive fleets based on specified dates. The alternative technology must achieve an 85% emission reduction. An Alternative Compliance Plan must be submitted at least 90 days before its intended use, but no later than June 30, 2006 if intended for use for the operator's intradistrict fleet or combined intradistrict and interdistrict fleets and no later than January 1, 2008 if intended for use for the operator's interdistrict fleet.
- Following the commencement of recordkeeping, the operator of a locomotive is required to submit a weekly electronic report identifying all idling events greater than 30 minutes.
- Beginning 60 days after rule adoption and every year thereafter the operator of a locomotive is required to submit an annual electronic report identifying:
 - Locomotive information for all locomotives operated in the district over the past year (e.g., locomotive service, engine information);
 - whether equipped with anti-idling device or alternative technology;
 - description of any emission control devices;
 - whether equipped with global position systems;

- | ▪ locomotive identifiers of controlled and uncontrolled interdistrict and intradistrict locomotives; and
- | ▪ locomotive identifiers of locomotives no longer operated in the District that were previously reported.
- | • Operators are exempt from keeping records for a locomotive equipped with an anti-idling device that is set at 15 minutes or less, engaged, and not tampered with, as of the date the modified locomotive is first operated in the District.
- | • Operators are exempt from keeping records for a locomotive equipped to operate exclusively using an alternative technology, as of the date the modified locomotive is first operated in the District.
- | • Operators of a locomotive with an approved Alternative Compliance Plan are exempt from most recordkeeping requirements as of the date of approval of the Alternative Compliance Plan.
- | • An operator required to conduct recordkeeping must maintain, for a period of not less than two years, and make available to the Executive Officer within this period, upon request, all information necessary to verify and substantiate information required for idling events. This information may include dispatch center files, locomotive operational logs, locomotive position information from any electronic system(s) that can be used to verify location, maintenance and repair records, or any other methods or techniques used to verify idling events. The purpose of this provision is to ensure that the railroads maintain records and information that may be used by the Executive Officer to verify idling events.

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.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

Proposed Rule (PR) 3501 – Recordkeeping for Locomotive Idling establishes recordkeeping requirements for all locomotives that operate in the South Coast Air Quality Management District (District). The purpose of PR 3501 is to provide the District and the public information regarding locomotive idling within the South Coast Air Basin. Through recording of idling events the District seeks to identify possible additional opportunities for reducing idling emissions and to better quantify emissions from idling events. Effective six months from date of adoption, PR 3501 would require recordkeeping to identify events where locomotives are left idling for more than 30 minutes. In lieu of recording these idling events, a railroad can voluntarily submit an Alternative Compliance Plan committing to install anti-idling devices or operate using alternative technologies achieving 85 percent reductions on its interdistrict fleet, intradistrict fleet, or both fleets. If an anti-idling device is installed, set at 15 minutes, engaged, and not tampered with, the locomotive is also exempt from PR 3502 – Minimization of Emissions from Locomotive Idling. PR 3501 also requires weekly reporting of idling events of greater than 30 minutes, as well as annual reporting on locomotive fleets.

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).³ 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 District is due to diesel PM.⁴ Exposure to diesel exhaust can

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.”

³ Office of Environmental Health Hazard Assessment and The American Lung Association of California. Health Effects of Diesel Exhaust.

⁴ 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.⁵ 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).

⁵ 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.⁶

⁶ 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.

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 2010.⁷

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.⁸ 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"⁹ 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

⁷ Memorandum of Mutual Understandings and Agreements, South Coast Locomotive Fleet Average Emissions Program, 1998.

⁸ ARB/Railroad Statewide Agreement, Particulate Emissions Reduction Program at California Railyards, 2005.

⁹ 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 (eds.), *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.¹⁰ 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 3501 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 3501 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.

¹⁰ 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” to reduce emissions. PR 3501 does not require any emission reductions from locomotives, so Health and Safety Code §40702 does not apply in this case.

PR 3501 is basically an information gathering rule, requiring records to be kept of locomotive idling. In addition to being within the district’s general authorities discussed above, it is specifically authorized by Health & Safety Code §41511, which provides:

For the purpose of carrying out the duties imposed upon the state board or any district, the state board or the district, as the case may be, may adopt rules and regulations to require the owner or the operator of any air pollution emission source to take such action as the state board or the district may determine to be reasonable for the determination of the amount of such emission from such source.

PR 3501 requires the gathering of information from which emissions may be calculated and methods of reducing such emissions may be determined. The districts may adopt such rules to collect information about emissions that may affect public health. 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 41705,¹¹ 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.

Accordingly, the district may regulate locomotives to prevent public nuisance (potential health impacts from TACs 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

¹¹ Section 41705, relating to agricultural operations and compost-handling operations, is not relevant to the present context.

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 NO_x, 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.

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

The railroads contend that the PR 3501 may be prohibited by principles of federal preemption. PR 3501, however, does not establish any emission standard, require installation of any control equipment, or interfere with the safe and efficient operation of the railroad, and therefore 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. The basic requirement of PR 3501 is to keep records of idling events. A railroad may record idling events and reduce idling without affecting the design or production of the locomotive.

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 3501 does not impose any permitting or other "prerequisite" to rail operations. The District has designed PR 3501 to not interfere with railroad operations. Under the decision of the Surface Transportation Board, PR 3501 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 reduce congestion and operate the railroad's business safely and efficiently, 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. In addition, the railroads' Proposition 65 warning states that 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 idling emissions. The requirements of PR 3501 call for recordkeeping of idling events. Locomotives equipped with and using anti-idling devices are exempt from recordkeeping. New locomotives are equipped with anti-idling devices, and therefore would be exempt from recordkeeping. These reasonable recordkeeping requirements do not interfere with interstate commerce and therefore would not be preempted by the ICCTA.

CHAPTER 2: SUMMARY OF PROPOSED RULE 3501

OVERVIEW

PUBLIC PROCESS

PROPOSED RULE 3501 REQUIREMENTS

OVERVIEW

PR 3501 is applicable to Class I freight railroads and switching and terminal railroads in the District. The purpose of PR 3501 is to provide the District and the public information regarding possible excess locomotive idling within the South Coast Air Basin. Through recording of idling events the District may identify additional opportunities for reducing idling emissions and better quantify emissions from idling events. The District anticipates that information gathered under PR 3501 can assist the District in fashioning additional locomotive idling restrictions in the future, including amendments to PR 3502 – Minimization of Emissions from Locomotive Idling.

PUBLIC PROCESS

The District staff began development of PR 3501 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 3501. 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 3501 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 3501, 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 Appendix A.

PROPOSED RULE 3501 REQUIREMENTS

PR 3501 establishes two main requirements for recordkeeping and reporting. Under the proposed rule, owners or operators of railroads are required to maintain records if a locomotive idles for longer than 30 minutes. The operator of a railroad is required to submit weekly reports of these idling events to the District. Annual reports that provide information about the locomotive fleet and locomotives equipped with anti-idling devices are also required under the proposed rule.

As discussed in more detail below, the proposed rule offers two types of exemptions from recordkeeping. If a railroad voluntarily submits an Alternative Compliance Plan committing to

installing anti-idling devices or using alternative technologies which achieve an 85 percent reduction in emissions on interdistrict and/or intradistrict locomotive fleets, the railroad would be exempt from recordkeeping requirements for the fleet(s) addressed by the Plan. In addition, the proposed rule exempts railroads from recordkeeping requirements for individual locomotives equipped with anti-idling devices or equipped with alternative technologies.

The following includes a more detailed description of the requirements of the proposed rule.

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 unoccupied 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 to wait 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.¹

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 amount of idling that currently occurs in the district is unknown. However, in the CARB's Roseville study, it was estimate that 45 percent of the diesel particulate emissions at the Roseville railyard were associated with idling. Locomotives idle in areas throughout the district such as in and around railyards, on sidings, on rail spurs, at crossings, and on the mainline. Additional information is needed to identify where, when, and how long locomotives are idling. The purpose of PR 3501 is to provide the District and the public information regarding locomotive idling within the district. Through recording of idling events the District may identify additional opportunities for reducing idling emissions and better quantify emissions from idling events. The District anticipates that information gathered under PR 3501 may assist the District in fashioning additional locomotive idling restrictions in the future, including possible amendments to PR 3502 – Minimization of Emissions from Locomotive Idling.

Applicability

PR 3501 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

¹ San Diego Union Tribune, July 9, 2005.

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 railroads operating in the District, such as Amtrak and Metrolink, would not be subject to the requirements of PR 3501 as a preliminary data analysis indicates that these operations contribute less than ten percent of NO_x 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 3501 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.

Recordkeeping Requirements

Under PR 3501, beginning six months from date of rule adoption an operator is required to maintain records for each idling event of 30 minutes or more. Recordkeeping requirements can be satisfied by engineers alone, without interaction with dispatchers. Under the proposed rule, an idling event is defined as the operation of a locomotive's diesel internal combustion engine used for locomotive motive power when the engine is not used to move the locomotive. It is not considered idling when the propulsion engine is running while the locomotive is being slowed or moved by gravity. Under the proposed rule, the following information must be recorded for each idling event that is 30 minutes or more:

- Name and owner and operator of the locomotive. If the name and owner of the locomotive are different both entities should be recorded;
- Locomotive identifier. The locomotive identifier is the numeric or alphanumeric nomenclature that is used by the railroad to uniquely identify locomotives one from another. The most commonly used locomotive identifier is the road number displayed on the front, back and sides of the locomotive;
- Specific location of idling event. The location of the idling event should specify the milepost and the city and county in which the idling event occurred.;
- Date and time of idling event onset. ;
- Duration of the idling event. The operator should identify the time duration of the idling event starting from time recorded for the idling event onset;
- For idling events more than two hours
 - explanation of the reason for the prolonged idling event; and
 - the same information required for idling events of 30 minutes or more.

Ultimately, the District staff would like records for all idling to better estimate emissions from locomotives. However, requiring recordkeeping for idling events that are less than 30 minutes may prove to be too burdensome for the railroads. The District staff is thus recommending that records be maintained for idling events that are longer than 30 minutes. The 30 minute timeframe is consistent with the idling requirements under Proposed Rule 3502.

Previous versions of Proposed Rule 3501 included provisions where the railroad was required to provide, for any idling event longer than 30 minutes, a detailed reason for idling events and an explanation of whether the length of the idling event could have been reduced. Based on discussions with the Working Group on November 9, the railroads had commented that providing a reason for all idling events could interfere with railroad operations. Thus, to minimize the potential burden to the railroads, the proposed rule was revised such that the operator is required to provide a specific reason for idling only for those idling events greater than two hours. The proposed rule allows the railroad to select the appropriate personnel to compile this information. The proposed rule was revised to allow a five-day period between the end of a weekly reporting cycle (which occurs on Friday) and the weekly report due date (the following Wednesday) to allow the railroads time to compile and verify weekly reports prior to submitting the report.

The following provides some examples of the detailed information that should be provided if idling exceeds two hours.

- Required to yield the right of way. Provide information why the locomotive needed to yield for more than two hours. The operator should identify if information was communicated to the engineer of the potential wait time and if so, who notified the engineer;
- Cannot proceed pending instructions or orders. The operator should identify if anyone such as a dispatcher provided information regarding the delay. In addition, the operator should specify the type of instructions and orders that were provided to the engineer of the locomotive;
- A mechanic is idling the locomotive for maintenance or diagnostic purposes which can be conducted only when the locomotive engine is in operation. If a mechanic is idling the locomotive for maintenance or diagnostic purposes, the operator should specify the type of test, procedure, maintenance or diagnostic procedure performed on the locomotive;
- Locomotive fueling. The operator should identify the specific circumstances or conditions where fueling the locomotive took over two hours. In addition, the operator should identify the unusual conditions that led to fueling over an extended time period;
- Prevent the freezing of engine coolant (water). The operator should specify the ambient temperature and the weather conditions in which the idling event occurred;
- Maintain locomotive battery charge or voltage. The operator should specify the battery charge or voltage during which the extended idling occurred;
- Provide an adequate supply of air for locomotive and railcar air brakes. The explanation should specify if the locomotive idling was the lead or trailing locomotive and the number of locomotives in the consist that were idling to provide an adequate supply of air for locomotive or railcar air brakes. If two or more locomotives in the consist were idling

for more than two hours to provide pressure for the air brakes, the operator should provide an explanation why one locomotive was not sufficient to provide an adequate supply of air pressure;

- Required for some other safety purpose. The operator should provide a specific explanation of why the locomotive needed to idle for more than two hours for a safety purpose not specifically identified above. The explanation should describe the situation or hazard that idling of the locomotive was trying to prevent or minimize; or
- Required to provide power for comfort heating or cooling in an occupied locomotive cab. The explanation should specify if the locomotive idling was the lead or trailing locomotive and the number of locomotives in the consist that were idling for comfort heating or cooling.

An operator required to conduct recordkeeping must maintain records for a period of not less than two years and make available to the Executive Officer within this period, upon request, all information necessary to verify and substantiate information required for idling events, including events of less than two hours. This information may include dispatch center files, locomotive operational logs, locomotive position information from any electronic system(s) that can be used to verify location, maintenance and repair records, or any other methods or techniques used to verify idling events. The purpose of this provision is not to require the collection and retention of new information by the railroads, but to ensure that the railroads do not destroy records that may be used to verify idling events and that such records and information are maintained, such that the Executive Officer has sufficient information to verify records of idling events. In addition, this requirement will provide flexibility to conduct retrospective analyses of reported idling events, including evaluation of any possible patterns of idling of less than two hours, for which PR 3501 does not required a detailed explanation.

Where a railroad is not subject to recordkeeping for idling events, PR 3501 requires that operators maintain and make available to the Executive Officer for a period of not less than two years all information needed to verify the installation of anti-idling devices and that the anti-idling devices are set at 15 minutes or less and are engaged. This information may include records from anti-idling device event recorders. This provision is intended to ensure the retention of records which might be needed for confirming the presence and performance of anti-idling devices.

Alternative Compliance Plan

Under PR 3501, in lieu of recording idling events for specified fleets, an operator may elect to implement an approved Alternative Compliance Plan in which the operator commits to install anti-idling devices set at 15 minutes, engaged, and not tampered with or to use alternative technologies on all of the locomotives in its intradistrict or interdistrict fleets. Locomotives included in an approved Alternative Compliance Plan are not subject to most recordkeeping requirements upon approval of the Alternative Compliance Plan.

Anti-Idling Device

An anti-idling device automatically shuts off a locomotive main diesel internal combustion engine used for motive power after a specified time period when specified parameters are at

acceptable levels, and then automatically restarts the engine when the parameters are no longer at acceptable levels. Anti-idling devices monitor parameters such as engine water temperature, ambient temperature, battery charge, and railcar brake pressure. Anti-idling devices are beneficial because they reduce locomotive fuel consumption, as well as provide reductions in idling emissions and noise resulting from extended idling. Both BNSF and UP have stated in meetings with District staff that they have ongoing programs to equip their locomotives with anti-idling devices to be set at 15 minutes.

PR 3501 only exempts locomotives with anti-idling devices set at 15 minutes or less. It is understood that locomotives equipped with anti-idling devices set at 15 minutes or less can run for more than 15 minutes if needed to maintain specific parameters to acceptable levels. The intent of the 15 minute set point is to ensure that idling time will be limited to 15 minutes or less if warranted by locomotive operating parameters.

Alternative Technologies

Alternative technologies are locomotive propulsion strategies resulting in an 85 percent or greater reduction in NO_x and diesel PM emissions (on a grams per brake horsepower-hour basis), relative to emission levels for conventional diesel locomotives operating on comparable duty cycles. Included with the definition are battery dominant hybrid systems with internal combustion engines (e.g., RailPower Technologies Corp. Green Goat®), as well as locomotive motive power fueled with natural gas, propane, ethanol, methanol, hydrogen, electricity, fuel cells, advanced technologies that do not rely on diesel fuel, and any of these fuels used in combination with each other or in combination with non-diesel fuel. Under PR 3501, diesel PM emission reductions from alternative technologies are to be verified using sources such as manufacturer data, certification by government entities, technical studies, or other data sources using acceptable (e.g., U.S. EPA, CARB) test methods, as approved by the Executive Officer.

Reporting Requirements

PR 3501 requires weekly and annual reports. The weekly report is a weekly summary of idling events and the annual report is an inventory of locomotives. In meetings with representatives from community and environmental groups, they have requested that the railroads submit weekly reports that are available to the public. District staff believes that weekly reporting is warranted due to the prevalence of idling events reported to the District by the public, combined with the toxicity of diesel exhaust. Under the proposed rule, beginning the first Wednesday following the effective date of recordkeeping requirements, weekly reports are required for each idling event 30 minutes or more. Weekly reports are to address idling events occurring over the seven day period terminating on the preceding Friday. The District staff intends to make the weekly reports available to the public. Weekly reporting is proposed to enable the District to closely monitor idling events in order to enhance the District's ability to quickly inform the public of potential health risks due to extended idling events at specific locations. In addition, detailed idling records will identify locations where extended idling occurs and possible site-specific strategies to reduce idling.

In addition, 60 days after rule adoption and every year thereafter, operators are required to submit annual reports including for each interdistrict and intradistrict locomotive operated in the District

within the past calendar year, if not previously reported or if different from the most recently submitted annual report, the following information:

- Locomotive identifier and whether the locomotive is an interdistrict or intradistrict locomotive;
- Description of the type of service the locomotive performed (e.g., line haul service, local service, yard switching, road switching);
- Number of engines;
- Manufacturer, model classification, year(s) of manufacture and repower, if applicable, and EPA emissions tier or other measure of locomotive emissions for pre-Tier 0 locomotives, if available. If the locomotive engine was certified at an emissions Tier that is not representative of the actual emissions due to averaging or banking, than the actual emissions in which the engine was certified to should be specified;
- Engine horsepower for the year(s) of manufacture (and repower, if applicable);
- Whether equipped with anti-idling device or alternative technology;
- Description of any emission control devices;
- Whether equipped with global positioning systems;
- Locomotive identifiers of locomotives that are no longer operated in the District that were previously reported;
- A timetable, or similar document, showing rail routes in the District, including milepost designations for stations and sidings;
- The method or technique used to record idling event information required pursuant to recordkeeping requirements, and
- The name, title, and signature of the responsible company official certifying the accuracy of the records submitted.

Foreign power, defined as locomotives that are not owned or leased by an operator but operated in the District by the operator, would not be subject to the PR 3501 annual report requirement. However, they would be subject to the weekly idling report. The 60 day initial schedule for submitting the annual report is based on the fact that most, if not all, of the required records are already maintained by the railroads (e.g., locomotive purchase and maintenance records, published timetables, compliance requirements in the 1998 and 2005 CARB Agreements, etc.) and that the allocated time is sufficient for compiling existing data into the report.

Under the proposed rule, weekly and annual reports are to be transmitted electronically in a format approved by the Executive Officer. In recognition that different railroads may opt to establish different internal procedures for recordkeeping and reporting, PR 3501 does not specify a particular reporting format. This approach is intended to provide maximum flexibility to the railroads in determining how best to provide required data to the District. Railroads are expected to submit all required records in an electronic data format which can be processed using common personal computer programs (e.g., Microsoft Excel, Microsoft Access, text files, ASCII). The selected electronic data format should enable the District to compile the reports and to electronically evaluate the data. Weekly reports are to be sent as attachments to e-mail messages to the Executive Officer, or an appointed designee. Annual reports may be sent either as e-mail message attachments to the Executive Officer, or appointed designee, or on storage media (CD, DVD) mailed via U.S. Mail or delivered by courier service.

All reports submitted pursuant to this rule are public records. The railroads have commented that making records of precise locations of idling events available to the public could enhance security risks for trains with hazardous freight. To respond to this concern, although recordkeeping requirements under Proposed Rule 3501 require the operator to identify the time, date, idling location, and duration of idling for the locomotive only, the proposed rule does not require that the operator identify the contents of railcars or to specify which railcars are connected to the locomotive (if any). Although some locations may have locomotives that frequently idle, it is unlikely that the time and duration of idling would be predictable. The District intends to make available to the public idling information collected under PR 3501, particularly information contained in weekly reports. Several community and environmental groups have specifically asked that weekly report information be made public. District staff believes that the public has a right to know about known sources of air toxics, including idling locomotives. On the other hand, the staff is sensitive to the security concerns expressed by the railroads. However, it is difficult to understand how the reporting of locations of trains with idling locomotives, which may or may not include hazardous materials, is more or less of a security concern than is direct public access to known stationary sources of hazardous substances (e.g., service stations, dry cleaners, chemical plants). In the first place, much of the information to be reported in weekly reports is already available on the internet, including milepost information from timetables. Also, information in weekly reports will be 5 to 12 days old before it is submitted to the District, and thus publicly available, reducing to some extent security concerns with public availability of records. Finally, it is important for the community and the District to be able to access the information contained in the weekly reports and attempt to find ways to reduce exposures to diesel PM.

Submittal of Alternative Compliance Plan

As previously described, under PR 3501 an operator may elect to submit an Alternative Compliance Plan that commits to the installation of anti-idling devices or use of alternative technologies achieving 85 percent reductions in locomotives, excluding foreign power. If an operator elects to implement an approved Alternative Compliance Plan, this will relieve the operator from daily recordkeeping and weekly reporting requirements. Under the proposed rule, a railroad that implements an approved Alternative Compliance Plan is committing to install anti-idling devices or to use alternative technologies on their entire fleet of intradistrict or their entire fleet of their interdistrict, or both fleets based on the specified timeframes. The fleet(s) addressed by the Alternative Compliance Plan would exclude foreign power. As a result, the operator would be exempt from recordkeeping requirements for the entire fleet of intradistrict or entire fleet of intradistrict, or both fleets, depending on which fleets, if any, that the railroad includes in an Alternative Compliance Plan. The Plan must also commit to set the anti-idling devices to 15 minutes or less, to be engaged and not tampered with, to qualify for the recordkeeping exemption. Locomotives equipped with anti-idling devices which are engaged are also exempt from PR 3502 – Minimization of Emissions from Locomotive Idling.

Under a Plan, for intradistrict locomotives (locomotives that are not foreign power that operate in the District for which 90 percent of their annual fuel consumption, annual hours of operation, or annual rail miles traveled occur in the District), the operator must voluntarily commit to

installing anti-idling devices or use of alternative technologies on its entire fleet of intradistrict locomotives for:

- 50 percent of the uncontrolled intradistrict locomotive fleet (the portion of the intradistrict locomotive fleet, excluding foreign power, that is not equipped with anti-idling devices or to operate exclusively using alternative technologies as of the date of rule adoption, including any locomotives added to the fleet after the date of rule adoption that are not equipped with anti-idling devices or to operate exclusively using alternative technologies) on or before December 31, 2006; and
- 100 percent of the uncontrolled intradistrict locomotive fleet on or before December 31, 2007.

Under a Plan, for interdistrict locomotives (locomotives that operate any period of time in the District and are not intradistrict locomotives), the owner or operator of a railroad must voluntarily commit to installing anti-idling devices or use of alternative technologies on its entire fleet of interdistrict locomotives for:

- 50 percent of the uncontrolled interdistrict locomotive fleet or before June 30, 2008; and
- 100 percent of the uncontrolled interdistrict locomotive fleet on or before June 30, 2010.

An operator that elects to submit an Alternative Compliance Plan must submit this plan at least 90 days before its intended use, but no later than June 30, 2006 if intended for use for the operator's intradistrict fleet or combined intradistrict and interdistrict fleets and no later than January 1, 2008 if intended for use for the operator's interdistrict fleet. Until an Alternative Compliance Plan is approved, the operator is subject to PR 3501 recordkeeping and reporting requirements.

In addition to committing to equipping intradistrict or interdistrict locomotive fleets, or combined intradistrict and interdistrict locomotive fleets with anti-idling devices or to begin operating exclusively using alternative technologies, the Alternative Compliance Plan must specify the schedule, including information such as:

- Locomotive identifier;
- Total number of interdistrict and intradistrict locomotives;
- Number of interdistrict and intradistrict locomotives to be equipped with anti-idling devices or to begin operating exclusively using alternative technologies;
- Actual or projected date of anti-idling device installation or initial use of alternative technology; and
- A statement that each locomotive anti-idling device is set at 15 minutes or less, engaged, and not tampered with.

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. It is understood that locomotives equipped with anti-idling devices can run for more than time set points selected by operators if needed to maintain specific parameters to acceptable levels. The intent of this requirement is to ensure that idling time will be limited to

operator set points if warranted by locomotive operating parameters. In order for a locomotive equipped with an anti-idling device to not be subject to the PR 3502 idling requirement, the operator must select a set point of 15 minutes.

Approval of Plans

Under PR 3501, Alternative Compliance Plans will be approved or disapproved within 90 days.

Fees and Right of Appeal

The Idling Monitoring and Recording Plan and Alternative Compliance 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 Alternative Compliance Plan consistent with the direction of the Hearing Board, correcting all deficiencies, and resubmit the Plan within 90 days of the Hearing Board’s decision.

Circumvention

Under PR 3501, 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. In addition, avoiding the proper operation of an anti-idling device by not following manufacturer specifications to engage the proper operation of the device is considered circumvention and, therefore, a violation of this rule.

Penalties

Under PR 3501, failure to comply with any requirement, including requirements of an approved Alternative Compliance 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 3501.

Exemptions

Under PR 3501, where an individual locomotive equipped with an anti-idling device set at no more than 15 minutes or equipped to operate exclusively using alternative technologies the railroad is exempt from the specified recordkeeping and reporting requirements for that locomotive. A railroad is also exempt from PR 3502 idling requirements for any locomotive that is equipped with an anti-idling device set at 15 minutes, engaged, and not tampered with. This exemption is in effect as of the date the locomotive is first operated in the District using the anti-idling device or alternative technology. Foreign power equipped with anti-idling devices or to operate exclusively using alternative technologies would be exempt from specified recordkeeping and reporting requirements. As described previously, a railroad submitting and implementing an

approved Alternative Compliance Plan for its intradistrict fleet, interdistrict fleet, or both fleets is exempt from recording idling events and reporting on them for the fleet or fleets addressed under the approved Alternative Compliance Plan.

CHAPTER 3: IMPACT ASSESSMENT

SUMMARY OF DISTRICT RAIL OPERATIONS

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 basis.¹ In 2002, there were 554 railroads in the United States, operating on approximately 142,000 miles of track.² During this same period, 30 freight railroads operated over approximately 5,900 miles of track in California.³ 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, LAJ and 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 District⁴.

Railyard Site Visits

District staff visited several railyards as part of the PR 3501 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); and
 - Watson Yard, Wilmington (August 18, 2005).

¹ Association of American Railroads, 2004, Overview of U.S. Freight Railroads.

² Association of American Railroads, 2004, Railroad Service in the United States – 2002

³ Association of American Railroads, 2004, Railroad Service in California – 2002.

⁴ 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.

- 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);
 - Colton Yard, Colton (March 10, 2005 and August 25, 2005);
 - Commerce Intermodal, Commerce (May 31, 2005 and August 17, 2005);
 - Dolores Yard, Carson (August 18, 2005);
 - Intermodal Container Transfer Facility (ICTF), Long Beach (August 18, 2005);
 - LATC, Los Angeles (August 18, 2005); and
 - 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.⁵ 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. Since PR 3501 is an information-gathering rule, it will not directly result in any foreseeable amount of emission reductions. The rule may result indirectly in emission reductions if railroads opt to submit an Alternative Compliance Plan in lieu of recordkeeping.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

In accordance with CEQA, the District, as the Lead Agency, has reviewed PR 3501. Consistent with CEQA Guidelines §15168(a)(4), the District has decided to prepare a Program Environmental Assessment (PEA) for PR 3501 and PR 3502 – Minimization of Emissions from 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.

⁵ South Coast Air Quality Management District, 2003 Air Quality Management Plan: Appendix III – Base and Future Year Emission Inventories.

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 3501.

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 3501 to accomplish the following:

- Record idling events to identify opportunities for reducing idling emissions; and
- To assist the District to quantify idling emissions

Authority

The District Governing Board has authority to adopt PR 3501 pursuant to the California Health and Safety Code Sections 39002, 40000, 40001, 40702, 40716, 40725 through 40728, 41508, 41511, and 41700.

Clarity

PR 3501 is written or displayed so that its meaning can be easily understood by the persons directly affected by the rule.

Consistency

PR 3501 is in harmony with and not in conflict with or contradictory to, existing statutes, court decisions or state or federal regulations.

Non-Duplication

PR 3501 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 3501, 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), 40001 (rules to attain state and federal ambient air quality standards), and 41511 (rules to require determination of amount of emissions).

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 3501 is not a control measure, but rather an information-gathering mechanism, 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. Moreover, PR 3501 does not require the reduction of emissions, so cost-effectiveness per ton is not applicable.

AQMP and Legal Mandates

PR 3501 is not a measure in the Air Quality Management Plan (AQMP) and does not require any emission reductions. However, the AQMP does include a large “black box” of NO_x and VOC reductions for which specific measures have not been identified. Therefore, the AQMP requires all feasible measures to reduce these pollutants be implemented. PR 3501 does not require any emission reductions, but may result in railyard operators voluntarily reducing emissions by submitting Alternative Compliance Plans in lieu of recordkeeping.

COMPARATIVE ANALYSIS

PR 3501 records idling events in the District. As part of the rule development process for PR 3501, 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.⁶ The federal regulations do not address the quantification of idling emissions or risk from railyard operations,

⁶ United States Environmental Protection Agency, 1998, 40 CFR Parts 85, 89 and 92: Emission Standards for Locomotives and Locomotive Engines; Final Rule.

nor require recordkeeping of idling events. A summary of the U.S. EPA emissions standards is shown in Table 1-1.

Existing State Requirements

As described in Chapter 1, 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 sulfur fuel be used in locomotives in 2012. The CARB rulemaking requires the use of low-sulfur diesel fuel six years earlier than required federally.⁷

As described 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 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. The second, which was developed in 2005, establishes 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.

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

⁷ 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.

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.

APPENDIX A: PUBLIC COMMENTS

PUBLIC COMMENTS

An April 25, 2005 comment letter to Proposed Regulation XXXV, which included comments to PR 3501, 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 3501. 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 PR 3501. 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 3501, as well as discussed why the proposed 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 NO_x 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 NO_x 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 3501 implement this control measure, and is consistent with, and will help implement, the AQMP and ATCP¹.

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 3501 will further the aim of reducing NOx, and is not inconsistent with the goals and objectives of the 1998 MOU. Further PR 3501 is not inconsistent with the termination clause. PR 3501 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, PR 3501 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 proceedings 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 3501 will not be inconsistent with any future

¹ 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: Rule 3501 has been characterized as a recordkeeping rule, but in fact will require the retrofitting of locomotives with idling control devices. The reporting requirements of the proposed rule are so punitive that the railroads will have no choice but retrofits.

Response: Proposed Rule 3501 has been revised to streamline recordkeeping requirements. Staff does not agree that the recordkeeping requirements are overly burdensome. The proposed rule has been revised to require railroads to provide an explanation for idling, only if the idling event exceeds two hours. Thus, idling events less than two hours must only specify basic information about the idling event. In addition, the proposed rule has been modified to allow the railroads a five day grace period to reconcile weekly idling reports. Proposed Rule 3501 provides an option to use an alternative compliance plan to comply with rule requirements. The alternative compliance plan allows utilization of alternative technologies and does not mandate use of anti-idling devices, but the use of anti-idling devices if set at 15 minutes or less would exempt the operator from with specific Rule 3501 requirements.

6. Comment: The District has made no attempt to quantify potential emission reductions from Proposed Rule 3501 and has not assessed the socioeconomic impacts of the rule. The District has not provided cost or emission calculations.

Response: Proposed Rule 3501 is an information gathering rule and therefore, no emission reductions have been estimated. In the Draft Socioeconomic Report for Proposed Rules 3501 and 3502, District staff has assessed the compliance cost associated with implementing PR 3501 and PR 3502.

7. 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.

Public Workshop Comments

8. Comment: If an operator submits an Alternative Compliance Plan under PR 3501, will recordkeeping and weekly reporting still be required for locomotives that are not equipped with anti-idling devices or to operate using alternative technologies?

Response: An operator submitting an Alternative Compliance Plan is committing to equipping its intradistrict fleet, interdistrict fleet, or both fleets with anti-idling devices or to operate using alternative technologies. Upon approval of a Plan, recordkeeping and weekly reporting is no longer required for individual locomotives within the affected fleets included in the Plan, even if they are not yet equipped, since the entire fleet will be equipped with anti-idling devices or operating using alternative technologies on or before December 31, 2007 for intradistrict fleets and June 30, 2010 for interdistrict fleets. If an operator, for example, submits a Plan for its intradistrict fleet only, then the interdistrict fleet would be subject to recordkeeping and weekly reporting requirements. Until a Plan is approved, recordkeeping and weekly reporting is required effective six months from the date of rule adoption.

9. 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.

10. Comment: For the PR 3501 Alternative Compliance Plan, what is the basis for the percentages of locomotives to be equipped with anti-idling devices or to operate using alternative technologies?

Response: Under an Alternative Compliance Plan, an operator agrees to equip specific percentages of its uncontrolled fleet, which is defined as the portion of the fleet, excluding foreign power, that is not equipped with either anti-idling devices or is not operating exclusively using alternative technologies as of the date of rule adoption, including any locomotives not so equipped that are added to the fleet after the date of rule adoption. Based on discussions with railroad representatives, both BNSF and UP are in the process of retrofitting existing locomotives with anti-idling devices as well as purchasing new locomotives equipped with anti-idling devices. The railroads estimate that within the next three to four years, their entire California intrastate fleet, as well as interstate locomotives traveling within California will be equipped with anti-idling devices. The PR 3501 Alternative Compliance Plan option, which allows railroads that elect to install anti-idling devices up to two years for intradistrict and four years for interdistrict fleets, is consistent with the railroad's plans.

11. Comment: PR 3501 specifies that recordkeeping is required for locomotive idling events of 60 minutes or more (through June 30, 2008) and 30 minutes or more (July 1, 2008 and later). PR 3502 generally limits locomotive idling to 15 minutes or less if equipped with anti-idling devices and 30 minutes if not equipped with anti-idling devices. What is the basis for the different thresholds?

Response: The 30 minute threshold in PR 3501 is consistent with the idling limit in PR 3502. The 60 minute threshold in PR 3501 was originally intended to allow operators a period to become accustomed to the recordkeeping requirements. Due to comments received from environmental groups

questioning the need for the 60 minute threshold, the PR 3501 recordkeeping limit was subsequently modified to 30 minutes.

12. Comment: One of the stated purposes of PR 3501 is to “assist in quantifying idling emissions.” Will the District be conducting source testing?

Response: It is not the District’s intent at this time to conduct source testing of locomotives. PR 3501 requires submittal of an annual report, including information on emissions for locomotives operated in the District. Specifically, U.S. EPA emissions tier must be reported or other measures of emissions for pre-Tier 0 locomotives. In addition, as part of the PR 3502 rule development process, the District funded locomotive emissions testing, which is discussed in Chapter 2 of the PR 3502 staff report.

Written Comments – Received Prior to October 21, 2005

13. Comment: PR 3501 and PR 3502 are 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 the proposed rules are needed to improve understanding of locomotive idling in the District (PR 3501) and to protect public health by limiting longer-duration idling events (PR 3502). 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

14. Comment: The railroads question the ultimate need for PR 3501 and 3502 in light of the June 30, 2005 CARB Statewide Agreement, which provides all of the benefits of PR 3501 and 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 3501 and 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 3501 and 3502 are structured to ensure enforceable benefits.

15. Comment: Implementation of PR 3501 would not result in any emission reduction since its substantive provisions relate to recordkeeping and reporting. Furthermore, the railroads are not aware of any significant intent to use information generated under PR 3501 for any purpose other than enforcement of compliance with other components of Regulation XXXV and to add a small amount of information to the District's air quality databases. Further, the railroads question whether the purpose of PR 3501 is to create such an onerous data collection requirement as to "encourage" the development of Alternative Compliance Plans to implement automatic idling reduction devices. In light of the benefits that would accrue under the 2005 Statewide Agreement, any purported "policing" purpose of PR 3501 cannot justify the onerous burdens and costs that would be necessary to fulfill PR 3501's recordkeeping and reporting obligations.

Response: The intent of PR 3501 is to identify opportunities for reducing idling emissions and to assist in quantifying idling emissions, rather than direct emission reductions. Although emission reductions would result if an operator chose to implement an Alternative Compliance Plan, PR 3501 is primarily an information gathering rulemaking. Staff disagrees that the recordkeeping and reporting requirements are onerous and burdensome, since the only unique information to be recorded at the time of the idling event pertains to the location and time of idling events. Information such as the railroad name and locomotive identifier could be pre-printed on paper or electronic forms to avoid undue burden to train crews. Also, since idling events occur during periods of train inactivity and since train crews typically consist of two or more personnel, the recording of unique records should be easily manageable. To provide flexibility to the

railroads, PR 3501 is silent on how idling event records are to be consolidated into weekly reports. Presumably, information recorded by train crews would be compiled on a daily or weekly basis into a single report for electronic transmission to the District. However, to address the concerns of the railroads, PR 3501 recordkeeping requirements have been revised to require explanations for extended idling only for events of more than two hours. The railroads have not documented that PR 3501 would be overly burdensome to implement.

16. Comment: PR 3501 should not exclude passenger train operations. If the objective of PR 3501 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 3501 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.

17. Comment: PR 3501's definition of "alternative fuel" should be corrected and clarified. The reference to "hybrid electric locomotive" should be either removed entirely or clarified specifically to include diesel-electric hybrid locomotives, which would further the stated objective of the proposed rule.

Response: The definition of "alternative fuel" has been rewritten and renamed as "alternative technology." Also, the term "hybrid electric locomotive" has been replaced with "battery dominant hybrid systems with diesel internal combustion engines."

18. Comment: The definition of "anti-idling device" in PR 3501 and 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.

19. Comment: The PR 3501 definition of “foreign power” is silent regarding critical information and imposes a highly unrealistic notification period. 24-hours is an insufficient amount of time to provide notification given operational restraints on the railroads and the District provides no detail regarding how notification is to occur.

Response: “Foreign power” has been amended to read “...a locomotive that is not owned or leased by an operator but operated in the District by the operator.” This change is due to an amendment to PR 3501(d)(1) to require recordkeeping for idling events of 30 minutes or more for all locomotives, including foreign power. Foreign power had previously been exempted from recordkeeping requirements on the basis that it could be difficult for operators to obtain certain information from foreign power, particularly information requiring access to onboard dataloggers. However, District staff believes that the very basic information under PR 3501(d)(1) to be reported (e.g., railroad name, locomotive identifier, location and duration of idling event) should be readily available to operators of all locomotives, regardless of whether it is owned by a railroad subject to PR 3501 or if it is foreign power. Only if the locomotive idles more than two hours is an explanation of the reason for the idling event needed. The 24-hour notification period has been deleted from the definition because it is no longer needed.

20. Comment: PR 3501’s definition of “idling” or “idling event” includes “operation of a locomotive’s propulsion engine(s) if used to move the locomotive solely for the purpose of preventing idling for more than the length of time for which recordkeeping is required.” Enforcement of this definition would require the District to divine the subjective intent of the engineer operating

the idling locomotive. How the District may do so is unstated and seems problematic. This portion of the definition should be eliminated.

Response: The sentence in question has been deleted from the definition. In its place, subdivision (i) has been added, which specifies that “The moving of a locomotive solely for the purpose of preventing idling for more than the length of time for which recordkeeping is required under paragraph (d)(1) or to prevent an anti-idling device from shutting off a locomotive’s main propulsion engine shall be considered a violation of this rule.” While it may not always be apparent whether such circumvention has occurred, when it is detected it should be penalized.

21. Comment: The PR 3501 definition of “interdistrict” and “intradistrict” locomotive presents a technical challenge. It could be very difficult for the railroads to classify locomotives accurately. Furthermore, such classifications may vary from year to year and, indeed, from month to month. At a minimum, the definition should be revised for consistency with CARB’s definition used in the Statewide Agreement and CARB’s 2004 locomotive diesel fuels rulemaking.

Response: The primary purpose for the PR 3501 terms “interstate locomotive” and “intrastate locomotive” is to provide the railroads with flexibility to submit and implement optional Alternative Compliance Plans for some or all of their locomotives operated in the District. District staff believe that the difficulties described in the comment in characterizing District locomotive fleets under PR 3501 are similar to those to be addressed in implementing the 2005 CARB Statewide Agreement for the intrastate locomotive fleet. In the same way that the railroads will presumably identify the specific locomotives to be voluntarily equipped with anti-idling devices under the 2005 Statewide Agreement, the PR 3501 Alternative Compliance Plan option assumes that the railroads will need to know which locomotives will be equipped with anti-idling devices or to operate using alternative technologies. Also, for the 2004 CARB locomotive diesel fuels rulemaking, the railroads were able to provide to CARB detailed information on both the intrastate and intradistrict locomotive fleets. It is unclear how PR 3501 requirements pertaining to inventorying of interstate and intrastate locomotive fleets will be so much more difficult to achieve than what has already been demonstrated, or will be demonstrated, under the CARB actions.

In response to the second part of the comment, the definition used in PR 3501 for intradistrict locomotives is taken directly from the 2004 CARB locomotive diesel fuels rulemaking definition for “intrastate diesel-electric locomotive.”

22. Comment: The PR 3501 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 3501, 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.

23. Comment: PR 3501 recordkeeping requirements appear applicable to all locomotives, whether equipped or not equipped with idling control devices unless an Alternative Compliance Plan is approved. Collecting and formatting the information at the level of detail required by PR 3501 is likely to be very costly in terms of compliance time and expense. The railroads estimate the cost of recordkeeping at a regular hourly rate, using a conservative number of starts and stops, as being several million dollars per year. The recordkeeping provisions in PR 3501 should be clarified to apply only to those locomotives that have not yet been equipped with idling control devices.

Response: The PR 3501 recordkeeping and weekly reporting requirements are not necessarily applicable to all locomotives. Under PR 3501(k), there are two types of exemptions for recordkeeping. An individual locomotive can be exempt from recordkeeping and weekly reports if it is equipped with an anti-idling device or using an alternative technology. This locomotive can be exempt individually or as one of many locomotives included in an approved Alternative Compliance Plan .

24. Comment: It is unclear whether PR 3501 recordkeeping requirements of paragraph (d)(2) can be satisfied by engineers (train operators) or if coordination between engineers and dispatchers is necessary. The District should clarify that the recordkeeping requirements of paragraph (d)(2) can be satisfied by engineers alone.

Response: In order to provide maximum flexibility to the railroads in determining the personnel to be used to conduct recordkeeping under PR 3501, paragraph (d)(1) does not specify whether the records to be kept are to be taken by engineers or dispatchers. Although the proposed rule does not expressly require it, District staff believes that it is most appropriate for the railroads

to determine whether or not to coordinate recordkeeping between engineers (train operators) and dispatchers. In addition, PR 3501 has been modified to require that information about the idling event such as the name of the owner and operator of the locomotive, time, date, and duration of idling event be collected for idling events of 30 minutes or more. Only for those idling events that are more than two hours is an explanation of the idling event required.

25. Comment: PR 3501 requires recording of a “detailed reason for the idling event” and a “detailed explanation of whether the length of the idling event could have been reduced without unreasonably interfering with rail operations.” The District should clarify that the word “detailed” means “identify” in the context of these subparagraphs.

Response: PR 3501 has been revised to specify that for idling events of more than two hours, the operator is to provide a reason for the idling event. This version should streamline the recordkeeping requirements such that only those events greater than two hours would need to provide an explanation of the idling event.

26. Comment: Regarding paragraph (d)(3), the railroads would like confirmation that the District’s intent is not to create any new information or system demands and simply that existing data be provided to the District upon request.

Response: PR 3501(d)(2) (formerly (d)(3)) is intended to require railroads to provide all information necessary to verify records, upon request. The District’s intent is not to create any new information or system demands. However, without knowledge of the specific information systems in place or planned by the railroads, it is not possible for District staff to know at this time what impact, if any, future PR 3501 information requests will have on the railroads, or whether requests for record verification will or will not possibly result in adjustments which may be construed to be “new information or system demands.”

27. Comment: The reporting requirements of PR 3501(e) should be eliminated to the extent they exceed the recordkeeping requirements of PR 3501(d). In the event the District identifies an adequate technical basis to require the additional information identified in PR 3501(e), PR 3501(d)(2) and (e)(3) should be revised to use common terminology to describe common events. For example, “locomotive information” and “locomotive identifier.” If the terms are intended to be different, the District should clarify the distinctions.

Response: PR 3501(e) is intended to enable the District to maintain a detailed inventory of the intradistrict and interdistrict locomotive fleets, including any changes to the composition of the fleet, such as retirements or installation of anti-idling devices. In addition, 3501(e) is intended to provide current information for rule enforcement purposes (e.g., installation of GPS units and location of rail routes and milepost designations). District staff has attempted to remove duplicative information from subdivisions (d) and (e). In addition, the terms “locomotive information” has been replaced with “locomotive identifier.”

28. Comment: Data required for the PR 3501 weekly report, which are due on Wednesdays, should cover the period ending the preceding Friday. This will allow a reasonable amount of time to assemble the necessary data.

Response: This change has been incorporated into PR 3501(e)(1).

29. Comment: The railroads are concerned that PR 3501(e)(2), which requires annual submittal of information “if not previously reported or different from the most recently submitted report” could be construed to require re-submittal of weekly report information required under PR 3502 (e)(1). This would pose an unnecessary and scientifically unjustifiable burden on railroads and the District has not provided any basis for this proposed duplication of effort.

Response: Paragraph (e)(1) refers to weekly reports of recorded idling events and paragraph (e)(2) refers to inventories of intradistrict and interdistrict locomotives. To clarify, paragraph (e)(2) has been modified to state “annual” report to avoid confusion with the weekly report required under paragraph (e)(1).

30. Comment: Requiring weekly reporting is wholly unreasonable; some alternative interval must be identified.

Response: District staff believes that weekly reporting of idling events is needed to ensure that information of idling events is transmitted to the District in a timely fashion. Staff believes that weekly reporting is reasonable because the basic information to be reported, such as locomotive identifier and location and time of the idling event, can be completed by train crews at the time of each idling event, rather than requiring data from sources which are not available to the crews at the time of each idling event. The PR 3501 weekly reporting requirements, which include a five day grace period from the last recordkeeping date (Friday) to the date that the weekly report is due (Wednesday), are intended to provide adequate time for the railroads to compile data for all idling events for the reporting period. In

addition, representatives from community groups have asked that idling reports be available on a weekly basis. One of the objectives of Proposed Rule 3501 is to evaluate idling and to identify opportunities to reducing idling. Weekly reports of idling events will allow the District staff to evaluate when, where, and how long locomotives are idling to evaluate trends in the data.

31. Comment: An acceptable format for electronic submittal of reports should be established in the context of the rulemaking so that a consistent, uniform format may be developed up front, rather than within six months of adoption of the rule.

Response: Prior to implementation of the proposed rule, the District staff will develop a format to submit reports under Proposed Rule 3501. The electronic format will include the information required to be recorded as specified under subdivision (d) of the proposed rule.

32. Comment: In light of heightened security concerns within and about the transportation industry since September 11, 2001, it seems imprudent to require inclusion of detailed information about precise locations and stationary periods for locomotives transporting potentially hazardous freight in documents available to the public – such a requirement could enhance security risks. The District should consider this possible magnification of risk in determining whether all reports, or all information contained in the reports, appropriately are manners of public record.

Response: Recordkeeping requirements under Proposed Rule 3501 require the operator to identify the time, date, idling location, and duration of idling for the locomotive only. The proposed rule does not require that the operator identify the contents of railcars or to specify which railcars are connected to the locomotive (if any). Although some locations may have locomotives that frequently idle, it is unlikely that the time and duration of idling would be predictable. Also, information in weekly reports will be 5 to 12 days old before it is submitted to the District, and thus publicly available, reducing to some extent security concerns with public availability of records.

33. 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.

34. 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.

35. Comment: In light of the numerous, serious technical and legal flaws inherent in the promulgation of PR 3501, 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 rule is necessary, with PR 3501 intended to establish the means to quantify idling emissions from locomotives and to identify opportunities to reduce idling emissions. For this reason, the staff believes that continuing the rulemaking process is warranted.

36. Comment: The PR 3501 definition of “foreign power” should be narrowly defined to specify that it operates in the District for a period of time that accurately reflects the time it takes for a foreign locomotive to enter the District, conduct its business, and leave.
- Response: Proposed Rule 3501 has been modified to require recordkeeping for foreign power locomotives. Since foreign power locomotives will have requirements and exemptions similar to locomotives owned and operated by the railroads, there is not a need to narrowly define “foreign power locomotives.”
37. Comment: Since it idles in the District, recordkeeping should be required for foreign power.
- Response: Proposed Rule 3501 has been modified to require recordkeeping for foreign power locomotives. Similar to other locomotives owned and operated by the railroads, foreign power locomotives must comply with recordkeeping requirements, unless the locomotive is equipped with an anti-idling device.
38. Comment: The tiered compliance system proposed in PR 3501(d)(1) is unnecessary and could undermine the effectiveness of the rule. The rule should require reporting of idling events exceeding 30 minutes from the outset.
- Response: Proposed Rule 3501 has been modified to removed the tiered compliance approach. Under paragraph (d)(1) of Proposed rule 3501, effective (*6 months from date of adoption*), the operator is required to record each idling event that is 30 minutes or more.
39. Comment: Given that it is an information gathering tool, PR 3501 should be required to provide detailed descriptions of why idling events occurred and whether the railroads could have minimized the events. Such a requirement will allow residents, the District, and the railroads to identify operational inefficiencies from locomotive operations.
40. Response: Proposed Rule 3501 has been modified to require the operator to provide an explanation of the reason an idling event occurred if the idling event is greater than two hours. For idling events that are less than two hours in duration, the operator must specify information about the location, time, date, and duration of the idling event. Under PR 3501 (d)(2) the railroads are required to maintain and make available to the Executive Officer upon request information necessary to verify and substantiate reported idling

events. Also, in the future the District could consider a different time threshold for requiring an explanation of idling events, if warranted by weekly reports.

41. Comment: PR 3501 weekly reporting requirements are crucial so that the District will be able to accurately follow efforts by the railroads to reduce idling.

Response: The District staff agrees. Proposed Rule 3501 requires operators to submit weekly reports that includes records maintained for idling events.

42. 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 Rule 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.

43. 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.

44. Comment: The railroads have commented that Proposed Rule 3501 is a “transparent retrofit requirements” and therefore would be preempted under the Clean Air Act.
- Response: This assertion is incorrect. PR 3501 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. 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.
45. 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.
46. 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 Ridgefield 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 Ridgefield 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.

47. 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.

48. 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.

49. 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).

50. 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).

51. 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 vehicles², 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

² 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.)

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 regulations, Section 41750, et. seq.³ 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

³ §41750(a) "Existing law authorizes each district to impose separate and sometimes inconsistent emission control requirements..."

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 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.

ATTACHMENT I

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

Assistant Deputy Executive Officer

Planning, Rule Development, and Area Sources
Laki Tisopulos, Ph.D., P.E.

Planning and Rules Manager

Planning, Rule Development, and Area Sources
Susan Nakamura

Author: Christopher Abe - Air Quality Specialist

Technical Assistance: Mike Bogdanoff – Program Supervisor
Tom Chico – Program Supervisor
Ed Eckerle – Program Supervisor
Cheryl Marshall – Air Quality Specialist

Reviewed by: Barbara Baird – Principal Deputy District Counsel
Peter Greenwald – Senior Policy Advisor
Mike Harris – Senior Deputy District Counsel
Frances Keeler – Senior Deputy District Counsel
Andrew Lee, P.E. – Program Supervisor
Kurt R. Wiese – District Counsel
William Wong – Senior Deputy District Counsel

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
GOVERNING BOARD**

Chairman: WILLIAM A. BURKE, Ed.D.
Speaker of the Assembly Appointee

Vice Chairman: S. ROY WILSON, Ed.D.
Supervisor, Fourth District
Riverside County Representative

MEMBERS:

MICHAEL D. ANTONOVICH
Supervisor, Fifth District
Los Angeles County Representative

JANE W. CARNEY
Senate Rules Committee Appointee

BEATRICE J. S. LAPISTO-KIRTLEY
Mayor Pro Tem, City of Bradbury
Cities Representative, Los Angeles County, Eastern Region

RONALD O. LOVERIDGE
Mayor, City of Riverside
Cities Representative, Riverside County

GARY OVITT
Supervisor, Fourth District
San Bernardino County Representative

JAN PERRY
Councilmember, City of Los Angeles
Cities Representative, Los Angeles County, Western Region

MIGUEL PULIDO
Mayor, City of Santa Ana
Cities Representative, Orange County

JAMES W. SILVA
Supervisor, Second District
Orange County Representative

CYNTHIA VERDUGO-PERALTA
Governor's Appointee

DENNIS YATES
Mayor, City of Chino
Cities Representative, San Bernardino County

EXECUTIVE OFFICER:

BARRY R. WALLERSTEIN, D.Env.

TABLE OF CONTENTS

TABLE OF CONTENTS	i
EXECUTIVE SUMMARY	
BACKGROUND	ES-1
PROPOSED RULE 3502 REQUIREMENTS	ES-1
CHAPTER 1: BACKGROUND	
INTRODUCTION	1-1
DIESEL PARTICULATE MATTER	1-1
REGULATORY HISTORY	1-2
REGULATORY AUTHORITY	1-4
CHAPTER 2: SUMMARY OF PROPOSED RULE 3502	
OVERVIEW	2-1
PUBLIC PROCESS	2-1
LOCOMOTIVE TESTING	2-1
PROPOSED RULE 3502 REQUIREMENTS	2-2
CHAPTER 3: IMPACT ASSESSMENT	
SUMMARY OF DISTRICT RAIL OPERATIONS	3-1
CALIFORNIA ENVIRONMENTAL QUALITY ACT	3-6
SOCIOECONOMIC ANALYSIS	3-6
DRAFT FINDINGS UNDER CALIFORNIA	
HEALTH AND SAFETY CODE 40727	3-6
COMPARATIVE ANALYSIS	3-8
ATTACHMENT A: PUBLIC COMMENTS	A-1
ATTACHMENT B: SOURCE TEST EMISSIONS TESTING RESULTS	B-1
ATTACHMENT C: RAILYARD EMISSIONS INVENTORY METHODOLOGY	C-1
ATTACHMENT D: HEALTH RISK ASSESSMENT GUIDANCE FOR RAILYARDS AND INTERMODAL FACILITIES	D-1

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 railyard operations pose proportionally lower health risks than freight railyards. 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.

²California 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.⁸

⁸ 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.

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 NO_x, 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 Okurowski, representing the Association of American Railroads, to Susan Nakamura (District), Mark Stehly (BNSF), Mark Elliott (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 NO_x. 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 if 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.

- Colton Yard, Colton (March 10, 2005 and August 25, 2005)
- Commerce Intermodal, Commerce (May 31, 2005 and August 17, 2005)
- Dolores Yard, Carson (August 18, 2005)
- Intermodal Container Transfer Facility (ICTF), Long Beach (August 18, 2005)
- LATC, Los Angeles (August 18, 2005)
- 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 $100 \text{ minus } 25 \text{ percent}$, 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
NO _x	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
NO _x	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
NO _x	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 NO_x 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 NO_x 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	• Intrastate and interstate locomotives • BNSF and UP	• Intradistrict and interdistrict locomotives • BNSF, UP, LAJ, PHL
Anti-Idling Devices	• Installation required for 99% of intrastate locomotives	• Installation not required, but allowed as an alternative method of compliance
Idling Requirements (Operating Parameters and Work Practice Requirements)	• 15 minutes if equipped with anti-idling device • 60 minutes if not equipped with anti-idling device (See exemptions)	• Exempt if equipped with anti-idling device set at 15-minutes • No idling for more than 30 minutes for the following reasons: ○ 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)	• None	• Emissions Equivalency Plan to demonstrate equivalent NOx 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	• Essential idling: ○ 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	• 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 NO_x 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 NO_x 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 NO_x 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 NO_x, 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 considered 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 Ridgefield 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 Ridgefield 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.

**ATTACHMENT B: ~~SOURCE TEST~~ EMISSIONS TESTING
RESULTS**

INTRODUCTION

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 comments from the railroad industry that increased start-ups from idling restrictions could result in a trade-off in emissions. One study was conducted by Southwest Research Institute (SwRI) in which two locomotives, one owned by UP and one by BNSF, were tested using specially designed test procedures to measure start-up emissions. The second study was conducted by Engine, Fuel, and Emissions Engineering, Inc. (EF&EE) on two locomotives owned by Metrolink.

LOCOMOTIVE SELECTION

Locomotive models for testing were selected based on the prevalence of particular models and/or engine types in the locomotive fleets represented in the District, as well as achieving a representative sample of 2-stroke and 4-stroke locomotives and representative horsepower for switch and line haul locomotives. The two major manufacturers of the locomotives used in the District by BNSF, UP, and LAJ are Electro-Motive Diesels, Inc. (EMD) and General Electric Transportation (GE). For the testing conducted for PR 3502, a total of four locomotives were selected: (1) EMD SD60, a line haul locomotive; (2) GE Dash 9-44CW, a line haul locomotive; (3) EMD F40, a passenger locomotive; (4) EMD MP15DC a switch locomotive.

The EMD SD60 and GE Dash 9-44CW locomotives were selected to represent the most common line haul locomotives and/or engines used by the Class I railroads for interdistrict service. The EMD F40 utilizes the EMD 16-645E engine, which is very commonly used for both interdistrict and intradistrict service. The EMD MP 15DC locomotive was selected to represent locomotives used for switching and intradistrict service. Based on data from CARB and the railroads, only EMD locomotives are used for switching duty at both UP and BNSF.

SwRI

Two locomotives were selected for testing by SwRI. The first locomotive tested was an EMD MP15DC locomotive equipped with a 12 cylinder 645E engine rated at 1500 horsepower, provided by UP. This unit is often used as a shunter or yard switcher rather than for line haul applications, although this particular locomotive model is suitable also for road switching (e.g., local switching and hauling outside of railyards). As is common to EMD locomotives, the MP15DC locomotive is equipped with a 2-stroke diesel engine. The unit was recently rebuilt and fitted with an automatic engine start stop system manufactured by ZTR Control Systems.

The second locomotive selected was a GE Dash 9-44CW locomotive equipped with a 16 cylinder GE 7FDL16 engine rated at 4400 horsepower, provided by BNSF. This unit is a line haul locomotive, equipped with six axles for motive power, used primarily for hauling freight for long distances rather than for yard or local duty. The GE 7FDL16 engine is a 4-stroke diesel engine. The unit was fitted with an automatic engine start stop system installed at the time of manufacture by GE.

EF&EE

Testing by EF&EE was conducted using two locomotives supplied by Metrolink. The first locomotive tested was an EMD SD60 locomotive equipped with a 16-cylinder EMD 16-710E engine rated at 3800 horsepower. This unit is a typical six-axle freight locomotive of the last generation, used primarily for hauling freight for long distances. This unit was not equipped with any sort of anti-idling device.

The second locomotive was an EMD F40 passenger locomotive, equipped with a 12-cylinder EMD 16-645E engine rated at 3000 horsepower. The engine used on this locomotive is used in freight locomotives commonly used in the District, including the EMD GP40, a four-axle general purpose locomotive used for local and line haul service. This unit was not equipped with any sort of anti-idling device.

TESTING METHODOLOGY

Current U.S. EPA regulations governing emissions from locomotives do not address start-up emissions. As a result, locomotive emissions testing conducted by SwRI and EF&EE to measure start-up emissions was conducted using test procedures specifically developed by SwRI and EF&EE.

Testing at SwRI was conducted at SwRI's facilities using the Federal Test Procedure, which was developed as part of the U.S. EPA's 1998 rulemaking establishing emissions standards for locomotives. For each locomotive, testing occurred over three days, with the first two days dedicated to investigating the effects of restarting and idling of locomotives, and the third day focused on repeating certain testing to acquire PM samples for District analysis. Testing was conducted in November and December 2005.

The EF&EE testing was conducted in the field at Metrolink's Los Angeles railyard using EF&EE's Ride Along Vehicle Emission Measurement (RAVEM) system. The RAVEM system is based on proportional partial-flow constant volume sampling (CVS), while conventional emission laboratory methods defined by the U.S. EPA and CARB utilize full-flow CVS, in which the entire exhaust flow is extracted and diluted. For each locomotive testing occurred over three days, consisting of a series of start-ups, shut-downs, and restarts. Testing was conducted in November 2005.

District staff conducted a follow-up analysis of the SwRI data to evaluate startup emissions. District staff subsequently discussed the data analysis with SwRI. SwRI has provided input to the District's analysis.

It is important to note that although the test methodologies used by SwRI and EF&EE were different from one another, the results from both sets of tests were fairly consistent in showing emissions trends.

Comparison of Continuous Idling and Startup Emissions

SwRI

Data collected from the SwRI tests for locomotives UPY1378 and BNSF4373 were analyzed to determine whether shutting down an idling locomotive, taking into account the emissions associated with the startup of the shutdown locomotive, provides emissions benefits compared to allowing the locomotive to idle. Specifically, the analysis evaluated NO_x and PM emissions associated with the continuous idling of UPY1378 and BNSF4373 for periods of 30, 60, 120, and 240 minutes, as compared with emissions resulting from the startup of the same locomotives following a shutdown period of the same time duration. As discussed in the SwRI Report titled “Locomotive Exhaust Idle and Start-up Emissions Testing” the 15 minute shutdown period is envisioned to be a non-typical operating cycle for the AESS. If the locomotive is occupied and the engineer anticipates moving the locomotive then it is assumed the operator would override the AESS system. If the locomotive is not occupied, the pre-test data showed that the locomotive would be shutdown for 90 minutes increments based on the AESS setting. As will be discussed subsequently in greater detail, the duration of continuous idling events, and corresponding emissions estimates, were increased by 30 minutes to reflect the time duration over which startup emissions were quantified. Overall, for each time period analyzed for both locomotives, continuous idling emissions of NO_x and PM were greater than startup emissions following a shutdown period. The following discussion describes emissions calculations used in this analysis.

Startup of Locomotives for the Shutdown Scenarios

Startup emission rates from testing conducted by SwRI for UPY1378 and BNSF4373 were used by District staff to estimate startup emissions from shutdown locomotives. For NO_x, these rates reflect the sum of NO_x emissions over the test following locomotive shutdown durations of 30, 60, 120, and 240 minutes. For purposes of this emissions analysis, NO_x startup emissions for 30 minute time intervals were used to reflect a conservative emissions case. The 30 minute idling time after start up was used since the proposed rule would limit idling to 30 minutes. The 30 minute time intervals were established for startups subsequent to each locomotive shutdown period, consisting of NO_x emission data for the time period from 0 to 10 minutes added to the data for the time period after 10 minutes. Since in most instances NO_x data was collected for a period of only 11 to 20 minutes, data for time periods after 10 minutes were projected out to 30 minutes by extrapolating the average NO_x emissions that were measured for the increment after the first 10 minutes. By projecting data to 30 minutes, District staff’s estimates of startup emissions are overestimated relative to what was measured by SwRI.

PM data, which were collected over five minute intervals for as many as three samples per restart following a shutdown period (or 15 minutes worth of PM accumulation), have been adjusted to reflect the actual number of samples collected. For example, when data from two PM filters (10 minutes worth of PM accumulation) were obtained, they were first averaged and then multiplied by three to represent a 30 minute startup period. When data from three filters (15 minutes of PM accumulation) were obtained through testing, the data were averaged, with the resulting value multiplied by two to represent a 30 minute startup period. Tables 1, 2, 3 and 4 show the startup emission rates and assumed startup emissions for UPY1378 and BNSF4373, respectively.

Table 1. Startup Emission Rates for UPY1378

<u>Shutdown Period</u>	<u>NOx First 10 Minutes</u>	<u>Projected NOx After the First 10 Minutes</u>	<u>Assumed Startup NOx Emissions (30 Minutes After Startup)</u>
<u>30 minute</u>	<u>102</u>	<u>120</u>	<u>342</u>
<u>60 minute</u>	<u>100</u>	<u>88</u>	<u>276</u>
<u>120 minute</u>	<u>108</u>	<u>112</u>	<u>332</u>
<u>240 minute</u>	<u>111</u>	<u>112</u>	<u>335</u>

Table 2. Startup PM Emission Rates for UPY1378

<u>Shutdown Period</u>	<u>Maximum PM Filter</u>	<u>Number of Filters</u>	<u>Assumed Startup PM Emissions (30 Minutes After Startup)</u>
<u>30 minute</u>	<u>0.9</u>	<u>2*</u>	<u>2.7</u>
<u>60 minute</u>	<u>0.9</u>	<u>2</u>	<u>2.7</u>
<u>120 minute</u>	<u>0.9</u>	<u>3</u>	<u>1.8</u>
<u>240 minute</u>	<u>1.0</u>	<u>3</u>	<u>2.0</u>

*There was only one filter sample taken. The second filter is a projected value.

Table 3. Startup NOx Emission Rates for BNSF4373

<u>Shutdown Period</u>	<u>NOx First 10 Minutes</u>	<u>Projected NOx After the First 10 Minutes</u>	<u>Assumed Startup NOx Emissions (30 Minutes After Startup)</u>
<u>30 minute</u>	<u>65</u>	<u>59</u>	<u>183</u>
<u>60 minute</u>	<u>159</u>	<u>80</u>	<u>319</u>
<u>120 minute</u>	<u>287</u>	<u>180</u>	<u>647</u>
<u>240 minute</u>	<u>228</u>	<u>176</u>	<u>580</u>

Table 4. Startup PM Emission Rates for BNSF4373

<u>Shutdown Period</u>	<u>Maximum PM Filter</u>	<u>Number of Filters</u>	<u>Assumed Startup PM Emissions (30 Minutes After Startup)</u>
<u>30 minute</u>	<u>0.9</u>	<u>2</u>	<u>2.7</u>
<u>60 minute</u>	<u>2.9</u>	<u>2</u>	<u>8.7</u>
<u>120 minute</u>	<u>4.1</u>	<u>3</u>	<u>8.2</u>
<u>240 minute</u>	<u>5.6</u>	<u>3</u>	<u>11.2</u>

Continuous Idling of Locomotives

Stabilized idle emission factors based on SwRI test data for UPY1378 and BNSF4373 were used to calculate emissions associated with continuous idling for the 30, 60, 120, and 240 minute time periods of locomotive shut down evaluated previously. In order to provide a fair comparison with emissions associated with startup of shutdown locomotives, idling durations were increased by 30 minutes to reflect the assumption that idling locomotives would idle for the 30 minutes over which the startup emissions are aggregated, as described previously. For example, the baseline NOx idle emission rate for UPY1378 is 605 grams per hour. Thus, for a locomotive shut down for 120 minutes and subsequently restarted, the corresponding NOx emissions from a locomotive idling for 120 minutes would be calculated as follows:

$$\text{Idling emissions} = (120 \text{ minutes} / 60 \text{ minutes}) * 605 \text{ g/hr} = 1210 \text{ g}$$

$$\text{Startup adjustment} = (30 \text{ minutes} / 60 \text{ minutes}) * 605 \text{ g/hr} = 303 \text{ g}$$

$$\text{Total emissions} = 1210 \text{ g} + 303 \text{ g} = 1513 \text{ g}$$

Tables 5 and 6 show baseline idle emission factors based on SwRI testing, as well as NOx and PM estimates, for UPY1378 and BNSF4373, respectively.

Table 5. Continuous Idling Emissions for UPY1378

<u>Shutdown Period</u>	<u>Baseline NOx Idle Emission Rate (g/hr)</u>	<u>Idle NOx Emissions (g)¹</u>	<u>Baseline PM Idle Emission Rate (g/hr)</u>	<u>Idle PM Emissions (g)</u>
<u>30 minute</u>	<u>605</u>	<u>605</u>	<u>6.7</u>	<u>6.7</u>
<u>60 minute</u>	<u>605</u>	<u>908</u>	<u>6.7</u>	<u>10.1</u>
<u>120 minute</u>	<u>605</u>	<u>1513</u>	<u>6.7</u>	<u>16.8</u>
<u>240 minute</u>	<u>605</u>	<u>2723</u>	<u>6.7</u>	<u>30.2</u>

¹ Idle NOx emissions are idle emissions for the shutdown period plus 30 minutes of startup emissions.

Table 6. Continuous Idling Emissions for BNSF4373

<u>Shutdown Period</u>	<u>Baseline NOx Idle Emission Rate (g/hr)</u>	<u>Idle NOx Emissions (g)¹</u>	<u>Baseline PM Idle Emission Rate (g/hr)</u>	<u>Idle PM Emissions (g)</u>
<u>30 minute</u>	<u>297</u>	<u>297</u>	<u>10.6</u>	<u>10.6</u>
<u>60 minute</u>	<u>297</u>	<u>446</u>	<u>10.6</u>	<u>15.9</u>
<u>120 minute</u>	<u>297</u>	<u>743</u>	<u>10.6</u>	<u>26.5</u>
<u>240 minute</u>	<u>297</u>	<u>1337</u>	<u>10.6</u>	<u>47.7</u>

¹ Idle NOx emissions are idle emissions for the shutdown period plus 30 minutes of startup emissions.

Comparison

Figures 1 through 4 show emissions associated with the startup of UPY1378 and BNSF4372 following shutdown periods of 30, 60, 120, and 240 minutes, as compared with emissions associated with the continuous idling of these locomotives for the same time intervals plus an additional 30 minutes to compensate for the 30 minute period over startup emissions would be aggregated under the locomotive shutdown scenario.

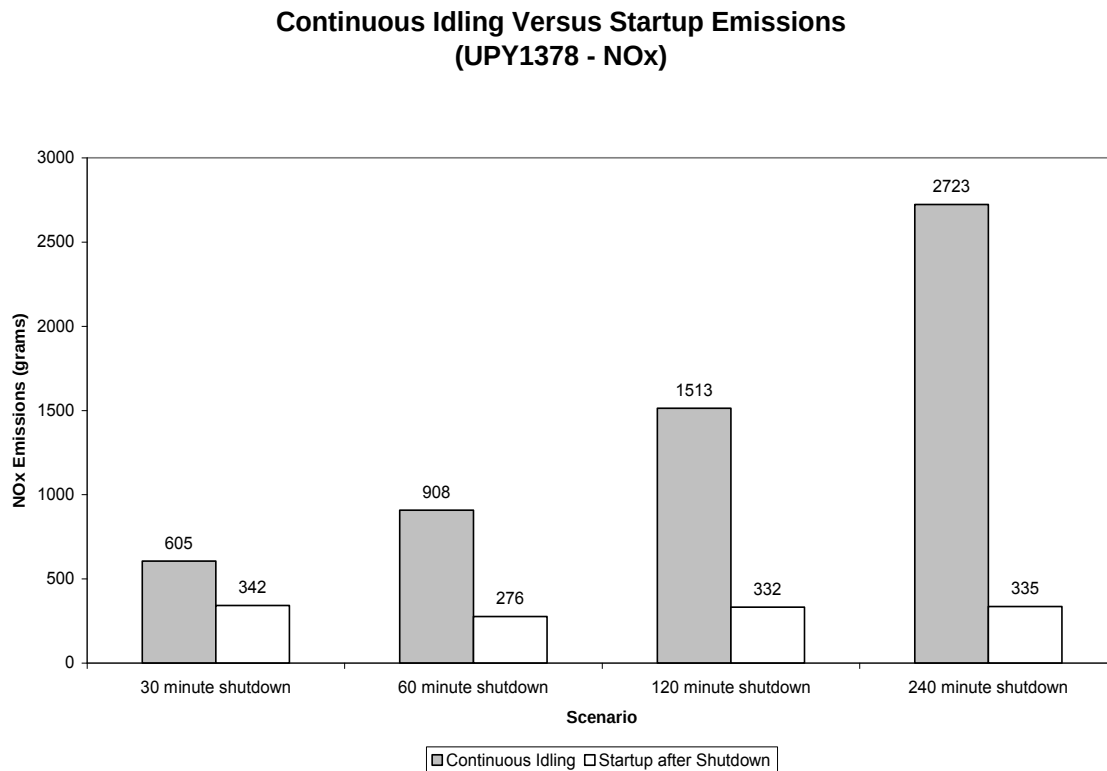


Figure 1. UPY1378 NO_x Emissions

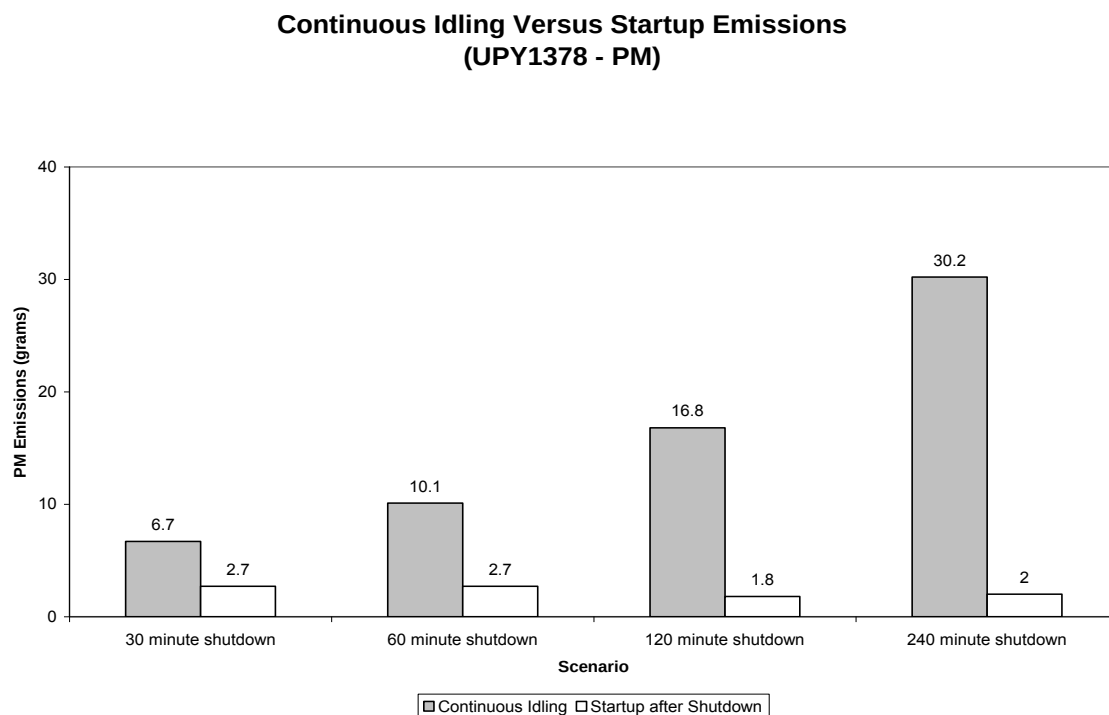


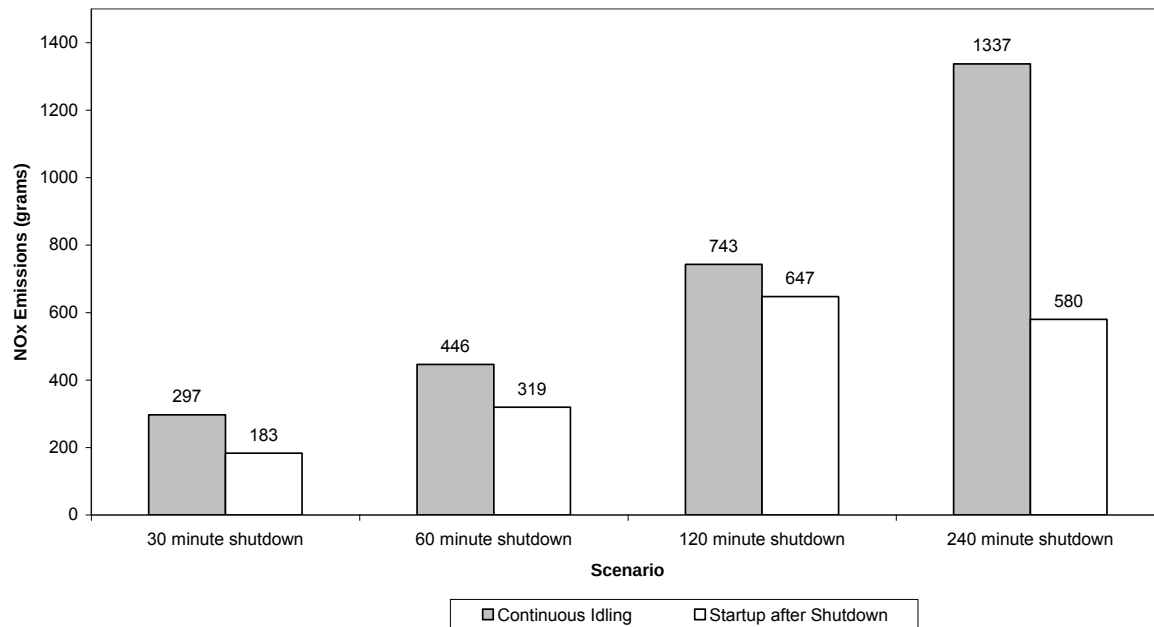
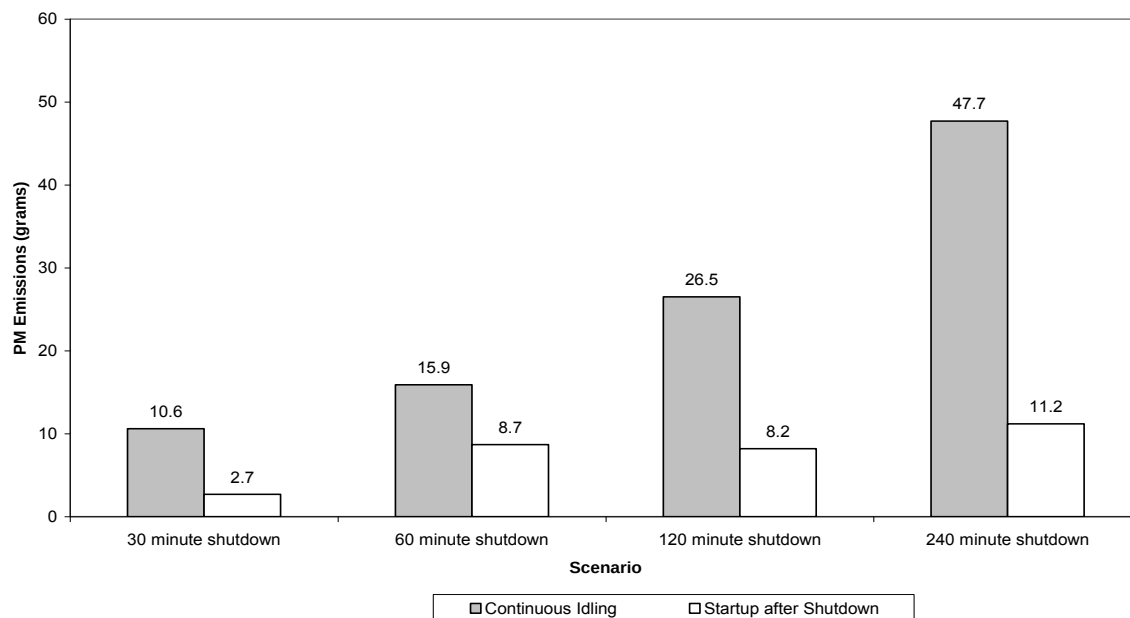
Figure 2. UPY 1378 PM Emissions**Continuous Idling Versus Startup Emissions
(BNSF4373 - NO_x)****Figure 3. BNSF4373 NO_x Emissions****Continuous Idling Versus Startup Emissions
(BNSF4373 - PM)**

Figure 4. BNSF4373 PM Emissions

Data Analysis

The EMD locomotive and the GE locomotive both have automatic engine start stop systems (ZTR SmartStart for the EMD locomotive and GE Automatic Engine Start Stop (AESS) System for the GE locomotive) that were disengaged during the shutdown/restart emission testing. The GE locomotive had a computer control system to protect the locomotive engine and allows the engine to idle from a low speed to a higher speed if warranted by the computer control system. This system allowed the engine to operate in different programmed modes, based upon engine operating parameters to maintain engine operation, fuel consumption and protection.

During the emissions testing for the GE locomotive for the Restart Post 120- and 240-Minute Shutdown periods, there was changes of engine idle speed that ranged from 580 to 888 rpm. Representatives of General Electric (GE), the manufacturer of the locomotive, indicated that these changes are due to a software algorithm to protect the locomotive engine. This system is called the Engine Protection Algorithm (EnPA). An example of one engine protection strategy is one that requires the engine, when started to use the temperature reading of the engine oil (cold oil strategy). If the engine oil is below a pre-set temperature, the engine speed will be increased to a high speed to accelerate the heating of the oil. When the oil temperature reaches a pre-determined temperature, the engine speed will lower and will be reduced further to a lower speed when normal oil temperature is attained. The engine software will continue to measure other engine operating parameters and will adjust engine speed as indicated in the software algorithm.

This control strategy does contribute to higher mass emissions measured during the restart tests for the 120- and 240-minute shutdowns, since the speed of the engine did increase to correspond to the EnPA oil temperature and high speed parameters.

The testing sequence for both locomotives consisted of a standard FTP warm up which allows the engine to reach normal operating parameters, i.e., the engine is warmed and ready to work, followed by the baseline idle test, 15 minute shutdown and restart test, 30 minute shutdown, and restart testing, etc. Each test mode the engine operated 30 minutes before the engine was shut off for the next timed period of shutdown prior testing for restart. The shutdown periods, after standard FTP warm up, began with the shortest period of shutdown time, 15 minutes then tests were run consecutively for a 30 minute shutdown, 60 minute shutdown, a 120 minute shutdown, going out to 240 minutes. During the shutdown periods the engine oil temperature and water temperatures fell substantially in the 120 to 240 minutes shutdown periods. The engine therefore became cooler than it would have after a typical single shutdown. This situation will cause the later restart emission readings to be higher than what they may actually be over a locomotive that is operating in a warmed operating condition and then shutdown, i.e., similar to those operating after the 15, 30, and 60 minutes shutdowns, because the EnPA will require the engine to operate at higher speed upon restart to reach its programmed engine protection mode. It is fair to assume if the engine was allowed to reach specified warm temperatures prior to shutdown, the restart up emissions would have been lower because the engine would be warmer at startup with lower emissions and the EnPA that idle speed would have operated over a shorter period..

During this testing procedure with the GE locomotive the AESS was disengaged. After the testing was completed, it was learned that by disengaging the AESS, the EnPA was indirectly blocked. Based on information from GE, the AESS will auto start if one or more of the following conditions do not meet pre-set engine requirements:

- Ambient temperature
- Battery voltage
- Reservoir brake air pressure
- Pre-set time since last auto start

In addition, if the AESS is engaged, the locomotive would auto stop only if all of the following conditions meet pre-set engine requirements:

- Ambient temperature
- Lubrication oil temperature
- Battery charging
- Battery voltage
- Reservoir brake air pressure
- Number of auto stops within 24 hours

The temperature of the lubrication oil is a parameter measured by the EnPA. As shown above, the AESS restarts the engine if the auto start was not activated within a pre-set time period. During such a restart, the engine will not be auto stopped if the lubrication oil is too cool, a parameter that is associated with the EnPA. If the AESS was not disabled, the locomotive would have restarted and would not have shutdown until the lubrication oil reached a minimum temperature. The reasons for the pre-set time auto start is to ensure the engine to maintain a specified engine oil temperature for immediate engine operation and if the temperature is already within the specified temperature range, the engine will be automatically be shutdown again. As previously discussed, the high engine speeds at the 120- and 240-minute shutdowns were due to the low oil temperature and the EnPA activating at the startup to rapidly heat the engine oil.

The test data measuring idle speed during the 4-hour idle time shows this phenomenon. Under normal operating conditions where the AESS would have been engaged and the EnPA not been interrupted, the engine would invariably never reach the actual conditions during testing for the 120- and 240-minute shutdown tests, i.e., low engine oil temperature mandated the EnPA to operate at high speed and therefore, produce higher emissions.

Additionally, there is a “skip fire” idling sequence used by GE which allows the engine to disable certain fuel injectors and skip the operating fuel injectors around the engine to different cylinders. This strategy allows higher fuel flow through the operating injectors, improves combustion, and reduces idle fuel consumption. This function is separate from EnPA. Skip fire accounts for the GE locomotive operating in the low 300 rpm range for the Post 30 Minute Shutdown Restart test. The low emissions from that startup reflect both the lower skip fire idle speed and the warm engine temperature which is very close to the standard FTP conditions.

RESULTS AND CONCLUSIONS

The results from the SwRI and EF&EE locomotive tests show that there is an increase in emissions from a locomotive startup after a ½-, 1-, 2- and 4-hour shutdown 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.

Based on conclusions from EF&EE, one can ascertain that not idling a locomotive engine for greater than 8 minutes would produce an air quality benefit even considering the emissions resulting from a startup. Based on this data, idle shutdown periods longer than about eight minutes, followed by a startup-idle event, result in reduced emissions; the longer the shutdown, the more substantial the emission benefits based upon the idle emission rates. The data was evaluated to estimate the amount of time locomotives can idle before generating emissions equivalent to a startup event. In general, the test results exhibited a trend of emissions during startup increasing sharply for a short duration, and then lowering from slightly elevated levels above idle to stabilized idle levels over approximately 30 minutes.

Conservatively, the emissions data shows that emissions due to startup in relationship to stabilized idling mode are very low (i.e., startup 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 startup whenever needed for operational necessities.

Using the data from the SwRI report shows in a total emissions standpoint, the same conclusion as the EF&EE report, that an air quality benefit will occur with shutdown and restart as opposed to continuously idling a locomotive.

The continuous idling emissions of NO_x and PM in the SwRI Report were greater than startup emissions following each shutdown period for both locomotives, except for GE shutdown periods of about 15 minutes or less. As discussed in the SwRI Report titled “Locomotive Exhaust Idle and Start-up Emissions Testing” the 15 minute shutdown period is envisioned to be a non-typical operating cycle for the AESS. If the locomotive is occupied and the engineer anticipates moving the locomotive then it is assumed the operator would override the AESS system. If the locomotive is not occupied, the pre-test data showed that the locomotive would be shutdown for 90 minute increments based on the AESS setting. Even with disengaging the GE AESS for the BNSF4373 locomotive, the above test scenarios still show that an air quality benefit will occur with shutdown and restart as opposed to continuously idling a locomotive.

In addition, regarding the GE AESS system, when BNSF 4373 was first delivered and parked, it auto started and auto stopped approximately every 90 minutes and then had an extended idle of about 8 hours until finally shutting down again (Figure 5). It appears this extended idle reflected a conflict between the auto start and auto stop criteria. Because the auto start essentially forced a restart every 90 minutes, 8 auto stops had occurred in less than 24 hours not allowing a further auto stop until the end of the 24 hour cycle. The locomotive apparently needed to idle until enough time passed to meet the criteria of less than 8 auto stops per 24 hours, and then it shutdown. It appears that the emissions during the 7-hour extended idle were excessive and

unnecessary. If the auto start were set to the optional 210-minute auto start criteria, the excessive idle condition would not have occurred and fuel consumption and emissions would have been reduced. This scenario should not occur under the proposed rules as the definition of anti-idling device is that the locomotive would “automatically restart the engine when parameters are no longer at acceptable levels.” This definition does not allow restarting to check parameters. Thus, the anti-idling device should check parameters before instead of as compared to the restarting the locomotive then checking specified parameters.

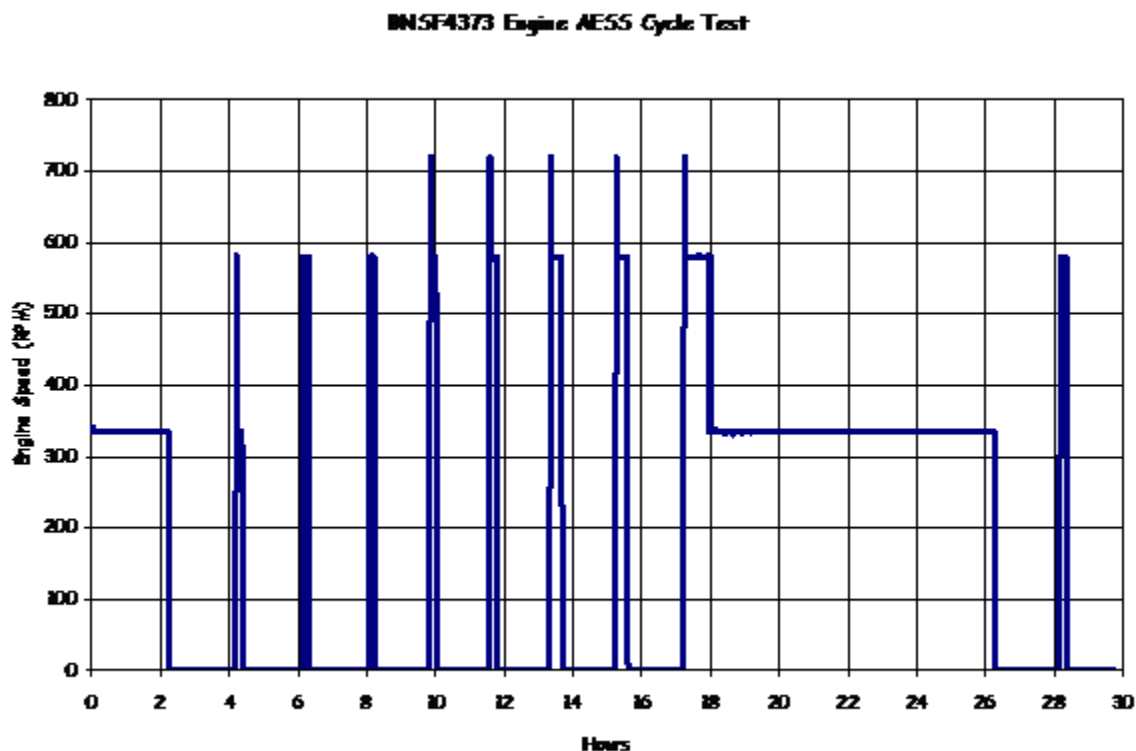


Figure 5 – Engine Speed During 29-hour Pre-test of BNSF 4373

Appendix A to this attachment consists of data from the SwRI Final Report, addressing the BNSF and UP locomotive testing. Appendix B consists of the EF&EE Final Report.

RESULTS

The results from the SwRI and EF&EE locomotive tests show that there is an increase in emissions 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. Based on results from EF&EE, one can ascertain that not idling a locomotive engine for greater than 8 minutes would produce an air quality benefit even considering the emissions resulting from a start-up. Based on this 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. The data was evaluated to estimate the amount of time locomotives can idle

~~before generating emissions equivalent to a start-up event. In general, the test results exhibited a trend of emissions during start-up increasing sharply for a short duration, and then lowering from slightly elevated levels above idle to stabilized idle levels over approximately 30 minutes. 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.~~

~~Appendix A to this attachment consists of data from the SwRI interim staff report, addressing the BNSF and UP locomotive testing. Appendix B consists of the EF&EE draft final report.~~

APPENDIX A

SOUTHWEST RESEARCH INSTITUTE®

6220 CULEBRA ROAD X POST OFFICE DRAWER 28510 X SAN ANTONIO, TEXAS, USA 78228-0510 X (210) 684-5111 X TELEX 244846

ENGINE, EMISSIONS, AND VEHICLE RESEARCH DIVISION
FAX: (210) 522-2019

ISO 9001 CERTIFIED
ISO 14001 CERTIFIED

January 25, 2006

TO: South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765

ATTN: Mr. Michael Bogdanoff

SUBJECT: SwRI® Project No. 03-11806, titled “Locomotive Exhaust Idle and Start-Up Emissions Testing” Final Report



This final report covers Southwest Research Institute's (SwRI) “Locomotive Exhaust Idle and Start-Up Emissions Testing” for South Coast Air Quality Management District's (SCAQMD). This report documents results from the two locomotives tested under this project during November and December 2005.

The body of this report covers:

- Test locomotives
- In-bound inspection
- Test plan
- Instrumentation
- Fuel system
- Test fuel
- Results
- Conclusions

Each of these topics will be covered in the following sections.

Test Locomotives

The first locomotive tested was UPY1378, which is an EMD MP15DC locomotive, and was equipped with a 12-cylinder 645E engine rated at 1500 horsepower. This locomotive is known as a shunter or yard switcher and is not typically used for line haul applications. The locomotive was recently rebuilt and fitted with a ZTR automatic engine start stop system. A photo of the locomotive, at Southwest Research Institute's (SwRI's) Locomotive Technology Center (LTC), can be seen in Figure 1.



SAN ANTONIO, TEXAS
HOUSTON, TX ! WASHINGTON, DC ! ANN ARBOR, MI



Figure 1. UPY1378

The second locomotive tested was BNSF4373 which was a GE Dash9-44CW. It was originally manufactured in March 1999 and was recently rebuilt into a Tier-0 configuration. This locomotive has a 16-cylinder engine, produces 4,400 horsepower and is considered a line-haul locomotive. This locomotive was equipped with a GE Automatic Engine Start Stop (AESS) System. Figure 2 shows the front view of BNSF4373.



Figure 2. BNSF4373

In-Bound Inspection

Upon receipt of the locomotive, SwRI inspected and logged the following components:

1. Document the cylinder head part and serial numbers for the EMD locomotive and the Power Assembly (PA) part number and serial numbers for the GE locomotive.
2. Document locomotive injector part and serial numbers for the EMD engine and the jerk pump part and serial numbers for the GE engine.
3. Document governor part number, UTEX number, and serial number for the EMD engine and the numbers stamped on the numbers printed on the body of the GE engine controller known as the EGU.
4. Document blower part and serial numbers on the roots blown EMD and the part and serial numbers on the GE turbocharger.

These items are provided in Appendix A for UPY1378 and in Appendix B for BNSF4373.

Test Plan/Test Sequence

Testing of both the UPY1378 and BNSF4373 was completed in three days for each locomotive. The first test day studied the affects of restarting the locomotive engine on emissions. The second day was used to investigate the affect of four hours idling, followed by a transition to Notch 3. The third day was used to repeat a number of these tests to acquire PM emission samples on a SCAQMD provided quartz filter media. These filters were then shipped to SCAQMD for EC/OC analysis.

The test sequence for the Day 1 restart portion of the testing is shown in Figure 3. The test sequence allowed for emissions sampling during the initial start and warm up of the engine, which overall resulted in a 12 hour test day. As shown in the Figure 3, the shutdown and start-up sequence for each of the scenarios was conducted consecutively. There was no warming of the locomotive between each test. For example, the engine was shutdown for 60 minutes, restarted and idled for the test, the engine was shutdown for 120 minutes and restarted and idled for testing, and the engine was shutdown for 240 minutes and restarted and idled again. The engine was never loaded after the baseline emissions test was started.

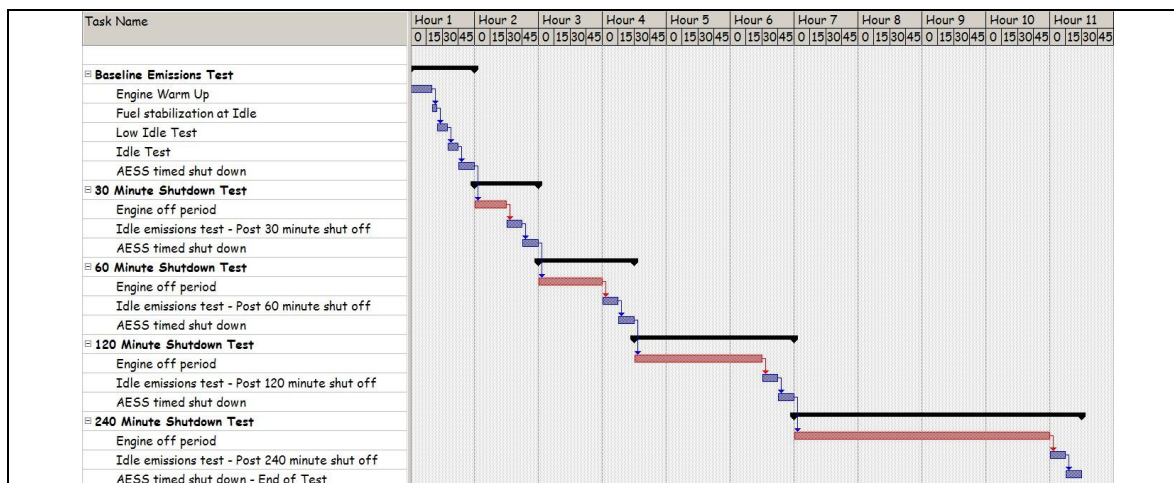


Figure 3. Day 1 Test Time Line

Day 2 of testing began with a start of the engines, after the engine had been shutoff overnight. After the engine was started (with the ZTR SmartStart system or the GE AESS System disabled), the engine was allowed to idle continuously for 4 hours. Over the four hours of idle, emissions data was acquired every 30 minutes. At the end of the 4 hours of idling, the engine was transitioned to Notch 3 (loaded) and emissions were measured during the transition. The two test days can be seen in sequence, along with test numbers used to track the emission test, in Table 1. During this testing, fuel flow rate, fuel and intake air temperature, ambient temperature, water jacket temperature and oil sump temperature were measured. In addition, hydrocarbon, NO_x, CO₂ and CO concentrations were recorded to calculate emissions during testing. Details of the results are included in Appendix C.

TABLE 1. TEST SEQUENCE FOR DAYS 1 & 2

Test Condition	UPY1378 Test Number	BNSF4373 Test Number
Test Day 1		
Initial Start	T1	T-20
Baseline test simulating FTP	T2	T-21
Restart post 15 minute shutdown	(A)	T-22
Restart post 30 minute shutdown	T3	T-23
Restart post 60 minute shutdown	T4	T-24
Restart post 120 minute shutdown	T5	T-25
Restart post 240 minute shutdown	T6	T-26

Test Day 2		
Initial start	T7	T-27
30 minute of idle	T8	T-28
60 minute of idle	T9	T-29
90 minute of idle	T10	T-30
120 minute of idle	T11	T-31
150 minute of idle	T12	T-32
180 minute of idle	T13	T-33
210 minute of idle	T14	T-34
240 minute of idle	T15	T-35
Transition to notch 3	T16	T-36

(A) Initial test plan did not call for this test point but was added for BNSF4373 test.

Instrumentation

After the inbound inspection was completed the locomotive was installed on the test track and instrumented. The low speed data that was acquired for this test included:

- Jacket water temperature
- Oil Sump temperature
- Fuel flow rate (Average over the test point)
- Engine speed
- Ambient temperature at the start of the test
- Barometer
- Relative humidity or wet bulb temperature
- Rack position (EMD)

Emissions that were acquired for each of the test points included:

- Oxides of nitrogen (NO_x) (PPM)
- Carbon monoxide (CO) (PPM)
- Carbon dioxide (CO₂) (%)
- Oxygen (O₂) (%)
- Hydrocarbons (HC) (PPMC)
- Particulate (mg)

Gaseous emissions from the multi-stack EMD locomotive were sampled within an exhaust manifold collection system installed above the roof of the locomotive, as shown in Figure 4 for the roots blown engine in UPY1378. A heated line transferred the raw exhaust sample to the emission instruments for analysis. Hydrocarbon concentrations in the raw exhaust were determined using a heated flame ionization detector (HFID), calibrated on propane. NO_x concentrations in the exhaust were measured with a chemiluminescence analyzer. NO_x correction factors for ambient air humidity are applied as specified by EPA in 40 CFR

§86.132(d). Concentrations of CO and CO₂ in the raw exhaust were determined by non-dispersive infrared (NDIR) instruments.



Figure 4. Exhaust Manifold Collection System For Emissions Sampling on UPY1378

Particulate emissions were measured at each test point using a “split then dilute” technique, in which a portion of the raw locomotive exhaust is “split” from the total flow and mixed with filtered air in a 10-inch diameter dilution tunnel. The split sample is transferred to the dilution tunnel through a 2-inch diameter stainless steel tube that is insulated and electrically heated to 375°F.

A particulate sample was extracted from the dilute exhaust stream within the dilution tunnel. Particulates were accumulated on 90 mm fluorocarbon-coated glass fiber filters (Pallflex T60A20) at a target filter face velocity of 70 cm/s. The filters were mounted in stainless steel filter holders and connected to the dilution tunnel. Particulate filters were preconditioned and weighed before and after testing, following the FTP. The particulate mass emission rate were computed using the increase of mass on the filters, the volume of dilute exhaust drawn through the filters, and dilution air and raw exhaust flow parameters.

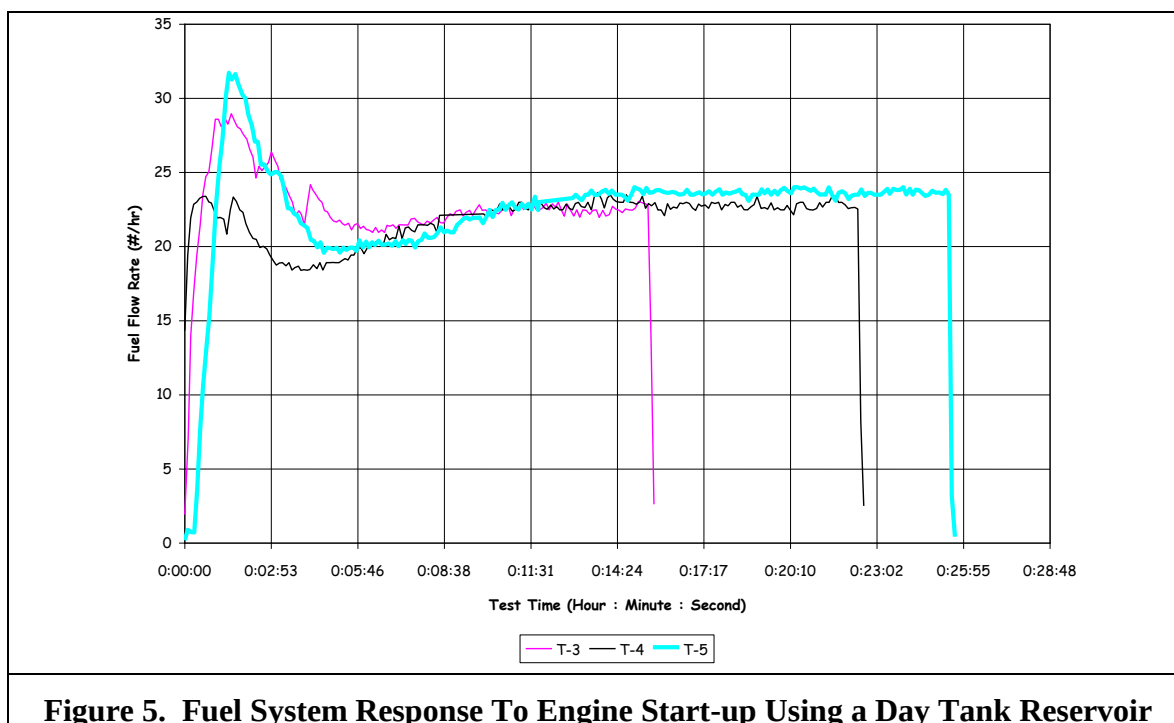
The emissions data acquisition system for these tests was based on an Agilent Technologies HP34970A, controlled by Agilent BenchLink Data Logger software. This software allows the HP34970A to export the emissions analyzer output data in a CSV file format for post processing of the emission data. The sample rate for the emissions data acquisition system was approximately 2 Hz.

Calibration of the HP34970A and the emissions cart output voltages was completed over a 6 point curve. This allow for conversion of the acquired emissions analyzer output voltage signal to a PPM value. The PPM values were later the used to post calculate emissions mass flow rates.

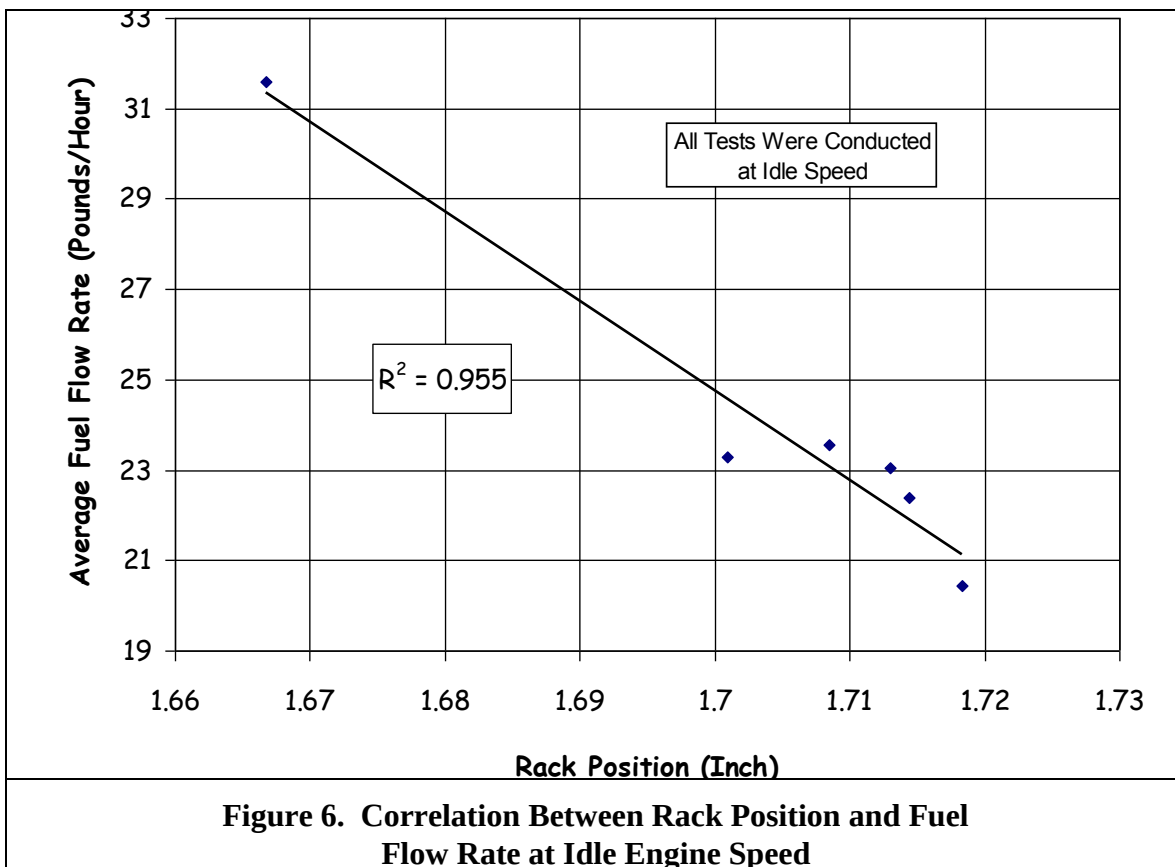
Fuel system

Fuel flow measurements for the restart tests on UPY1378 utilized SwRI's standard fuel flow measurement system. The fuel system utilizes floats in the fuel system's day tank are used to modulate the flow rate, to maintain constant fuel level. Any make up fuel, needed to keep a constant level in the tank, is measured by the MicroMotion™ sensor.

The standard SwRI fuel flow system is design for an operating engine, tested over a typical FTP emissions test. However, the existing system was found to be poorly suited for these restart tests, due to the inertia of the system or lag between the engine operation and the response of the fuel flow measurement as shown in Figure 5. This lag in response also caused the fuel system to over-compensate in the measured flow rate, once the system did respond. This caused the instantaneous fuel flow measurements for the restart tests to be inaccurate.



To correct the instantaneous fuel flow measurements on UPY1378, the fuel flow rate was calculated by using the measured rack position. Rack position was measured during all tests at a sample rate of 1 sample per 6 seconds; a rack position measurement was available over the entire test sequence. Figure 6 was generated to define the relationship between the rack position and fuel flow for the steady state data sets taken during the 6 tests on the first day of testing. With a correlation factor (R^2) value of 0.955, the calculated linear relationship between rack and fuel flow was used to calculate the start sequence instantaneous fuel rate shown in Figure 7.



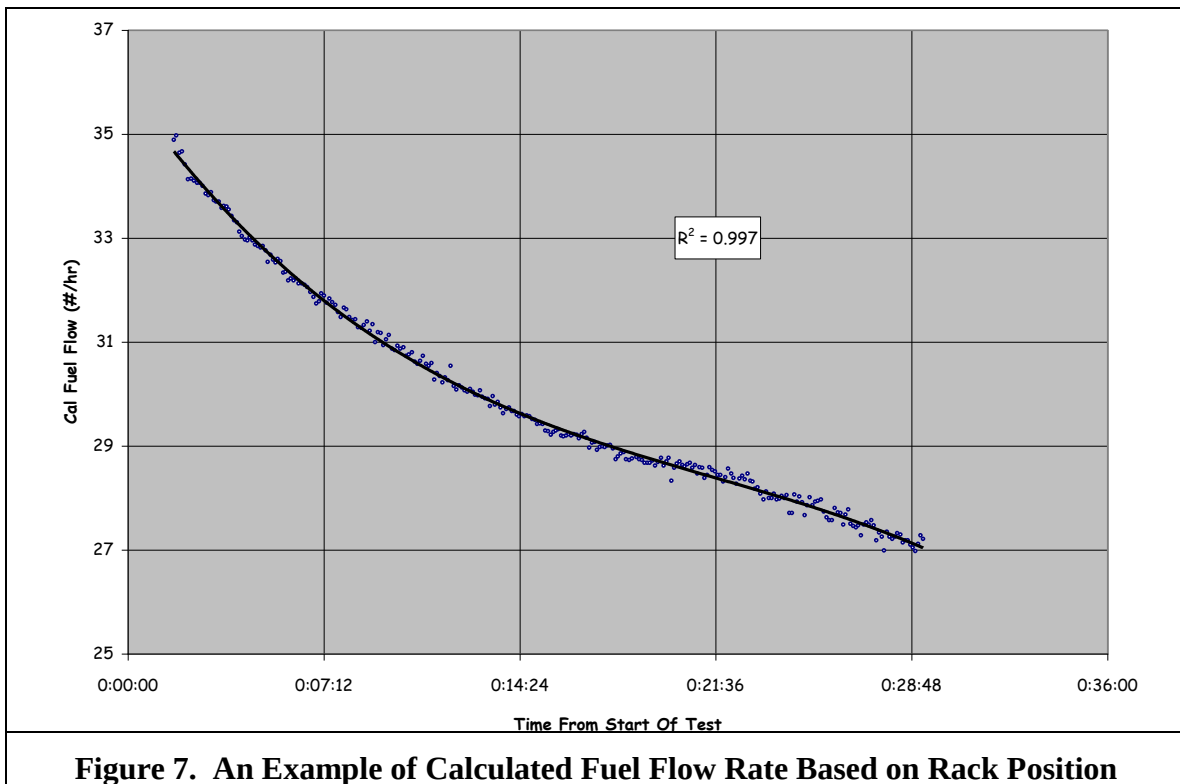
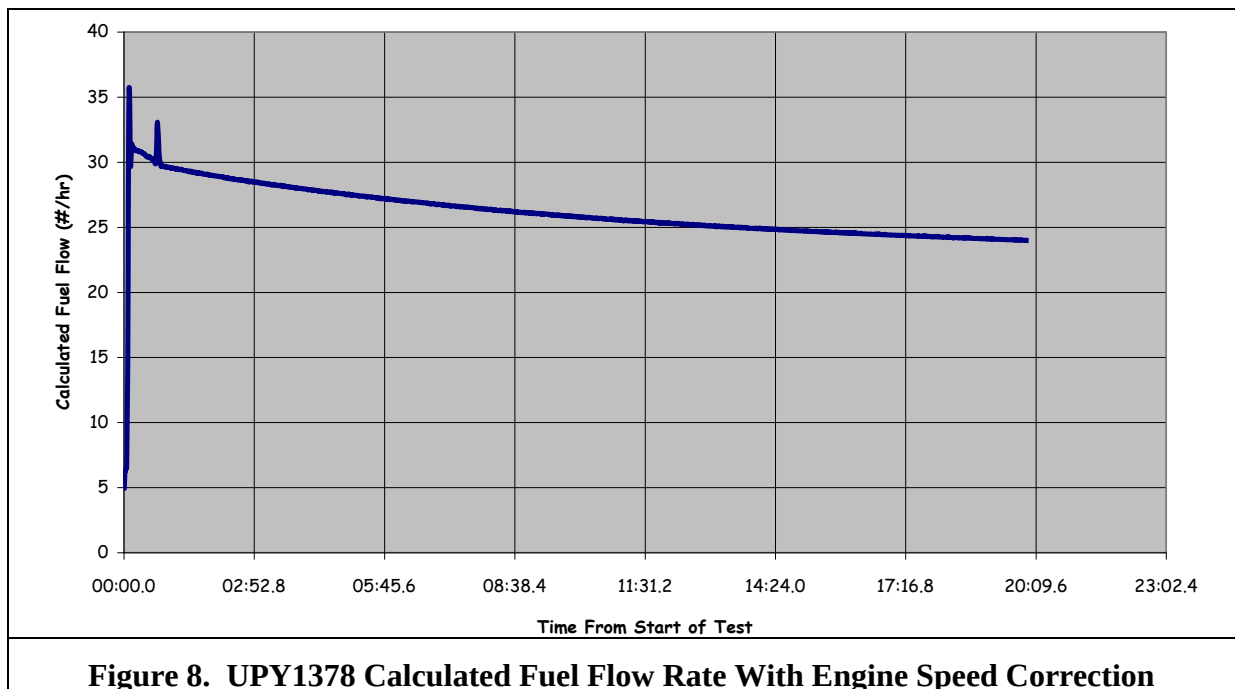


Figure 8 shows the fuel flow rate for the first restart test after the fuel flow rate was further corrected for engine speed. These steps were repeated to calculate the fuel flow rate for all of the restart tests and applied to the emissions calculations.



Because of the issues of instantaneous fuel flow measurements on UPY1378, a load cell and hanging barrel system were used to measure the fuel flow on BNSF4373. This allowed for a direct mass change calculation, via the HP34970A DAQ system that was used to measure the gaseous emissions.

Test Fuel

Diesel fuel used in locomotives in the U.S. is currently not regulated by EPA or CARB. However, EPA regulations for diesel fuel used in non-road engines, including locomotives, will begin on June 1, 2007. EPA is requiring non-road diesel fuel to have less than 500 ppm sulfur, have a Cetane index greater than 40 and have an aromatic content less than 35 percent. In June, 2010, the maximum sulfur allowed for non-road engines is reduced to 15 ppm, except for fuel used locomotives. Locomotive fuel sulfur is reduced to 15 ppm in June, 2012.

In California, the Air Resources Board (CARB) recently passed regulatory amendments extending the California standards for motor vehicle diesel fuel to include diesel fuel used in harbor craft and intrastate locomotives, requiring CARB diesel for intrastate locomotives starting in Jan. 1, 2007.³⁰ CARB diesel fuel regulations will require < 15 ppm Sulfur, < 10% aromatics, and a minimum Lubricity standard.³¹ The CARB diesel fuel regulations apply to intrastate locomotives used in freight, passenger, commuter, regional, short-line, switch, industrial, terminal and port operations.

California will require the railroads to use CARB Diesel. The CARB Diesel is a high quality fuel with a high cetane number, low sulfur, and low aromatics. The high cetane number aspect of the fuel was especially important because the high cetane number fuel allows for good cold start ability of the engine. For these tests, SwRI used a Valero supplied diesel fuel called Texas Low Emissions Diesel (TxLED) that met CARB requirements for aromatic and content, and low sulfur level content requirements. Table 2 shows a typical fuel analysis for the Valero TxLED fuel, and also gives select properties for the specific batch of fuel used for testing UPY1378 and BNSF4373.

³⁰ CARB Resolution 04-38 (November 18, 2004), <http://www.arb.ca.gov/regact/carblohc/res0438.pdf>

³¹ California Code of Regulations, Title 13, §2281-§2285.

Table 2. Typical Analysis Result for the Valero TxLED Fuel

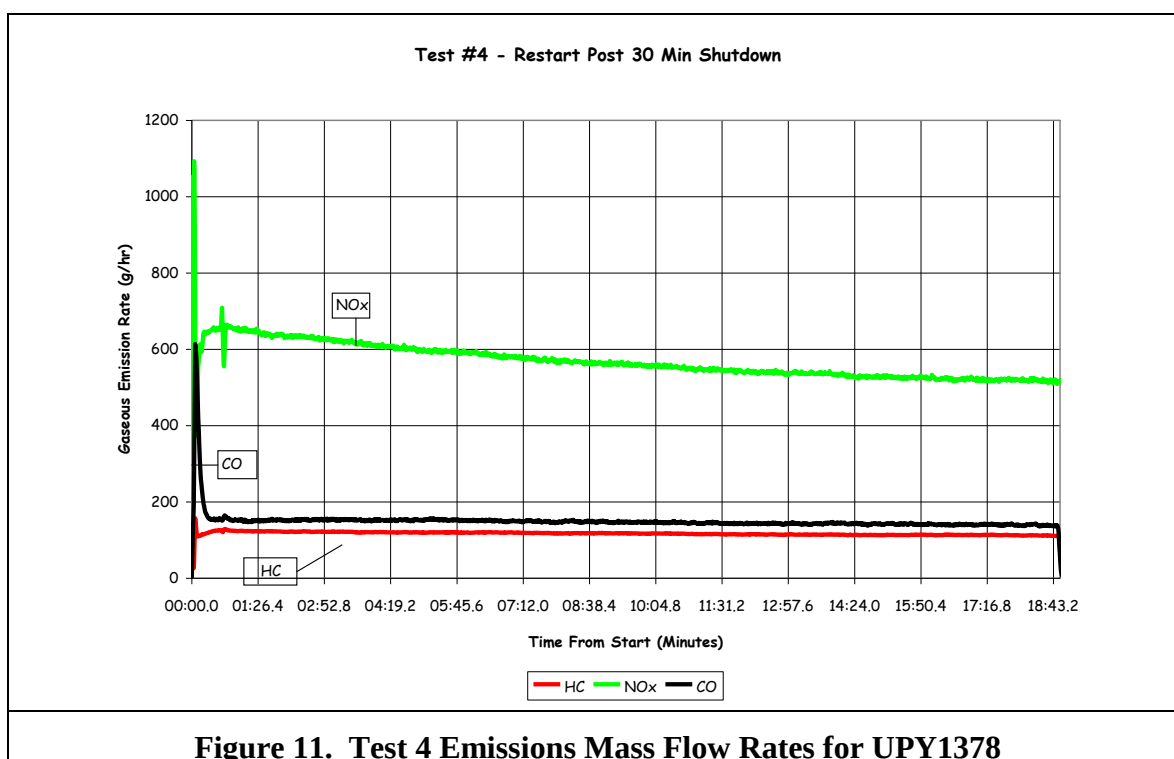
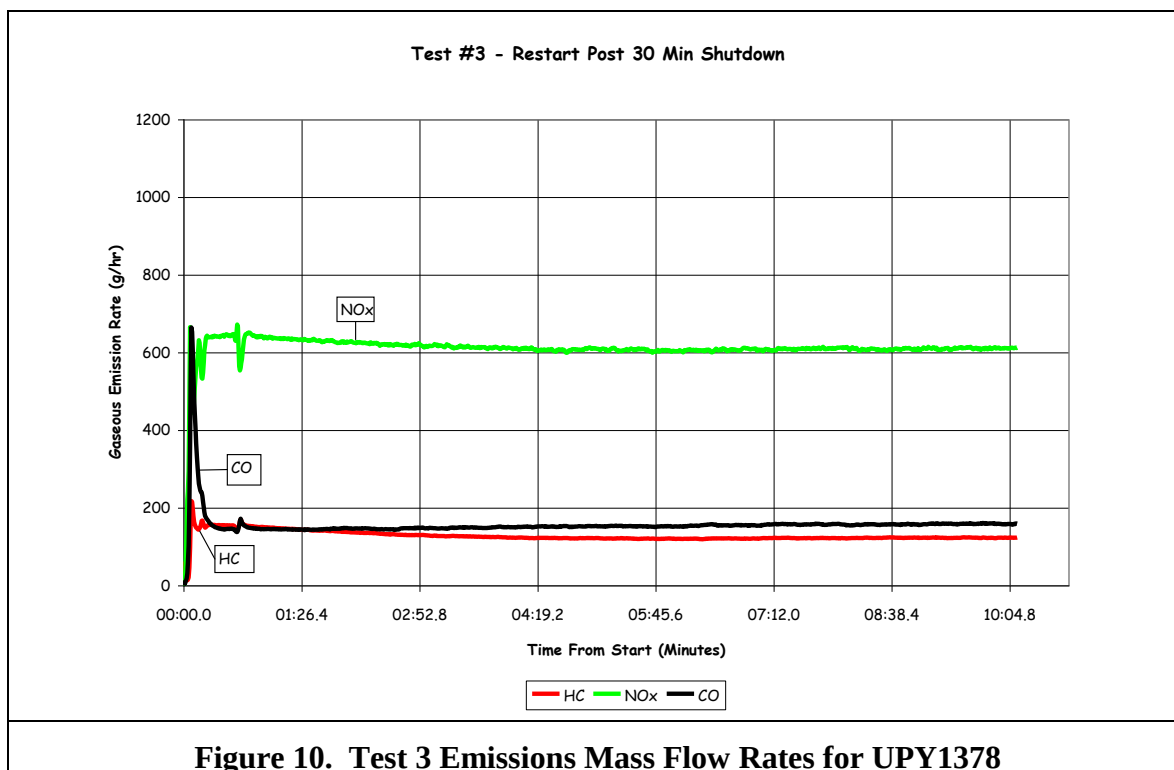
Property	Unit	ASTM	Typical	Test Fuel
SwRI Fuel Code			EM-5347-F	
Cetane Number		D613-84	55.6	
Cetane Index		D-4737		
Cetane Index		D-976		
Aromatic Content	mass %	D5186-96	1.7	6.64
Mono Aromatics	mass %	D5186-96	1.5	5.86
PNA Content	mass %	D5186-96	0.1	0.77
Sulfur Content	ppmw	D5453-93	< 5	2.3
Nitrogen	ppmw	D4629-96	3	
API Gravity [1]		D287-82	39.1	
Kinematic Viscosity @ 40°C	cSt	D445-83	3.0	
Flash Point	°F	D93-80	202	
Initial Boiling Point	°F	D86-96	429	
T10	°F	D86-96	454	
T50	°F	D86-96	507	
T90	°F	D86-96	577	
Final Boiling Point	°F	D86-96	615	
% H		D-5292	14.20	
% C		D-5292	85.50	
Calculated H/C			1.98	
specific gravity		D-4052	0.8353	
Heating Value, gross (HHV)	BTU/lb	D240	19,966	
Heating Value, net (LHV)	BTU/lb	D240	18,671	
density, lb/gal	lb/gal		6.97	
Fuel Energy Content - HHV	BTU/gal		139,184	
Fuel Energy Content - LHV	BTU/gal		130,153	

Results for Tests on UPY1378

Test “T2” utilized a standard FTP warm up and performance and emissions test at the idle condition. This test is the baseline for comparison for all of the other tests on this locomotive. The results of this test are:

- NO_x (Corrected) = 605.4 g/hr
- CO = 138.8 g/hr
- HC = 130.8 g/hr
- PM = 6.7 g/hr

For the restart tests (tests T3 through T6), the measured exhaust emission were post processed to calculate mass emissions flow rates. The results can be seen in Figures 10 through 13, for tests 3 through 6 respectfully. The NO_x emissions shown in these graphs have are corrected for atmospheric humidity per 40 CFR Part 92 requirements.



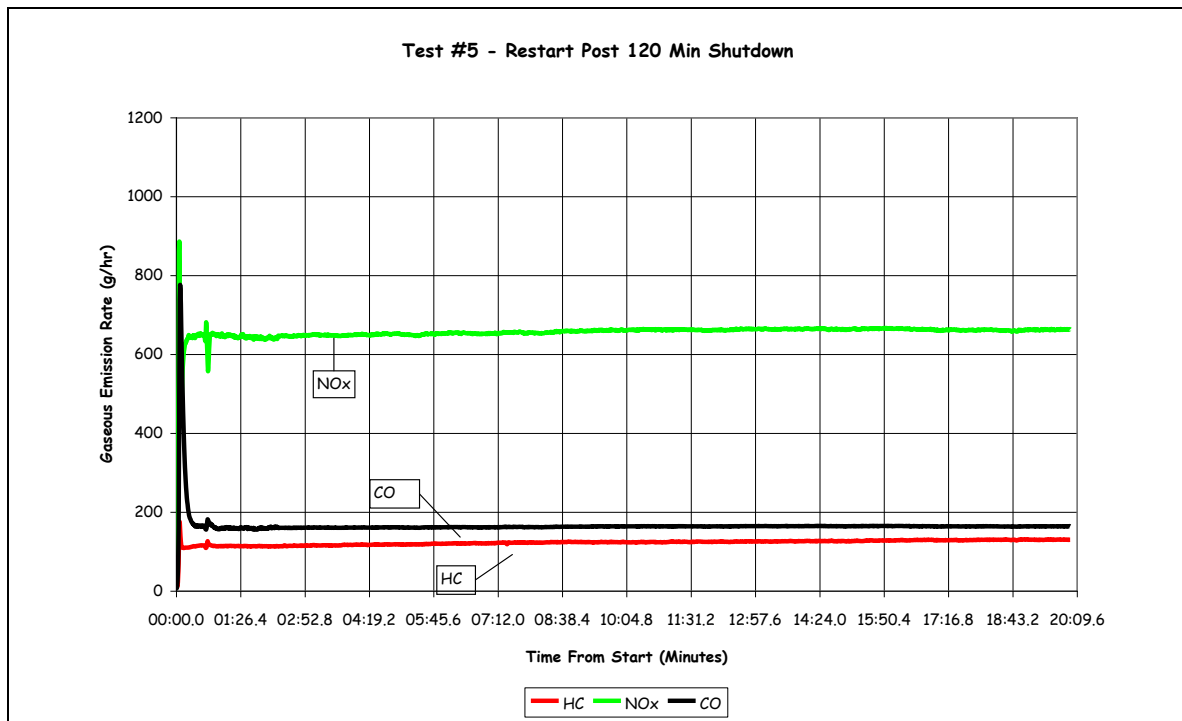


Figure 12. Test 5 Emissions Mass Flow Rates for UPY1378

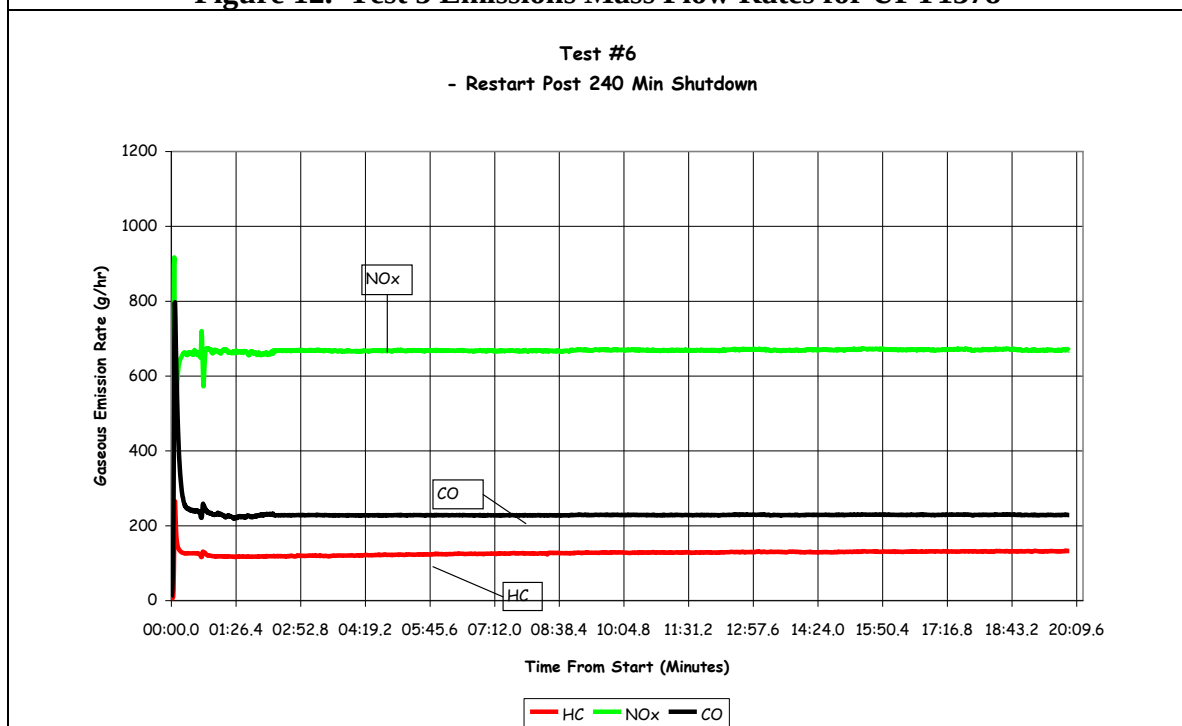


Figure 13. Test 6 Emissions Mass Flow Rates for UPY1378

The instantaneous emissions mass flow rates, from tests 3 through 6, were then integrated over the test cycle. The outcomes of these results were compared to the baseline emissions test, assuming that baseline emissions rate would be constant while the engine was idling. The results of this work for NO_x emissions are shown in Figure 14. In general, the affect of restarting the engine is not an issue for the NO_x emissions from the engine. Figures 15 and 16 shows the trends for HC and CO emissions are the same as the NO_x emissions.

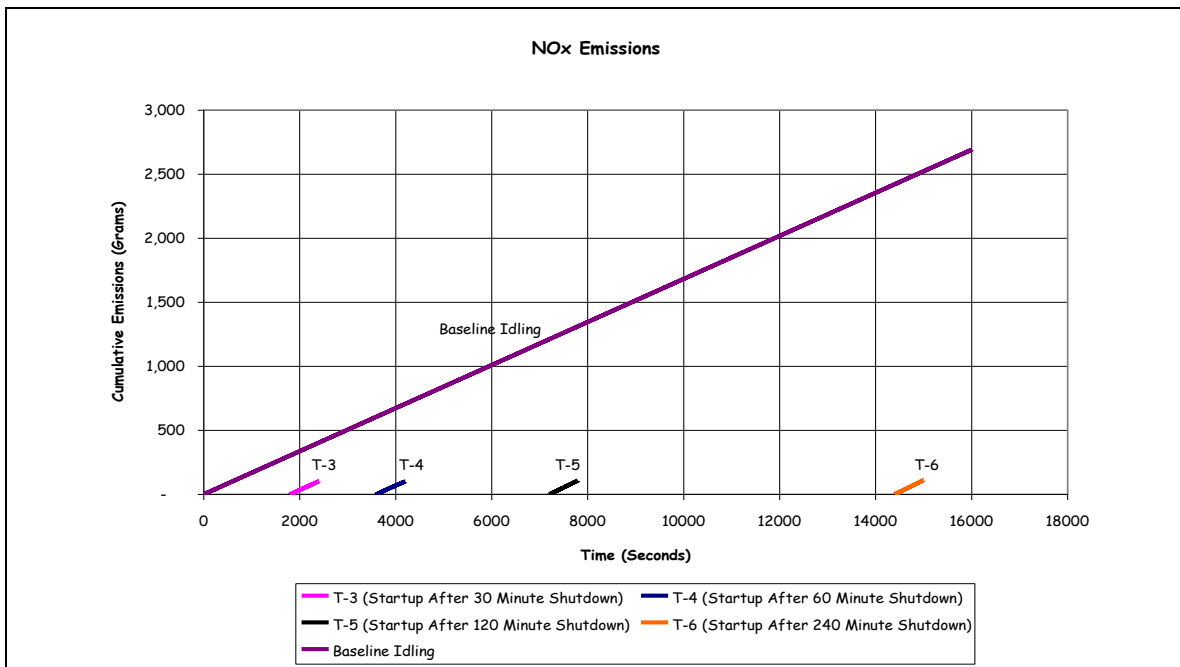


Figure 14. UPY1378 Cumulative NO_x Emission for UPY1378

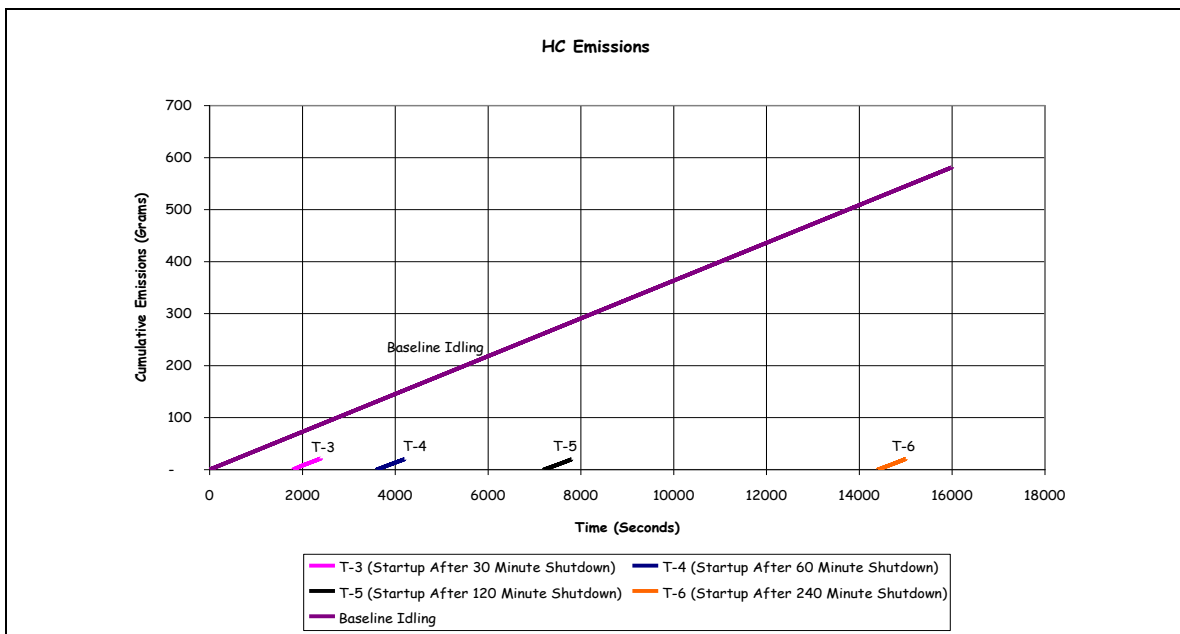


Figure 15. UPY1378 Cumulative HC Emission for UPY1378

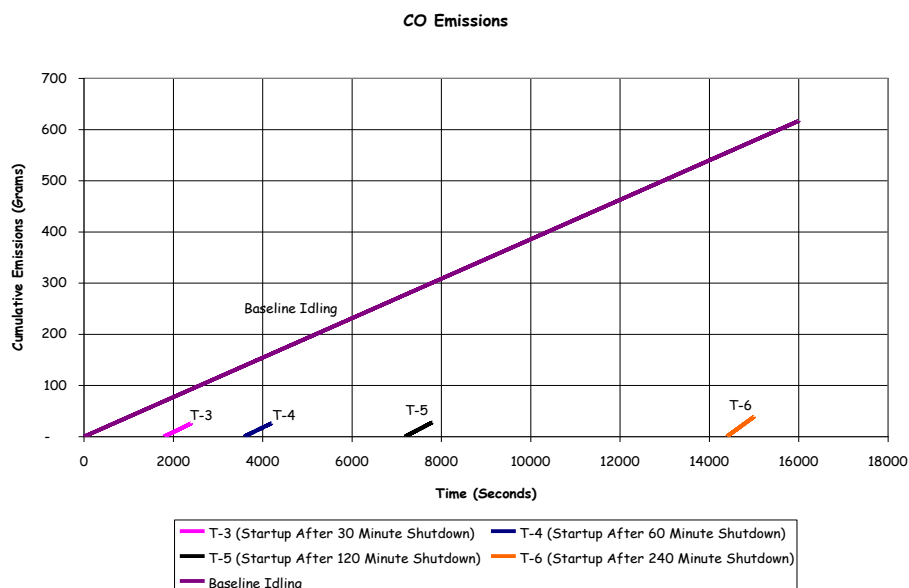


Figure 16. UPY1378 Cumulative CO Emission for UPY1378

PM emissions were also measured for each of the restarts. Some of the tests had multiple PM samples taken and were labeled Filters A, B and C. Each PM emissions sample was taken for 300 seconds, so the filter weights are an average over the 300 second sample period. The test description, test code, PM filter weight gain, and the PM emissions rate are all shown in Table 3.

Table 3. PM Emissions Results for Restart Tests on UPY1378

Condition of Test	Test Code	PM Emissions Filter A (g/hr)	PM Emissions Filter B (g/hr)	PM Emissions Filter C (g/hr)
Baseline = FTP conditions	T-2	6.7	(A)	(A)
Start-up post 30 minute shutdown	T-3	13.1	(A)	(A)
Start-up post 60 minute shutdown	T-4	13.2	7.8	(A)
Start-up post 120 minute shutdown	T-5	17.6	7.8	7.2
Start-up post 240 minute shutdown	T-6	19.3	7.1	8.0

(A) PM emissions not measured

These tests show that the PM emissions rate increased during the start-up of the engine compared to the standard idle PM emissions rate. However, the additional filters taken on Test 4 and Test 5 shows that the PM emissions rates returns to a level close to the baseline PM emissions rates after the initial filter is completed. This suggests that the start-up event PM emissions are somewhat higher, from the engine at a restart of the engine were somewhat higher than baseline, but quickly drops to a lower level shortly after the restart of the engine.

The test sequence and emissions results for the extended idle tests are given in Table 4. This table shows that the emissions rate over the 4 hours of idle after the start of the engine was relatively steady. However, the emissions rate during the transient from idle to Notch 3 at the end of the 4 hours of idle produced an extremely high PM emissions level, which decreased with time, but did not stabilize, over the three PM samples taken over a 15-minute period after the transient.

Table 4. Steady State Emissions Results from 4 Hour Idle Study on UPY1378

Test	Notch	Time (Minutes)	NO _x (g/hr)	HC (g/hr)	CO (g/hr)	PM (g/hr)
7A	Idle	0	554	132	294	20
7B	Idle	5				9
7C	Idle	10				9
8	Idle	30	630	154	289	11
9	Idle	60	611	150	231	10
10	Idle	90	610	149	203	11
11	Idle	120	615	152	194	10
12	Idle	150	609	149	177	11
13	Idle	180	592	144	166	10
14	Idle	210	583	145	163	(A)
15	Idle	240	588	154	159	10
16A	3	250	4751	705	310	433
16B	3	255				209
16C	3	260				101

(A) = PM sample filter torn.

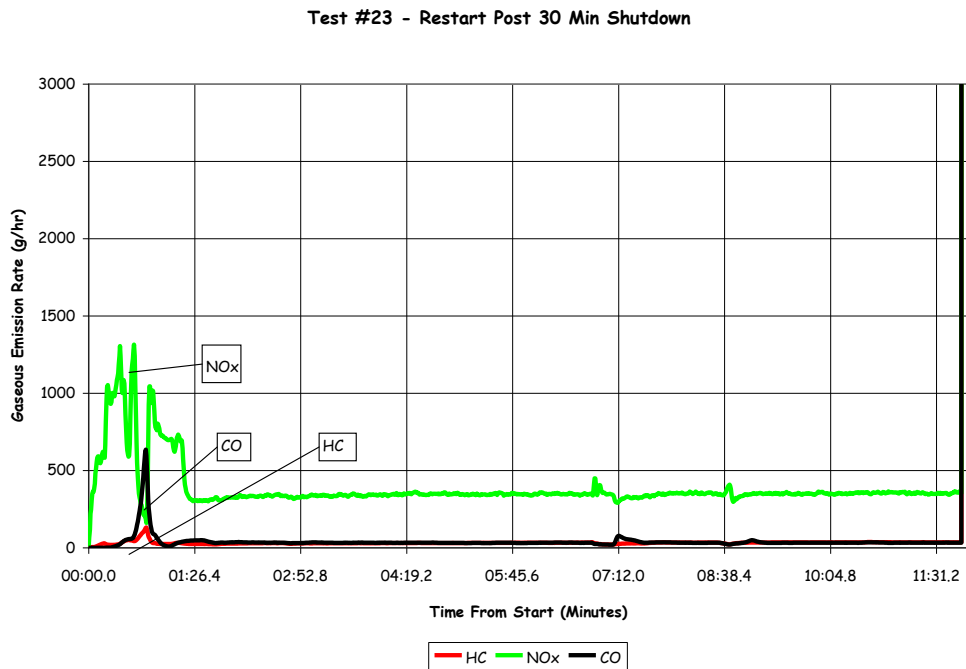
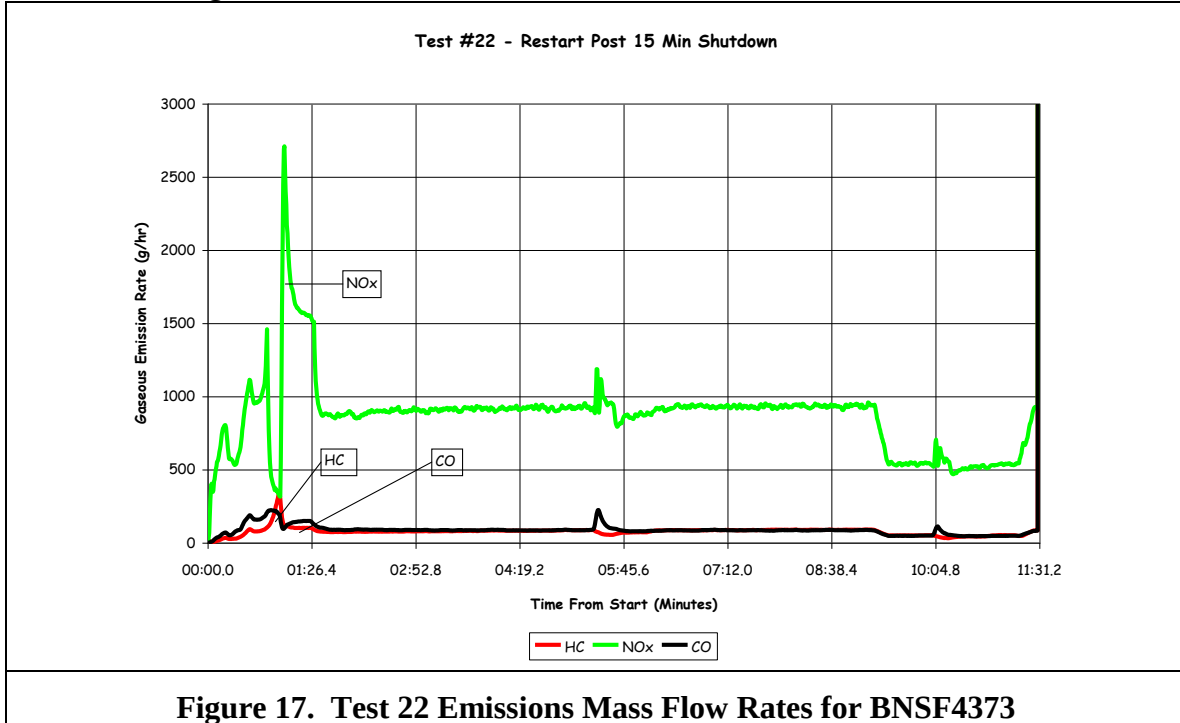
Results for Tests on BNSF4373

Test "T-21" utilized a standard FTP warm up and performance and emissions test at the idle condition. This test is the baseline for comparison for all of the other tests on BNSF4373. The results of this test are:

- NO_x (Corrected) = 296.6 g/hr
- CO = 29.1 g/hr
- HC = 30.6 g/hr
- PM = 10.6 g/hr

For the restart tests (tests T-22 through T-26), the measured exhaust emission were post processed to calculate mass emissions flow rates. The results can be seen in Figures 17 through 21, for tests 22 through 26 respectfully. The NO_x emissions shown in these graphs have are corrected for atmospheric humidity per 40 CFR Part 92 requirements. These graphs shows that

the emissions out of the engine varies over the test period due to the changes in engine speed and various auxiliary loads of the locomotive are on and off. These are primarily the air compressor and various cooling fans.



Test #24 - Restart Post 60 Min Shutdown

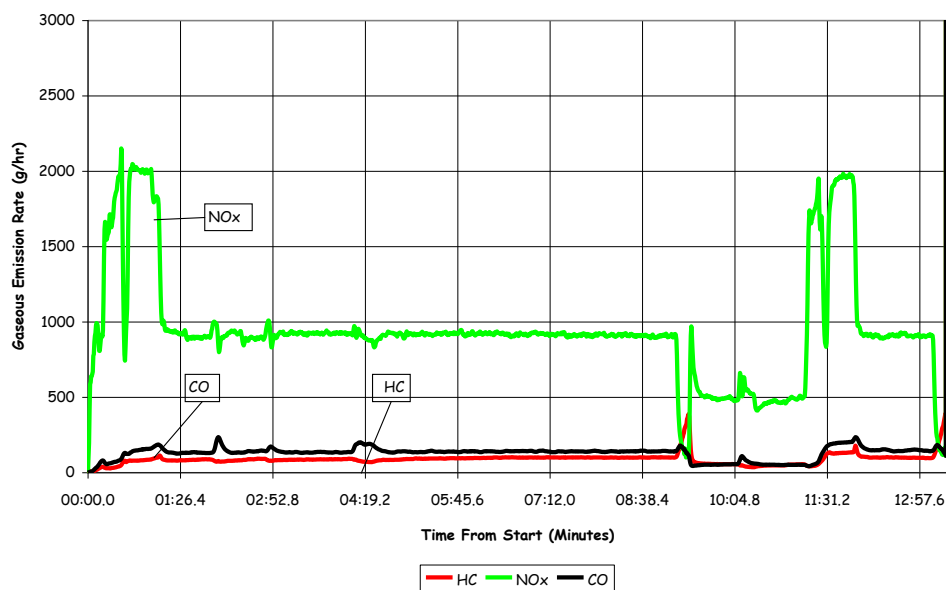


Figure 19. Test 24 Emissions Mass Flow Rates for BNSF4373

Test #25
- Restart Post 120 Min Shutdown

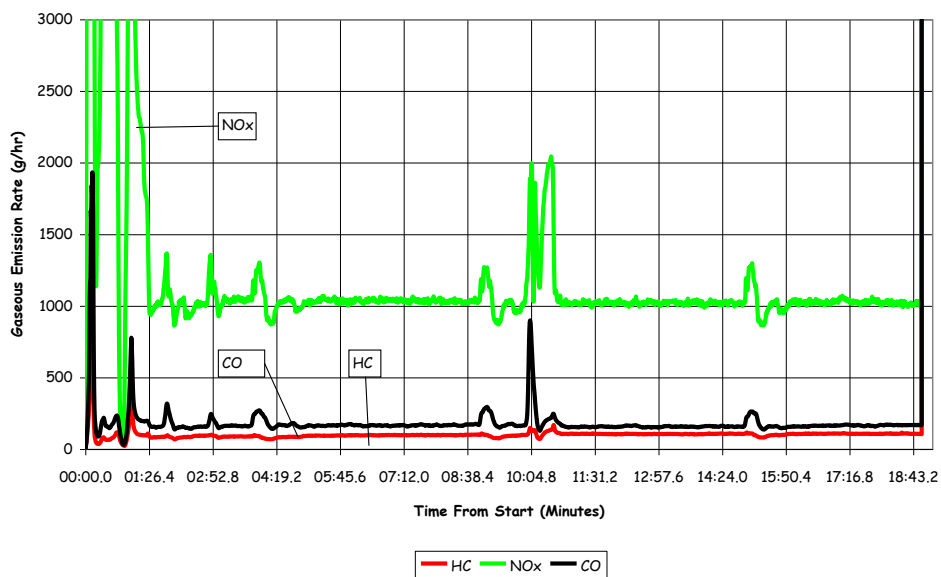


Figure 20. Test 25 Emissions Mass Flow Rates for BNSF4373

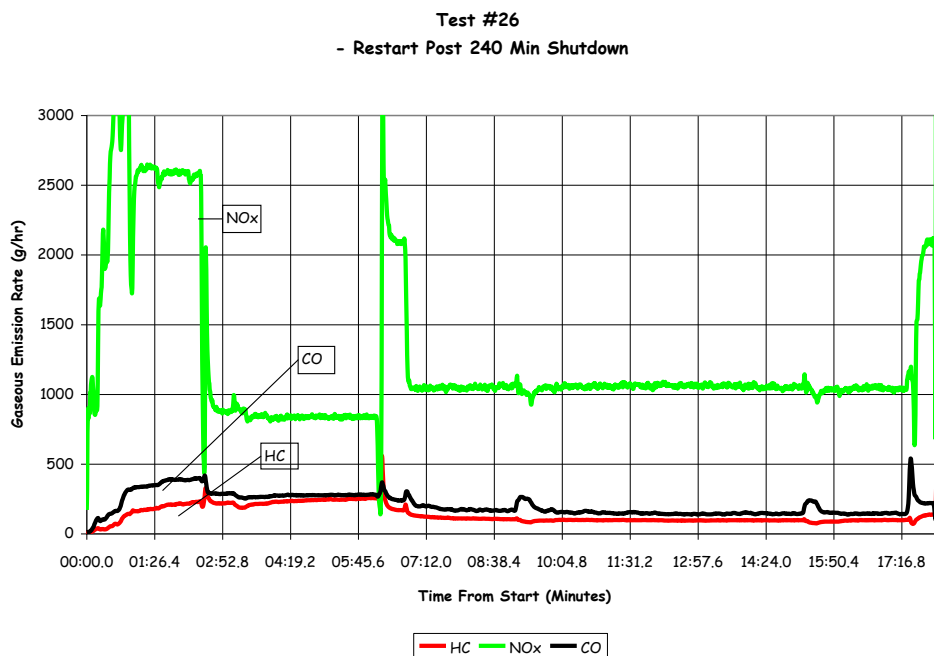


Figure 21. Test 26 Emissions Mass Flow Rates for BNSF4373

The emissions profile from the BNSF4373 locomotive was significantly different than that of the UPY1378 locomotive. These two locomotives are different in many ways. These include, but are not limited to; manufacturer, control system of the engines and the locomotive in general, engine types and power rating. The one fact that became obvious during these tests was when the UPY1378 was started, the engine speed was held constant by the mechanical governor, except for minor (and short lived) droops in engine speed as the air compressor was turned on shortly after the engine was started. BNSF4373 is computer controlled and equipped with electronic fuel injection and electronic speed governing. The GE locomotive computers manage various engine and locomotive parameters, including engine speed up for high and low jacket water and oil sump temperatures and low air pressure. These locomotive control issues, which drove the variable emissions traces seen in figures 17 through 21 can also be seen in the engine speeds of the BNSF4373 locomotive over these same tests. The engine speed over the tests can be seen in Figure 22.

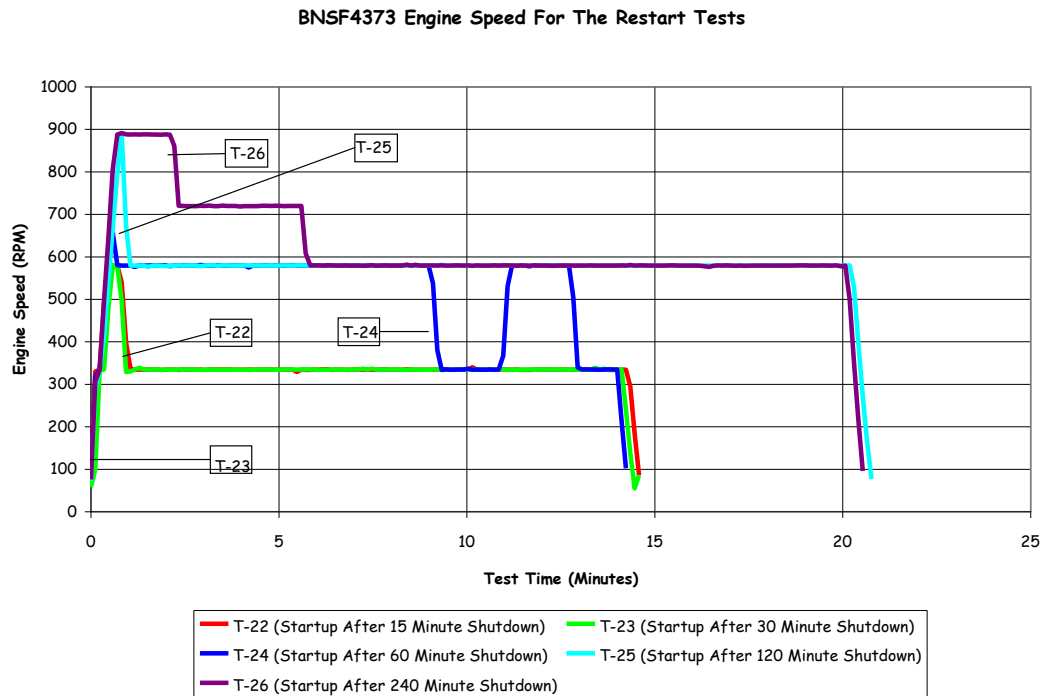


Figure 22. Engine Speeds During the Restart Tests on BNSF4373

Because of the variable emissions profile from BNSF4373, the cumulative emissions rates are also more unpredictable, as shown in Figures 23 through 25. These emissions rates shows that the higher engine speeds and auxiliary loads of the locomotive when the restart takes place causes the cumulative rate to be very steep and in T-22 actually crosses the baseline test line. One many of these tests the cumulative emissions rates are starting to drop somewhat and have less steep of a slope, after about 5 minutes of operation, depending on the test.

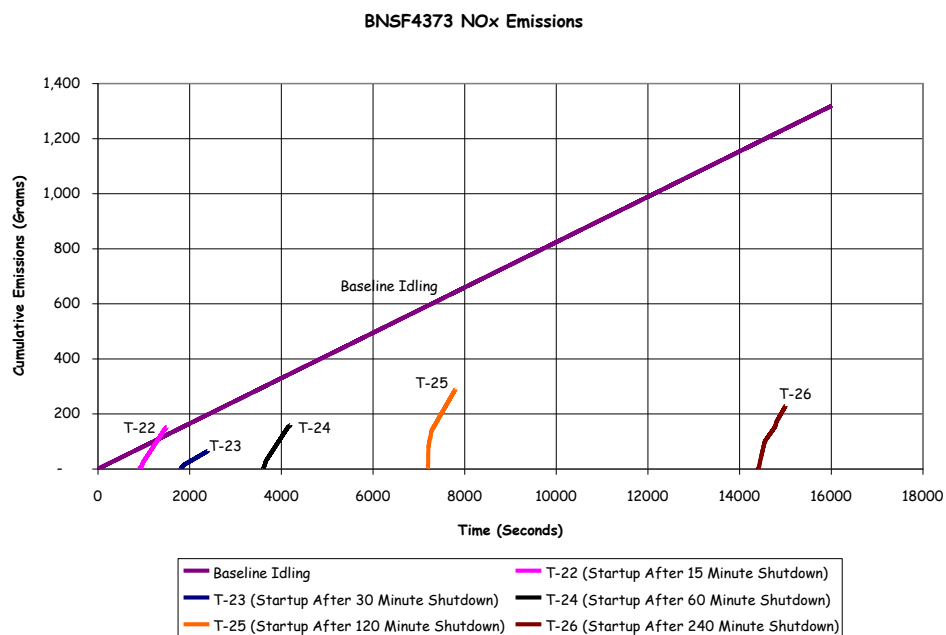


Figure 23. Cumulative NO_x Emissions From BNSF4373

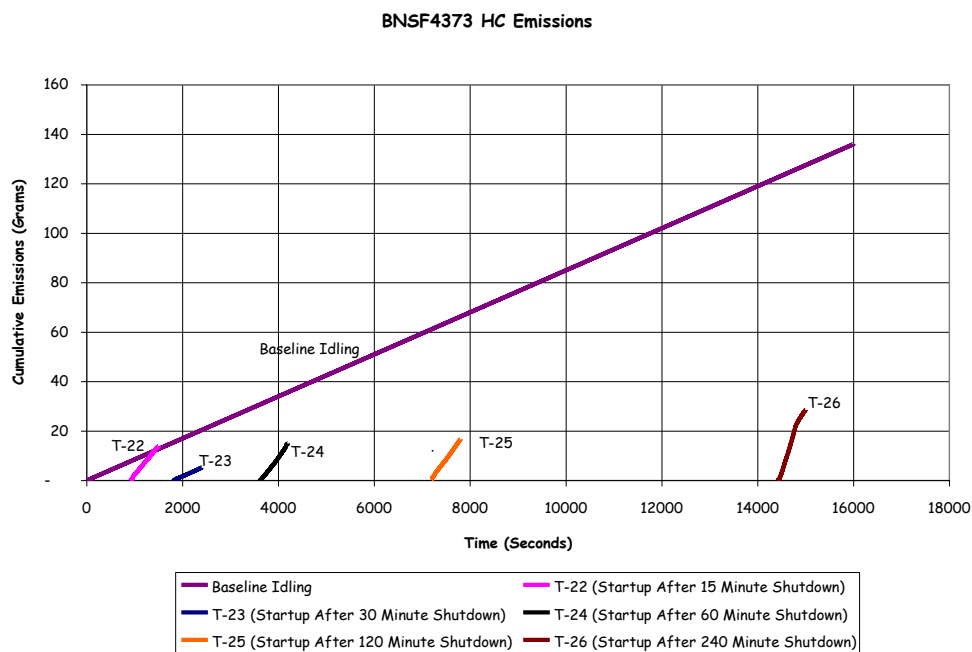


Figure 24. Cumulative HC Emissions From BNSF4373

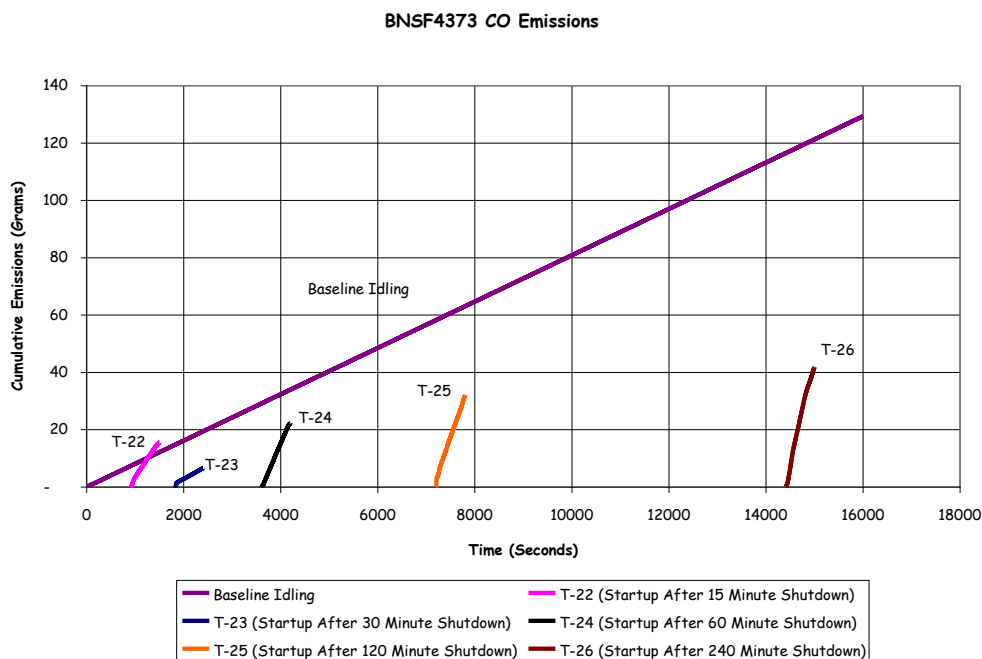


Figure 25. Cumulative CO Emissions From BNSF4373

The PM emissions from this series of restart tests are shown in Table 5. By comparing the PM results in Table 5 to the PM results of the UPY1378 in Table 3, one can see that the PM emissions from BNSF4373 are higher than that of the UPY1378. Additionally if one compares the results shown in Table 5 to the engine speeds that the engine exhibited during the restart tests, as shown in Figure 22, one can see that the engine produces higher PM emissions as the engine is allowed longer engine shutdown periods and as the locomotive drives the engine to higher speeds, for a longer duration, after the restart of the engine.

Table 5. PM Emissions Results for Restart Tests on BNSF4373

Condition of Test	Test Code	PM Emissions Filter A (g/hr)	PM Emissions Filter B (g/hr)	PM Emissions Filter C (g/hr)
Baseline = FTP conditions	T-21	10.6	(A)	(A)
Start-up post 15 minute shutdown	T-22	11.0	9.8	(A)
Start-up post 30 minute shutdown	T-23	10.7	10.1	(A)
Start-up post 60 minute shutdown	T-24	36.3	32.3	(A)
Start-up post 120 minute shutdown	T-25	46.1	51.6	48.4
Start-up post 240 minute shutdown	T-26	106.3	50.6	45.2

(A) PM emissions not measured

The test sequence and emissions results for the extended idle tests are given in Table 6. The data shows that all of the emissions were greatly reduced between Test T-30 and T-31, the point that the engine speed transited from higher idle speed of 580 RPM, apparently to assist in the warm up of the engine, and the low idle speed of 330 RPM. The emissions rate during the transient from idle to Notch 3, at the end of the 4 hours of idle, produced an extremely high PM emissions level, which decreased after the first filter (after 5 minutes). This is a different profile of emissions than what was seen on the UPY1378, in Table 4, where the PM emissions were more consistent over the 4 hour idling period, due to the one engine speed, and the PM emissions. Additionally, the UPY1378 produced much lower PM emissions at the transient from the 4 hours of idle to Notch 3 then did the BNSF4373. However, on a brake specific basis, these differences will be minimized due to the higher horsepower output of the BNSF4373 engine at notch 3.

Table 6. Steady State Emissions Results from 4 Hour Idle Study on BNSF4373

Test	Notch	Time (Minutes)	NO _x (g/hr)	HC (g/hr)	CO (g/hr)	PM (g/hr)
T-27A	Idle	0	2159	144	283	37
T-27B	Idle	5				43
T-27C	Idle	10				45
T-28	Idle	30	2272	164	253	50
T-29	Idle	60	1054	96	116	33
T-30	Idle	90	1035	105	136	38
T-31	Idle	120	397	36	34	11
T-32	Idle	150	398	37	35	12
T-33	Idle	180	444	43	41	14
T-34	Idle	210	407	36	37	13
T-35	Idle	240	343	31	31	10
T-36A	3	250	16699	657	1455	1169
T-36B	3	255				263
T-36C	3	260				230

Conclusions

The first and main conclusion that can be drawn from this testing is that continuous idling emissions of NO_x and PM were greater than start-up emissions following each shut-down period for both locomotives. The only exception is the 15 minute restart test on the BNSF4373, but this is envisioned to be a non-typical operating cycle for the AESS system.

The second conclusion is that restarting the EMD 12-645E engine does not dramatically increase the emissions rate. Figure 12 shows that by shutting down the engine for 4 hours could reduce the NO_x emissions by nearly 2,450 grams or nearly 5.4 pounds. Additionally there does not appear to be a significant increase in any of the other emissions emitted by the engine at the start-up.

The third conclusion is that the GE T-0 locomotive engine in BNSF4373 operated at higher than nominal idle speed for a number of the restart tests (see Figure 22). After restart, the engine operated at engine speeds of 580 RPM and some times as high as 980 RPM to accommodate the Engine Protection Algorithm. These high engine operating speeds increase the emissions rate from the GE engine when compared to the baseline condition.

The fourth conclusion is that extended idling of the locomotive engines that were tested can cause high PM emissions to be produced when the engine is transitioned from idle to a power producing notch. This is due to the build up of unburned fuel and lubrication oil that collects in the exhaust system during the idle and is ejected from the engine exhaust with the higher exhaust temperature and the higher exhaust mass flow through the exhaust system during the transient. This simply reinforces the desirability of shutting down the engines to avoid unnecessary idling. To further understand the emissions affect of the transient at the end of an extended idle, an FTP Notch 3 data point should be run. This will allow for a better estimate for the amount of time that is required to stabilize the engine emissions after the transient.

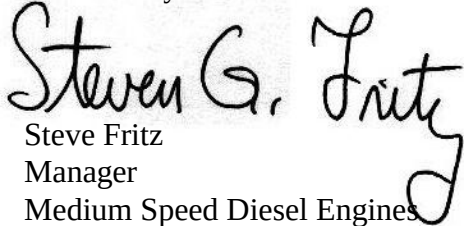
A fifth conclusion is that during any future tests to characterize idle or restart emissions, the pre-shutdown engine conditioning should better reflect actual locomotive operation, especially for 120- and 240-minute equivalent shutdowns where a typical cold starting occurred.

The final conclusion from this project concerns the GE Automatic Engine Stop Start (AESS) system tested. When BNSF4373 was first delivered to SwRI for testing, the system only allowed the engine to be shutdown for a maximum of approximately 90 minutes at a time and had an extended idle of about 9.45 hours until finally shutting down again. These operating characteristics of the AESS system may provide excellent engine and locomotive protection; but would not be considered an optimum operating cycle for emissions or fuel consumption reductions.

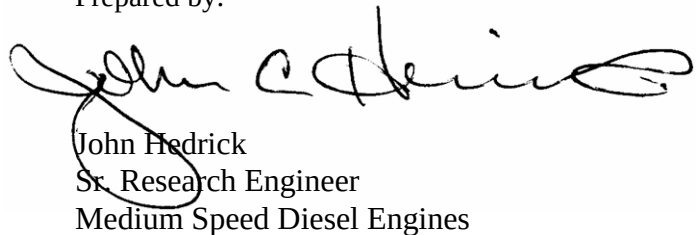
Closure

If you have any questions or comments regarding this report, please feel free to contact me via e-mail at jhedrick@swri.org, by telephone at (210) 522-2336, or by fax at (210) 522-2019.

Reviewed by:


Steve Fritz
Manager
Medium Speed Diesel Engines

Prepared by:

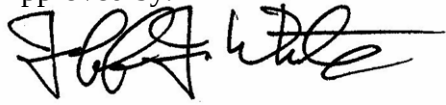

John Hedrick
Sr. Research Engineer
Medium Speed Diesel Engines

Mr. Michael Bogdanoff
South Coast Air Quality Management District
January 25, 2006
Page 26

**Department of Engines and Emissions Research Engine, Emissions & Vehicle
Research Div.**

Engine, Emissions & Vehicle Research Div.

Approved by:

A handwritten signature in black ink, appearing to read 'Jeff J. White', with a stylized, sweeping flourish at the end.

Jeff J. White
Director – Development
Department of Engines and Emissions Research
Engine, Emissions & Vehicle Research Div.

*This report must be reproduced in
full, unless SwRI® approves a
summary or abridgement*

/mr

Appendix A

In-Bound Inspection Worksheet UPY1378

Date:	10/10/2005	Customer:	SCAQMD
Locomotive Type	MP-15 DC		
Engine Serial Number:	82J2-1042	Road Number:	Y1378

Head Assembly	Cylinder	Part Number	Serial Number	Diamond #
EMD	1	9556059	05D33765	5
EMD	2	"	05E33165	5
EMD	3	"	05E33128	5
EMD	4	" (?)	05E33127	5
EMD	5	"	05E33167	5
EMD	6	"	05D33763	5
EMD	7	"	05E33467	5
<u>W</u>	8	"	05E33114	6
<u>W</u>	9	"	05E33115	6
<u>W</u>	10	"	05E33159	6
EMD	11	40021328	05E33124	6
EMD	12	9556059	05E33456	5
	13			
	14			
	15			
	16			

Injector	Cylinder	Part Number	Serial Number
Haynes	1	5229200	D5251107
	2	"	D525111?
	3	"	D5251109
	4	"	D5251110
	5	"	D5251111
	6	"	D5251112
	7	"	D5251113
	8	"	D5251114
	9	"	D5251121
	10	"	D5251122
	11	"	D5251123
	12	"	D5251124
	13		
	14		
	15		
	16		
Blower		Part Number	Serial Number
	Rt	8369676 RH	5113905 2-9-05
	Lt	8369677LH	51B2105-4 2-21-05
Governor		Part Number	Serial Number
	UTEX	8482413	1014146
	Customer	7326788	
	Balance Point	0.83	
	Engine Speed	900	

Appendix B

In-Bound Inspection Worksheet BNSF4373

Date:	11/26/2005	Customer:	AAR
Locomotive Type:	Dash9-44CW		
Engine Type:	7FDL16Y16	Road Number:	BNSF4373
Engine Serial Number:	040126R		

Power Assembly

Cylinder	CAT Number	Serial Number	Part Number
Right 1	121X1228	LQ00090962R	41R992519P8
Right 2	"	CG97110948R	"
Right 3	"	CG98010853R	"
Right 4	"	CG00099020R	"
Right 5	"	CG00090837R	"
Right 6	"	CG97030135R	"
Right 7	"	LG00091314R	"
Right 8	"	CG95110362R	"
Left 1	"	LG95040603R	"
Left 2	"	CG95060532SA	"
Left 3	"	LG98040455R	"
Left 4	"	CG98010307R	"
Left 5	"	CB97120757R	"
Left 6	"	CG98010357R	"
Left 7	"	CG95040703R	"
Left 8	"	LG01020212R	"

Injection Pump

Cylinder	CAT Number	Serial Number	Part Number
Right 1	132X1825-1R	39277413	41C642286P2R
Right 2	"	39277427	"
Right 3	"	39277433	"

Right 4	"	39277432	"
Right 5	132X1825-2R	584117735	84C623439P1R
Right 6	132X1825-1R	39277429	41C642286P2R
Right 7	"	39277436	"
Right 8	"	39277430	"
Left 1	132X1825-2R	584117748	84C623439P1R
Left 2	132X1825-1R	39277422	41C642286P2R
Left 3	"	39277467	"
Left 4	No Tag	No Tag	No Tag
Left 5	132X1825-1R	39277466	41C642286P2R
Left 6	"	39277436	"
Left 7	"	39277443	"
Left 8	"	39277505	"

Turbocharger

CAT Number	Serial Number
126x1886R	7S45B6R

Aftercooler

	Part Number	Serial Number
Left	??	??
Right	41E914534G1	RG03111424

Governor / EGU

Part Number	Serial Number
89954-169D4727P1	

Appendix C

Test Data Sheets

UPY1378	10/25\2005																
Restart Test	Project # 03.11806																
Test #	Test Condition	Time	Baro	Engine RPM	Fuel flow Rate	Fuel Temp	Intake Air Temp	Ambient Dry Bulb Temp	Ambient Wet Bulb Temp	Locomotive Horsepower	Jacket Water Temp	Oil Sump Temp	HC, g/hr	CO, g/hr	Corr. NOx, g/hr	PM1, g/hr	PM2, g/hr
T-1	Cold Start	9:32	29.50	318	20.4	50	65	53	44	16	62	73	152	373	431	22.8	--
T-2	Baseline	11:34	29.47	318	22.5	110	80	51	47	16	175	214	131	139	605	6.7	--
	15 Min Shut Down	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--
T-3	30 Min Shut Down	11:52	29.45	318	20.4	110	77	57	50	16	186	195	113	126	547	13.1	--
T-4	60 Min Shut Down	14:08	29.40	318	20.9	108	81	73	52	16	168	170	107	139	530	13.2	7.8
T-5	120 Min Shut Down	16:39	29.36	318	22.5	106	81	75	52	16	159	161	114	157	568	17.6	7.8
T-6	240 Min Shut Down	21:11	29.39	318	23.6	98	67	63	48	16	144	147	119	219	575	19.3	7.1
BNSF4373	10/26/2005																
Extended Idle Test	Project # 03.11806																
Test #	Test Condition	Time	Baro	Engine RPM	Fuel flow Rate	Fuel Temp	Intake Air Temp	Ambient Dry Bulb Temp	Ambient Wet Bulb Temp	Locomotive Horsepower	Jacket Water Temp	Oil Sump Temp	HC, g/hr	CO, g/hr	Corr. NOx, g/hr	PM1, g/hr	PM2, g/hr
T-7	Start	10:39	29.36	318	27.8	62	69	68	55	16	65	72	132	294	554	20.1	8.7
T-8	30 Min of Idle	11:22	29.35	318	26.5	78	73	68	55	16	111	109	154	289	630	10.9	--
T-9	60 Min of Idle	11:55	29.35	318	25.2	90	75	71	56	16	126	126	150	231	611	10.3	--
T-10	90 Min of Idle	12:21	29.34	318	24.8	101	77	72	56	16	145	145	149	203	610	10.5	--
T-11	120 Min of Idle	12:48	29.34	318	24.6	105	79	74	57	16	155	156	152	194	615	10	--
T-12	150 Min of Idle	13:53	29.33	318	24.0	76	80	74	57	16	162	164	149	177	609	10.6	--
T-13	180 Min of Idle	14:52	29.32	318	23.4	78	81	75	57	16	174	175	144	166	592	10.4	--
T-14	210 Min of Idle	15:41	29.3	318	23.4	77	84	76	57	16	180	182	145	163	583	--	--
T-15	240 Min of Idle	16:29	29.31	318	23.5	72	85	77	58	16	179	195	154	159	588	9.6	--
T-16	Notch 3 Transient	17:18	29.3	512	193.8	79	86	78	58	475	182	197	705	310	4751	432.8	209.1

APPENDIX B

START-UP AND IDLING EMISSIONS FROM TWO LOCOMOTIVES

FINAL REPORT

January 16, 2006

**Submitted to:
Technology Advancement Office
South Coast Air Quality Management District**



**START-UP AND IDLING EMISSIONS
FROM TWO LOCOMOTIVES
Final Report**

**Submitted to
Technology Advancement Office
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, CA 91765**

Contract No. 00112

January 16, 2006

**Submitted by
Christopher S. Weaver, P.E.
Engine, Fuel, and Emissions Engineering, Inc.
3215 Luyung Drive
Rancho Cordova, CA 95742 USA
(916) 368-4770**

EXECUTIVE SUMMARY

The South Coast Air Quality Management District (SCAQMD) is developing regulations to limit idling by locomotive engines. Such regulations would necessarily result in more-frequent starting, including start-up after varying periods of being shut down. The SCAQMD staff has received comments from the railroad industry that increase in the number of start-ups due to idle restrictions could result in a tradeoff of emissions.

To clarify the relationship between start-up and idling emissions, the SCAQMD Technology Advancement Office requested Engine, Fuel, and Emissions Engineering, Inc. (EF&EE) to carry out emission measurements on two locomotives owned by the South Coast Regional Rail Authority – better known as Metrolink. Emission measurements were performed using the Ride Along Vehicle Emission Measurement (RAVEM) system developed and manufactured by EF&EE. Pollutants measured included particulate matter (PM), oxides of nitrogen (NO_x), carbon dioxide (CO₂), and total hydrocarbons (HC). CO concentrations were also measured, but the results were below detection levels, and are not reported. The emission measurements were performed during the period from November 3 to 8, 2005, at Metrolink's Central Maintenance Facility (old "Taylor Yard") in Los Angeles.

The two locomotives tested were both produced by the Electromotive Division of General Motors (EMD), and were equipped with 16-cylinder, two-stroke, turbocharged and aftercooled diesel engines. The first locomotive tested, Metrolink No. 804, was an SD60 model – a typical freight locomotive of the last generation – equipped with an EMD 16-710G engine. This unit was also equipped with a computer control system that – among other functions – changed the idle speed from low idle (about 200 RPM) to higher speed in response to low coolant temperature, low battery voltage, or low pressure in the air brake reservoir. The second unit tested was Metrolink No. 800, an F40 locomotive equipped with an EMD 16-645E engine. This unit was equipped with an electromechanical control system, and included a manual switch to select between low and normal idle speeds. Consistent with normal railroad practice, low idle speed was selected during all of the idle and start-up measurements in this test program.

PM emissions at idle from the two locomotives tested were 0.66 and 0.38 grams per minute, respectively; and NO_x emissions were 16.7 and 19.8 grams per minute. A significant fraction of the total PM (15% in the first case, and 49% in the second) is not emitted at the time, but retained in the exhaust system as "soup" – semivolatile hydrocarbons and lubricating oil – to be emitted subsequently when the locomotive returns to higher-load operation. The present Federal locomotive test procedure fails to measure these substantially-increased PM emissions during the transient conditions following a period of idle.

The incremental emissions due to engine start-up from these locomotives were small compared to the emissions produced under stabilized idle conditions. In none of the start-up tests conducted did these emissions exceed the equivalent of 8 minutes of idle operation. Based on these data, shutting down the engine and restarting it will result in reduced emissions compared

to allowing it to idle, as long as the idle shutdown period is longer than eight minutes. The longer the shutdown period, the greater the emission benefits.

CONTENTS

1. INTRODUCTION.....	1
2. EMISSION MEASUREMENT SYSTEM INSTALLATION AND OPERATION	2
3. EMISSION RESULTS	5
4. ANALYSIS AND DISCUSSION	9
5. SUMMARY AND CONCLUSIONS	11
6. REFERENCES.....	12

APPENDIX: RAVEM SYSTEM DESCRIPTION

LIST OF TABLES

TABLE 1: SUMMARY OF EMISSION TESTS ON METROLINK NO. 804	6
TABLE 2: SUMMARY OF EMISSION TESTS ON METROLINK NO. 800	7
TABLE 3: CALCULATION OF INCREMENTAL EMISSIONS DUE TO LOCOMOTIVE RESTART	10

LIST OF FIGURES

FIGURE 1: EMISSION MEASUREMENT SYSTEM INSTALLATION ON METROLINK NO. 804	3
FIGURE 2: EMISSION MEASUREMENT SYSTEM INSTALLATION ON METROLINK NO. 800	3
FIGURE 3: INSIDE OF EXHAUST STACK ON METROLINK NO. 804, SHOWING THE CRANKCASE VENT DISCHARGE ON THE RIGHT SIDE	4

INTRODUCTION

In the railroad industry, it is presently a common practice for locomotive engines to be left idling when the locomotive is not in use – sometimes for very long periods. The South Coast Air Quality Management District (SCAQMD) is developing regulations to limit idling by locomotive engines. Such regulations would necessarily result in more-frequent starting, including start-up after varying periods of being shut down. There was concern, therefore, that the extra emissions due to more-frequent starts – especially starting with the engine cold – might offset the benefits of reduced pollutant emission from the shut down periods.

In order to clarify the relationship between start-up and idling emissions, the SCAQMD Technology Advanced Office requested Engine, Fuel, and Emissions Engineering, Inc. (EF&EE) to carry out emission measurements on two locomotives owned by the South Coast Regional Rail Authority – better known as Metrolink. Emission measurements were performed using the Ride Along Vehicle Emission Measurement (RAVEM) system developed and manufactured by EF&EE. Pollutants measured included particulate matter (PM), oxides of nitrogen (NO_x), carbon dioxide (CO₂), and total hydrocarbons (HC). CO concentrations were also measured, but the results were below detection levels. The emissions measurements were performed during the period from November 3 to 8, 2005, at Metrolink's Central Maintenance Facility (old "Taylor Yard") in Los Angeles.

The two locomotives tested were both produced by the Electromotive Division of General Motors (EMD), and were equipped with 16-cylinder, two-stroke, turbocharged and aftercooled diesel engines. The first locomotive tested, Metrolink No. 804, was an SD60 model – a typical freight locomotive of the last generation – equipped with an EMD 16-710G engine. This unit was also equipped with a computer control system that – among other functions – changed the idle speed from low idle (about 200 RPM) to higher speed in response to low coolant temperature, low battery voltage, or low pressure in the air brake reservoir. The second unit tested was Metrolink No. 800, an F40 locomotive equipped with an EMD 16-645E engine. This unit was equipped with an electromechanical control system, and included a manual switch to select between low and normal idle speeds. Consistent with normal railroad practice, low idle speed was selected during all of the idle and start-up measurements in this test program.

EMISSION MEASUREMENT SYSTEM INSTALLATION AND OPERATION

Emission measurements were performed using EF&EE's "Ride Along Vehicle Emission Measurement" (RAVEM) systemⁱⁱ. Conventional vehicle emission measurement methods defined by the U.S. EPAⁱⁱⁱ and California ARB^{iv} utilize *full-flow* constant volume sampling (CVS), in which the entire exhaust flow is extracted and diluted. RAVEM measurements use *partial flow* CVS. This is similar to the EPA and CARB methods, except that the sampling system extracts and dilutes only a small, constant fraction of the total exhaust flow. The RAVEM system is further described in the Appendix.

Although the RAVEM system is designed to measure emissions while "riding along" on the vehicle under test, it can also be used for stationary tests in those cases where the source being measured does not need to move. For this program, the RAVEM system unit was placed on a table next to the locomotive. Figure 1 and Figure 2 show these installations for locomotives 804 and 800, respectively.

In the RAVEM system, as in conventional CVS systems, particulate matter is normally collected on filters of Teflon-coated borosilicate glass. For the testing in this program, the SCAQMD requested that EF&EE also collect particulate matter from some tests on quartz filters, to allow the content of organic and elemental carbon to be determined. Thus, two sets of PM sample filters were collected for most of these tests. The sample filter plumbing was modified to allow two filter holders to be installed in parallel, and flow through the quartz filter was controlled by an auxiliary mass flow controller slaved to the mass flow controller for the Teflon/borosilicate glass filters.

The RAVEM system normally does not measure gaseous HC emissions, as experience has shown that diesel engines emit very low quantities of HC. For these tests, it was considered possible that HC emissions would be significant, so a heated sample probe, heated line, and heated FID analyzer were added to the measurement system. Background HC concentrations cannot be determined reliably from the RAVEM's background bag samples, due to HC hangup in the bag system. Thus, background HC concentrations were measured before and/or after each test. The variability in these background measurements was comparable in magnitude to the net HC concentrations measured in the dilution tunnel, so that the HC results reported here should be considered only approximate.

Figure 1: Emission measurement system installation on Metrolink No. 804**Figure 2: Emission measurement system installation on Metrolink No. 800**

Inspection of the locomotive exhausts showed that both units discharge almost directly from the turbocharger to the atmosphere via a very short, tapered exhaust stack. While the mixing due to passage of the exhaust through the turbine would have helped to provide homogeneity, there was concern that the distribution of pollutants could be affected by the crankcase vent discharging

into the right side of each stack. In addition, it would have been difficult to find a single probe location in the existing stacks for which the exhaust velocity would be equal to the average velocity of the exhaust as a whole, as required by the isokinetic proportional sampling system. To increase the opportunity for mixing, and to help provide a uniform velocity profile in the exhaust, EF&EE extended each locomotive's stack by 7.5 feet, using rectangular sheet metal extensions cut to fit around the edge of the existing stack. The RAVEM probe was attached to a crossbar at the top center of the stack extension, and the insulated one-half inch sample line was led from the probe to the sample inlet on the CVS.

Figure 3: Inside of exhaust stack on Metrolink No. 804, showing the crankcase vent discharge on the right side



As a check on the accuracy of the sampling system, a system for measuring mass fuel consumption was installed on locomotive 800. This system consisted of a 55-gallon drum, a drum scale, and a pair of three-way valves inserted in the fuel supply and return lines, with supply and return tubes leading to the 55-gallon drum. By opening and closing the three-way valves, it was possible to switch the locomotive's fuel supply and return from its own tank to the drum mounted on the scale, and thus to measure the fuel consumed during a given emission test. A similar installation was planned to be made on locomotive no. 804, but this proved to be impractical. The fuel system on no. 804 had been rebuilt at some time in the past, and was assembled with non-standard fittings in such a way that the three-way valves could not be installed without damaging it.

EMISSION RESULTS

The planned emission test sequence was as follows:

1. Precondition the engine and check the accuracy of the RAVEM sampling system using carbon balance. Begin an emission test using the RAVEM system. With the RAVEM system recording data, start the engine, and allow it idle for 10 minutes. Increase the throttle to notch 2 for 10 minutes, and then to notch 4 for 10 minutes. Note the weight indicated by the drum scale at the beginning and end of each segment. End the emission test, reduce the throttle to notch 3, read the sample bags, and change the PM filters. Confirm that the fuel consumption rate calculated by carbon balance from the RAVEM measurements matches that calculated from the change in weight of the fuel drum.
2. “Soup” test baseline – This test, carried out after the exhaust system has been cleaned of “soup” (accumulated heavy HC and lube oil), establishes the baseline for the “soup” test at the end of the program. Reduce the throttle from notch 4 to idle. Start the emission test after no more than 5 minutes at idle. After 60 seconds, return the throttle to notch 3. Measure emissions for 20 minutes. End the emission test, change PM filters, and read bags while continuing to run the engine in notch 3.
3. Cooldown idle. Reduce the locomotive throttle from notch 3 to idle. After ten seconds, begin the emission test. Measure emissions and fuel consumption and monitor cooling water temperature for 30 minutes. Change filters and read bags while the engine continues to idle. If the engine coolant temperature has not stabilized by the end of the test, perform additional 30 minute tests until stability is reached. (i.e. the rate of change in cooling water temperature is less than 1 degree C per 5 minutes.)
4. Stabilized idle. Measure stabilized emissions for 30 minutes.
5. Restart ½ hour. Shut down the locomotive for 30 minutes. Begin the emission test, wait 30 seconds, and then restart the engine. Allow the engine to idle for 29 minutes before shutting it down. End the emission test 30 seconds after shutting down.
6. Restart 1 hour. Shut down the locomotive engine for 60 minutes. Begin the emission test, wait 30 seconds, and then restart the engine. Allow the engine to idle for 29 minutes before shutting it down. End the emission test 30 seconds after shutting down.
7. Cold Restart. Shut down the locomotive engine for 12 to 16 hours. Begin the emission test, wait 30 seconds, and then restart the engine. Allow the engine to continue idling while reading bags and changing filters for the next test. If the engine coolant temperature has not stabilized by the end of the test, perform additional 30 minute tests until stability is reached. (i.e. the rate of change in cooling water temperature is less than 1 degree C per 5 minutes.)
8. Stabilized idle. Measure emissions for 30 minutes.

9. Restart 2 hours. Shut down the locomotive engine for 120 minutes. Begin the emission test, wait 30 seconds, and then restart the engine. Allow the engine to idle for 29 minutes before shutting it down. End the emission test 30 seconds after shutting down.
10. Restart 4 hours. Shut down the locomotive engine for 240 minutes. Begin the emission test, wait 30 seconds, and then restart the engine. Allow the engine to idle for 29 minutes before shutting it down.
11. “Soup” Test -- Start the emission test with the engine at idle. After 60 seconds, increase the throttle to notch 3. Measure emissions for 20 minutes. During this time, the increased exhaust temperature will drive off the “soup” that has accumulated in the exhaust system during the preceding idle tests, allowing it to be measured.
12. Shut down the locomotive, remove the stack extension, probe, thermocouple, and three-way valves.

Because of scheduling issues (primarily involving the availability of the locomotives and the scheduling of the cold start), it was necessary to change the order of the emission tests somewhat. Also, system problems led to repeating some tests on locomotive 804. Table 1 shows the emission tests performed on that locomotive, in the order they were performed.

Table 1: Summary of Emission Tests on Metrolink No. 804

Test No.	Start Date/Time	Test Conditions	Coolant °C		Run Min.	Total Emissions (g)			
			Start	End		PM	CO ₂	NO _x	HC
T0759	11/3/05 8:02	Warm-Start Idle	#N/A	#N/A	29.5	18.4	19,864	559	33
T0760	11/3/05 9:00	Idle-Notch 2-Notch 4	#N/A	#N/A	30.0	59.9	73,061	1,753	85
T0761	11/3/05 9:49	Soup Test Baseline - Notch 3	#N/A	#N/A	20.0	38.9	65,231	1,532	28
T0762	11/3/05 10:24	Cooldown Idle from Notch 3	#N/A	#N/A	30.0	9.4	14,632	473	12
T0763	11/3/05 11:31	Restart after 30 minutes	#N/A	#N/A	29.0	12.5	13,520	449	26
T0764	11/3/05 13:01	Restart after 1 hour	#N/A	#N/A	29.0	13.8	13,008	426	13
T0765	11/3/05 16:01	Restart after 2 hours	#N/A	#N/A	29.0	18.6	13,199	436	22
T0767	11/3/05 20:34	Restart after 4 hours	#N/A	#N/A	29.0	18.6	19,629	484	20
T0769	11/4/05 9:03	Restart after 12 hours	32.3	52.8	29.5	19.3	24,132	632	33
T0770	11/4/05 9:42	Warmup Idle after Cold Start	56.3	60.0	30.0	13.5	17,695	518	31
T0771	11/4/05 10:25	Semi-stabilized idle	61.2	64.1	30.0	#N/A	16,199	495	12
T0772	11/4/05 11:13	Stabilized Idle after Cold Start	65.3	67.5	30.0	16.9	15,449	484	30
T0773	11/4/05 12:00	Soup Test	68.1	81.2	20.0	70.9	70,147	1,654	88
T0774	11/4/05 12:38	Cooldown Idle after Notch 4	84.7	75.9	30.0	12.9	16,188	533	9
T0775	11/4/05 13:43	Restart after ½ hour	71.1	74.3	29.0	11.4	13,835	485	18
T0776	11/4/05 15:13	Restart after 1 hour	66.7	71.4	29.0	9.9	14,391	476	20
T0777	11/4/05 17:43	Restart after 2 hours	58.7	65.9	29.0	#N/A	15,975	506	23
Soup Test Minus Baseline					32.4	32.0	4,915	123	60

In addition to the summary results shown in Table 1, detailed second-by-second data and plots of gaseous pollutant concentrations, exhaust temperature, and coolant temperature are given in the Excel files produced by the RAVEM system for each test. These files also contain background pollutant concentrations and environmental data such as ambient temperature, humidity, and barometric pressure.

During the first day of testing, a software error prevented the coolant temperature data from being stored with the rest of the test data, although some limited data were recorded manually by another participant. During test 771, the primary PM sample filter stuck to the filter holder and tore, invalidating the weight results. During test 777, the sample filter holder was not pushed all the way into its receptacle, and this was not noticed until most of the way through the test.

Table 2 summarizes the emission tests performed on locomotive 800. With the increased experience of the sample team, no significant problems were experienced during this testing. In one deviation from the planned procedure, test 779 – preconditioning – was performed with the engine throttle set to notches 2 and 4, but without the self-load system in operation. This was because no-one available at the time knew how to apply the self-load system. The resulting exhaust temperatures were lower than if the self-load had been in effect, but still exceeded 100 °C. We believe that this adequately preconditioned the engine and exhaust system for the subsequent tests.

Table 2: Summary of Emission Tests on Metrolink No. 800

Test No.	Start Date/Time	Test Conditions	Coolant °C		Run Min.	Total Emissions (g)			
			Start	End		PM	CO ₂	NO _x	HC
T0778	11/7/05 21:58	Stabilized Normal Idle	72.1	78.8	20.0	12.2	28,214	573	42
T0779	11/7/05 23:24	Idle-Notch 2-Notch 4 Prep	81.1	76.3	30.0	25.4	51,084	991	104
T0780	11/8/05 10:11	Cold Start after 10 hours	37.4	54.2	29.5	9.3	24,066	545	60
T0781	11/8/05 10:58	Warmup idle after cold start	58.1	63.4	30.0	10.0	23,721	578	53
T0782	11/8/05 11:45	Stabilized Idle	65.5	68.4	30.0	8.0	23,539	627	66
T0783	11/8/05 13:15	1 hour restart	59.0	67.0	29.0	8.5	22,315	589	32
T0784	11/8/05 14:16	30 Minute Restart	62.5	67.6	29.0	6.4	22,731	621	44
T0785	11/8/05 17:00	2.25 hour restart	51.8	63.5	29.0	7.0	21,878	565	37
T0786	11/8/05 21:30	4 hour restart	42.5	56.7	29.0	9.6	20,143	498	38
T0787	11/8/05 22:18	Soup Test	56.5	77.8	20.0	102.6	114,541	1,862	62
T0788	11/8/05 22:57	Soup test baseline	76.1	82.4	20.0	54.3	117,218	2,004	84
T0789	11/8/05 23:33	Cooldown idle after Notch 3	77.4	75.8	30.0	5.4	21,910	612	35
T0790	11/9/05 0:15	Stabilized Idle	74.8	72.7	30.0	3.8	21,314	594	38
Soup Test Minus Baseline					259	48.3	(2,677)	-142	-21

Fuel consumption measurements and carbon balance checks were conducted on all but the last two emission tests on locomotive no. 800. During the course of this testing, it was found that the locomotive fuel system is not closed, but includes air vents or leaks that allow it to “drain down” when the fuel pump is not running. This requires that the system be “primed” by running the fuel pump for about 15 seconds before attempting to start the engine. The amount of fuel entering and leaving the weighed drum during these processes amounted to about three kilograms – a substantial fraction of the 7-8 kilograms consumed during a half-hour idle. Because of these effects, carbon balance during the start-up and shutdown events was poor.

Carbon balance checks were conducted during preconditioning at notches 2 and 4 (test 779), and during the soup test baseline at notch 3 (test 788), resulting in fuel carbon recoveries of 98.3% and 101.0%, respectively. Unlike the start-up tests, the engine was not started or stopped during these tests, so that the transient effects discussed above had little effect on the results. Another carbon balance test was attempted during the “soup test” at notch 3 (test 787), but the fuel level in the drum fell below the entry to the fuel supply hose, allowing air to enter the fuel system.

A carbon balance calculation can also be conducted on the two-hour period covering tests 780 through 782. During this period, the locomotive underwent a cold start, followed by 123 minutes of idle, after which the locomotive was shut down for one hour. The 123 minutes of run time included 89.5 minutes during the three tests, as well as the roughly 15 minute periods between the tests. Allowing for these periods, total fuel consumption during the 123 minutes of idle is calculated at 30.93 kg. Fuel drum weight prior to the cold start was 92.4 kg, and it was 63.6 kg after the engine had been shut down for 55 minutes, giving total consumption of 28.8 kg over the period. Thus, calculated fuel consumption was 107% of the measured fuel consumption over the time period.

ANALYSIS AND DISCUSSION

The main purpose of this test program was to determine the tradeoff in emissions between more-frequent restarting and continuous idling of locomotive engines. Table 3 shows how the incremental emissions due engine restarting were calculated.

In calculating PM emissions at idle, the effects of exhaust system “souping” turned out to be very significant. Although this particulate matter is not emitted immediately, it accumulates until the next time the locomotive goes to a higher power setting, and is emitted then. Since the amount emitted depends on the amount accumulated, it is appropriate to attribute it to the idling period rather than the high-power operation when it actually comes out the stack. These substantial PM emissions are not measured by the Federal locomotive test procedure, since this procedure does not measure during the transition between test modes.

The first line in the table shows the stabilized exhaust emissions measured from locomotive 804, in grams per minute. Emissions from “souping” were calculated by subtracting the emissions during the soup test baseline from those during the soup test, and then dividing by the number of minutes of idle operation between the two tests. The results came to 0.10 g/minute of PM for locomotive 804 and 0.19 g/min for locomotive 800. These amounted to 15% and 49%, respectively, of the total PM emissions at idle. Incremental emissions of CO₂, NO_x, and HC attributable to “souping” were very small, and probably reflect test-to-test variability rather than any actual accumulation in the exhaust.

Having calculated the emissions – including “soup” buildup – attributable to a 29-minute period of stabilized idle, we then added the same allowance for “soup” buildup to the 29-minute idle period in each of the start-up tests (29.5 minutes in the case of the cold-starts). Incremental start-up emissions were obtained by subtracting the stabilized idle emissions from those observed during each start-up.

As Table 3 shows, the incremental emissions due to start-up were relatively small, even for the ten and twelve-hour shut down periods. In the case of locomotive 804, the incremental emissions from start-up after one-half hour and one hour were negative. In no case did the incremental PM emissions due to start-up exceed the emissions produced during eight minutes of stabilized idle. The maximum incremental NO_x emissions were observed in the 12-hour test for locomotive 804, and were equivalent to 10 minutes of stabilized idle.

Table 3: Calculation of Incremental Emissions Due to Locomotive Restart

	Emissions				Start-Idle Equivalence (min)	
	PM	CO ₂	NOx	HC	From PM	From NOx
Locomotive #804 (SD-60)						
Stabilized Idle (g/minute)	0.56	527	16.3	0.7		
Addl Emissions from Soup Test (g/min)	0.10	15	0.4	0.2		
Total Stabilized Idle Emissions/Min	0.66	542	16.7	0.9		
Stabilized Idle (g/29 minutes)	19.2	15,725	484	25		
Emissions From Restart + Plus 29 min Idle (including "Soup")						
After 1/2 hour	14.8	14,118	478	27		
After 1 hour	14.7	14,139	462	22		
After 2 hours	21.5	15,027	482	28		
After 4 hours	21.5	20,069	495	26		
After 12 hours	22.2	24,572	643	39		
Incremental Emissions From Restart						
After 1/2 hour	-4.4	-1,608	-6	2	-6.7	-0.4
After 1 hour	-4.5	-1,586	-22	-4	-6.8	-1.3
After 2 hours	2.2	-698	-2	2	3.4	-0.1
After 4 hours	2.2	4,344	12	0	3.4	0.7
After 12 hours	3.3	9,118	168	14	5.0	10.1
Locomotive #800 (F-40)						
Stabilized Idle (g/minute)	0.20	747	20.3	1.7		
Addl Emissions from Soup Test g/min	0.19	(10)	-0.5	-0.1		
Total Stabilized Idle Emissions/Min	0.38	737	19.8	1.6		
Stabilized Idle (g/29 minutes)	11.1	21,361	574	48		
Emissions From Restart + Plus 29 min Idle (including "Soup")						
After 1/2 hour	11.8	22,431	605	42		
After 1 hour	13.9	22,015	573	30		
After 2 hours	12.4	21,578	549	34		
After 4 hours	12.4	20,583	509	43		
After 12 hours	12.1	24,506	556	65		
Incremental Emissions From Restart						
After 1/2 hour	0.6	1,069	31	-6	1.7	1.6
After 1 hour	2.8	654	-1	-18	7.2	0.0
After 2 1/4 hours	1.3	216	-25	-13	3.3	-1.3
After 4 hours	1.3	-778	-65	-5	3.4	-3.3
After 10 hours	1.2	3,513	-8	18	3.0	-0.4

SUMMARY AND CONCLUSIONS

Emission tests were performed on two locomotives equipped with engines typical of those used in older line-haul locomotives in the U.S. These tests focused on emissions produced at idle, and under start-up conditions after the engine was shut down for varying periods up to 12 hours.

PM emissions at idle from the two locomotives tested were 0.66 and 0.38 grams per minute, respectively; and NO_x emissions were 16.7 and 19.8 grams per minute. A significant fraction of the total PM attributable to idle operation (15% in the first case, and 49% in the second) is not emitted at the time, but retained in the exhaust system as “soup”, to be emitted subsequently when the locomotive returns to higher-load operation. The present Federal locomotive test procedure fails to measure these substantially-increased PM emissions during the transient conditions following a period of idle.

The incremental emissions from these locomotives due to engine start-up were small compared to the emissions produced under stabilized idle conditions. In none of the start-up tests conducted did these emissions exceed the equivalent of 8 minutes of idle operation. Based on these data, shutting down the engine and restarting it will result in reduced emissions compared to allowing it to idle, as long as the idle shutdown period is longer than eight minutes. The longer the shutdown period, the greater the emission benefits.

REFERENCES

ⁱ C.S. Weaver and L.E. Petty “Reproducibility and Accuracy of On-Board Emission Measurements Using the RAVEM™ System “, SAE Paper No. 2004-01-0965, March, 2004.

ⁱⁱ Weaver, C.S. and M.V. Balam-Almanza, “Development of the ‘RAVEM’ Ride-Along Vehicle Emission Measurement System for Gaseous and Particulate Emissions”, SAE Paper No. 2001-01-3644.

ⁱⁱⁱ 40 CFR 86, Subpart N “Emission Regulations for New Otto-Cycle and Diesel Heavy-Duty Engines; Gaseous and Particulate Exhaust Test Procedures”

^{iv} "California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles" as amended on February 26, 1999, California Air Resources Board, available at

APPENDIX

RAVEM SYSTEM DESCRIPTION

The Ride-Along Vehicle Emissions Measurement (RAVEM) technology was developed by and patented by EF&EE. The RAVEM system was among the first portable emission measurement systems (PEMS) to be developed, and is presently the only commercially-available PEMS that can measure emissions of PM as well as NO_x, CO, and CO₂. Optional capabilities – also allow the measurement and quantification of total hydrocarbons (THC), sulfur dioxide (SO₂), as well as individual species of volatile organic compounds (VOC) and carbonyls such as formaldehyde, acetaldehyde, and acrolein.

During the last four years, EF&EE has applied its own prototype RAVEM unit to measure pollutant emissions from a wide variety of mobile sources, ranging from natural gas garbage trucks^v to diesel ferryboats^{vi}. It has also been applied to the evaluation of emission control systems including selective catalytic reduction (SCR), diesel particulate filters (DPF), diesel oxidation catalysts (DOC) and emulsion fuels.

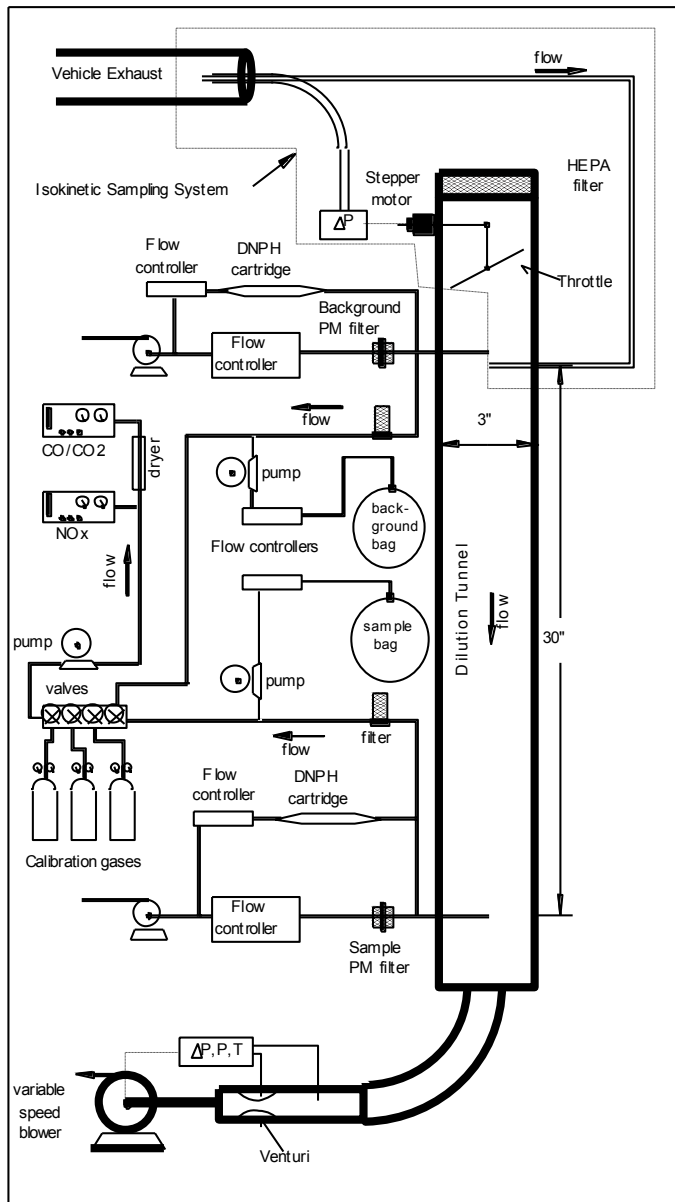
Principles of Operation

The RAVEM system is described in two published papers^{vii,viii}, so its operating principles are summarized only briefly here. As Reference vii explains in more detail, the RAVEM system is based on proportional *partial-flow* constant volume sampling (CVS) from the vehicle exhaust pipe. The CVS principle is widely used for vehicle emission measurements because the air dilution and total flow arrangements are such that the pollutant *concentration* in the CVS dilution tunnel is proportional to the pollutant *mass flow rate* in the vehicle exhaust. Gaseous pollutant concentrations can be measured readily, as can integrated concentrations of particulate matter. On the other hand, exhaust mass flow rates are difficult and expensive to measure accurately – especially under transient conditions.

The total pollutant mass emissions over a given driving cycle, such as the US Federal Test Procedure, European Transient Cycle, or Mexico City Bus Cycle, are equal to the integral of the pollutant mass flow rate over that cycle. In a CVS system, this integrated value can readily be determined by integrating the concentration measurement alone. The CVS flow rate enters into the calculation as a constant multiplier. The integration of pollutant concentration can be accomplished either numerically or physically. The vehicle exhaust mass flow rate does not enter into the calculation, making it unnecessary to measure.

For gases, the RAVEM system uses both numerical and physical integration. Concentrations of NO_x, CO₂, and CO in the dilute exhaust gas are recorded second-by-second during each test. In addition, integrated samples of the dilute exhaust mixture and dilution air are collected in Tedlar® bags during the test, and analyzed afterward for NO_x, CO₂, CO and (optionally) other pollutants.

In CVS sampling for particulate matter, sample integration is accomplished physically -- by passing dilute exhaust mixture through a pre-weighed filter at a constant, controlled flow rate. The weight gain by the filter is then divided by the volume of mixture passed through it to yield the average particulate concentration over the test cycle.



A schematic diagram of the RAVEM system is shown in Figure 1. Except for the isokinetic sampling system at the top of the figure, this diagram closely resembles a conventional single-dilution CVS emission measurement system.

Conventional emission laboratory methods defined by the U.S. EPA^{ix} and California ARB^x utilize full-flow CVS, in which the entire exhaust flow is extracted and diluted with air. However, the large amounts of dilution air required make full-flow CVS impractical for portable systems.

The principle of the RAVEM sampling system is as follows: the RAVEM's sampling system extracts and dilutes only a small, constant fraction of the total exhaust flow. The dilution air requirements and dilution tunnel size can thus be reduced to levels compatible with portable operation. As explained in Section 0, the patented isokinetic proportional sampling system^{xi} system continuously adjusts the sample flow rate so that the flow velocity in the sample probe is equal to that of the surrounding

exhaust. Since the velocities are equal ("isokinetic"), the ratio of the flow rates in the exhaust pipe and the sample probe is equal to the ratio of their cross-sectional areas.

Figure 4: Schematic diagram of the RAVEM system

Pollutant concentration measurements in the RAVEM system follow the methods specified by the U.S. EPA (US CFR Vol 40 Part 86) and ISO standard 8178. The pollutants measured are as follows:

- Oxides of Nitrogen (NO_x) by chemiluminescent analysis of the dilute exhaust sample,
- Carbon monoxide (CO) and carbon dioxide (CO₂) by non-dispersive infrared analysis of the dehumidified dilute exhaust sample;

- Particulate matter (PM) by collection particulate matter on pre-weighed filters of Teflon-coated borosilicate glass fiber, followed by post-conditioning and reweighing of the exposed filters.
- Volatile organic compounds (VOC) by gas-chromatographic (GC) analysis of the integrated bag samples, using flame ionization detectors in a method patterned on California Air Resources Board methods 102 and 103.
- Aldehydes and carbonyls by collection in silica-gel cartridges coated with di-nitro phenyl hydrazine (DNPH), followed by elution with acetonitrile and analysis of the eluate by high-pressure liquid chromatography, as specified in U.S. EPA method TO-11a.

Aldehyde measurements and GC analysis to characterize VOC emissions were not employed during the first part of this test program, as these optional capabilities were ordered later than the basic RAVEM system, and were not available at the time that the program began.

RAVEM Subsystems and Operation

The RAVEM system comprises the following key subsystems.

- Miniature constant volume dilution system
- Isokinetic proportional sampling system
- Bag sampling system: a) exhaust sample; b) background air sample
- Gas analyzer system: a) CO/CO₂; b) NO_x
- Particulate sampling system
- Cartridge sampling system (not used in this test program)
- Data processing and handling system
- Auxiliary inputs

MINIATURE CONSTANT-VOLUME DILUTION SYSTEM

This constitutes the heart of the RAVEM system. As diagrammed in Figure 4, the variable speed blower draws dilute air/exhaust gas mixture out of the dilution tunnel at a constant rate (expressed in standard liters per minute). The flow rate is controlled by a closed-loop system that measures volumetric flow rate via a venturi meter, corrects this to standard conditions of one atmosphere pressure and 20° C, and then adjusts the blower speed to maintain the flow setpoint. The venturi meter is calibrated against a high-accuracy hot-wire mass flow meter (not shown) in order to compensate for any drift. High accuracy is needed, as any error in the mass flow will result in a proportional error in the final results.

Raw exhaust gas enters the dilution tunnel near the upper end, where it mixes with filtered dilution air. The relative proportions of exhaust gas and dilution air are controlled by the isokinetic sampling system, by means of the throttle in the air inlet.

ISOKINETIC PROPORTIONAL SAMPLING SYSTEM

The isokinetic sampling system comprises: a) the sampling probe in the exhaust pipe; b) an insulated sample line connecting the sampling probe to the raw gas inlet on the

dilution tunnel; and c) the system for controlling the sample flow to maintain isokinetic conditions. The control system uses static pressure taps on the inside and outside surfaces of the probe, connected to a sensitive differential pressure sensor. When this sensor reads zero, the inside and outside pressures are the same. This requires that the velocities inside and outside the sample probe also be equal – i.e. isokinetic. Thus, exhaust gas entering the sampling probe is equal in velocity to that in the main engine exhaust stream ($v_1 = v_2$).

The throttle at the upstream end of the dilution tunnel is connected to a “smart” motor/controller combination. The controller responds to the signal from the differential pressure sensor by changing the throttle position to maintain isokinetic conditions. When the exhaust flow rate increases, the controller closes the throttle somewhat, increasing the pressure drop between the probe and the dilution tunnel, and thus increasing the flow velocity through the probe. When the exhaust flow decreases, the throttle opens, decreasing the pressure drop and the flow velocity in the probe. A fan upstream of the throttle (not shown) extends the possible range of dilution tunnel pressures to include slightly positive as well as negative values (compared to ambient atmospheric pressure). Since the control system depends on equalizing the static pressures measured inside and outside the probe, leaks or other problems in the pressure taps, pressure lines, or differential pressure sensor can affect the measured pressure difference, and thus the emission results. This was a significant problem during the early part of the measurement campaign. The need to strengthen quality assurance procedures in this area was one of the key lessons drawn from the experience of this project. To aid in detecting this problem, EF&EE developed and retrofit a design change to permit *in situ* leak checks on the differential pressure lines. This modification was installed in the Mexico City RAVEM at the beginning of September, 2005.

BAG SAMPLING SYSTEM

The bag sampling system is designed to fill one pair of Tedlar bags for each test. One bag contains an integrated sample of the dilute exhaust from the dilution tunnel, and the other contains an integrated sample of the dilution air. Two choices are available with respect to the Tedlar bags: a pair of internal bags having a usable volume of about 10 liters, or a pair of 60 liter external bags fed through two quick-connect ports on the exterior of the system unit. The system is designed to allow the external bags to be exchanged quickly between tests, so that the bag samples for each test can be analyzed off-board – e.g. by gas chromatograph. A pair of manually operated three-way valves selects the internal or external bags.

For each bag, gas is drawn from a sample port in the dilution tunnel, through a filter to a small pump. It then passes through a mass flow controller to the bag selector valve, and thence to the bag. The flow rate to the bags typically ranges from 0.25 to 1.5 standard liters per minute, and is kept constant during each emission test. The flow rate is normally calculated and set automatically, to capture a specified volume of gas over the length of the emission test. It can also be set manually by the RAVEM operator. The volume flowing to the sample bag is added to the total CVS flow in calculating the emission results.

Any leaks in the sample bag will directly affect the bag emission results. A leak check is therefore performed in the process of emptying the sample bags before each test.

During this test program, we found that the mass flow controllers to the sample bags would occasionally malfunction during long tests, allowing the bags to overfill and pop. The cause of this problem has not yet been identified, but software changes to monitor the backpressure in the bag feed lines have made it possible to detect and correct it.

GAS ANALYZER SYSTEM

The gas analyzer system comprises a sample pump, valve manifold, and conventional laboratory-grade heated NO_x and ambient-temperature CO/CO₂ analyzers installed in a shock-mounted 19 inch rack inside a protective case. The NO_x analyzer is a California Analytical Instruments HCLD 400 equipped with an NO to NO₂ converter using activated carbon. The analyzer is maintained at 60°C, making it unnecessary to dry the sample to avoid condensation. Dry, low-pressure compressed air for the ozone generator is supplied by an on-board pump by way of a filter and desiccant cartridge.

The CO/CO₂ analyzer is a California Analytical Instruments model ZRH using non-dispersive infrared (NDIR) analysis. Water vapor interferes with the NDIR measurement, especially for CO, and must be removed from the sample. This is accomplished by passing it through a Nafion™ semi-permeable membrane mass-exchanger. Dry gas for the other side of the mass exchanger is supplied by a small pump circulating air through a desiccant cartridge.

The gas analyzer system valve manifold allows the analyzer sample feed to be drawn from any one of the following sources: the dilute exhaust mixture in the dilution tunnel, the dilution air entering the tunnel (for background measurements), the integrated sample bag, the integrated background bag, zero gas, CO/CO₂ span gas, or NO_x span gas. The latter three gases are used for calibration, and are supplied to quick-connect ports on the exterior of the RAVEM system unit. The gases used are certified by the manufacturer (PraxAir) and are traceable to U.S. NIST standards.

During an emission test, gas concentrations in the dilute exhaust are monitored continuously, and recorded about once per second. After the test ends, the analyzers are normally again calibrated prior to analyzing the concentrations in the sample and background bags.

Since the second-by-second pollutant readings can be affected by drift, vibration, and changes in background pollutant concentrations as the vehicle drives, the bag data are normally more accurate, and are generally the ones reported. The second-by-second data are useful for examining the variation in emissions over the driving cycle, and also provide a backup should the bag results be compromised – e.g. by bag failure during a test.

Particulate Sampling System

The particulate sampling system comprises a vacuum pump, two flow controllers, two shutoff valves, and two filter holders: one for the PM sample, and one for the background dilution air. Each filter holder contains two 37 mm filters in series. The filters are composed of Teflon-coated borosilicate glass, and meet U.S. EPA (40 CFR 86.1311-90)

and ISO 8178 specifications for diesel PM measurement. At least two sets of filter holders are used, and they are designed to be quickly connected and removed from the sampling system – thus allowing one emission test to go on while the filters from the last test are being exchanged for the filters for the next.

During an emission test, the shutoff valves are opened, and the dilute exhaust gas and dilution air are drawn through their respective filter sets. The filtered gas then passes through the flow controllers to the vacuum pump, where it is exhausted. The flow controllers maintain a constant flow rate (typically 10 to 30 SLPLM, depending on the anticipated PM loading) throughout the emission test. Integrated flow volume is recorded during the emission test in order to calculate the particulate mass concentration in the dilute air/exhaust sample and in the background dilution air.

The filter set exposed to the dilution air provides a “blank” sample for each test, correcting for the effects of changing humidity, atmospheric pressures, and any ambient PM (including condensable species) present in the filtered dilution air. Experience has shown that such corrections can amount to 0.01 to 0.02 grams of PM per BHP-hr. This is important since this amount of PM is of the same order as the total measured PM emissions for the DPF-equipped vehicles in this study.

CARTRIDGE SAMPLING SYSTEM

The DNPH cartridge sampling system is similar in design to the PM sampling system described above, comprising two shutoff valves, two holders for SKC 6 mm glass sampling tubes, two flow controllers. Initially, the system included only a single pump, but later each flow controller was given its own pump. The DNPH sampling system differs from the PM sampling system in having much lower designed flow rates (i.e. 0 to 2 liters per minute, rather than 0 to 30), and in drawing from the filtered sample stream that also feeds the Tedlar bags, rather than directly from the dilution tunnel.

To measure the concentration of carbonyls such as formaldehyde, acetaldehyde, and acetone, the cartridge sampler is loaded with two 6 mm glass tubes containing DNPH-impregnated silica gel. Gas is drawn from the sample and dilution air ports, through filters, and then through the cartridges, where any carbonyls present react with the DNPH and are retained in the cartridge. The cartridges are then removed, placed in a cooler at approximately 4 °C, and transported to the laboratory, where they are kept in a freezer until analysis by high performance liquid chromatography (HPLC), as specified in EPA method TO-11a.

DATA PROCESSING AND HANDLING SYSTEM

The data processing and handling system comprises a laptop computer, connected to a National Instruments Fieldpoint system containing 24 analog-to-digital channels, 8 digital-to-analog channels, 36 digital outputs, 8 general-purpose digital inputs, and 4 counter inputs. These include a number of spare inputs and outputs beyond those required by the RAVEM system itself, making it easy to interface auxiliary sensors.

The RAVEM system measures and records numerous data on a second-by-second basis during each emission test, including the raw inputs and calculated concentrations of CO, CO₂, and NO_x, the CVS flow rate, throttle position, and differential pressure sensor reading. Calibration data relating the raw inputs and calculated concentrations are also

recorded, making it possible to recalculate the second-by-second results using the calibration at the end of the test. Exhaust temperature and up to two auxiliary temperatures are recorded second-by-second; in addition, the temperature, barometric pressure, and humidity are recorded at the beginning of each test. All of these are stored in separate data file for each test, in a compact binary format.

A data file reading utility is supplied with the RAVEM system. This utility can be used to review and correct the data collected for each test, and to add data developed later such as the post-test weights of the particulate filters. This utility can also copy the data to a Microsoft Excel worksheet file. This file is formatted to be "human readable", and occupies much more space than the compact binary format. Copies of the Excel worksheets for each emission test are given in the CD ROM that accompanies this report, along with summary worksheets that combine the individual test results.

AUXILIARY INPUTS

Auxiliary inputs to the RAVEM system include a global positioning system (GPS) receiver, as well as user-specified pulse, voltage, and 4-20 ma current inputs. The GPS system provides three-dimensional location and velocity data, based on signals from the global positioning network. These are supplied and recorded at a frequency of 1 Hz.

Quality Control Measures

RAVEM operating procedures include a number of quality assurance measures. Two key QA procedures are CO₂ recovery tests and fuel consumption checks. The CO₂ recovery check injects CO₂ gas from a cylinder into the dilution tunnel, and compares the CO₂ mass measured to the change in weight of the CO₂ cylinder. This confirms the accuracy of the CVS flow measurement, as well as the gas sampling system and the CO₂ analyzer. As mentioned earlier, CO₂ recovery checks performed prior to the correlation testing with WVU showed a discrepancy of 6 to 8%. The source of this discrepancy was subsequently determined to be leakage through a setscrew hole. Once this hole was plugged, CO₂ recovery checks have shown close agreement between the CO₂ emissions as measured by the RAVEM system and by the change in weight of the gas cylinder.

Fuel consumption checks compare the mass of fuel consumed by the vehicle under test to the fuel consumption calculated from the CO₂ and CO emissions by carbon balance. In addition to the CVS and gas sampling system, this procedure also checks that the isokinetic sampling system is working properly.

References

^v Weaver, C.S., M.V. Balam-Almanza, D. Noriega, R. Rodriguez, and L. Petty, "Medición de Emisiones a Vehículos Recolectores de Basura en la Ciudad De México" (Measurement of Emissions from Garbage Collection Vehicles in Mexico City), presented to the Interamerican Association for Sanitary Engineering, Cancún, Mexico, September 2002.

^{vi} Weaver, C.S., L.M. Chan and L. Petty, Measurement of Air Pollutant Emissions From In-Service Passenger Ferries, report to the Water Transit Authority of San Francisco Bay, August, 2002.

^{vii} C.S. Weaver and L.E. Petty “Reproducibility and Accuracy of On-Board Emission Measurements Using the RAVEM™ System “, SAE Paper No. 2004-01-0965, March, 2004.

^{viii} Weaver, C.S. and M.V. Balam-Almanza, “Development of the ‘RAVEM’ Ride-Along Vehicle Emission Measurement System for Gaseous and Particulate Emissions”, SAE Paper No. 2001-01-3644.

^{ix} 40 CFR 86, Subpart N “Emission Regulations for New Otto-Cycle and Diesel Heavy-Duty Engines; Gaseous and Particulate Exhaust Test Procedures”

^x "California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles" as amended on February 26, 1999, California Air Resources Board

^{xi} U.S. Patent No. 6,062,092. "System for Extracting Samples from a Stream", May 16, 2000.

**ATTACHMENT C: RAILYARD EMISSIONS INVENTORY
METHODOLOGY**

Railyard Emissions Inventory Methodology

Version 1.2

October 2005

Introduction

Rule 3503 – Emissions Inventory and Health Risk Assessment for Railyards requires an emissions inventory be conducted for railyards operated by all Class 1 freight railroads and switching and terminal railroads in the Basin for the purpose of conducting a Health Risk Assessment. The following methodology is intended to provide a quantification methodology to estimate the emissions of both criteria and toxic air pollutants (VOC, NOx, PM10, CO, SOx, and Toxic Air Contaminants) from all dedicated and transient mobile sources at railyards in the Basin. This methodology is applicable to locomotives (both line haul and switching), cargo handling equipment (e.g., yard tractors), on-road trucks and vehicles, and other off-road equipment such as transport refrigeration units. All mobile emissions within the railyard boundary, as defined in Proposed Rule 3503, must be quantified using this methodology. This methodology does not apply to stationary sources and the emissions inventory for stationary sources shall be conducted according to Proposed Rule 3503 (d)(2).

For the purpose of preparing Health Risk Assessment air dispersion modeling inventory input data, use of annual emissions can be desegregated into hourly emissions based upon operational profiles, for each equipment category, that can represent peak or average hourly emissions. This approach is appropriate provided the derived peak hourly emissions that are derived from annual average emissions utilize appropriate assumptions, such as seasonal variations, daily variations, etc., that would represent the peak hourly.

The following sections describe specific emissions inventory methodologies for each source category.

Locomotives

Locomotive emissions must be quantified separately for line haul and switcher locomotives. Emissions are based on number of locomotives, engine size, activity level (i.e., time spent in each power notch) and applicable emission factors from a district approved source (e.g., U.S. EPA, manufacturer's certification data) for each locomotive type. Since locomotives operate in discrete throttle settings called notches, ranging from notch position one through eight, plus an idle position, emissions for each locomotive must be calculated based on the time spent in each notch as well as the corresponding emission factor for each notch. Any locomotive activity, regardless of ownership, that occurs within the railyard should be included in the emissions inventory. The emissions inventory, however, does not include emissions outside of the railyard, such as emissions from locomotives that may travel along rail lines that are adjacent to the railyard. This means that the emissions from locomotives on main lines that pass through railyards must be quantified, while emissions from locomotives on main lines located adjacent to but outside of railyards should not be quantified.

Use of an average operating mode (AOM) for an equipment category may be used in cases where it can be shown that equipment will be operating in a pattern that is predictable and repetitive.

Sufficient verifiable data must be provided to validate the AOM of the equipment category and the use of the average operating mode must be approved by the Executive Officer. Use of an

AOM shall include only the necessary information to validate normal use of the equipment which shall, include but not be limited to, time in each engine load or notch, fuel type and amount utilized, time in idle mode, distance traveled in miles within the railyard, hours of operation in railyard, or any other information to show the predictable and repetitive nature of the equipment.

a) Line Haul Locomotives

Data Needed:

1. number of line haul locomotives
2. size (hp), make, and model of locomotive
3. emission factor (EF) per locomotive per notch (g/hp-hr)
4. time-in-notch (hours) for each locomotive within rail yard boundary

Emissions Calculation:

$$EI_{Line\ haul} = \sum_{i=1}^n EF_{ij} * (Time - in - Notch)_{ij} * HP_i$$

Where:

$EI_{Line\ haul}$	=	Emissions inventory for all line haul locomotives
EF_{ij}	=	Emission factor per locomotive per notch (g/bhp-hr)
$Time-in-Notch_{ij}$	=	Time spent in each notch for each locomotive (hours)
HP_i	=	Horsepower of each locomotive (hp)

b) Switcher Locomotives

Data Needed:

1. size (hp), make, and model of locomotive
2. emission factor (EF) per locomotive per notch (g/hp-hr)
3. time-in-notch (hours) for each locomotive within rail yard boundary

Emissions Calculation:

$$EI_{Switchers} = \sum_{i=1}^n EF_{ij} * (Time - in - Notch)_{ij} * HP_{ij}$$

Where:

$EI_{Switchers}$	=	Emissions inventory for all switcher locomotives
EF_{ij}	=	Emission factor per locomotive per notch (g/bhp-hr)
$Time-in-Notch_{ij}$	=	Time spent in each notch for each locomotive (hours)
HP_i	=	Horsepower of each locomotive (hp)

c) Maintenance and Certification Testing of Locomotives (Line Haul or Switcher)

Data Needed:

1. size (hp), make, and model locomotive
2. emission factor (EF) per locomotive per notch (g/hp-hr)

3. Time-in-notch (hours) or operating test mode time interval for each locomotive within railyard boundary

Emissions Calculation:

$$EI_{Maintenance} = \sum_{m=1}^n EF_m * (Time-in-notch)_m * HP_m$$

Where;

- $EI_{Maintenance}$ = Emissions inventory for all locomotives
- EF_m = Emission factor per locomotive per notch (g/bhp-hr)
- $Time-in-notch_m$ = Time spent in each notch or operating test mode time interval for each locomotive (hours)
- HP_m = Horsepower per locomotive per notch (hp)

Cargo Handling Equipment

Cargo handling equipment (CHE) refers to all off-road mobile equipment used to move containers or bulk goods at rail yards such as yard tractors, forklifts, cranes, side and top picks, chassis stackers, loaders, and flippers. Emissions are based on number and type of equipment, activity levels (i.e., hours of operation), and applicable emission factor from a district approved source (e.g., U.S. EPA, manufacturer's certification data) for each equipment type.

Use of an average operating mode (AOM) for an equipment category may be used in cases where it can be shown that equipment will be operating in a pattern that is predictable and repetitive.

Sufficient verifiable data must be provided to validate the AOM of the equipment category and the use of the average operating mode must be approved by the Executive Officer. Use of an AOM shall include only the necessary information to validate normal use of the equipment which shall, include but not be limited to, engine load, fuel type and amount utilized, time in idle mode, distance traveled in miles within the railyard, hours of operation in railyard, or any other information to show the predictable and repetitive nature of the equipment.

Data Needed:

1. population of cargo handling equipment
2. emission factor (EF) by size and model year (g/bhp-hr)
3. size (hp)
4. load factor (LF)
5. activity within rail yard boundary (hours)

Emission Calculation:

$$EI_{CHE} = \sum_{i=1}^n EF_i * HRS_i * HP_i * LF_i$$

Where:

- EI_{CHE} = Emissions inventory for all cargo handling equipment

EF_i	=	Emission factor for each CHE by type, size, and model year (g/bhp-hr)
HRS_i	=	Operating hours within rail yard boundary (hours)
HP_i	=	Horsepower of each equipment (hp)
LF_i	=	Load factor

On-Road Trucks

The emissions from on-road trucks, either dedicated or transient visitors (e.g., delivering containers) are based on number of trucks, activity levels (i.e., vehicle average miles to designated areas traveled within rail yard boundary, idling hours), and applicable emission factors from CARB's most recently approved EMFAC model. An overall fleet average for each class of on-road trucks (i.e., heavy-heavy-duty on-road trucks, heavy-duty on-road trucks) can be used to estimate emissions.

Use of an average operating mode (AOM) for an equipment category may be used in cases where it can be shown that equipment will be operating in a pattern that is predictable and repetitive.

Sufficient verifiable data must be provided to validate the AOM of the equipment category and the use of the average operating mode must be approved by the Executive Officer. Use of an AOM shall include only the necessary information to validate normal use of the equipment which shall, include but not be limited to, time in each engine load or notch, fuel type and amount utilized, time in idle mode, distance traveled in miles within the railyard, hours of operation in railyard, or any other information to show the predictable and repetitive nature of the equipment.

Data Needed:

1. for each class of truck, the number of trucks
2. fleet average EMFAC emission factor (EF_{VMT}) for average speed within rail yard (g/mile) – for dedicated on-road trucks, use model year specific EMFAC emission factor
3. fleet average EMFAC emission factor (EF_{idling}) for idling (g/hour) – for dedicated on-road trucks, use model year specific EMFAC emission factor
4. average of miles to designated areas traveled within rail yard boundary (VMT) for each truck
5. time spent idling within rail yard boundary (hours)

Emission Calculation:

$$EI_{Trucks} = \sum_{i=1}^n (EF_{VMT})_i * VMT_i + (EF_{idling})_i * HRS_i$$

Where:

EI_{Trucks}	=	Emissions inventory for all trucks
EF_{VMTi}	=	fleet average (model year specific for dedicated on-road trucks) EMFAC emission factor for average speed within rail yard (g/mile)

EF_{Idling}	=	fleet average (model year specific for dedicated on-road trucks) EMFAC emission factor for idling (g/hour)
VMT_i	=	number of average miles to designated areas traveled in each truck within rail yard boundary
HRS_i	=	idling hours for each truck (hours)

Other On-Road Vehicles (e.g., Light Duty Service Trucks)

The emissions from other on-road vehicles such as light duty service trucks, either dedicated or transient visitors, are based on number of trucks, activity levels (i.e., vehicle miles traveled within rail yard boundary), and applicable emission factors from CARB's most recently approved EMFAC model. Employee passenger vehicles are to be excluded from the inventory. An overall fleet average for each class of on-road vehicles (i.e., light-duty trucks, medium-duty trucks) can be used to estimate emissions.

Use of an average operating mode (AOM) for an equipment category may be used in cases where it can be shown that equipment will be operating in a pattern that is predictable and repetitive.

Sufficient verifiable data must be provided to validate the AOM of the equipment category and the use of the average operating mode must be approved by the Executive Officer. Use of an AOM shall include only the necessary information to validate normal use of the equipment which shall, include but not be limited to, engine load, fuel type and amount utilized, time in idle mode, distance traveled in miles within the railyard, hours of operation in railyard, or any other information to show the predictable and repetitive nature of the equipment.

Data Needed:

1. for each on-road vehicle class, the number of on-road vehicles
2. fleet average EMFAC emission factor (EF) (g/mile) – for dedicated on-road trucks, use model year specific EMFAC emission factor
3. miles traveled within rail yard boundary (VMT) for each vehicle

Emission Calculation:

$$EI_{Onroad} = \sum_{i=1}^n EF_i * VMT_i$$

Where:

EI_{Onroad}	=	Emissions inventory for other on-road vehicles
EF_i	=	fleet average (model year specific for dedicated on-road trucks) EMFAC emission factor (g/mile)
VMT_i	=	number of miles traveled within rail yard boundary

Other Off-Road Equipment

The emissions from other off-road equipment such as transport refrigeration units (TRU) are based on activity level (i.e., number of equipment, activity levels (i.e., hours of operation), and applicable emission factor from a district approved source (e.g., U.S. EPA, manufacturer's certification data) for each equipment type.

Use of an average operating mode (AOM) for an equipment category may be used in cases where it can be shown that equipment will be operating in a pattern that is predictable and repetitive.

Sufficient verifiable data must be provided to validate the AOM of the equipment category and the use of the average operating mode must be approved by the Executive Officer. Use of an AOM shall include only the necessary information to validate normal use of the equipment which shall, include but not be limited to, engine load, fuel type and amount utilized, time in idle mode, distance traveled in miles within the railyard, hours of operation in railyard, or any other information to show the predictable and repetitive nature of the equipment.

Data Needed:

1. population of off-road equipment (non-cargo handling equipment)
2. baseline emission factor (EF) by size and model year (g/bhp-hr)
3. size (hp)
4. load factor (LF)
5. activity within rail yard boundary (hours)

Emission Calculation:

$$EI_{offroad} = \sum_{i=1}^n EF_i * HRS_i * HP_i * LF_i$$

Where:

$EI_{offroad}$	= Emissions inventory for all other equipment
EF_i	= Emission factor by type, size, and model year (g/bhp-hr)
HRS_i	= Operating hours within rail yard boundary (hours)
HP_i	= Horsepower of each equipment (hp)
LF_i	= Load factor

Total Emissions from Rail Yards

The total mobile source emissions from rail yards are calculated by summing the individual totals for each source category as follows:

$$EI_{TotalMobile} = EI_{Linehaul} + EI_{Switcher} + EI_{Maintenance} + EI_{CHE} + EI_{Trucks} + EI_{Onroad} + EI_{Offroad}$$

Recordkeeping Requirement

The railyard operator must maintain records of all items described above under Data Needed for each locomotive, CHE, on-road truck, other on-road vehicle or off-road equipment. The information must be recorded in a format approved by the District and be maintained for a minimum of two years. The source for all emission factors and information used to determine emission factors shall be referenced and documented.

The emissions inventory for each source category shall be determined in accordance with Rule 3503 (d) and provided in a format that is re-producible by District staff.

**ATTACHMENT D: HEALTH RISK ASSESSMENT GUIDANCE
FOR RAILYARDS AND INTERMODAL
FACILITIES**

Health Risk Assessment Guidance for Railyards and Intermodal Facilities

**South Coast Air Quality Management District
September 2005**

Introduction

The purpose of this document is to provide dispersion modeling and health risk assessment guidance for railyard and intermodal facilities. The California Air Resources Board (ARB) has done significant work in this area. Much of the guidance presented here is built upon their previous work on the Diesel Risk Management Plan^[1] and the Roseville Rail Yard Study.^[2]

Air Dispersion Modeling

Air dispersion modeling is performed for the exposure assessment of the health risk assessment (HRA). A basic understanding of dispersion modeling is presumed. For a more detailed overview of regulatory modeling procedures, the reader is referred to the U.S. Environmental Protection Agency's "Guideline on Air Quality Models."^[3]

Facility Description and Source Information

The HRA report should contain a brief description of the facility and its activities as shown in the detailed HRA report outline provided in Appendix A. Table 1 lists the information on the facility and its surroundings that must be provided in the modeling analysis. The facility location is used to determine the most representative meteorological data for the analysis. The nearby land use is needed to properly label receptors as residential, commercial, sensitive, etc.

The facility plot plan (including a length scale) is needed to determine all stationary and mobile source locations (including their elevations above sea level), building dimensions, truck and train routes, truck and train idling activities, cargo handling activities, other on- and off-road equipment activities, and the property boundary. Table 2 lists the potential sources that must be included in the HRA. The operating profile, the hourly emission rates, the annual average emission rates, and the source parameters listed in Table 1 are necessary to accurately characterize the source emissions. It is acceptable to estimate the hourly emission rate of certain equipment based on operating profiles. The reader is referred to the detailed outline provided in Appendix A for additional information and guidance.

Source Treatment

On-road and off-road mobile emission sources, such as trucks, locomotives, cargo handling equipment, etc., should be treated as point sources when stationary or idling and as volume sources when moving. Stack parameters representative of the fleets of trucks, locomotives, and cargo handling equipment for the railyard should be used. The stationary or idling mobile equipment are not typically uniformly distributed throughout the facility. Their location in the dispersion modeling should be based on a detailed study and survey of the facility activity; emissions should only be placed where activity occurs.

Emissions from the movement of trucks and trains should be simulated as a series of volume sources along their corresponding routes of travel. A typical railyard or intermodal facility can have a large number of individual sources; the ARB modeling for the Roseville Railyard Study^[2] included about 20,000 individual sources. It is acceptable

and even encouraged to combine sources into large volumes in order to make the modeling analysis manageable. Like or related pollutant sources with similar source parameters may be combined. The volume source footprint should remain within the confines of the activity. Spreading the emissions to areas outside the activity is not acceptable. Appropriate volume source heights for the trucks and trains can be estimated by calculating effective plume height under expected travel speeds, atmospheric stability conditions, and stack parameters representative of the truck and train fleet.

Table 1. Required Source Information.

Information on the Facility and its Surroundings

- Location (i.e., address and UTM coordinates)
- Local land use (within 20 km)
- Local topography (within 20 km)
- Facility plot plan
 - Property boundaries
 - Horizontal scale
 - Building heights (for building downwash calculations)
 - Stationary source locations including elevations
 - Maintenance and servicing areas
 - Fueling areas
 - Vehicle entrance and exit of railyard
 - Weigh and dispatch stations
 - Switching, classification, hump location, yard sidings and spurs
 - Locations of truck and train idling activity including elevations
 - Locomotive and truck crossing locations, weigh and dispatch stations
 - Truck queuing prior to loading
 - Truck and train routes within the facility
 - Including crossing locations
 - Cargo handling activities
 - Maintenance, servicing, storage, mobile fueling locations
 - Intermodal loading/unloading, chassis loaders and stackers, yard hostlers, etc.

Point Source Information (stacks, vents, etc.)

- Annual emissions
- Operating profile (e.g., seasonal, monthly, weekly, or daily operating schedule)
- Maximum and average hourly emission rates
- Stack location (in UTM coordinates) on plot plan including elevation
- Stack height
- Stack gas exit velocity
- Stack gas exit temperature
- Building dimensions, heights, and location

Mobile and Fugitive Source Information (i.e., area and volume sources)

- Maximum and average hourly emission rates
- Annual emissions
- Source location (in UTM coordinates) on plot plan including elevations
- Source height
- Area or volume dimensions

Table 2. Potential Emission Sources for Consideration in the HRA.

Source Category	Examples
Stationary	Boilers (all fuels), water heaters (all fuels), emergency generator sets and fire pumps (all fuels), fuel dispensing (LPG, gasoline, diesel, etc.), fuel storage tanks (LPG, gasoline, diesel, etc.), waste water treatment facilities
On-road mobile	heavy duty diesel trucks (idling & moving), crew vans, crew trucks (all fuels)
Off-road mobile	overhead cranes, side loaders, chassis stackers, chassis loaders, yard hostlers, rubber tire gantry cranes, utility trucks, dozers, forklifts, locomotives (switchers and line haul)

Two important modeling input parameters are initial lateral and vertical dimensions. As recommended by the ISCST3 User's Guide,^[4] the initial lateral dimension is calculated by dividing the adjacent source separation distance by 2.15 and the initial vertical dimension is calculated by dividing the effective height of the plume by 2.15. The reader is referred to a couple of ARB modeling studies for additional guidance and clarification.^{[1],[2]} Table 3 recommends the ISCST3 source treatment for typical sources expected at a railyard.

Table 3. ISCST3 source treatment for typical railyard sources.

Source Category	Specific Sources	ISCST3 Source Treatment
Stationary	Natural gas boilers & water heaters	Point
	Diesel & natural gas emergency generators	Point
	Diesel & gasoline fuel pumps	Point
	Fuel storage tanks with floating roofs	Volume or Area
	Fuel storage tanks with vent valves	Point
	Waste water treatment facilities	Point
On-road mobile	Heavy duty diesel trucks (idling)	Point
	Heavy duty diesel trucks (moving)	Volume
	Crew vans & trucks	Volume
Off-road mobile	Overhead cranes	Volume
	Side loaders	Volume
	Chassis stackers	Volume
	Chassis loaders	Volume
	Yard hostlers	Volume
	Rubber tire gantry cranes	Volume
	Utility trucks	Volume
	Dozers	Volume
	Forklifts	Volume
	Locomotives (moving)	Volume
	Locomotives (idling)	Point

Stacks with Raincaps and Area Sources

Emission release points with raincaps or which are oriented so that the exhaust is vented downward or horizontally may not use the velocity inside the stack as the vertical velocity of the point source in the model. However, as a point source must be modeled with some vertical velocity, these stacks may be modeled with a positive vertical velocity of no more than 0.1 meters per second. In general, if there is uncertainty on how to represent sources in a model, South Coast Air Quality Management District (SCAQMD) staff in the AB2588 Section should be consulted before proceeding with modeling.

According to U.S. EPA guidance for area sources in ISCST3,^[4] the aspect ratio (i.e., length/width for area sources should be less than 10 to 1. If this is exceeded, then the area should be subdivided to achieve a 10 to 1 or less aspect ratio for all sub-areas.

Model Selection and Model Options

All stationary source risk assessments prepared for the SCAQMD must follow the Office of Environmental Health Hazard Assessment (OEHHA) guidance^[5] and use ARB's Hotspots Analysis and Reporting Program (or HARP).^[6] The U.S. Environmental Protection Agency (U.S. EPA) air quality dispersion model, called ISCST3 (Industrial Source Complex – Short Term, Version 3) is used by HARP for the exposure assessment. Given the many and varied activities at a typical railyard or intermodal facility, HARP may not be the best tool for simulating the risks from the diesel particulate sources. Such sources may be best treated directly by ISCST3 and the risks estimated using procedures outlined in Appendix B. It is suggested that HARP be used for the all the non-diesel sources and that the results from the two approaches be combined.

ISCST3 is a Gaussian plume model capable of estimating pollutant concentrations from a wide variety of sources that are typically present in an industrial source complex. The model is applicable to transport distances of 50 km or less;^[3] therefore, receptors should be limited to within 50 km of the source. Emission sources are categorized into four basic types: point, area, volume, and open pit sources. ISCST3 estimates hourly concentrations for each source/receptor pair and calculates concentrations for user-specified averaging times, including an average concentration for the complete simulation period. ISCST3 includes atmospheric dispersion options for both urban and rural environments and can address flat, gently rolling, and complex terrain situations. ISCST3 documentation is available at the U.S. EPA website.^[4] Table 4 summarizes the dispersion modeling assumptions required by the SCAQMD. These requirements are discussed in more detail next.

ISCST3 should be executed using the urban dispersion parameters (i.e., URBAN), which is SCAQMD policy for all air quality impact analyses in its jurisdiction. The U.S. EPA regulatory defaults options are implemented except that the calm processing option is disabled (i.e., NOCALM). The SCAQMD believes that calm processing is inappropriate for its meteorological data for the following reasons:

- Calm processing was developed by the U.S. EPA to correct problems with preprocessed data in which calm winds are given the speed of 1 m/s and the direction

of the last non-calm hour. This results in artificial persistence. Wind data collected by the SCAQMD is not preprocessed.

- Wind speeds in the SCAQMD stations are always 1 m/s or greater. Thus, model problems associated with lower wind speeds are not an issue.
- Wind direction is always recorded regardless of the wind speed and the direction is randomized over a 22.5 degree sector. Thus, artificial persistence is not an issue.
- SCAQMD data is more like on-site data and calm processing is not appropriate for on-site data.
- Given the high frequency of calms at many sites in the South Coast Air Basin and their association with high pollutant concentrations, it would be inappropriate to eliminate that portion of the data.

For these reasons, the SCAQMD does not require calm processing for dispersion modeling that uses SCAQMD supplied meteorological data.

Table 4. Summary of SCAQMD Dispersion Modeling Guidance.

Parameter	Assumption
<i>Model Control Options</i>	
Use regulatory default?	No
Urban or Rural?	Urban
Gradual plume rise?	No
Stack tip downwash?	Yes
Buoyancy induced dispersion?	Yes
Calms processing?	No
Missing data processing?	No
<i>Source Options</i>	
Include building downwash?	Yes
Lowbound option?	No
<i>Meteorology Options</i>	
Meteorological data	See note #1 below

1. The data are available for download from the SCAQMD website; see reference [7].

Meteorological Data

The SCAQMD has 1981 meteorological data (i.e., hourly winds, atmospheric stability, and mixing heights) at 35 stations in the South Coast Air Basin, as shown in Figure 1 and listed in Table 5.

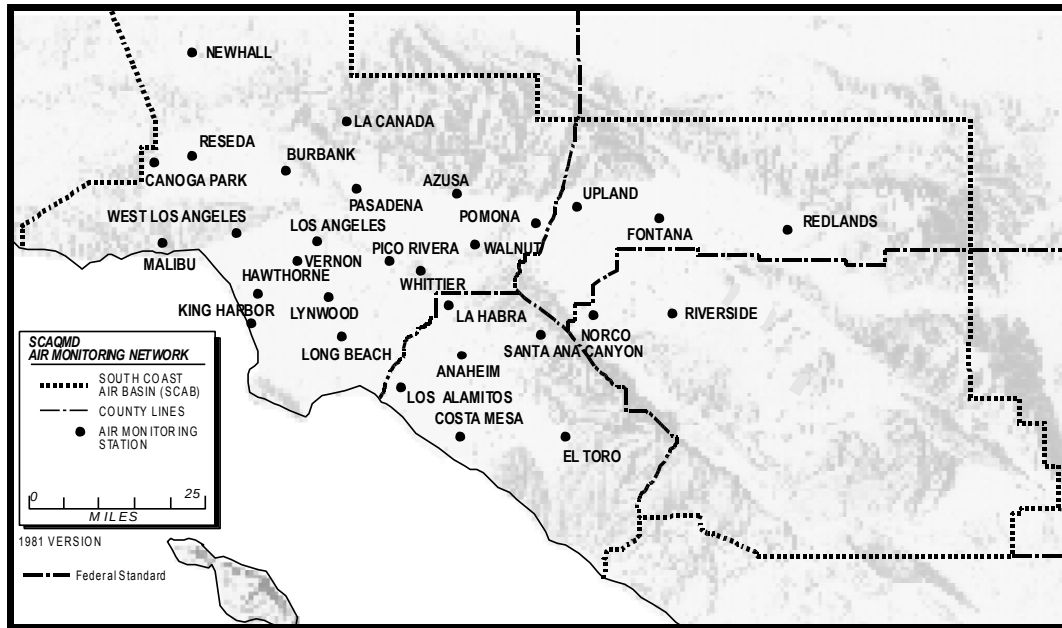


Figure 1. Locations of meteorological stations.

Table 5. Locations of Meteorological Stations

Station name	UTM Coordinates (m)		Lat./Long. Coordinates	
	E-W	N-S	Latitude	Longitude
Anaheim	415.0	3742.5	33°49'16"	117°55'07"
Azusa	414.9	3777.4	34°08'09"	117°55'23"
Banning	510.5	3754.5	33°55'58"	116°53'11"
Burbank	379.5	3783.0	34°10'58"	118°18'27"
Canoga Park	352.9	3786.0	34°12'23"	118°35'48"
Compton	385.5	3750.3	33°53'19"	118°14'17"
Costa Mesa	413.8	3724.2	33°39'21"	117°55'47"
Downtown Los Angeles	386.9	3770.1	34°04'02"	118°13'31"
El Toro	436.0	3720.9	33°37'39"	117°41'25"
Fontana	455.4	3773.9	34°06'24"	117°29'01"
Indio	572.3	3731.0	33°43'06"	116°13'11"
King Harbor	371.2	3744.4	33°50'00"	118°23'30"
La Canada	388.2	3786.1	34°12'42"	118°12'49"
La Habra	412.0	3754.0	33°55'28"	117°57'07"
Lancaster	396.0	3839.5	34°41'38"	118°08'08"
Lennox	373.0	3755.0	33°55'46"	118°22'26"
Long Beach	390.0	3743.0	33°49'24"	118°11'19"
Los Alamitos	404.5	3739.8	33°47'45"	118°01'54"
Lynwood	388.0	3754.0	33°55'20"	118°12'42"
Malibu	344.0	3766.9	34°01'59"	118°41'23"
Newhall	355.5	3805.5	34°22'59"	118°31'02"

continued

Table 5. Concluded.

Station name	UTM Coordinates (m)		Lat./Long. Coordinates	
	E-W	N-S	Latitude	Longitude
Norco	446.8	3749.0	33°52'54"	117°34'31"
Palm Springs	542.5	3742.5	33°49'25"	116°32'27"
Pasadena	396.0	3778.5	34°08'38"	118°07'41"
Pico Rivera	402.3	3764.1	34°00'53"	118°03'29"
Pomona	430.8	3769.6	34°03'60"	117°44'60"
Redlands	486.2	3769.4	34°04'00"	117°09'00"
Reseda	359.0	3785.0	34°11'54"	118°31'49"
Riverside	464.8	3758.6	33°58'10"	117°22'50"
Santa Ana Canyon	431.0	3748.4	33°52'32"	117°44'46"
Upland	440.0	3773.1	34°05'55"	117°39'02"
Vernon	387.4	3762.5	33°59'55"	118°13'10"
Walnut	420.0	3761.7	33°59'41"	117°51'58"
West Los Angeles	372.3	3768.6	34°03'08"	118°23'01"
Whittier	405.3	3754.0	33°55'26"	118°01'28"

This data is in a format which can be directly read by U.S. EPA's dispersion model, ISCST3 and by ARB's health risk assessment tool, HARP. The nearest representative meteorological station should be chosen for modeling. Usually this is simply the nearest station; however, an intervening terrain feature may dictate the use of an alternate station. Modelers should contact the AB2588 Section regarding the most representative meteorological station, if necessary. The data are available for download from the SCAQMD website.^[7] The railyard may propose an alternative set of meteorological data subject to the Executive Officer's approval, provided that the data is representative and complete for modeling purposes.

Receptor Grid

Air dispersion modeling is required to estimate (a) annual average concentrations to calculate the Maximum Exposed Individual Resident (MEIR); the Maximum Exposed Individual Worker (MEIW); the Maximum Individual Cancer Risk (MICR), which is simply the greater of the MEIR and MEIW; the maximum chronic HI; the zones of impact; and excess cancer burden and (b) peak hourly concentrations to calculate the health impact from substances with acute non-cancer health effects. To achieve these goals, the receptor grid should begin at the facility fence line and extend to cover the zone of impact. However, the modeling domain should not extend more than 50 km in any direction from the facility due to the pollutant transport limitation of 50 km for ISCST3.^[3] In addition, the receptor grid should be fine enough to identify the points of maximum impact.

To identify the maximum impacted receptors (i.e., peak cancer risk and peak hazard indices) a grid spacing of 100 meters or less must be used. All receptors should be identified in UTM coordinates. Receptor grid points outside of the facility boundary with grid spacing of 100 meters or more must be placed so that individual grid points are placed at UTM coordinates ending in "00" (e.g., grid point UTM East 572300 and UTM

North 3731000). Receptor grids with less than 100 meter spacing must include grid points at UTM coordinates ending in “00”.

Receptors on the facility boundary must be placed along the boundary following the maximum spacing requirements shown in Table 6. Sensitive receptors must be identified by exact UTM coordinates. Elevations must be provided for all receptors.

The density of the receptor network can be relaxed in downwind regions outside the peak impact area. The network must only be sufficiently dense to develop the 1, 10, 25, 100, 250, 500, 1000, 2500, 5000, etc. in a million cancer risk isopleths and the 0.5, 1, 3, 5, and 10 non-cancer hazard index isopleths.

Table 6. Maximum Receptor Spacing Requirements for Fenceline Receptors.

Area of Facility	Maximum Receptor Spacing
Area < 4 acres	20 meters
4 acres ≤ Area < 10 acres	30 meters
10 acres ≤ Area < 25 acres	50 meters
25 acres ≤ Area < 100 acres	75 meters
Area ≥ 100 acres	100 meters

Missing or Incomplete Data

Currently Rule 3503 requires the concurrent development of an air toxics inventory and health risks assessment one year after the adoption of the rule. Since annual and peak hourly emission rates are required for the preparation of the HRA, it may be necessary to estimate annual emissions from less than a complete year of activity. Given the requirements of the rule, it is acceptable to extrapolate annual emissions from less than a full year of activity. If the activity is seasonal in nature, then extrapolation to obtain the annual emissions needs to rely on operational profiles.

Risk Assessment

The SCAQMD requires that all stationary source HRAs be prepared in accordance with OEHHA and ARB guidance.^[5] This guidance is implemented through the ARB computer program called, Hotspots Analysis and Reporting Program (HARP).^[6] HARP is a convenient and the preferred tool to evaluate risks from multiple sources emitting multiple toxics. However, given the many and varied activities at a typical railyard or intermodal facility, HARP may not be the best tool for simulating the risks from the diesel particulate sources. Such sources may be best treated directly by ISCST3 and the risks estimated using procedures outlined in Appendix B. It is suggested that HARP be used for the all the non-diesel sources and that the results from the two approaches be combined. OEHHA guidance assumes that risks are additive.

Uncertainty in Risk Assessment

The SCAQMD recognizes that there can be uncertainty in health risk assessments. It is appropriate to include a discussion on the topic of risk assessment uncertainty in the Executive Summary and main body of the HRA. Any discussion of uncertainty must consider both the factors that contribute to risk overestimation and those that contribute to risk underestimation (see pages 1-4 and 1-5 of the OEHHA Guidelines^[5]).

Toxic Pollutants Considered in the HRA

Emissions of all compounds in Appendix A-I of the OEHHA Guidelines^[5] must be quantified and included in the HRA. Appendix A-I in the OEHHA Guidelines^[5] provides a “degree of accuracy” for each compound, which is nothing more than a de minimis emission level for reporting. As a result, facility-wide emissions of toxics greater than one-half of their corresponding degree of accuracy must be inventoried, reported, and included in the HRA.

The degree of accuracy for diesel particulate matter given in Appendix A-I is inappropriate since it was established before OEHHA developed a cancer potency for diesel particulate. Thus, all emissions of diesel particulate matter must be reported and included in the HRA.

Although OEHHA has developed acute and chronic reference exposure levels (RELs) for many criteria pollutants, such as carbon monoxide, nitrogen dioxide, ozone, and sulfur dioxide, emissions of these pollutants should not be included in the HRA.

AQMD Risk Assessment Guidance

All HRAs prepared for the SCAQMD must include a Tier-1 evaluation, which is defined by OEHHA as a point estimate using standard assumptions. For the purpose of Proposed Rule 3503, public notification is based on OEHHA’s Tier-1 risk assessment. Tier-2, Tier-3, and Tier-4 evaluations may be prepared and presented in the HRA. However, the results from any Tier-2, Tier-3, or Tier-4 evaluations must be presented in separate, clearly titled, sections, tables, figures, and text. Table 7 summarizes the risk assumptions required by the SCAQMD. These requirements are discussed in more detail next.

Residential cancer risks assume a 70-year exposure and must include, at a minimum, the following pathways: home grown produce, dermal absorption, soil ingestion, and mother’s milk. A deposition velocity of 0.02 m/s should be assumed for the non-inhalation pathways. The HRA should assume the urban default value of 5.2 percent for the fraction of homegrown fruits and vegetables consumed. The other pathways of fish ingestion; dairy milk ingestion; drinking water consumption; and meat (i.e., beef, pork, chicken, and egg) ingestion should be included only if the facility impacts a local fishable body of water, grazing land, dairy, or water reservoir. The “Derived (Adjusted)” risk calculation method^[8] should be used for estimating cancer risks at residential receptors. To estimate chronic non-cancer risks at residential receptors the “Derived (OEHHA)” risk calculation method^[9] should be used.

Worker cancer risks assume a 40-year exposure and must include the pathways of dermal absorption and soil ingestion. A deposition velocity of 0.02 m/s should be assumed for these pathways. The “Point estimate” risk calculation method should be used for estimating cancer and non-cancer chronic risks at worker receptors.

The air concentration that the neighboring workers breathe when present at work is different than the annual average concentration calculated by the dispersion model, ISCST3. The annual average estimated by the dispersion model is a 24 hours per day, 7 days per week, 365 days per year average, regardless of the actual operating schedule of the emitting facility. Thus, the model-predicted concentrations must be adjusted by a multiplying factor to reflect the pollutant concentration that the worker breathes. For example, suppose that the off-site worker and the emitting facility have the same operating schedule, perhaps 8 hours per day, 5 days per week, and 52 weeks per year. The annual average concentrations predicted by ISCST3 must be adjusted by a factor of 4.2 (i.e., $7/5 \times 24/8$). The reader is referred to the OEHHA guidelines^[5] on pages 8-5 and 8-6 for further detail on this issue.

Table 7. Summary of SCAQMD Guidance.

Parameter	Assumption
<i>Pathway</i>	
Drinking water	Site specific; see note #1 below
Fish water	Site specific; see note #1 below
Beef/dairy (pasture)	Site specific; see note #1 below
Home grown produce	Required for residential receptors
Pigs, chickens, and/or eggs	Site specific; see note #1 below
Dermal	Required for residential & worker receptors
Soil ingestion	Required for residential & worker receptors
Mother's milk	Required for residential receptors
Deposition velocity	0.02 meters per second
Fraction of homegrown fruits & vegetables consumed	5.2 percent
<i>Cancer Risk Assumptions or Methods for Residential Receptors</i>	
Exposure duration	70 years
Analysis method	Derived (Adjusted)
<i>Cancer Risk Assumptions or Methods for Worker Receptors</i>	
Exposure duration	40 years; see note #2 below
Analysis method	Point estimate
<i>Chronic Non-cancer Risk Assumptions or Methods for Residential Receptors</i>	
Analysis method	Derived (OEHHA)
<i>Chronic Non-cancer Risk Assumptions or Methods for Worker Receptors</i>	
Analysis method	Point estimate; see note #3 below

1. Required pathway only if the facility impacts a local fishable body of water, grazing land, dairy, or water reservoir.
2. See text discussion and Table 8 for required concentration adjustments.
3. The concentration adjustments provided in Table 8 are not necessary for non-cancer chronic risks.

The adjustment factors for all possible operating schedules are given in Table 8. These factors are entered into HARP by activating the worker scenario labeled "Use adjusted GLC or exposure assumptions" and entering the appropriate factor in Table 8 in the data field labeled "GLC adjustment factor." If the emitting facility operates continuously then the user should activate the worker scenario labeled "Use modeled GLC and default exposure assumptions."

Table 8. Adjustment Factors for Off-site Worker Ground-level Concentrations.*

Hours of Operation per Day	Days of Operation per Week		
	1 to 5	6	7
1 to 8	4.2	3.5	3.0
9	3.7	3.1	2.7
10	3.4	2.8	2.4
11	3.1	2.5	2.2
12	2.8	2.3	2.0
13	2.6	2.2	1.8
14	2.4	2.0	1.7
15	2.2	1.9	1.6
16	2.1	1.8	1.5
17	2.0	1.6	1.4
18	1.9	1.6	1.3
19	1.8	1.5	1.3
20	1.7	1.4	1.2
21	1.6	1.3	1.1
22	1.5	1.3	1.1
23	1.5	1.2	1.0
24	1.4	1.2	1.0

* These adjustment factors should only be used when calculating worker cancer risks. The adjustment factors should not be used when calculating chronic non-cancer risks.

Reporting Format

The reporting format for the HRA must follow the detailed outline presented in Appendix A. A completed Health Risk Assessment Summary form must be included in the executive summary of all health risk assessments submitted to the SCAQMD; a sample of the form can be downloaded from the SCAQMD's AB2588 website.^[10] The detailed HRA outline provided in Appendix A lists the HARP computer files to be included in a CD with the HRA. Three (3) copies of the HRA and two (2) copies of CD(s) should be sent to the engineer or air quality specialist involved in the facility HRA. The HRA, in electronic form (i.e., pdf format), should also be included on the CD.

Cancer risk values should be reported to the nearest tenth and should be rounded up from 5 (e.g., 5.05 in a million is rounded up to 5.1 in a million). Non-cancer risk values should be reported to the nearest hundredth and should be rounded up from 5 (e.g., a hazard index of 0.105 is rounded to 0.11)

Notification Risk Levels

The SCAQMD Governing Board has adopted risk levels for purposes of public notification as shown in Table 9. Additional information regarding the SCAQMD's notification procedures are available on the web site.^[11]

Table 9. Public Notification Risk Levels.

Risk Variable	Public Notification Levels
Cancer risk	≥ 10 in a million
Non-cancer risk	Hazard index > 1

MEIR, MEIW, and MICR

To identify the location of the Maximum Exposed Individual Resident (MEIR); the Maximum Exposed Individual Worker (MEIW); the Maximum Individual Cancer Risk (MICR), which is simply the greater of the MEIR and MEIW, it is necessary to examine current land use and allowable land use in the vicinity of the point of maximum impact (residential, commercial/industrial or mixed use). The use of block group or census tract centroids as surrogates for the maximum exposed individuals does not provide sufficient spatial resolution and will not be approved.

Cancer risk and non-carcinogenic hazard indices (HIs) must be provided for both the most exposed residential and the most exposed commercial/industrial receptors. Additionally, cancer risk and hazard index values at each sensitive receptor located within the zone of impact must be presented in a table. The zone of impact is discussed in the next section.

Zone of Impact

In any risk assessment, it is necessary to define a zone of impact or a method to set boundaries on the analysis. The SCAQMD requires that the risk assessment must encompass the area subject to an added lifetime cancer risk (all pathways) of one in a million or greater ($\geq 1.0 \times 10^{-6}$). For large railyards and intermodal facilities, one in a million cancer risks could occur more than 50 km downwind, which would exceed the 50 km pollutant transport distance limitation of ISCST3. In those instances it is acceptable to limit the receptor network to conform to the model limitation.

For non-carcinogens the analysis must bound the area subject to a hazard index of greater than or equal to one half (≥ 0.5).

Land Use Considerations

Risk estimates are sensitive to land uses (e.g. residential, commercial, vacant) since these factors can affect exposure assumptions. If residential or worker risks are not calculated at the point of maximum impact because the land is currently vacant, the location, zoning and potential future land uses must be discussed. Updated information on current land uses is requested when updated emission estimates are reported to the SCAQMD.

Maps

Maps showing the location of the source in relation to the zone of impact must be submitted. Dispersion modeling for sources should be conducted with receptors defined in terms of Universal Transverse Mercator (UTM) coordinates. For carcinogen impacts, total risk isopleths for facilities should be plotted on the street map at cancer risk intervals

of 1, 10, 25, 50, 100, 250, 500, 1000, 2500, 5000, etc. in a million. Isopleths for non-carcinogens must include levels corresponding to a HI of 0.5, 1, 3, 5, and 10.

Separate maps should be provided for each of the three risk variables: cancer risks, non-cancer acute risks, and non-cancer chronic risks. The maps must contain an accurate scale for measuring distances and a legend. The map scale that can accommodate the isopleths and show the greatest level of detail must be used. The names of streets and other locations must be presented and be legible.

The location of schools, hospitals, day-care centers, other sensitive receptors, residential areas and work-sites within the zone of impact must be identified on the map. If the area of the zone of impact is very large, then more detail should be devoted to higher concentration/risk areas versus lower risk areas. The land uses in the vicinity of the point of maximum impact (off-site) must be shown in detail. This may require a separate map. If sensitive receptors are located within the zone of impact, then risk and hazard index values must also be presented in the form of a table including all the sensitive receptors.

References

- [1] Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. Appendix VII – Risk Characterization Scenarios. ARB. October 2000. The document can be downloaded at the following link: <http://www.arb.ca.gov/diesel/documents/rrpapp7.pdf>
- [2] ARB. 2004. Roseville Rail Yard Study. The document can be downloaded at the following link: <http://www.arb.ca.gov/diesel/documents/rrstudy.htm>
- [3] U.S. EPA. 2003. Guideline on Air Quality Models, Appendix W of 40CFR Part 51. The document can be downloaded at the following link: <http://www.epa.gov/scram001/tt25.htm#guidance>
- [4] U.S. EPA. 1995. User's Guide for the Industrial Source Complex (ISC3) Dispersion Models. EPA-4504/B-95-003a & EPA-4504/B-95-003b. The program and documentation can be downloaded at the following link: <http://www.epa.gov/scram001/tt22.htm#isc>
- [5] OEHHA. 2003. "The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments." The document can be downloaded at the following link: http://www.oehha.ca.gov/air/hot_spots/HRSguide.html
- [6] ARB. 2003. HARP User Guide. The program and document can be downloaded at the following link: <http://www.arb.ca.gov/toxics/harp/harp.htm>
- [7] Meteorological data for ISC3 and HARP can be downloaded at the following link: <http://www.aqmd.gov/smog/metdata/MeteorologicalData.html>

- [8] An explanation of the “Derived (Adjusted)” cancer risk method is provided at the ARB web site under frequently asked questions; refer to the following link: <http://www.arb.ca.gov/toxics/harp/rmpolicyfaq.htm#11>
- [9] An explanation of the “Derived (OEHHA)” cancer risk method is provided at the ARB web site under frequently asked questions; refer to the following link: <http://www.arb.ca.gov/toxics/harp/rmpolicyfaq.htm#10>
- [10] Forms mentioned here can be downloaded from SCAQMD’s web site at the following link: http://www.aqmd.gov/prdas/AB2588/AB2588_forms.html.
- [11] AQMD’s notification procedures can be downloaded at the following link: http://www.aqmd.gov/prdas/AB2588/AB2588_B4.html
- [12] ARB. 2003. Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk. Letter dated 10/9/2003. The document can be downloaded at the following link: <http://www.arb.ca.gov/toxics/harp/docs.htm#rm>

APPENDIX A
OUTLINE FOR THE HEALTH RISK ASSESSMENT
REPORT

I. Table of Contents

- Section headings with page numbers indicated.
- Tables and figures with page numbers indicated.
- Definitions and abbreviations. Must include a definition of acute, chronic, and cancer health impacts.
- Appendices with page numbers indicated.

II. Executive Summary

- Name of facility and the complete address.
- Facility ID number.
- Description of facility operations and a list identifying emitted substances, including a table of maximum 1-hour and annual emissions in units of lbs/hr and lbs/yr, respectively.
- List the multipathway substances and their pathways.
- Text presenting overview of dispersion modeling and exposure assessment.
- Text defining dose-response assessment for cancer and noncancer health impacts and a table showing target organ systems by substance for noncancer impacts.
- Summary of results. Potential cancer risks for residents must be based on 70-year, Tier-1 analysis and potential cancer risks for workers must be based on 40-year, Tier-1 analysis. (The results from any Tier-2, Tier-3, or Tier-4 evaluations must be presented in separate, clearly titled, sections, tables, figures, and text).
 - Location (address or UTM coordinates) and description of the maximum exposed individual resident (MEIR), maximum exposed individual worker (MEIW), and the maximum individual cancer risk (MICR). See reference #10 for the required summary form.
 - Location (address or UTM coordinates) and description of any sensitive receptors that are above a cancer risk of ten in one million or above a noncancer health hazard index of one.
 - Text presenting an overview of the total potential multipathway cancer risk at the MEIR, MEIW, MICR, and sensitive receptors (if applicable). Provide a table of cancer risk by substance for the MEIR and MEIW. Include a statement indicating which of the substances appear to contribute to (i.e., drive) the potential health impacts. In addition, identify the exposure pathways evaluated in the HRA.
 - Provide a map of the facility and surroundings and identify the location of the MEIR, MEIW, and MICR.

- Provide a map of 70-year lifetime cancer risk zone of impact (i.e., 1 in one million risk contour), if applicable. Also show the 10, 25, 50, 100, 250, 500, 1000, 2500, 5000, etc. in one million risk contours, if applicable.
- Text presenting an overview of the acute and chronic noncancer hazard quotients or the (total) hazard indices for the MEIR, MEIW, and sensitive receptors. Include separate statements (for acute and chronic exposures) indicating which of the substances appear to drive the potential health impacts. In addition, clearly identify the primary target organ(s) that are impacted from acute and chronic exposures.
- Identify any subpopulations (e.g., subsistence fishers) of concern.
- Table and text presenting an overview of estimates of population exposure.
- Version of the Risk Assessment Guidelines and computer program(s) used to prepare the risk assessment.

III. Main Body of Report

A. Hazard Identification

- Table and text identifying all substances emitted from the facility. Include the CAS number of substance and the physical form of the substance if possible. The complete list of the substances to be considered is contained in Appendix A of *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (August 2003)*.^[5]
- Table and text identifying all substances that are evaluated for cancer risk and/or noncancer acute and chronic health impacts. In addition, identify any substances that present a potential cancer risk or chronic noncancer hazard via noninhalation routes of exposure.
- Describe the types and amounts of continuous or intermittent predictable emissions from the facility that occurred during the reporting year. As required by statute, releases from a facility include spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping (fugitive), leaching, dumping, or disposing of a substance into ambient air. Include the substance(s) released and a description of the processes that resulted in long-term and continuous releases.

B. Exposure Assessment

This section describes the information related to the air dispersion modeling process that should be reported in the risk assessment. In addition, doses calculated by pathway of exposure for each substance should be included in this section. The experienced reader should be able to reproduce the risk assessment without the need for clarification. The location of any information that is presented in appendices, on electronic media, or attached documents that supports information presented in this section, must be clearly identified by title and page number in this section's text and in the document's table of contents.

B.1. Facility Description

Report the following information regarding the facility and its surroundings:

- Facility name.
- Facility ID.
- Facility location (i.e., address).
- Local topography.
- Facility plot plan identifying: emission source locations, property line, horizontal scale, building heights and dimensions.
- Description of the site/route dependent exposure pathways. Provide a summary of the site-specific inputs used for each pathway (e.g., water or grazing intake assumptions). This information may be presented in the appendix with the information clearly presented and cross-referenced to the text.

B.2. Emissions Inventory

Report the following information regarding the facility's sources and emissions in table format; see Appendix K of OEHHA Guidelines (2003).^[5] Depending on the number of sources and/or pollutants, this information may be placed in the main body of the report or in an appendix.

- Source identification number used by the facility.
- Source name.
- Source location using UTM coordinates (in meters); be sure to indicate the projection assumed (e.g., NAD 1927, NAD 1983, etc.).
- Source base elevation (m).
- Source height (m).
- Source dimensions (e.g., stack diameter, building dimensions, area/volume size, etc.) (m).
- Stack gas exit velocity (m/s) if applicable.
- Stack gas volumetric flow rate (ACFM) if applicable.
- Stack gas exit temperature (K).
- Number of operating hours per day and per year.
- Number of operating days per week.
- Number of operating days or weeks per year.
- Report emission control equipment and efficiency by source and by substance. The description should be brief.

- Report emission inventory methods indicating whether emissions are measured or estimated.
- Report emission rates for each toxic substance, grouped by source, in table form including the following information (see Appendix K of OEHHA Guidelines, 2003). Depending on the number of sources and/or pollutants, this information may be placed in the main body of the report or in an appendix.
 - Source name.
 - Source identification number.
 - Substance name and CAS number.
 - Annual average emissions for each substance (lbs/yr & g/s). Radionuclides are reported in Curies/yr.
 - Maximum one-hour emissions for each substance (lbs/hr & g/s). Radionuclides are reported in millicuries/yr.
- Report facility total emission rates by substance for all emittants including the following information (see Appendix K of OEHHA Guidelines, 2003). This information should be in the main body of the report.
 - Substance name and CAS number.
 - Annual average emissions for each substance (lbs/yr & g/s). Radionuclides are reported in Curies/yr.
 - Maximum one-hour emissions for each substance (lbs/hr & g/s). Radionuclides are reported in millicuries/yr.

B.3. Air Dispersion Modeling

- The HRA should indicate the source and time period of the meteorological data used. Include the meteorological data electronically with the HRA. The SCAQMD has 1981 meteorological data (i.e., hourly winds, atmospheric stability, and mixing heights) at 35 stations in the South Coast Air Basin. This data can be downloaded from the SCAQMD web site.^[7]
- Include proper justification for using the meteorological data. The nearest representative meteorological station should be chosen for modeling. Usually this is simply the nearest station to the facility; however, an intervening terrain feature may dictate the use of an alternate site.
- HARP should be used for all health risk assessments prepared for the SCAQMD. Make sure that the latest version of the program is used.
- Table and text that specifies the following information:
 - Selected model options and parameters.
 - Receptor grid spacing.

- For the MEIR, MEIW, MICR, and any sensitive receptors required by the SCAQMD, include tables that summarize the annual average concentrations calculated for all substances.
- For the MEIR, MEIW, MICR, and any sensitive receptors required by the SCAQMD, include tables that summarize the maximum one-hour; maximum four-, six-, or seven-hour (for those substances with RELs based on those averaging periods); and 30-day average (lead only) concentrations.

C. Risk Characterization

HARP generates the risk characterization data needed for the outline below. Any data needed to support the risk characterization findings should be clearly presented and referenced in the text and appendices. A listing of HARP output files that meet these HRA requirements are provided in this outline under the section entitled “Appendices.” All HARP files should be included in the HRA. Ideally, the HRA report and a summary of data used in the HRA should be on paper and all data and model input and output files should be provided electronically (i.e., CD). The SCAQMD also requires the HRA in electronic form (i.e., pdf format).

The potential cancer risk for the MEIR and sensitive receptors of interest must be presented in the HRA’s text, tables, and maps using a lifetime 70-year exposure period. MEIW location should use appropriate exposure periods. A 70-year exposure duration should be used as the basis for residential public notification and risk reduction audits and plans. All HRAs must include the results of a Tier-1 exposure assessment. If persons preparing the HRA would like to present additional information (i.e., exposure duration adjustments or the inclusions of risk characterizations using Tier-2 through Tier-4 exposure data), then this information must be presented in separate, clearly titled, sections, tables, figures, and text.

The following information should be presented in this section of the HRA. If not fully presented here, then by topic, clearly identify the section(s) and pages within the HRA where this information is presented.

- Description of receptors to be quantified.
- Identify the site/route dependent exposure pathways (e.g., water ingestion) for the receptor(s), where appropriate (e.g., MEIR). Provide a summary of the site-specific inputs used for each exposure pathway (e.g., water or grazing intake assumptions). In addition, provide reference to the appendix (section and page number) that contains the modeling (i.e., HARP/dispersion modeling) files that show the same information.
- Tables and text providing the following information regarding the potential multipathway cancer risks at the MEIR, MEIW, MICR, and any sensitive receptors of concern:
 - Location in UTM coordinates
 - Contribution by substance
 - Contribution by source

- 9- and 30-year cancer risks
- Tables and text providing the following information regarding the acute noncancer hazard quotient at the MEIR, MEIW, MICR, and any sensitive receptors of concern:
 - Location in UTM coordinates
 - Target organ(s)
 - Contribution by substance
 - Contribution by source
- Tables and text providing the following information regarding the chronic noncancer (inhalation and oral) hazard quotient at the MEIR, MEIW, and any sensitive receptors of concern:
 - Location in UTM coordinates
 - Target organ(s)
 - Contribution by substance
 - Contribution by source
- Table and text presenting estimates of population exposure. Tables should indicate the number of persons exposed to a total cancer risk greater than 10^{-6} , 10^{-5} , 10^{-4} , 10^{-3} etc. and total hazard quotient or hazard index greater than 0.5, 1.0, 3.0, 5.0, and 10.0. Total excess cancer burden should also be provided.
- Provide maps that illustrate the HRA results as noted below. The maps should be an actual street map of the area impacted by the facility with UTM coordinates and facility boundaries clearly labeled. This should be a true map (i.e., one that shows roads, structures, etc.), drawn to scale, and not just a schematic drawing. U.S. Geologic Survey 7.5 minute maps are usually the most appropriate choice. The following maps are required:
 - Locations of the MEIR, MEIW, MICR, and sensitive receptors for the cancer and noncancer acute and chronic risks. Also show the facility emission points and property boundary.
 - Total multipathway cancer risk contours for the following risk levels: 1, 10, 25, 50, 100, 250, 500, 1000, 2500, 5000, etc. in a million. Maps should be provided for the minimum exposure pathways (i.e., inhalation, soil ingestion, dermal exposure, and breast-milk consumption) and for all applicable exposure pathways (i.e., minimum exposure pathways plus additional site/route specific pathways). Include the facility location on the maps.
 - Noncancer acute and chronic hazard index contours for the following levels: 0.5, 1.0, 3.0, 5.0, and 10.0. Include the facility location.
- The risk assessor may want to include a discussion of the strengths and weaknesses of the risk analyses and associated uncertainty directly related to the facility HRA.
- If appropriate, comment on the possible alternatives for control or remedial measures.
- If possible, identify any community concerns that influence public perception of risk.

D. References

IV. Appendices

The appendices should contain all data, sample calculations, assumptions, and all modeling and risk assessment files that are needed to reproduce the HRA results. Ideally, a summary of data used in the HRA will be on paper and all data and model input and output files will be provided electronically (e.g., CD). All appendices and the information they contain should be referenced, clearly titled, and paginated. The following are potential appendix topics unless presented elsewhere in the HRA:

- List of all receptors in the zone of impact and their associated risks.
- Emissions by source.
- Census data.
- Maps and facility plot plan.
- All calculations used to determine emissions, concentrations, and potential health impacts at the MEIR, MEIW, MICR, and sensitive receptors.
- Presentation of alternate risk assessment methods (e.g., alternate exposure durations, or Tier-2 to Tier-4 evaluations with supporting information).

V. Computer Files

The list of computer files that must be submitted on CD with the HRA is as follows:

- Provide facility, device, process, emissions, and stack data in electronic transaction file, EXPORT.TRA
- ISC workbook file with all ISC parameters (filename.ISC).
- ISC input file generated by HARP when ISC is run (filename.INP).
- ISC output file generated by HARP when ISC is run (filename.OUT).
- ISC binary output files; holds χ/Q values for each hour (filename.BIN).
- List of error messages generated by ISC (filename.ERR).
- Source-receptor file; contains lists of sources and receptors for the ISC run; file generated by HARP when ISC is run (filename.SRC).
- Point estimate risk values generated by HARP; this file is updated automatically each time you perform one of the point estimate risk analysis functions (filename.RSK).
- Average and maximum χ/Q values for each source-receptor combination; values are generated by ISC (filename.XOQ).
- Plot file generated by ISC (filename.PLT).
- Representative meteorological data used for the facility air dispersion modeling (filename.MET).

- Site-specific parameters used for all receptor risk modeling (filename.SIT).
- Map file used to overlay facility and receptors (filename.DEB).

Appendix B

Calculation of Inhalation Cancer Risk for Diesel Particulate Matter

Below is a procedure for estimating the inhalation cancer risk from exposure to diesel particulate matter (DPM). Impacts to residential and worker exposures are addressed. The methods below represent a Tier-1 assessment as described by OEHHA.^[5]

The inhalation cancer risk equation is as follows:

$$\text{Cancer risk} = \text{Cancer Potency (CP)} \cdot \text{Inhalation Dose (Dose-Inh)}$$

$$\text{Dose-Inh} = 10^{-6} \cdot C_{\text{air}} \cdot \text{DBR} \cdot (\text{EF} \cdot \text{ED})/\text{AT}$$

Where,

CP	= Cancer potency; the cancer potency for DPM is 1.1 cancers/mg/kg-day;
Dose-inh	= Dose through inhalation (mg/kg-day);
10^{-6}	= Unit conversion factor;
C_{air}	= Model-estimated DPM concentration ($\mu\text{g}/\text{m}^3$);
DBR	= Daily breathing rate (L/kg-day);
EF	= Exposure frequency (days/year);
ED	= Exposure duration (years); and
AT	= Averaging time period over which exposure is averaged, in days.

Assumptions for the above parameters are given in the table below:

Receptor	DBR	EF	ED	AT
Residential	302*	350	70	25,550
Worker	149	245	40	25,550

* 80th percentile breathing rate per ARB's interim risk management guidance for inhalation risk at residential receptors.^[12]

The inhalation cancer risk for a residential receptor simplifies to:

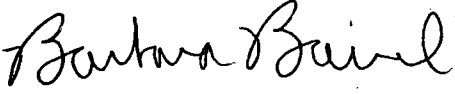
$$\text{Cancer risk} = 318.5 \cdot C_{\text{air}} \cdot 10^{-6}$$

The inhalation cancer risk for a worker receptor simplifies to:

$$\text{Cancer risk} = 62.9 \cdot C_{\text{air}} \cdot 10^{-6}$$

The model-predicted DPM concentration that a worker is exposed to (i.e., C_{air}) must be adjusted using the factors given in Table 8 of the main body of this document.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
OFFICE OF DISTRICT COUNSEL
MEMORANDUM FOR SIP SUBMITTAL – RULES 3501 & 3502

DATE: November 2, 2011
FROM: Barbara Baird, District Counsel 
SUBJECT: ICCTA Does Not Preempt South Coast AQMD Rules 3501 and 3502

Summary of the Issue

Clean Air Act Section 110(a)(2)(E) (42 U.S.C. § 7410) requires a state implementation plan (SIP) submittal to include necessary assurances that the implementing agency “is not prohibited by any provision of Federal or State law from carrying out such implementation plan or portion thereof...” This memorandum addresses the issue of whether the federal Interstate Commerce Commission Termination Act (ICCTA) preempts the two rules proposed for inclusion in the SIP, and thereby would prohibit their implementation. ICCTA, adopted in 1995, substantially deregulated the rail industry. In particular, ICCTA contains 49 U.S.C. § 10501(b), providing exclusive jurisdiction to the Surface Transportation Board over “(1) transportation by rail carriers....” and “(2) the construction, acquisition, operation, abandonment...of...tracks, or facilities....” Section 10501(b) also provides that “the remedies provided under this part with respect to the regulation of rail transportation are exclusive and preempt the remedies provided under Federal or State law.”¹

Following adoption of the rules in question, the Association of American Railroads, BNSF Railway, and Union Pacific Railroad sued the South Coast Air Quality Management District (SCAQMD), alleging among other things that the rules were preempted by ICCTA. In response, the SCAQMD argued that since the rules implemented the Clean Air Act (CAA), the courts must attempt to harmonize ICCTA and the CAA so that both statutes could be implemented. The Ninth Circuit Court of Appeals held that, because the rules in question were not yet included in the SIP, they did not have the force and effect of federal law. Accordingly, it was not yet necessary to harmonize the CAA and ICCTA. *Association of American Railroads, et al. v. South Coast Air Quality Management Dist.*, 622 F.3d. 1094, 1098. (9th Cir. 2008) (hereafter “AAR”).

Significantly, however, the Court acknowledged that “If an apparent conflict exists between ICCTA and a *federal* law, then the courts must strive to harmonize the two laws, giving effect to both if possible.” (*Id.* at 1097). In addition, the court explained that “...to the extent that state and local agencies promulgate EPA-approved statewide plans under federal environmental laws

¹ The District believes it is clear that the Clean Air Act does not prohibit rules such as Rule 3501 and 3502, as explained below.

(such as “statewide implementation plans” under the Clean Air Act), ICCTA generally does not preempt those regulations because it is possible to harmonize the ICCTA with those federally recognized regulations.” (*Id.* at 1098). In sum, the Court set out the procedural roadmap for applying the harmonization test: the rules must first be approved by EPA into the SIP. Accordingly, the SCAQMD is submitting the two rules for inclusion in the state implementation plan. Once approved by EPA, the rules will have the force and effect of federal law and will need to be harmonized with ICCTA.

Given the Ninth Circuit’s holding, we therefore approach the task of demonstrating that ICCTA does not preempt the rules from the point of view of a court looking at the situation as it exists once the rules are approved by EPA. It would not make sense to analyze preemption as though the rules were not approved by EPA, because in that case the rules would inevitably be held preempted simply because EPA had not yet approved them. In such a case, the opportunity would never arise to demonstrate that the rules are not preempted under the test applicable to an approved SIP. Such an approach would render meaningless the Ninth Circuit’s decision that SIP-approved rules are generally not preempted. No rule could *ever* be approved into the SIP, because it would be held preempted simply by virtue of the fact that EPA had not yet acted on the proposal. This would be an absurd interpretation.

How Harmonization Analysis is to be Conducted

Once approved by EPA, the rules will need to be harmonized with ICCTA. As stated by the Surface Transportation Board, “[N]othing in Section 10501(b) is intended to interfere with the role of state and local agencies in implementing Federal environmental statutes, such as the Clean Air Act...” (*Boston & Me. Corp. v Town of Ayers*, 2001 STB LEXIS 435, 2001 WL 458685, at 19-20). In harmonizing the provisions of the two laws, courts look to the core purpose of the respective statutes. See *Morton v. Mancari*, 417 U.S. 535, 542, 550 (examining the “overriding purpose” and “aim” of both the Indian Reorganization Act of 1934 and the 1972 Equal Employment Opportunity Act); *Headwaters, Inc. v. Talent Irrigation Dist.*, 243 F.3d 526, 531 (9th Cir. 2001) (comparing objectives of the Clean Water Act and the Federal Insecticide, Fungicide, and Rodenticide Act); *Chao v. Bremerton Metal Trades Council*, 294 F.3d 1114 (9th Cir. 2002) at 1119 (looking to the “overriding purpose” of the Civil Service Reform Act and the Labor-Management Reporting and Disclosure Act); *Get Out Oil! Inc. v. Exxon Corp.*, 586 F.2d 726, 731 (9th Cir. 1978) (looking to “principal concern” of Congress in enacting the Deepwater Port Act and the Outer Continental Shelf Lands Act.)

Where the challenged rule implements the core purpose of one law, while merely touching on the periphery of the other, the court must effectuate the core purpose of the first statute. In this instance, cases on preemption are relevant to the harmonization analysis, for those cases have addressed analogous situations. *Merrill Lynch, Pierce, Fenner & Smith, Inc. v. Ware* 414 U.S. 117, 126 (finding the one type of analysis “instructive” to the other.) Even where the question is the validity of a state law in light of asserted federal preemption, the preemption cases illustrate that where the challenged action concerns the core of one statute but only the periphery of another statute, the law whose core is implicated controls. As the Court summarized in *Bowman v. Texas Educ. Foundation, Inc.*, 454 F.2d 1097, 1101 (5th Cir. 1972): “Where provisions of two Acts are in conflict, standard statutory construction requires that a court adopt as controlling that provision more closely associated with the specific substance of

the controversy.” See also *New York Susquehanna & W. Ry. Corp. v. Jackson*, 500 F. 3d 238, 252: “a federal law does not preempt state laws ‘where the activity regulated [by the state is] merely a peripheral concern’ of the federal law...”; *Merrill Lynch, et al.*, 414 U.S. at 131-136 (federally authorized New York Stock Exchange rules do not preempt state arbitration law because arbitration is part of a “strong [state] policy” but is “extremely attenuated and peripheral” to the Exchange rules.)

In the specific field of air pollution law, the U.S. Supreme Court has readily concluded that two federal statutes may be harmonized. In *Massachusetts v. EPA*, states petitioned EPA to regulate greenhouse gases emitted from motor vehicles as a means of combating global warming. EPA responded that since fuel efficiency is a primary means of reducing greenhouse gas emissions, regulating greenhouse gas emissions would conflict with the authority of the Department of Transportation to set fuel mileage standards under the Energy Policy and Conservation Act. The U.S. Supreme Court disagreed, declaring, “The two obligations may overlap, but there is no reason to think the two agencies cannot both administer their obligations and yet avoid inconsistency.” *Massachusetts v. EPA*, 549 U.S. 497, 532 (2007).

Another example of the U.S. Supreme Court harmonizing two federal statutes is *National Association of Home Builders, et al. v. Defenders of Wildlife*, 551 U.S. 644 (2007). The environmental plaintiffs challenged EPA’s approval of the transfer to a state of permitting authority under the Clean Water Act. They argued that EPA failed to comply with the Endangered Species Act, to insure that the transfer did not jeopardize any endangered or threatened species. While the language of the Endangered Species Act was mandatory in form, the Court held that the ESA did not impliedly repeal the provisions of the Clean Water Act that required EPA to transfer permitting authority upon certain criteria being met, where those criteria did not include the ESA determination.

The federal courts have already rejected ICCTA challenges to state actions authorized under other federal statutes. In *Iowa, Chicago, & Eastern Rail Road Corp. v. Washington County, Iowa*, 384 F.3d 557 (8th Cir. 2004) the court examined the pre-ICCTA history whereby Congress had “forged a federal-state regulatory partnership” under the Federal Rail Safety Act to deal with road and bridge problems. The court upheld the local government’s order requiring the railroad to replace four bridges, noting that ICCTA did not purport to address these issues. In essence, the court harmonized ICCTA and the Federal Rail Safety Act, which allowed the local action. Similarly, in *Tyrell v. Norfolk S. Ry. Co.*, 248 F.3d 517 (6th Cir. 2001), the court rejected the railroad’s claim that ICCTA’s exclusive jurisdiction over “rail construction” preempted an action for damages based on a state “track clearance” regulation that the Federal Rail Safety Act authorized.

Moreover, in a recent decision, a federal court has held that ICCTA does not preempt an action taken under the Clean Water Act where the only burden asserted by the railroad was the cost of litigation. *Humboldt Baykeeper v. Union Pacific Railroad Co.*, 2010 U.S. Dist. LEXIS 52182 (N.D.Cal. 2010)

Therefore, the SCAQMD Rules will be upheld unless the railroads can show that they impair the core purposes of ICCTA.

Determining the Core Purposes of the CAA and ICCTA

In order to harmonize ICCTA with the Clean Air Act (CAA) in this case, it is necessary to (1) determine the core purposes of each statute and then (2) evaluate whether rules 3501 and 3502 impact the core purposes of the respective statutes, or only their periphery. As the preemption cases, discussed above, held with respect to the task of harmonization, if the rules effectuate the core purposes of the Clean Air Act, but only impact the periphery of ICCTA, then the rules can be upheld as a matter of law, without a detailed factual analysis. SCAQMD submits that this is the correct outcome and the rules should be upheld.

The text of the CAA specifically identifies the Act's core purpose as "protect[ing] and enhance[ing] the quality of the Nation's air resources so as to promote the public health and welfare..." 42 U.S.C. § 7401(b)(1). The CAA relies upon states and agencies such as the District to carry out this purpose. (42 U.S.C. § 7410: state plans to implement and maintain National Ambient Air Quality Standards or NAAQS). As the Ninth Circuit emphasized in *Engine Manufacturers' Association*, 498 F. 3d 1031, 1042 (9th Cir. 2007), "[t]he overriding purpose of the Clean Air Act is to force the states to do their job in regulating air pollution effectively so as to achieve baseline air quality standards..." To that end, the CAA authorizes states to adopt and implement "any requirement respecting control or abatement of air pollution" except as specifically preempted by listed sections. 42 U.S.C. § 7416 (emphasis added).

The CAA does preempt states from adopting "standards" relating to the control of emissions from nonroad engines, a category including locomotives, and specifically from *new* locomotives, 42 U.S.C. § 7543(e). However, EPA has interpreted this section to allow states to adopt "in-use" regulations for nonroad engines. "EPA believes that states are not precluded under Section 209 from regulating the use and operation of nonroad engines, such as regulations on hours of usage, daily mass emission limits, or sulfur limits on fuel." 40 C.F.R. Part 89, Subpt. A., App A, 59 Fed. Reg. 31396, 31339 (June 17, 1994). This interpretation has been upheld by the courts. *Engine Manufacturers' Association v. EPA*, 88 F.3d 1075 (D.C. Cir. 1996).

Moreover, in a later rulemaking, EPA explained that rules affecting locomotives are not preempted if they do not affect how locomotives are designed or manufactured. 63 Fed. Reg. 18978, 18993, (April 16, 1998). Because SCAQMD Rule 3502 is limited to locomotive idling, it falls squarely within the purview of "in-use" regulations affecting the "use or operation" of the locomotive, not its "design or manufacture." While locomotives may be exempt from the rule if they have and use certain anti-idling equipment, the basic prohibition of the rule applies to locomotive idling, limiting it to 30 minutes in certain narrowly-defined circumstances. In contrast, Rule 3501 is a record-keeping rule, designed to help document the occasions of lengthy idling, and the reasons for them, so as to potentially help identify opportunities to further reduce idling. Both rules are integral to the core purpose of the Clean Air Act, to reduce air pollution, and are being submitted as part of the SIP, the state's core responsibility under the CAA. Therefore, the rules implement the core purposes of the CAA.

Next, we must determine the core purposes of ICCTA. The Ninth Circuit has rejected arguments, based on legislative history, that ICCTA was designed primarily to address economic regulation. *AAR*, 622 F. 3d at 1098. As accepted by the Ninth Circuit, ICCTA preempts state rules that "may reasonably be said to have the effect of managing or governing rail transportation, while permitting the continued application of laws having a more remote or

incidental effect on rail transportation..." *AAR*, 622 F. 3d at 1097. Because the Ninth Circuit did not need to harmonize the CAA with ICCTA, it never determined the *extent* of the rules' impact on rail transportation to conclude that they were preempted. In contrast, the Ninth Circuit reiterated that to the extent the state or local requirement is approved by EPA into the SIP, "ICCTA generally does not preempt those regulations because it is possible to harmonize the ICCTA with those federally recognized regulations." *Ass'n of Am. R.R. v. S. Coast Air Quality Mgmt. Dist.*, 622 F.3d 1094, 1098 (9th Cir. 2010). Therefore, we start with the proposition that state SIP rules "generally" are not preempted by ICCTA, even if they have some impact on rail transportation. And, most importantly, EPA has already approved into the relevant SIP two idling rules from other states that apply to locomotives. (See 37 Fed. Reg. 23085 (Oct. 28, 1972)(Massachusetts), and 73 Fed. Reg. 16203 (March 27, 2008)(Rhode Island)).

Determining Whether the Rules Impair the Core Purposes of ICCTA

We now turn to the rules themselves. Rule 3501 merely requires locomotive operators to record instances of idling lasting more than 30 minutes, and the reasons for idling if it is for over two hours, and to make reports to the District. This rule does not in any way "have the effect of managing or governing rail transportation." It only goes into effect when the train is already idling, and then merely requires a record to be kept. It does not affect whether or when the train idles or how it operates.

Rule 3502 does impact whether and for how long the train idles. However, on its face it does not intrude into ICCTA's core purposes, because it only goes into effect when the locomotive is already "unattended" or, in the case of a trailing locomotive, where the train operator knows it will be idling for more than 30 minutes. (Rule 3502(d)(1); (d)(2).) If the locomotive is already unattended (Rule 3502(d)(12)), it is not engaged in rail transportation; rather, it is simply idling unnecessarily. Where the trailing locomotive is affected, the rule does not go into effect unless there is already a lengthy delay. (Rule 3502(d)(2).) Thus the rule does not implicate rail transportation, but rather affects only existing periods of nonoperation or delay. Furthermore, the rule contains exemptions for emergency operations, cases where the temperature is predicted to drop below 40% (and it may be difficult to restart the train), or where idling is required to maintain battery charge or voltage sufficient to start the locomotive. (Rule 3502(j).)

In sum, Rule 3502 applies only when the train is not operating, and only when it is already unattended (or already subject to lengthy delay). Thus, it touches only the periphery of the interests protected by ICCTA. It does not manage or govern the manner of rail transportation. Therefore, Rule 3502 can be upheld by harmonizing the CAA and ICCTA, because it implements the core purpose of the CAA in reducing air pollution and carrying out the SIP, while it at most touches the periphery of ICCTA's concerns.

Nonetheless, BNSF and UP have contended that Rule 3502 in fact interferes with rail transportation for two reasons. First, they say that it presents a safety issue because a train's airbrakes will cease to function after lengthy times without power to the locomotive. Second, the railroads say the rule will cause lengthy delays by causing the train to be not ready to promptly start when its opportunity to leave the railyard occurs. These two arguments, however, may be rejected as a matter of law.

First, whenever a train is left unattended, Federal regulations require that the handbrakes be set and the air brakes may not be relied upon. BNSF and UP have admitted that "Federal rail regulations require that whenever a train is unattended, there must be a sufficient number of handbrakes set to hold the train without the airbrakes." (*Ass'n of Am. R.R. v. South Coast Air Quality Mgmt. Dist.*, U.S. Dist. Case No. 06-1416 JFW(PLAx), 2007 LEXIS 65685 (C.D. Cal. Apr. 30, 2007), Railroads' Admitted Fact No. 16.) Moreover, their particular concern regarding trains on a grade is addressed by federal regulations, 49 C.F.R. § 232.103(n): "A train's air brake shall not be depended upon to hold equipment standing unattended on a grade, including a locomotive, a car, or a train whether or not locomotive is attached.)" Therefore, the asserted safety need to maintain locomotive power so as to maintain airbrakes is an illusion. Also, federal safety rules do not even require an air brake test unless the train has been shut down for four hours. (49 C.F.R. § 232.205.) Thus, in the ordinary case a shutdown will not even impact the train's air brakes.

Second, the rule does not prevent a train from being ready to promptly start when its opportunity to leave the railyard occurs. Under Rule 3502(d)(1), the rule is only triggered when the train is both unattended and will be idling for more than 30 minutes. All that the train operator need do is make sure that the train is not left unattended for all of the 30 minutes preceding departure. Indeed, if a train is likely to be dispatched in the immediate future, there is no reason why it would be unattended.

Under Rule 3502(d)(2), the trailing locomotives (but not the lead locomotive) must be shut down if the yardmaster or dispatcher notifies the operator that there will be a delay of more than 30 minutes, or in the case of a breakdown resulting in a delay of over 30 minutes. In such situations, the train is by definition already delayed, and is therefore not immediately ready to depart on a moment's notice. In this case, the lead locomotive may continue to idle, so that heat or air conditioning for train crew comfort is still available.

Given the presumption that SIP measures may generally be harmonized with ICCTA, the railroads would need to show that the Rules impair the core purposes of ICCTA. They cannot make that showing in this case. It may be determined as a matter of law that the rules do not impair the core purposes of ICCTA, while they do implement the core purpose of the CAA. Accordingly, they are not preempted, just as SIP rules "generally" are not preempted.

Surface Transportation Board Test if Factual Determination is Needed

If it is determined that a factual determination is needed (*i.e.*, if it cannot be decided as a matter of law that the rules do not impair the core purposes of ICCTA), then the test developed by the Surface Transportation Board (STB) should be used. The STB has concluded that ICCTA was not intended to "interfere with role of the state and local agencies in implementing Federal environmental statutes, such as the Clean Air Act...unless the regulation is being applied in such a manner as to unduly restrict the railroad from conducting its operations, or unreasonably burden[ing] interstate commerce." *Bos. & Me. Corp. and Town of Ayer*, 2001 STB LEXIS 782, 2001 WL 1174385 (Oct. 3, 2001). The Board continued: "The severity of the likely environmental impacts should be weighed against the severity of the transportation impacts of compliance to determine whether, and how, the various Federal statutes can be accommodated." *Id.* at 2.

Under the STB's "undue restriction/unreasonable burden" balancing test, the impact on railroad operations must be severe before a state regulation will be invalidated. As the Third Circuit explained in *Jackson*, 500 F. 3d at 254, "[a]s for the unreasonably burdensome prong, the most obvious component is that the substance of the regulation must not be so draconian that it prevents the railroad from carrying out its business in a sensible fashion."

If EPA believes a factual determination is necessary, the burden is upon the railroads to demonstrate that the rules are so "draconian" as to prevent them from carrying out their business in a sensible fashion. As EPA is aware, the railroads and SCAQMD have already participated in a thorough and lengthy factual discovery process and have participated in a trial at which the railroads presented all their best evidence. However, the trial court never made any factual findings, since it concluded that SCAQMD was not authorized to regulate locomotives under state law (a conclusion which we demonstrate is plainly incorrect in an accompanying memorandum.) If EPA believes a factual submission is needed, SCAQMD offers to submit to EPA the factual materials presented to the trial court by both sides, together with an analysis of why the facts presented do not support preemption.

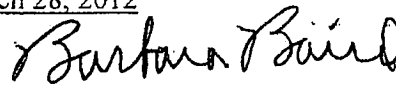
BB/VT/pa

e:\share\veera\carb railyard\sip submittal\memo-iccta.doc

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
OFFICE OF DISTRICT COUNSEL
MEMORANDUM FOR SIP SUBMITTAL – RULES 3501 & 3502

DATE: November 2, 2011; Revised March 28, 2012

FROM: Barbara Baird, District Counsel



SUBJECT: State Law Authority

SUMMARY OF THE ISSUE

Clean Air Act Section 110(a)(2)(E), 42 U.S.C. §7410(a)(2)(e) requires SIPs to ensure the implementation agency has adequate authority under State law to carry out the implementation plan. The District submits the following memorandum to comply with this requirement.

Under State law, both local air districts and CARB have the authority to regulate railroad emissions. California law has long divided regulatory authority over air pollution into two general parts. CARB is charged with regulating emissions from “motor vehicles,” while “local and regional authorities have the primary responsibility for control of air pollution from all sources, other than emissions from motor vehicles.” Health & Safety Code § 40000; § 39002 (“Local and regional authorities have the primary responsibility for control of air pollution from all sources other than vehicular sources.”); § 39037 (“local and regional authorities” include districts).

The Health and Safety Code references Vehicle Code § 415 for a definition of a “motor vehicle”, which, in turn, defines a motor vehicle as a “vehicle that is self-propelled.” Also, Vehicle Code § 670 defines a “vehicle” as “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.” See also, Health & Safety Code § 39060 (defining “vehicular sources” as “those sources of air contaminants emitted from motor vehicles.”)

Under the plain language of these statutes, a locomotive is not a “vehicle” because it is not a device for moving a “person or property... upon a highway.” Veh. Code § 670. Moreover, it falls clearly within the exception to “vehicle” for devices “used exclusively upon stationary rails or tracks.” Id. Consequently, when Section 40000 grants authority to local air pollution districts over “all sources other than emissions from motor vehicles,” this universe of sources necessarily includes locomotives, a non-vehicular source. Therefore, regulating emissions from locomotives is under the District’s authority under California law.

The District recognizes that the opinion of the federal district court in Association of American Railroads v. South Coast Air Quality Management District, 2007 U.S. Dist. LEXIS 65685, *18,

states: "[T]he Court finds that the District does not have the authority under the [Health and Safety Code] to regulate air contaminants from locomotives..." However, that language was not affirmed on appeal and therefore is not controlling here. The Ninth Circuit Court of Appeals stated: "[W]e assume without deciding that the rules fall within the District's regulatory authority." *Association of American Railroads v. South Coast Air Quality Management District*, 622 F. 3d 1094-at, 1096 n. 1 (9th Cir. 2010)

Because the Court of Appeals left the question undecided, neither the doctrine of res judicata nor collateral estoppel prevents the District from contending before CARB and EPA that it has authority under state law to adopt the rules. *Martin v. Henley*, 452 F. 2d. 295, 300 (9th Cir. 1971). The Railroads in fact conceded this point in later proceedings before the District Court: "[T]he District is correct that where an alternate ground is not decided on appeal it has no res judicata effect..." Railroads' Reply to Opposition to Motion for an Order to Show Cause, Case No. CV06-1416 JFW (PLAx)(Docket #23). Similarly, the doctrine of "law of the case", which governs relitigation of issues previously decided in the same litigation, does not apply to issues the appellate court did not decide. *United States v. Cote*, 51 F. 3d 178, 181 (9th Cir. 1995). Therefore, the federal district court ruling is not binding on the District, and the District respectfully asserts that the decision is incorrect/incorrectly interprets California law.

Effect of Health & Safety Code §40702 and 43013(b)

Section 40702 of the Health and Safety Code provides that,

"A district shall 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.

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."

This section serves only to limit the authority of the District to adopt three types of railroad locomotive rules, those specifying (1) the design of equipment, (2) the type of construction, or (3) the particular method to be used for emission reduction. In other words, it imposes very precise restrictions on the types of regulations that a district may adopt and is not all encompassing. If the Legislature intended to withdraw regulatory authority entirely from local districts, they would have done so. See, e.g., Health & Safety Code § 41904 (standards for sandblasting operations "shall be statewide, and no rule or regulation of any district... shall be stricter or less strict than the standards adopted by the state board"). In Section 40702, however, the Legislature employed narrower language establishing limits on specific types of local regulation. A difference in statutory language must be given effect. See *Hicks v. E.T. Legg & Associates*, 89 Cal.App.4th 496, 507 (2001) ("[W]hen the legislature has carefully employed a term in one place and has excluded in another, it should not be implied where excluded.").

Therefore, Section 40000 broadly authorizes local districts to regulate nonvehicular sources, while Section 40702 slightly limits that broad power, but only with respect to specific types of regulations on locomotives. Since the rules included within this submittal do not "specify the design of equipment, type of construction, or particular method to be used in reducing the release of air contaminants", the rules comport with the prohibition in Section 40702. Specifically, Rule 3502, which is the only rule which requires emission reductions, allows the railroads to comply

by limiting idling, by using idling-reduction devices, or by following an emissions equivalency plan which would obtain equivalent reductions.

Section 43013(b) of the Health and Safety Code also does not limit the ability of the District to adopt the Rules. This section states,

"The [California Air Resources Board] shall, consistent with subdivision (a), adopt standards and regulations for...off-road or nonvehicular engine categories, including, but not limited to, off-highway motorcycles, off-highway vehicles, construction equipment, farm equipment, utility engines, locomotives, and, to the extent permitted by federal law, marine vessels."²²

Thus, this section authorizes CARB to adopt one specific type of regulation: "standards and regulations for...off-road and non-vehicle engine categories, including...locomotives." Id (emphasis added.) The statute, however, is silent on and therefore does not encompass all types of railroad regulation. Since the District's rules do not adopt any standard for locomotive engines, there is no conflict under this provision.

Even if Section 43013(b) encompasses all types of regulation of railroads, it still would not preclude districts from regulating locomotives because two other statutes, Section§ 39002 and Section§ 41508, empower local districts to act even when other statutes authorize CARB to regulate the same subject matter. Health and Safety Code Section§ 39002 states,

"Except as otherwise provided in this division, including, but not limited to, Section 41809, 41810, and 41904, local and regional authorities [such as the District] may establish stricter standards than those set by law or by the state board for nonvehicular sources."

Health and Safety Code Section§ 41508 states, in almost identical language,

"Except as otherwise specifically provided in this division, including but not limited to, Sections 41809, 41810, and 41904, any local or regional authority may establish additional, stricter standards than those set forth by law or by the state board for nonvehicular sources."

These statutes instruct that, unless the Legislature "otherwise provides," local districts may adopt standards for nonvehicular sources like locomotives that are "additional" to and "stricter" than any standard CARB might set. Nothing in Section 43013(b) precludes a local district from establishing that type of "additional, stricter" regulation. Compare, Health & Safety Code § 41810 ("[n]o district shall adopt any rule or regulation stricter than those provided by law with respect to open outdoor fires.")

Taken as a whole, these provisions of the Health and Safety Code are interpreted to mean that the Legislature granted the districts authority over all sources-including locomotives-except motor vehicles and expressly allowed districts to adopt stricter rules than those adopted by CARB. Health & Safety Code §§ 39002, 40000. Therefore, the District submits that it has authority under state law to adopt the rules.

BB/VT/pa

c:\share\barbara\railroads\memo-state authority.docx

(Adopted January 9, 1976)(Amended January 5, 1990) (Amended
May 19, 2000)

RULE 216. APPEALS

- . (a) The applicant may petition the Hearing Board in writing within thirty (30) days after receipt of notification from the Executive Officer of the denial of a permit or the conditions of operation imposed on the permit. The Hearing Board shall commence a public hearing within 30 days after receiving the petition, unless such time is extended by order of the Hearing Board upon stipulation of the parties. The Hearing Board may sustain or reverse the action of the Executive Officer. The Hearing Board order may be made subject to specified conditions. An applicant who desires to continue operating equipment pending the determination of an appeal of the denial of a permit to operate, or who desires to operate the equipment at variance with the conditions imposed by the Executive Officer pending the determination of an appeal of the conditions, must obtain a variance from Rule 203 from the Hearing Board.
- . (b) Within thirty (30) days of any decision or action pertaining to the issuance of a permit by the Executive Officer, any person who, in person or through a representative, submitted written comments or otherwise participated in the review by the Executive Officer, may petition the Hearing Board to hold a public hearing to determine whether the permit was properly issued. The Hearing Board shall schedule a public hearing to take place within 30 days of the filing of the petition, unless such time is extended by order of the Hearing Board upon stipulation of the parties. The petition shall be in writing in a form approved by the Hearing Board and shall include, at a minimum, a clear, concise statement of the rules of the District or provisions of state law with which the equipment which is the subject of the permit would not

comply. If the petition claims that the permit conditions imposed by the Executive Officer are inadequate to assure compliance with District rules or provisions of state law, it shall state which rules or laws may not be complied with, which permit conditions are inadequate and the basis for such alleged inadequacies. Failure to comply with the provisions of this subparagraph shall be grounds for dismissal of the petition.

216-1

(Adopted January 4, 1985)

RULE 221. PLANS

- . (a) A person shall not conduct any operation for which these rules and regulations require a plan without first obtaining approval of such plan by the Executive Officer within the time interval expressed in said rules and regulations.
- . (b) The operation shall not be conducted contrary to any conditions specified in the approved plan.
- . (c) All plans shall be submitted in a form and manner as specified by the Executive Officer.
- . (d) A violation of the plan is a violation of the rule.
- . (e) A plan shall have all the rights delineated in Regulation II for permits including the right of appeal.

(Adopted January 4, 1985)(Amended June 5, 1987)(Amended June 3, 1988) (Amended January 6, 1989)(Amended November 3, 1989)(Amended July 6, 1990) (Amended June 11, 1993)(Amended June 10,1994)(Amended May 12, 1995) (Amended May 10, 1996)(Amended May 9, 1997)(Amended May 8, 1998) (Amended May 14, 1999)(Amended May 19, 2000)(Amended May 11, 2001) (Amended May 3, 2002)(Amended June 6, 2003)(Amended July 9, 2004) (Amended June 3, 2005)(Amended June 9, 2006)(Amended May 4, 2007) (Amended May 2, 2008)(Amended June 5, 2009)(Amended May 7, 2010)

RULE 306. PLAN FEES

- . (a) Summary California Health and Safety Code Section 40522 provides authority for the South Coast Air Quality Management District to adopt a fee schedule for the approval of plans to cover the costs of review, planning, inspection, and monitoring related to activities conducted pursuant to the plans. An annual fee may also be charged to cover the costs of annual review, inspection, and monitoring related thereto. This rule establishes such a fee schedule, and requires that fees be paid for:

- (1) Filing of plans;
- (2) Evaluation of the above plans;
- (3) Inspections to verify compliance with the plans;
- (4) Duplicate plans;
- (5) Change of condition; and
- (6) Annual review/renewal of plans, if applicable.

- . (b) Definitions

For the purpose of th

and/or test report (including equipment certification source tests) required by federal or state law, or District Rules and Regulations to be submitted to the District. A plan may be a description of a method to control or measure emissions of air contaminants required by the Rules and Regulations. Plans include, but are not limited to, the following: Demonstration Plan; Application Test Plan; Implementation Plan; Compliance Plan; Management Plan; Control Plan; CEQA Mitigation Monitoring Plan; Acid Rain Repowering Extension Plan and Compliance Plan; Acid Rain Continuous Emission Monitoring System Plan; Acid Rain Protocol/Report Evaluation; VOC Excavation Mitigation Plans (Site Specific and Various Locations); Reduction of Refrigerant Emissions from Stationary Refrigeration and Air Conditioning Systems Plan; Title V Exclusion Requests; Rule

306 - 1

Rule 306 (Cont.) (Amended May 7, 2010)

109.1; Smoke Management Plans; Burn Management Plans; Emergency Burn Plans; Post Burn Evaluation Reports; Alternative Recordkeeping System Plan and Solid Waste Air Quality Assessment Test Reports (Health and Safety Code Section 41805.5); Compliance Assurance Monitoring Plan (40CFR64); Maximum Achievable Control Technology MACT Exemption Requests; Equipment Certification Source Test Reports; and MACT Case-by-Case Analysis.

(c) Plan Filing Fee

The filing fee for a plan

condition shall be \$114.66.

. (d) Plan Evaluation Fee

The plan evaluation

amount equal to the total actual and reasonable time incurred by the District for evaluation of a plan, assessed at the rate of

\$114.66 per person per hour or prorated portion thereof.

- . (e) Duplicate Plan Fee A request for a
made in writing by the applicant. The applicant shall pay
\$19.74 for each plan requested.
- . (f) Inspection Fee The inspection
be an amount equal to the total actual and reasonable time
incurred by the District for inspection and verification of the
plan, assessed at the hourly rate of \$91.69 per inspection staff
or prorated portion thereof. For inspections conducted
outside of regular District working hours, the fee shall be
assessed at the rate of 150% of the above hourly rate. This
subdivision shall not apply to plans subject to subdivision
(h).
- . (g) Change of Condition Fee A ny request for a c
condition on a VOC Excavation Mitigation Plan shall be
made in writing by the applicant. A request submitted after
thirty (30) days of the issuance of the plan shall be subject to
additional fees assessed at the rate of \$114.66 per hour for
time spent in evaluation of the plan. Such fees shall be
imposed at the time the review is completed.
- . (h) Annual Review/Renewal Fee A n annual re
shall be charged for plans listed in the following table. The
annual review/renewal fee shall be an amount equal to the
Rule

306 - 2

Rule 306 (Cont.) (Amended May 7, 2010)

301(d)(2) Schedule A fee. In addition, annual reviews/renewals
shall meet all

relevant and applicable requirements of Rule 301(d) and 301(g),
and be paid on an annual renewal date set by the Executive

Officer.

Plan type

Rule 1166 - Volatile Organic Compound Emissions from Decontamination of Soil - Various locations

Rule 1166 - Volatile Organic Compound Emissions from Decontamination of Soil – Fixed Site

Rule 1407 – Non Ferrous Metal Melting

Rule 1420 – Emissions of Lead

Rule 1176 - VOC Emissions Waste Water System

Rule 1469.1 - Spray Coating Chromium

Rule 1169 - Chrome Plating Operations

Rule 1470 - Compliance Plan

Compliance Assurance Monitoring Plan

Rule 1150 - Excavation Management Plan

Rule 1150.1. - Active Landfill Control of Gaseous Emissions

Rule 431.1 - Sulfur Content of Gaseous Fuels

Rule 463 (e)(1)(A) - Organic Liquid Storage - Self-Inspection of Floating Roof Tanks

Rule 462 – Organic Liquid Loading Continuous Monitoring System (CMS) Plan

Rule 1118 - Control of Emissions from Refinery Flares - Flare Minimization Plan

Rule 1173 - Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Refineries

Rule 1176 - VOC Emissions from Wastewater Systems (d)(2)

Rule 1158 - Storage, Handling, and Transport of Coke, Coal and Sulfur - Open Pile Control Plan

Rule 1132 - Further Control of VOC Emissions from High- Emitting Spray Booth Facilities

(i) Payment of Fees

(1) Plan Filing or Submission

In addition to payment of the filing fee, the initial payment for plan evaluation fees shall be \$401.30 paid at the time of filing. This fee shall not apply to plans pursuant to Rule 403 - Fugitive Dust, Rule 461(i), and Rule 1166 - Various Location Plans issued pursuant to the Decontamination of VOC Soil, for which the initial payment for plan evaluation fees will be \$114.66. This fee shall also not apply to Rule 1133 registration and annual updates, Rule 444 – Open Burning, or Rule 1415 – Reduction of Refrigerant Emissions from Stationary Refrigerant

306 - 3

Rule 306 (Cont.) (Amended May 7, 2010)

for which the plan submittal fee will be charged solely in accordance with subdivision (c) of this rule. The adjustment to plan evaluation fees will be determined at the time a plan is approved or rejected and notification of the amount due or refund will be made.

. (2) Independent Consultant Fees

In the case th

Officer requires a qualified independent consultant, engaged by the District under a contract, to review the plan, the fees charged by the consultant will be in addition to all other fees required.

. (3) Payment Due Date

Paym ent of all applica

including annual review/renewal fee, shall be due in thirty (30) days from the date of personal service or mailing of the notification of the amount due. Non-payment of the fee within this time period will result in expiration of the plan. For the purpose of this paragraph, the fee payment will be considered to be received by the District if it is postmarked by the United States Postal Service on or before the expiration date stated on the billing notice. If the expiration date falls on a Saturday, Sunday, or a state holiday, the fee

payment may be postmarked on the business day following the Saturday, Sunday, or the state holiday with the same effect as if it had been postmarked on the expiration date. No further plan applications will be accepted until such time as all overdue fees have been fully paid.

- . (4) Fee Due Date Exception Whenever the fee
has reasonable cause to believe that the plan evaluation fee will be less than the fee for one hour's work, the fee need not be paid at the time of filing and notification of amount due, if any, shall be sent at the time the plan is approved or rejected.

- . (5) Expedited Processing Fees for expedited
evaluation will be an additional fifty percent (50%) of the applicable plan evaluation fee, and shall be submitted at the time that the expedited processing is requested.

- (j) Small Business Discount For small businesses
fees assessed shall be fifty percent (50%) of the amounts specified in subdivisions (c), (d), (f), and (g).

306 - 4

Rule 306 (Cont.) (Amended May 7, 2010)

- . (k) Alternative Recordkeeping System Plan Discount For alternative recordkeeping system plan filed pursuant to Rule 109.1, the fee assessed shall be fifty percent (50%) of the amount specified in subdivisions (d), (f), and (g).

- . (l) Plan Application Cancellation Fee The plan application cancellation fee shall be \$152.84 or the plan fee set forth in the Summary Permit Fee Rates table, whichever is less. The cancellation fee shall not apply when the application was filed based on an erroneous District request.

- . (m) Protocol/Report Evaluation Fees A minimum fee of \$305.85 will be charged for the evaluation of source test

protocols and reports. Additional fees for time spent in the evaluation in excess of 5 hours will be assessed at the hourly rate of \$114.66 per hour.

- . (n) Exemptions M obile Source E
(MSERC) Applications, Compliance Plans required under Regulation XVI and Rule 2449 – Control of Oxides of Nitrogen from Off-Road Diesel Vehicles and Technical Infeasibility Certification Requests as cited in District Fleet Rules under Regulation XI shall be exempt from the provisions of this rule. Fees for Regulation XVI MSERC Applications and Compliance Plans shall be assessed in accordance with District Rule 309.
- . (o) Government Agencies r Federal, state, or local government
agencies or public districts shall pay all fees.
- . (p) Air Quality Investment Program (AQIP) E ffective July
1996, all Air Quality Investment Program (AQIP) fees shall be subject to Rule 311 and all other Rule 2202 registration fees shall be subject to Rule 308.
- . (q) Optional Expedited Protocol/Report Evaluation Processing Fee Fees for requested exped i
Protocol/Report Evaluations, will be an additional fee based upon actual review and work time billed at a rate for staff overtime which is equal to the staff's hourly rate of \$114.66 plus \$59.47 per hour (one half of hourly rate). The established "minimum fee" found in Rule 306(m)

306 - 5

Rule 306 (Cont.) (Amended May 7, 2010)

shall be paid at the time of filing with the additional overtime fee billed following project completion (adjustments to the final bill will be made accordingly for the processing time which is included

in the minimum fee). Fees are due at the time specified in the bill which will allow a reasonable time for payment. Request for expedited Protocol/Report Evaluation work can only be made upon initial work submittal, and approval of such a request is contingent upon the ability of the District to implement the necessary policies and procedures and the availability of qualified staff for overtime work.

(r) Regulation XXVII Fees

- . (1) Fees for Rule 2701 – SoCal Climate Solutions Exchange
 - . (A) Entities submitting a plan will be assessed a filing fee of \$114.66.
 - . (B) The fee for review and verification of Certified Greenhouse Gas Emission Reductions by SCAQMD staff shall be assessed at \$118.67 per hour or prorated portion thereof.
- . (2) Fees for Rule 2702 – Greenhouse Gas Reduction Program
 - . (A) Upon submitting a completed Greenhouse Gas Reduction Program Request to the Executive Officer for certified emission reductions an entity shall pay a fee of \$114.66.
 - . (B) Individuals or households wishing to participate are exempt from the plan fees for reductions used to offset personal, household or event GHG emissions.



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

November 2, 2011

Mr. Alex Krichevsky
Rule Evaluation Section
Stationary Source Division
AIR RESOURCES BOARD
1001 I Street
P.O. Box 2815
Sacramento, CA 95812

Re: SIP Submittal: **Rule 3501 – Recordkeeping for Locomotive Idling**
Rule 3502 – Minimization of Emissions from
Locomotive Idling

Dear Mr. Krichevsky:

Attached you will find information pertaining to Rule **3501 and 3502** which were adopted by the South Coast Air Quality Management District (AQMD) Governing Board on February 3, 2006. Please note that the submittal includes two memoranda providing assurances that this portion of the implementation plan is authorized under State law and is not prohibited by any provision of Federal law, namely the Interstate Commerce Commission Termination Act, as required by CAA § 110(a)(2)(E).

We are requesting that upon your review and concurrence the attached information be provided to U.S. EPA for its review and inclusion in the SIP.

If you have any questions on this submittal, please contact Susan Nakamura at (909) 396-3105.

Sincerely, ,

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

SN:EE:EK

Attachments:

- SIP Completeness Checklist
- Clean copies of adopted rule
- Memorandum on State Law Authority
- Memorandum on Consistency with Federal Law-ICCTA
- Referenced Documents
- Proof of Publication
- Signed Board Resolution/Minutes
- APCD/AQMD Rule Evaluation Form
- Staff Report (includes public comments & responses)

Cleaning the air that we breathe...

cc: Deborah Jordan, U.S. EPA (w/ attachments)
Andrew Steckel, U.S. EPA Region IX (w/ attachments)
Ellen M. Peter, ARB (w/ attachments)
Lynn Terry, ARB (w/attachments)
Cynthia Marvin, ARB (w/attachments)
Elaine Chang, SCAQMD (w/o attachments)
Laki Tisopulos, SCAQMD (w/o attachments)
Susan Nakamura, SCAQMD (w/o attachments)
Mary Leonard, SCAQMD (w/o attachments)
Rule 3501 (w/o attachments)
Rule 3502 (w/o attachments)
SIP File (w/attachments)



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

June 28, 2012

Ms. Cynthia Marvin, Chief
Stationary Source Division
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: South Coast Air Quality Management District SIP Submittal of Rules 3501 and 3502
(November 2, 2011)

This letter is in response to our telephone conversation of Thursday, June 21, 2012. We discussed the emissions estimates for Rule 3502-Minimization of Emissions from Locomotive Idling- that had been described in the California Air Resources Board "APCD/AQMD Rule Evaluation Form" submitted along with Rules 3501 and 3502 on November 2, 2011. You informed us that in the 2007 CARB SIP submittal of its emissions inventory to EPA, CARB has already taken credit for changes in the locomotive emissions resulting from the 1998 and 2005 CARB MOUs with the freight railroads. The railroads have argued that these MOUs resulted in most of their locomotives that visit South Coast being equipped with anti-idling devices. The District's emission estimates in the Rule Evaluation Form had been based on information known at the time of rule adoption. Therefore, it is likely that the additional SIP-creditable emissions benefits of Rule 3502 would be smaller than those estimated in the Rule Evaluation Form. Nevertheless, the District believes it is appropriate to include Rules 3501 and 3502 into the SIP, because these rules assist in ensuring that the emissions reductions will actually occur, and improve enforceability of those emission reductions. EPA frequently approves rules into the SIP that do not in and of themselves provide additional SIP reduction credits, but assist in assuring that reductions assumed will actually occur. An example is South Coast AQMD Rule 109 Recordkeeping for Volatile Organic Compound Emissions.

Thank you for your consideration.

Sincerely,

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

cc: Barbara Baird, SCAQMD
Susan Nakamura, SCAQMD



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

August 9, 2012

via electronic mail

Ellen Peter
Chief Counsel
California Air Resources Board
1001 "I" Street
Sacramento, CA 95814
epeter@arb.ca.gov

Re: Railroads' Preemption Arguments

Dear Ms. Peter:

Thank you for discussing with us the various issues the railroads have raised concerning the District's request that the Air Resources Board submit Rules 3501 and 3502 to EPA for inclusion in the state implementation plan (SIP). In our conversation of July 26, 2012, we agreed to provide a written explanation of our position regarding the railroads' various preemption arguments. Our position is set forth below.

I. General Principles of Preemption by Specific Statutory Language

Of course Congress may expressly preempt state law. Also, the U.S. Supreme Court has stated that preemption may be implied based on conflict with federal law. Conflict preemption may be found where "it is impossible for a private party to comply with both state and federal requirements." *English v. General Elec. Co.*, 496 U.S. 72, 79 (1990). Conflict preemption may also exist where state law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Freightliner Corp. v. Myrick*, 514 U.S. 280, 287 (1995). Finally, the state law may be preempted where Congress acts in a field that Congress intended the federal government to occupy exclusively, such as where there is a scheme of federal regulation so pervasive as to leave no room for state action, or where the field is one in which the federal interest is so dominant as to preclude enforcement of state laws on the subject. *English v. General Electric Co.*, 496 U.S. at 72.

II. Express Preemption

We start with the proposition that Section 116 of the Clean Air Act generally provides that federal regulation under the Act does not preempt more stringent state regulations. That section provides in pertinent part:

Except as otherwise provided in sections 1857c-10(c), (e), and (f) (as in effect before August 7, 1977), 7543, 7545(c)(4) and 7573 of this title (preempting certain State regulation of moving sources) nothing in this chapter shall preclude or deny the right of any State or political subdivision thereof to adopt or enforce (1) any standard or limitation respecting emissions of air pollutants or (2) any requirement respecting control or abatement of air pollution....

42 U.S.C. §7416.

One of the preemptive sections listed in Section 116 is Section 209 [42 U.S.C. §7543]. That section includes specific preemptive provisions related to locomotives in Section 209(e), as follows:

(e)(1) No State or any other political subdivision thereof shall adopt or attempt to enforce any standard or other requirement relating to the control of emissions from either of the following new nonroad engines or nonroad vehicles subject to regulation under this chapter—

...

(B) New locomotives or new engines used in locomotives.

(2)(A) In the case of any nonroad vehicles or engines other than those referred to in Paragraph (A) or (B) of paragraph (1), the Administrator shall, after notice and opportunity for public hearing, authorize California to adopt standards and other requirements....[provided certain conditions are met].

Any argument that Section 209(e) [42 U.S.C. §7543(e)] expressly preempts Rule 3502 must be rejected. The basic requirement of Rule 3502 is a 30-minute limit on idling in certain circumstances, subject to certain exemptions. These idling limits constitute “in-use” or operational requirements which are not preempted under §209(e). *Engine Mfrs’ Ass’n v. EPA* 88 F.3d 1075, 1094 (D.C. Cir. 1996). The court specifically referenced idling restrictions as a type of “in-use” restriction that is not preempted. *Id.*

III. Alleged Conflict Preemption Based on Express Conflict with EPA Rules

The Railroads argue that Rule 3502 conflicts with EPA’s idling requirements because EPA allows a locomotive to idle to provide necessary heating or cooling of the cab. Rule 3502 does not contain such an exemption. However, such an exemption is not needed in Rule 3502. This is because the rule only applies to (1) unattended locomotives (which do not need comfort heating or cooling); *see* Rule 3502(d)(1), or, in other cases, (2) trailing locomotives, in which case the lead locomotive may continue to idle and provide heating and cooling in the cab (i.e., lead locomotive); *see* Rule 3502(d)(2).

The Railroads also argue that Rule 3502 conflicts with federal requirements because it does not allow the locomotive to idle to maintain airbrake pressure. This is an illusory claim. Under Rule 3502(d)(2), only the trailing locomotives must be shut down. The lead locomotive may continue to idle, and supply power to the airbrakes. Under Rule 3502(d)(1), lead locomotives must be shut down only if the train is left unattended. In such a case, federal rules require that whenever a train is unattended, sufficient handbrakes must be set to hold the train without the airbrakes. [Admitted Facts 16, 17 from trial court action in *Ass'n of American Railroads v. SCAQMD*.]

UP and BNSF both have rules requiring that handbrakes be set to hold a train whenever it is unattended, whether it is idling or not. (11/29/06 Trial Transcript 81:15-21; Trial Exh. 418, BNSF Rule 102.1, 102.11, UP Rule 32-1.) The requirement for handbrakes is triggered by leaving the train unattended, not by the fact that it is no longer idling. The requirement to use handbrakes on an unattended train addresses any possible safety concerns. Nor do the rules cause any additional delay (in order to set and release handbrakes) since this must be done whenever the train is unattended, not just when it shuts down.

Nor is it likely that trains would be left unattended long enough to cause the airbrakes to be no longer operable, or even to trigger the federal requirement for a test. Even if all locomotives are shut down, the airbrakes do not go off, but remain operational for many hours or even days. Federal safety rules do not even require an airbrake test unless the train has been shut down for four hours. (Quilty Depo. 66:21-67:5; 11/29/06 Trial Transcript 89:4-18 (Willis).) Therefore, there is no possible issue concerning the ability of airbrakes to operate unless the entire train has been shut down for at least four hours. At trial, the railroads did not present any evidence that the train would frequently be left unattended for such periods. As a result, Rule 3502 does not present any safety risk or delay relative to its effect on the application of airbrakes.

The Railroads point out that under EPA regulations, a manufacturer may limit the locomotive automotive shutdown/restart cycle to 6 times per day. This objection is unclear. Rule 3502 has nothing to do with how many times the locomotive has been shut down in a day.

Because it is not impossible to comply with both the federal regulation and the District regulation, there is no conflict with federal requirements. *English v. General Elec. Co.*, 496 U.S. 72, 79 (1990).

The Railroads complain that Rule 3502 requires anti-idle devices to be “engaged” but does not define the term. They further argue that Rule 3502 states that anti-idle devices may not be “tampered” with but does not define the term “tampered,” and thus may be interpreted differently than the way EPA interprets the term. These are implausible arguments. The Railroads never raised these concerns during the rulemaking or the prior extensive litigation. These terms are in common use in English speech and their meaning with reference to a piece of equipment is obvious. Hence, the railroads’ new arguments are mere makeweight. In any event, the meaning of “engage” with respect to a piece of machinery is set forth at Oxforddictionaries.com: *verb*: (with reference to a part of a machine or engine) “move into position so as to come into operation.” *Examples*: “the clutch will not engage”; “the driver

engaged the gears and pulled out into the road.” Similarly, “tamper with” is defined as “interfere with (something) in order to cause damage or make unauthorized alteration.” *Example*: “someone tampered with the brakes on my car.”

In the Preamble to its 1998 rule, EPA states, under the heading “Tampering,” that it is adopting a regulatory provision that prohibits any person from removing or rendering inoperative any device or element of design installed on or in a locomotive or locomotive engine in compliance with EPA’s regulations prior to introduction into commerce, and from knowingly removing or rendering inoperative any such device or element of design after introduction into commerce.

63 Fed. Reg. 18978, 18991 (April 16, 1998)

EPA states that it is basing this definition on existing policies relative to tampering in the motor vehicle context. 63 Fed. Reg. at 18992. Section 203(a)(3)(A) of the Act does not use the word “tampering” but is essentially the same as the EPA definition discussed above. The District does not foresee interpreting the word “tamper” in a manner that would conflict with EPA’s interpretation.

The Railroads note that only new and remanufactured locomotives are required by EPA to have idling devices installed, so that states cannot require such devices on non-new engines. The short answer is that Rule 3502 simply does not require the installation of anti-idling devices on any “non-new” locomotives. Instead, the rule exempts locomotives that have anti-idling devices installed and set at 15 minutes. Rule 3502(d)(1).

IV. Alleged Preemption of Anti-Idling Device Provisions of Rule 3502 based on Conflict with EPA 30-Minute Idling Rule

A. Supreme Court Precedent

Rule 3502 exempts locomotives that are equipped with anti-idling devices set at 15 minutes. The Railroads contend that the EPA idling rules preempt this provision because EPA rules allow an anti-idling device to be set at 30 minutes. However, EPA rules clearly allow an anti-idling device to be set at less than 30 minutes. [“Except as allowed by paragraph (g)(2) of this section, the stop/start systems must shut off the main locomotive engine(s) after 30 minutes of idling (*or less*).” 40 C.F.R. §1033.115(g)(1).] Therefore, EPA rules clearly allow railroad operators to have their anti-idling devices set at 15 minutes, in order to take advantage of the exemption from Rule 3502. We understand that a major aftermarket anti-idling equipment manufacturer already sets its devices at 15 minutes. Certainly, EPA rules do not require locomotives to idle for 30 minutes rather than 15. Most importantly, however, Rule 3502 does not require devices to be set at 15 minutes; it merely exempts locomotives that have such devices.

The law as established by the U.S. Supreme Court allows the District to offer the railroads the option of installing anti-idling devices. In *Ray v. Atlantic Richfield Co.*, 435 U.S. 151 (1978), the U.S. Supreme Court held that state regulation of the design and construction of oil tankers was

preempted by federal law, the Ports & Waterways Safety Act. 435 U.S. at 163-164. On the other hand, the state was free to establish requirements for tug escorts for tankers that applied only to ships that did not satisfy the design requirements of the state law. 435 U.S. at 169. Both the tug escort requirements and the design requirements were intended to prevent marine pollution resulting from accidents. The Supreme Court explained: "Given the validity of a general rule prescribing tug escorts for all tankers, [the State of] Washington is also privileged, insofar as the Supremacy Clause is concerned, to waive the rule for tankers having specified design characteristics." 435 U.S. at 173.

Rule 3502 operates in exactly the same way. Its basic provisions (the 30-minute idling limits) constitute "in use" or operational requirements which are not preempted by the Clean Air Act. *EMA v. EPA*, 88 F.3d 1075, 1094 (D.C. Cir. 1996). The court specifically referenced idling restrictions as a type of "in use" restriction that is not preempted. Therefore, a state or local agency may exempt from its railroad operational limits equipment that meets specified requirements (e.g., for anti-idling devices) even if the agency would be preempted from directly requiring such devices. The fact that both provisions are intended to reduce air pollution does not change this result, since in *Ray*, both provisions were intended to enhance safety and prevent marine pollution due to accidental spills. 435 U.S. at 169, 171.

B. No Evidence of Intent to Preempt

Finally, the EPA anti-idling device rules do not purport to preempt more stringent state requirements. As discussed above, CAA §116 generally authorizes state and local agencies to adopt and enforce more stringent requirements than those imposed by the CAA or EPA rules thereunder. The issue here, therefore, is whether the EPA regulation regarding idling expressly preempts more stringent requirements. In other words, since EPA rules allow an anti-idling device to be set at 30 minutes, do they preclude a state or local agency from requiring the device to be set at 15 minutes?¹

The answer is clearly "no." EPA's regulation provides that the anti-idling device "must shut off the main locomotive engine(s) after 30 minutes of idling (*or less.*)"

This language obviously does not express any intent that the devices must be set at 30 minutes rather than any lesser time limit. Nor does it express any intent that the locomotive must idle under circumstances where Rule 3502 would preclude idling. Notably, EPA's 2008 rulemaking setting locomotive idling requirements contains no hint whatsoever of any intent to preempt more stringent state and local requirements.

¹ This discussion is hypothetical since Rule 1302 does not require the devices to be set at 15 minutes but instead merely provides an exemption for locomotives with devices set at 15 minutes.

C. No Need for National Uniformity for Operational Requirements

The Railroads contend that EPA's 2008 rules require national uniformity in idling requirements. We disagree. Unlike design requirements, there is no logical reason why operational requirements should be nationally uniform. As noted in *EMA v. EPA*, 88 F.3d 1015, idling restrictions are a classic type of use and operational requirement that is not preempted under the CAA and may vary from region to region. Indeed, even before Rule 3502 was adopted, the Railroads observed and respected local "no idling" and limited time idling zones. *See e.g.*, UP Commerce Yard (Rule 32.20) and Riverside "No Idle Zone (UP Los Angeles Areas Timetable #3).

BNSF has similar areas where they have agreed to not leave locomotives idling. (11/28/06 Trial Transcript 215:20-216.2.) The Railroads already comply with local "use" requirements relative to speed, highway crossings, and the use of whistles or horns, so they can comply with rules specific to the District. Brazytis Depo. 41:1-48:2, 62:23-63:25, Quilty Depo. 76:2-8. Therefore, there is no need for national uniformity regarding idling limits.

Moreover, the Rule 3502 basic 30-minute idling limit reflects the EPA rule exactly. While the Railroads argue that Rule 3502 does not contain certain exemptions that are found in the EPA rule, these exemptions are unnecessary in Rule 3502, which is narrower in scope than the EPA rule. *See discussion supra*, Section III.

V. Alleged Implied Conflict Preemption Based on Interference with the "Full Purpose and Objectives" of EPA Regulation

Conflict preemption may also exist where state law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Freightliner Corp. v. Myrick*,

514 U.S. 280, 287 (1995). In this case, the railroads are not arguing preemption by Congressional act, but rather by EPA regulation, so it is uncertain whether this conflict preemption principle even applies. But assuming that it does, there is no evidence that the District's railroad idling requirements stand as an obstacle to the purposes of the EPA regulations. As noted above, EPA's regulation specifies that idling be cut off after "30 minutes (*or less*)."

Neither the basic 30 minute idling limit nor the exemption for idling devices set as 15 minutes stands as an obstacle to EPA intent with regard to the basic period of idling allowed.

Nor does the fact that Rule 3502 contains no express exemption for heating or cooling the cab, or maintaining airbrake pressure, "stand as an obstacle" to accomplishing the full purposes of the EPA regulation. In the first place, as described above, these exemptions are not needed within the scheme of Rule 3502 and therefore do not serve as an obstacle to any asserted EPA intent. But even if the lack of these exemptions meant that the rule was more stringent than the EPA requirement, the railroads could not show that this served as an "obstacle" to implementing EPA's full intent. In the first place, Section 116 expressly preserves state authority to adopt more stringent rules than EPA requires. *Union Electric Co. v. EPA*, 427 U.S. 246, 263-64 (1976). Therefore, EPA cannot preempt more stringent state requirements unless those

requirements constitute “standards or requirements” preempted under Section 209(e). (That section is specifically mentioned in Section 116 as an exception to the general principle that EPA *cannot* preempt more stringent state requirements.) As we have explained, Rule 3502 is an “in use” or operational requirement that is not preempted by Section 209(e). *EMA v. EPA*, 88 F.3d 1075, 1094.

Even if Section 116 did not preclude the type of implied conflict preemption argued by the railroads, they still could not prevail. The railroads cannot show that it is one of the Clean Air Act’s “full purposes and objectives” to preserve the railroads’ ability to continue idling in cases where EPA rules would allow it. A similar argument was rejected in *Oxygenated Fuels Assoc. Inc. v. Davis*, 331 F.3d 665 (9th Cir. 2003). In that case, manufacturers of MTBE argued that the Clean Air Act, which did not specify the type of oxygenate to be used, embodied a principle of “fuel neutrality” which was violated by California’s ban of MTBE, and that the Clean Air Act also was intended to prevent market disruption due to the ban. The court found that at most, there was some legislative history that EPA was to be fuel neutral, but no evidence of such intent regarding state regulation. And with respect to market disruption, the fact that “Congress might not have wanted to cause a substantial increase in gasoline prices is not the same as saying that assuring inexpensive gasoline was a goal of the Act.” *Oxygenated Fuels*, 331 F.3d at 673. Instead, “the central goal of the Clean Air Act is to reduce air pollution.” *Oxygenated Fuels*, 331 F.3d at 673. Similarly in this case, the railroads cannot show that it was a central goal of the Clean Air Act to allow locomotives to idle to maintain airbrake pressure or comfort heating and cooling, especially where the challenged state regulation does not significantly impinge on those exemptions, as in this case. Instead, the central goal of the EPA idling regulation is to reduce air pollution.

VI. Argument that EPA Idling Rules “Occupy the Field”

The railroads argue that EPA has occupied the field of locomotive controls. As discussed above, the Clean Air Act (by virtue of Section 116) and case law (*EMA v. EPA*, 88 F.3d 1075) preclude any argument that EPA even has the power to occupy the field with respect to “in- use” and operational controls.

However, assuming EPA had the power to occupy the field of locomotive idling, it has not done so. In the first place, given the fact that EPA has previously promulgated preemption provisions (specific to locomotives) which do not mention idling regulations, 40 C.F.R. §86.1603, EPA would have to amend those regulations in order to preempt locomotive idling rules. It did not do so. At the very least, it would have to somehow explain that its existing preemption rule covers locomotive idling regulations. Again, it did not do so.

The railroads argue that Rule 3502 is preempted because the federal rule only requires anti-idling devices on new or remanufactured locomotives. Since Rule 3502 does not require anti-idling devices at all, it does not impact the allegedly preempted field of anti-idling devices.

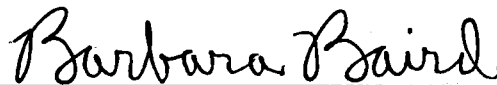
Ellen Peter, Chief Counsel
California Air Resources Board
August 9, 2012
Page 8

The railroads argue that EPA has occupied the field of locomotive idling controls, even if those controls are operational only. As discussed above, this is incorrect, since under §116 EPA may not preempt the field of operational or use limits such as idling. But even if this were true, Rule 3502 would not be preempted because it does not have the required "direct and substantial effect" on the preempted field. *English*, 496 U.S. 72, 85. As described above, Rule 3502 does not as a practical matter have any substantial effect on whether a cab can be heated or cooled where necessary, nor does it create any safety or delay issues by virtue of its lack of an exemption for airbrake pressure.

Thank you for your consideration of our position regarding these issues. Please contact us if you have any questions or wish to discuss this further.

Sincerely,

SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT
Kurt R. Wiese, General Counsel,



By: Barbara Baird, District Counsel

BB:pa
c:\share\barbara\railroads\peter letter.doc

cc: Deborah Jordon
jordan.deborah@epamail.epa.gov

Nina Spiegelman
spiegelman.nina@epaemail.epa.gov



September 12, 2012

VIA HAND DELIVERY, E-MAIL AND CERTIFIED MAIL
CERTIFIED MAIL NO. 7008 0500 0002 0133 9387

Mr. Jared Blumenfeld
Regional Administrator
United States Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, CA 94105

Re: California's August 30, 2012 Submittal of South Coast Air Quality Management
District Rules 3501 and 3502 for Inclusion in the California State Implementation
Plan – Request for Prompt EPA Determination of Incompleteness

Dear Mr. Blumenfeld:

The August 30, 2012 California State Implementation Plan ("SIP") submission of the South Coast Air Quality Management District Rules 3501 and 3502 is not complete under EPA's SIP completeness rules. EPA should timely determine that it is not complete and return it to the California Air Resources Board ("ARB").

The submission should be returned to ARB because: (1) the rules are preempted under the Clean Air Act ("CAA") and California has not requested a waiver of preemption, in stark contrast to scores of prior California mobile source rule submissions; (2) the submission relies on outdated emissions data and lacks a technical justification; and (3) the submission lacks adequate evidence of state law authority.¹

As the required technical basis for this submission, ARB forwards District emissions reduction calculations that are outdated and that the District admits are wrong. The pre-2003 data in the submission fails to account for:

¹ Regarding the required evidence of the District's authority under state law to implement and enforce the Idling Rules, this submission omits a final, non-appealable federal court order enjoining the District from implementing or enforcing these rules. A full and complete copy of the order is enclosed for your convenience. See Enclosure 2.

1. The idling reductions that resulted from the June 2005 statewide agreement between the railroads and ARB. The railroads fully implemented these idling reductions, ARB reported them to EPA and EPA credited California with those idling reductions in the California SIP several years ago.
2. The idling reductions that are resulting from the EPA's own 2008 nationwide idling regulations. EPA is crediting all SIPs nationwide, including California's SIP, with those idling reductions as locomotives are built, remanufactured and enter the national fleet with idling reduction devices.
3. The substantial additional idling reductions resulting from the railroads' accelerated introduction of new and remanufactured locomotives in SCAQMD under the 1998 fleet average agreement between the railroads and ARB. EPA is crediting California's SIP with reductions from that 1998 MOU as well.

The SIP package contains a June 28, 2012, letter from the District's Deputy Executive Officer recognizing that reductions have occurred since 2003 and admitting that the "additional SIP-creditable emissions benefits of Rule 3502 would be smaller than those estimated" in the SIP submission package. The reductions from these idling rules are probably zero in light of the intervening reductions listed above and described in greater detail in this letter. In light of these reductions, the state must provide EPA with a current estimate of the significantly smaller benefits achieved, which it has not done.

ARB formally submitted these rules—District Rules 3501 and 3502 (collectively, the "Idling Rules")—to EPA Region 9 on August 30, 2012, as a proposed revision to the California SIP, despite these deficiencies. In this letter, the Association of American Railroads ("AAR"), including two of its member railroads that operate in California—the BNSF Railway Company ("BNSF") and the Union Pacific Railroad Company ("UP")—provide detailed comments on the submission's deficiencies under EPA's minimum criteria for complete SIP submittals, as adopted by EPA pursuant to Clean Air Act ("CAA") § 110(k)(1)(B).

For the reasons provided in this letter, EPA must determine that the submission is not complete and treat it as not having been made, as provided in CAA § 110(k)(1)(C). AAR, BNSF, and UP also request that EPA Region 9 decline to process the submission unless and until ARB can submit a package that fully complies with the applicable provisions of the Clean Air Act and EPA regulations.

Background

The SCAQMD Board adopted the Idling Rules on February 3, 2006.² On March 7, 2006, AAR, BNSF and UP filed a complaint in federal District Court alleging that the Idling Rules were,

² SCAQMD also adopted Rule 3503, on October 7, 2005. Rule 3503 requires operators to develop emission inventories and conduct health risk assessments to understand the health risks from California toxic air

among other claims, preempted by the Interstate Commerce Commission Termination Act (“ICCTA”) and were not authorized by state law. On April 30, 2007, the District Court ruled that the Idling Rules were preempted by ICCTA and as part of that conclusion found that SCAQMD lacked authority under state law to promulgate the Idling Rules.³ On May 17, 2007, the District Court entered its final judgment and permanent injunction enjoining implementation or enforcement of the Idling Rules by the District and any person acting in concert with the District, on the basis of ICCTA preemption.⁴ On September 15, 2010, the 9th Circuit Court of Appeals affirmed the decision of the District Court on the basis of ICCTA preemption.⁵ On October 12, 2010, the 9th Circuit issued a Mandate making the District Court’s permanent injunction final.⁶

Notwithstanding the decisions at the trial and appellate levels, on November 2, 2011, SCAQMD submitted the Idling Rules to ARB, asking that ARB approve and forward to EPA as a potential SIP revision the exact Idling Rules the District adopted six years earlier in 2006, along with the same supporting materials that the District Board relied upon in 2006.⁷ SCAQMD did not mention the District Court final judgment or permanent injunction—or the 9th Circuit decision affirming the judgment—in its SIP submission to ARB.

On February 24, 2012, the District Court, which previously imposed a permanent injunction against the District’s implementation and enforcement of the Idling Rules, concluded that the injunction did not bar the District from submitting the rules to ARB for SIP consideration. Although the District Court allowed the District to submit the Idling rules to ARB as a proposed SIP revision, the Court did not alter its previous findings or the Injunction. Thus, the Idling Rules still cannot be included in the SIP because, as the District Court found, SCAQMD lacks authority to adopt and enforce them: “The [District’s] Memorandum of State Law Authority blatantly ignored this Court’s determination that the District lacked authority to adopt the Rules.”⁸ Contemplating that ARB and EPA would evaluate the submission under applicable California and federal laws and regulations, the District Court predicted that “the Court is confident that this misrepresentation will be raised by [the Railroads] in any further regulatory proceeding relating to this matter.” See fn.8.

contaminant emissions at railyards. Rule 3503 was not submitted to ARB as a SIP revision and is not part of the SIP submission. Hence, this letter addresses only Rules 3501 and 3502.

³ *Ass’n of Am. R.R. v. S. Coast Air Quality Mgmt. Dist.*, 2007 U.S. Dist. LEXIS 65685 at *26 (C.D. Cal. 2007).

⁴ *Ass’n of Am. R.R. v. S. Coast Air Quality Mgmt. Dist.*, No. CV06-1416, Document 193 (C.D. Cal. May 17, 2007) (Judgment and Permanent Injunction).

⁵ *Ass’n of Am. R.R. v. S. Coast Air Quality Mgmt. Dist.*, 622 F.3d 1094, 1098 (9th Cir. 2010).

⁶ *Ass’n of Am. R.R. v. S. Coast Air Quality Mgmt. Dist.*, No. 07-55804, Document 61 (9th Cir. Oct. 12, 2010) (Mandate).

⁷ Letter to Alex Krichevsky, Rule Evaluation Section, ARB, from Elaine Chang, Deputy Executive Officer, SCAQMD, dated Nov. 2, 2011 (submitting Rules 3501 and 3502 to ARB for review and concurrence as a SIP revision).

⁸ *Ass’n of Am. R.R. v. S. Coast Air Quality Mgmt. Dist.*, No. CV06-1416, Document 269 (C.D. Cal. Feb. 24, 2012) (Order Granting Defendants’ Motion to Vacate Order to Show Cause), at p. 4 (emphasis added).

Most recently, on August 30, 2012, ARB forwarded the District's Idling Rules package to EPA Region 9 as a proposed revision to the California SIP. ARB relied on the information that the District originally developed over six years ago. As submitted, the August 30 package does not meet EPA's SIP submission completeness criteria. Neither the District nor ARB has authority under federal or California law to adopt or enforce the 2006 Idling Rules; and neither agency has provided the required information on the emissions impact of the Idling Rules. These deficiencies are described in more detail below.

This SIP Submission is Incomplete

When a state submits a proposed SIP revision to EPA, EPA's first task is to determine whether the submission is complete. CAA § 110(k)(1)(B). Congress added this requirement in the 1990 Clean Air Act Amendments, and required the Administrator to adopt clear and uniform regulations governing the completeness of SIP submissions across the nation.

As directed by Congress, EPA has adopted final and binding minimum criteria for determining whether a SIP submission is complete and must be processed by EPA. The criteria are codified at 40 CFR Part 51, Appendix V. When a state's submission does not meet these criteria, "the State shall be treated as not having made the submission." CAA § 110(k)(1)(C). As described below, ARB's submission of the Idling Rules fails to meet at least three of the required completeness criteria and should be rejected until and unless California can correct these deficiencies.

Technical Completeness Criteria

Section 2.2 of Appendix V requires that a submission include:

- (c) Quantification of the changes in plan allowable emissions from the affected sources; estimates of changes in current actual emissions from affected sources or, where appropriate, quantification of changes in actual emissions from affected sources through calculations of the differences between certain baseline levels and allowable emissions anticipated as a result of the revision.

ARB's submission fails to meet this standard. SCAQMD did not accurately identify the expected emission reductions at the time the rules were adopted. Despite possessing currently available public data that documented a much higher penetration rate of idling reduction devices (on over 90 percent of the BNSF's and UP's locomotives that enter the South Coast Air Basin) and the numerous changes in the inventory of locomotives in use, the District erroneously relied on then-stale data to inflate the potential emissions reductions of the Idling Rules in its request for SIP submission to ARB. The District calculated the anticipated emissions from the Idling Rules based upon a 2003 locomotive inventory, a 2005 locomotive fleet in which only 47 percent of the locomotives were equipped with idle reduction devices, and on 2000 idle activity data from the Roseville Health Risk Assessment. Some of this data is now almost 12 years old and results in inflating the possible emissions reductions of the Idling Rules by at least a factor of ten

for NO_x and a factor of six for PM in 2010. Neither the District nor ARB has updated these flawed emissions estimates.

Events over the six years since the Idling Rules were adopted have made it clear that the Idling Rules will have no effect on locomotive emissions in the South Coast region. In particular, BNSF and UP have reduced idling emissions in the South Coast since 2006, due to federal idling restrictions and the 1998 and 2005 final, binding memoranda of agreement between the BNSF, UP, and ARB. Those reductions are well quantified and are reflected in the SIP emission inventories submitted to EPA and previously approved by EPA Region 9. For example, the 2005 MOU required that 99 percent of the roughly 400 intrastate locomotives in California would be configured with idle control devices on an expedited schedule. In April, 2008, an ARB staff report stated:

To date, 398 out of the California's 413 intrastate locomotives are now equipped with idle reduction devices which represents 96 percent of California's intrastate fleet. This is more than twice the rate of installations that have occurred to date in the rest of the country. As of March 31, 2008, staff believes both railroads are on schedule to meet the 99 percent requirement by June 30, 2008.⁹

SCAQMD has accounted for these reductions in its SIP emission inventories.¹⁰ BNSF's and UP's current fleets in the South Coast Air basin are almost universally equipped with idling reduction devices. All but four of BNSF's 1565 locomotives (99.7 percent), and all but 69 of UP's 4321 locomotives (98.4 percent), are so equipped.

Both ARB and the District have effectively admitted that the submittal fails to satisfy EPA's completeness criterion requiring "estimates of changes in current actual emissions from affected sources"¹¹ The District's June 28, 2012 letter to ARB, which is included in the SIP submittal, states that "it is likely that the additional SIP-creditable emissions benefits of Rule 3502 would be smaller than those estimated in the Rule Evaluation Form." ARB states that it is "likely" that the reductions would be smaller. These are more than mere understatements and go to the heart of the completeness requirements. Under EPA's SIP completeness criteria, EPA cannot process this submission without an accurate and current accounting of the reductions (if any) that would result from the Idling Rules. If EPA processes ARB's August 30 submission as a SIP revision

⁹ California Air Resources Board, "Update on the Implementation of the 2005 ARB/Railroad Statewide Agreement," p. 1 (2008).

¹⁰ See the 2007 South Coast AQMP, pages 3-3 and 3-4 of Chapter 3 (Base Year and Future Emissions): "Emissions from off-road vehicle categories (e.g., trains, ships, construction equipment, ports and rail cargo handling equipment) were developed primarily based on estimated activity levels and emission factors. The major changes made to the off-road model include: . . . 2. Locomotive inventory reflecting the 1998 South Coast Locomotive MOU and the 2005 CARB/Railroad MOU; . . . The inventory for trains was revised from the 2003 AQMD to reflect projected emission reductions based on the 1998 South Coast MOU and the 2005 CARB/Railroad MOU."

¹¹ See *Sierra Club v. EPA*, 671 F.3d 955, 966 (9th Cir. 2012): "EPA stands on shaky legal ground relying on significantly outdated data."

without obtaining current SCAQMD emissions information, it would do so knowing that the basis for this submission is outdated. EPA designed its completeness rules to avoid this result.

Administrative Completeness Criteria

Section 2.1 of Appendix V in EPA's current and final completeness regulations requires:

- (c) Evidence that the State has the necessary legal authority under State law to adopt and implement the plan.
- (d) A copy of the actual regulation or document submitted for approval and incorporation by reference into the plan, indicating that it is fully enforceable by the State.

Neither the District nor ARB has the necessary legal authority because the Idling Rules are preempted by the Clean Air Act. Section 209(e) of the Act preempts states from issuing emissions standards for locomotives. Laws purporting to regulate locomotive idling clearly are such emissions standards as shown by EPA's assertion of regulatory authority over locomotive idling; EPA's regulatory authority under section 213 extends only to emissions standards.¹²

Section 209(e) preempts all California regulation of locomotive idling. Under subsection 209(e)(1), states (and political subdivisions) are completely preempted from applying emissions standards to new locomotives. With respect to other locomotives, subsection 209(e)(2) permits California to ask EPA for approval to apply emissions standards to such locomotives, subject to three criteria. California has not asked for such a waiver. Nor do the Railroads believe California can satisfy the statutory criteria. Thus, under section 209(e), California and its political subdivisions are completely preempted from regulating locomotive idling.

Since the Idling Rules are preempted by the Clean Air Act, California has not made the requisite showing that there is legal authority to issue the rules. For this reason alone, EPA must find that the SIP submission is incomplete.

¹² Furthermore, EPA has stated that locomotive idling requirements are "standards relating to the control of emissions" that require manufacturers to design engines with shutdown systems. "The primary compliance option of the new engine requirements requires new 2008 and later model year heavy-duty diesel engines to be equipped with idling shutdown systems. . . . While it is clear that requiring a shutdown system does not establish a numerical emission standard, it is also clear that requiring manufacturers to design their engines with a shutdown system to control truck idling emissions does impose a requirement upon manufacturers, for the purpose of limiting emissions. Even though this requirement imposes itself as a design requirement and not as an emissions performance standard, it is nevertheless a requirement related to emission reduction. Furthermore, the Supreme Court in *EMA v. South Coast* explicitly contemplated that a "design feature related to the control of emissions" would be considered a standard relating to the control of emissions. . . . Thus, EPA has determined that California's new engine requirements are standards relating to the control of emissions; and therefore, EPA has evaluated the new engine requirements by application of the full waiver criteria." 77 Fed. Reg. 9239, 9243.

The District also lacks state law authority to adopt the Idling Rules. The submission includes the District's argument that it has the necessary state law authority, and an unsupported conclusion from ARB's Deputy Executive Officer that the District "is authorized" by state law "to adopt and enforce" the Idling Rules. However, the submission does not provide the required evidence to support these claims. More importantly, the submission fails to include evidence from the railroad's successful federal court challenge to the Idling Rules. In particular, the District and ARB failed to provide EPA with the District Court's Finding of Fact that concludes that SCAQMD does not have authority to adopt and enforce the Idling Rules under state law;¹³ nor did they provide the District Court's permanent injunction specifying that the District and its "officers, agents, employees, attorneys and all others acting in concert or participation with them" are "permanently enjoined from implementing or enforcing any provision" of the Idling Rules.¹⁴ Under this final, non-appealable federal court order, neither SCAQMD nor ARB can provide EPA with adequate evidence showing that the Idling Rules are "fully enforceable by the State." The Idling Rules remain enjoined and cannot be enforced at all.

* * * * *

For the reasons described above, EPA should determine that ARB's August 30 submission of the Idling Rules for SIP approval is incomplete, and return the submission to ARB no more than 60 days after having received it, as required by the Clean Air Act. It is particularly important that California comply with EPA's nationwide SIP submission completeness criteria because this submission raises novel and important issues. It may also affect other states, the national railroad network and interstate and international commerce.

¹³ Copy included as Enclosure 1.

¹⁴ Copy included as Enclosure 2.

Mr. Jared Blumenfeld
September 12, 2012
Page 8

We continue to review this California SIP submission and expect to provide EPA with additional information and comments. We would be happy to discuss any of these issues with the appropriate EPA staff at any time. Thank you for your consideration of these comments.

Sincerely,



Michael J. Rush
Associate General Counsel
Association of American Railroads



Melissa B. Hagan
Senior General Attorney
Union Pacific Railroad Company



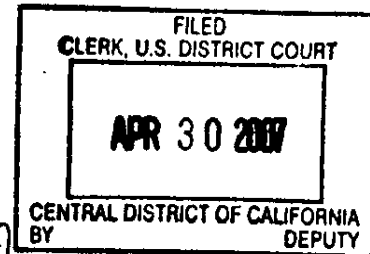
Russell J. Light
Senior General Attorney
BNSF Railway Company

Encs.

cc: Ms. Margo Oge
Ms. Deborah Jordan
Mr. Richard Corey
Ms. Cynthia Marvin
Dr. Barry Wallerstein

ENCLOSURE 1

Priority ☒
 Send ☒
 Enter ☒
 Closed ☐
 JS-5/JS-6 ☐
 JS-2/JS-3 ☐
 Scan Only ☐



30 APR 2007

THIS CONSTITUTES NOTICE OF ENTRY
AS REQUIRED BY FRCP, RULE 77(d).

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

Association of American
Railroads, BNSF Railway
Company, and Union Pacific
Railroad Company,

Plaintiffs,

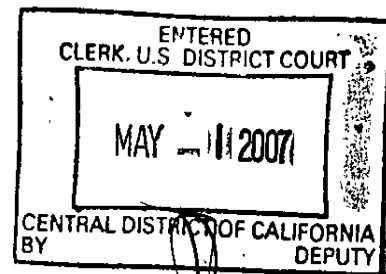
v.

South Coast Air Quality
Management District, and
The Governing Board of
South Coast Air Quality
Management District,

Defendants.

Case No. CV 06-01416-JFW(PLAx)

**FINDINGS OF FACT AND
CONCLUSIONS OF LAW**



This action came on for a court trial on November 28, 29,
30 and December 1, 2006. Steven Kramer, Cynthia Burch, John
Nadolenco, and Robert M. Jenkins, III of Mayer, Brown, Rowe,
& Maw LLP and Mark Elliot and Jerone English of Pillsbury,
Winthrop, Shaw, Pittman LLP appeared for Plaintiffs
Association of American Railroads, BNSF Railway Company, and
Union Pacific Railroad Company (collectively "Plaintiffs").
Brian O'Neill, Kirk Dublin, Suzanne Jones, and Frederick
Friedman of Jones Day, and Daniel Selmi of Daniel P. Selmi

191

1 Law Offices appeared for Defendants South Coast Air Quality
2 Management District and the Governing Board of South Coast
3 Air Quality Management District (collectively "Defendants" or
4 the "District"). On December 8, 2006, the parties filed
5 their Post-Trial Briefs. On December 13, 2006, the parties
6 each filed their proposed Post-Trial Findings of Fact and
7 Conclusions of Law. On December 20 and 21, 2006, the parties
8 filed their marked copies of the opposing parties' proposed
9 Post-Trial Findings of Fact and Conclusions of Law. After
10 considering the evidence, briefs and argument of counsel, the
11 Court makes the following findings of fact and conclusions of
12 law:

13 Findings of Fact¹

14 I. Procedural Background

15 At issue in this action is whether Defendants have the
16 authority to enact and enforce Rules which directly regulate
17 and impact Plaintiffs' operations, and which require
18 Plaintiffs to collect and provide certain information to
19 Defendants and the public regarding Plaintiffs' operations
20 and potential health risks arising out of those operations.
21 On March 7, 2006, Plaintiffs filed a Complaint against
22 Defendants alleging the following claims for relief:

23 _____
24 ¹ The Court has elected to issue its findings in
25 narrative form because a narrative format more fully explains
26 the reasons behind the Court's conclusions, which aids
27 appellate review and provides the parties with more
28 satisfying explanations. Any finding of fact that
constitutes a conclusion of law is also hereby adopted as a
conclusion of law, and any conclusion of law that constitutes
a finding of fact is also hereby adopted as a finding of
fact.

(1) Preemption by the Interstate Commerce Commission Termination Act of 1995 ("ICCTA"); (2) Violation of the Clean Air Act; (3) Violation of the Locomotive Boiler Inspection Act; (4) Violation of the Commerce Clause; (5) Violation of California State law; (6) Declaratory relief; and (7) Preliminary and permanent injunctive relief.

Shortly thereafter, on March 9, 2006, Plaintiffs filed a Motion for Preliminary Injunction. At the hearing on the motion on June 7, 2006, the Court consolidated the Motion for Preliminary Injunction with the trial on the merits pursuant to Federal Rule of Civil Procedure 65(a)(2) and set an expedited trial date.² On June 21, 2006, the Court signed a Stipulation Re: Standstill Agreement pursuant to which the parties agreed that the implementation and enforcement of the Rules at issue in this action would be delayed until after the Court entered final judgment in this matter.

After the conclusion of the trial on December 1, 2006, the parties agreed to conduct further mediation sessions in an attempt to resolve this matter prior to the Court issuing its Findings of Fact and Conclusions of Law. Shortly thereafter, the parties notified the Court that they had scheduled the further mediation sessions with a retired District Court Judge. On April 4, 2007, the Court was

² During the June 7, 2006 hearing, the Court and counsel discussed whether the case could be resolved on cross-motions for summary judgment. However, both the Court and counsel were concerned that the Court might need a fully developed factual record to render a decision on the issue of preemption, and did not want the existence of a genuine issue of fact to delay the resolution of such an important issue for the citizens of the South Coast Air Basin.

1 advised that the parties had reached an impasse and would be
2 unable to settle the case.

3
4 **II. Factual Background**

5 **A. The Railroads and AAR**

6 Plaintiff Union Pacific Railroad Company ("UPRR") is the
7 principal operating subsidiary of Union Pacific Corporation,
8 and is the largest railroad company in North America. UPRR
9 operates in 23 states in the western two-thirds of the United
10 States. Plaintiff BNSF Railway Company ("BNSF") is the
11 principal operating subsidiary of Burlington Northern Santa
12 Fe Corporation, and is the second largest railroad company in
13 North America. BNSF operates in 28 states in the midwestern
14 and western United States and Canada. UPRR and BNSF are each
15 the product of hundreds of predecessor companies that were
16 merged or acquired over the past 150 years to form a unified
17 interstate railway system.

18 UPRR and BNSF have a large freight rail presence in
19 California, and more specifically, in the South Coast Air
20 Basin (the "Basin"). The Basin is comprised of Orange County
21 and portions of Los Angeles, Riverside and San Bernardino
22 Counties. The ports of Los Angeles and Long Beach are
23 located in the Basin. From the standpoint of rail
24 operations, the Basin is one of the most congested areas in
25 the country. Approximately 100 freight trains currently move
26 per day over BNSF's principal lines through the Basin. The
27 amount of time between trains in the Basin is as little as 20
28 minutes.

1 Plaintiff Association of American Railroads ("AAR") is a
2 non-profit trade association representing the major freight
3 railroads in North America, as well as the passenger railroad
4 Amtrak. AAR's members account for more than 95% of intercity
5 rail freight service in this country. UPRR and BNSF are two
6 of AAR's largest members.

7
8 B. Memorandums of Understanding with the California Air
9 Resources Board

10 On July 2, 1998, UPRR and BNSF (the "Railroads") entered
11 into a memorandum of understanding with the California Air
12 Resources Board ("CARB") pursuant to which the Railroads
13 voluntarily agreed to accelerate the introduction of cleaner
14 burning locomotives into Southern California to achieve a 65%
15 reduction of nitrogen oxide ("NOx") emissions by the year 2010
16 (the "1998 MOU").

17 On June 24, 2005, the Railroads entered into a second
18 memorandum of understanding with CARB entitled "[C]ARB/
19 Railroad Statewide Agreement - Particulate Emissions
20 Reduction Program at California Rail Yards" (the "2005 MOU").
21 The 2005 MOU is a statewide agreement pursuant to which the
22 Railroads voluntarily agreed to undertake certain emissions
23 reduction program elements that the Railroads were not
24 otherwise required to undertake. Specifically, under the
25 2005 MOU, the Railroads agreed to limit nonessential idling
26 in locomotives. Additionally, the Railroads agreed to
27 perform emissions inventories at designated rail yards around
28 the state, including several in the Basin. Both the 1998 MOU

1 and the 2005 MOU contain release clauses which permit the
2 Railroads to terminate program elements in the MOU if the
3 State of California or any of its political subdivisions
4 impose their own regulations with the same goals as the MOU
5 program elements.

6
7 C. The Rules Adopted by the District

8 The South Coast Quality Air Management District (the
9 "District") is one of 35 air quality management districts in
10 the state of California established by the California
11 legislature and codified in the California Health and Safety
12 Code to develop and implement strategies for reducing
13 emissions in their respective geographic regions. The
14 District's geographic area encompasses the four county Basin,
15 including the Ports of Los Angeles and Long Beach. The
16 members of the District's Governing Board are all residents
17 of the State of California.³

18 The District opposed the 2005 MOU and actively sought to
19 have CARB rescind that MOU. In 2005, the District conducted
20 regulatory proceedings to adopt and implement its own set of
21 regulations, denominated "Regulations XXXV," aimed at
22 railroad operations and facilities in the District. The
23 Railroads and AAR participated in the District proceedings
24 which led to the adoption of District Rules 3501, 3502, and
25 3503 (collectively the "Rules"). During those proceedings,

26
27 ³ For ease of reference, Defendants South Coast Air
28 Quality Management District and the Governing Board of South
Coast Air Quality Management District will be collectively
referred to herein as the "District."

1 the Railroads and AAR advised the District that its adoption
2 of the Rules would not only be unlawful, it would place a
3 significant burden on those railroads governed by the Rules.

4 Notwithstanding the Railroads' objections and their
5 arguments regarding federal and state preemption, the
6 District adopted Rule 3503 on October 7, 2005. Several
7 months later, on February 3, 2006, the District adopted Rules
8 3501 and 3502. The Rules apply to all Class I and switching
9 and terminal freight railroads in the Basin, including the
10 Railroads - the two largest rail operators in the Basin. As
11 drafted, the Rules address certain subject areas that are
12 also addressed in the 2005 MOU. Although passenger trains
13 are pulled by locomotives, and passenger train operators
14 maintain rail yards for switching and maintenance, the Rules
15 do not apply to passenger train operations and facilities in
16 the Basin.

17 The stated purpose of Rule 3501 "is to record idling
18 events to identify opportunities for reducing idling
19 emissions and to assist in quantifying idling emissions."
20 See Rule 3501.⁴ Rule 3501 requires the Railroads to record
21 specific, detailed information for certain incidents of
22 idling as defined by the Rule, and to report those idling
23 events to the District on a weekly and an annual basis. See
24 *id.* Rule 3502 is designed "to minimize emissions from
25 unnecessary idling of a locomotive" and requires the
26 Railroads to limit idling of unattended locomotives to 30

27 ⁴ Copies of the Rules were admitted at trial as Exhibits
28 1, 2, and 3.

1 minutes or less in certain circumstances. See Rule 3502.
2 Alternatively, the Railroads can equip their locomotives with
3 anti-idling devices, or submit an emissions equivalency plan
4 to the District for approval. See *id.* The stated purpose of
5 Rule 3503 "is to determine criteria pollutant and toxic
6 emissions from railyards to conduct health risk assessments
7 estimating the cancer risk, chronic hazard index, and acute
8 hazard index caused by emissions at railyards, and to notify
9 the public regarding such health risks." See Rule 3503.
10 Rule 3503 requires the Railroads, *inter alia*, to prepare and
11 submit multiple railyard emissions inventory reports and
12 health risk assessments to the District. Rule 3503 also
13 requires the Railroads in certain circumstances to notify the
14 public of the contents of the health risk assessments. See
15 *id.*

16
17 **III. Discussion**

18 A. Preemption by the ICCTA - Plaintiffs' First Claim
19 for Relief

20 In their First Claim for Relief, Plaintiffs allege that
21 the Rules are preempted under Section 10501(b) the Interstate
22 Commerce Commission Termination Act of 1995, 49 U.S.C.
23 § 10101, *et seq.* ("ICCTA"). "Preemption under the Supremacy
24 Clause of the federal Constitution may arise in several ways,
25 i.e., (1) express preemption where the intent of Congress to
26 preempt state law is clear and explicit; (2) field preemption
27 where state law intrudes in an area that Congress has
28 reserved for federal jurisdiction; and (3) conflict

1 preemption, where enforcement of state law cannot be
2 accomplished while simultaneously complying with federal
3 law." *Friberg v. Kansas City Southern Railway Co.*, 267 F.3d
4 439, 442 (5th Cir. 2001) (citing *English v. General Electric*
5 *Co.*, 496 U.S. 72 (1990)).

6 "Congress and the courts long have recognized a need to
7 regulate railroad operations at the federal level. Congress'
8 authority under the Commerce Clause to regulate the railroads
9 is well established, and the Supreme Court repeatedly has
10 recognized the preclusive effect of federal legislation in
11 this area." *City of Auburn v. U.S. Government*, 154 F.3d
12 1025, 1029 (9th Cir. 1998) (internal citations omitted).

13 "Congress initially asserted federal authority over the
14 railroad industry by enacting the Interstate Commerce Act,
15 ch. 104, 24 Stat. 379 (1887), which, as amended, continues to
16 govern federal regulation of that industry, and has been
17 recognized as 'among the most pervasive and comprehensive of
18 federal regulatory schemes.' *Id.* (quoting *Chicago & N.W.*
19 *Transp. Co. v. Kalo Brick & Tile Co.*, 450 U.S. 311, 318
20 (1981)). Federal regulation of the railroad industry was
21 expanded in 1995 when Congress enacted the ICCTA." *Rushing*
22 *v. Kansas City Southern Railway Co.*, 194 F. Supp. 2d 493, 500
23 (S.D. Miss. 2001). Section 10501(b) of the ICCTA, which
24 contains an express preemption clause, provides that:

25 / / /

26 / / /

27 / / /

28 / / /

1 The jurisdiction of the [Surface
2 Transportation] Board over -

3 (1) transportation by rail carriers, and
4 the remedies provided in this part with
5 respect to rates, classifications, rules
6 (including car service, interchange, and
7 other operating rules), practices,
8 routes, services, and facilities of such
9 carriers; and

10 (2) the construction, acquisition,
11 operation, abandonment, or discontinuance
12 of spur, industrial, team, switching, or
13 side tracks, or facilities, even if the
14 tracks are located, or intended to be
15 located, entirely in one State,
16 *is exclusive*. Except as otherwise provided in
17 this part, the remedies provided under this
18 part with respect to regulation of rail
19 transportation are exclusive and preempt the
20 remedies provided under Federal or State law.

21 49 U.S.C. § 10501(b) (emphasis added).

22 "The language of the statute could not be more precise,
23 and it is beyond peradventure that regulation of [the
24 Railroads'] train operations . . . is under the exclusive
25 jurisdiction of the STB" *Friberg*, 267 F.3d at 443.
26 Indeed, several courts have noted in cases involving
27 preemption under the ICCTA that "[i]t is difficult to imagine
28 a broader statement of Congress's intent to preempt state

1 regulatory authority over railroad operations." *CSX Transp.,*
2 *Inc. v. Georgia Public Service Comm'n*, 944 F. Supp. 1573,
3 1581 (N.D. Ga.1996). Specifically, the Ninth Circuit has
4 described the language of § 10501(b)(2) as "broad" and has
5 interpreted that section as "granting the STB exclusive
6 jurisdiction over construction, acquisition, operation,
7 abandonment, or discontinuance of rail lines." *City of*
8 *Auburn*, 154 F.3d at 1031 (emphasis added).

9 Notwithstanding the broad preemptive language of the
10 ICCTA, the District argues that the ICCTA does not preempt
11 other federal statutes such as the Clean Air Act, 42 U.S.C.
12 § 7401, et seq. ("CAA"). The District claims that because it
13 was compelled by the CAA to enact the Rules, the Court must
14 "harmonize" the ICCTA and the CAA to find that the Rules are
15 not preempted.⁵ The District is correct that the ICCTA does
16 not preempt the CAA, as the STB has repeatedly held that
17 "nothing in section 10501(b) is intended to interfere with
18 the role of state and local agencies in implementing Federal
19 environmental statutes, such as the Clean Air Act, the [Clean
20 Water Act], and the [Safe Water Drinking Act]." *Boston and*
21 *Maine Corp. and Town of Ayer, MA*, STB Fin. Docket No. 33971,
22 2001 WL 458685, at *5 (STB, Apr. 30, 2001); see also *Cities*
23 *of Auburn and Kent - Burlington Northern Railroad Co.*, STB
24 Fin. Docket No. 33200, 1997 WL 362017, at *4 (STB, July 1,
25 1997) ("Nothing in . . . this decision is intended to

26
27 ⁵ In further support of their position, Defendants
28 provided the Court with the recent Supreme Court decision in
Massachusetts v. EPA, 127 S. Ct. 1438 (Apr. 2, 2007).

1 interfere with the role of the states and local entities in
2 implementing these federal laws."). However, upon review of
3 the relevant statutory authority and the evidence and
4 testimony presented at trial, the Court finds that the
5 District was not acting under the authority of the CAA when
6 it enacted the Rules.

7 The United States Environmental Protection Agency (the
8 "EPA") is the federal agency responsible for setting National
9 Ambient Air Quality Standards ("NAAQS") for air pollutants
10 identified by the EPA which may reasonably be anticipated to
11 endanger public health or welfare. The EPA has established
12 NAAQS for, *inter alia*, ozone and particulate matter ("PM")
13 less than 10 microns in diameter and less than 2.5 microns in
14 diameter. Diesel locomotives emit PM directly and also emit
15 nitrogen oxides ("NOx") which contribute to the formation of
16 PM in the atmosphere and also contribute to the formation of
17 ozone. On April 16, 1998, in exercising its authority with
18 respect to locomotives, the EPA adopted emission control
19 measures for locomotives under the CAA.

20 The CAA also requires each state to adopt "state
21 implementation plans" which contain enforceable measures to
22 attain the NAAQS. See 42 U.S.C. § 7410. Pursuant to
23 California Health & Safety Code ("CHSC") § 39602, CARB "is
24 designated as the state agency responsible for the
25 preparation of the state implementation plan required by the
26 [CAA], and, to this end, shall coordinate the activities of
27 all districts necessary to comply with that act." CHSC
28 § 39602. The District was established under the CHSC "to

1 adopt and enforce rules and regulations to achieve and
2 maintain the state and federal ambient air quality standards
3 in all areas affected by emission sources under their
4 jurisdiction." CHSC §§ 40001, 40460-40471.

5 Based on the foregoing, the District claims that it
6 enacted the Rules to comply with its obligations under the
7 CAA. However, the District's authority to regulate air
8 pollution is derived from state law, and state law dictates
9 that CARB is the entity with authority over locomotives.
10 Specifically, under CHSC § 40000, the "control of emissions
11 from motor vehicles, except as otherwise provided in this
12 division, shall be the responsibility of [CARB]."
13 Additionally, Section 43013 provides, in relevant part, that:

14 (a) [CARB] may adopt and implement motor
15 vehicle emission standards, in-use performance
16 standards, and motor vehicle fuel
17 specifications for the control of air
18 contaminants and sources of air pollution
19 which the state board has found to be
20 necessary, cost-effective, and technologically
21 feasible, to carry out the purposes of this
22 division, unless preempted by federal law.

23 (b) [CARB] shall, consistent with subdivision
24 (a), adopt standards and regulations for . . .
25 off-road or nonvehicle engine categories,
26 including, but not limited to, off-highway
27 motorcycles, off-highway vehicles,
28 construction equipment, farm equipment,

1 utility engines, locomotives, and, to the
2 extent permitted by federal law, marine
3 vessels.

4 CHSC § 43013 (emphasis added). Indeed, in Section 40702, the
5 California legislature explicitly restricted the District
6 from regulating locomotives: "No order, rule, or regulation
7 of any district shall, however, specify the design of
8 equipment, type of construction, or particular method to be
9 used in reducing the release of air contaminants from
10 railroad locomotives." CHSC § 40702.

11 "Even though the CAA certainly envisions a joint approach
12 to air pollution abatement between federal, state, and local
13 governments, nowhere does the CAA affirmatively grant local
14 governments the independent power to regulate air pollution.
15 Rather, a local legislature's power to regulate in this area
16 is subject not only to the minimum standards of the CAA, but
17 also to limitations placed upon that power by the state."

18 *Southeastern Oakland County Resource Recovery Authority v.*
19 *City of Madison Heights*, 5 F.3d 166, 169 (6th Cir. 1993)
20 (internal citations omitted). Based on the express
21 limitations on the District's authority set forth in CHSC
22 § 40702, the provisions of CHSC § 43013 regarding CARB's
23 authority to adopt standards regulating locomotives to the
24 extent permitted by federal law, and the efforts made by CARB
25 in negotiating the 1998 and 2005 MOUs, the Court finds that
26 the District does not have the authority under the CHSC to
27 regulate air contaminants from locomotives, and therefore was

28 / / /

1 not acting under the CAA when it adopted the Rules.⁶ As a
2 result of the Court's finding that the District did not
3 derive its authority to enact the Rules from the CAA, the
4 Court need not "harmonize" or reconcile the preemptive effect
5 of the ICCTA with the mandates of the CAA.

6 The District also claims that because it retains its
7 "police powers" under the ICCTA, the Rules are not preempted
8 because the District can use those "police powers" to
9 directly regulate the Railroads "so long as the District does
10 not unreasonably burden interstate rail activities." Def.
11 Tr. Br. at 4. Relying on STB decisions and cases which
12 discuss the extent of a locality's "police power," the
13 District argues that in deciding preemption under the ICCTA,
14 the Court must apply a balancing test to determine whether
15 the Rules impose an "undue restriction" or an "unreasonable
16 burden" on the Railroads.

17 The District is correct that both the STB and a number of
18 Courts have recognized that under the ICCTA, "state and local
19 regulation is permissible where it does not interfere with
20 interstate rail operations, and localities retain certain
21 police powers to protect public health and safety. For
22 example, non-discriminatory enforcement of state and local
23 requirements such as building and electrical codes generally
24 are not preempted." *Boston and Maine*, 2001 WL 458685, at *5.

25
26 ⁶ Indeed, based on the fact that the CAA was never
27 mentioned as part of the District proceedings which led to
28 the adoption of the Rules, it appears that the decision to
invoke the CAA was "pretextual" - a litigation decision made
after Plaintiffs filed suit against the District. See, e.g.,
Boston and Maine, 2001 WL 458685.

1 However, it is clear from these decisions that the types of
2 regulations contemplated are those that are generally
3 applicable to all businesses, including the railroads, such
4 as building and electrical codes. To the extent these
5 general, nondiscriminatory regulations which are enacted as
6 part of a locality's exercise of its police power do not
7 place an undue burden on the railroads, the STB and the
8 courts have found that they are not preempted.

9 The Court finds that the Rules at issue in this case do
10 not fall within that category of regulations, because the
11 District is attempting to directly regulate rail operations.
12 The District has failed to cite a single decision in which
13 the STB or a court upheld direct regulations such as the
14 Rules. To the contrary, the STB and courts around the
15 country have consistently held that the enforcement of any
16 law which would result in the imposition of regulations on
17 the way that a railroad company operates its trains is
18 preempted by the ICCTA.⁷ See, e.g., *Rushing*, 194 F. Supp. 2d
19 at 500 (finding that the use of common law claims to "impose
20 regulations on the Defendant [railroad] regarding the manner
21 in which it operates its switch yard thereby potentially

22
23 ⁷ The District cites as favorable authority *Jones v.*
24 *Union Pacific R.R. Co.*, 79 Cal. App. 4th 1053 (2000), in
25 which the court allowed the plaintiff in that case to proceed
26 with a nuisance claim against the railroad for excessive
27 idling and horn blowing near the plaintiff's home on the
28 grounds that the plaintiff had adequately alleged that the
activities did not have a transportation purpose and the
railroad was engaging in these activities solely to harass
the plaintiff. The holding in that case is not applicable
here, as the Court finds based on the testimony and evidence
presented at trial that the activities of the Railroads which
are regulated by the Rules have a transportation purpose.

1 interfering with interstate rail operations" was preempted,
2 and noted that "to the extent that these laws could provide
3 local authorities with the power to regulate the periods of
4 time in which a railroad company was permitted to operate its
5 switching activities, and the manner in which those
6 activities could otherwise be conducted, the state laws would
7 impose an impermissible economic regulation on the railroad
8 industry"); *Friberg*, 267 F.3d at 443 ("Texas Anti-Blocking
9 Statute" preempted on the grounds that "[r]egulating the time
10 a train can occupy a rail crossing impacts, in such areas as
11 train speed, length and scheduling, the way a railroad
12 operates its trains, with concomitant economic ramifications
13 that are not obviated or lessened merely because the
14 provision carries a criminal penalty"). Because the Rules
15 directly regulate rail operations such as idling, they are
16 preempted without regard to whether they are undue or
17 unreasonable.⁸

18 The District also argues that because the Railroads have
19 alleged a "facial" challenge to the Rules, at the very least
20 the Court should determine whether there is any
21 interpretation of any provision in the Rules which would
22 withstand preemption by the ICCTA. However, as the Second

23
24 ⁸ With respect to the Rules which contain recordkeeping
25 and reporting requirements, those Rules are also preempted
26 without the need for the Court to engage in any "balancing,"
27 as they not only seek to regulate certain operations of the
28 Railroads, but also on the grounds that they require the
Railroads to provide the District with information
essentially for the District's own interest or education,
because the District lacks the authority to act upon the
information it receives.

1 Circuit has explained, "[t]he facial/as-applied distinction
2 would be relevant only if we might find some applications of
3 the statute preempted and others not . . . [W]here a state
4 statute is in direct conflict' with a federal statute 'or one
5 of its processes,' the 'focus is the act of regulation
6 itself, not the effect of the state regulation in a specific
7 factual situation.'" *Green Mountain R.R. Corp. v. Vermont*,
8 404 F.3d 638, 644 (2d Cir. 2005) (quoting *Chamber of Commerce*
9 *v. Lockyer*, 364 F.3d 1154, 1169 (9th Cir.2004)).

10 The Court finds that the Rules at issue in this case are
11 exactly the type of local regulation Congress intended to
12 preempt by enacting the ICCTA in order to prevent a
13 "patchwork" of such local regulation from interfering with
14 interstate commerce. The District argues that the Railroads
15 have the ability to comply with a "patchwork" of local
16 regulations, as they have already entered into agreements
17 with different states and districts regarding their
18 operations. However, the mere fact that the Railroads have
19 consented to certain restrictions on their operations does
20 not result in a finding that they have "waived" their right
21 to protection under the ICCTA from restrictions being imposed
22 upon them by individual counties within a state.

23 The Court is mindful of both the air quality problems
24 which are unique to the Basin, and of the efforts made by
25 Barry Wallerstein and the members of the District Board,
26 including Mayor Yates, to improve the air quality, and thus
27 the quality of life for the residents of the District. The
28 Court is "also mindful, however, of the declaration by

1 Congress that states may not interfere with the operational
2 aspects of railroading and that localized concerns may not
3 burden the nationwide system of railroads." *Village of*
4 *Ridgefield Park v. New York, Susquehanna & Western Ry. Corp.*,
5 163 N.J. 446, 750 A.2d 57 (N.J. 2000). In deciding that the
6 Rules are preempted by the ICCTA the Court does not arrive at
7 its decision lightly, and recognizes that there is a serious
8 problem with the air quality in the Basin which needs to be
9 addressed. Notwithstanding this decision, the Court urges
10 the parties to continue to work amicably with each other to
11 take the necessary steps to address the serious air quality
12 problem in the Basin.

13

14 B. Plaintiffs' Remaining Claims

15 In light of the Court's finding that the Rules are
16 preempted in their entirety by the ICCTA, the Court need not
17 make findings with respect to Plaintiffs' remaining claims
18 for relief, as those claims are moot.

19

20 Conclusions of Law

21 1. The Court has original jurisdiction over the federal
22 claims asserted in this action pursuant to 28 U.S.C. § 1331
23 in that the claims arise under the Interstate Commerce
24 Commission Termination Act of 1995, 49 U.S.C. § 10101, et
25 seq. ("ICCTA"), the Clean Air Act, 42 U.S.C. § 7401, et seq.,
26 the Locomotive Boiler Inspection Act, 49 U.S.C. § 20701, et
27 seq., and the Commerce and Supremacy Clauses of the United
28 States Constitution, art. I, § 8, cl. 3 and art. VI, cl. 2.

1 The Court also has jurisdiction over Plaintiffs' state law
2 claims under the doctrine of supplemental jurisdiction as set
3 forth in 28 U.S.C. § 1367.

4 2. Venue is proper in the United States District Court
5 for the Central District of California under 28 U.S.C.
6 § 1391(b) because the alleged acts complained of occurred and
7 are occurring in this district.⁹

8 3. The Court concludes that the Rules are preempted in
9 their entirety by the ICCTA as alleged in Plaintiffs' First
10 Claim for Relief. Accordingly, the Court also concludes that
11 Plaintiffs are entitled to a permanent injunction against
12 enforcement of the Rules by Defendants.

13 4. In light of the Court's conclusion that the Rules
14 are preempted by the ICCTA, the Court concludes that it need
15 not resolve the issues raised by Plaintiffs' remaining claims
16 for relief, and those claims are, therefore, dismissed as
17 moot.

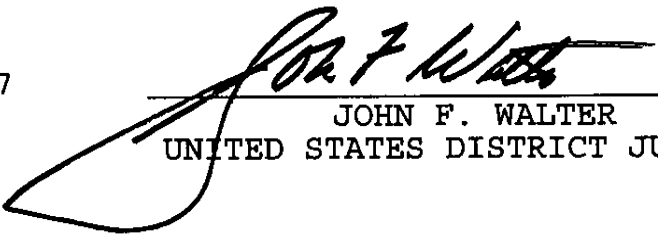
18 The Court orders the parties to meet and confer and draft
19 a joint proposed Judgment and Permanent Injunction which is
20 consistent with this Order. The parties shall lodge the
21 joint proposed Judgment and Permanent Injunction with the
22 Court on or before May 11, 2007. If the parties are unable
23 to agree upon a joint proposed Judgment and Permanent
24 Injunction, the parties shall each submit separate versions
25 of a proposed Judgment and Permanent Injunction, along with a

26 ⁹ The parties do not dispute the facts requisite to
27 federal jurisdiction and venue.
28

1 declaration outlining their objections to the opposing
2 party's version, no later than May 11, 2007.

3
4
5 Dated: April 30, 2007

6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28



JOHN F. WALTER
UNITED STATES DISTRICT JUDGE

SCANNED

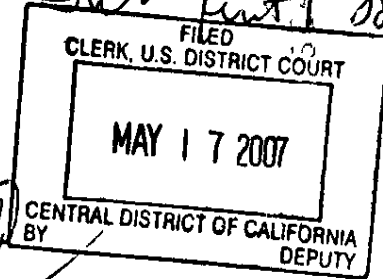
ENCLOSURE 2

LOGGED ORIGINAL

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28CLERK, U.S. DISTRICT COURT
CENTRAL DIST. OF CALIF.
LOS ANGELES

BY

NOTE CHANGES MADE BY THE COURT

THIS CONSTITUTES NOTICE OF ENTRY
AS REQUIRED BY FRCP, RULE 77(d).

NOTE CHANGES MADE BY THE COURT

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIAASSOCIATION OF AMERICAN
RAILROADS, BNSF RAILWAY
COMPANY, and UNION PACIFIC
RAILROAD COMPANY,

Plaintiffs,

v.

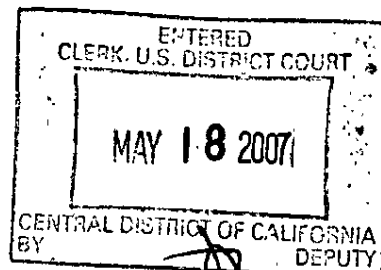
SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT; THE
GOVERNING BOARD OF SOUTH
COAST AIR QUALITY
MANAGEMENT DISTRICT,

Defendants.

Case No. CVO6-1416 JFW (PLAx)

**[PROPOSED] JUDGMENT AND
PERMANENT INJUNCTION****[No Hearing Required]**Complaint Filed: March 7, 2006
Trial: November 28-30, 2006

Honorable John F. Walter, Judge



193

1 This action came on for court trial on November 28 through 30, 2006, the
2 Honorable John F. Walter, United States District Judge, presiding. Plaintiffs are the
3 Association of American Railroads, BNSF Railway Company and Union Pacific
4 Railway Company (collectively, "Plaintiffs"). Defendants are the South Coast Air
5 Quality Management District (the "District") and its Governing Board (the
6 "Governing Board") (collectively, "Defendants"). Plaintiffs allege the following
7 claims for declaratory and injunctive relief: (1) preemption by the Interstate
8 Commerce Commission Termination Act of 1995; (2) violation of the Clean Air
9 Act; (3) preemption by the Locomotive Boiler Inspection Act; (4) violation of the
10 Commerce Clause; (5) violation of California state law; (6) declaratory relief; and
11 (7) preliminary and permanent injunction.

12 The action having been tried and the Court having issued its Findings of Fact
13 and Conclusions of Law on May 1, 2007, IT IS HEREBY ORDERED,
14 ADJUDGED AND DECREED THAT:

15 1. District Rule 3503, adopted by the Governing Board on October 7, 2005,
16 and District Rules 3501 and 3502, adopted by the Governing Board on February 3,
17 2006, are preempted in their entirety by the Interstate Commerce Commission
18 Termination Act of 1995 ("ICCTA"), 49 U.S.C. § 10101 *et seq.*

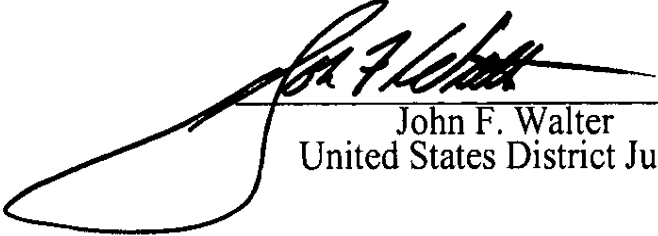
19 2. Under Plaintiffs' First and ~~Seventh~~ Causes of Action, the District, the
20 Governing Board, and their board members, officers, agents, employees, attorneys
21 and all others acting in concert or participation with them, are hereby permanently
22 enjoined from implementing or enforcing any provision of Rules 3501, 3502 or
23 3503.

24 3. In light of the order, judgment and decree that District Rules 3501, 3502,
25 and 3503 are preempted in their entirety by ICCTA, Plaintiffs' remaining claims
26 need not be adjudicated and, therefore, are dismissed as moot.

1 4. Plaintiffs shall recover their costs from Defendants in the amount of
2 \$ _____.

3 **IT IS SO ORDERED:**

4
5 Dated: May 17, 2007

6
7 
8 John F. Walter
9 United States District Judge
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

PROOF OF SERVICE

I, Haewon Park:

I am employed in Los Angeles County, California. I am over the age of eighteen years and not a party to the within-entitled action. My business address is 350 South Grand Avenue, 25th Floor, Los Angeles, California 90071-1503.

On May 10, 2007, I served a copy of the within document(s):

[PROPOSED] JUDGMENT AND PERMANENT INJUNCTION

by transmitting via facsimile the document(s) listed above to the fax number(s) set forth below on this date before 5:00 p.m.

X by placing the document(s) listed above in a sealed envelope with postage thereon fully prepaid, in the United States mail at Los Angeles, California addressed as set forth below.

by placing the document(s) listed above in a sealed UPS envelope and affixing a pre-paid air bill, and causing the envelope to be delivered to a UPS agent for delivery.

by personally delivering the document(s) listed above to the person(s) at the address(es) set forth below.

SEE ATTACHED SERVICE LIST

I am readily familiar with the firm's practice of collection and processing correspondence for mailing. Under that practice it would be deposited with the U.S. Postal Service on that same day with postage thereon fully prepaid in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if postal cancellation date or postage meter date is more than one day after date of deposit for mailing in affidavit.

I declare that I am employed in the office of a member of the bar of this court at whose direction the service was made.

I declare under penalty of perjury under the laws of the United States of America that the above is true and correct.

Executed on May 10, 2007, at Los Angeles, California.



Haewon Park

SERVICE LIST

**Attorneys for Defendants South Coast Air Quality Management District AND
The Governing Board of South Coast Air Quality Management District**

Brian O'Neill, Esq.
Reed Aljian, Esq.
Susan Haines, Esq.
Jones Day
555 S. Flower Street, 50th Floor
Los Angeles, CA 90071
Fax: (213) 243-2539

Kirk Dublin, Esq.
Jones Day
555 California Street
26th Floor
San Francisco, CA 94104
Fax: (415) 875-5700

Kurt R. Wiese, Esq.
Barbara S. Baird, Esq.
Michael R. Harris, Esq.
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-0940
Fax: (909) 396-2961

Daniel P. Selmi, Esq.
Attorney at Law
919 S. Albany Street
Los Angeles, CA 90015
Fax: (949) 675-9861

**Attorneys for Plaintiffs ASSOCIATION OF AMERICAN RAILROADS and
UNION PACIFIC RAILROAD COMPANY**

Mark E. Elliott, Esq.
Jerone J. English, Esq.
Pillsbury Winthrop Shaw Pittman LLP
725 South Figueroa Street, Suite 2800
Los Angeles, CA 90017-5406
Fax: (213) 629-1033

Michael R. Barr, Esq.
Pillsbury Winthrop Shaw Pittman LLP
50 Fremont Street
San Francisco, CA 94105
Fax: (415) 983-1000



BUILDING AMERICA

DATE 9/14/12		
ACTION (✓)		COPIED (✓)
RA	RA	✓
DRA	DRA	
✓ AIR	AIR	
CED	CED	
MTS	MTS	
OPA	OPA	
✓ ORC	ORC	
# FUND	# FUND	
SCFO	SCFO	
WASTE	WASTE	
WATER	WATER	
		TR ✓

September 14, 2012

VIA HAND DELIVERY, E-MAIL AND CERTIFIED MAIL
CERTIFIED MAIL NO. 7000 1670 0005 4806 1128

Mr. Jared Blumenfeld
Regional Administrator
United States Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, CA 94105

Re: California's August 30, 2012 Submittal of South Coast Air Quality Management
District Rules 3501 and 3502 for Inclusion in the California State Implementation
Plan – Request for Prompt EPA Determination of Incompleteness

Dear Mr. Blumenfeld:

To supplement our September 12 letter to you on the above topic, enclosed are letters from the California Air Resources Board ("ARB") dated September 13, 2012 determining that the Union Pacific Railroad Company and BNSF Railway Company ("Railroads") have fully complied with the provisions of the "1998 Memorandum of Mutual Understandings and Agreements, South Coast Fleet Average Emissions Program" for their operations in the South Coast Air Quality Management District in 2010. These determinations were based on ARB's review of actual activity information for thousands of locomotives operating in the South Coast Air Basin during 2010. Based on this information, ARB found that the Railroads had introduced advanced technology locomotives in the District, as well as provided significant early emission reductions and public health benefits.

As we noted in our September 12 letter, the emissions calculations in ARB's August 30 submission of the SCAQMD Idling Rules as a revision to the SIP fail to account for the substantial idling reductions which have resulted from the Railroads' accelerated introduction of new and remanufactured locomotives in the District under the 1998 MOU. EPA is crediting California's SIP with reductions from that 1998 MOU and should determine that the August 30 SIP submission is not complete unless and until the SCAQMD and/or ARB fully account for the idling reductions resulting from the 1998 MOU.

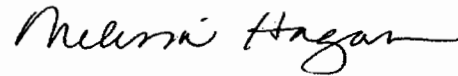
Mr. Jared Blumenfeld
September 14, 2012
Page 2

We ask that you place this letter and its attachments in the rulemaking docket that EPA creates regarding ARB's August 30 submission and that EPA Region 9 consider the attached information as part of its consideration of the completeness of that submission.

Sincerely,



Michael J. Rush
Associate General Counsel
Association of American Railroads



Melissa B. Hagan
Senior General Attorney
Union Pacific Railroad Company



Russell J. Light
Senior General Attorney
BNSF Railway Company

Encs.

cc: Ms. Margo Oge
Ms. Deborah Jordan
Mr. Richard Corey
Ms. Cynthia Marvin
Dr. Barry Wallerstein



Matthew Rodriguez
Secretary for
Environmental Protection

Air Resources Board

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov



Edmund G. Brown Jr.
Governor

September 13, 2012

Mr. Michael Stanfill, Director
Environmental Engineering and
Program Development
BNSF Railway Company
920 SE Quincy
Topeka, Kansas 66612-1116

Dear Mr. ^{mike}Stanfill:

The Air Resources Board (ARB) received BNSF Railway's (BNSF) 2010 Fleet Average Agreement Annual Compliance Report (Compliance Report) pursuant to Section IV.B. of the 1998 Memorandum of Mutual Understanding and Agreements, South Coast Locomotive Fleet Average Emissions Program (1998 Agreement). ARB staff has determined that BNSF has fully complied with provisions of the 1998 Agreement for its operations in 2010.

BNSF's Compliance Report included the following:

- (1) BNSF's letter of certification: This letter is signed by the railroad and certifies that the information in this report is true, accurate and complete.
- (2) BNSF's fleet summary information: This is information regarding the methodology used by the railroad to comply with the 1998 Agreement (Form F-S).
- (3) BNSF's fleet average calculation: This information includes individual locomotive megawatt-hours and emission levels, as well as calculations and any necessary adjustments (Form F-A-1 through Form F-A-6).

Starting in calendar year 2010, the 1998 Agreement requires that BNSF have an annual locomotive final fleet average of 5.5 grams per brake horsepower-hour (g/bhp-hr) for oxides of nitrogen (NOx) for locomotive operations in the South Coast Air Basin. Additionally, the 1998 Agreement allows BNSF to use accumulated fleet average credits, including credits accrued from the use of ultra-low emitting locomotives (ULEL) in the South Coast Air Basin, in order to meet the locomotive final fleet average.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Printed on Recycled Paper

Mr. Michael Stanfill, Director

September 13, 2012

Page 2

ARB reviewed BNSF's initial submittal of its Compliance Report, which included activity information (in megawatt-hours) and emission levels for over 1,300 individual locomotives in 2010. Staff assessed the accuracy of BNSF's data by comparison with extensive locomotive information ARB staff has collected from field surveys, inspection reports, and locomotive inventories. As a result, modifications were made to the initial BNSF fleet average. After final changes and reviews were completed, ARB staff determined that, for calendar-year 2010, BNSF's final fleet average meets the required 5.5 g/bhp-hr NOx compliance level set forth in the 1998 Agreement.

BNSF has generated ULEL fleet average credits from 2008 through 2010 by operating line haul locomotives that are about 30 percent cleaner than required. These locomotives have provided the South Coast Air Basin with significant early emission reductions and public health benefits. For 2010, BNSF did not need to apply any ULEL credit to adjust its initial fleet average.

As we have discussed with your staff, ARB will make all of the information available publicly except for individual locomotive activity levels, which have been determined to be business confidential according to California Government Code Section 6254.7. The activity data will be aggregated by tier or emission standard level.

Should you have any questions regarding BNSF's compliance with the 1998 Agreement, please contact me at (916) 324-0062 or cmarvin@arb.ca.gov, or Mr. Harold Holmes, Manager, Rail Strategies Section at (916) 324-8029 or hholmes@arb.ca.gov.

Sincerely,



Cynthia Marvin, Chief
Stationary Source Division

cc: See next page.

Mr. Michael Stanfill, Director
September 13, 2012

Page 3

cc: Mr. John Lovenburg
Vice President
Environmental
BNSF Railway Company
2500 Lou Menk Drive
Fort Worth, Texas 76131

Mr. Ryan Mills, Manager
Environmental Operations
BNSF Railway Company
4515 Kansas Avenue
Kansas City, Kansas 66106

Ms. Margo T. Oge, Director
U.S. Environmental Protection Agency
Office of Transportation and Air Quality (6401A)
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Mr. William Charmley
Deputy Director
U.S. Environmental Protection Agency
Office of Transportation and Air Quality
Assessment and Standards Division
2000 Traverwood Drive
Ann Arbor, Michigan 48105

Harold Holmes, Manager
Rail Strategies Section



Air Resources Board



Matthew Rodriguez
Secretary for
Environmental Protection

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov

Edmund G. Brown Jr.
Governor

September 13, 2012

Mr. Michael Stanfill, Director
Environmental Engineering and
Program Development
BNSF Railway Company
920 SE Quincy
Topeka, Kansas 66612-1116

Dear Mr. ^{Mike} Stanfill:

This letter is to inform you that the Air Resources Board (ARB) staff has completed its review of BNSF Railway's (BNSF) submittals for Ultra Low Emitting Locomotive (ULEL) credit as provided for in the 1998 South Coast Locomotive Fleet Average Emissions Program (1998 Agreement).

The 1998 Agreement provides the opportunity to create ULEL credit as an incentive to a participating railroad to introduce the cleanest locomotives into the South Coast Air Basin. Since 2008, BNSF has been operating line haul locomotives that are 30 percent cleaner than required. These locomotives have provided significant emission reductions as well as local and regional public health benefits.

Our review covered BNSF's submittals for calendar years 2008, 2009 and 2010. Each submittal included the following:

- (1) BNSF's letter of certification: This letter is signed by the railroad and certifies that the information in this report is true, accurate, and complete.
- (2) BNSF's summary information: This is information provided by the railroad regarding the methodology used to generate fleet average emission credits for the 1998 Agreement (Form F-S).
- (3) BNSF's calculation for ULEL credit: This information includes individual locomotive days of operation and emission levels, as well as calculations and any adjustments (Form F-D-1 through F-D-4).

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Printed on Recycled Paper

Mr. Michael Stanfill, Director
September 13, 2012
Page 2

Upon review, ARB has determined that the submitted documents are complete and meet the reporting requirements set forth in the 1998 Agreement. ARB analyzed individual locomotive emission and activity levels to review the amount of ULEL credit supported by BNSF's submittals. We have determined that, for calendar years 2008 through 2010, BNSF has accumulated a total of 1.9 grams per brake horsepower-hour (g/bhp-hr) of ULEL credit. Similar to a bank transaction, the ULEL credit can be deposited then withdrawn in the future in order to comply with the NOx fleet average of 5.5 g/bhp-hr. The maximum pre-2010 ULEL credit that can be withdrawn annually is 1.3 g/bhp-hr.

As we have discussed with your staff, ARB will make all of the information available publicly except for individual locomotive activity levels, which have been determined to be business confidential according to California Government Code Section 6254.7. The activity data will be aggregated by tier or emission standard level.

Should you have any questions regarding BNSF's submittals ULEL credit, please contact me at (916) 324-0062 or cmarvin@arb.ca.gov or Mr. Harold Holmes, Manager, Rail Strategies Section at (916) 324-8029 or hholmes@arb.ca.gov.

Sincerely,



Cynthia Marvin, Chief
Stationary Source Division

cc: See next page.

Mr. Michael Stanfill, Director

September 13, 2012

Page 3

cc: Mr. John Lovenburg
Vice President
Environmental
BNSF Railway Company
2500 Lou Menk Drive
Fort Worth, Texas 76131

Mr. Ryan Mills, Manager
Environmental Operations
BNSF Railway Company
4515 Kansas Avenue
Kansas City, Kansas 66106

Ms. Margo T. Oge, Director
U.S. Environmental Protection Agency
Office of Transportation and Air Quality (6401A)
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Mr. William Charmley
Deputy Director
U.S. Environmental Protection Agency
Office of Transportation and Air Quality
Assessment and Standards Division
2000 Traverwood Drive
Ann Arbor, Michigan 48105

Harold Holmes, Manager
Rail Strategies Section



Matthew Rodriguez
Secretary for
Environmental Protection

Air Resources Board

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov



Edmund G. Brown Jr.
Governor

September 13, 2012

Mr. Robert M. Grimalia
Vice President
Safety, Security, Environment and CSO
Union Pacific Railroad
1400 Douglas Street, STOP 1180
Omaha, Nebraska 68179-1180

Dear Mr. Grimalia:

The Air Resources Board (ARB) received Union Pacific Railroad's (UP) 2010 Fleet Average Agreement Annual Compliance Report (Compliance Report) pursuant to Section IV.B. of the 1998 Memorandum of Mutual Understanding and Agreements, South Coast Locomotive Fleet Average Emissions Program (1998 Agreement). ARB staff has determined that UP has fully complied with provisions of the 1998 Agreement for its operations in 2010.

UP's Compliance Report included the following:

- (1) UP's letter of certification: This letter is signed by the railroad and certifies that the information in this report is true, accurate and complete.
- (2) UP's fleet summary information: This is information regarding the methodology used by the railroad to comply with the 1998 Agreement (Form F-S).
- (3) UP's fleet average calculation: This information includes individual locomotive megawatt-hours and emission levels, as well as calculations and any necessary adjustments (Form F-A-1 through Form F-A-6).

Starting in calendar year 2010, the 1998 Agreement requires that UP have an annual locomotive final fleet average of 5.5 grams per brake horsepower per hour (g/bhp-hr) for oxides of nitrogen (NOx) for locomotive operations in the South Coast Air Basin. Additionally, the 1998 Agreement allows UP to use accumulated fleet average credits, including credits accrued from the use of ultra-low emitting locomotives (ULEL) in the South Coast Air Basin, in order to meet the locomotive final fleet average.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Printed on Recycled Paper

Mr. Robert M. Grimalia
September 13, 2012
Page 2

ARB reviewed UP's initial submittal of its Compliance Report, which included activity information (in megawatt-hours) and emission levels for over 4,700 individual locomotives in 2010. Staff assessed the accuracy of UP's data by comparison with extensive locomotive information ARB staff has collected from field surveys, inspection reports, and locomotive inventories. As a result, modifications were made to the initial UP fleet average. After final changes and reviews were completed, ARB staff determined that, for calendar year 2010, UP had an initial fleet average NOx level of 6.3 g/bhp-hr.

UP has generated ULEL fleet average credits from 2006 through 2010, by operating genset and battery-electric hybrid switch locomotives, which are 50 to 75 percent cleaner than required. These advanced technology locomotives have provided the South Coast Air Basin with significant early emission reductions and public health benefits. For 2010, UP has applied 0.8 g/bhp-hr of ULEL credit to its fleet average. Therefore, we find that the adjusted final fleet average for 2010 meets the required 5.5 g/bhp-hr NOx compliance level set forth in the 1998 Agreement.

As we have discussed with your staff, ARB will make all of the information available publicly except for individual locomotive activity levels, which have been determined as business confidential according to California Government Code Section 6254.7. The activity data will be aggregated by tier or emission standard level.

Should you have any questions regarding UP's compliance with the 1998 Agreement, please contact me at (916) 324-0062 or cmarvin@arb.ca.gov or Mr. Harold Holmes, Manager, Rail Strategies Section at (916) 324-8029 or hholmes@arb.ca.gov.

Sincerely,



Cynthia Marvin, Chief
Stationary Source Division

cc: See next page.

Mr. Robert M. Grimalia
September 13, 2012
Page 3

cc: Mr. Lanny Schmid, Director
Environmental Operations
Union Pacific Railroad
1400 Douglas Street, STOP 1030
Omaha, Nebraska 68179

Ms. Margo T. Oge, Director
U.S. Environmental Protection Agency
Office of Transportation and Air Quality (6401A)
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Mr. William Charmley
Deputy Director
U.S. Environmental Protection Agency
Office of Transportation and Air Quality
Assessment and Standards Division
2000 Traverwood Drive
Ann Arbor, Michigan 48105

Harold Holmes, Manager
Rail Strategies Section



Air Resources Board



Matthew Rodriguez
Secretary for
Environmental Protection

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov

Edmund G. Brown Jr.
Governor

September 13, 2012

Mr. Robert M. Grimalia
Vice President
Safety, Security, Environment and CSO
Union Pacific Railroad
1400 Douglas Street, STOP 1180
Omaha, Nebraska 68179-1180

Dear Mr. Grimalia:

This letter is to inform you that Air Resources Board (ARB) staff has completed its review of Union Pacific Railroad's (UP) submittals for Ultra Low Emitting Locomotive (ULEL) credit as provided for in the 1998 South Coast Locomotive Fleet Average Emissions Program (1998 Agreement).

The 1998 Agreement provides the opportunity to create ULEL credit as an incentive to a participating railroad to introduce the cleanest locomotives into the South Coast Air Basin. Since 2006, UP has been operating genset and battery-electric hybrid locomotives that are 50 to 75 percent cleaner than required. These advanced technology locomotives have provided significant emission reductions as well as local and regional public health benefits.

Our review covered UP's submittals for calendar years 2006, 2007, 2008, 2009 and 2010. Each submittal included the following:

- (1) UP's submittal of certification: This letter is signed by the railroad and certifies that the information in this report is true, accurate, and complete.
- (2) UP's summary information: This is information provided by the railroad regarding the methodology used to generate fleet average emission credits for the 1998 Agreement (Form F-S).
- (3) UP's calculation for ULEL credit: This information includes individual locomotive days of operation and emission levels, as well as calculations and any necessary adjustments (Form F-D-1 through F-D-4).

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Mr. Robert M. Grimalia
September 13, 2012
Page 2

Upon review, ARB has determined that the submitted documents are complete and meet the reporting requirements set forth in the 1998 Agreement. ARB analyzed individual locomotive emission and activity levels to review the amount of ULEL credit supported by UP's submittals. We have determined that, for calendar years 2006 through 2010, UP has accumulated a total of 11.8 grams per brake horsepower-hour (g/bhp-hr) of ULEL credit. Similar to a bank transaction, the ULEL credit can be deposited, then withdrawn in the future in order to comply with the NOx fleet average of 5.5 g/bhp-hr. The maximum pre-2010 ULEL credit that can be withdrawn annually is 1.3 g/bhp-hr.

As we have discussed with your staff, ARB will make all of the information available publicly except for individual locomotive activity levels, which have been determined to be business confidential according to California Government Code Section 6254.7. The activity data will be aggregated by tier or emission standard level.

Should you have any questions regarding our determinations on UP's submittals for ULEL credit, please contact me at (916) 324-0062 or cmarvin@arb.ca.gov, or Mr. Harold Holmes, Manager, Rail Strategies Section at (916) 324-8029 or hholmes@arb.ca.gov.

Sincerely,



Cynthia Marvin, Chief
Stationary Source Division

cc: See next page.

Mr. Robert M. Grimalia
September 13, 2012
Page 3

cc: Mr. Lanny Schmid, Director
Environmental Operations
Union Pacific Railroad
1400 Douglas Street, STOP 1030
Omaha, Nebraska 68179

Ms. Margo T. Oge, Director
U.S. Environmental Protection Agency
Office of Transportation and Air Quality (6401A)
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Mr. William Charmley
Deputy Director
U.S. Environmental Protection Agency
Office of Transportation and Air Quality
Assessment and Standards Division
2000 Traverwood Drive
Ann Arbor, Michigan 48105

Harold Holmes, Manager
Rail Strategies Section



DATE 9/14/12		
ACTION (✓)		COPIED (✓)
RA	RA	✓
DRA	DRA	
✓ AIR	AIR	
CED	CED	
MTS	MTS	
OPA	OPA	
✓ ORC	ORC	
# FUND	# FUND	
SCFO	SCFO	
WASTE	WASTE	
WATER	WATER	
		TR ✓

September 14, 2012

VIA HAND DELIVERY, E-MAIL AND CERTIFIED MAIL
CERTIFIED MAIL NO. 7000 1670 0005 4806 1128

Mr. Jared Blumenfeld
Regional Administrator
United States Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, CA 94105

Re: California's August 30, 2012 Submittal of South Coast Air Quality Management District Rules 3501 and 3502 for Inclusion in the California State Implementation Plan – Request for Prompt EPA Determination of Incompleteness

Dear Mr. Blumenfeld:

To supplement our September 12 letter to you on the above topic, enclosed are letters from the California Air Resources Board ("ARB") dated September 13, 2012 determining that the Union Pacific Railroad Company and BNSF Railway Company ("Railroads") have fully complied with the provisions of the "1998 Memorandum of Mutual Understandings and Agreements, South Coast Fleet Average Emissions Program" for their operations in the South Coast Air Quality Management District in 2010. These determinations were based on ARB's review of actual activity information for thousands of locomotives operating in the South Coast Air Basin during 2010. Based on this information, ARB found that the Railroads had introduced advanced technology locomotives in the District, as well as provided significant early emission reductions and public health benefits.

As we noted in our September 12 letter, the emissions calculations in ARB's August 30 submission of the SCAQMD Idling Rules as a revision to the SIP fail to account for the substantial idling reductions which have resulted from the Railroads' accelerated introduction of new and remanufactured locomotives in the District under the 1998 MOU. EPA is crediting California's SIP with reductions from that 1998 MOU and should determine that the August 30 SIP submission is not complete unless and until the SCAQMD and/or ARB fully account for the idling reductions resulting from the 1998 MOU.

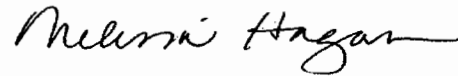
Mr. Jared Blumenfeld
September 14, 2012
Page 2

We ask that you place this letter and its attachments in the rulemaking docket that EPA creates regarding ARB's August 30 submission and that EPA Region 9 consider the attached information as part of its consideration of the completeness of that submission.

Sincerely,



Michael J. Rush
Associate General Counsel
Association of American Railroads



Melissa B. Hagan
Senior General Attorney
Union Pacific Railroad Company



Russell J. Light
Senior General Attorney
BNSF Railway Company

Encs.

cc: Ms. Margo Oge
Ms. Deborah Jordan
Mr. Richard Corey
Ms. Cynthia Marvin
Dr. Barry Wallerstein



Matthew Rodriguez
Secretary for
Environmental Protection

Air Resources Board

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov



Edmund G. Brown Jr.
Governor

September 13, 2012

Mr. Michael Stanfill, Director
Environmental Engineering and
Program Development
BNSF Railway Company
920 SE Quincy
Topeka, Kansas 66612-1116

Dear Mr. ^{mike}Stanfill:

The Air Resources Board (ARB) received BNSF Railway's (BNSF) 2010 Fleet Average Agreement Annual Compliance Report (Compliance Report) pursuant to Section IV.B. of the 1998 Memorandum of Mutual Understanding and Agreements, South Coast Locomotive Fleet Average Emissions Program (1998 Agreement). ARB staff has determined that BNSF has fully complied with provisions of the 1998 Agreement for its operations in 2010.

BNSF's Compliance Report included the following:

- (1) BNSF's letter of certification: This letter is signed by the railroad and certifies that the information in this report is true, accurate and complete.
- (2) BNSF's fleet summary information: This is information regarding the methodology used by the railroad to comply with the 1998 Agreement (Form F-S).
- (3) BNSF's fleet average calculation: This information includes individual locomotive megawatt-hours and emission levels, as well as calculations and any necessary adjustments (Form F-A-1 through Form F-A-6).

Starting in calendar year 2010, the 1998 Agreement requires that BNSF have an annual locomotive final fleet average of 5.5 grams per brake horsepower-hour (g/bhp-hr) for oxides of nitrogen (NOx) for locomotive operations in the South Coast Air Basin. Additionally, the 1998 Agreement allows BNSF to use accumulated fleet average credits, including credits accrued from the use of ultra-low emitting locomotives (ULEL) in the South Coast Air Basin, in order to meet the locomotive final fleet average.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Printed on Recycled Paper

Mr. Michael Stanfill, Director

September 13, 2012

Page 2

ARB reviewed BNSF's initial submittal of its Compliance Report, which included activity information (in megawatt-hours) and emission levels for over 1,300 individual locomotives in 2010. Staff assessed the accuracy of BNSF's data by comparison with extensive locomotive information ARB staff has collected from field surveys, inspection reports, and locomotive inventories. As a result, modifications were made to the initial BNSF fleet average. After final changes and reviews were completed, ARB staff determined that, for calendar-year 2010, BNSF's final fleet average meets the required 5.5 g/bhp-hr NOx compliance level set forth in the 1998 Agreement.

BNSF has generated ULEL fleet average credits from 2008 through 2010 by operating line haul locomotives that are about 30 percent cleaner than required. These locomotives have provided the South Coast Air Basin with significant early emission reductions and public health benefits. For 2010, BNSF did not need to apply any ULEL credit to adjust its initial fleet average.

As we have discussed with your staff, ARB will make all of the information available publicly except for individual locomotive activity levels, which have been determined to be business confidential according to California Government Code Section 6254.7. The activity data will be aggregated by tier or emission standard level.

Should you have any questions regarding BNSF's compliance with the 1998 Agreement, please contact me at (916) 324-0062 or cmarvin@arb.ca.gov, or Mr. Harold Holmes, Manager, Rail Strategies Section at (916) 324-8029 or hholmes@arb.ca.gov.

Sincerely,



Cynthia Marvin, Chief
Stationary Source Division

cc: See next page.

Mr. Michael Stanfill, Director
September 13, 2012

Page 3

cc: Mr. John Lovenburg
Vice President
Environmental
BNSF Railway Company
2500 Lou Menk Drive
Fort Worth, Texas 76131

Mr. Ryan Mills, Manager
Environmental Operations
BNSF Railway Company
4515 Kansas Avenue
Kansas City, Kansas 66106

Ms. Margo T. Oge, Director
U.S. Environmental Protection Agency
Office of Transportation and Air Quality (6401A)
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Mr. William Charmley
Deputy Director
U.S. Environmental Protection Agency
Office of Transportation and Air Quality
Assessment and Standards Division
2000 Traverwood Drive
Ann Arbor, Michigan 48105

Harold Holmes, Manager
Rail Strategies Section



Air Resources Board



Matthew Rodriguez
Secretary for
Environmental Protection

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov

Edmund G. Brown Jr.
Governor

September 13, 2012

Mr. Michael Stanfill, Director
Environmental Engineering and
Program Development
BNSF Railway Company
920 SE Quincy
Topeka, Kansas 66612-1116

Dear Mr. ^{Mike} Stanfill:

This letter is to inform you that the Air Resources Board (ARB) staff has completed its review of BNSF Railway's (BNSF) submittals for Ultra Low Emitting Locomotive (ULEL) credit as provided for in the 1998 South Coast Locomotive Fleet Average Emissions Program (1998 Agreement).

The 1998 Agreement provides the opportunity to create ULEL credit as an incentive to a participating railroad to introduce the cleanest locomotives into the South Coast Air Basin. Since 2008, BNSF has been operating line haul locomotives that are 30 percent cleaner than required. These locomotives have provided significant emission reductions as well as local and regional public health benefits.

Our review covered BNSF's submittals for calendar years 2008, 2009 and 2010. Each submittal included the following:

- (1) BNSF's letter of certification: This letter is signed by the railroad and certifies that the information in this report is true, accurate, and complete.
- (2) BNSF's summary information: This is information provided by the railroad regarding the methodology used to generate fleet average emission credits for the 1998 Agreement (Form F-S).
- (3) BNSF's calculation for ULEL credit: This information includes individual locomotive days of operation and emission levels, as well as calculations and any adjustments (Form F-D-1 through F-D-4).

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Printed on Recycled Paper

Mr. Michael Stanfill, Director
September 13, 2012
Page 2

Upon review, ARB has determined that the submitted documents are complete and meet the reporting requirements set forth in the 1998 Agreement. ARB analyzed individual locomotive emission and activity levels to review the amount of ULEL credit supported by BNSF's submittals. We have determined that, for calendar years 2008 through 2010, BNSF has accumulated a total of 1.9 grams per brake horsepower-hour (g/bhp-hr) of ULEL credit. Similar to a bank transaction, the ULEL credit can be deposited then withdrawn in the future in order to comply with the NOx fleet average of 5.5 g/bhp-hr. The maximum pre-2010 ULEL credit that can be withdrawn annually is 1.3 g/bhp-hr.

As we have discussed with your staff, ARB will make all of the information available publicly except for individual locomotive activity levels, which have been determined to be business confidential according to California Government Code Section 6254.7. The activity data will be aggregated by tier or emission standard level.

Should you have any questions regarding BNSF's submittals ULEL credit, please contact me at (916) 324-0062 or cmarvin@arb.ca.gov or Mr. Harold Holmes, Manager, Rail Strategies Section at (916) 324-8029 or hholmes@arb.ca.gov.

Sincerely,



Cynthia Marvin, Chief
Stationary Source Division

cc: See next page.

Mr. Michael Stanfill, Director

September 13, 2012

Page 3

cc: Mr. John Lovenburg
Vice President
Environmental
BNSF Railway Company
2500 Lou Menk Drive
Fort Worth, Texas 76131

Mr. Ryan Mills, Manager
Environmental Operations
BNSF Railway Company
4515 Kansas Avenue
Kansas City, Kansas 66106

Ms. Margo T. Oge, Director
U.S. Environmental Protection Agency
Office of Transportation and Air Quality (6401A)
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Mr. William Charmley
Deputy Director
U.S. Environmental Protection Agency
Office of Transportation and Air Quality
Assessment and Standards Division
2000 Traverwood Drive
Ann Arbor, Michigan 48105

Harold Holmes, Manager
Rail Strategies Section



Matthew Rodriguez
Secretary for
Environmental Protection

Air Resources Board

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov



Edmund G. Brown Jr.
Governor

September 13, 2012

Mr. Robert M. Grimalia
Vice President
Safety, Security, Environment and CSO
Union Pacific Railroad
1400 Douglas Street, STOP 1180
Omaha, Nebraska 68179-1180

Dear Mr. Grimalia:

The Air Resources Board (ARB) received Union Pacific Railroad's (UP) 2010 Fleet Average Agreement Annual Compliance Report (Compliance Report) pursuant to Section IV.B. of the 1998 Memorandum of Mutual Understanding and Agreements, South Coast Locomotive Fleet Average Emissions Program (1998 Agreement). ARB staff has determined that UP has fully complied with provisions of the 1998 Agreement for its operations in 2010.

UP's Compliance Report included the following:

- (1) UP's letter of certification: This letter is signed by the railroad and certifies that the information in this report is true, accurate and complete.
- (2) UP's fleet summary information: This is information regarding the methodology used by the railroad to comply with the 1998 Agreement (Form F-S).
- (3) UP's fleet average calculation: This information includes individual locomotive megawatt-hours and emission levels, as well as calculations and any necessary adjustments (Form F-A-1 through Form F-A-6).

Starting in calendar year 2010, the 1998 Agreement requires that UP have an annual locomotive final fleet average of 5.5 grams per brake horsepower per hour (g/bhp-hr) for oxides of nitrogen (NOx) for locomotive operations in the South Coast Air Basin. Additionally, the 1998 Agreement allows UP to use accumulated fleet average credits, including credits accrued from the use of ultra-low emitting locomotives (ULEL) in the South Coast Air Basin, in order to meet the locomotive final fleet average.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Mr. Robert M. Grimalia
September 13, 2012
Page 2

ARB reviewed UP's initial submittal of its Compliance Report, which included activity information (in megawatt-hours) and emission levels for over 4,700 individual locomotives in 2010. Staff assessed the accuracy of UP's data by comparison with extensive locomotive information ARB staff has collected from field surveys, inspection reports, and locomotive inventories. As a result, modifications were made to the initial UP fleet average. After final changes and reviews were completed, ARB staff determined that, for calendar year 2010, UP had an initial fleet average NOx level of 6.3 g/bhp-hr.

UP has generated ULEL fleet average credits from 2006 through 2010, by operating genset and battery-electric hybrid switch locomotives, which are 50 to 75 percent cleaner than required. These advanced technology locomotives have provided the South Coast Air Basin with significant early emission reductions and public health benefits. For 2010, UP has applied 0.8 g/bhp-hr of ULEL credit to its fleet average. Therefore, we find that the adjusted final fleet average for 2010 meets the required 5.5 g/bhp-hr NOx compliance level set forth in the 1998 Agreement.

As we have discussed with your staff, ARB will make all of the information available publicly except for individual locomotive activity levels, which have been determined as business confidential according to California Government Code Section 6254.7. The activity data will be aggregated by tier or emission standard level.

Should you have any questions regarding UP's compliance with the 1998 Agreement, please contact me at (916) 324-0062 or cmarvin@arb.ca.gov or Mr. Harold Holmes, Manager, Rail Strategies Section at (916) 324-8029 or hholmes@arb.ca.gov.

Sincerely,



Cynthia Marvin, Chief
Stationary Source Division

cc: See next page.

Mr. Robert M. Grimalia
September 13, 2012
Page 3

cc: Mr. Lanny Schmid, Director
Environmental Operations
Union Pacific Railroad
1400 Douglas Street, STOP 1030
Omaha, Nebraska 68179

Ms. Margo T. Oge, Director
U.S. Environmental Protection Agency
Office of Transportation and Air Quality (6401A)
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Mr. William Charmley
Deputy Director
U.S. Environmental Protection Agency
Office of Transportation and Air Quality
Assessment and Standards Division
2000 Traverwood Drive
Ann Arbor, Michigan 48105

Harold Holmes, Manager
Rail Strategies Section



Matthew Rodriguez
Secretary for
Environmental Protection

Air Resources Board

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov



Edmund G. Brown Jr.
Governor

September 13, 2012

Mr. Robert M. Grimalia
Vice President
Safety, Security, Environment and CSO
Union Pacific Railroad
1400 Douglas Street, STOP 1180
Omaha, Nebraska 68179-1180

Dear Mr. Grimalia:

This letter is to inform you that Air Resources Board (ARB) staff has completed its review of Union Pacific Railroad's (UP) submittals for Ultra Low Emitting Locomotive (ULEL) credit as provided for in the 1998 South Coast Locomotive Fleet Average Emissions Program (1998 Agreement).

The 1998 Agreement provides the opportunity to create ULEL credit as an incentive to a participating railroad to introduce the cleanest locomotives into the South Coast Air Basin. Since 2006, UP has been operating genset and battery-electric hybrid locomotives that are 50 to 75 percent cleaner than required. These advanced technology locomotives have provided significant emission reductions as well as local and regional public health benefits.

Our review covered UP's submittals for calendar years 2006, 2007, 2008, 2009 and 2010. Each submittal included the following:

- (1) UP's submittal of certification: This letter is signed by the railroad and certifies that the information in this report is true, accurate, and complete.
- (2) UP's summary information: This is information provided by the railroad regarding the methodology used to generate fleet average emission credits for the 1998 Agreement (Form F-S).
- (3) UP's calculation for ULEL credit: This information includes individual locomotive days of operation and emission levels, as well as calculations and any necessary adjustments (Form F-D-1 through F-D-4).

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Mr. Robert M. Grimalia
September 13, 2012
Page 2

Upon review, ARB has determined that the submitted documents are complete and meet the reporting requirements set forth in the 1998 Agreement. ARB analyzed individual locomotive emission and activity levels to review the amount of ULEL credit supported by UP's submittals. We have determined that, for calendar years 2006 through 2010, UP has accumulated a total of 11.8 grams per brake horsepower-hour (g/bhp-hr) of ULEL credit. Similar to a bank transaction, the ULEL credit can be deposited, then withdrawn in the future in order to comply with the NOx fleet average of 5.5 g/bhp-hr. The maximum pre-2010 ULEL credit that can be withdrawn annually is 1.3 g/bhp-hr.

As we have discussed with your staff, ARB will make all of the information available publicly except for individual locomotive activity levels, which have been determined to be business confidential according to California Government Code Section 6254.7. The activity data will be aggregated by tier or emission standard level.

Should you have any questions regarding our determinations on UP's submittals for ULEL credit, please contact me at (916) 324-0062 or cmarvin@arb.ca.gov, or Mr. Harold Holmes, Manager, Rail Strategies Section at (916) 324-8029 or hholmes@arb.ca.gov.

Sincerely,



Cynthia Marvin, Chief
Stationary Source Division

cc: See next page.

Mr. Robert M. Grimalia
September 13, 2012
Page 3

cc: Mr. Lanny Schmid, Director
Environmental Operations
Union Pacific Railroad
1400 Douglas Street, STOP 1030
Omaha, Nebraska 68179

Ms. Margo T. Oge, Director
U.S. Environmental Protection Agency
Office of Transportation and Air Quality (6401A)
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Mr. William Charmley
Deputy Director
U.S. Environmental Protection Agency
Office of Transportation and Air Quality
Assessment and Standards Division
2000 Traverwood Drive
Ann Arbor, Michigan 48105

Harold Holmes, Manager
Rail Strategies Section



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

Office of General Counsel

Writer's Direct Dial:

909.396.2302

Fax: 909.396.2963

e-mail: bbaird@aqmd.gov

October 19, 2012

via electronic mail and U.S. Mail

Mr. Jared Blumenfeld
Regional Administrator
U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, CA 94105

Re: *Response to September 12, Letter from Railroads Regarding August 30, 2012
Submittal of South Coast AQMD Rules 3501 and 3502 for Inclusion in the
California SIP*

Dear Mr. Blumenfeld:

Introduction

Counsel for the Association of American Railroads and the two freight railroads BNSF and Union Pacific ("the Railroads") have submitted a letter to you dated September 12, 2012. That letter objects to the August 30, 2012 action by the California Air Resources Board ("CARB") in submitting South Coast Air Quality Management District ("SCAQMD") Rules 3501 and 3502 for inclusion in the California state implementation plan ("SIP"). The Railroads submitted an additional letter dated September 14, 2012, enclosing letters from CARB asserting the Railroads' compliance with MOU provisions. The railroads request EPA to determine that the SIP submittal is incomplete and return the submittal to CARB.

This letter constitutes the SCAQMD's preliminary response to the Railroads' submissions. While we intend to file a further response later, we submit that for the reasons discussed below, the Railroads' request should be rejected.

In their September 12 letter, the Railroads contend that the submittal is incomplete for three reasons: (1) the rules are preempted under the Clean Air Act ("CAA"), and CARB has not requested a waiver; (2) the submission relies on outdated data and lacks a technical justification; and (3) the submission lacks adequate evidence of state law authority. We respond to each argument in turn.

I. The Rules Are Not Preempted Under the Clean Air Act and Do Not Require a Waiver

Rule 3501: While alleging broadly that the Clean Air Act preempts the Rules, the Railroads' letter does not present any argument regarding Rule 3501. That rule merely requires the Railroads to keep simple records of idling events of 30 minutes or more and to file specified reports. Nor does anything in the CAA preempt such a recordkeeping and reporting rule. Therefore, this claim must be rejected.

Rule 3502: Rule 3502 requires the railroads to limit idling to no more than 30 minutes in certain circumstances. Those circumstances include when a train is *unattended*, and the crew has been relieved or has left for a meal, the locomotive is queuing for fueling, maintenance, or servicing; the train is in the railyard, or maintenance or diagnostics are being performed that do not require the engine to operate. The other circumstance applies to *trailing locomotives only* (the lead locomotive may continue to idle). Furthermore, it applies only when the train is notified of a delay that will exceed 30 minutes, or there is a locomotive breakdown that will result in a delay of more than 30 minutes. Exceptions from both limits exist for emergency operations, when temperatures are projected to be at 40% or lower (to protect engine coolant from freezing); or when idling is required to maintain battery charge or voltage.

An individual locomotive is not subject to Rule 3502 if it is equipped with an anti-idling device that is set at 15 minutes or less, engaged, and not tampered with. Also, instead of complying with the idling limits, a railroad may submit an "emissions equivalency plan" demonstrating that a given locomotive will achieve reductions equivalent to those it would achieve by limiting idling.

The Railroads argue that the Clean Air Act preempts Rule 3502. In doing so, they misrepresent EPA as having found that locomotive idling requirements are "standards relating to the control of emissions" that would be preempted under Section 209(e) of the CAA. (Sept. 12 letter, page 6 and fn. 12.) They are incorrect.

First, the CAA does not preempt all regulation of locomotives. As amended in 1990, the CAA for the first time included a preemption provision relevant to locomotives. That provision of the CAA, however, only preempts state and local agencies from adopting "standard(s) or other requirement(s) relating to the control of emissions" from locomotives. 42 U.S.C. §7543(e)(1) ["Section 209(e)"] As with motor vehicles, only EPA may establish emission standards that require changes in the design of locomotives. Also, as with motor vehicles, California may receive authorization (referred to as a waiver in the Sept. 12 letter) to adopt emissions standards for non-new locomotives.

Following the 1990 Amendments, and consistent with the long-established regime for motor vehicles, EPA interpreted Section 209(e) as allowing state and local agencies to adopt "in use" regulations for non-road engines. That category includes locomotives. 40 C.F.R. Part 89, Subpt. A, App. A, 59 Fed. Reg. 31306, 31339 (June 17, 1994). EPA explained: "EPA

believes that States are not precluded under Section 209 from regulating the use and operation of nonroad engines, such as regulations on hours of usage, daily mass emission limits, or sulfur limits on fuel.” *Id.* EPA’s interpretation of Section 209(e) was upheld by the D.C. Court of Appeals. *Engine Manufacturers Ass’n. v. EPA*, 88 F. 3d 1975, 1094 (D.C. Cir. 1996). Importantly, the D.C. Circuit referenced limits on idling as examples of the type of “use” limits that are not preempted by Section 209. *EMA*, 88 F. 3d at 1094.

EPA has maintained this consistent interpretation against repeated attacks. *See, American Road & Transportation Builders’ Ass’n v. EPA*, 588 F.3d. 1109 (D.C. Cir. 2009); *American Road & Transportation Builders’ Ass’n. v. EPA*, 2012 U.S. Dist. LEXIS 79282 (D.D.C. June 7, 2012). Region 9 itself has declined to change EPA’s longstanding interpretation. 76 Fed. Reg. 26609, 26611-12 (May 9, 2011). As EPA explained: “EPA has already reviewed these issues several times and is not revisiting these broader issues....” In the specific context of locomotives, EPA has found that state rules are only preempted if they affect how the manufacturer designs and manufactures new engines. 63 Fed. Reg. 18978 (April 16, 1998). EPA reached a similar conclusion with regard to a CARB truck rule that required the installation of anti-idling devices in new trucks. EPA concluded that this provision was a “standard relating to the control of emissions” and required a waiver under Section 209. 77 Fed. Reg. 9239, 9243 (Feb. 16, 2012).

The railroads misrepresent EPA’s determination on that issue. CARB’s truck rule included *two* requirements relevant to idling: (1) a requirement for manufacturers of new engines for heavy duty trucks to install a system that automatically shuts down the engine after five minutes of continuous idling; and (2) a requirement for the operator of a sleeper truck to manually shut down the engine after five minutes of continuous idling. With respect to the first requirement, EPA decided that it was a “standard” requiring a waiver because it imposes an engine design requirement relating to the control of emissions. Such design requirements are plainly preempted.

EPA’s conclusion was quite different with respect to the second provision, which required drivers in sleeper cars to stop idling after five minutes. EPA summarized CARB’s position on this provision as follows: “Read together, sections 209(a) and 209(d) make clear that operational controls, such as idling limits directed towards the operator of a vehicle, are not preempted and do not need a waiver of preemption pursuant to Section 209(b).” EPA then concluded: “EPA agrees with this analysis and *does not believe that in-use controls, such as idling limits, are preempted* by Section 209(a).” 77 Fed. Reg. 9239, 9245 (emphasis added). Thus, the Railroads’ claim--that EPA has held that idling requirements are “standards” and therefore preempted--is wrong.

Rule 3502 does not contain any requirement that locomotive manufacturers install anti-idling equipment. Instead, it requires locomotive operators to limit idling from locomotives to 30 minutes in certain cases. This requirement is exactly analogous to the sleeper car idling rule that EPA held was not preempted. While Rule 3502 does offer an *exemption* for locomotives having anti-idling devices set for 15 minutes, it does not *require* such devices. (For further

discussion of this issue, see pages 4-5 of our letter dated August 9, 2012, to Ms. Ellen Peter, CARB Chief Counsel, attached hereto.)

Finally, EPA has also confirmed its conclusion that state railroad idling rules are not preempted by the Clean Air Act (or any other statute) by approving two state idling rules into state SIPs. A Massachusetts rule was approved on October 28, 1972 (37 Fed. Reg. 23085), and a Rhode Island rule was approved on March 27, 2008 (73 Fed. Reg. 16203). Moreover, EPA has recently taken enforcement action under the Massachusetts rule (August 2010). (Copies of the cites to the EPA approval actions and a press release regarding the enforcement action are attached hereto.) EPA's position remains clear, and it refutes the Railroads' contention.

II. The SIP Submission Complies with EPA's Technical Completeness Criteria

Next, the Railroads argue that the SIP submission did not comply with EPA's technical completeness criteria. Therefore, according to the Railroads, the submission is incomplete, and EPA must treat it as "not having been made." They are incorrect. The SIP submission fully complies with EPA's technical completeness criteria.

The Railroads cite Section 2.2 of Appendix V to Part 51, which requires that a SIP submission include:

(c) Quantification of the changes in plan allowable emissions from the affected sources; estimates of changes in current actual emissions from affected sources or, where appropriate, quantification of changes in actual emissions from affected sources through calculation of the differences between certain baseline levels and allowable emissions anticipated as a result of the revision.

The first clause of this provision requires a quantification of the "changes" in "plan allowable emissions." By its own wording, this clause is only applicable where the SIP revision actually affects a plan's "allowable" emissions. Normally, the term "allowable emissions" refers to the emissions rate of a stationary source, as used in permitting, calculated by using maximum rated capacity or permit limits. 40 C.F.R. § 51.165(a)(1)(xi). The calculation results in a mass emissions limit, e.g., 4 tons per year.

In this case, no mass emissions limits applied to a railroad or a locomotive, either before the rules were adopted or after they were adopted. The absence of such mass emission limits is a common situation. For example: (1) AQMD Rule 1121 limits NO_x emissions for water heaters to 40 nanograms per joule; and (2) numerous AQMD Rules, such as 1113 and 1136, limit the VOC content of coatings to certain grams per liter. None of these rules imposes any mass emissions limit or limits "allowable" emissions. The same is true of the Railroad rules. There is no limit on miles travelled or hours operated by the locomotives. Therefore, we have provided a calculation of the change in projected actual emissions before and after the rule, which is directly analogous to the calculations we do for the vast majority of our rules, which do not set mass emissions limits. EPA has never required AQMD to use a calculation based on "allowable emissions" in such cases.

The second clause of subdivision (c) establishes two options for compliance. The second option, which follows the word “or,” provides that where appropriate, a state may quantify “changes in actual emissions from affected sources through calculations of the differences between certain baseline levels and allowable emissions anticipated as a result of the revision.” The AQMD used this second option, which allows the use of baseline emissions (i.e., those existing before the rule was adopted). AQMD quantified the change in actual emissions by calculating the differences between (1) baseline emission levels at the time of rule adoption; and (2) expected actual emissions upon rule implementation.

As we have just explained, this is the method AQMD normally uses to quantify emission reductions. Although subdivision (c) refers to “allowable” emissions as compared to baseline actual emissions, in most instances—as here—no “allowable” limits have been set. Therefore, the AQMD uses projected actual emissions to make the calculation. That approach is certainly reasonable. Moreover, the purpose of this subsection is to provide a “quantification of the changes in actual emissions.” Therefore it is appropriate to look at baseline actual emissions before the rule compared to projected actual emissions after the rule.

The Railroads thus misquote subdivision (c) of the completeness criteria when they say it *requires* “estimates of changes in current actual emissions from affected sources.” The wording does not support that claim. In short, AQMD used the same method it typically uses to calculate emissions reductions from the rules, and it clearly complied with the second option allowed by EPA’s completeness criteria.

The Railroads, however, argue that the AQMD was required to recalculate the emission reductions to take into account any benefits that may have resulted from the Railroads acquiring locomotives that have anti-idling devices since the time the rule was adopted. Nothing in subdivision (c) requires such a recalculation. Moreover, if such a recalculation were required, only the Railroads possess the information that would be necessary in order to perform such a calculation. They have not provided that information.

Nor is such information already available to AQMD, as argued by the railroads. When CARB provided AQMD with locomotive emissions for the 2012 AQMP, the emission estimates did not break out idling emissions from other types of emissions. Further, CARB has stated that locomotive-specific data provided to CARB by the railroads will not be available. (See Railroads’ Sept. 14 2012 letter to EPA, enclosing CARB letter dated September 13.)

Furthermore, while arguing that approximately 99% of their locomotives are now equipped with anti-idling devices, the Railroads provide no data on how those devices are set or when they are overridden. Notably, the railroads studiously avoid even claiming that they are in compliance with federal anti-idling requirements. They present no evidence to support their claim that actual emission reductions are overestimated by a factor of ten for NOx and a factor of six for PM. And they present no evidence that the emission reduction estimates were not accurately identified at the time of rule adoption.

More importantly, EPA would be establishing a precedent with significant adverse repercussions if it held that emission reductions must be recalculated to account for any delay between rule adoption and SIP submission. Such delays are common when industry challenges a rule in litigation, since waiting for the conclusion of the litigation prevents confusion that would result if EPA has already approved a rule into the SIP and the rule is later struck down. The Railroads' arguments on this issue merely boil down to a claim that since the rule adoption, they have taken actions that constitute compliance, at least in part, with the AQMD rule, whether due to agreements with CARB or due to a subsequently adopted EPA rule. Those steps toward compliance provide no support for a claim that the emissions estimates must be recalculated.

EPA's acceptance of the railroads' arguments would have widespread adverse policy consequences. Any time a regulated industry begins complying with a rule before it is submitted for inclusion into the SIP, they would be able to argue that the submittal is incomplete for failing to measure current emissions. Moreover, any time a different level of government subsequently adopts a requirement that arguably provides similar benefits to an earlier adopted rule, at least in part, the industry could argue that the SIP submittal is not providing the claimed benefits and thus is incomplete.

Such a practice would discourage adoption of air quality requirements by each jurisdiction that has authority, as occurred here. EPA lacks authority to adopt "use" limitations, but the AQMD does have that authority. Hence, the AQMD adopted the idling rule in question. Similarly, AQMD does not have authority to adopt "standards" for locomotives within the meaning of Section 209(e), but EPA does, and it adopted requirements for the installation of anti-idling devices in new locomotives. If the emissions benefits of the two sets of rules overlap in this manner, this overlap should not result in the rejection of the SIP submission as incomplete.

The railroad's position is also inconsistent with the provision of Section 116 of the CAA that authorizes state and local governments to adopt more stringent requirements than those adopted by EPA. EPA has no authority to reject a SIP submission merely because its benefits may overlap with the benefits of a federal rule. In this case, the federal rule may easily be circumvented simply by overriding the anti-idling device. AQMD's idling rule thus can serve as an important backstop in assuring that idling reductions actually occur.

Finally, the Railroads express concern that CARB's SIP Inventory has already taken credit for emission reductions resulting from implementation of the 1998 and 2005 MOUs. This argument, however, is irrelevant, because CARB and the AQMD have not asked EPA to adjust the SIP inventory based on this SIP revision submitting the Railroad rules. (Moreover, AQMD has serious doubts about the efficacy and enforceability of the 2005 MOU idling requirements. See attached letter to CARB regarding this issue.) Again, the AQMD rule serves to ensure that idling reductions will actually occur.

Contrary to the Railroads' claim, AQMD did not "admit" that the submittal fails to satisfy EPA's completeness criteria. Rather, AQMD stated that, because CARB has already taken credit in the emissions inventory for reductions due to the 1998 and 2005 MOUs, the *additional SIP creditable emission reductions* would likely be smaller than those estimated in the Rule Evaluation form. (Emphasis added). AQMD is not asking EPA to credit additional reductions to the SIP inventories. Instead, AQMD is only asking EPA to approve the rules into the SIP so that they may be enforced. (See also discussion of this issue in AQMD's March 28, 2012 letter to Ellen Peter, CARB Chief Counsel, pages 3-4, which was included in the SIP submittal.)

III. The District Has Authority under State Law to Adopt the Rules

The Railroads argue that the SIP submittal fails to satisfy administrative completeness criteria for SIPs because AQMD lacks authority under state law to adopt the rules. The District has thoroughly addressed this issue in its March 28, 2012, letter to Ms. Peter (pages 8-11). In short, the AQMD has authority under state law, and CARB has recognized that authority not only in submitting this SIP revision, but in prior written statements.

The railroads continue to emphasize their concern that the AQMD's November 2011 memo regarding state law authority failed to discuss the federal trial court's decision that included language saying the AQMD lacked state law authority. They completely ignore the fact that AQMD responded to that concern by submitting a revised memo, dated March 28, 2012, attached hereto, that discussed the federal trial court decision. AQMD explained both why the decision was not binding as well as why it was not correct. This submission was in addition to the letter to CARB's Chief Counsel, cited above, which also thoroughly discussed the state law issue.

IV. The Railroads' Continuing Opposition to the SIP Submittal Contradicts their Position before the Federal Court of Appeals

While a regulated industry normally may oppose the submission into the SIP of a rule affecting that industry, in this case, the Railroads' opposition directly contradicts the position they took earlier. They persuaded the Ninth Circuit Court of Appeals not to undertake the task of harmonizing the Clean Air Act with the Interstate Commerce Commission Termination Act by arguing that the AQMD should submit the rules into the SIP first. As Judge Walter stated in denying the Railroads' motion to hold AQMD executives in contempt of court for submitting the rules to CARB, "Plaintiffs clearly represented to the Ninth Circuit that it would be appropriate for the District to submit the Rules to CARB. And the Ninth Circuit tacitly approved that position...." (See Order Granting Defendants' Motion to Vacate Order to Show Cause, Case CV-06-01416-JFW(PLAx), p. 4.; attached hereto.)

Now, however, the Railroads are attempt prevent this submission, and thus ultimately prevent the Ninth Circuit from harmonizing the two statutes. The position that they now take flatly conflicts with the position they took before the Ninth Circuit. EPA should not condone such flagrant gamesmanship.

Mr. Jared Blumenfeld

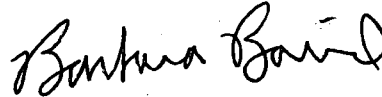
October 19, 2012

Page 8

Conclusion

Based on the foregoing, the District respectfully requests that EPA deny the Railroads' request to find the SIP submission incomplete, and proceed as expeditiously as possible to approve the rules into the SIP.

Very truly yours,



Barbara Baird
District Counsel

BBB:vmr

e/share/bb/railroads/letter-blumenfeld10-5-12.doc

cc: Barry R. Wallerstein, D.Env., SCAQMD, Executive Officer
Ellen Peter, CARB, Chief Counsel
Nina Spiegelman, EPA, Office of Regional Counsel

TAB 1

(Attachment to Letter dated 10/19/12
to Mr. Jared Blumenfeld, EPA, from Barbara Baird, SCAQMD)



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

August 9, 2012

via electronic mail

Ellen Peter
Chief Counsel
California Air Resources Board
1001 "I" Street
Sacramento, CA 95814
epeter@arb.ca.gov

Re: Railroads' Preemption Arguments

Dear Ms. Peter:

Thank you for discussing with us the various issues the railroads have raised concerning the District's request that the Air Resources Board submit Rules 3501 and 3502 to EPA for inclusion in the state implementation plan (SIP). In our conversation of July 26, 2012, we agreed to provide a written explanation of our position regarding the railroads' various preemption arguments. Our position is set forth below.

I. General Principles of Preemption by Specific Statutory Language

Of course Congress may expressly preempt state law. Also, the U.S. Supreme Court has stated that preemption may be implied based on conflict with federal law. Conflict preemption may be found where "it is impossible for a private party to comply with both state and federal requirements." *English v. General Elec. Co.*, 496 U.S. 72, 79 (1990). Conflict preemption may also exist where state law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Freightliner Corp. v. Myrick*, 514 U.S. 280, 287 (1995). Finally, the state law may be preempted where Congress acts in a field that Congress intended the federal government to occupy exclusively, such as where there is a scheme of federal regulation so pervasive as to leave no room for state action, or where the field is one in which the federal interest is so dominant as to preclude enforcement of state laws on the subject. *English v. General Electric Co.*, 496 U.S. at 72.

II. Express Preemption

We start with the proposition that Section 116 of the Clean Air Act generally provides that federal regulation under the Act does not preempt more stringent state regulations. That section provides in pertinent part:

Except as otherwise provided in sections 1857c-10(c), (e), and (f) (as in effect before August 7, 1977), 7543, 7545(c)(4) and 7573 of this title (preempting certain State regulation of moving sources) nothing in this chapter shall preclude or deny the right of any State or political subdivision thereof to adopt or enforce (1) any standard or limitation respecting emissions of air pollutants or (2) any requirement respecting control or abatement of air pollution....

42 U.S.C. §7416..

One of the preemptive sections listed in Section 116 is Section 209 [42 U.S.C. §7543]. That section includes specific preemptive provisions related to locomotives in Section 209(e), as follows:

(e)(1) No State or any other political subdivision thereof shall adopt or attempt to enforce any standard or other requirement relating to the control of emissions from either of the following new nonroad engines or nonroad vehicles subject to regulation under this chapter—

...

(B) New locomotives or new engines used in locomotives.

(2)(A) In the case of any nonroad vehicles or engines other than those referred to in Paragraph (A) or (B) of paragraph (1), the Administrator shall, after notice and opportunity for public hearing, authorize California to adopt standards and other requirements....[provided certain conditions are met].

Any argument that Section 209(e) [42 U.S.C. §7543(e)] expressly preempts Rule 3502 must be rejected. The basic requirement of Rule 3502 is a 30-minute limit on idling in certain circumstances, subject to certain exemptions. These idling limits constitute “in-use” or operational requirements which are not preempted under §209(e). *Engine Mfrs’ Ass’n v. EPA* 88 F.3d 1075, 1094 (D.C. Cir. 1996). The court specifically referenced idling restrictions as a type of “in-use” restriction that is not preempted. *Id.*

III. Alleged Conflict Preemption Based on Express Conflict with EPA Rules

The Railroads argue that Rule 3502 conflicts with EPA’s idling requirements because EPA allows a locomotive to idle to provide necessary heating or cooling of the cab. Rule 3502 does not contain such an exemption. However, such an exemption is not needed in Rule 3502. This is because the rule only applies to (1) unattended locomotives (which do not need comfort heating or cooling); *see* Rule 3502(d)(1), or, in other cases, (2) trailing locomotives, in which case the lead locomotive may continue to idle and provide heating and cooling in the cab (i.e., lead locomotive); *see* Rule 3502(d)(2).

The Railroads also argue that Rule 3502 conflicts with federal requirements because it does not allow the locomotive to idle to maintain airbrake pressure. This is an illusory claim. Under Rule 3502(d)(2), only the trailing locomotives must be shut down. The lead locomotive may continue to idle, and supply power to the airbrakes. Under Rule 3502(d)(1), lead locomotives must be shut down only if the train is left unattended. In such a case, federal rules require that whenever a train is unattended, sufficient handbrakes must be set to hold the train without the airbrakes. [Admitted Facts 16, 17 from trial court action in *Ass'n of American Railroads v. SCAQMD*.]

UP and BNSF both have rules requiring that handbrakes be set to hold a train whenever it is unattended, whether it is idling or not. (11/29/06 Trial Transcript 81:15-21; Trial Exh. 418, BNSF Rule 102.1, 102.11, UP Rule 32-1.) The requirement for handbrakes is triggered by leaving the train unattended, not by the fact that it is no longer idling. The requirement to use handbrakes on an unattended train addresses any possible safety concerns. Nor do the rules cause any additional delay (in order to set and release handbrakes) since this must be done whenever the train is unattended, not just when it shuts down.

Nor is it likely that trains would be left unattended long enough to cause the airbrakes to be no longer operable, or even to trigger the federal requirement for a test. Even if all locomotives are shut down, the airbrakes do not go off, but remain operational for many hours or even days. Federal safety rules do not even require an airbrake test unless the train has been shut down for four hours. (Quilty Depo. 66:21-67:5; 11/29/06 Trial Transcript 89:4-18 (Willis).) Therefore, there is no possible issue concerning the ability of airbrakes to operate unless the entire train has been shut down for at least four hours. At trial, the railroads did not present any evidence that the train would frequently be left unattended for such periods. As a result, Rule 3502 does not present any safety risk or delay relative to its effect on the application of airbrakes.

The Railroads point out that under EPA regulations, a manufacturer may limit the locomotive automotive shutdown/restart cycle to 6 times per day. This objection is unclear. Rule 3502 has nothing to do with how many times the locomotive has been shut down in a day.

Because it is not impossible to comply with both the federal regulation and the District regulation, there is no conflict with federal requirements. *English v. General Elec. Co.*, 496 U.S. 72, 79 (1990).

The Railroads complain that Rule 3502 requires anti-idle devices to be "engaged" but does not define the term. They further argue that Rule 3502 states that anti-idle devices may not be "tampered" with but does not define the term "tampered," and thus may be interpreted differently than the way EPA interprets the term. These are implausible arguments. The Railroads never raised these concerns during the rulemaking or the prior extensive litigation. These terms are in common use in English speech and their meaning with reference to a piece of equipment is obvious. Hence, the railroads' new arguments are mere makeweight. In any event, the meaning of "engage" with respect to a piece of machinery is set forth at Oxforddictionaries.com: *verb*: (with reference to a part of a machine or engine) "move into position so as to come into operation." *Examples*: "the clutch will not engage"; "the driver

engaged the gears and pulled out into the road.” Similarly, “tamper with” is defined as “interfere with (something) in order to cause damage or make unauthorized alteration.” *Example:* “someone tampered with the brakes on my car.”

In the Preamble to its 1998 rule, EPA states, under the heading “Tampering,” that it is adopting a regulatory provision that prohibits any person from removing or rendering inoperative any device or element of design installed on or in a locomotive or locomotive engine in compliance with EPA’s regulations prior to introduction into commerce, and from knowingly removing or rendering inoperative any such device or element of design after introduction into commerce.

63 Fed. Reg. 18978, 18991 (April 16, 1998)

EPA states that it is basing this definition on existing policies relative to tampering in the motor vehicle context. 63 Fed. Reg. at 18992. Section 203(a)(3)(A) of the Act does not use the word “tampering” but is essentially the same as the EPA definition discussed above. The District does not foresee interpreting the word “tamper” in a manner that would conflict with EPA’s interpretation.

The Railroads note that only new and remanufactured locomotives are required by EPA to have idling devices installed, so that states cannot require such devices on non-new engines. The short answer is that Rule 3502 simply does not require the installation of anti-idling devices on any “non-new” locomotives. Instead, the rule exempts locomotives that have anti-idling devices installed and set at 15 minutes. Rule 3502(d)(1).

IV. Alleged Preemption of Anti-Idling Device Provisions of Rule 3502 based on Conflict with EPA 30-Minute Idling Rule

A. Supreme Court Precedent

Rule 3502 exempts locomotives that are equipped with anti-idling devices set at 15 minutes. The Railroads contend that the EPA idling rules preempt this provision because EPA rules allow an anti-idling device to be set at 30 minutes. However, EPA rules clearly allow an anti-idling device to be set at less than 30 minutes. [“Except as allowed by paragraph (g)(2) of this section, the stop/start systems must shut off the main locomotive engine(s) after 30 minutes of idling (*or less*).” 40 C.F.R. §1033.115(g)(1).] Therefore, EPA rules clearly allow railroad operators to have their anti-idling devices set at 15 minutes, in order to take advantage of the exemption from Rule 3502. We understand that a major aftermarket anti-idling equipment manufacturer already sets its devices at 15 minutes. Certainly, EPA rules do not require locomotives to idle for 30 minutes rather than 15. Most importantly, however, Rule 3502 does not require devices to be set at 15 minutes; it merely exempts locomotives that have such devices.

The law as established by the U.S. Supreme Court allows the District to offer the railroads the option of installing anti-idling devices. In *Ray v. Atlantic Richfield Co.*, 435 U.S. 151 (1978), the U.S. Supreme Court held that state regulation of the design and construction of oil tankers was

preempted by federal law, the Ports & Waterways Safety Act. 435 U.S. at 163-164. On the other hand, the state was free to establish requirements for tug escorts for tankers that applied only to ships that did not satisfy the design requirements of the state law. 435 U.S. at 169. Both the tug escort requirements and the design requirements were intended to prevent marine pollution resulting from accidents. The Supreme Court explained: "Given the validity of a general rule prescribing tug escorts for all tankers, [the State of] Washington is also privileged, insofar as the Supremacy Clause is concerned, to waive the rule for tankers having specified design characteristics." 435 U.S. at 173.

Rule 3502 operates in exactly the same way. Its basic provisions (the 30-minute idling limits) constitute "in use" or operational requirements which are not preempted by the Clean Air Act. *EMA v. EPA*, 88 F.3d 1075, 1094 (D.C. Cir. 1996). The court specifically referenced idling restrictions as a type of "in use" restriction that is not preempted. Therefore, a state or local agency may exempt from its railroad operational limits equipment that meets specified requirements (e.g., for anti-idling devices) even if the agency would be preempted from directly requiring such devices. The fact that both provisions are intended to reduce air pollution does not change this result, since in *Ray*, both provisions were intended to enhance safety and prevent marine pollution due to accidental spills. 435 U.S. at 169, 171.

B. No Evidence of Intent to Preempt

Finally, the EPA anti-idling device rules do not purport to preempt more stringent state requirements. As discussed above, CAA §116 generally authorizes state and local agencies to adopt and enforce more stringent requirements than those imposed by the CAA or EPA rules thereunder. The issue here, therefore, is whether the EPA regulation regarding idling expressly preempts more stringent requirements. In other words, since EPA rules allow an anti-idling device to be set at 30 minutes, do they preclude a state or local agency from requiring the device to be set at 15 minutes?¹

The answer is clearly "no." EPA's regulation provides that the anti-idling device "must shut off the main locomotive engine(s) after 30 minutes of idling (*or less.*)"

This language obviously does not express any intent that the devices must be set at 30 minutes rather than any lesser time limit. Nor does it express any intent that the locomotive must idle under circumstances where Rule 3502 would preclude idling. Notably, EPA's 2008 rulemaking setting locomotive idling requirements contains no hint whatsoever of any intent to preempt more stringent state and local requirements.

¹ This discussion is hypothetical since Rule 1302 does not require the devices to be set at 15 minutes but instead merely provides an exemption for locomotives with devices set at 15 minutes.

C. No Need for National Uniformity for Operational Requirements

The Railroads contend that EPA's 2008 rules require national uniformity in idling requirements. We disagree. Unlike design requirements, there is no logical reason why operational requirements should be nationally uniform. As noted in *EMA v. EPA*, 88 F.3d 1015, idling restrictions are a classic type of use and operational requirement that is not preempted under the CAA and may vary from region to region. Indeed, even before Rule 3502 was adopted, the Railroads observed and respected local "no idling" and limited time idling zones. See e.g., UP Commerce Yard (Rule 32.20) and Riverside "No Idle Zone (UP Los Angeles Areas Timetable #3).

BNSF has similar areas where they have agreed to not leave locomotives idling. (11/28/06 Trial Transcript 215:20-216.2.) The Railroads already comply with local "use" requirements relative to speed, highway crossings, and the use of whistles or horns, so they can comply with rules specific to the District. Brazytis Depo. 41:1-48:2, 62:23-63:25, Quilty Depo. 76:2-8. Therefore, there is no need for national uniformity regarding idling limits.

Moreover, the Rule 3502 basic 30-minute idling limit reflects the EPA rule exactly. While the Railroads argue that Rule 3502 does not contain certain exemptions that are found in the EPA rule, these exemptions are unnecessary in Rule 3502, which is narrower in scope than the EPA rule. See discussion *supra*, Section III.

V. Alleged Implied Conflict Preemption Based on Interference with the "Full Purpose and Objectives" of EPA Regulation

Conflict preemption may also exist where state law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Freightliner Corp. v. Myrick*, 514 U.S. 280, 287 (1995). In this case, the railroads are not arguing preemption by Congressional act, but rather by EPA regulation, so it is uncertain whether this conflict preemption principle even applies. But assuming that it does, there is no evidence that the District's railroad idling requirements stand as an obstacle to the purposes of the EPA regulations. As noted above, EPA's regulation specifies that idling be cut off after "30 minutes (or less)." Neither the basic 30 minute idling limit nor the exemption for idling devices set as 15 minutes stands as an obstacle to EPA intent with regard to the basic period of idling allowed.

Nor does the fact that Rule 3502 contains no express exemption for heating or cooling the cab, or maintaining airbrake pressure, "stand as an obstacle" to accomplishing the full purposes of the EPA regulation. In the first place, as described above, these exemptions are not needed within the scheme of Rule 3502 and therefore do not serve as an obstacle to any asserted EPA intent. But even if the lack of these exemptions meant that the rule was more stringent than the EPA requirement, the railroads could not show that this served as an "obstacle" to implementing EPA's full intent. In the first place, Section 116 expressly preserves state authority to adopt more stringent rules than EPA requires. *Union Electric Co. v. EPA*, 427 U.S. 246, 263-64 (1976). Therefore, EPA cannot preempt more stringent state requirements unless those

requirements constitute "standards or requirements" preempted under Section 209(e). (That section is specifically mentioned in Section 116 as an exception to the general principle that EPA *cannot* preempt more stringent state requirements.) As we have explained, Rule 3502 is an "in use" or operational requirement that is not preempted by Section 209(e). *EMA v. EPA*, 88 F.3d 1075, 1094.

Even if Section 116 did not preclude the type of implied conflict preemption argued by the railroads, they still could not prevail. The railroads cannot show that it is one of the Clean Air Act's "full purposes and objectives" to preserve the railroads' ability to continue idling in cases where EPA rules would allow it. A similar argument was rejected in *Oxygenated Fuels Assoc. Inc. v. Davis*, 331 F.3d 665 (9th Cir. 2003). In that case, manufacturers of MTBE argued that the Clean Air Act, which did not specify the type of oxygenate to be used, embodied a principle of "fuel neutrality" which was violated by California's ban of MTBE, and that the Clean Air Act also was intended to prevent market disruption due to the ban. The court found that at most, there was some legislative history that EPA was to be fuel neutral, but no evidence of such intent regarding state regulation. And with respect to market disruption, the fact that "Congress might not have wanted to cause a substantial increase in gasoline prices is not the same as saying that assuring inexpensive gasoline was a goal of the Act." *Oxygenated Fuels*, 331 F.3d at 673. Instead, "the central goal of the Clean Air Act is to reduce air pollution." *Oxygenated Fuels*, 331 F.3d at 673. Similarly in this case, the railroads cannot show that it was a central goal of the Clean Air Act to allow locomotives to idle to maintain airbrake pressure or comfort heating and cooling, especially where the challenged state regulation does not significantly impinge on those exemptions, as in this case. Instead, the central goal of the EPA idling regulation is to reduce air pollution.

VI. Argument that EPA Idling Rules "Occupy the Field"

The railroads argue that EPA has occupied the field of locomotive controls. As discussed above, the Clean Air Act (by virtue of Section 116) and case law (*EMA v. EPA*, 88 F.3d 1075) preclude any argument that EPA even has the power to occupy the field with respect to "in- use" and operational controls.

However, assuming EPA had the power to occupy the field of locomotive idling, it has not done so. In the first place, given the fact that EPA has previously promulgated preemption provisions (specific to locomotives) which do not mention idling regulations, 40 C.F.R. §86.1603, EPA would have to amend those regulations in order to preempt locomotive idling rules. It did not do so. At the very least, it would have to somehow explain that its existing preemption rule covers locomotive idling regulations. Again, it did not do so.

The railroads argue that Rule 3502 is preempted because the federal rule only requires anti-idling devices on new or remanufactured locomotives. Since Rule 3502 does not require anti-idling devices at all, it does not impact the allegedly preempted field of anti-idling devices.

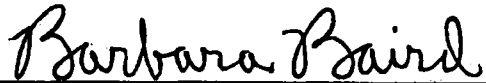
Ellen Peter, Chief Counsel
California Air Resources Board
August 9, 2012
Page 8

The railroads argue that EPA has occupied the field of locomotive idling controls, even if those controls are operational only. As discussed above, this is incorrect, since under §116 EPA may not preempt the field of operational or use limits such as idling. But even if this were true, Rule 3502 would not be preempted because it does not have the required "direct and substantial effect" on the preempted field. *English*, 496 U.S. 72, 85. As described above, Rule 3502 does not as a practical matter have any substantial effect on whether a cab can be heated or cooled where necessary, nor does it create any safety or delay issues by virtue of its lack of an exemption for airbrake pressure.

Thank you for your consideration of our position regarding these issues. Please contact us if you have any questions or wish to discuss this further.

Sincerely,

SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT
Kurt R. Wiese, General Counsel,



By: Barbara Baird, District Counsel

BB:pa

c:\share\barbara\railroads\peter letter.doc

cc: Deborah Jordon
jordan.deborah@epamail.epa.gov

Nina Spiegelman
spiegelman.nina@epaemail.epa.gov

TAB 2

(Attachment to Letter dated 10/19/12
to Mr. Jared Blumenfeld, EPA, from Barbara Baird, SCAQMD)

Barbara Baird

Subject: FW: State Rail Idling Rules in SIP

Barbara Baird

District Counsel
SCAQMD
(909) 396-2302

 Please consider the environment before printing this email.

CONFIDENTIALITY NOTICE: This email may contain material that is confidential, privileged or attorney work product for the sole use of the intended recipient. Any review, reliance or distribution by other recipients without express permission is prohibited. If you are not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, please contact the sender and delete all copies.

Massachusetts

- State regulation 310 CMR 7.11 (MassDEP) prohibits idling for more than 30 minutes (except during servicing)
 - <http://www.mass.gov/dep/air/laws/idlereg.htm>
- Component of SIP
 - http://www.epa.gov/region1/topics/air/sips/sips_ma.html

State Citation	Title / Subject	State Effective Date	EPA Approval Date	Explanations
Regulations for the Control of Air Pollution (PDF) (2 pp, 107K)	Regulation 11 Transportation Media.	6/1/1972	10/28/1972 37 FR 23085	Regulation 11 is now known as 310 CMR 7.11. This regulation restricts idling.

- Federal enforcement action taken by EPA and DOJ in August 2010
 - <http://yosemite.epa.gov/opa/admpress.nsf/6d651d23f5a91b768525735900400c28/b89a1cd70da60b968525777500615ce7!OpenDocument>
 - Affects two railroads:
 - Massachusetts Bay Transportation Authority (MBTA)
 - Massachusetts Bay Commuter Railroad Company (MBCR)
 - MBTA and MBCR had 33 violations of 30 minute idling restriction in three months. Average idling time was 234 minutes
 - To settle the enforcement action, MBTA and MBCR will:
 - Install or upgrade electric plug-in stations as anti-idling equipment to supply all commuter locomotives with electric auxiliary power to prevent excess idling during train layovers
 - Switch to cleaner burning, ultra-low sulfur diesel fuel for all trains on the MBTA's commuter rail lines for a two year period at an estimated cost of \$1 million
 - Install new, less polluting auxiliary engines on fourteen commuter locomotives by no later than December 2012
 - Pay a \$225,000 fine

Rhode Island

- Air Pollution Control Regulation No. 45 prohibits “unnecessary idling” for non-road engines
 - http://www.dem.ri.gov/pubs/regs/regs/air/air45_07.pdf
 - Exemptions provided for:
 - maintenance, servicing, repairing, or diagnostic purposes; and
 - as part of a state or federal inspection to verify that all equipment is in good working order
- Part of SIP
 - http://www.epa.gov/region1/topics/air/sips/sips_ri.html

State Citation	Title / Subject	State Effective Date	EPA Approval Date	Explanations
<u>Air Pollution Control Regulation 45 (PDF) (5 pp, 114K)</u>	Rhode Island Diesel Engine Anti-Idling Program	7/19/2007	3/27/2008 73 FR 16203	<u>Limits idling for diesel on-highway and non-road engines. [See: Electronic Docket Number EPA-R01-OAR-2007-1176 at www.regulations.gov]</u>



Newsroom

News Releases from Region 1

MBTA to Spend Millions to Reduce Commuter Train Emissions in Clean Air Act Settlement

Release Date: 08/04/2010

Contact Information: EPA, David Deegan, (617) 918-1017 DOJ, (202) 514-2007

Joint News Release

U.S. Environmental Protection Agency, New England Regional Office
Department of Justice

(Boston, Mass. – Aug. 4, 2010) – In response to a federal enforcement action for excessive train engine idling, the Massachusetts Bay Transportation Authority (MBTA) and the Massachusetts Bay Commuter Railroad Company (MBCR) will spend more than \$2 million to reduce diesel locomotive emissions throughout the MBTA's commuter rail system, the Justice Department and Environmental Protection Agency (EPA) announced today.

Under a consent decree lodged in federal court, MBTA and MBCR will spend over \$1 million on anti-idling equipment at all end-of-line stations and maintenance facilities, and will spend another \$1 million on ultra-clean diesel fuel for all trains in the commuter rail system for two years.

These emission-reducing measures are the result of a federal enforcement action brought by the Justice Department on behalf of EPA in response to MBTA's and MBCR's excessive locomotive idling at the Widett Circle layover facility in South Boston and the Greenbush line station in Scituate, Mass. Neighboring residents have complained of excessive train idling at both locations.

To settle the enforcement action, MBTA and MBCR will:

- Install or upgrade electric plug-in stations as anti-idling equipment to supply all commuter locomotives with electric auxiliary power to prevent excess idling during train layovers;
- Switch to cleaner burning, ultra-low sulfur diesel fuel for all trains on the MBTA's commuter rail lines for a two year period at an estimated cost of \$1 million;
- Install new, less polluting auxiliary engines on fourteen commuter locomotives by no later than December 2012; and
- Pay a \$225,000 fine.

The anti-idling measures, clean diesel fuel switch, and new auxiliary engines required by the federal settlement will have significant clean air benefits. For example, a reduction in commuter locomotive idling by even one hour per day per locomotive, together with the fuel switch and new engines, could result in yearly carbon dioxide emission reductions of an estimated 800 tons, nitrogen oxides reductions of nearly 170 tons, carbon monoxide reductions of about 80 tons, particulate reductions of 23 tons, and sulfur dioxide reductions of 1-2 tons.

MBTA owns 80 commuter locomotives used on 13 commuter rail routes in Eastern Massachusetts. Since 2003, MBCR has managed and operated the commuter train system for the MBTA. The system includes 14 layover facilities where the locomotives and passenger cars are parked and serviced between runs. Electric plug-in stations at these facilities supply the trains with electric power for lights and ventilation. If a plug-in is not available, a train on layover idles its auxiliary diesel engine to supply any needed electric power.

Under today's settlement, which must be approved by the court, commuter train layovers will only be allowed at locations where there are sufficient electric plug-in stations for all trains.

The Massachusetts locomotive idling regulation, a federally-enforceable state regulation, prohibits all unnecessary diesel locomotive idling for more than 30 minutes. According to a 2008 notice of violation

[Search this collection of releases](#) | or [search all news releases](#)

[Get Region 1 news releases by email](#)

[View selected historical press releases from 1970 to 1998 in the EPA History website.](#)

Recent additions

- 09/24/2012 [More Than \\$750,000 Awarded in Connecticut for Community-Based Projects to Improve Health and Vitality of Long Island Sound](#)
- 09/20/2012 [Rhode Island Transit Authority wins EPA Clean Air Excellence Award](#)
- 09/18/2012 [Leeds Metal Site in Maine Added to National Superfund List](#)
- 09/18/2012 [EPA Proposes Two Massachusetts Sites to be Added to National Superfund List](#)
- 09/14/2012 [Motorcycle Importer Pays Penalty to Resolve Clean Air Violations](#)

issued by EPA, MBTA and MBCR committed 33 violations of this regulation at Widett Circle and Greenbush in three months. At Widett, the average idling time during the violations was just under four hours (234 minutes).

"This precedent-setting, multi-million dollar settlement for train idling is appropriate in light of the defendants' conduct," said Ignacia S. Moreno, Assistant Attorney General for the Justice Department's Environment and Natural Resources Division. "The settlement will provide immediate and lasting environmental benefits to the residents of Eastern Massachusetts, particularly those in environmental justice communities."

"It is imperative that anti-idling laws are followed, given the proximity of these layover facilities to densely-populated communities and environmental justice neighborhoods," said Curt Spalding, regional administrator of EPA's New England Office. "Diesel pollution can be very harmful, especially to sensitive populations such as the young, elderly and people who suffer from asthma."

Diesel emissions contribute to a number of serious air pollution problems such as smog, acid rain and increased carbon concentrations in the atmosphere. Diesel exhaust contains fine particles that can cause lung damage and aggravate respiratory conditions, such as asthma and bronchitis. Based upon human and laboratory studies, there is also considerable evidence that diesel exhaust is a likely carcinogen.

Since 2002, EPA has brought more than a dozen federal enforcement cases to stop diesel engine idling violations in Mass., Conn. and R.I. Most of the cases have involved diesel truck and bus idling, including a judicial settlement announced in July 2010 against National Car Rental for shuttle bus idling at two airports. Only Massachusetts and Rhode Island have federally-enforceable locomotive idling regulations, and today's action marks the first time EPA and DOJ have sued a railroad for excessive idling violations.

More information:

The consent decree, lodged in the U.S. District Court, will be subject to a 30-day public comment period and approval by the federal court. Once it is published in the Federal Register, a copy of the consent decree and instructions on how to comment will be available on the Justice Department Web site at (http://www.usdoj.gov/enrd/Consent_Decrees.html).

Fact Sheet on MBTA Settlement: <http://www.epa.gov/region1/enforcement/air/pdfs/CAA-MBTA-MBCR-Fact-Sheet.pdf>

Diesel exhaust and anti-idling guidelines (www.epa.gov/ne/eco/diesel)

###

Last updated on Tuesday, September 28, 2010 <http://yosemite.epa.gov/opadmpress.nsf/6d651d23f5a91b768525735900400c28/b89a1cd70da60b968525777500615ce7?OpenDocument>

TAB 3

(Attachment to Letter dated 10/19/12
to Mr. Jared Blumenfeld, EPA, from Barbara Baird, SCAQMD)



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

July 24, 2007

The Honorable Mary D. Nichols, Chair
California Air Resources Board
1001 I Street
P.O. Box 2815
Sacramento, CA 95812

Re: Update on 2005 ARB/Railroad Statewide Agreement; Agenda Item 7-8-3,
July 27, 2007

Dear Chairperson Nichols:

On behalf of the South Coast Air Quality Management District, I would like to provide the CARB Board the following comments on the July 18, 2007 "Update on the Implementation of the 2005 ARB/Railroad Statewide Agreement." We would like to provide some perspective on elements covered by your staff's report. Our comments will cover four subjects: the background of our concerns regarding the MOU, the health risk assessments prepared for certain railyards, other aspects of the MOU including idling limitations, and recommendations for the future.

I. Background

On June 24, 2005, the CARB Executive Officer entered into an MOU with BNSF Railway Company and Union Pacific Railroad Company entitled "ARB/Railroad Statewide Agreement: Particulate Emissions Reduction Program at California Rail Yards." The MOU was entered into without any public input or involvement, and without approval by the CARB Governing Board. As a result of concerns about this process expressed by elected officials, members of the Legislature, and members of the public, as well as the South Coast AQMD, the CARB Board held a hearing on the MOU. Following the public hearing, the Board adopted Resolution 05-40, July 21, 2005. This resolution required that any future MOU would not be effective until approved by the Board, and that prior to initiating negotiations on any future MOU or amendment, the Executive Officer must notify the Board and the public, and must solicit public comment

on the subject of the MOU or amendment. The South Coast AQMD greatly appreciates the Board taking these steps to assure that future MOUs are subject to public comment and Board ratification.

In addition to our concerns about the process of entering into the MOU, the South Coast AQMD had—and still has—a number of concerns about the content of the MOU. These may be grouped into three categories: (1) vague and unenforceable language and lack of commitment to real emission reductions; (2) inadequate enforcement provisions, and (3) the release clause, referred to as the “poison pill”, under which the railroads may walk away from any program element of the MOU if any other government agency, including EPA, adopts or enforces any requirements directed toward the same goal as the MOU program element.

We will not repeat our previous comments here. However, just to give a few examples of vague language, the MOU calls upon the railroads to “reduce locomotive idling by the maximum amount that is feasible” for engines equipped with anti-idling devices (Program Element 1, paragraph (b)). For engines not equipped with anti-idling devices, the railroads must “exert their best efforts” to limit non-essential idling (Program Element 1, paragraph (d)), and limit “non-essential” idling to 60 minutes. (Id) The MOU provides that idling shall be considered “essential” when the “anticipated” idling period is less than 60 minutes. (Program Element 1, paragraph (e)). The railroads agree to “maximize” their use of lower sulfur on-highway diesel in locomotives operating in California. (Program Element 2, paragraph (a)). This type of vague language makes it difficult if not impossible for ARB staff to actually determine whether the railroad is in violation of the MOU.

In addition to vague language, there is no commitment to actually reduce emissions or risk. Upon completion of the specified Health Risk Assessments, ARB staff and the Railroads are merely to “meet and confer” to “create a process to determine what additional actions are necessary to communicate and mitigate the risks identified in the health risk assessment and put the risks in the appropriate context.” (Program Element 5, paragraph (d)).

The enforcement provisions of the MOU are also inadequate. For one thing, ARB staff is not allowed to seek enforcement of the MOU through specific enforcement or injunction. (Paragraph 11(d)). Thus, the railroads have the absolute right to continue to violate the MOU, if they so choose, subject only to the puny monetary penalties set forth in the MOU. Violations of the idling limits or visible emissions repair program are assessed on an individual locomotive basis, starting at \$400 for the first violation, and only going up to \$1200 for the third and any subsequent violation in a given year. (Paragraph 10 (a)). These amounts may be compared to the railroads’ annual profits of \$1 billion to \$1.5 billion. Also by way of comparison, the South Coast District a number of years ago settled a continuing public nuisance case resulting from excessive idling at a siding in Colton for \$500,000.

Finally, the MOU provides that the railroads in their sole discretion may decide to be released from their obligations under a specific Program Element of the MOU if any agency or subdivision of the state of California adopts or attempts to enforce any requirement addressing the goal of any program element, or if EPA adopts or attempts to enforce more stringent requirements addressing the goal of any Program Element. (Paragraph 11(c)). This release clause is commonly referred to as the "poison pill", because of its intent to dissuade any district from taking any action to reduce rail emissions, or even to study their health risks. For these and other reasons, the South Coast AQMD continues to have serious concerns about the content of the MOU.

II. Health Risk Assessments

The most important activity under the MOU since the last staff report in January 2007 has been the release of the first batch of health risk assessments at certain railyards. The remainder of the HRAs required under the MOU are scheduled for release by the end of this year. Our comments on the HRAs make three points: (1) the magnitude of the risks disclosed confirms our concerns about railyard risk; (2) the risk is not placed in appropriate context compared to stationary sources, and (3) the HRAs reveal an urgent need for promptly and significantly reducing risk, which unfortunately the MOU does not require.

Health Risk Assessments were prepared for four railyards in Commerce, which ARB staff has analyzed together because of their close proximity. The maximum cancer risk from the four railyards together was revealed to be 3,000 in a million. However, that maximum number is not even disclosed in the staff's update to your Board. This is in contrast to the typical approach to AB 2588 health risk assessments, which are characterized by their maximum risk numbers. Instead, the staff report notes that about 5,000 persons are exposed to risks equaling a 70% increase over background levels (i.e., approximately 700 in a million. The HRA Fact Sheet, attached to the staff report, only discloses this number, not the maximum number, and only compares this risk to risks from the Los Angeles-Long Beach Port areas, which are the greatest source of diesel risk in the entire state. The HRA, in contrast, discloses that about 82,000 people are exposed to risks exceeding 100 in a million. However, it is not disclosed that this is the maximum allowable level for risks to any person from individual stationary sources in the South Coast.

While the HRAs attempt to put the risk in some context by comparing average risks to background levels, they do not discuss the maximum risk, and they do not provide any point of comparison to typical stationary sources. For example, they do not reveal that typical maximum risks from large stationary sources such as refineries are generally less than 10 in a million, and power plants less than 1 in a million. Also by way of comparison, stationary sources are required to reduce their risks to 25 in a million, unless to do so is not technologically feasible or cost effective. When communicating railyard

risk to the public, we believe typical stationary source risks should also be disclosed, so that the public has a point of comparison.

What is clear from the HRAs released so far is that there is an urgent need for prompt and significant risk reduction. Unfortunately, the MOU does not require anything of the railroads in this regard. The MOU merely provides that within 90 days of the completion of each HRA, ARB staff and the affected railroad are to "meet and confer" to "create a process to determine what additional actions are necessary to communicate and mitigate the risks identified in the health risk assessment and put the risks in the appropriate context." (Paragraph 5(d)). The MOU contains no requirements, and no deadlines. It is imperative that the CARB Board insist on the railroads implementing the maximum possible mitigation measures at the earliest possible date.

The following mitigation measures should be considered, and required if possible. First, the update reports that diesel particulate filters are currently being tested on 2 switcher locomotives, and if successful, each railroad commits to installing one additional DPF on a switcher. This is an absurdly small commitment. If the DPF test is successful, each railroad should immediately install DPFs on ALL switchers. Moreover, switchers are only a small part of total locomotive emissions. More attention needs to be given to line-haul locomotives. South Coast AQMD and CARB staff recently received a presentation by National Rail Equipment Company and Cummins that would use multiple off-road engines in conjunction with SCR and DPFs to achieve EPA's proposed Tier 4 standards in a line-haul locomotive by 2010, a number of years prior to EPA's proposed deadline. CARB should make every effort to advance this technology, or other similar technologies, for use in line-haul locomotives. Additionally, CARB should require the railroads to use the "hood" technology demonstrated at the Roseville railyard where possible to reduce railyard emissions.

The HRAs also disclose that significant contributors to railyard risks are on-road trucks and cargo-handling equipment. The railroads should be required to install DPFs on on-road trucks that are recurrent visitors to the yards. In addition, the railyards should be required to electrify their cargo-handling equipment. BNSF is currently proposing electric CHE for a new railyard, so it appears feasible. These are just a few of the concepts that need to be examined, and implemented. Unfortunately, the MOU is wholly inadequate in not requiring the railroads to actually do anything about the risks at their yards, but CARB can use public concern and the railroads' asserted good faith to require the maximum possible risk reductions.

III. Other MOU Elements and Railroad Activities

A. MOU Emission Benefits Are Illusory

In the staff report for the October 2005 Public Hearing on the MOU, CARB staff reported that they expected a 20% reduction in locomotive diesel PM emissions in and around

railyards. These reductions have proven to be illusory. CARB staff had identified half of these reductions, or 10%, to come from the idling reduction program or installation of anti-idling devices. During the South Coast AQMD litigation with the railroads, it was revealed that the MOU merely "codifies" the railroads' existing idling practices, which were designed for fuel conservation. Top executives from both railroads testified that absolutely NO changes had been made in the railroads' operations as a result of the MOU idling limits. The railroads may have misled your staff, who testified that they had fully expected the railroads to make changes in their operations. As for the installation of anti-idling devices, the railroads' own data revealed that they pay for themselves in fuel savings within about two years. Thus, it is highly likely that the railroads, in pursuing their own financial interests, would have installed these devices even without the MOU.

In October 2005, staff predicted a 7% emission reduction from the ultra-low sulfur diesel fuel provisions of the MOU, but on the very next page (p. 38) admitted that CARB regulations relative to low sulfur diesel for intrastate locomotives were responsible for 5% of total reductions, with only 2% of the total reductions resulting from the MOU's application of low-sulfur refueling to line-haul locomotives.

Finally, staff estimated a 3% reduction resulting from the visible emissions inspection and repair program. However, the October 2005 report acknowledged that air districts had been and would continue to enforce the state visible emissions law against the railroads. For example, South Coast AQMD has in the past implemented visible emissions programs requiring repair within 10 to 18 hours (compared to the MOU's four days) and assessing penalties of up to \$5,000 for failure to repair (compared to \$400 to \$1200 under the MOU.) Given this pre-existing aggressive enforcement of the visible emissions law, it is doubtful that the MOU results in any actual emissions benefit as a result of the visible emissions testing program.

B. Significant Idling Violations Still Occur Despite the MOU

In the July 2007 update, CARB staff claims there is a 96% compliance rate with the MOU's idling restrictions. As discussed earlier, we are uncertain how meaningful this is when the definitions of prohibited idling are so vague. And we note that this is a decline from the reported 98% compliance in fall 2006. Moreover, CARB railyard inspections are conducted on an *announced* basis, giving the railroads plenty of opportunity to be "on their best behavior" and to assure that the MOU's provisions (which are the same as the railroads' own internal rules) are complied with. Yet violations still occur. It should also be noted that many of the idling complaints we have received involve sidings and even lines, which CARB staff generally does not inspect.

Also, the asserted 96% compliance rate includes locomotives that are turned off, and locomotives that are working. If we look only at the locomotives that were actually idling during the CARB inspections, we find that 40% were in violation (40 out of 100). And in the South Coast District, 11 out of 12 idling locomotives were given NOVs, for a 92% rate of violations, and only an 8% compliance rate. Moreover, it appears that based on 2007 data there are as many as 40 idling violations per day, which amounts to 14,600 violations per year. Given the continued idling violations, we are not assured that the MOU provides adequate deterrence and enforcement. We suggest that the CARB staff updates to your Board should include data regarding the idling penalties paid, as well as the number of NOVs issued, for a more complete picture of enforcement efforts under the MOU.

Finally, despite the MOU, egregious examples of uncontrolled idling still occur. Recently a local television station documented an idling event that went on for 20 hours, in close proximity to people's homes. We would like to know what kind of penalties were paid for this incident, or similar incidents. We are concerned that the MOU's provision preventing enforcement by injunction or specific performance is encouraging the railroads to take a lax attitude toward MOU compliance, since the penalties are so minor compared to their annual costs and profits.

C. BNSF Alternative Compliance Plan for Barstow Refueling

CARB's ULSD fuel regulation requires that by January 1, 2007 all intrastate locomotives use CARB diesel (15 ppmv). CARB staff has approved an Alternative Emission Reduction Plan for BNSF to allow it to use EPA on-road diesel instead of CARB diesel. This fuel has the same sulfur content but higher aromatics, resulting in an estimated 6% increase in NOx and 14% increase in PM per gallon. The Plan provides that the "balance" of emission reductions will be made up through dedicating only CARB diesel for all locomotives at the BNSF Hobart facility in Commerce, by refueling "more than 100 intermodal locomotives per day." South Coast AQMD staff has two questions concerning this Plan. First, how can the railroad demonstrate that the reductions to occur at Commerce are not already required by the MOU, and thus ineligible for use in an Alternative Emission Reduction Plan? The MOU already requires the railroads to "maximize the use of lower-sulfur on-highway diesel fuel in locomotives operating in California." If the railroad was already planning to use CARB diesel at the Commerce facility, these reductions would not be surplus, and not eligible for use in an alternative compliance plan. Second, it is unclear how BNSF can be fueling over 100 locomotives per day at the Hobart facility. According to the emissions inventory information for Hobart, there is no refueling at this facility. Even if CARB staff mistakenly cited the wrong facility, the only other BNSF facility that does fueling in Commerce refuels only 40 locomotives per day, far less than the 100 required by the Alternative Emission Reduction Plan. CARB staff has failed to supply South Coast AQMD staff with the data to substantiate the legitimacy of the Alternative Emission Reduction Plan.

IV. Recommendations

South Coast AQMD has three specific recommendations for CARB that are based on the Health Risk Assessments, the CARB staff report, and our experiences in the railroad litigation and in developing comments for EPA's proposed Tier 4 locomotive standards. First, we recommend that CARB staff immediately initiate a process to require the railroads to reduce risks at all their railyards to the maximum extent possible. Second, we urge CARB to reconsider the issue of whether it should adopt regulations limiting railroad emissions, rather than relying solely on a flawed MOU. Recent developments in the railroad litigation have brightened the prospects for just such CARB regulation. Finally, we urge CARB to include in its statewide mobile source control strategy for the State Implementation Plan, scheduled to be adopted in September, the expectation that EPA shall require the implementation of Tier 4 technology by 2012, as recommended by South Coast staff, rather than by 2015, as recommended by CARB. We also urge CARB to revise their comments to EPA consistent with the 2012 deadline. We believe this schedule is feasible, and it is necessary to gain any benefit in time for PM2.5 attainment in 2015.

In 2005 and 2006, SCAQMD adopted rules limiting idling in specified circumstances to 30 minutes, requiring railroads to keep records of idling events, and requiring the railroads to prepare HRAs for 19 yards in the District. The railroads sued. The recent trial court decision in the railroads' litigation against the South Coast AQMD resulted in an adverse decision, which we are appealing. However, the court's decision only heightened the importance of CARB taking effective regulatory action. The court ruled that, as a matter of state law, only CARB has the authority to regulate locomotives. Unfortunately, the court relied in part on the existence of the CARB MOU in finding that the District lacked authority over locomotives. We strongly believe the court's decision is incorrect and will be reversed. In the meantime, however, CARB should pursue effective regulation of the railroads since the court has now opened the door for such action.

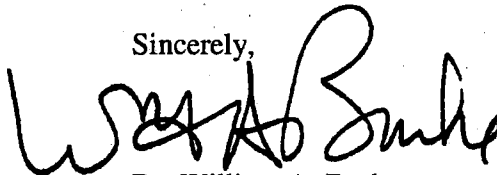
Significantly, the federal court also recognized and reaffirmed an important principle of law that is ignored in your staff's pessimistic analysis of federal preemption issues. That is the principle that the Interstate Commerce Commission Termination Act (ICCTA), which provides substantial preemption of state regulation of rail operations, nevertheless is not "intended to interfere with the role of state and local agencies in implementing Federal environmental statutes, such as the Clean Air Act..." *citing Boston and Maine Corp. and Town of Ayer, MA*, STB Fin. Docket No. 33971, 2001 WL 458685 (STB, Apr. 30, 2001). Moreover, the court stated, "the District is correct that the ICCTA does not preempt the CAA..." Accordingly, CARB, acting to implement the Clean Air Act, has room to adopt regulations which are not preempted by ICCTA. In essence, the court has practically invited CARB to exercise its authority. We urge CARB to seriously consider adopting effective idling regulations, as well as other regulations which could reduce cancer risk from diesel particulate while also reducing criteria pollutants and their precursors as required under the Clean Air Act. For example, CARB could likely require

The Honorable Mary D. Nichols, Chair
California Air Resources Board
July 24, 2007
Page 8

use of the "hood" demonstrated at Roseville without being preempted by ICCTA. And CARB's existing authority relative to on-road trucks and cargo-handling equipment could be used to adopt requirements applicable to railyard use of these sources, such as electrification of CHE and use of DPFs and alternative fuels for trucks.

Thank you for considering the comments of the South Coast AQMD.

Sincerely,

A handwritten signature in black ink, appearing to read "W. A. Burke". The signature is fluid and cursive, with the first and last names being more prominent than the middle initial.

Dr. William A. Burke
Chairman
SCAQMD Governing Board

WAB:BB

e:/share/Barbara/railroads/MOU July 07 comments.doc

cc: CARB Board Members
Tom Cackette
SCAQMD Governing Board Members

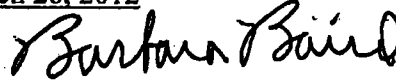
TAB 4

(Attachment to Letter dated 10/19/12
to Mr. Jared Blumenfeld, EPA, from Barbara Baird, SCAQMD)

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
OFFICE OF DISTRICT COUNSEL
MEMORANDUM FOR SIP SUBMITTAL – RULES 3501 & 3502

DATE: November 2, 2011; Revised March 28, 2012

FROM: Barbara Baird, District Counsel



SUBJECT: State Law Authority

SUMMARY OF THE ISSUE

Clean Air Act Section 110(a)(2)(E), 42 U.S.C. §7410(a)(2)(e) requires SIPs to ensure the implementation agency has adequate authority under State law to carry out the implementation plan. The District submits the following memorandum to comply with this requirement.

Under State law, both local air districts and CARB have the authority to regulate railroad emissions. California law has long divided regulatory authority over air pollution into two general parts. CARB is charged with regulating emissions from “motor vehicles,” while “local and regional authorities have the primary responsibility for control of air pollution from all sources, other than emissions from motor vehicles.” Health & Safety Code § 40000; § 39002 (“Local and regional authorities have the primary responsibility for control of air pollution from all sources other than vehicular sources.”); § 39037 (“local and regional authorities” include districts).

The Health and Safety Code references Vehicle Code § 415 for a definition of a “motor vehicle”, which, in turn, defines a motor vehicle as a “vehicle that is self-propelled.” Also, Vehicle Code § 670 defines a “vehicle” as “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.” See also, Health & Safety Code § 39060 (defining “vehicular sources” as “those sources of air contaminants emitted from motor vehicles.”)

Under the plain language of these statutes, a locomotive is not a “vehicle” because it is not a device for moving a “person or property...upon a highway.” Veh. Code § 670. Moreover, it falls clearly within the exception to “vehicle” for devices “used exclusively upon stationary rails or tracks.” Id. Consequently, when Section 40000 grants authority to local air pollution districts over “all sources other than emissions from motor vehicles,” this universe of sources necessarily includes locomotives, a non-vehicular source. Therefore, regulating emissions from locomotives is under the District’s authority under California law.

The District recognizes that the opinion of the federal district court in Association of American Railroads v. South Coast Air Quality Management District, 2007 U.S. Dist. LEXIS 65685, *18,

states: "[T]he Court finds that the District does not have the authority under the [Health and Safety Code] to regulate air contaminants from locomotives..." However, that language was not affirmed on appeal and therefore is not controlling here. The Ninth Circuit Court of Appeals stated: "[W]e assume without deciding that the rules fall within the District's regulatory authority." *Association of American Railroads v. South Coast Air Quality Management District*, 622 F. 3d 1094 at 1096 n. 1 (9th Cir. 2010)

Because the Court of Appeals left the question undecided, neither the doctrine of res judicata nor collateral estoppel prevents the District from contending before CARB and EPA that it has authority under state law to adopt the rules. *Martin v. Henley*, 452 F. 2d 295, 300 (9th Cir. 1971). The Railroads in fact conceded this point in later proceedings before the District Court: "[T]he District is correct that where an alternate ground is not decided on appeal it has no res judicata effect..." Railroads' Reply to Opposition to Motion for an Order to Show Cause, Case No. CV06-1416 JFW (PLAx)(Docket #23). Similarly, the doctrine of "law of the case", which governs relitigation of issues previously decided in the same litigation, does not apply to issues the appellate court did not decide. *United States v. Cote*, 51 F. 3d 178, 181 (9th Cir. 1995). Therefore, the federal district court ruling is not binding on the District, and the District respectfully asserts that the decision is incorrect in its interpretation of California law.

Effect of Health & Safety Code §40702 and 43013(b)

Section 40702 of the Health and Safety Code provides that,

"A district shall 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.

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."

This section serves only to limit the authority of the District to adopt three types of railroad locomotive rules, those specifying (1) the design of equipment, (2) the type of construction, or (3) the particular method to be used for emission reduction. In other words, it imposes very precise restrictions on the types of regulations that a district may adopt and is not all encompassing. If the Legislature intended to withdraw regulatory authority entirely from local districts, they would have done so. See, e.g., Health & Safety Code § 41904 (standards for sandblasting operations "shall be statewide, and no rule or regulation of any district...shall be stricter or less strict than the standards adopted by the state board"). In Section 40702, however, the Legislature employed narrower language establishing limits on specific types of local regulation. A difference in statutory language must be given effect. See *Hicks v. E.T. Legg & Associates*, 89 Cal.App.4th 496, 507 (2001) ("[W]hen the legislature has carefully employed a term in one place and has excluded in another, it should not be implied where excluded.").

Therefore, Section 40000 broadly authorizes local districts to regulate nonvehicular sources, while Section 40702 slightly limits that broad power, but only with respect to specific types of regulations on locomotives. Since the rules included within this submittal do not "specify the design of equipment, type of construction, or particular method to be used in reducing the release of air contaminants", the rules comport with the prohibition in Section 40702. Specifically, Rule 3502, which is the only rule which requires emission reductions, allows the railroads to comply

by limiting idling, by using idling-reduction devices, or by following an emissions equivalency plan which would obtain equivalent reductions.

Section 43013(b) of the Health and Safety Code also does not limit the ability of the District to adopt the Rules. This section states,

“The [California Air Resources Board] shall, consistent with subdivision (a), adopt standards and regulations for...off-road or nonvehicular engine categories, including, but not limited to, off-highway motorcycles, off-highway vehicles, construction equipment, farm equipment, utility engines, locomotives, and, to the extent permitted by federal law, marine vessels.”

Thus, this section authorizes CARB to adopt one specific type of regulation: “standards and regulations for...off-road and non-vehicle engine categories, including...locomotives.” *Id.* (emphasis added.) The statute, however, is silent on and therefore does not encompass all types of railroad regulation. Since the District’s rules do not adopt any standard for locomotive engines, there is no conflict under this provision.

Even if Section 43013(b) encompasses all types of regulation of railroads, it still would not preclude districts from regulating locomotives because two other statutes, Section§ 39002 and Section§ 41508, empower local districts to act even when other statutes authorize CARB to regulate the same subject matter. Health and Safety Code Section§ 39002 states,

“Except as otherwise provided in this division, including, but not limited to, Section 41809, 41810, and 41904, local and regional authorities [such as the District] may establish stricter standards than those set by law or by the state board for nonvehicular sources.”

Health and Safety Code Section§ 41508 states, in almost identical language,

“Except as otherwise specifically provided in this division, including but not limited to, Sections 41809, 41810, and 41904, any local or regional authority may establish additional, stricter standards than those set forth by law or by the state board for nonvehicular sources.”

These statutes instruct that, unless the Legislature “otherwise provides,” local districts may adopt standards for nonvehicular sources like locomotives that are “additional” to and “stricter” than any standard CARB might set. Nothing in Section 43013(b) precludes a local district from establishing that type of “additional, stricter” regulation. Compare, Health & Safety Code § 41810 (“[n]o district shall adopt any rule or regulation stricter than those provided by law with respect to open outdoor fires.”)

Taken as a whole, these provisions of the Health and Safety Code are interpreted to mean that the Legislature granted the districts authority over all sources-including locomotives-except motor vehicles and expressly allowed districts to adopt stricter rules than those adopted by CARB. Health & Safety Code §§ 39002, 40000. Therefore, the District submits that it has authority under state law to adopt the rules.

BB/VT/pa

e:\share\barbara\railroads\memo-state authority.docx

TAB 5

(Attachment to Letter dated 10/19/12
to Mr. Jared Blumenfeld, EPA, from Barbara Baird, SCAQMD)

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

PRIORITY SEND
JS-6

CIVIL MINUTES -- GENERAL

Case No. **CV 06-01416-JFW (PLAx)**

Date: February 24, 2012

Title: Association of American Railroads, et al. -v- South Coast Air Quality Management District, et al.

PRESENT:

HONORABLE JOHN F. WALTER, UNITED STATES DISTRICT JUDGE

Shannon Reilly
Courtroom Deputy

None Present
Court Reporter

ATTORNEYS PRESENT FOR PLAINTIFFS:
None

ATTORNEYS PRESENT FOR DEFENDANTS:
None

PROCEEDINGS (IN CHAMBERS): **ORDER GRANTING DEFENDANTS' MOTION TO VACATE ORDER TO SHOW CAUSE**
[filed 1/27/2012; Docket No. 257]

On January 27, 2012, Defendants South Coast Air Quality Management District and the Governing Board of South Coast Air Quality Management District (collectively, the "District") and Dr. Barry Wallerstein, Dr. Elaine Chang, and Barbara Baird, Esq. (collectively, the "Contempt Defendants") filed a Motion to Vacate Order to Show Cause. On February 6, 2012, Association of American Railroads, BNSF Railway Company, and Union Pacific Railroad Company (collectively "Plaintiffs") filed their Opposition. On February 13, 2012, the District and Contempt Defendants filed a Reply. Pursuant to Rule 78 of the Federal Rules of Civil Procedure and Local Rule 7-15, the Court finds that this matter is appropriate for decision without oral argument. The hearing calendared for February 27, 2012 is hereby vacated and the matter taken off calendar. After considering the moving, opposing, and reply papers and the arguments therein, the Court rules as follows:

I. PROCEDURAL AND FACTUAL BACKGROUND

On April 30, 2007, following a bench trial, the Court issued its Findings of Facts and Conclusions of Law in this action, concluding that the Interstate Commerce Commission Termination Act ("ICCTA"), 49 U.S.C. § 10101, preempted the District's Rules 3501, 3502, and 3503 (collectively the "Rules"), and that the District lacked state law authority to adopt these Rules. On May 17, 2007, in accordance with the Findings of Facts and Conclusions of Law, the Court entered a Judgment and Permanent Injunction ("Permanent Injunction"), which provides in relevant part:

1. District Rule 3503, adopted by the Governing Board on October 7, 2005, and District Rules 3501 and 3502, adopted by the Governing Board on February 3, 2006, are preempted in their entirety by the Interstate Commerce Commission Termination Act of 1995 ("ICCTA"), 49 U.S.C. § 10101 *et seq.*
2. Under Plaintiffs' First Cause of Action, the District, the Governing Board, and their board members, officers, agents, employees, attorneys and all others acting in concert or participation with them, are hereby permanently enjoined from implementing or enforcing any provision of Rules 3501, 3502 or 3503.

On May 30, 2007, Defendants appealed the Judgment and Permanent Injunction. On September 15, 2010, the Ninth Circuit issued a published opinion affirming this Court's Judgment and Permanent Injunction. *Ass'n of Am. Railroads v. South Coast Air Quality Mgmt. Dist.*, 622 F.3d 1094 (9th Cir. 2010).

On November 2, 2011, the District, acting through its employees, including Executive Officer Dr. Barry Wallerstein, Deputy Executive Officer for Planning, Rule Development & Area Sources Dr. Elaine Chang, and District Counsel Barbara Baird, formally submitted Rules 3501 and 3502 to the California Air Resources Board ("CARB") and requested that CARB submit the Rules to the United States Environmental Protection Agency for its review and inclusion in California's State Implementation Plan ("SIP") under the federal Clean Air Act.

On December 7, 2011, Plaintiffs filed a Motion for an Order to Show Cause Why South Coast Air Quality Management District and its Employees Should Not Be Held in Civil Contempt or, in the Alternative, an Order of Contempt, claiming that the District and Contempt Defendants have violated and continue to violate the provisions of the Permanent Injunction, by submitting Rules 3501 and 3502 to CARB. The Court declined to enter the requested Order of Contempt, but concluded, based on the record submitted by the parties, that Plaintiffs had made the minimal required showing for the issuance of the Order to Show Cause Why South Coast Air Quality Management District and its Employees Should Not Be Held in Civil Contempt. Accordingly, the Court issued the Order to Show Cause Why South Coast Air Quality Management District and its Employees Should Not Be Held in Civil Contempt ("Order to Show Cause"), and set a briefing schedule and date for the evidentiary hearing or "trial."

On January 27, 2012, the District and Contempt Defendants, represented by new counsel, filed the pending Motion to Vacate Order to Show Cause, which included a transcript of the oral argument before the Ninth Circuit. The transcript was not presented to the Court, and therefore not considered by the Court in its decision to issue the Order to Show Cause.¹

II. DISCUSSION

After reviewing the transcript of the oral argument before the Ninth Circuit, the Court concludes that the Order to Show Cause was improvidently granted, due to the incomplete and

¹The Court finds Plaintiffs' Objection to Defendants' Filing of Certified Transcript of Oral Argument Before Ninth Circuit completely disingenuous and frivolous.

misleading record presented to the Court. Quite frankly, the Court is surprised and disappointed that Plaintiffs did not voluntarily agree to vacate the Order to Show Cause, upon reviewing the transcript of the oral argument and Plaintiffs' Motion to Vacate Order to Show Cause.

Plaintiffs' counsel, Mr. Jenkins, clearly represented to the Ninth Circuit that the District's submission of the Rules to CARB, and then to EPA, for inclusion in the SIP would be an appropriate and proper avenue for the District to pursue. Indeed, at the outset of his argument, Mr. Jenkins stated:

I'd like to start out by addressing, Judge Rymer, the point that you were making toward the end, which is, isn't what [the District] ought to do here is to get CARB and EPA to approve these rules. And if they do, that becomes part of the SIP and it becomes federally enforceable and then you do have a harmonization question. And the answer to that is yes. That's exactly what the statute provides for.

Transcript of Oral Argument, 13:4-11.

Moreover, in response to the Ninth Circuit's questioning regarding the effect of this Court's determination that the District did not have authority to adopt the Rules, Mr. Jenkin's reaffirmed that the District's submission of the Rules to CARB would not be prohibited by the Court's determination, and in fact, would be permissible:

Judge Graber: You started by saying, gee, if they just get the State to put this in the State Plan and then it's fine, because they you have a . . . harmonizing -- between the Clean Air Act and ICCTA. How do they get from here to there, if your position is that they can't even get started?

Mr. Jenkins: They can propose a regulation, Your Honor. They can't implement it. They can propose it; CARB can adopt it; EPA can approve it. And if it's approved, that doesn't mean we still won't -- won't challenge it, because we still have this harmonization issue. But if it's approved, at least they have the harmonization argument.

Id. at 23:1-14.

Based on the arguments and position advanced by Plaintiffs before the Ninth Circuit, the Court concludes that Plaintiffs are judicially estopped from claiming that the District's submission of the Rules to CARB violates the provisions of the Court's Permanent Injunction in this action. As the Ninth Circuit recently stated:

Judicial estoppel, sometimes also known as the doctrine of preclusion of inconsistent positions, precludes a party from gaining an advantage by taking one position, and then seeking a second advantage by taking an incompatible position. Judicial estoppel is an equitable doctrine that is intended to protect the integrity of the judicial process by preventing a litigant from playing fast and loose with the courts. Judicial estoppel applies to a party's stated position whether it is an expression of intention, a statement of fact, or a legal assertion.

Wagner v. Prof'l Eng'rs in California Gov't, 354 F.3d 1036, 1044 (9th Cir. 2004) (quotations and citations omitted). "[T]he circumstances under which judicial estoppel may appropriately be invoked are probably not reducible to any general formulation of principle" and there are no "inflexible prerequisites" for determining the applicability of judicial estoppel. *New Hampshire v. Maine*, 532 U.S. 742, 750-51 (2011).

In this case, the Court concludes that Plaintiffs are unfortunately "playing fast and loose" with the Court, and allowing Plaintiffs to take a totally inconsistent position in these contempt proceedings would be fundamentally unfair and constitute a gross miscarriage of justice. Although the Court recognizes that the scope of the Permanent Injunction was never at issue before the Ninth Circuit, Plaintiffs clearly represented to the Ninth Circuit that it would be appropriate for the District to submit the Rules to CARB. And, the Ninth Circuit tacitly approved that position: "Because the District's rules have not become a part of California's EPA-approved state implementation plan, they do not have the force and effect of federal law, even if they might *in the future*." *Ass'n of Am. Railroads v. South Coast Air Quality Mgmt. Dist.*, 622 F.3d 1094, 1098 (9th Cir. 2010) (emphasis added).

III. CONCLUSION

For the foregoing reasons, the Motion to Vacate Order to Show Cause is **GRANTED**. The Order to Show Cause is hereby **VACATED**. Although the Court is concerned by the conduct of Plaintiffs' counsel in pursuing the Order to Show Cause after reviewing the complete transcript of the oral argument before the Ninth Circuit and Plaintiffs' Motion to Vacate Order to Show Cause, the Court declines to award sanctions.²

IT IS SO ORDERED.

²The Court is equally concerned by the District's submission to CARB of the Memorandum of State Law Authority authored by the District's counsel, Barbara Baird. The Memorandum of State Law Authority blatantly ignored this Court's determination that the District lacked authority to adopt the Rules by stating: "[T]he District has authority under state law to adopt the rules." Declaration of Mark E. Elliott [Docket No. 227-2], Exhibit 1 at 34. It is difficult to understand how competent counsel could take that position in light of the clear ruling of this Court. In any event, the Court is confident that this misrepresentation will be raised by Plaintiffs in any further regulatory proceedings relating to this matter.



BUILDING AMERICA[®]

DATE 11/19/2012	
ACTION (✓)	COPIED (✓)
RA	RA
DRA	DRA
✓ AIR	AIR
CED	CED
MTS	MTS
OPA	OPA
ORC	ORC
# FUND	# FUND
SCFO	SCFO
WASTE	WASTE
WATER	WATER
	✓ TCDT

November 19, 2012

VIA HAND DELIVERY, E-MAIL AND CERTIFIED MAIL
CERTIFIED MAIL NO. 7004 1350 0003 3714 1845

Mr. Jared Blumenfeld
Regional Administrator
United States Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, CA 94105

Re: California's August 30, 2012 Submittal of South Coast Air Quality Management District Rules 3501 and 3502 for Inclusion in the California State Implementation Plan – Request for Prompt EPA Determination of Incompleteness

Dear Mr. Blumenfeld:

On October 19, 2012, SCAQMD wrote a letter to you in support of approving the two locomotive idling rules in the California state implementation plan (SIP) request. As described in detail in our previous letters, the record clearly demonstrates that this request does not satisfy EPA's criteria for finding a SIP submission complete or approvable under the Clean Air Act. We are convinced that we previously addressed most of the points made in the letter, but today we are taking this opportunity to address SCAQMD's accusation that the railroad industry is contradicting the position it took before the Ninth Circuit concerning the Local Idling Rules and engaging in "flagrant gamesmanship." The accusation is baseless.

The two proposed rules are South Coast Air Quality Management District (SCAQMD) Rules 3501 and 3502, adopted by SCAQMD in 2006 (the Local Idling Rules). The Local Idling Rules relate only to regulation of locomotives in the South Coast Air Basin. The California Air Resources Board (CARB) did not promulgate these Local Idling Rules. Instead, CARB simply submitted them to EPA with a pro forma request that EPA approve them as part of the SIP.

The railroads have been absolutely consistent regarding the lack of validity of the Local Idling Rules. Rules 3501 and 3502 were not adopted by SCAQMD in accordance with California and federal law. The district court expressly acknowledged and endorsed our position. The Ninth Circuit, electing to rule only on federal law issues, further endorsed the railroads' federal arguments. Because these courts ultimately concluded that the Local Idling Rules were invalid

Mr. Jared Blumenfeld
November 19, 2012
Page 2

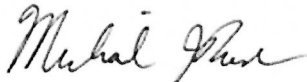
due to express federal preemption under the ICCTA, the courts did not reach all of the other legal flaws identified by the railroads. However, those flaws are critical to EPA's current review of the Local Idling Rules under the Clean Air Act, and we have again presented them in a proper forum in a timely manner.

SCAQMD's allegations of gamesmanship and inconsistent positions pertain to discussions of harmonization of the Clean Air Act and ICCTA. The discussion of harmonization between the railroads' counsel and the Ninth Circuit during oral argument, as well as both the Ninth Circuit's and the District Court's written opinions concerning harmonization, were premised on a hypothetical scenario in which the Local Idling Rules were validly adopted under California and federal law. Such discussions or opinions were hypothetical because the courts acknowledged that the Local Idling Rules were not validly adopted.

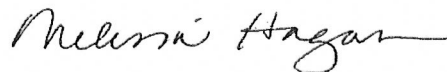
There can be no ICCTA harmonization analysis when the rules are not approvable under the Clean Air Act in the first instance—and the mere fact that the Local Idling Rules have been submitted for SIP approval does not legitimize them for ICCTA purposes. SCAQMD remains barred from implementing and enforcing these Local Idling Rules by a permanent federal district court injunction—in part because the rules are illegal under California law. In his February 24, 2012 minute order on this matter, Judge Walter reiterated that SCAQMD lacks authority under California law to adopt the SCAQMD Local Idling Rules that California has now submitted to you. Lack of state law authority is a fatal defect in a rule proposed for SIP approval.

Thank you for the opportunity to correct the record. As always, the railroads would be pleased to provide any additional information you might need.

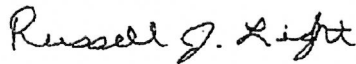
Sincerely,



Michael J. Rush
Associate General Counsel
Association of American Railroads



Melissa B. Hagan
Senior General Attorney
Union Pacific Railroad Company



Russell J. Light
Senior General Attorney
BNSF Railway Company

cc: Mr. Christopher Grundler
Ms. Deborah Jordan
Mr. Richard Corey
Ms. Cynthia Marvin
Dr. Barry Wallerstein

GIDEON KRACOV

Attorney at Law

801 South Grand Avenue
11th Floor
Los Angeles, California 90017

(213) 629-2071
Fax: (213) 623-7755

gk@gideonlaw.net
www.gideonlaw.net

January 7, 2013

VIA E-MAIL AND CERTIFIED MAIL

blumenfeld.jared@epa.gov

Jared Blumenfeld
Regional Administrator
United States EPA Region IX
75 Hawthorne Street
San Francisco, CA 94105

**Re: SUPPORT FOR APPROVAL OF SOUTH COAST AQMD RULES 3501 AND 3502
INTO CALIFORNIA'S STATE IMPLEMENTATION PLAN**

Dear Mr. Blumenfeld:

This Office respectfully writes on behalf of East Yard Communities for Environmental Justice ("EYCEJ"). EYCEJ is an environmental health and justice organization located at 2317 Atlantic Avenue, Commerce, California 90040 that is dedicated to a safe and healthy environment for communities that disproportionately suffer the negative impacts of industrial pollution in Southeast Los Angeles County and throughout the State. In particular, EYCEJ is extremely concerned about the 1,285,200 persons exposed to excess cancer risk caused by emissions from the four Commerce, California railyards within the South Coast Air Basin.¹

EYCEJ writes to request that the U.S. Environmental Protection Agency ("U.S. EPA") expeditiously approve South Coast Air Quality Management District ("SCAQMD" or "District") Rules 3501 and 3502 into California's State Implementation Plan ("SIP") under the federal Clean Air Act ("CAA" or "Act"). These Rules that address locomotive idling were forwarded by the California Air Resources Board ("CARB") to Region IX for SIP approval on or about August 30, 2012.

The locomotive idling that is the subject of the Rules is a real and ongoing problem in the South Coast Air Basin, and we attach hereto as Exhibit A numerous declarations from community members under penalty of perjury that verify this. The Rules, including the recordkeeping requirement in Rule 3501, will ensure that idling and emissions reductions will actually occur, and improve enforceability of those reductions.

¹"Health Risk Assessment for the Four Commerce Railyards," Report of the California Air Resources Board, Stationary Source Division (November 2007) at pp. 16-19.

U.S. EPA and the State have authority to include these Rules in the SIP. The Ninth Circuit Court of Appeals decision in *Association of American Railroads v. South Coast Air Quality Management District*, 622 F.3d 1094, 1098 (9th Cir. 2010) concerning Rules 3501 *et seq.* held that submission of the Rules to CARB, and then to EPA, for inclusion in the SIP [is the] appropriate and proper avenue for the District to pursue. U.S. EPA must reject the railroads' arguments to the contrary. In fact, on February 24, 2012, the United States District Court, Central District of California issued an Order that allowed SCAQMD to forward Rules 3501 and 3502 on to CARB for SIP approval, rejecting the railroads' argument that this action was unlawful. This Order is attached hereto as *Exhibit B*.

EYCEJ therefore urges Region IX to support the CAA's policy goals of protecting public health and welfare by approving the Rules into the California SIP. The quality of life of EYCEJ's community members depends on it. EYCEJ also requests that this letter be added to the U.S. EPA rulemaking docket for the Rules.

I. LOCOMOTIVE IDLING IS AN ONGOING PROBLEM IN THE SOUTH COAST AIR BASIN THAT MAKES RULES 3501 AND 3502 NECESSARY

Contrary to the railroads' self-serving assertion that the problem of extended locomotive idling has been addressed by their voluntary agreements, the need for implementation of the Rules is ongoing. EYCEJ members in the South Coast Air Basin continue to regularly experience and report idling events that would be subject to the Rules. We attach hereto as Exhibit A numerous affidavits from Commerce, California residents who complain about ongoing locomotive idling. These witnesses all describe a continuing practice of idling at Union Pacific's East Yard Railyard in Commerce, California. The circumstances and pattern of the identified idling events is the same.

If U.S. EPA has *bona fide* concerns that such idling remains an issue, EYCEJ will be pleased to have community members contact you, or to arrange a "town hall" meeting with U.S. EPA personnel and the community on the idling issue.

By way of example, Maria Jauregui of 5816 Ferguson Drive, in Commerce, California reports that:

"On a semi-regular basis over the last two years, Union Pacific locomotives at the East Yard Railyard have been, and continue to be, left idling for extended periods of time, up to one hour, during which time staff/engineers leave the premises entirely, presumably for lunch or dinner breaks. I can hear the locomotives idling and see fumes emitted from the locomotive smokestacks. These cause annoyance to me and my family.

... Additionally, Union Pacific locomotives at the East Yard Railyard are left idling for long periods of time, often longer than 30 minutes, while staff/engineers

causally “hang out” in the yard listening to music and/or “chit chatting.” When neighbors request that the locomotive engines be turned off, the staff/engineers refuse to do so. Neighbors have refrained from making such requests in recent months because staff/engineers consistently respond to our requests by boarding the locomotive and honking of the train horn for extended periods for no apparent reason other than to retaliate against our community.” (*See Exhibit A attached hereto.*)

So too, Lourdes Beltran of 2302 Bedessen Avenue in Commerce, California declares that:

“I reside at 2302 Bedessen Avenue in Commerce, California where I have lived for over 20 years. . . .

I suffer from anxiety, which is aggravated by the consistent idling . . . (the tracks from the Union Pacific East Yard Railyard located about 100 feet from my home) . . .

I hear locomotives idling at the Union Pacific East Yard Railyard for over an hour at a time at least twice every night between the hours of 8pm and 8am. This has been consistent for years and continues today. I am alerted to the idling by prolonged noise and vibration caused by the engines . . .

I also identify strong fumes as an issue while the trains are idling.” (*See Exhibit A attached hereto.*)

In sum, locomotive idling in the SCAQMD Air Basin is still an ongoing issue despite the railroads’ voluntary actions. EYCEJ also wants to emphasize that polluting idling likely occurs at locations within the railyards where the public cannot serve as direct eyewitnesses. This is why the Rules are necessary.

II. SIGNIFICANT BENEFITS WILL RESULT FROM INCLUDING RULES 3501 AND 3502 IN CALIFORNIA’S STATE IMPLEMENTATION PLAN

Codification of the Rules would provide a level of certainty and enforceability that our members deserve and the Act requires. The Rules, including the recordkeeping requirement in Rule 3501, will ensure that idling and emissions reductions will actually occur, and improve enforceability of those reductions. All additional reductions in toxic air emissions are meaningful for communities in the South Coast Air Basin, where the air is polluted not only by locomotives, but also related railyard operations, multiple local freeways (including a proposed freeway expansion) and industrial facilities.

Locomotive emissions alone account for 158 tons per day of NOx and 4.8 tons per day of PM in the State.² In the South Coast Air Basin, regulators recognize that “the severity of the region’s PM-2.5 problem and the attainment deadline make it necessary to further mitigate locomotive emissions in 2014.”³ The railroads repeatedly emphasize their voluntary agreement to limit locomotive idling, so the Regional Administrator must ask -- why do the railroads fight these Rules so furiously?

Air toxic emissions from California railyards and locomotives also present a significant concern. Human health risk assessments for railyard communities in San Bernardino and Commerce show excess maximum cancer risk caused by local railyard operations as high as 3,300 per million.⁴ This is far above generally accepted regulatory thresholds.⁵ In fact, over three million Californians are exposed by railyard sources to excess cancer risk of more than ten in one million.⁶ CARB insists that “every feasible effort” is needed to “reduce localized risk in communities adjacent” to the State’s railyards.⁷

The State of California has specifically identified diesel particulate matter (PM) as a toxic air contaminant, which is addressed in California’s implementation of the Act. Because of their microscopic sizes, PM 10 and PM 2.5 can penetrate deep in to the lungs, enter the bloodstream and carry with it an array of additional toxins. Health risks associated with diesel PM include increased incidence of cancer, respiratory illnesses (e.g. asthma), heart disease, and premature birth.⁸ EYCEJ is particularly concerned that our children and seniors are especially susceptible to these health risks. Every missed school day means expanding an achievement gap that directly limits the potential for our children and communities, and indirectly limits the

²California Air Resources Board, Recommendations to Implement Further Locomotive and Railyard Emission Reductions, September 9, 2009, p. 12, available at <http://www.arb.ca.gov/railyard/ted/ted.htm>.

³California Air Resources Board, Meeting to Consider Approval of the Proposed State Strategy for California’s State Implementation Plan -- Revised Staff Proposal, September 27, 2007, section 1 p. 4, available at www.arb.ca.gov/planning/sip/2007sip/revcasip2007.pdf.

⁴California Air Resources Board, Health Risk Assessment for the BNSF San Bernardino Railyard, June 11, 2008, p. 13, available at www.arb.ca.gov/railyard/hra/hra.htm.

⁵In 1990, Congress adopted a one in one million threshold in Section 112 of the Clean Air Act, which requires the United States Environmental Protection Agency (EPA) to issue technology-based standards to reduce emissions of hazardous air pollutants and consider issuing residual risk standards if the excess cancer risk to the individual most exposed would exceed one in one million.

⁶See *supra* note 2 at p. 2.

⁷*Id.*

⁸“Diesel and Health in America: The Lingering Threat” available at <http://www.catf.us/resources/publications> (reporting that diesel emissions are responsible for heart attacks, cancer and over 20,000 premature deaths. Between now and 2030, 100,000 premature deaths could be avoided by an aggressive but feasible national program to clean up today’s dirty diesels.) (February 2005).

contributions they can make to the State and Nation.

Additionally, when adult income earners are forced to miss work on account of illness associated with PM emissions—or must stay home to care for the young or elderly in their families who become sick—avoidable economic strain falls on already economically disadvantaged families. The direct health care costs of pollution related illness impose further economic pressure on our communities and under-resourced local and State health care systems.

Any additional emissions reduction that result from implementation the idling rules will serve the primary purpose of the Clean Air Act, “to promote the public health and welfare and the productive capacity of [the] population.”⁹ It is SCAQMD’s duty and authority, “subject to the powers and duties of [CARB]” to: i) craft rules and regulations that “provide for the prevention and abatement of air pollution episodes which[,] cause discomfort or health risks to, or damage to the property of, a significant number of person or class of persons;” and ii) “enforce all applicable provisions of state and federal law.”¹⁰

EYCEJ therefore implores U.S. EPA to endorse CARB’s SIP revision. In doing so, EPA will uphold both the environmental and environmental justice values embodied in the Act.

III. U.S. EPA AND THE STATE HAVE AUTHORITY TO IMPOSE THESE RULES IN THE SIP, AND U.S. EPA SHOULD DISREGARD THE RAILROADS’ CONTINUED PATTERN OF “PLAYING FAST AND LOOSE” WITH THE LAW AND FACTS

The railroads’ September 12, 2012 letter to U.S. EPA suggests that the idling Rules cannot lawfully be included in the California SIP. This is wrong, contradicted by controlling legal authority, and the railroads’ own prior concessions.

On February 24, 2012, the United States District Court, Central District of California issued an Order (*see attached Exhibit B*) that allowed SCAQMD to forward Rules 3501 and 3502 on to CARB for SIP approval, rejecting the railroads’ argument that this action was unlawful.

In that Order, the Judge John F. Walter lamented that the railroads were “unfortunately playing fast and loose with the Court.”¹¹ The Judge noted that efforts by the railroads to hold the

⁹Clean Air Act of 1963, § 7401, 42 U.S.C. § 7401 (1990).

¹⁰Cal. Health & Safety Code §40001(a)-(b).

¹¹*Ass’n of Am. R.R. v. S. Coast Air Quality Mgmt. Dist.*, No.CV06-1416, Document 269 (C.D. Cal. Feb. 24, 2012) (Order Granting Defendants’ Motion to Vacate Order to Show Cause), at p. 4 (emphasis added) *attached hereto as Exhibit B*.

SCAQMD in civil contempt for forwarding these Rules on to CARB for SIP approval were “completely disingenuous and frivolous,” and that their submissions were “misleading.”¹²

We therefore caution the Regional Administrator and U.S. EPA staff to review the railroads’ submissions and legal analysis with a skeptical eye.

A. The Ninth Circuit Held That Rules 3501 and 3502 Can, And Should, Be Included in California’s SIP

The Ninth Circuit Court of Appeals decision in *Association of American Railroads v. South Coast Air Quality Management District*, 622 F.3d 1094, 1098 (9th Cir. 2010) concerning Rules 3501 *et seq.* clearly held that submission of the Rules to CARB, and then to EPA, for inclusion in the SIP [is the] appropriate and proper avenue for the District to pursue.

In fact, the Ninth Circuit’s explanation of the role of the SIP process is the key holding of the *Association of Am. Railroads v. S. Coast Air Qual. Mgmt Dist.* While the Ninth Circuit did invalidate the Rules as presented then without SIP-approval, the case provides a clear path by which such state and local air quality rules can survive pre-emption. The opinion holds at p. 1098 that: “to the extent that state and local agencies promulgate EPA-approved statewide plans under federal environmental laws (such as ‘statewide implementation plans’ under the Clean Air Act), ICCTA generally does not preempt those regulations because it is possible to harmonize the ICCTA with those federally recognized regulations. *See, e.g., Bos. & Me. Corp., 2001 WL 458685*, at (*[N]othing in section 10501(b) is intended to interfere with the role of state and local agencies in implementing Federal environmental statutes, such as the Clean Air Act [and the federal clean water statutes].’).”

Thus, *Association of Am. Railroads v. S. Coast Air Qual. Mgmt Dist.* provides a path to avoid pre-emption under the Interstate Commerce Commission Termination Act (“ICCTA”), 9 U.S.C. § 10501(b). This path is the SIP.

This holding sets valuable precedent for air quality regulators. Pursuant to *Association of Am. Railroads v. S. Coast Air Qual. Mgmt Dist.*, 622 F.3d at 1098, the principle of harmonization will apply if the rules are submitted by California pursuant to the Clean Air Act to U.S. EPA and then approved as part of California’s SIP. “Once approved by EPA, state implementation plans have ‘the force and effect of federal law.’” That is what is occurring now in this submission to Region IX, and these Rules should be approved into the SIP.

In reality, the railroads have conceded this in other venues. Before the Ninth Circuit, the railroads stated “[t]hat’s exactly what the statute provides for.” In that venue, the railroads stated that the District:

“ought to do here is to get CARB and EPA to approve these rules. And if they do, that becomes part of the SIP and it becomes federally enforceable and then you do have a

¹²*Id.*

harmonization question, And the answer to that is yes. That's exactly what the statute provides for."¹³

That is why Judge Walter later forcefully rejected the railroads' arguments to the contrary (see *Exhibit B hereto*.)

Despite this, the railroads again play "fast and loose," now arguing in their letters to Region IX that the Rules cannot be included in the SIP. Please reject this argument. Both the Ninth Circuit and District Court already have done so.

B. The Proposed Rules Are Not Pre-Empted By, Nor Do They Conflict With, the Federal Clean Air Act

Association of Am. Railroads v. S. Coast Air Qual. Mgmt Dist. provides a clear path by which State and local governments can adopt rules to reduce rail pollution as part of their required SIP duties under the Clean Air Act. Pursuant to *Association of Am. Railroads v. S. Coast Air Qual. Mgmt Dist.*, once approved by U.S. EPA pursuant to the Act, such rules will be "harmonized" with, and not preempted by, the federal Clean Air Act or the ICCTA law. In fact, U.S. EPA has SIP-approved anti-idling regulations for diesel engines including train locomotives in other jurisdictions. These include Massachusetts Vehicle Idling Regulation 310 CMR 7.11 U(2) for diesel trains (see attached *Exhibit C*.)

We also note for the record that the SIP submission package for the Rules included detailed legal analysis on the pre-emption topic, including the SCAQMD memoranda dated November 21, 2011, March 20, 2012 and letter dated August 9, 2012. We agree with the District's analysis and do not write to reiterate all that, but please consider the following:

Section 116 of the Clean Air Act [42 U.S.C. §7416] creates a general presumption against pre-emption of rules such as those proposed, and specifically addresses the *retention* of State authority. Under this presumption, states (and their political subdivisions) are generally *not* pre-empted from adopting or enforcing rules regarding control or abatement of air pollution, or the emissions that cause such pollution.¹⁴ Furthermore, Section 209(d) expressly *permits* states to craft "in-use requirements," granting states and their agents "the right otherwise to control, regulate, or restrict the use, operation, or movement of registered or licensed motor vehicles."¹⁵ In *Engine Mfrs. Ass'n v. EPA*, the D.C. Circuit specifically references "programs to control

¹³*Id.*

¹⁴42 U.S.C. §7416. "Except as otherwise provided in sections 1857c-10(c), (e), and (f)(as in effect before August 7, 1977), 7543, 7545(c)(4) and 7573 of this title (preempting certain State regulation of moving sources) nothing in this chapter shall preclude or deny the right of any State or political subdivision thereof to adopt or enforce (1) any standard or limitation respecting emissions of air pollutants or (2) any requirement respecting control or abatement of air pollution"

¹⁵42 U.S.C. §7543(d).

extended idling of vehicles” as a typical example of “in-use requirements” *not* pre-empted by Section 209.¹⁶ Here, the core mandate of the District and CARB’s SIP amendment is a 30 minute idling time-limit for certain locomotives in specific geographical areas that confront extraordinary air pollution challenges. The idling Rules are the very type of state and local regulation Congress and the courts have contemplated as protected from pre-emption.

The railroads characterize the time limit on idling as an emission standard pre-empted under Section 209(e). Such a characterization should be rejected. Section 209(e) pre-empt a State (or political subdivision) from adopting or enforcing a “*standard* or other requirement relating to the control of *emissions*.” The Supreme Court has interpreted the statutory phrase “standard relating to the control of emissions” as “denot[ing] requirements such as *numerical emission levels* with which vehicles or engines must comply.”¹⁷ The Rules at issue here are plainly not an emission standard that require locomotives to meet any numerical emissions level. Rather, the Rules are an “in use” or “operational” requirement that limits engine idling time in and around communities suffering the impacts of toxic emissions in excessive amounts *from* railroad operations.

Additionally, in the unlikely event that a court found the Rules to constitute emissions standards under 209(e), rather than in-use requirements under 209(d), Section 209 specifically provides for California to apply for a waiver. If granted, the waiver would void any pre-emption and allow implementation and enforcement by the District.

Lastly, the assertion that Rule 3502 conflicts with similar federal requirements, and is therefore pre-empted, is false. The Rule applies only to: (1) unattended locomotives (which do not need comfort heating or cooling); see Rule 3502(d)(1), or, in other cases, to (2) trailing locomotives (i.e., lead locomotive); see Rule 3502(d)(2). This assures that locomotive operators will not face circumstances where they cannot comply with both the letter and spirit of the federal requirements. Because it is not impossible to comply with the federal regulation and the District regulation, there is no conflict with federal requirements. *English v. General Elec. Co.*, 496 U.S. 72, 79 (1990).

///

///

///

///

///

¹⁶ *Engine Mfrs. Ass’n, v. EPA*, 88 F.3d 1075, 1094 (D.C. Cir. 1996).

¹⁷ *Engine Mfrs. Ass’n v. S. Coast Air Quality Mgmt. Dist.*, 541 U.S. 246, 253 (2004) [emphasis not in original]; 42 U.S.C. § 7543(a).

C. Harmonization With ICCTA Is Not A Barrier to SIP Approval

Please do not let the railroads' ICCTA "bogeyman" deter your action to clean the air -- there are many instances where ICCTA does not pre-empt environmental protection and health and safety laws.¹⁸

The SCAQMD has provided detailed and persuasive legal analysis on the ICCTA harmonization issue in its memoranda dated November 21, 2011, March 20, 2012 and letter dated August 9, 2012. In its analysis, SCAQMD cites *N.Y. Susquehanna & W. Ry. Corp. v. Jackson*, 500 F.3d 238, 252-254 (3d Cir. 2007), which holds that "[t]he touchstone [of this analysis] is whether the state regulation imposes an unreasonable burden on railroading." Overcoming ICCTA pre-emption is far from insurmountable -- "the substance of the regulation must not be so draconian that it prevents the railroad from carrying out its business in a sensible fashion," and "the regulation must be settled and definite enough to avoid open-ended delays." *Id.* Here, narrowly tailored Rules 3501 and 3502 easily pass these hurdles.

Also, please consider that this is not a case where ICCTA is being used to pre-empt a local law such as is the case in many ICCTA decisions cited by the railroads including *City of Auburn v. United States*, 154 F.3d 1025, 1027-1030 (9th Cir. 1998). Here, delegation under federal law is at issue -- the federal Clean Air Act. In this instance, it is far harder for the railroads to establish pre-emption. In fact, the federal Surface Transportation Board decisions interpreting the intersection of ICCTA and the federal Clean Air Act specifically have acknowledged that ICCTA should not interfere with the CAA:

"[T]he Clean Air Act requires states to implement plans to protect and enhance air quality so as to promote the public health and welfare. See 42 U.S.C. section 7401 et seq. Rather than relegating state and local agencies to the periphery in implementing Federal law, the statutory scheme gives individual states the responsibility of developing and enforcing air quality programs that meet or exceed the national standards within their borders . . . [n]othing in *King County* or this decision is intended to interfere with the role of the states and local entities in implementing these federal laws." *Cities of Auburn and Kent – Burlington Northern Railroad Co.*, STB Fin. Docket No. 33200, 197 WL 362017,

¹⁸ See *Emerson v. Kansas City Railway Co.*, 503 F.3d 1126, 1131-1132 (10th Cir. 2007) (ICCTA does not preempt tort claims); *N.Y. Susquehanna & W. Ry. Corp. v. Jackson*, 500 F.3d 238, 255-257 (3d Cir. 2007) (court finds state solid waste regulations are "not *per se* unreasonable"); *Hi Tech Transp., LLC v. City of New Jersey*, 382 F.3d 295, 308 (3rd Cir. 2004); *Hackensack Riverkeeper v. Delaware Ostego Co.*, 450 F.Supp.2d 467, 478 (D.N.J. 2006) (Resource Conservation and Recovery Act claim not ICCTA preempted); *J.P. Rail v. New Jersey Pinelands*, 404 F.Supp.2d 636, 652 (D.N.J. 2005); *Holland v. DelRay Connecting Railroad Co.*, 311 F.Supp.2d 744, 757 (N.D.In. 2004) (court rejects ICCTA exclusive and primary jurisdiction arguments in Coal Industry Health Benefits Act case); *Jones v. Union Pacific Railroad Company* (2000) 79 Cal.App. 4th 1053, 1060 (nuisance locomotive noise problems not pre-empted).

at *4 (STB July 1, 1997); *see also Boston and Maine Corp. and Town of Ayer, MA*, STB Fin. Docket No. 33971, 2201 WL 45685, at *5 (STB April 30, 2001).¹⁹

IV. CONCLUSION

EYCEJ respectfully urges your Office to support the CAA's policy goals of protecting public health and welfare by approving SCAQMD Rules 3501 et seq. into the California SIP.

EYCEJ is a stakeholder, and requests that it be added to all public notice and service lists concerning U.S. EPA review or approval of the California SIP revision submission of SCAQMD Rules 3501 and 3502. EYCEJ respectfully requests that this letter be added to the U.S. EPA rulemaking docket for the Rules. EYCEJ also reserves the right to provide your Office with additional information and comments.

EYCEJ is particularly troubled by the railroads' characterization of the benefits of these idling Rules as being "probably zero," as we have provided on-the-ground factual support (*see Exhibit A hereto*) that limiting the time locomotives can idle in the South Coast Air Basin would bring tremendous public health and welfare benefits to our communities. Locomotive idling is a real and ongoing problem, despite the railroads' voluntary actions. The Rules, including the recordkeeping requirement in Rule 3501, will ensure that idling and emissions reductions will actually occur, and improve enforceability of those reductions.

The railroads repeatedly emphasize their voluntary agreement to limit locomotive idling, so the Regional Administrator must question why do the railroads fight these idling Rules so furiously? One is reminded of Act III of Hamlet: the railroads "doth protest too much, methinks."

EYCEJ also wishes to re-emphasize that the Ninth Circuit Court of Appeals decision in *Association of American Railroads v. South Coast Air Quality Management District*, 622 F.3d 1094 (9th Cir. 2010) concerning Rules 3501 et seq. held that "submission of the Rules to CARB, and then to EPA, for inclusion in the SIP [is the] appropriate and proper avenue for the District to pursue." U.S. EPA must reject the railroads' arguments to the contrary. In fact, the United States District Court, Central District of California issued an Order in February 2012 that allowed SCAQMD to forward Rules 3501 and 3502 on to CARB for SIP approval, rejecting the railroads' argument that this action was unlawful.

EYCEJ would like the opportunity to discuss the Rules and the issues raised in this comment letter with the appropriate U.S. EPA staff. My contact information is set forth on the letterhead and Angelo Logan, Co-Director of EYCEJ, can be contacted at 323-263-2113 or alogan@eycej.org.

¹⁹The United States Supreme Court has held that the Clean Air Act is not preempted by federal transportation agency laws. *See Massachusetts v. United States E.P.A.*, 549 U.S. 497, 532 (2007) (federal Department of Transportation jurisdiction does not preempt Clean Air Act greenhouse gas control efforts).

Thank you for your consideration of these comments.

Sincerely,



Gideon Kracov, Esq.
Counsel for East Yard Communities for Environmental Justice

Exs. A-C

CC (via email):

Deborah Jordan
Andy Steckel
Deldi Reyes
Carlin Hafiz
James Goldstene
Cynthia Marvin
Ellen Peter
Elaine Chang
Kurt Wiese
Barbara Baird
Veera Tyagi
Dan Selmi
Kim Foy
Penny Newman
David Pettit
Adrian Martinez
Paul Cort
Jesse Marquez
Bahram Fazeli

EXHIBIT A

1
2
3
4
5
6
7
8
9
0
1
2
3
4
5
6
7
8
9
0
1
2
3
4
5
6

2
3
4
5
6
7
8
9
0
1
2
3
4
5
6
7
8
9
0
1
2
3
4
5
6

- 9

- 0
-
- 1
-
- 2
-
- 3
-
- 4

- 6
7
8
9
0

- 3
4
5
6

1 engines be turned off, the staff/engineers refuse to do so. Neighbors have refrained from making
2 such requests in recent months because staff/engineers consistently respond to our requests by
3 boarding the locomotive and honking of the train horn for extended periods for no apparent
4 reason other than to retaliate against our community.

5
6 I declare under penalty of perjury under the laws of the State of California that the
7 foregoing is true and correct. Executed on 12-21-12, 2012, at Commerce,
8 California.

9
10 
11 Maria Jauregui

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26

Lourdes Beltran
Lourdes Beltran

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26

1. I reside at 1441 S. Sydney Dr., #2 in Commerce, California. My home is 1.5 short blocks from the Union Pacific East Yard Railyard.

3. I also identify strong fumes as an issue while the trains are idling.


Jose Murray

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

H
STATEMENT OF ORTENCIA LIGGINS

I, Ortencia Liggins, an over 18 years of age, have personal knowledge of each fact stated herein and could and would testify competently thereto. I wish the following statement to be incorporated into the record of the U.S. Environmental Protection Agency (EPA) compiled for considering revision of California's State Implementation Plan (SIP) to include the South Coast Air Quality Management District proposed Rules 3501 and 3502:

1. I reside at 4576 Leonis St. in Commerce, California. My home is less than 100 feet from the Union Pacific East Yard Railyard.

2. I have observed locomotives idling at the Union Pacific East Yard Railyard for 45 minutes to one hour after midnight on a regular basis. This continues to occur. I am alerted to the idling by prolonged noise and vibration caused by the engines.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed on Jan 4th, 2012, at Commerce, California.

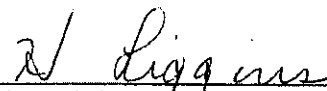

H Ortencia Liggins

EXHIBIT B

**UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA**

**PRIORITY SEND
JS-6**

CIVIL MINUTES -- GENERAL

Case No. **CV 06-01416-JFW (PLAx)**

Date: February 24, 2012

Title: Association of American Railroads, et al. -v- South Coast Air Quality Management District, et al.

PRESENT:

HONORABLE JOHN F. WALTER, UNITED STATES DISTRICT JUDGE

**Shannon Reilly
Courtroom Deputy**

**None Present
Court Reporter**

ATTORNEYS PRESENT FOR PLAINTIFFS:
None

ATTORNEYS PRESENT FOR DEFENDANTS:
None

PROCEEDINGS (IN CHAMBERS): **ORDER GRANTING DEFENDANTS' MOTION TO
VACATE ORDER TO SHOW CAUSE
[filed 1/27/2012; Docket No. 257]**

On January 27, 2012, Defendants South Coast Air Quality Management District and the Governing Board of South Coast Air Quality Management District (collectively, the "District") and Dr. Barry Wallerstein, Dr. Elaine Chang, and Barbara Baird, Esq. (collectively, the "Contempt Defendants") filed a Motion to Vacate Order to Show Cause. On February 6, 2012, Association of American Railroads, BNSF Railway Company, and Union Pacific Railroad Company (collectively "Plaintiffs") filed their Opposition. On February 13, 2012, the District and Contempt Defendants filed a Reply. Pursuant to Rule 78 of the Federal Rules of Civil Procedure and Local Rule 7-15, the Court finds that this matter is appropriate for decision without oral argument. The hearing calendared for February 27, 2012 is hereby vacated and the matter taken off calendar. After considering the moving, opposing, and reply papers and the arguments therein, the Court rules as follows:

I. PROCEDURAL AND FACTUAL BACKGROUND

On April 30, 2007, following a bench trial, the Court issued its Findings of Facts and Conclusions of Law in this action, concluding that the Interstate Commerce Commission Termination Act ("ICCTA"), 49 U.S.C. § 10101, preempted the District's Rules 3501, 3502, and 3503 (collectively the "Rules"), and that the District lacked state law authority to adopt these Rules. On May 17, 2007, in accordance with the Findings of Facts and Conclusions of Law, the Court entered a Judgment and Permanent Injunction ("Permanent Injunction"), which provides in relevant part:

1. District Rule 3503, adopted by the Governing Board on October 7, 2005, and District Rules 3501 and 3502, adopted by the Governing Board on February 3, 2006, are preempted in their entirety by the Interstate Commerce Commission Termination Act of 1995 ("ICCTA"), 49 U.S.C. § 10101 *et seq.*
2. Under Plaintiffs' First Cause of Action, the District, the Governing Board, and their board members, officers, agents, employees, attorneys and all others acting in concert or participation with them, are hereby permanently enjoined from implementing or enforcing any provision of Rules 3501, 3502 or 3503.

On May 30, 2007, Defendants appealed the Judgment and Permanent Injunction. On September 15, 2010, the Ninth Circuit issued a published opinion affirming this Court's Judgment and Permanent Injunction. *Ass'n of Am. Railroads v. South Coast Air Quality Mgmt. Dist.*, 622 F.3d 1094 (9th Cir. 2010).

On November 2, 2011, the District, acting through its employees, including Executive Officer Dr. Barry Wallerstein, Deputy Executive Officer for Planning, Rule Development & Area Sources Dr. Elaine Chang, and District Counsel Barbara Baird, formally submitted Rules 3501 and 3502 to the California Air Resources Board ("CARB") and requested that CARB submit the Rules to the United States Environmental Protection Agency for its review and inclusion in California's State Implementation Plan ("SIP") under the federal Clean Air Act.

On December 7, 2011, Plaintiffs filed a Motion for an Order to Show Cause Why South Coast Air Quality Management District and its Employees Should Not Be Held in Civil Contempt or, in the Alternative, an Order of Contempt, claiming that the District and Contempt Defendants have violated and continue to violate the provisions of the Permanent Injunction, by submitting Rules 3501 and 3502 to CARB. The Court declined to enter the requested Order of Contempt, but concluded, based on the record submitted by the parties, that Plaintiffs had made the minimal required showing for the issuance of the Order to Show Cause Why South Coast Air Quality Management District and its Employees Should Not Be Held in Civil Contempt. Accordingly, the Court issued the Order to Show Cause Why South Coast Air Quality Management District and its Employees Should Not Be Held in Civil Contempt ("Order to Show Cause"), and set a briefing schedule and date for the evidentiary hearing or "trial."

On January 27, 2012, the District and Contempt Defendants, represented by new counsel, filed the pending Motion to Vacate Order to Show Cause, which included a transcript of the oral argument before the Ninth Circuit. The transcript was not presented to the Court, and therefore not considered by the Court in its decision to issue the Order to Show Cause.¹

II. DISCUSSION

After reviewing the transcript of the oral argument before the Ninth Circuit, the Court concludes that the Order to Show Cause was improvidently granted, due to the incomplete and

¹The Court finds Plaintiffs' Objection to Defendants' Filing of Certified Transcript of Oral Argument Before Ninth Circuit completely disingenuous and frivolous.

misleading record presented to the Court. Quite frankly, the Court is surprised and disappointed that Plaintiffs did not voluntarily agree to vacate the Order to Show Cause, upon reviewing the transcript of the oral argument and Plaintiffs' Motion to Vacate Order to Show Cause.

Plaintiffs' counsel, Mr. Jenkins, clearly represented to the Ninth Circuit that the District's submission of the Rules to CARB, and then to EPA, for inclusion in the SIP would be an appropriate and proper avenue for the District to pursue. Indeed, at the outset of his argument, Mr. Jenkins stated:

I'd like to start out by addressing, Judge Rymer, the point that you were making toward the end, which is, isn't what [the District] ought to do here is to get CARB and EPA to approve these rules. And if they do, that becomes part of the SIP and it becomes federally enforceable and then you do have a harmonization question. And the answer to that is yes. That's exactly what the statute provides for.

Transcript of Oral Argument, 13:4-11.

Moreover, in response to the Ninth Circuit's questioning regarding the effect of this Court's determination that the District did not have authority to adopt the Rules, Mr. Jenkin's reaffirmed that the District's submission of the Rules to CARB would not be prohibited by the Court's determination, and in fact, would be permissible:

Judge Graber: You started by saying, gee, if they just get the State to put this in the State Plan and then it's fine, because they you have a . . . harmonizing -- between the Clean Air Act and ICCTA. How do they get from here to there, if your position is that they can't even get started?

Mr. Jenkins: They can propose a regulation, Your Honor. They can't implement it. They can propose it; CARB can adopt it; EPA can approve it. And if it's approved, that doesn't mean we still won't -- won't challenge it, because we still have this harmonization issue. But if it's approved, at least they have the harmonization argument.

Id. at 23:1-14.

Based on the arguments and position advanced by Plaintiffs before the Ninth Circuit, the Court concludes that Plaintiffs are judicially estopped from claiming that the District's submission of the Rules to CARB violates the provisions of the Court's Permanent Injunction in this action. As the Ninth Circuit recently stated:

Judicial estoppel, sometimes also known as the doctrine of preclusion of inconsistent positions, precludes a party from gaining an advantage by taking one position, and then seeking a second advantage by taking an incompatible position. Judicial estoppel is an equitable doctrine that is intended to protect the integrity of the judicial process by preventing a litigant from playing fast and loose with the courts. Judicial estoppel applies to a party's stated position whether it is an expression of intention, a statement of fact, or a legal assertion.

Wagner v. Prof'l Eng'rs in California Gov't, 354 F.3d 1036, 1044 (9th Cir. 2004) (quotations and citations omitted). "[T]he circumstances under which judicial estoppel may appropriately be invoked are probably not reducible to any general formulation of principle" and there are no "inflexible prerequisites" for determining the applicability of judicial estoppel. *New Hampshire v. Maine*, 532 U.S. 742, 750-51 (2011).

In this case, the Court concludes that Plaintiffs are unfortunately "playing fast and loose" with the Court, and allowing Plaintiffs to take a totally inconsistent position in these contempt proceedings would be fundamentally unfair and constitute a gross miscarriage of justice. Although the Court recognizes that the scope of the Permanent Injunction was never at issue before the Ninth Circuit, Plaintiffs clearly represented to the Ninth Circuit that it would be appropriate for the District to submit the Rules to CARB. And, the Ninth Circuit tacitly approved that position: "Because the District's rules have not become a part of California's EPA-approved state implementation plan, they do not have the force and effect of federal law, even if they might *in the future*." *Ass'n of Am. Railroads v. South Coast Air Quality Mgmt. Dist.*, 622 F.3d 1094, 1098 (9th Cir. 2010) (emphasis added).

III. CONCLUSION

For the foregoing reasons, the Motion to Vacate Order to Show Cause is **GRANTED**. The Order to Show Cause is hereby **VACATED**. Although the Court is concerned by the conduct of Plaintiffs' counsel in pursuing the Order to Show Cause after reviewing the complete transcript of the oral argument before the Ninth Circuit and Plaintiffs' Motion to Vacate Order to Show Cause, the Court declines to award sanctions.²

IT IS SO ORDERED.

²The Court is equally concerned by the District's submission to CARB of the Memorandum of State Law Authority authored by the District's counsel, Barbara Baird. The Memorandum of State Law Authority blatantly ignored this Court's determination that the District lacked authority to adopt the Rules by stating: "[T]he District has authority under state law to adopt the rules." Declaration of Mark E. Elliott [Docket No. 227-2], Exhibit 1 at 34. It is difficult to understand how competent counsel could take that position in light of the clear ruling of this Court. In any event, the Court is confident that this misrepresentation will be raised by Plaintiffs in any further regulatory proceedings relating to this matter.

EXHIBIT C

[Skip Navigation](#)

[MassDEP Home](#)

[Mass.Gov Home](#)

[State Agencies](#)

[State Online Services](#)

[site](#)
[map](#)

contactssearch:

[Find](#)

[dep home](#) > [air](#) > [laws, regulations & policies](#) > [regulations & standards](#)

MassDEP Quick Links:



[About MassDEP](#)

[Public Participation & News](#)

Air & Climate

- :: [reports, plans & data](#)
- :: [air quality & monitoring](#)
- :: [laws, regulations & policies](#)
- :: [permits, reporting & forms](#)
- :: [grants & assistance](#)
- :: [programs & initiatives](#)
- :: [publications & fact sheets](#)

[Water, Wastewater & Wetlands](#)

[Waste & Recycling](#)

[Toxics & Hazards](#)

[Cleanup of Sites & Spills](#)

[Service Center](#)

[Calendar](#)

[My Community](#)

[Online Services](#)

[Regional Offices](#)

[Report Pollution](#)

AIR & CLIMATE

310 CMR 7.11: Massachusetts Vehicle Idling Regulation

7.11: U Transportation Media

(1) Motor Vehicles.

(a) All motor vehicles registered in the Commonwealth shall comply with pertinent regulations of the Registry of Motor Vehicles relative to exhaust and sound emissions.

(b) No person shall cause, suffer, allow, or permit the unnecessary operation of the engine of a motor vehicle while said vehicle is stopped for a foreseeable period of time in excess of five minutes. 310 CMR 17.11 shall not apply to:

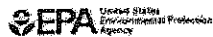
1. vehicles being serviced, provided that operation of the engine is essential to the proper repair thereof, or
2. vehicles engaged in the delivery or acceptance of goods, wares, or merchandise for which engine assisted power is necessary and substitute alternate means cannot be made available, or
3. vehicles engaged in an operation for which the engine power is necessary for an associated power need other than movement and substitute alternate power means cannot be made available provided that such operation does not cause or contribute to a condition of air pollution.

(c) 310 CMR 7.11(1)(b) is subject to the enforcement provisions specified in 310 CMR 7.52.

(2) Diesel Trains.

(a) No person owning or operating a diesel powered locomotive shall cause, suffer, allow, or permit said locomotive to be operated in a manner such as to cause or contribute to a condition of air pollution.

(b) No person shall cause, suffer, allow, or permit the unnecessary foreseeable idling of a diesel locomotive for a continuous period of time longer than 30 minutes. 310 CMR 7.00 shall not apply to diesel locomotives being serviced provided that idling is essential to the proper repair of said locomotive and that such idling does not cause or contribute to a condition of air pollution.



EPA New England Topics

Serving Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont & 10 Tribal Nations

EPA-Approved Massachusetts Regulations

Subpart - Massachusetts

Section **.**** Identification of plan.

(c) EPA approved regulations.

EPA Approved Massachusetts Regulations
(As of July 9, 2010.)

You will need Adobe Acrobat to view some of the files on this page. See [EPA's PDF page](#) to learn more about PDFs, and for a link to the free Acrobat Reader.

State Citation	Title / Subject	State Effective Date	EPA Approval Date	Explanations
310 CMR 6.04 (PDF) (1 pg, 105K)	Standards	07/25/1990	10/04/2002 67 FR 62184	Adopted PM10 as the criteria pollutant for particulates.
310 CMR 7.00 (PDF) (38 pp, 199K)	Definitions.	11/15/1993	02/01/1995	
		05/11/1994	60 FR 6027	
		07/30/1993	10/15/1996 61 FR 53628	
		02/17/1993	09/03/1999 64 FR 48297	
		07/30/1996	04/11/2000 65 FR 19323	
		01/11/1995	04/11/2000	
		03/29/1995	65 FR 19323	
		07/25/1995 08/09/2000 09/11/2000	12/18/2000 65 FR 78974	
		07/25/1990	10/04/2002 67 FR 62184	
		12/01/2006	07/31/2008 73 FR 44654	Addition of the term, "Boston Metropolitan Planning Organization." [See: Electronic Docket Number EPA-R01-OAR-2006-1018 at www.regulations.gov]
310 CMR 7.00 Appendix A (PDF) (23 pp, 223K)	Emission Offsets and Nonattainment Review.	07/15/94 and 04/14/95	10/27/2000 65 FR 64360	Approving 1990 CAAA revisions and general NSR permit requirements.
310 CMR 7.00 Appendix B (PDF) (19 pp, 93K)	Emission Banking, Trading and Averaging.	02/09/1994 03/29/1995	08/08/1996 61 FR 41335	Except 310 CMR 7.00 Appendix B(3)(e)5.h.
Regulations for the Control of Air Pollution (PDF) (2 pp, 109K)	Regulation 1 General Regulations to Prevent Air Pollution.	01/27/1972	05/31/1972 37 FR 10841	
Regulations for Prevention And/or Abatement of Air Pollution Episode and Air Pollution Incident Emergencies (PDF) (2 pp, 109K)	Regulation 1 Introduction.	08/28/1972	10/28/1972 37 FR 23085	
Regulations for the Control of Air Pollution (PDF) (15 pp, 126K)	Regulation 2 Plans Approval and Emission Limitations.	02/01/1978	03/15/1979 44 FR 15703	Regulation 2 is now known as 310 CMR 7.02.
Regulations for Prevention And/or Abatement of Air Pollution Episode and Air Pollution Incident Emergencies (PDF) (2 pp, 109K)	Regulation 2 Definitions.	08/28/1972	10/28/1972 37 FR 23085	

EPA-Approved MA Regulations | State Implementation Plans (SIPs) | Topi... Page 2 of 4

<u>310 CMR 7.02 (PDF)</u> (4 pp, 113K)	Plans Approval and Emission Limitations.	06/06/1994	04/05/1995 60 FR 17226	
<u>Regulations for the Control of Air Pollution (PDF)</u> (19 pp, 93K)	Regulation 3 Nuclear Energy Utilization Facilities.	06/01/1972	10/28/1972 37 FR 23085	
<u>310 CMR 7.03 (PDF)</u> (1 pg, 105K)	Plan Application Exemption Construction Requirements. Paint Spray Booths 310 CMR 7.03(13)	02/17/1993	09/03/1999 64 FR 48297	
<u>Regulations for the Control of Air Pollution (PDF)</u> (19 pp, 93K)	Regulation 4 Fossil Fuel Utilization Facilities.	01/27/1972	10/28/1972 37 FR 23085	Regulation 4 is now known as 310 CMR 7.04
<u>Regulations for the Control of Air Pollution (PDF)</u> (2 pp, 106K)	Regulation 5 Fuels	08/31/1978	03/07/1979 44 FR 12421	Regulation 5 is now known as 310 CMR 7.05. Portions of Regulation 5 have been replaced with the approval of 310 CMR 7.05
<u>310 CMR 7.05 (PDF)</u> (12 pp, 130K)	Fuels All Districts	02/11/1986	11/25/1986 51 FR 42563	
<u>Regulations for the Control of Air Pollution (PDF)</u> (2 pp, 107K)	Regulation 6 Visible Emissions.	08/28/1972	10/28/1972 37 FR 23085	Regulation 6 is now known as 310 CMR 7.06
<u>310 CMR 7.07 (PDF)</u> (3 pp, 111K)	Open Burning.	09/28/1979	06/17/1980 45 FR 40987	
<u>Regulations for the Control of Air Pollution (PDF)</u> (2 pp, 157K)	Regulation 8 Incinerators.	08/28/1972	10/28/1972 37 FR 23085	Regulation 8 is now known as 310 CMR 7.08
<u>310 CMR 7.08 (PDF)</u> (19 pp, 233K)	Incinerators. Municipal Waste Combustors 310 CMR 7.08(2).	01/11/1999	09/02/1999 64 FR 48095	
<u>Regulations for the Control of Air Pollution (PDF)</u> (1 pg, 105K)	Regulation 9 Dust and Odor.	12/09/1977	09/29/1978 43 FR 44841	Regulation 9 is now known as 310 CMR 7.09
<u>Regulations for the Control of Air Pollution (PDF)</u> (1 pg, 105K)	Regulation 10 Noise.	06/01/1972	10/28/1972 37 FR 23085	Regulation 10 is now known as 310 CMR 7.10.
<u>Regulations for the Control of Air Pollution (PDF)</u> (2 pp, 107K)	Regulation 11 Transportation Media.	06/01/1972	10/28/1972 37 FR 23085	Regulation 11 is now known as 310 CMR 7.11. This regulation restricts idling.
<u>310 CMR 7.12 (PDF)</u> (2 pp, 106)	Inspection Certificate, Record Keeping and Reporting.	06/28/1990 09/30/1992 07/15/1994	03/21/1996 61 FR 11556	The 06/28/1990 and 09/30/1992 submittals deal with the permitting process. The 07/15/1994 submittal develops 7.12 to comply with emission statement requirements.
<u>Regulations for the Control of Air Pollution (PDF)</u> (19 pp, 93K)	Regulation 13 Stack Testing.	06/01/1972	10/28/1972 37 FR 23085	Regulation 13 is now known as 310 CMR 7.13.
<u>310 CMR 7.14 (PDF)</u> (1 pg, 105K)	Monitoring Devices and Reports	11/21/1986 01/15/1987	03/10/89 54 FR 10147	
<u>Regulations for Prevention And/or Abatement of Air Pollution Episode and Air Pollution Incident Emergencies</u>	Regulation 15. Asbestos	08/28/1972	10/28/1972 37 FR 23085	Regulation 15 is now known as 310 CMR 7.15
<u>310 CMR 7.16 (PDF)</u> (7 pp, 120K)	Reduction of Single-Occupant Commuter Vehicle Use.	12/31/1978 05/16/1979	09/16/1980 45 FR 61293	
<u>310 CMR 7.17 (PDF)</u> (2 pp, 107K)	Conversions to Coal	01/22/1982	06/09/82 47 FR 25007	
<u>310 CMR 7.18 (PDF)</u> (63 pp, 267K)	Volatile and Halogenated Organic Compounds	10/07/1999	10/04/2002 67 FR 62179	
<u>310 CMR 7.19 (PDF)</u> (28 pp, 222K)	Reasonably Available Control Technology (RACT) for Sources of Oxides of Nitrogen (NOx)	11/19/1999	12/27/2000 65 FR 81743	
<u>310 CMR 7.24 (PDF)</u> (39 pp, 192K)	Organic Material Storage and Distribution.	08/09/2000 09/11/2000	12/18/2000 65 FR 78974	



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

Office of the General Counsel

Writer's Direct Dial:

909.396.2302

Fax: 909.396.2963

e-mail: bbaird@aqmd.gov

August 7, 2013

Via Electronic and U.S. Mail

Mr. Jared Blumenfeld
Regional Administrator
U.S. Environmental Protection Agency, Region 9
75 Hawthorne Street
San Francisco, CA 94105

Re: Follow-up to Telephone Conversation Regarding South Coast AQMD Rules 3501 and 3502 (Locomotive Idling)

Dear Mr. Blumenfeld:

Thank you for taking the time to discuss South Coast AQMD Rules 3501 and 3502 regarding locomotive idling with us. This letter responds to the issue raised in our conversation regarding whether Clean Air Act Section 110(a)(2)(E) precludes EPA from approving the rules into the SIP. We believe the CAA cannot be interpreted to preclude approval, on the specific facts of this case.

In the attached memorandum, the District demonstrates that the interpretation of Section 110(a)(2)(E) suggested by EPA in a recent telephone conference call:

- is certainly not compelled by the statutory language found in Section 110(a), and would interpret the Clean Air Act in way that is harmful to the public health;
- would conflict with the Ninth Circuit's decision in *Ass'n of American Railroads v. South Coast AQMD*, 622 F.3d 1094 (9th Cir. 2010);

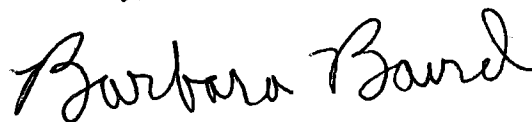
Mr. Jared Blumenfeld
U. S. Environmental Protection Agency
August 7, 2013
Page 2

- would reverse EPA's previously expressed public interpretation of that decision;
- would adopt a position that the railroads themselves have never recognized nor urged throughout the lengthy litigation over the rules;
- would conflict with the long-settled position of the Surface Transportation Board on the preemptive sweep of the Interstate Commerce Commission Termination Act, and would adopt a much wider scope of preemption than the Board has adopted for environmental protection measures; and
- would render it more likely that state regulations submitted as part of the SIP would be preempted than environmental regulations adopted by local governments;

We strongly urge the EPA to consider the attached materials and to approve the SIP submission in question.

We would be happy to discuss this matter further with you.

Sincerely,



Barbara Baird
Chief Deputy Counsel

BBB:vmr

e/bb/railroads/SIP Preemption Blumenfeld.doc

cc: Deborah Jordan, Air Division Director, Region 9
Nina Spiegelman, Office of Regional Counsel

TABLE OF CONTENTS

I.	AUTHORITY TO APPROVE SOUTH COAST AQMD RULES 3501 AND 3502 INTO THE SIP	1
II.	DESCRIPTION OF THE RULES AND LITIGATION HISTORY	1
A.	The Rules	1
B.	Litigation History	2
C.	EPA Has Previously Recognized that the Rules May Be Included in the SIP	3
III.	EFFECT OF THE REQUIREMENT IN CAA § 110(a)(2)(E) TO SHOW THAT A SIP REVISION IS NOT PROHIBITED BY FEDERAL LAW	4
A.	Purpose of Clean Air Act Requirement	4
B.	EPA Must Interpret the Clean Air Act to Further its Purposes and Avoid Absurd Results	5
C.	The Purposes of Section 110(a)(2)(E) Do Not Support Disapproval of the SIP	6
D.	The Surface Transportation Board Has Repeatedly Held that ICCTA Does Not Prevent States from Implementing CAA Measures including State Implementation Plan Provisions	6
1.	<i>The General Rule is that State and Local Implementation of the Clean Air Act and the SIP is Not Preempted</i>	6
2.	<i>The STB Holds that the Clean Air Act—including SIP Measures—Must Be Harmonized with ICCTA</i>	8
3.	<i>State Action Under the Clean Air Act is Not Preempted Unless it Unduly Burdens or Unreasonably Interferes with Interstate Commerce</i>	8
4.	<i>The Position Being Considered by EPA Results in the Anomalous Outcome that SIP Submissions under the Clean Air Act are Less Effective than Local Government Regulations</i>	9
5.	<i>In the Ninth Circuit Litigation the Railroads Agreed with the STB’s Test</i>	9
6.	<i>Only Permitting Requirements or Regulations of Matters that the STB Directly Regulates are Facially Preempted</i>	10

IV.	THE EXISTING INJUNCTION DOES NOT PROHIBIT EPA FROM APPROVING THE RULES	11
A.	The Courts Have Already Held that the Injunction Does Not Preclude SIP Approval of the Rules	11
B.	Case Law Allows EPA to Approve Rules into the SIP Where SIP Approval is Necessary to their Validity	12
V.	EPA MUST APPROVE THE RULES IF THEY MEET THE REQUIREMENTS OF THE CLEAN AIR ACT	13
A.	EPA May Not Afford ICCTA More Preemptive Scope than Does the STB	13
B.	EPA’s Refusal to Approve the Rules Based on a Determination that the Rules are Preempted by ICCTA Would Usurp the Role of the Federal Courts in this Case	14
C.	EPA’s Refusal to Approve the Rules Would Render the Ninth Circuit Decision Meaningless	14
D.	The Rules Do Not Unreasonably Interfere with Rail Transportation, So if they Are Approved Into the SIP they Should be Harmonized and Upheld	15
E.	Refusing to Approve the Rules on the Ground that they Have Already Been Enjoined Would Be “Fundamentally Unfair” and Would Allow the Railroads to Perpetrate a “Gross Miscarriage of Justice”	17
VI.	CONCLUSION	19

I. AUTHORITY TO APPROVE SOUTH COAST AQMD RULES 3501 and 3502 INTO THE SIP

EPA has informed the District that it is considering the position that Section 110(a)(2)(E) of the Clean Air Act requires it to disapprove the District's submission of Rules 3501 and 3502 into the California State Implementation Plan. In this memorandum, the District demonstrates that such action by EPA:

1. is not required by the language of Section 110(a)(2)(E);
2. would conflict with the decisions of the Surface Transportation Board, which regulates railroads and has which recognized that SIP provisions can regulate railroad operations;
3. would flatly conflict with the opinion of Ninth Circuit Court of Appeals in *Ass'n of American Railroads v. South Coast AQMD*; 622 F.3d 1094 (9th Cir. 2010);
4. would adopt an extreme position that the railroads themselves never urged in litigation over the rule;
5. would arbitrarily reverse the position earlier taken by EPA on this issue;
6. would interpret the Clean Air Act in way that it is not protective of the public health;
7. would adopt a position substantially less protective of the public health than the position of the Surface Transportation Board; and
8. would render SIP submissions adopted under the Clean Air Act less effective than local environmental regulations.

The District urges the District to reject this anomalous, unsupported, and environmentally counterproductive position, and to approve the District's rules into the SIP.

II. DESCRIPTION OF THE RULES AND LITIGATION HISTORY

A. The Rules

The South Coast Air Quality Management District ("District") adopted Rules 3501 and 3502 on February 3, 2006. Rule 3501 requires freight railroads to keep simple records of idling events exceeding 30 minutes, and to report such events to the District on a weekly basis. Rule 3502 limits idling to 30 minutes in certain circumstances, all of which occur when either (1) the train is unoccupied, or (2) only the trailing locomotives must be shut down, while the lead locomotive may continue to idle.

The rules responded to consistently expressed public concerns about air pollution from idling locomotives. In 2002-2005, the District received approximately 300 complaints regarding locomotives and locomotive idling. There had been reports of locomotives idling for hours, some near residences. Comments were received through the District's complaint hotline, during town hall meetings, and in writing.

In response to the railroads' arguments that the rules were preempted by the Interstate Commerce Commission Termination Act of 1995 (ICCTA), the District designed the rules to limit idling only in situations where idling is not necessary for rail operations. To further ensure that idling restrictions would not interfere with railroad operations, the idling rule provides exemptions if the locomotive is being used in an emergency, or if idling is needed to maintain battery charge or prevent freezing. Finally, both rules exempt locomotives equipped with an anti-idling device that is set to limit idling to 15 minutes.

The District estimated that the rules would reduce PM10 emissions by 0.06 tons per day and NOx emissions by 1.35 tons per day. The District also estimated that Rule 3501 would cost the railroads \$180,926 per year. At the same time, although Rule 3502 would have a cost impact due to the need to provide training for railroad staff, it would also result in a net annual savings of \$3,219,550 from burning less fuel.¹

B. Litigation History

Promptly after the rules' adoption, the railroads sued, claiming that ICCTA preempted the rules. The U.S. District Court held that the rules were preempted because they were not "generally applicable" rules, concluding "[b]ecause the Rules directly regulate rail operations such as idling, they are preempted without regard to whether they are undue or unreasonable." *Ass'n. of Am. Railroads v. South Coast Air Quality Mgmt. Dist.*, 2007 U.S. Dist. LEXIS 65685 (2007), *21-22. Accordingly, the court enjoined enforcement of the rules but did not order that they be set aside.

The District appealed, arguing that the court must harmonize ICCTA with the District's authority under the Clean Air Act. The Ninth Circuit Court of Appeals directly addressed this argument. It held that "[i]f an apparent conflict exists between ICCTA and a *federal* law, then the courts must strive to harmonize the two laws, giving effect to both laws if possible." *Ass'n. of Am. Railroads v. South Coast Air Quality Mgmt. Dist.*, 622 F.3d 1094, 1097 (9th Cir. 2010) (emphasis in original). The court noted that the Surface Transportation Board (STB)—the agency implementing ICCTA—had also recognized the need to harmonize the two laws. It summarized STB precedent as follows:

The STB has explained that this system preserves a role for state and local agencies in the environmental regulation of railroads in at least two ways. First, to the extent that state and local agencies promulgate EPA-approved statewide plans under federal environmental laws (such as 'statewide implementation plans' under the Clean Air Act), ICCTA generally does not preempt those regulations because it is possible to harmonize the ICCTA with those federally recognized regulations....Second, to the extent that state and local agencies enforce their generally applicable regulations in a way that does not unreasonably burden railroad activity, ICCTA does not preempt such regulation, despite the fact that the regulation does not have the force and effect of federal law.

Id. at 1098.

¹ These facts are taken from the Board Letter in support of the rule adoption, contained in the record of this SIP submittal.

Regarding the first issue, the Court explained, “Here, the District’s rules do not have the force and effect of federal law.” *Id.* While acknowledging the District’s intent to submit the rules for SIP approval, the Court held: “*Until approved by the EPA*, state implementation plans do not have the force and effect of federal law.” *Id.*, (emphasis in original). The Court concluded: “Because the District’s rules have not become a part of California’s EPA-approved state implementation plan, they do not have the force and effect of federal law, *even if they might in the future*. Accordingly, there is no authority for the courts to harmonize the District’s rules with ICCTA.” *Id.*, (emphasis added.)²

The Ninth Circuit could not have been more clear. Once EPA approved the SIP, then the District’s rules under the Clean Air Act could be harmonized with ICCTA. Indeed, at no point in this litigation did the railroads ever argue that EPA lacked authority to approve the rules as part of the SIP.

On November 2, 2011, the District submitted the rules to the California Air Resources Board (CARB) and on August 30, 2012, CARB submitted the rules to EPA for inclusion in the SIP.

C. EPA Has Previously Recognized that the Rules May Be Included in the SIP

Furthermore, EPA has *already recognized* that the Ninth Circuit opinion allows the rules to be approved into the SIP. In 2011, EPA responded to a comment by Communities for a Better Environment asserting the inadequacy of the demonstration of reasonably available control technology (RACT) in the South Coast AQMD’s 2007 PM2.5 plan. Citing the Ninth Circuit’s decision, CBE claimed that the demonstration failed to evaluate reasonably available technologies that could reduce locomotive and railyard emissions. EPA’s response never claimed that it could not approve SIP amendments that regulated railroads. Instead, it agreed that

[T]he Ninth Circuit’s opinion in the Association of American Railroads v. South Coast Air Quality Management District case opens the door to District regulation of locomotive idling under Federal law by signaling the potential for harmonization between such District rules and the Interstate Commerce Commission Act of 1995 (ICCTA) if the rules are approved into the SIP....

“Approval of Air Quality Implementation Plans; California; South Coast; Attainment Plan for 1997 PM2.5 Standards,” 76 Fed. Reg. 69928, 69937, col. 3 (November 9, 2011). EPA went on to note that both the information submitted by CBE and the court case post-dated the 2007 SIP submittal and therefore could not undermine the 2007 RACT demonstration. *Id.*³

² The court also held that the rules could not qualify as rules of “general applicability” since they applied “exclusively and directly to railroad activity.” *Id.*

³ EPA also noted that the Ninth Circuit did not decide whether the District had adequate state law authority, but the District has demonstrated such authority in connection with this SIP submittal. CARB has approved it, and EPA has not questioned it.

This response was certainly well-considered. It reflects that EPA's staff had both read and seriously considered the effect of the Ninth Circuit's decision, and that it agreed with the District on the effect of that decision.

EPA is now considering reversing that position on the ground that Clean Air Act section 110(a)(2)(E) bars EPA from approving the Rules into the SIP. As the District demonstrates below, this complete reversal of position would:

- completely reverse EPA's earlier position, which recognized EPA's ability to approve the rules into the SIP;

- conflict with the Ninth Circuit's acknowledgement that the rules may be approved;

- conflict with STB precedent, which also recognized this possibility; and

- adopt a position that even the railroads—who have strenuously litigated the rules' validity from the outset—have never taken.

EPA should reject such an insupportable position.

III. EFFECT OF THE REQUIREMENT IN CAA § 110(a)(2)(E) TO SHOW THAT A SIP REVISION IS NOT PROHIBITED BY FEDERAL LAW

A. The Plain Meaning of the Statute Does Not Require EPA to Disapprove the SIP Submission Containing the Railroad Rules

Clean Air Act section 110(a)(2)(E) (42 U.S.C. § 7410(a)(2)(E)) requires that the state implementation plan provide necessary assurances that the state or local agency “is not prohibited by any provision of Federal or State law from carrying out such implementation plan or portion thereof...” On its face, § 110(a)(2)(E) does not bar EPA from approving the District's SIP submission.

First, no provision of federal law *expressly prohibits* carrying out the implementation plan if it includes Rules 3501 and 3502. Indeed, ICCTA on its face says nothing about the Clean Air Act. It was this lack of express preemption that led both the Ninth Circuit and, as we discuss below, the Surface Transportation Board, to conclude that the two acts must be harmonized.

Second, Section 110(a)(2)(E) bars approval only if a provision of federal law prohibits “*carrying out* such implementation plan.” The focus of the statute is on whether the provision can be implemented *after* its inclusion in the SIP. The railroad rules, of course, will be “carried out” only after EPA approves their inclusion in the SIP, and under the Ninth Circuit's ruling, the “carrying out” of the railroad rules is prohibited only if there is an “unreasonable burden” on railroad activities. The District has shown that no such “unreasonable burden” exists. Accordingly, nothing “prohibits” the later “carrying out” of the rules as part of the SIP.

EPA should not adopt any interpretation of Clean Air Act Section 110(a)(2)(E) that gives ICCTA *more* preemptive effect than is required by either applicable case law or Surface Transportation Board decisions. To do so would not only be unfair and illogical, it would violate the President's May 20, 2009 Memorandum for the Heads of Executive Departments and Agencies regarding preemption. That memorandum directs that “preemption of State law by executive departments

and agencies should be undertaken only with full consideration of the legitimate prerogative of the States and with a sufficient legal basis for preemption.” Here, EPA’s crabbed interpretation of Section 110(a)(2)(E) would deprive the SCAQMD of its prerogative and opportunity to have the rules harmonized with the purposes of ICCTA, as stated by the Ninth Circuit Court of Appeals and recognized by the STB, which can only occur once the Rules are approved into the SIP.

Moreover, such preemption would occur without sufficient legal basis as both the courts and the STB have recognized that ICCTA does not automatically preempt a rule implementing the Clean Air Act. Finally, as stated in the President’s Executive Order on Federalism (#13132, August 4, 1999, Section 2(e)), a fundamental principle of federalism is that “The Framers recognized that the States possess unique authorities, qualities, and abilities to meet the needs of the people and should function as laboratories of democracy.” Here, the local rules serve to protect the people from the continuing idling violations by the railroads and should not be held preempted before they are even given an opportunity to be harmonized.

B. EPA Must Interpret the Clean Air Act to Further its Purposes and Avoid Absurd Results

It has been suggested that CAA Section 110(a)(2)(E) prohibits EPA’s approval of the railroad rules and thus somehow supersedes the decision of the Ninth Circuit Court of Appeals that a SIP measure regulating railroads could be approved. The logic, apparently, is that Section 110(a)(2)(e) prohibits EPA from approving a rule into the SIP because that rule has been held to be preempted. But this logic is circular, for the rule was held to be preempted only because it was not yet approved into the SIP.

As EPA itself has recognized, the Clean Air Act cannot be interpreted to produce such absurd results. *Coalition for Responsible Regulation, Inc. v. EPA*, 684 F.3d 102, 145 (D.C. Cir. 2012), citing EPA’s Tailoring Rule. Indeed, a proffered “plain meaning” interpretation of the law that led to absurd results was rejected by the court where it was “squarely at odds with the purposes of the Safe Drinking Water Act.” *Am. Water Works Ass’n v. EPA*, 40 F.3d 1266, 1271 (D.C. Cir. 1994). Here, the proposed interpretation is at odds with the purposes of the CAA.

Moreover, such an interpretation flies in the face of a cardinal rule of statutory interpretation: statutes to protect the public health must be liberally construed to serve their purposes. As stated in the leading treatise on statutory interpretation, “Courts have been committed for over a century to giving statutes enacted for the protection and preservation of public health an extremely liberal construction to accomplish and maximize their beneficent objectives.” Singer, *Statutes and Statutory Construction*, §73.2, Vol. 3A, p. 856 (7th Ed. 2010).

In this case, EPA recognizes—as it must-- that the Ninth Circuit held that the rules may be approved into the SIP, despite ICCTA. But EPA is nonetheless considering an interpretation that Section 110(a)(2)(E) prohibits approval of the rules. Such an interpretation, which is not compelled by the statute’s language, violates the purposes of the Clean Air Act.

Moreover, such would make the Clean Air Act *less* protective of the public health than ICCTA, as interpreted by both the STB and the courts. Both the STB and the courts have recognized that a rule may be approved into the SIP even though it has some effect on rail transportation and

even though it would not be upheld if it were merely a local ordinance. Any cramped interpretation of the Clean Air Act that would preclude such a result cannot be a correct interpretation of the Act.

C. The Purposes of Section 110(a)(2)(E) Do Not Support Disapproval of the SIP Submission.

While we were unable to find any relevant legislative history, Section 110(a)(2)(E) apparently serves two purposes. First, where the SIP provision at issue is not a mandatory element of the SIP (e.g. NSR), this requirement presumably prevents a situation where EPA grants a state SIP emission reduction credit for a measure where that measure is illegal and is later set aside by a court. In such a situation, the SIP improperly credits the state with emission reductions that will not actually occur.

Second, this provision may help to prevent a situation where EPA approves a rule, thus making it federally enforceable, yet the rule is later set aside by a court, requiring EPA to remove the measure from the SIP. Such a situation could create confusion if, during the time between the court decision and EPA's action removing the measure from the SIP, a person tried to enforce the rule through Clean Air Act Section 304 citizens' suit. *See "Revisions to California State Implementation Plan, San Joaquin Valley Unified Air Pollution Control District"*, 73 Fed. Reg. 9260, 9263, col. 2 (February 20, 2008), mentioning such lawsuits.

In this case, neither of those two purposes justifies failing to approve the rules into the SIP. No "improper crediting" of SIP emissions reductions can occur because according to the railroads, no reductions are directly attributed to the District's rules. Second, a Federal Court of Appeals has already held that the measures may not be enforced unless and until they are approved into the SIP *and* the court has harmonized them with ICCTA and held that they are valid. Therefore, a citizens' suit could not be successfully brought until the rules pass this test.

D. The Surface Transportation Board Has Repeatedly Held that ICCTA Does Not Prevent States from Implementing CAA Measures including State Implementation Plan Provisions

1. The General Rule is that State and Local Implementation of the Clean Air Act and the SIP is Not Preempted

For at least 15 years, the Surface Transportation Board (STB) has repeatedly asserted that ICCTA does not interfere with the role of state and local governments in implementing the Clean Air Act--including the state implementation plan. In 1997, the STB reviewed an earlier decision ("King County") which had limited the authority of state and local governments to implement state and local environmental laws. The STB clarified that this limitation did not apply where the state or local government was implementing a federal environmental law. The STB explained:

Because there are significant roles for state and local agencies under various federal statutes, including environmental statutes, we want to clarify that statement here. For example, the Clean Air Act requires states to implement plans to protect and enhance air quality so as to promote the public health and welfare. *See* 42 U.S.C. § 7401, *et seq.* Rather than relegating state and local agencies to the periphery in implementing Federal law, the statutory scheme gives individual states the responsibility of developing and

enforcing air quality programs that meet or exceed the national standards within their borders (footnote omitted). See *Chevron U.S.A. Inc. v. Hammond*, 726 F.2d 483,489 (9th Cir. 1984) (*Hammond*), cert. denied, 471 U.S. 1140 (1985).

Cities of Auburn and Kent, WA—Petition for Declaratory Order—Burlington Northern Railroad Company—Stampede Pass Line, STB Finance Docket No. 32000, 2 S.T.B. 330, 1997 STB LEXIS 143, *15-16 (July 1, 1997).

Thus, the STB expressly recognized the important role of state and local governments in carrying out their state implementation plans to fulfill the Clean Air Act's requirements. Moreover, the STB emphasized: "Nothing in King County or this decision is intended to interfere with the role of the states and local entities in implementing these federal laws." *Id.*

Therefore, according to the STB, ICCTA does not prevent carrying out a state implementation plan under the CAA.

Since that time, the STB has repeatedly reaffirmed its position. For example, the STB has said that "nothing in section 10501(b) is intended to interfere with the role of state and local agencies in implementing Federal environmental statutes, such as the Clean Air Act, the CWA, and the SDWA." *Joint Petition for Declaratory Order—Boston and Maine Corporation and Town of Ayer, MA*, STB Finance Docket No. 33971, 2001 S.T.B. LEXIS 435, *19, 20 (April 30, 2001), cited with approval by the federal Court of Appeal, *Boston and Maine Corp., et al. v. Town of Ayer*, 330 F.3d. 12, 16 (1st Cir., 2003).⁴

Accordingly, it is abundantly clear that, as a general rule, ICCTA imposes no blanket or wholesale preemption of actions of state and local governments in implementing the Clean Air Act, including carrying out the state implementation plan to attain national ambient air quality standards. While there are some circumstances in which ICCTA might preempt implementation of the SIP, as discussed in section 3 below, no blanket preemption exists. Again, the STB has made this point clear: "Federal environmental laws, including those that may be implemented or enforced by state and local authorities, typically are not preempted." (*emphasis added*) *James Riffin—Petition for Declaratory Order*, STB Finance Docket No. 34997, 2008 STB LEXIS 242, *15 (May 1, 2008).

The position that EPA is considering flatly contradicts the STB's long-held position. Under that position, *all* SIP submissions touching on railroad operations would be preempted regardless of their actual effect on railroad operations. That position is radically different from the long-held position of the STB, and less protective of the environment.

⁴ Other STB cases using the same or very similar language include: *Friends of the Aquifer*, STB Finance Docket No. 33966, 2001 STB LEXIS 670, *12 (August 10, 2001); *Fletcher Granite Co., LLC—Petition for Declaratory Order*, STB Finance Docket No., 34020, 2001 STB LEXIS 590,*12 ((June 25, 2001); *Green Mountain Railroad Corporation—Petition for Declaratory Order*, STB Finance Docket No. 34052, 2002 STB LEXIS 332, *14 (May 24, 2002); *CSX Transportation, Inc.,--Petition for Declaratory Order*, STB Finance Docket No. 34662, 2005 LEXIS 675, *14, n. 7 (May 3, 2005); *New England Transrail—Construction, Acquisition, and Operation Exemption—In Wilmington and Woburn, MA*, STB Finance Docket No. 34797, 2007 STB LEXIS 391,*19-20 (June 29, 2007); *James Riffin—Petition for Declaratory Order*, STB Finance Docket No., 34997, 2008 STB LEXIS 242, *11 (May 1, 2008).

2. *The STB Holds that the Clean Air Act—Including SIP Measures-- Must Be Harmonized with ICCTA*

The STB has also made it clear that where other federal statutes, including environmental statutes, overlap with ICCTA, they are to be harmonized. The STB explains:

Even where the section 10501(b) preemption applies, there are limits to its scope. Where there are overlapping Federal statutes, they are to be harmonized, with each statute given effect to the extent possible. *See Tyrell v. Norfolk S. Ry.*, 248 F.3d. 517. 523 (6th Cir. 2001). This includes Federal environmental statutory programs that are implemented in part by the states, including the Clean Air Act, the Clean Water Act, SDWA as amended by RCRA, and the regulation of railroad safety under the Federal Railroad Safety Act.

New England Transrail—Construction, Acquisition and Operation Exemption—In Wilmington and Woburn, MA, STB Finance Docket No. 34797, 2007 STB LEXIS 391, *19-20 (June 29, 2007).

Once again, this quote documents the STB’s understanding that the Clean Air Act is carried out through state implementation plans, and that such SIPs are to be harmonized with ICCTA “to the extent possible.”⁵ By contrast, the position that EPA is considering would impose a blanket preemption of all SIP adoptions that touch on railroad operations. It would not harmonize the two laws “to the extent possible.” Instead, it would *prevent* harmonization in *all* cases.

3. *State Action Under the Clean Air Act is Not Preempted Unless it Unduly Burdens or Unreasonably Interferes with Interstate Commerce*

The STB has explained how to harmonize ICCTA with the role of state and local governments in implementing federal environmental statutes such as the Clean Air Act:

[W]here section 10501(b) and a Federal environmental statute are both involved, the Federal statutes need to be harmonized. The severity of the likely environmental impacts should be weighed against the severity of the transportation impacts of compliance to determine whether, and how, the various Federal statutes can be accommodated. This is a case-specific and fact-specific determination. One must look at the objective effects (i.e. all of the facts and circumstances) to determine whether the local body’s regulation, as applied, unduly burdens or unreasonably interferes with interstate commerce.

Joint Petition for Declaratory Order—Boston and Maine Corporation and Town of Ayer, MA, STB Finance Docket No. 33871; 2001 STB LEXIS 782, *6-7 (October 3, 2001). This explanation reiterates that *local regulation* under a federal environmental statute is entitled to be harmonized with ICCTA.

⁵ Similar language is found in *CSX Transportation, Inc.—Petition for Declaratory Order*, STB Finance Docket No:34662, 2005 STB LEXIS 675, *13 “... while a literal reading of section 10501(b) would suggest that it preempts all other federal law, neither the Board nor the courts have interpreted the statute in that manner. Rather, where there are overlapping federal statutes, they are to be harmonized, with each statute given effect to the extent possible.”

Thus, the STB applies a balancing test, looking at the impacts on the environment and comparing them with the impacts on transportation of complying with the environmental law, to determine whether local regulation “as applied, unduly burdens or unreasonably interferes with interstate commerce.” *Id.* Since it is a balancing test, the greater the benefit to the environment, the greater the potential burden on rail operation that may be allowed before the burden or interference becomes unreasonable.

Again, EPA’s proposed interpretation of Section 110 conflicts with this approach. Under that interpretation, the balancing never occurs.

4. *The Position Being Considered by EPA Results in the Anomalous Outcome that SIP Submissions under the Clean Air Act are Less Effective than Local Government Regulations.*

Moreover, this outcome results in an anomaly. If a local government—say, a city or county—adopts an environmental regulation affecting railroads that is not *per se* preempted, then that regulation would be subject to the balancing test adopted by the STB. Its environmental effects would be compared with the impacts on railroad operations. The regulation would be upheld if it did not “unreasonably burden” or “unreasonably interfere with” interstate commerce.

Under EPA’s proposed interpretation, SIP submittals are treated differently. EPA would refuse to approve such submittals into the SIP. Accordingly, those submittals would be invalidated before they were subject to the balancing test. The District submits that such an interpretation, treating SIP submissions under the Clean Air Act as less important than local government regulations, is anomalous. EPA should reject such an interpretation.

5. *The Railroads Agree with the STB’s Test.*

Notably, in a prior STB case, the Association of American Railroads (AAR) expressly agreed with the STB’s formulation of the balancing test. The Association also agreed that the analysis requires an examination of the specific facts of each case. The STB quoted AAR’s comments as follows:

AAR agrees that, under ICCTA, the preemption analysis of local regulation, whether based on Federal law or local police powers, is focused on ‘whether the imposition of the local restriction prevents a railroad from conducting its operations or unreasonably burdens interstate commerce.’ AAR Comments at 4. AAR submits that whether a Federal environmental statute or a local land-use requirement unduly restricts a carrier from performing operations, or unreasonably burdens interstate commerce is a fact-bound question.

Joint Petition for Declaratory Order—Boston and Maine Corporation and Town of Ayer, MA, STB Finance Docket No. 33971, 2001 STB LEXIS 782, *4 (October 3, 2001).⁶

⁶ Other cases reiterating that the test is whether the regulation “unduly restricts the railroad from conducting its operations, or unreasonably burdens interstate commerce” are the following: *Fletcher Granite Company, LLC—Petition for Declaratory Order*, STB Finance Docket No. 34020, 2001 STB LEXIS 590, *12 (June 25, 2001); *Friends of the Aquifer*, STB Finance Docket No. 33966, 2001 STB

Some of the more recent cases have used a slightly different formulation: “For state or local actions that are not facially preempted,⁷ the section 10501(b) preemption analysis requires a factual assessment of whether that action would have the effect of preventing or unreasonably interfering with railroad transportation.” *CSX Transportation Inc.*—Petition for Declaratory Order, STB Finance Docket No. 34662, 2005 STB LEXIS 675,*8-9 (May 3, 2005); *DesertXpress Enterprises, LLC*—Petition for Declaratory Order, STB Finance Docket No. 34914, 2007 STB LEXIS 343,*10, (June 25, 2007); *New England Transrail, LLC*—Construction, Acquisition, and Operation Exemption—In *Wilmington and Woburn, MA*, STB Finance Docket No. 34797, 2007 STB LEXIS 391,*17-18 (June 29, 2007). But this formulation also requires balancing.

In the present case, there has never been a determination of whether the rules in issue “prevent or unreasonably interfere with rail transportation” because the Ninth Circuit Court of Appeals determined that it did not need to harmonize the rules with ICCTA. (622 F.3d at 1098.) The Ninth Circuit did observe, however, that rules in the state implementation plan are generally *not* preempted, because they can be harmonized with ICCTA. *Id.*

Therefore, EPA should find the rules approvable if they do not unreasonably burden or unreasonably interfere with railroad operations. It should not short-circuit the very process that the railroads have conceded is applicable. Moreover, as discussed in Section V.E. below, the Railroads, conceded in the Ninth Circuit that the rules could be approved into the SIP.

6. Only Permitting Requirements or Regulations of Matters that the STB Directly Regulates are Facially Preempted

The STB’s body of case law on preemption has held that only two types of local regulation are facially preempted, and thus are not subject to harmonization:

Two broad categories of state and local actions have been found to be preempted regardless of the context or rationale for the action: (1) any permit requirement that could be used to deny the railroad the ability to conduct its operations or to proceed with activities the Board has authorized (footnote omitted), and (2) any attempted regulation of a matter directly regulated by the Board, such as a state statute dictating when a train can traverse a road crossing, (footnote omitted) or a state or local regulation determining how a railroad’s traffic should be routed (footnote omitted.) Other state or local requirements are not preempted unless, as applied, they would have the effect of preventing or unreasonably interfering with interstate commerce.

New England Transrail, LLC.—Construction, Acquisition, and Operation Exemption—In *Wilmington and Woburn, MA*, STB Finance Docket No. 34797, 2007 STB LEXIS 391,*17-18 (June 29, 2007). See also, *DesertXpress Enterprises, LLC*—Petition for Declaratory Order, STB Finance Docket No. 34914; 2007 STB LEXIS 343,*8, n. 4 ((June 25, 2007) (preemption of

LEXIS 670,*12 (August 10, 2001); *Green Mountain Railroad Corporation*—Petition for Declaratory Order, STB Finance Docket No. 34052, 2002 STB LEXIS 322,*14 (May 24, 2002); *Boston and Maine Corp., et al. v. Town of Ayer*, 330 F.3d 12, 13 (1st. Cir., 2003).

⁷ See the following section for a discussion of such actions.

permitting or preclearance requirements, and regulations of matters directly regulated by the Board, such as construction, operation, and abandonment of rail lines)).

Pre-construction approval requirements are “preempted because *by their nature* they unduly interfere with interstate commerce by giving the local body the ability to deny the carrier the right to construct facilities or conduct operations.” *Boston and Maine Corp. v. Town of Ayer*, 330 F.3d 12, 16 (1st Cir. 2003) (emphasis added). Permitting requirements are disallowed for the same reason. If a regulation does not fall into these *per se* categories, it is subject to a fact-based determination of whether it unreasonably interferes with rail transportation.

The regulations in the present case do not involve either a permitting or preclearance requirement. Nor do they regulate a subject matter directly regulated by the Board, such as where a railroad must secure STB permission for construction or operation of a rail line. Indeed, the Ninth Circuit implicitly determined that the rules did *not* fit either of the two facial preemption categories, or it would not have referred to the likelihood that once approved into the SIP, the rules could be harmonized with ICCTA and upheld.

Accordingly, the applicable STB precedent requires a fact-specific analysis of the effect of the rules. The rules are valid unless they unreasonably interfere with rail transportation. Once again, the interpretation being considered by EPA flatly conflicts with this analysis, as it *assumes* all regulations of railroads are automatically preempted and thus not approvable under the CAA.

IV. THE EXISTING INJUNCTION DOES NOT PROHIBIT EPA FROM APPROVING THE RULES

A. The Courts Have Already Held that the Injunction Does Not Preclude SIP Approval of the Rules

It has been suggested that because the rules have been enjoined, EPA may not approve the rules into the SIP. This suggestion, however, is contrary to both the Ninth Circuit’s and the District Court’s interpretation of the injunction.

The Ninth Circuit was, of course, well aware that the rules had been enjoined. (See 622 F.3d at 1096: “the district court...entered a permanent injunction...”). Yet the Court stated that the rules might in the future be approved into the SIP. After noting the District’s intent to submit the rules into the SIP, the Court explained: “Because the District’s rules have not become a part of California’s EPA-approved state implementation plan, they do not have the force and effect of federal law, *even if they might in the future*.” (emphasis added) 622 F.3d 1098. Therefore, the Ninth Circuit plainly held that the injunction does not preclude SIP approval.

Moreover, the District Court, which issued the injunction, likewise concluded that the injunction did not prevent the rules from being approved into the SIP. On December 11, 2011, the Association of American Railroads filed a Motion for an Order to Show Cause Why South Coast Air Quality Management District and its Employees Should Not Be Held in Civil Contempt, or, in the Alternative, an Order of Contempt. The motion claimed that the District and its employees violated the permanent injunction by submitting the rules to CARB for submission to EPA for its review and inclusion in California’s SIP under the federal Clean Air Act.

The District Court initially issued the order to show cause but subsequently vacated it, explaining:

“Although the Court recognizes that the scope of the Permanent Injunction was never at issue before the Ninth Circuit, Plaintiffs clearly represented to the Ninth Circuit that it would be appropriate for the District to submit the rules to CARB. And, the Ninth Circuit tacitly approved that position: ‘Because the District’s rules have not become a part of California’s EPA- approved state implementation plan, they do not have the force and effect of federal law, even if they might *in the future*.’

Ass’n of Am. Railroads v. South Coast Air Quality Mgmt. Dist., 622 F.3d 1094, 1098 (9th Cir. 2010).” (Emphasis by District Court). Order Granting Defendants’ Motion to Vacate Order to Show Cause, p. 4, *Ass’n of Am. Railroads v. South Coast Air Quality Mgmt. Dist.*, United States District Court, Central District of California, No. CV 06-01416-JFW (PLAx). (A copy of the District Court Order is attached hereto for your reference.)

Thus, the District Court rejected Plaintiffs’ claim that the injunction prevented submission of the rules for approval into the SIP. The injunction presents no legal impediment to EPA’s approval of the rules.

B. EPA’s Position Flatly Contradicts Case Law Allowing EPA to Approve Rules into the SIP Where SIP Approval is Necessary to their Validity

While the Clean Air Act requires the State to show that implementation of its rules is not “prohibited by any provision of Federal law...,” case law allows EPA to approve rules into the SIP where SIP approval is necessary to their validity. In other words, EPA may approve a rule even though *absent such approval*, its implementation is prohibited by Federal law.

In *American Petroleum Institute v. Jorling*, 710 F. Supp. 421 (N.D.N.Y. 1989), New York had adopted a rule limiting the Reid vapor pressure of motor vehicle fuels. The API sued, arguing that the rule was preempted by Clean Air Act § 211(c)(4)(A) (42 U.S.C. § 7545(c)(4)(A)), which preempts state and local agencies from regulating motor vehicle fuel if EPA has determined that no regulation is necessary or if EPA has itself prescribed an applicable regulation. However, the Act contains an exception from preemption if the rule is approved into an applicable state implementation plan. (CAA § 211(c)(4)(C) 942; U.S.C. § 7545(c)(4)(C).)

As of the date the Court ruled, the New York regulations had been submitted into the SIP, and EPA had proposed approval but had not taken final action. *Jorling*, 710 F. Supp. at 427. The court recognized that the rules were preempted, and New York could not enforce them. The court explained that “New York State has the option ... of seeking the approval of EPA of an implementation plan containing non-identical and more restrictive gasoline volatility regulations and in fact has done so...” *Id.* at 429. However, the court ruled that under applicable provisions of the CAA, a state “cannot, consistent with the Supremacy Clause, enforce or attempt to enforce any provision of such a rule *unless it has been approved by EPA*.” *Id.* at 430 (emphasis added).

The *Jorling* case makes clear that the Clean Air Act does not prohibit EPA from approving a rule into the SIP where such approval is necessary to avoid preemption. EPA has pointed out that the *Jorling* case involved a situation where the law expressly stated that SIP approval was necessary

to avoid preemption. But that is equally true in this case. The Ninth Circuit decision is just as much “law” as is Section 211 of the Clean Air Act.

Moreover, the outcome is completely consistent with the statutory language. A state must show that *implementation* of its rules is not “prohibited by any provision of Federal law...” In the present case, as in *Jorling*, the state made just such a showing. Here, the District has demonstrated that, when the rule is implemented after EPA approval, Federal law will not prohibit it. Section 110(a)(2)(E) does not, on its face, require that the regulation must be capable of implementation *before* EPA approves it. Such an interpretation would add a condition to the statute not found in its actual language.

V. EPA MUST APPROVE THE RULES IF THEY MEET THE REQUIREMENTS OF THE CLEAN AIR ACT

A. EPA May Not Afford ICCTA More Preemptive Scope than Does the STB

The Ninth Circuit has held that the STB’s preemption rulings are entitled to *Chevron* deference. *Association of American Railroads v. South Coast Air Quality Management District*, 622 F.3d 1094, 1097 (9th Cir. 2010). *Chevron* requires deference to an agency’s interpretation of the statute that it administers. If the meaning of the statute is ambiguous, “the question for the court is whether the agency’s answer is based on a permissible construction of the statute.” *Chevron U.S.A., Inc., v. Natural Resources Defense Council*, 467 U.S. 837, 843 (1984).

As set forth above, the STB has made abundantly clear its position that a rule may be approved into the SIP and harmonized with ICCTA, even though the rule has some effect on rail transportation. And the Ninth Circuit agrees. Indeed, as the STB phrases the principle, nothing in its preemption decisions “interferes with the role of state or local agencies in implementing” the Clean Air Act, *specifically referencing the role of the SIP. Cities of Auburn and Kent, WA—Petition for Declaratory Order—Burlington Northern Railroad Company—Stampede Pass Line*, STB Finance Docket No. 32000, 2 STB 330, 1997 STB LEXIS 143 *15-16 (July 1, 1997). A SIP rule will only be preempted, in STB’s view, if it unreasonably interferes with rail transportation, which is a fact-based determination.

Neither the trial court nor the Ninth Circuit ever made such a determination. Instead, the Ninth Circuit said that, because the rules were not yet in the SIP, *even though they might be in the future*, it would not determine whether the rules could be harmonized with ICCTA. Accordingly, at this point the rules could be upheld if they were “rules of general applicability that do not unreasonably burden railroad activity.” *AAR, supra*, 622 F.3d at 1098. Because the rules “apply exclusively and directly to railroad activity,” they could not meet the test of general applicability. *Id.*

However, both the STB and the Ninth Circuit decision contemplate that a SIP rule might be upheld even if it were not a rule of “general applicability.” Otherwise, there would not be “two ways” (the SIP way and the way of general applicability) that a state’s role in environmental regulation of railroads could be carried out. *AAR, supra*, 622 F.3d at 1098. Therefore, the fact that the rules apply “directly” to railroad activity does not automatically mean they cannot be approved into the SIP and harmonized with ICCTA.

The interpretation being considered by EPA flatly conflicts with the body of ICCTA law established by the STB. Such an interpretation by EPA would grant ICCTA a preemptive effect *much greater* than the effect found by the STB. Given the STB's role in administering ICCTA, EPA's position according ICCTA *more* preemptive effect than does the STB would be nonsensical.

B. EPA's Refusal to Approve the Rules Based on a Determination that the Rules are Preempted by ICCTA Would Usurp the Role of the Federal Courts in this Case

The District submits that in this particular case, both the Ninth Circuit decision and STB precedent entitles the District to a judicial determination of whether its rules may be harmonized with ICCTA and allowed to stand. The District's position does not ignore or render meaningless Clean Air Act Section 110(a)(2)(E). On its face, that statute speaks to the "implementation" of District Rules, which will occur after EPA acts.

In any event, Section 110(a)(2)(E) should not be interpreted so as to authorize EPA to decide important questions regarding the preemptive scope of Federal laws—here, ICCTA—that it does not administer. Of course, the District recognizes that EPA administers the Clean Air Act, so a claimed preemption by the Clean Air Act is a proper issue for EPA to decide in the first instance.⁸ But EPA has no special expertise or administrative authority where the claim is that a *separate* Federal statute preempts the SIP submission.

Clean Air Act Section 110(a)(2)(E) should be interpreted to allow EPA to reject a SIP submission on the grounds of Federal preemption only if case law conclusively establishes that the rule cannot be reconciled with federal law *even if it were to be included in the SIP*. There is no such controlling precedent in this case. As a result, the District is entitled to a judicial determination of whether its rules, once included in the SIP, may be harmonized with ICCTA and allowed to stand. Certainly the Ninth Circuit expected such a judicial determination to be made. EPA should not interpret Section 110(a)(2)(E) to circumvent the District's right to that determination.

C. EPA's Refusal to Approve the Rules Would Render the Ninth Circuit Decision Meaningless

As explained above, the Ninth Circuit decision established that once EPA approved the rules into the SIP, the court would consider whether they could be harmonized with ICCTA. Indeed, the court stated that ICCTA generally does *not* preempt SIP-approved rules.

If EPA were to refuse to approve the rules into the SIP because the District Court enjoined them, its action would render the Ninth Circuit decision meaningless. Such an interpretation would place the District in a classic "Catch-22" situation: the rules could not be approved into the SIP because they have been enjoined, but they were enjoined because they were not yet approved

⁸ We have previously explained that the rules are not preempted by the Clean Air Act. Letter dated October 19, 2012 from Barbara Baird to Jared Blumenfeld and attached letter dated August 9, 2013 to Ellen Peter, CARB.

into the SIP and thus not entitled to harmonization. By creating this “Catch-22” situation, EPA’s interpretation would render the Ninth Circuit holding meaningless.

EPA staff has noted that the Ninth Circuit was not made aware of Clean Air Act section 110(a)(2)(E). But that situation occurred because *no party* in the litigation believed that this statute affected the preemption issue. Certainly, if the railroads had thought this section prohibited approval of the rules, they would have brought it to the attention of the Court. But they did not. EPA should not take positions on railroad issues that are less protective of the environment than the positions taken by the railroads.

Moreover, as explained above, both the Ninth Circuit and the STB have held that even if ICCTA would preempt a rule if *not* included in the SIP, the rule is subject to a different standard of review if it *is* part of the SIP. Therefore, both the Ninth Circuit and the STB allow EPA to approve a rule that would be preempted if not part of the SIP. EPA should not interpret the Clean Air Act to give ICCTA more preemptive force than either the courts or the STB have afforded it.

Nor should EPA interpret the Clean Air Act to prohibit approval of the rule simply because the railroads were able to quickly obtain an injunction. That interpretation would be nonsensical, since such an injunction would be based on a legal standard that applies *only* when the rule is not yet included in the SIP. Any such interpretation would be arbitrary, as it would prohibit approval of a rule that the courts would otherwise uphold under the standard of review applicable to SIP rules.

D. The Rules Do Not Unreasonably Interfere with Rail Transportation, So if they Are Approved Into the SIP they Should be Harmonized and Upheld

As summarized above, the STB has held that SIP rules are normally *not* preempted by ICCTA, and the Ninth Circuit agrees. (622 F.3d at 1098.) Such rules would only be preempted if they “unduly burden or unreasonably interfere with interstate commerce.” See Section II B 1, *supra*. Stated another way, the rules will only be preempted if they have the effect of “preventing or unreasonably interfering with interstate commerce.” *Id.* Importantly, the STB recognizes that a SIP rule may cause *some* interference with rail transportation—as long as such interference is not “unreasonable.” While the courts, not EPA, are the final arbiters of whether the rules cause such “unreasonable interference,” in this case the District submits the following facts to reassure EPA that the railroads will not be able to demonstrate preemption.

Any factual consideration begins with the recognition that the railroads bear the burden of establishing preemption. They bear the “considerable burden” to demonstrate that federal law preempts a state rule. *De Buono v. NYSA-ILA Med. and Clinical Servs. Fund*, 520 U.S. 806, 814 (1997). Moreover, a federal law which is claimed to be preemptive must be narrowly and strictly construed. *Brown v. Investors Mortgage Co.*, 121 F.3d 472, 475 (9th Cir. 1997).

In their September 12, 2012 letter to EPA, p. 4, the railroads claim that “over 90% of the BNSF and UP locomotives that enter the South Coast Air Basin are equipped with idling devices.” They also claim that “the idling rules will have no effect on locomotive emissions in the South Coast region.” (*Id.*, p. 5), and that nearly 100% of their intrastate locomotives are equipped with anti-idling devices. Of course, by asserting that the idling rules will have no effect on

locomotive emissions, the railroads necessarily concede that the rules will not require a locomotive to shut down in any cases where it would otherwise idle. As a result, under the facts as asserted by the railroads, the rules cannot cause *any* interference with rail operations, let alone any unreasonable interference.⁹

Indeed, the railroads have never presented any cogent argument that the rules will interfere with rail operations. EPA's locomotive emission standards provide that, where a locomotive is required to have anti-idling devices, the devices must "shut off the main locomotive engines after 30 minutes of idling (or less)." 40 C.F.R. § 1033.115. Likewise, where Rule 3502 applies, it limits idling to 30 minutes. It is true that EPA's idling limits only apply to locomotives that are newly manufactured or remanufactured after the idling rules were initially adopted in 2008, (see 73 Fed. Reg. 25098); there is no federal requirement that locomotives retrofitted with anti-idling devices limit their idling to 30 minutes. But the important point is that existence of the federal requirement to limit idling to 30 minutes or less clearly demonstrates that a 30 minute idling limit does not unreasonably interfere with rail operations.

Accordingly, a claim of "unreasonable interference" could only arise if the federal rule allowed idling to exceed 30 minutes in cases where the District rule would not. As set forth above, the railroads have already conceded this argument by claiming the District rules would have "no effect" on emissions.¹⁰ But in any event, such an argument is meritless.

The EPA regulation allows locomotive engines to continue idling for four reasons: (1) to prevent engine damage (for example, to prevent the engine coolant from freezing); (2) to maintain air pressure for brakes or the starter system, or to recharge the locomotive battery; (3) to perform necessary maintenance; and (4) to otherwise comply with federal regulations. Rule 3502 does not interfere with any of these exceptions. Rule 3502(j)(2) provides an exemption if temperatures of 40 degrees or lower occur or are predicted in the next 24 hours (i.e. to prevent freezing). Rule 3502(j)(3) provides an exemption if the idling is required to maintain battery charge or voltage. Finally, Rule 3502(d)(1)(E) prohibits idling beyond 30 minutes during maintenance only if the maintenance does not require operation of the engine.

The only exception found in the federal regulation that is not expressly included in Rule 3502 allows the engine to idle to maintain air pressure for brakes. But such an exception is not needed. First, unlike the federal rule, Rule 3502 only limits idling of *unattended* locomotives. (Rule 3502(d)(1).)¹¹ Thus, the railroad may allow the locomotive to idle to maintain air brake pressure

⁹ Rule 3501 merely requires simple records to be kept if an idling event exceeds 30 minutes. Since the railroads are now claiming that over 90% of their locomotives are equipped with anti-idling devices, which under EPA regulation must be set at 30 minutes or less, there should be very few such events to record. Rule 3501 does not even require a statement of the reason for the idling event unless it exceeds two hours. (Rule 3501(d)(1)(B)). These requirements cannot pose an "unreasonable interference" with rail operations.

¹⁰ Despite the widespread use of anti-idling devices, neighbors continue to complain of extended idling in certain cases. See letter to EPA dated January 7, 2013 on behalf of East Yard Communities for Environmental Justice with attached declarations.

¹¹ Rule 3502(d)(2), which applies only to trailing locomotives, by definition allows the lead locomotive to continue idling, and thus to maintain air pressure.

as long as the train is attended. Even if the train is unattended, Federal regulations do not require the air brakes to be tested unless the train has been shut down for more than four hours. 49 C.F.R. §232.205(a)(3). Therefore, the railroad may avoid even the requirement to *test* the air brakes simply by not leaving the locomotive unattended for *more* than four and ½ hours (the allowed ½ hour of idling plus the allowed four hours of shutdown).

The railroads never have presented evidence of an urgent need to keep an unattended locomotive idling for more than four and one-half hours. Moreover, the testimony at trial showed that air brakes remain operational far longer than the four hour period that triggers a test. Finally, contrary to the railroads' claims, shutting down a locomotive presents no safety risk, even if the air brakes begin to fade. BNSF's Air Brake and Train Handling Rules, Section 102.1, states: "Crew members are responsible for securing standing equipment with hand brakes to prevent undesired movement. The air brake system must not be depended upon to prevent an undesired movement." (These rules were discussed at trial, can be found on the internet, and are attached hereto.)

The EPA idling regulation also states that a railroad does not circumvent the rule by "allow[ing] a locomotive to idle to heat or cool the cab, provided heating or cooling is necessary." 40 C.F.R. 1033.115(g)(5). Again, Rule 3502 only prohibits idling for more than a half hour in certain circumstances--all of which occur only when the train is unattended or which apply only to trailing locomotives. Thus, in *all* circumstances, either the lead locomotive may continue to idle or the locomotive may idle if the train is attended. If no one is present, heating or cooling the cab is not "necessary."

Accordingly, Rule 3502 does not unreasonably interfere with rail operations. Indeed, the railroads themselves have described the arguments that they now make as "myths." The UP brochure, "The Lowdown on the Shutdown" (found on CARB's website and attached hereto), states: "Sometimes locomotives are kept idling due to a variety of myths. 'It won't restart. The train will be late. It takes too long. We'll lose our air conditioning. It's not my responsibility.' The brochure continues: 'Forget the myths. Shutting down idling locomotives is everyone's responsibility ... Help out the environment and be a good neighbor—shut it down!'"

In short, the railroads have offered no credible objections to the actual impact of the idling rules. EPA should approve the rules into the SIP so that the courts may harmonize the rules with the principles of ICCTA. Following such harmonization, the rules should be upheld.

E. Refusing to Approve the Rules Because they Have Already Been Enjoined Would Be "Fundamentally Unfair" and Would Allow the Railroads to Perpetrate a "Gross Miscarriage of Justice"

As explained above, the Ninth Circuit assumed that EPA could approve the rules into the SIP despite ICCTA and despite the existing injunction. Once they were approved, it would be the duty of the Court to harmonize the rules with ICCTA and determine whether they could be upheld—although the court noted that ICCTA "generally does not preempt" SIP rules because they can be harmonized. Now, EPA is considering a decision that would deprive the District of its right to have those rules harmonized by the Court by refusing to even approve them into the SIP--based on the ground that the rules were held preempted *because they were not yet in the SIP*.

Such a decision would not only destroy the protection from toxic air emissions that the rules would afford, it also would be fundamentally unfair. The Ninth Circuit reached its decision based upon express representations made by the railroads during oral argument. Had the railroads not assured the Ninth Circuit that the proper course was for the rules to be submitted into the SIP, the Court may well have harmonized the rules with ICCTA at that point, because the rules are consistent with the intent and purpose of the Clean Air Act to reduce emissions. The railroads plainly led the Court to believe the railroads did not object to the SIP approval *itself*, but only to whether the rules could be harmonized with ICCTA.

EPA should carefully consider the following dialogue included in the District Court opinion, attached hereto, which dismissed the railroads' attempt to hold the District and its officers in contempt of court for submitting the rules into the SIP:

Plaintiffs' [the railroads'] counsel, Mr. Jenkins, clearly represented to the Ninth Circuit that the District's submission of the Rules to CARB, and then to EPA, for inclusion in the SIP would be an appropriate and proper avenue for the District to pursue. Indeed, at the outset of his argument, Mr. Jenkins stated:

'I'd like to start out by addressing, Judge Rymer, the point that you were making toward the end, which is, isn't what [the District] ought to do here is to get CARB and EPA to approve these rules. And if they do, that becomes part of the SIP and it becomes federally enforceable and then you do have a harmonization question. And the answer to that is yes. That's exactly what the statute provides for.'

Transcript of Oral Argument, 13:4-11.

Moreover, in response to the Ninth Circuit's questioning regarding the effect of the district court's determination that the District did not have the authority to adopt the Rules, Mr. Jenkins reaffirmed that the District's submission of the Rules to CARB would not be prohibited by the Court's order and in fact, would be permissible:

'Judge Graber: You started by saying, gee, if they just get the State to put it in the State Plan and then it's fine, because they have a...harmonizing—between the Clean Air Act and ICCTA. How do they get from here to there, if your position is that they can't even get started?

Mr. Jenkins: They can propose a regulation, Your Honor. They can't implement it. They can propose it; CARB can adopt it; EPA can approve it. And if it's approved, that doesn't mean we still won't—won't challenge it, because we still have the harmonization issue. But if it's approved, at least they have the harmonization argument.' (District Court Opinion, p. 3.)

The transcript makes it obvious that the railroads represented to the Ninth Circuit that "EPA can approve it [the rules]" despite ICCTA, thus addressing Judge Graber's concern about "how do they [the District] get from here to there?"¹²

¹² The railroads remain free to argue that EPA should not approve the rules for *other* reasons, as they have done.

Based upon these representations, the District court concluded:

In this case, the Court concludes that Plaintiffs are unfortunately ‘playing fast and loose’ with the Court, and allowing Plaintiffs to take a totally inconsistent position in these contempt proceedings would be fundamentally unfair and constitute a gross miscarriage of justice.

(District Court Opinion, p. 4.) Therefore, if EPA were to take the position that the mere fact the rules have been enjoined prevents them from being approved into the SIP, that position would allow very same “gross miscarriage of justice” by the railroads that the district court excoriated.

VI. CONCLUSION

Based on the foregoing, EPA should approve Rules 3501 and 3502 into the State Implementation Plan.

[Get Email Updates](#) | [Contact Us](#)
[Home](#) • [Briefing Room](#) • [Presidential Actions](#) • [Presidential Memoranda](#)
[Search WhiteHouse.gov](#)
[Search](#)

THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release

May 20, 2009

May 20, 2009

MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

SUBJECT: Preemption

From our Nation's founding, the American constitutional order has been a Federal system, ensuring a strong role for both the national Government and the States. The Federal Government's role in promoting the general welfare and guarding individual liberties is critical, but State law and national law often operate concurrently to provide independent safeguards for the public. Throughout our history, State and local governments have frequently protected health, safety, and the environment more aggressively than has the national Government.

An understanding of the important role of State governments in our Federal system is reflected in longstanding practices by executive departments and agencies, which have shown respect for the traditional prerogatives of the States. In recent years, however, notwithstanding Executive Order 13132 of August 4, 1999 (Federalism), executive departments and agencies have sometimes announced that their regulations preempt State law, including State common law, without explicit preemption by the Congress or an otherwise sufficient basis under applicable legal principles.

The purpose of this memorandum is to state the general policy of my Administration that preemption of State law by executive departments and agencies should be undertaken only with full consideration of the legitimate prerogatives of the States and with a sufficient legal basis for preemption. Executive departments and agencies should be mindful that in our Federal system, the citizens of the several States have distinctive circumstances and values, and that in many instances it is appropriate for them to apply to themselves rules and principles that reflect these circumstances and values. As Justice Brandeis explained more than 70 years ago, "[i]t is one of the happy incidents of the federal system that a single courageous state may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country."

To ensure that executive departments and agencies include statements of preemption in regulations only when such statements have a sufficient legal basis:

1. Heads of departments and agencies should not include in regulatory preambles statements that the department or agency intends to preempt State law through the regulation except where preemption provisions are also included in the codified regulation.
2. Heads of departments and agencies should not include preemption provisions in codified regulations except where such provisions would be justified under legal principles governing preemption, including the principles outlined in Executive Order 13132.
3. Heads of departments and agencies should review regulations issued within the past 10 years that contain statements in regulatory preambles or codified provisions intended by the department or agency to preempt State law, in order to decide whether such statements or provisions are justified under applicable legal principles governing preemption. Where the head of a department or agency determines that a regulatory statement of preemption or codified regulatory provision cannot be so justified, the head of that department or agency should initiate appropriate action, which may include amendment of the relevant regulation.

Executive departments and agencies shall carry out the provisions of this memorandum to the extent permitted by law and consistent with their statutory authorities. Heads of departments and agencies should consult as necessary with the Attorney General and the Office of Management and Budget's Office of Information and Regulatory Affairs to determine how the requirements of this memorandum apply to particular situations.

This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.



BLOG POSTS ON THIS ISSUE

August 01, 2013 12:30 PM EDT

Coding for All: A STEM Sector that Reflects America

Yesterday, I joined eleven Champions of Change at the White House to celebrate their achievements toward making STEM industries more inclusive for underrepresented communities.

August 01, 2013 11:00 AM EDT

A One-Stop-Shop on the Health Care Law for Businesses Big and Small

Today, we're launching [Business.USA.gov/healthcare](#), a one-stop-shop where employers of all sizes can go for information on the Affordable Care Act.

August 01, 2013 9:30 AM EDT

State-by-State Reports: The Economic Benefits of Fixing Our Broken Immigration System

In addition to giving a significant boost to our national economy, commonsense immigration reform will also generate important economic benefits in each state, from increasing workers' wages and generating new tax revenue to strengthening the local industries that are the backbone of states' economies.

[VIEW ALL RELATED BLOG POSTS](#)
[Facebook](#)
[YouTube](#)
[Twitter](#)
[Vimeo](#)
[Flickr](#)
[iTunes](#)
[Google+](#)
[LinkedIn](#)

The Director of the Office of Management and Budget is authorized and directed to publish this memorandum in the Federal Register.

BARACK OBAMA

WWW.WHITEHOUSE.GOV

[En español](#) | [Accessibility](#) | [Copyright Information](#) | [Privacy Policy](#) | [Contact](#)
[USA.gov](#) | [Developers](#) | [Apply for a Job](#)

Federal Register

Vol. 64, No. 153

Tuesday, August 10, 1999

Presidential Documents

Title 3—

Executive Order 13132 of August 4, 1999

The President

Federalism

By the authority vested in me as President by the Constitution and the laws of the United States of America, and in order to guarantee the division of governmental responsibilities between the national government and the States that was intended by the Framers of the Constitution, to ensure that the principles of federalism established by the Framers guide the executive departments and agencies in the formulation and implementation of policies, and to further the policies of the Unfunded Mandates Reform Act, it is hereby ordered as follows:

Section 1. Definitions. For purposes of this order:

(a) "Policies that have federalism implications" refers to regulations, legislative comments or proposed legislation, and other policy statements or actions that have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

(b) "State" or "States" refer to the States of the United States of America, individually or collectively, and, where relevant, to State governments, including units of local government and other political subdivisions established by the States.

(c) "Agency" means any authority of the United States that is an "agency" under 44 U.S.C. 3502(1), other than those considered to be independent regulatory agencies, as defined in 44 U.S.C. 3502(5).

(d) "State and local officials" means elected officials of State and local governments or their representative national organizations.

Sec. 2. Fundamental Federalism Principles. In formulating and implementing policies that have federalism implications, agencies shall be guided by the following fundamental federalism principles:

(a) Federalism is rooted in the belief that issues that are not national in scope or significance are most appropriately addressed by the level of government closest to the people.

(b) The people of the States created the national government and delegated to it enumerated governmental powers. All other sovereign powers, save those expressly prohibited the States by the Constitution, are reserved to the States or to the people.

(c) The constitutional relationship among sovereign governments, State and national, is inherent in the very structure of the Constitution and is formalized in and protected by the Tenth Amendment to the Constitution.

(d) The people of the States are free, subject only to restrictions in the Constitution itself or in constitutionally authorized Acts of Congress, to define the moral, political, and legal character of their lives.

(e) The Framers recognized that the States possess unique authorities, qualities, and abilities to meet the needs of the people and should function as laboratories of democracy.

(f) The nature of our constitutional system encourages a healthy diversity in the public policies adopted by the people of the several States according to their own conditions, needs, and desires. In the search for enlightened public policy, individual States and communities are free to experiment with a variety of approaches to public issues. One-size-fits-all approaches to public policy problems can inhibit the creation of effective solutions to those problems.

(g) Acts of the national government—whether legislative, executive, or judicial in nature—that exceed the enumerated powers of that government under the Constitution violate the principle of federalism established by the Framers.

(h) Policies of the national government should recognize the responsibility of—and should encourage opportunities for—individuals, families, neighborhoods, local governments, and private associations to achieve their personal, social, and economic objectives through cooperative effort.

(i) The national government should be deferential to the States when taking action that affects the policymaking discretion of the States and should act only with the greatest caution where State or local governments have identified uncertainties regarding the constitutional or statutory authority of the national government.

Sec. 3. Federalism Policymaking Criteria. In addition to adhering to the fundamental federalism principles set forth in section 2, agencies shall adhere, to the extent permitted by law, to the following criteria when formulating and implementing policies that have federalism implications:

(a) There shall be strict adherence to constitutional principles. Agencies shall closely examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and shall carefully assess the necessity for such action. To the extent practicable, State and local officials shall be consulted before any such action is implemented. Executive Order 12372 of July 14, 1982 ("Intergovernmental Review of Federal Programs") remains in effect for the programs and activities to which it is applicable.

(b) National action limiting the policymaking discretion of the States shall be taken only where there is constitutional and statutory authority for the action and the national activity is appropriate in light of the presence of a problem of national significance. Where there are significant uncertainties as to whether national action is authorized or appropriate, agencies shall consult with appropriate State and local officials to determine whether Federal objectives can be attained by other means.

(c) With respect to Federal statutes and regulations administered by the States, the national government shall grant the States the maximum administrative discretion possible. Intrusive Federal oversight of State administration is neither necessary nor desirable.

(d) When undertaking to formulate and implement policies that have federalism implications, agencies shall:

(1) encourage States to develop their own policies to achieve program objectives and to work with appropriate officials in other States;

(2) where possible, defer to the States to establish standards;

(3) in determining whether to establish uniform national standards, consult with appropriate State and local officials as to the need for national standards and any alternatives that would limit the scope of national standards or otherwise preserve State prerogatives and authority; and

(4) where national standards are required by Federal statutes, consult with appropriate State and local officials in developing those standards.

Sec. 4. *Special Requirements for Preemption.* Agencies, in taking action that preempts State law, shall act in strict accordance with governing law.

(a) Agencies shall construe, in regulations and otherwise, a Federal statute to preempt State law only where the statute contains an express preemption provision or there is some other clear evidence that the Congress intended preemption of State law, or where the exercise of State authority conflicts with the exercise of Federal authority under the Federal statute.

(b) Where a Federal statute does not preempt State law (as addressed in subsection (a) of this section), agencies shall construe any authorization in the statute for the issuance of regulations as authorizing preemption of State law by rulemaking only when the exercise of State authority directly conflicts with the exercise of Federal authority under the Federal statute or there is clear evidence to conclude that the Congress intended the agency to have the authority to preempt State law.

(c) Any regulatory preemption of State law shall be restricted to the minimum level necessary to achieve the objectives of the statute pursuant to which the regulations are promulgated.

(d) When an agency foresees the possibility of a conflict between State law and Federally protected interests within its area of regulatory responsibility, the agency shall consult, to the extent practicable, with appropriate State and local officials in an effort to avoid such a conflict.

(e) When an agency proposes to act through adjudication or rulemaking to preempt State law, the agency shall provide all affected State and local officials notice and an opportunity for appropriate participation in the proceedings.

Sec. 5. *Special Requirements for Legislative Proposals.* Agencies shall not submit to the Congress legislation that would:

(a) directly regulate the States in ways that would either interfere with functions essential to the States' separate and independent existence or be inconsistent with the fundamental federalism principles in section 2;

(b) attach to Federal grants conditions that are not reasonably related to the purpose of the grant; or

(c) preempt State law, unless preemption is consistent with the fundamental federalism principles set forth in section 2, and unless a clearly legitimate national purpose, consistent with the federalism policymaking criteria set forth in section 3, cannot otherwise be met.

Sec. 6. *Consultation.*

(a) Each agency shall have an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications. Within 90 days after the effective date of this order, the head of each agency shall designate an official with principal responsibility for the agency's implementation of this order and that designated official shall submit to the Office of Management and Budget a description of the agency's consultation process.

(b) To the extent practicable and permitted by law, no agency shall promulgate any regulation that has federalism implications, that imposes substantial direct compliance costs on State and local governments, and that is not required by statute, unless:

(1) funds necessary to pay the direct costs incurred by the State and local governments in complying with the regulation are provided by the Federal Government; or

(2) the agency, prior to the formal promulgation of the regulation,

(A) consulted with State and local officials early in the process of developing the proposed regulation;

(B) in a separately identified portion of the preamble to the regulation as it is to be issued in the **Federal Register**, provides to the Director of the Office of Management and Budget a federalism summary impact statement, which consists of a description of the extent of the agency's prior consultation with State and local officials, a summary of the nature of their concerns and the agency's position supporting the need to issue the regulation, and a statement of the extent to which the concerns of State and local officials have been met; and

(C) makes available to the Director of the Office of Management and Budget any written communications submitted to the agency by State and local officials.

(c) To the extent practicable and permitted by law, no agency shall promulgate any regulation that has federalism implications and that preempts State law, unless the agency, prior to the formal promulgation of the regulation,

(1) consulted with State and local officials early in the process of developing the proposed regulation;

(2) in a separately identified portion of the preamble to the regulation as it is to be issued in the **Federal Register**, provides to the Director of the Office of Management and Budget a federalism summary impact statement, which consists of a description of the extent of the agency's prior consultation with State and local officials, a summary of the nature of their concerns and the agency's position supporting the need to issue the regulation, and a statement of the extent to which the concerns of State and local officials have been met; and

(3) makes available to the Director of the Office of Management and Budget any written communications submitted to the agency by State and local officials.

Sec. 7. Increasing Flexibility for State and Local Waivers.

(a) Agencies shall review the processes under which State and local governments apply for waivers of statutory and regulatory requirements and take appropriate steps to streamline those processes.

(b) Each agency shall, to the extent practicable and permitted by law, consider any application by a State for a waiver of statutory or regulatory requirements in connection with any program administered by that agency with a general view toward increasing opportunities for utilizing flexible policy approaches at the State or local level in cases in which the proposed waiver is consistent with applicable Federal policy objectives and is otherwise appropriate.

(c) Each agency shall, to the extent practicable and permitted by law, render a decision upon a complete application for a waiver within 120 days of receipt of such application by the agency. If the application for a waiver is not granted, the agency shall provide the applicant with timely written notice of the decision and the reasons therefor.

(d) This section applies only to statutory or regulatory requirements that are discretionary and subject to waiver by the agency.

Sec. 8. Accountability.

(a) In transmitting any draft final regulation that has federalism implications to the Office of Management and Budget pursuant to Executive Order 12866 of September 30, 1993, each agency shall include a certification from the official designated to ensure compliance with this order stating that the requirements of this order have been met in a meaningful and timely manner.

(b) In transmitting proposed legislation that has federalism implications to the Office of Management and Budget, each agency shall include a certification from the official designated to ensure compliance with this order that all relevant requirements of this order have been met.

(c) Within 180 days after the effective date of this order, the Director of the Office of Management and Budget and the Assistant to the President for Intergovernmental Affairs shall confer with State and local officials to ensure that this order is being properly and effectively implemented.

Sec. 9. *Independent Agencies.* Independent regulatory agencies are encouraged to comply with the provisions of this order.

Sec. 10. *General Provisions.*

(a) This order shall supplement but not supersede the requirements contained in Executive Order 12372 ("Intergovernmental Review of Federal Programs"), Executive Order 12866 ("Regulatory Planning and Review"), Executive Order 12988 ("Civil Justice Reform"), and OMB Circular A-19.

(b) Executive Order 12612 ("Federalism"), Executive Order 12875 ("Enhancing the Intergovernmental Partnership"), Executive Order 13083 ("Federalism"), and Executive Order 13095 ("Suspension of Executive Order 13083") are revoked.

(c) This order shall be effective 90 days after the date of this order.

Sec. 11. *Judicial Review.* This order is intended only to improve the internal management of the executive branch, and is not intended to create any right or benefit, substantive or procedural, enforceable at law by a party against the United States, its agencies, its officers, or any person.



THE WHITE HOUSE,
August 4, 1999.

BNSF Safety Vision

We believe every accident or injury is preventable. Our vision is that Burlington Northern Santa Fe will operate free of accidents and injuries. Burlington Northern Santa Fe will achieve this vision through:

A culture that makes safety our highest priority and provides continuous self-examination as to the effectiveness of our safety process and performance ...

A work environment, including the resources and tools, that is safe and accident-free where all known hazards will be eliminated or safe-guarded ...

Work practices and training for all employees that make safety essential to the tasks we perform ...

An empowered work force, including all employees, that takes responsibility for personal safety, the safety of fellow employees, and the communities in which we serve.

Introduction

This version contains the following revised or added pages:

July 11, 2004: 3, 4, 19, 20, 25, 26, 27, 28, 29, 30, 31, 32, 37, 38, 43, 44, 45, 46, 51, 52, 53, 54, 55, 56, 75, 76, 89, 90, 93, 94.

April 3, 2005: 7, 8, 13, 14, 15, 16, 16a added, 16b added, 17, 18, 21, 22, 33, 34, 35, 36, 59, 60, 63, 64, 117, 118.

June 8, 2005: 5, 6.

June 24, 2005: Title Page, 2, 9, 10.



Air Brake and Train Handling Rules

No. 3

IN EFFECT AT 0001

Central, Mountain and Pacific
Continental Time

Sunday, July 13, 2003
(including revisions up to
June 24, 2005)

102.0 Train Operations

102.1 Securing Equipment Against Undesired Movement

Crew members are responsible for securing standing equipment with hand brakes to prevent undesired movement. The air brake system must not be depended upon to prevent an undesired movement.

Use the following steps to determine the hand brakes to be applied when setting out cars on a grade:

- With slack bunched, apply the hand brakes on the low end of the cut of cars.
- With slack stretched, apply the hand brakes on the high end of the cut of cars.

To determining the number of hand brakes to be applied depends on:

- Grade and adhesion.
- Number of loaded and empty cars.
- Weather conditions (wind and temperature).

Note: Reference Rule 104.14 for hand brake guidelines.

To verify the hand brake(s) applied will prevent movement, release all air brakes. Note: All retainer valves must be in EXHAUST position

102.1.1 Securing an Unattended Train or Portion of Train with Locomotive Attached

To secure a train or a portion of a train with the lead locomotive consist attached, perform the steps below:

1. Secure equipment against undesired movement. When securing an unattended train, in addition to hand brakes required to secure train, all locomotive hand brakes on the lead consist must be applied. When determining the minimum number of had brakes required to secure a train, the locomotive hand brakes should be counted toward the total hand brakes required. Use the table provided in Rule 104.14 if the minimum number required is not known.

Exception: Distributed power remote consists coupled to unattended trains do not require hand brakes to be applied or other securement steps outlined in Rule 102.3 when the train is otherwise properly secured.

2. Release all air brakes to ensure hand brakes will prevent movement.
3. Secure the locomotive consist as outlined in Rule 102.3, items 1 - 10.

102.1.2 Securing Train Before Detaching Locomotives

When any part of a train is left standing and train brake inspection is not required, do not depend on the air brake system to secure the cars.

When detaching locomotives or locomotives and cars:

1. Secure equipment against undesired movement. Exception: Use the table provided in Rule 104.14 if the minimum number required is not known or if releasing air brakes to test for sufficient hand brakes is not practical (i.e. only rear of train being left unattended).
2. Release all air brakes to ensure hand brakes will prevent movement.
3. Make a 20-psi brake pipe reduction.
4. Close angle cock on rear locomotive or last car to be detached from portion left standing. Leave angle cock open on portion left standing.
5. Allow brakes on any standing portion to apply in emergency. When available, use the end-of-train telemetry device to make sure that brake pipe pressure drops to 0 psi.
6. Do not bottle air or maintain air pressure in the brake pipe when locomotives are detached or yard air is uncoupled. However, after the brake pipe pressure has completely exhausted, the angle cock on the standing portion of the train may be closed to allow a locomotive to switch the cars from the opposite end.

Exception: When separating a train in temperatures below 25 degrees F and the train is on a light grade, (see Glossary) follow the steps in Rule 100.17 (Inbound Train Inspection) to prevent vent valves from sticking open.

102.2 Releasing Hand Brakes

Before moving cars or locomotives, fully release all hand brakes to prevent wheel damage.

If a hand brake is difficult to release, charge the air brake system and make a full service application of the car or locomotive brakes before attempting to release the hand brake again. If hand brake is still difficult to release place the car or locomotive brake system into emergency.

If the hand brake cannot be released using the above method do not move the car except to set it out. Car must be watched during entire movement to set out and limit speed to 5 MPH if wheels are not turning freely. Report defect to Mechanical Desk/Dispatcher.

When releasing hand brakes, check at least three additional cars beyond the last applied hand brake to ensure that no other hand brakes are applied.

102.3 Unattended Locomotive(s)

When securing locomotives (excluding DP remote locomotives on secured unattended trains):

1. Place the throttle in IDLE unless you are protecting the engine from freezing (see Rule 106.2, Winterization of Locomotives).
2. Place the transition handle (if equipped) in the OFF position.
3. Place the generator field switch or the circuit breaker on the control stand (if equipped) in the OFF position.
4. Remove the reverser handle from the reverser slot on the control stand and place it in the receptacle, if equipped. Do not remove the reverser handle if you need to increase the throttle position to prevent freezing.
5. Apply all hand brakes.
6. Release the air brakes to determine the hand brakes will prevent movement.
7. Make a 20-psi brake pipe reduction after allowing the brake system to charge.
8. Leave the automatic brake valve cut in.
9. Fully apply the independent brake.
10. Place engine control switch to ISOLATE on all locomotives unless conditions require winter protection as prescribed by Rule 106.2 and Rule 106.6.

Additional securement guidelines for unattended locomotives not coupled to other equipment:

11. Must not be left unattended on a main track.
12. When left unattended on auxiliary tracks must be protected by derail(s) or a facing point switch lined and locked to prevent movement to the main track.
13. If the grade exceeds 1 percent, block the wheels securely.

Exceptions: DP remote locomotives and single person helper consists may be left standing with all hand brakes applied at any location, even on the main track, when in the process of making up a DP train or when single person helper is performing duties that require temporarily leaving the locomotives.

At mechanical facilities, when locomotives are protected by outbound derails on designated servicing tracks, apply a sufficient number of hand brakes to prevent undesired movement, but a minimum of one per locomotive consist.

How Do I Shut It Down?

GCCR 32.20.2:

1. Properly secure equipment.
2. Fully apply independent brake; apply 20# to automatic brake.
3. Turn generator field switch to OFF position.
4. Remove and stow the reverser.
5. Move the engine control switch to Start/Stop/Isolate position.
6. If engine has been at throttle 4 or lower during the past 10 minutes, push the Engine Stop button until the engine stops.
7. Wait 5 minutes after the engine stops and open the battery switch. Five-minute wait is not required on low-horsepower engines.

Don't assume someone else will do it for you; ask questions about the locomotive's status.

Protect yourself and the company from fines for failure to shut down.



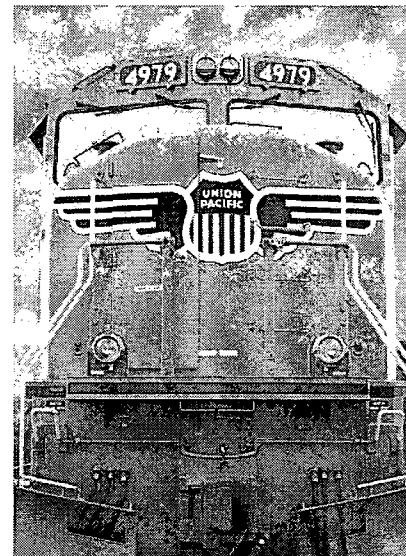
SHUTDOWN
FAST SIMPLE SMART

UNION PACIFIC
ENVIRONMENTAL
MANAGEMENT



THE LOWDOWN ON THE SHUTDOWN.

BUILDING AMERICA



Shutting Down Idling Locomotives Benefits Everyone.

Far more than just a cost-saving initiative, shutting down locomotives reduces diesel emissions and benefits our environment, our communities, your family — and YOU! Air pollution is a public health concern, and the noise caused by idling locomotives can irritate community members. Sometimes locomotives are kept idling due to a variety of myths. You've probably heard most of them: *It won't restart. The train will be late. It takes too long. We'll lose our air conditioning. It's not my responsibility.*

Forget the myths. Shutting down idling locomotives is everyone's responsibility, regardless of craft. Help out the environment and be a good neighbor — shut it down!

When Should I Shut It Down?

GCCR 32.20:

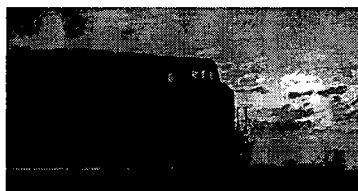
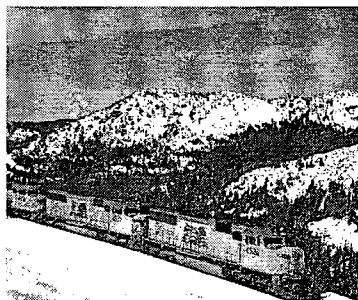
Shut down trailing diesel engines to be left standing unattended for 1 hour or longer. However, the lead locomotive of the consist may be left running if needed to maintain the air supply on the train. It is not necessary to shut down DPU locomotives unless instructed by the train dispatcher or local supervisors.

Other locomotives must also be shut down except when authorized by local supervisors or special instructions to be left running. The following guidelines apply:

- Keep the lead engine idling to maintain air pressure if coupled to a train and not equipped with AESS.
- Shut down trailing locomotives if the idle time is expected to exceed one hour. If you don't know, shut it down.
- Shut down all light locomotives if outside air temperature is 40 degrees or more.
- Do not manually shut down locomotives with AESS or SmartStart if the system is enabled. (Indicator light shows green on EMD AESS and SmartStart. GE AESS displays "ready.")
- Tag any locomotives with weak batteries or another condition that prevents starting.
- Local managers do not have the authority to allow diesel engines to idle.
- Report any locomotive with disabled AESS or SmartStart to the Mechanical Desk and the Engine Defect (ED) reporting system.

Automatic START/STOP

- Monitors water temperature, ambient temperature, brake pressure, etc., and shuts down the locomotive when all parameters are met.
- Starts the locomotive when one of the monitored parameters is not met.
- Locomotives equipped with Automatic Start/Stop are identified by decals or warning labels in the locomotive cab.



EMD AESS Locomotive *

Auto Start SHUTDOWN	
Auto-Start-Enabled Indicator	Green
Locomotive Reverser	Centered
Independent Brakes	Applied
Throttle Position	Idle
Reverser Position	Centered
Warning Device	Equipped with a siren that "chirps" when the system is activated. Siren blares when the system begins to shut down.
Troubleshooting	Check the EM2000 crew message.
Maintenance	Depress the EPCO switch prior to performing any maintenance.
Once the EPCO/STOP button or one of the locomotive's protective systems is shut down, Auto Start is disabled. Manual re-start must be performed to start the locomotive.	

Auto Start RE-START	
Auto Start will not start a locomotive that it did not shut down.	
Auto-Start-Enabled Indicator	Green
Inhibit-Disabled Indicator	Extinguished
Throttle Position	Idle
Warning Device	Siren blares when the system begins starting up the locomotive.

Triggers	
Reverser Position	Move to forward or reverse.
Independent Brakes	Released
If locomotive fails to start after 20 seconds, Auto Start stops. Following a 2-minute cooldown, the sequence begins again. Auto Start attempts to re-start the locomotive three times.	

Manual Shutdown	
Disable Auto Start	Press the EPCO/STOP button.
Auto-Start-Enabled Indicator	Red

Auto Shutdown Delay	
10 minutes prior to shutdown. Press the reset key on the EM2000 screen for messages #3713 or #3637 to delay shutdown on a local unit for two hours.	

GE AESS Locomotive *

Auto Start SHUTDOWN	
Auto-Start-Enabled Indicator	IPD/LDM (or DID) displays "ready."
Auto-Start-Disabled Indicator	IPD/LDM (or DID) displays "ready — engine stop control not active."
Locomotive Reverser	Centered
Independent Brakes	Applied
Throttle Position	Idle
Reverser Position	Centered
EC Switch	NOT in JOG position
DC Locomotive	Aux. cab door closed
AC Locomotive	Barrier bar down & BPCO switch in normal position
Warning Device	Warning bell rings continuously for 30 seconds. Once shut down, warning bell rings for 1 second every 5 minutes.
Override	Press auto-stop override (AESS) button.
Troubleshooting	Check IPD/LDM (or DID Panel) display.
Maintenance	Once the EPCO/STOP button or one of the locomotive's protective systems is shut down, Auto Start is disabled. Manual re-start must be performed to start the locomotive.

Auto Start RE-START	
Auto Start will not start a locomotive that it did not shut down.	
Auto Start (ASDS) Switch (if applicable)	On position
EC Switch	NOT in JOG position
Throttle Position	Idle
Warning Device	Warning bell rings continuously for 30 seconds.

Triggers	
Reverser Position	Move to forward or reverse.
Independent Brakes	Released
If the locomotive fails to start after 3 attempts, a start failure is logged. This AESS fault will not restrict the AESS to the inactive mode, and Auto Start attempts will continue as long as a crank restriction is not active.	

*To keep the air conditioners operating on EMD and GE AESS locomotives, press the Reset button on the lead locomotive after centering the reverser.

SMARTSTART (Low-Horsepower Locomotive) *

Auto Start SHUTDOWN	
Auto-Start-Enabled Indicator	On position, "green"
Locomotive Reverser	Centered
Independent Brakes	Applied
Throttle Position	Idle
Reverser Position	Centered
Warning Device	Siren turns "on" for about 30 seconds. Auto Start indicator will flash green & red. Once shut down, sirens will operate in "chirp" mode.
Maintenance	Depress the EPCO switch prior to performing any maintenance.
Once the EPCO/STOP button or one of the locomotive's protective systems is shut down, Auto Start is disabled. Manual re-start must be performed to start the locomotive.	

Auto Start RE-START	
Auto Start will not start a locomotive that it did not shut down.	
Auto-Start-Enabled Indicator	On position, "green"
Throttle Position	Idle
Warning Device	Siren blares when the system begins starting up the locomotive.

Triggers	
Reverser Position	Move to forward or reverse.
Independent Brakes	Released
If the locomotive fails to start after 20 seconds, Auto Start stops. Following a 2-minute cooldown, the sequence begins again. Auto Start attempts to re-start the locomotive three times. When train is ready to depart, move reverser to appropriate direction for 90 seconds before releasing brakes.	

*The directions above apply to all locomotives retrofitted with SmartStart equipment, except CANAC RCL models.

**UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA**

**PRIORITY SEND
JS-6**

CIVIL MINUTES -- GENERAL

Case No. **CV 06-01416-JFW (PLAx)**

Date: February 24, 2012

Title: Association of American Railroads, et al. -v- South Coast Air Quality Management District, et al.

PRESENT:

HONORABLE JOHN F. WALTER, UNITED STATES DISTRICT JUDGE

**Shannon Reilly
Courtroom Deputy**

**None Present
Court Reporter**

ATTORNEYS PRESENT FOR PLAINTIFFS:
None

ATTORNEYS PRESENT FOR DEFENDANTS:
None

**PROCEEDINGS (IN CHAMBERS): ORDER GRANTING DEFENDANTS' MOTION TO
VACATE ORDER TO SHOW CAUSE
[filed 1/27/2012; Docket No. 257]**

On January 27, 2012, Defendants South Coast Air Quality Management District and the Governing Board of South Coast Air Quality Management District (collectively, the "District") and Dr. Barry Wallerstein, Dr. Elaine Chang, and Barbara Baird, Esq. (collectively, the "Contempt Defendants") filed a Motion to Vacate Order to Show Cause. On February 6, 2012, Association of American Railroads, BNSF Railway Company, and Union Pacific Railroad Company (collectively "Plaintiffs") filed their Opposition. On February 13, 2012, the District and Contempt Defendants filed a Reply. Pursuant to Rule 78 of the Federal Rules of Civil Procedure and Local Rule 7-15, the Court finds that this matter is appropriate for decision without oral argument. The hearing calendared for February 27, 2012 is hereby vacated and the matter taken off calendar. After considering the moving, opposing, and reply papers and the arguments therein, the Court rules as follows:

I. PROCEDURAL AND FACTUAL BACKGROUND

On April 30, 2007, following a bench trial, the Court issued its Findings of Facts and Conclusions of Law in this action, concluding that the Interstate Commerce Commission Termination Act ("ICCTA"), 49 U.S.C. § 10101, preempted the District's Rules 3501, 3502, and 3503 (collectively the "Rules"), and that the District lacked state law authority to adopt these Rules. On May 17, 2007, in accordance with the Findings of Facts and Conclusions of Law, the Court entered a Judgment and Permanent Injunction ("Permanent Injunction"), which provides in relevant part:

1. District Rule 3503, adopted by the Governing Board on October 7, 2005, and District Rules 3501 and 3502, adopted by the Governing Board on February 3, 2006, are preempted in their entirety by the Interstate Commerce Commission Termination Act of 1995 ("ICCTA"), 49 U.S.C. § 10101 *et seq.*
2. Under Plaintiffs' First Cause of Action, the District, the Governing Board, and their board members, officers, agents, employees, attorneys and all others acting in concert or participation with them, are hereby permanently enjoined from implementing or enforcing any provision of Rules 3501, 3502 or 3503.

On May 30, 2007, Defendants appealed the Judgment and Permanent Injunction. On September 15, 2010, the Ninth Circuit issued a published opinion affirming this Court's Judgment and Permanent Injunction. *Ass'n of Am. Railroads v. South Coast Air Quality Mgmt. Dist.*, 622 F.3d 1094 (9th Cir. 2010).

On November 2, 2011, the District, acting through its employees, including Executive Officer Dr. Barry Wallerstein, Deputy Executive Officer for Planning, Rule Development & Area Sources Dr. Elaine Chang, and District Counsel Barbara Baird, formally submitted Rules 3501 and 3502 to the California Air Resources Board ("CARB") and requested that CARB submit the Rules to the United States Environmental Protection Agency for its review and inclusion in California's State Implementation Plan ("SIP") under the federal Clean Air Act.

On December 7, 2011, Plaintiffs filed a Motion for an Order to Show Cause Why South Coast Air Quality Management District and its Employees Should Not Be Held in Civil Contempt or, in the Alternative, an Order of Contempt, claiming that the District and Contempt Defendants have violated and continue to violate the provisions of the Permanent Injunction, by submitting Rules 3501 and 3502 to CARB. The Court declined to enter the requested Order of Contempt, but concluded, based on the record submitted by the parties, that Plaintiffs had made the minimal required showing for the issuance of the Order to Show Cause Why South Coast Air Quality Management District and its Employees Should Not Be Held in Civil Contempt. Accordingly, the Court issued the Order to Show Cause Why South Coast Air Quality Management District and its Employees Should Not Be Held in Civil Contempt ("Order to Show Cause"), and set a briefing schedule and date for the evidentiary hearing or "trial."

On January 27, 2012, the District and Contempt Defendants, represented by new counsel, filed the pending Motion to Vacate Order to Show Cause, which included a transcript of the oral argument before the Ninth Circuit. The transcript was not presented to the Court, and therefore not considered by the Court in its decision to issue the Order to Show Cause.¹

II. DISCUSSION

After reviewing the transcript of the oral argument before the Ninth Circuit, the Court concludes that the Order to Show Cause was improvidently granted, due to the incomplete and

¹The Court finds Plaintiffs' Objection to Defendants' Filing of Certified Transcript of Oral Argument Before Ninth Circuit completely disingenuous and frivolous.

misleading record presented to the Court. Quite frankly, the Court is surprised and disappointed that Plaintiffs did not voluntarily agree to vacate the Order to Show Cause, upon reviewing the transcript of the oral argument and Plaintiffs' Motion to Vacate Order to Show Cause.

Plaintiffs' counsel, Mr. Jenkins, clearly represented to the Ninth Circuit that the District's submission of the Rules to CARB, and then to EPA, for inclusion in the SIP would be an appropriate and proper avenue for the District to pursue. Indeed, at the outset of his argument, Mr. Jenkins stated:

I'd like to start out by addressing, Judge Rymer, the point that you were making toward the end, which is, isn't what [the District] ought to do here is to get CARB and EPA to approve these rules. And if they do, that becomes part of the SIP and it becomes federally enforceable and then you do have a harmonization question. And the answer to that is yes. That's exactly what the statute provides for.

Transcript of Oral Argument, 13:4-11.

Moreover, in response to the Ninth Circuit's questioning regarding the effect of this Court's determination that the District did not have authority to adopt the Rules, Mr. Jenkin's reaffirmed that the District's submission of the Rules to CARB would not be prohibited by the Court's determination, and in fact, would be permissible:

Judge Graber: You started by saying, gee, if they just get the State to put this in the State Plan and then it's fine, because they you have a . . . harmonizing -- between the Clean Air Act and ICCTA. How do they get from here to there, if your position is that they can't even get started?

Mr. Jenkins: They can propose a regulation, Your Honor. They can't implement it. They can propose it; CARB can adopt it; EPA can approve it. And if it's approved, that doesn't mean we still won't -- won't challenge it, because we still have this harmonization issue. But if it's approved, at least they have the harmonization argument.

Id. at 23:1-14.

Based on the arguments and position advanced by Plaintiffs before the Ninth Circuit, the Court concludes that Plaintiffs are judicially estopped from claiming that the District's submission of the Rules to CARB violates the provisions of the Court's Permanent Injunction in this action. As the Ninth Circuit recently stated:

Judicial estoppel, sometimes also known as the doctrine of preclusion of inconsistent positions, precludes a party from gaining an advantage by taking one position, and then seeking a second advantage by taking an incompatible position. Judicial estoppel is an equitable doctrine that is intended to protect the integrity of the judicial process by preventing a litigant from playing fast and loose with the courts. Judicial estoppel applies to a party's stated position whether it is an expression of intention, a statement of fact, or a legal assertion.

Wagner v. Prof'l Eng'rs in California Gov't, 354 F.3d 1036, 1044 (9th Cir. 2004) (quotations and citations omitted). "[T]he circumstances under which judicial estoppel may appropriately be invoked are probably not reducible to any general formulation of principle" and there are no "inflexible prerequisites" for determining the applicability of judicial estoppel. *New Hampshire v. Maine*, 532 U.S. 742, 750-51 (2011).

In this case, the Court concludes that Plaintiffs are unfortunately "playing fast and loose" with the Court, and allowing Plaintiffs to take a totally inconsistent position in these contempt proceedings would be fundamentally unfair and constitute a gross miscarriage of justice. Although the Court recognizes that the scope of the Permanent Injunction was never at issue before the Ninth Circuit, Plaintiffs clearly represented to the Ninth Circuit that it would be appropriate for the District to submit the Rules to CARB. And, the Ninth Circuit tacitly approved that position: "Because the District's rules have not become a part of California's EPA-approved state implementation plan, they do not have the force and effect of federal law, even if they might *in the future*." *Ass'n of Am. Railroads v. South Coast Air Quality Mgmt. Dist.*, 622 F.3d 1094, 1098 (9th Cir. 2010) (emphasis added).

III. CONCLUSION

For the foregoing reasons, the Motion to Vacate Order to Show Cause is **GRANTED**. The Order to Show Cause is hereby **VACATED**. Although the Court is concerned by the conduct of Plaintiffs' counsel in pursuing the Order to Show Cause after reviewing the complete transcript of the oral argument before the Ninth Circuit and Plaintiffs' Motion to Vacate Order to Show Cause, the Court declines to award sanctions.²

IT IS SO ORDERED.

²The Court is equally concerned by the District's submission to CARB of the Memorandum of State Law Authority authored by the District's counsel, Barbara Baird. The Memorandum of State Law Authority blatantly ignored this Court's determination that the District lacked authority to adopt the Rules by stating: "[T]he District has authority under state law to adopt the rules." Declaration of Mark E. Elliott [Docket No. 227-2], Exhibit 1 at 34. It is difficult to understand how competent counsel could take that position in light of the clear ruling of this Court. In any event, the Court is confident that this misrepresentation will be raised by Plaintiffs in any further regulatory proceedings relating to this matter.



U.S. Department
of Transportation

**Federal Railroad
Administration**

Administrator

SEP 27 2013

1200 New Jersey Avenue, SE
Washington, DC 20590

Mr. Jared Blumenfeld
Regional Administrator
United States Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, CA 94105

Dear Mr. Blumenfeld:

This letter is regarding the two proposed locomotive idling rules submitted to your office on August 30, 2012 by the California Air Resource Board (CARB) on behalf of the South Coast Air Quality Management District for inclusion in California's State Implementation Plan (SIP). The Association of American Railroads (AAR) has reached out to us about the proposed rules and provided us with some background materials and associated correspondence.

As you know, AAR has advanced a number of concerns with the two proposed locomotive idling rules, including that the proposed rules open the door to a patchwork of regulatory requirements throughout California, making industry compliance more difficult. While FRA does not have regulations specifically covering the subject matter of idling locomotives, I would like to take this opportunity to alert you to a few important safety and operational considerations related to the proposed CARB restrictions on locomotive idling. The proposed rules have the potential to:

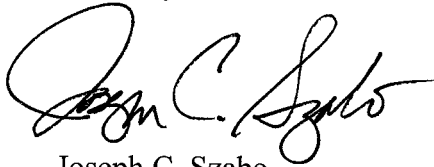
- Cause confusion because the CARB proposed rules define "unattended" in a manner that potentially conflicts with FRA's definition of "unattended equipment" in 49 CFR 232.103(n);
- Increase the length of time that equipment is removed from a source of compressed air, which can negatively impact the integrity and operation of the brake system on a vehicle or train;
- Create time delays when restarting a locomotive where it is necessary to allow the airbrake systems to re-charge after the locomotive is shut down; and
- Increase safety risks to railroad employees who will be required to manually set and release handbrakes.

In providing this information, I understand that the decision on whether to adopt the two proposed rules ultimately rests with you and that there may be other compelling interests

that factor into your decision. We would be happy to discuss the safety and operational issues mentioned above with you if that would be helpful in informing your decision.

Thank you for considering this request and please contact Elizabeth Gross at (202) 493-1342 if you should have any questions or wish to discuss the issue further.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph C. Szabo". The signature is fluid and cursive, with the first name "Joseph" and last name "Szabo" being the most prominent parts.

Joseph C. Szabo
Administrator

Railex, Inc.
Colon R. Fulk
Railway Consultant/Expert Witness
4305 Pointe Norman Drive * Sherrills Ford, NC 28673
T 828.478.9666 * F 828.478.9660

November 13, 2013

Ms. Barbara Baird
District Counsel
SCAQMD

You have asked me to provide you with my comments referencing a letter dated September 27, 2013 from Joseph Szabo to Mr. Jared Blumenfeld, Regional Administrator for the United States Environmental Protection Agency, Region 9.

The letter addressed concerns Mr. Szabo has with potential safety and operational issues the rail industry would incur while complying with two proposed locomotive idling rules that were submitted to the Region 9 U.S. Environmental Protection Agency by the California Air Resource Board (CARB) on behalf of the South Coast Air Quality Management District (SCAQMD) for inclusion in California's State Implementation Plan (SIP).

Mr. Szabo listed four bullet points in his letter, the first point reads as follows:

- Cause confusion because the CARB proposed rules define "unattended" in a manner that potentially conflicts with FRA's definition of "unattended equipment" in 49 CFR 232.103(n):

I find no confusion in the term "unattended", unattended is unattended, period. It has been my experience the rail industry and the FRA understands what "unattended" means. It is my belief the interpretation of "unattended" in Rule 3502 parallels railroad operating rules and federal regulations already in place. Simply meaning that if there are no qualified railroad personnel to control the braking system that train is considered to be "unattended". Rule 3502 has a slightly different wording of "unattended" stating that a person must be physically on the locomotive or the locomotive is considered "unattended." It is my opinion the difference in wording is insufficient to create confusion and has no appreciable merit to the issue in question.

As per railroad operating rules and federal regulations an unattended train will be secured, i.e., the application of a sufficient number of handbrakes to ensure the train will not move should the trains' air brake leak to a level that would not hold the train stationary.

Second bullet point reads as follows:

- Increase the length of time that equipment is removed from a source of compressed air, which can negatively impact the integrity and operation of the brake system on a vehicle or train:

Yes. Should the locomotives be shutdown, which would stop operation of the air compressors, this would stop the supply of compressed air into the trains' air braking system. However, such a shutdown would have no effect on the train's operation unless the train is off air for more than four hours. After being off air for more than four hours railroad rules and federal regulations require the trains' air brake system be retested as per the requirements of a Class 1 brake test.

However, I do not foresee a negative impact of the integrity and operation of the trains' air braking system on any vehicle in the train. It is true, after a period of time when a train is left without a supply of compressed air; the trains' air brakes must be retested. It is reasonable to believe under most scenarios where the trains' air brakes are retested a particular vehicle (railcar) will function properly as when the train initially stopped. Furthermore, in such scenarios when a vehicles' air brake is found to be defective during a retest it would increase the integrity and safe operation of the railroad by gaining knowledge of defective equipment in the train.

Third bullet point reads as follows:

- Create time delays when restarting a locomotive where it is necessary to allow the airbrake systems to re-charge after the locomotive is shut down:

Railroad Air Brake and Train Handling Rules already instruct locomotive engineers to apply the train air brake system when stopped, thereby creating a measurement of time to replenish air into the trains' air brake system before departing. This is a railroad requirement during most any scenario despite any proposed rule changes. This is true whether or not the locomotives are idling. It is my opinion any additional re-charging time would be minimal and if necessary, could be handled through improved communication between the train and the dispatch center.

Addressing restarting of a locomotive, it is not a big deal. It only consumes a few minutes of time. Furthermore, once a locomotive is restarted and has begun replenishing air to the train the train crew could restart other locomotives during the aforementioned built-in waiting time.

Fourth bullet point reads as follows:

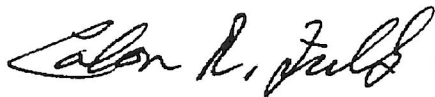
- Increase safety risks to railroad employees who will be required to manually set and release handbrakes:

Railroads hire railroad employees to perform railroad duties. The manual setting and releasing of handbrakes is a function of a railroad train service employees duties. The rail industry has addressed the proper and safe manner for which employees set and release handbrakes, on various types of rail equipment, in numerous rules, special instructions and safety rules. I find it surprising that the rail industry or the FRA even suggest that applying handbrakes on rail equipment causes an increased risk to railroad workers.

This should be considered a non-issue.

It is my opinion the application of the aforementioned SCAQMD rule requirements would not interfere with a railroads operations. Yes, as with any requirement, inadequate training and poor planning normally has an adverse affect on the railroads operation. However, considering the rail industries already fuel conservation mind-set I believe this to be beneficial from an environmental and/or financial standpoint.

Sincerely;

A handwritten signature in black ink, appearing to read "Colon R. Fulk". The signature is stylized with a large, sweeping initial 'C' and a trailing flourish.

Colon R. Fulk
Railex, Inc.

Railex, Inc.
Colon R. Fulk
Railway Consultant/Expert Witness
4305 Pointe Norman Drive * Sherrills Ford, NC 28673
T 828.478.9666 * F 828.478.9660

November 13, 2013

Ms. Barbara Baird
District Counsel
SCAQMD

You have asked me to provide you with my comments referencing a letter dated September 27, 2013 from Joseph Szabo to Mr. Jared Blumenfeld, Regional Administrator for the United States Environmental Protection Agency, Region 9.

The letter addressed concerns Mr. Szabo has with potential safety and operational issues the rail industry would incur while complying with two proposed locomotive idling rules that were submitted to the Region 9 U.S. Environmental Protection Agency by the California Air Resource Board (CARB) on behalf of the South Coast Air Quality Management District (SCAQMD) for inclusion in California's State Implementation Plan (SIP).

Mr. Szabo listed four bullet points in his letter, the first point reads as follows:

- Cause confusion because the CARB proposed rules define "unattended" in a manner that potentially conflicts with FRA's definition of "unattended equipment" in 49 CFR 232.103(n):

I find no confusion in the term "unattended", unattended is unattended, period. It has been my experience the rail industry and the FRA understands what "unattended" means. It is my belief the interpretation of "unattended" in Rule 3502 parallels railroad operating rules and federal regulations already in place. Simply meaning that if there are no qualified railroad personnel to control the braking system that train is considered to be "unattended". Rule 3502 has a slightly different wording of "unattended" stating that a person must be physically on the locomotive or the locomotive is considered "unattended." It is my opinion the difference in wording is insufficient to create confusion and has no appreciable merit to the issue in question.

As per railroad operating rules and federal regulations an unattended train will be secured, i.e., the application of a sufficient number of handbrakes to ensure the train will not move should the trains' air brake leak to a level that would not hold the train stationary.

Second bullet point reads as follows:

- Increase the length of time that equipment is removed from a source of compressed air, which can negatively impact the integrity and operation of the brake system on a vehicle or train:

Yes. Should the locomotives be shutdown, which would stop operation of the air compressors, this would stop the supply of compressed air into the trains' air braking system. However, such a shutdown would have no effect on the train's operation unless the train is off air for more than four hours. After being off air for more than four hours railroad rules and federal regulations require the trains' air brake system be retested as per the requirements of a Class 1 brake test.

However, I do not foresee a negative impact of the integrity and operation of the trains' air braking system on any vehicle in the train. It is true, after a period of time when a train is left without a supply of compressed air; the trains' air brakes must be retested. It is reasonable to believe under most scenarios where the trains' air brakes are retested a particular vehicle (railcar) will function properly as when the train initially stopped. Furthermore, in such scenarios when a vehicles' air brake is found to be defective during a retest it would increase the integrity and safe operation of the railroad by gaining knowledge of defective equipment in the train.

Third bullet point reads as follows:

- Create time delays when restarting a locomotive where it is necessary to allow the airbrake systems to re-charge after the locomotive is shut down:

Railroad Air Brake and Train Handling Rules already instruct locomotive engineers to apply the train air brake system when stopped, thereby creating a measurement of time to replenish air into the trains' air brake system before departing. This is a railroad requirement during most any scenario despite any proposed rule changes. This is true whether or not the locomotives are idling. It is my opinion any additional re-charging time would be minimal and if necessary, could be handled through improved communication between the train and the dispatch center.

Addressing restarting of a locomotive, it is not a big deal. It only consumes a few minutes of time. Furthermore, once a locomotive is restarted and has begun replenishing air to the train the train crew could restart other locomotives during the aforementioned built-in waiting time.

Fourth bullet point reads as follows:

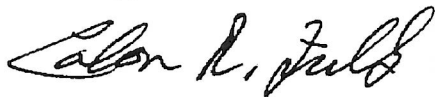
- Increase safety risks to railroad employees who will be required to manually set and release handbrakes:

Railroads hire railroad employees to perform railroad duties. The manual setting and releasing of handbrakes is a function of a railroad train service employees duties. The rail industry has addressed the proper and safe manner for which employees set and release handbrakes, on various types of rail equipment, in numerous rules, special instructions and safety rules. I find it surprising that the rail industry or the FRA even suggest that applying handbrakes on rail equipment causes an increased risk to railroad workers.

This should be considered a non-issue.

It is my opinion the application of the aforementioned SCAQMD rule requirements would not interfere with a railroads operations. Yes, as with any requirement, inadequate training and poor planning normally has an adverse affect on the railroads operation. However, considering the rail industries already fuel conservation mind-set I believe this to be beneficial from an environmental and/or financial standpoint.

Sincerely;

A handwritten signature in black ink, appearing to read "Colon R. Fulk". The signature is stylized with a large, sweeping initial 'C' and a long, horizontal stroke extending to the right.

Colon R. Fulk
Railex, Inc.



South Coast
AQMD

South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

Office of the General Counsel

Writer's Direct Dial:

909.396.2302

Fax: 909.396.2963

e-mail: bbaird@aqmd.gov

November 14, 2013

Via Electronic and U.S. Mail

Mr. Jared Blumenfeld
Regional Administrator
U.S. Environmental Protection Agency, Region 9
75 Hawthorne Street
San Francisco, CA 94105

Re: Letter dated September 27, 2013 from the Federal Railroad Administration to Jared Blumenfeld, Regional Administrator, EPA, Region 9

Dear Mr. Blumenfeld:

This letter is in response to the letter dated September 27, 2013 from the Federal Railroad Administration (FRA) to EPA Region 9 (Attachment 1) regarding two locomotive idling rules submitted to Region 9 for inclusion in the California State Implementation Plan. These rules were adopted by the South Coast Air Quality Management District (SCAQMD), the regional agency responsible for air pollution control for all sources except motor vehicles in the greater Los Angeles region. Apparently, the FRA was contacted by the Association of American Railroads to express concerns regarding the rules. Since the SCAQMD was not included in these discussions, we wanted to bring some facts to your attention which addresses the concerns raised by FRA.

We would also like to provide you with some background information that puts the FRA letter in context. The FRA, unfortunately, was apparently not presented with the extensive information presented by the SCAQMD at trial, including expert testimony, demonstrating that the rules do not interfere with rail operations.

Background

The two rules adopted by SCAQMD are very simple. Rule 3501 merely requires the railroads to keep simple records of idling events of 30 minutes or more and to file specified reports. It does not raise any of the concerns identified in the FRA letter. Rule 3502 requires the railroads to limit idling to no more than 30 minutes in certain circumstances. These circumstances were carefully described and limited so as to avoid interfering with normal rail operations, while preventing unnecessary idling. First, idling is limited to 30 minutes when a train is *unattended*,

and the crew has been relieved or has left for a meal, the locomotive is queuing for fueling, maintenance, or servicing; the train is in the railyard, or maintenance or diagnostics are being performed that do not require the engine to operate. Rule 3502(d)(1). The second circumstance applies to *trailing locomotives only* (the lead locomotive may continue to idle). Furthermore, it applies only when the train is notified of a delay that will exceed 30 minutes, or there is a locomotive breakdown that will result in a delay of more than 30 minutes. Rule 3502(d)(2). Exceptions from both idling prohibitions exist for emergency operations, cases when temperatures are expected to be at 40 degrees or lower (to protect engine coolant from freezing), or when idling is required to maintain battery charge or voltage. Rule 3502(j).

FRA CONCERNS

Potential confusion between CFR definition of “unattended equipment” and Rule 3502 definition of “unattended”

As described above, Rule 3502 limits idling to 30 minutes in certain circumstances when the locomotive is “unattended.” Rule 3502 defines “unattended” as follows: “UNATTENDED means where no crew member is on board a locomotive.” There is also a definition of “unattended equipment” in 49 C.F.R. §232.103 (General requirements for all train brake systems). Subdivision (n) of §232.103 provides in pertinent part that “A train’s air brake shall not be depended upon to hold equipment standing unattended on a grade (including a locomotive, a car, or a train whether or not locomotive is attached).” That subdivision goes on to provide: “For purposes of this section, ‘unattended equipment’ means equipment left standing and unmanned in such a manner that the brake system of the equipment cannot be readily controlled by a qualified person.” These two provisions may differ slightly. The Rule 3502 definition applies anytime no person is on board the locomotive. The CFR provision may allow equipment to avoid being identified as “unattended” even if no one is physically on board the locomotive if a person could readily control the brakes—perhaps if the person is standing immediately outside the locomotive cab. However, there should be no confusion created, because the two definitions serve different purposes.

Under Rule 3502, an unattended locomotive triggers the obligation to limit idling to 30 minutes under certain circumstances. Under 49 C.F. R. §232.103(n), air brakes may not be relied upon to secure “unattended equipment” on a grade. Thus, “unattended equipment” on a grade must be secured with hand brakes, *whether or not the train is idling*. On the other hand, if there is no one aboard the locomotive, and one of the circumstances listed in Rule 3502 occurs, then the train must limit idling to 30 minutes. But this requirement does not have any impact on train operations until the train has been unattended for 30 minutes – it must then cease idling. Since the definitions serve entirely different purposes there should be no confusion.

Concern that the rules can increase the length of time that equipment is removed from a source of compressed air

The railroads have argued that if the train is entirely shut down due to the idling limits, and does not obtain air from some other source such as yard air, at some point the air brakes begin to fade. First, it should be noted that in most cases when the train is away from the yard, the lead

locomotive may continue to idle under Rule 3502(d)(2). Thus, there will be no effect on the air brakes. Also, under federal regulations, the air brakes do not even need to be tested until the train has been shut down for more than four hours. 49 C.F.R. § 232.205(a)(3). Therefore, the mere stopping of idling after ½ hour will have no effect on the air brakes unless the train is off air for more than four hours. Moreover, the SCAQMD presented expert testimony at trial that the air brakes remain operational far longer than this four hour period. But to be conservative, we will assume that the train should not be left off air for more than 4 hours since that would trigger an air brake test. The railroads have never presented any evidence of the possibility of the train being left off air for more than four hours having a significant impact on their operations. Moreover, all that they need to do to avoid this potential is to return to the locomotive before the four hours is up and restart the engine. In most cases, as where the train is in the yard, it would be easy to re-start the engine before the four hours expire. The idling limit would no longer apply because the train would not be unattended. Therefore, the rule will have no impact on the ability to award having to do a brake test.

Concern that the rule could create time delays due to the need to allow time to re-charge the brakes after a shutdown

As noted above, there presumably is no need to re-charge the brakes if they are left off air for four hours or less. If the four hours limit before a brake test is required is approaching, a qualified crew member may re-board the train so that the locomotive is no longer “unattended” and the idling limits no longer apply. Thus the engine can be restarted and idled as long as deemed necessary for the protection of the air brakes.

Concern re safety risk to crew who will be required to manually set and release handbrakes

The obligation to set hand brakes occurs whenever the equipment is left unattended on a grade, *even if it is idling*. Moreover, at least BNSF has internal rules that require the use of handbrakes whenever the train is left unattended, even if it is not on a grade – again even if it is idling. BNSF Rule 102.1; 102.11 (Attachment 2). Therefore, the requirement to limit idling to one-half hour when the train is unattended will have no impact on the obligation to set and release handbrakes.

Reasonableness of 30-minute idling limits

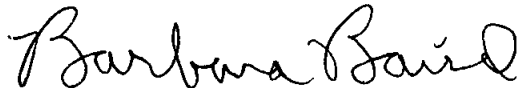
The railroads have simply failed to present any cogent argument that a 30 minute limit on idling will unreasonably interfere with their operations. In fact, EPA’s idling equipment rule for locomotives provides that anti-idling devices must be set for a period of 30 minutes *or less*. 40 C.F. R. §1033.115(g)(1). We understand that a major manufacturer of aftermarket anti-idling equipment already sets its devices at 15 minutes. Moreover, Massachusetts already has a regulation limiting idling of diesel locomotives to 30 minutes, which has been approved by EPA into the state implementation plan and enforced by the Department of Justice. (See Attachment 3 - EPA news release.) Together with the carefully-drawn provisions of Rule 3502, we believe these facts support the position that a 30 minute limit on idling does not unreasonably interfere with rail operations.

Mr. Jared Blumenfeld
United States Environmental Protection Agency
November 14, 2013
Page 4

Conclusion

We note the fact that the FRA letter recognizes that there may be a compelling interest in applying the SCAQMD rules to the freight railroads in our region. We believe the interests in helping attain federal clean air standards, reducing exposure to cancer-causing diesel emissions, and protecting citizens from the nuisance and health impacts of excessive idling certainly justify applying these rules.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Barbara Baird". The signature is fluid and cursive, with the first name "Barbara" and last name "Baird" clearly distinguishable.

Barbara Baird
Chief Deputy Counsel
South Coast Air Quality Management District

BB:pa

e/BB/Railroads/FRA Second Response

Attachments: 1) Letter dated 9/27/13 from FRA to EPA
2) Air Brake and Train Handling Rules No. 3
3) EPA News Release dated August 4, 2010

cc: Mr. Joseph Szabo, FRA Administrator

Ms. Elizabeth Gross, Trial Attorney
Office of Chief Counsel, FRA

ATTACHMENT 1



U.S. Department
of Transportation

Administrator

1200 New Jersey Avenue, SE
Washington, DC 20590

**Federal Railroad
Administration**

SEP 27 2013

Mr. Jared Blumenfeld
Regional Administrator
United States Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, CA 94105

Dear Mr. Blumenfeld:

This letter is regarding the two proposed locomotive idling rules submitted to your office on August 30, 2012 by the California Air Resource Board (CARB) on behalf of the South Coast Air Quality Management District for inclusion in California's State Implementation Plan (SIP). The Association of American Railroads (AAR) has reached out to us about the proposed rules and provided us with some background materials and associated correspondence.

As you know, AAR has advanced a number of concerns with the two proposed locomotive idling rules, including that the proposed rules open the door to a patchwork of regulatory requirements throughout California, making industry compliance more difficult. While FRA does not have regulations specifically covering the subject matter of idling locomotives, I would like to take this opportunity to alert you to a few important safety and operational considerations related to the proposed CARB restrictions on locomotive idling. The proposed rules have the potential to:

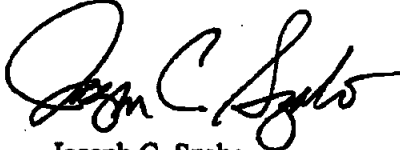
- Cause confusion because the CARB proposed rules define "unattended" in a manner that potentially conflicts with FRA's definition of "unattended equipment" in 49 CFR 232.103(n);
- Increase the length of time that equipment is removed from a source of compressed air, which can negatively impact the integrity and operation of the brake system on a vehicle or train;
- Create time delays when restarting a locomotive where it is necessary to allow the airbrake systems to re-charge after the locomotive is shut down; and
- Increase safety risks to railroad employees who will be required to manually set and release handbrakes.

In providing this information, I understand that the decision on whether to adopt the two proposed rules ultimately rests with you and that there may be other compelling interests

that factor into your decision. We would be happy to discuss the safety and operational issues mentioned above with you if that would be helpful in informing your decision.

Thank you for considering this request and please contact Elizabeth Gross at (202) 493-1342 if you should have any questions or wish to discuss the issue further.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph C. Szabo". The signature is fluid and cursive, with the first name "Joseph" and last name "Szabo" clearly distinguishable.

Joseph C. Szabo
Administrator

ATTACHMENT 2

BNSF Safety Vision

We believe every accident or injury is preventable. Our vision is that Burlington Northern Santa Fe will operate free of accidents and injuries. Burlington Northern Santa Fe will achieve this vision through:

A culture that makes safety our highest priority and provides continuous self-examination as to the effectiveness of our safety process and performance ...

A work environment, including the resources and tools, that is safe and accident-free where all known hazards will be eliminated or safe-guarded ...

Work practices and training for all employees that make safety essential to the tasks we perform ...

An empowered work force, including all employees, that takes responsibility for personal safety, the safety of fellow employees, and the communities in which we serve.

Introduction

This version contains the following revised or added pages:

July 11, 2004: 3, 4, 19, 20, 25, 26, 27, 28, 29, 30, 31, 32, 37, 38, 43, 44, 45, 46, 51, 52, 53, 54, 55, 56, 75, 76, 89, 90, 93, 94.

April 3, 2005: 7, 8, 13, 14, 15, 16, 16a added, 16b added, 17, 18, 21, 22, 33, 34, 35, 36, 59, 60, 63, 64, 117, 118.

June 8, 2005: 5, 6.

June 24, 2005: Title Page, 2, 9, 10.



Air Brake and Train Handling Rules

No. 3

IN EFFECT AT 0001
Central, Mountain and Pacific
Continental Time

Sunday, July 13, 2003
(including revisions up to
June 24, 2005)

102.0 Train Operations

102.1 Securing Equipment Against Undesired Movement

Crew members are responsible for securing standing equipment with hand brakes to prevent undesired movement. The air brake system must not be depended upon to prevent an undesired movement.

Use the following steps to determine the hand brakes to be applied when setting out cars on a grade:

- With slack bunched, apply the hand brakes on the low end of the cut of cars.
- With slack stretched, apply the hand brakes on the high end of the cut of cars.

To determining the number of hand brakes to be applied depends on:

- Grade and adhesion.
- Number of loaded and empty cars.
- Weather conditions (wind and temperature).

Note: Reference Rule 104.14 for hand brake guidelines.

To verify the hand brake(s) applied will prevent movement, release all air brakes. Note: All retainer valves must be in EXHAUST position

102.1.1 Securing an Unattended Train or Portion of Train with Locomotive Attached

To secure a train or a portion of a train with the lead locomotive consist attached, perform the steps below:

1. Secure equipment against undesired movement. When securing an unattended train, in addition to hand brakes required to secure train, all locomotive hand brakes on the lead consist must be applied. When determining the minimum number of had brakes required to secure a train, the locomotive hand brakes should be counted toward the total hand brakes required. Use the table provided in Rule 104.14 if the minimum number required is not known.

Exception: Distributed power remote consists coupled to unattended trains do not require hand brakes to be applied or other securement steps outlined in Rule 102.3 when the train is otherwise properly secured.

2. Release all air brakes to ensure hand brakes will prevent movement.
3. Secure the locomotive consist as outlined in Rule 102.3, items 1 - 10.

102.1.2 Securing Train Before Detaching Locomotives

When any part of a train is left standing and train brake inspection is not required, do not depend on the air brake system to secure the cars.

When detaching locomotives or locomotives and cars:

1. Secure equipment against undesired movement. Exception: Use the table provided in Rule 104.14 if the minimum number required is not known or if releasing air brakes to test for sufficient hand brakes is not practical (i.e. only rear of train being left unattended).
2. Release all air brakes to ensure hand brakes will prevent movement.
3. Make a 20-psi brake pipe reduction.
4. Close angle cock on rear locomotive or last car to be detached from portion left standing. Leave angle cock open on portion left standing.
5. Allow brakes on any standing portion to apply in emergency. When available, use the end-of-train telemetry device to make sure that brake pipe pressure drops to 0 psi.
6. Do not bottle air or maintain air pressure in the brake pipe when locomotives are detached or yard air is uncoupled. However, after the brake pipe pressure has completely exhausted, the angle cock on the standing portion of the train may be closed to allow a locomotive to switch the cars from the opposite end.

Exception: When separating a train in temperatures below 25 degrees F and the train is on a light grade, (see Glossary) follow the steps in Rule 100.17 (Inbound Train Inspection) to prevent vent valves from sticking open.

102.2 Releasing Hand Brakes

Before moving cars or locomotives, fully release all hand brakes to prevent wheel damage.

If a hand brake is difficult to release, charge the air brake system and make a full service application of the car or locomotive brakes before attempting to release the hand brake again. If hand brake is still difficult to release place the car or locomotive brake system into emergency.

If the hand brake cannot be released using the above method do not move the car except to set it out. Car must be watched during entire movement to set out and limit speed to 5 MPH if wheels are not turning freely. Report defect to Mechanical Desk/Dispatcher.

When releasing hand brakes, check at least three additional cars beyond the last applied hand brake to ensure that no other hand brakes are applied.

102.3 Unattended Locomotive(s)

When securing locomotives (excluding DP remote locomotives on secured unattended trains):

1. Place the throttle in IDLE unless you are protecting the engine from freezing (see Rule 106.2, Winterization of Locomotives).
2. Place the transition handle (if equipped) in the OFF position.
3. Place the generator field switch or the circuit breaker on the control stand (if equipped) in the OFF position.
4. Remove the reverser handle from the reverser slot on the control stand and place it in the receptacle, if equipped. Do not remove the reverser handle if you need to increase the throttle position to prevent freezing.
5. Apply all hand brakes.
6. Release the air brakes to determine the hand brakes will prevent movement.
7. Make a 20-psi brake pipe reduction after allowing the brake system to charge.
8. Leave the automatic brake valve cut in.
9. Fully apply the independent brake.
10. Place engine control switch to ISOLATE on all locomotives unless conditions require winter protection as prescribed by Rule 106.2 and Rule 106.6.

Additional securement guidelines for unattended locomotives not coupled to other equipment:

11. Must not be left unattended on a main track.
12. When left unattended on auxiliary tracks must be protected by derail(s) or a facing point switch lined and locked to prevent movement to the main track.
13. If the grade exceeds 1 percent, block the wheels securely.

Exceptions: DP remote locomotives and single person helper consists may be left standing with all hand brakes applied at any location, even on the main track, when in the process of making up a DP train or when single person helper is performing duties that require temporarily leaving the locomotives.

At mechanical facilities, when locomotives are protected by outbound derails on designated servicing tracks, apply a sufficient number of hand brakes to prevent undesired movement, but a minimum of one per locomotive consist.

ATTACHMENT 3



Newsroom

News Releases from Region 1

MBTA to Spend Millions to Reduce Commuter Train Emissions in Clean Air Act Settlement

Release Date: 08/04/2010

Contact Information: EPA, David Deegan, (617) 918-1017 DOJ, (202) 514-2007

Joint News Release

U.S. Environmental Protection Agency, New England Regional Office
Department of Justice

(Boston, Mass. – Aug. 4, 2010) – In response to a federal enforcement action for excessive train engine idling, the Massachusetts Bay Transportation Authority (MBTA) and the Massachusetts Bay Commuter Railroad Company (MBCR) will spend more than \$2 million to reduce diesel locomotive emissions throughout the MBTA's commuter rail system, the Justice Department and Environmental Protection Agency (EPA) announced today.

Under a consent decree lodged in federal court, MBTA and MBCR will spend over \$1 million on anti-idling equipment at all end-of-line stations and maintenance facilities, and will spend another \$1 million on ultra-clean diesel fuel for all trains in the commuter rail system for two years.

These emission-reducing measures are the result of a federal enforcement action brought by the Justice Department on behalf of EPA in response to MBTA's and MBCR's excessive locomotive idling at the Widett Circle layover facility in South Boston and the Greenbush line station in Scituate, Mass. Neighboring residents have complained of excessive train idling at both locations.

To settle the enforcement action, MBTA and MBCR will:

- Install or upgrade electric plug-in stations as anti-idling equipment to supply all commuter locomotives with electric auxiliary power to prevent excess idling during train layovers;
- Switch to cleaner burning, ultra-low sulfur diesel fuel for all trains on the MBTA's commuter rail lines for a two year period at an estimated cost of \$1 million;
- Install new, less polluting auxiliary engines on fourteen commuter locomotives by no later than December 2012; and
- Pay a \$225,000 fine.

The anti-idling measures, clean diesel fuel switch, and new auxiliary engines required by the federal settlement will have significant clean air benefits. For example, a reduction in commuter locomotive idling by even one hour per day per locomotive, together with the fuel switch and new engines, could result in yearly carbon dioxide emission reductions of an estimated 800 tons, nitrogen oxides reductions of nearly 170 tons, carbon monoxide reductions of about 80 tons, particulate reductions of 23 tons, and sulfur dioxide reductions of 1-2 tons.

MBTA owns 80 commuter locomotives used on 13 commuter rail routes in Eastern Massachusetts. Since 2003, MBCR has managed and operated the commuter train system for the MBTA. The system includes 14 layover facilities where the locomotives and passenger cars are parked and serviced between runs. Electric plug-in stations at these facilities supply the trains with electric power for lights and ventilation. If a plug-in is not available, a train on layover idles its auxiliary diesel engine to supply any needed electric power.

Under today's settlement, which must be approved by the court, commuter train layovers will only be allowed at locations where there are sufficient electric plug-in stations for all trains.

The Massachusetts locomotive idling regulation, a federally-enforceable state regulation, prohibits all unnecessary diesel locomotive idling for more than 30 minutes. According to a 2008 notice of violation

[Search this collection of releases](#) | or [search all news releases](#)

[Get Region 1 news releases by email](#)

[View selected historical press releases from 1970 to 1998 in the EPA History website.](#)

Recent additions

- 09/24/2012 [More Than \\$750,000 Awarded in Connecticut for Community-Based Projects to Improve Health and Vitality of Long Island Sound](#)
- 09/20/2012 [Rhode Island Transit Authority wins EPA Clean Air Excellence Award](#)
- 09/18/2012 [Leads Metal Site in Maine Added to National Superfund List](#)
- 09/18/2012 [EPA Proposes Two Massachusetts Sites to be Added to National Superfund List](#)
- 09/14/2012 [Motorcycle Importer Pays Penalty to Resolve Clean Air Violations](#)

issued by EPA, MBTA and MBCR committed 33 violations of this regulation at Widett Circle and Greenbush in three months. At Widett, the average idling time during the violations was just under four hours (234 minutes).

"This precedent-setting, multi-million dollar settlement for train idling is appropriate in light of the defendants' conduct," said Ignacia S. Moreno, Assistant Attorney General for the Justice Department's Environment and Natural Resources Division. "The settlement will provide immediate and lasting environmental benefits to the residents of Eastern Massachusetts, particularly those in environmental justice communities."

"It is imperative that anti-idling laws are followed, given the proximity of these layover facilities to densely-populated communities and environmental justice neighborhoods," said Curt Spalding, regional administrator of EPA's New England Office. "Diesel pollution can be very harmful, especially to sensitive populations such as the young, elderly and people who suffer from asthma."

Diesel emissions contribute to a number of serious air pollution problems such as smog, acid rain and increased carbon concentrations in the atmosphere. Diesel exhaust contains fine particles that can cause lung damage and aggravate respiratory conditions, such as asthma and bronchitis. Based upon human and laboratory studies, there is also considerable evidence that diesel exhaust is a likely carcinogen.

Since 2002, EPA has brought more than a dozen federal enforcement cases to stop diesel engine idling violations in Mass., Conn. and R.I. Most of the cases have involved diesel truck and bus idling, including a judicial settlement announced in July 2010 against National Car Rental for shuttle bus idling at two airports. Only Massachusetts and Rhode Island have federally-enforceable locomotive idling regulations, and today's action marks the first time EPA and DOJ have sued a railroad for excessive idling violations.

More information:

The consent decree, lodged in the U.S. District Court, will be subject to a 30-day public comment period and approval by the federal court. Once it is published in the Federal Register, a copy of the consent decree and instructions on how to comment will be available on the Justice Department Web site at (http://www.usdoj.gov/enrd/Consent_Decrees.html).

Fact Sheet on MBTA Settlement: <http://www.epa.gov/region1/enforcement/air/pdfs/CAA-MBTA-MBCR-Fact-Sheet.pdf>

Diesel exhaust and anti-idling guidelines (www.epa.gov/naeco/diesel)

###

Last updated on Tuesday, September 28, 2010 <http://yosemite.epa.gov/opa/admpress.nsf/6d651d23f5a91b768525735900400c28/b89a1cd70da60b968525777500615ce7?OpenDocument>