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ENTERED  
Office of Proceedings  
February 14, 2014  
Part of  
Public Record

February 14, 2014

VIA ELECTRONIC FILING

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

Re: **United States Environmental Protection Agency—Petition for Declaratory Order,  
STB Finance Docket No. 35803**

Dear Ms. Brown:

Enclosed for filing in the above-captioned matter is the BNSF Railway Company's Reply to United States Environmental Protection Agency's Petition for Declaratory Order.

Thank you for your assistance.

Sincerely,



Anthony J. LaRocca  
Counsel for BNSF Railway Company

Enclosures

cc: Counsel of Record

**BEFORE THE  
SURFACE TRANSPORTATION BOARD**

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**STB FINANCE DOCKET NO. 35803**

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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY –  
PETITION FOR DECLARATORY ORDER**

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**BNSF RAILWAY COMPANY’S REPLY TO  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY’S  
PETITION FOR DECLARATORY ORDER**

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BNSF Railway Company (“BNSF”) hereby replies to the Petition for Declaratory Order (“Petition”) filed by the United States Environmental Protection Agency (“EPA”) on January 24, 2014. BNSF has joined the reply filed by the Association of American Railroads (“AAR”) and files this additional reply to supplement the AAR’s comments.

For the reasons explained in AAR’s reply and further below, the Board should declare, without initiating further investigation, that the rules at issue in the Petition are preempted under the ICC Termination Act (“ICCTA”), 49 U.S.C. §10501(b). BNSF believes that the Board can and should issue such a declaration based on the findings of fact and conclusions of law by the United States District Court for the Central District of California in a 2007 decision which, after a full trial on the matter, permanently enjoined the rules at issue on grounds that they are unlawful under California law and preempted under ICCTA. The District Court’s injunction was

upheld on appeal. If the Board believes that a more detailed investigation needs to be conducted, the Board should initiate a proceeding that will allow for the development of a full record.

## **I. INTRODUCTION**

EPA's Petition asks the Board to issue a declaratory order on the question whether certain locomotive idling rules issued by a local government entity in Southern California that seek directly to regulate rail operations are preempted under ICCTA. The local government entity – the Southern California Air Quality Management District (“SCAQMD”) – is one of 35 regional air quality management districts created by the State of California. The rules issued by SCAQMD present a stark case of improper and unauthorized interference by a local government in the conduct of interstate rail operations.

The SCAQMD rules go far beyond efforts that are being undertaken by both the State of California and the EPA to address diesel locomotive emissions and, in fact, undermine and contradict those efforts. The rules could result in the termination of successful voluntary agreements between the California state agency charged with mobile source Clean Air Act (“CAA”) responsibilities and the railroads. They exceed national rules adopted by EPA addressing diesel emissions from locomotives and in some cases would directly conflict with those rules. They would impose severe operating burdens on freight railroads serving Southern California. The Federal Railroad Administration (“FRA”) has raised in the record before the EPA serious concerns about the safety implications of the rules. If the rules were allowed to go into effect in Southern California, numerous local government entities across the country may well attempt to impose their own local locomotive emissions requirements on railroads. The rules are precisely the type of “patchwork” regulation of rail operations by local government entities that Section 10501(b) of ICCTA is intended to prevent.

In 2007, the United States District Court for the Central District of California found that the rules are unlawful under state law, concluded that the rules were not a legitimate vehicle for implementing the CAA, determined that the rules were preempted by ICCTA, and issued a permanent injunction prohibiting implementation of the rules. *Ass'n of Am. R.R. v. S. Coast Air Quality Mgmt. Dist.*, No. CV 06-01416-JFW (PLAx), 2007 U.S. Dist. LEXIS 65685, at \*23-24 (C.D. Cal. Apr. 30, 2007) (“*Ass'n of Am. R.R.*”) (Attached to EPA’s Petition at Enclosure 1 of the September 12, 2012 Letter from Association of American Railroads, BNSF Railway Company and Union Pacific Railroad Company to Jared Blumenfeld, Regional Administrator, U.S. EPA). The United States Court of Appeals for the Ninth Circuit unanimously upheld the District Court’s decision to enjoin the rules. *Ass'n of Am. R.R. v. S. Coast Air Quality Mgmt. Dist.*, 622 F.3d 1094 (9th Cir. 2010).

In the face of the District Court’s rulings and injunction, SCAQMD sought to do indirectly what it could not directly achieve. In 2011, SCAQMD asked the State of California’s Air Resources Board (“CARB”) to seek EPA’s approval of the local rules as an amendment to California’s State Implementation Plan (“SIP”) under the CAA. As an administrative action, CARB forwarded the request to EPA, and EPA has now asked the Board for its view on the question of ICCTA preemption.<sup>1</sup>

Specifically, the EPA has asked the Board whether the rules would continue to be preempted under ICCTA if EPA were to accept the locomotive idling rules issued by SCAQMD as amendments to the California SIP. The EPA has not indicated that it plans to approve the rules. Indeed, correspondence between the EPA and SCAQMD attached to the EPA’s Petition suggests that the EPA has told SCAQMD that the EPA has serious concerns about the proposed

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<sup>1</sup> In fact, the request for a declaratory order was made by EPA’s Region IX and not EPA headquarters.

SIP amendments on grounds other than ICCTA preemption.<sup>2</sup> Moreover, as BNSF, AAR and Union Pacific Railroad Company (“Union Pacific”) have pointed out in correspondence with EPA, there are many reasons unrelated to the issue of ICCTA preemption why such EPA approval would be unlawful and inappropriate.<sup>3</sup>

However, the EPA has asked for the Board’s views on the question of ICCTA preemption, and the issue is one that the Board can and should easily resolve given the unique circumstances raised by the SCAQMD rules and the District Court’s and Ninth Circuit’s clear judgment that the rules are preempted under ICCTA. The question is not a close call. As those courts have already found, the rules promulgated by SCAQMD represent an extreme and unacceptable intrusion into the regulation of railroads that has been delegated by Congress exclusively to the Board. A Board declaration that the rules at issue here are preempted under ICCTA would not only reinforce the Board’s previously stated views on the scope of ICCTA preemption, it will also avoid any future efforts by local government entities to engage, directly or indirectly through the SIP process, in impermissible regulation of rail operations.

The SCAQMD rules seek directly to regulate rail operations through onerous conditions placed on the operation of locomotives. EPA’s approval of the SIP amendments would not change the District Court’s unqualified conclusion that “the Rules at issue in this case are exactly the type of local regulation Congress intended to preempt by enacting ICCTA to prevent a ‘patchwork’ of such local regulation from interfering with interstate commerce.” *Ass’n of Am. R.R.*, 2007 U.S. Dist. LEXIS 65685, at \*23-24. Local government rules aimed directly at rail

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<sup>2</sup> See Letter from Barbara Baird, Chief Deputy Counsel, South Coast Air Quality Management District to Jared Blumenfeld, Regional Administrator, Region 9, U.S. EPA (Aug. 7, 2013) (Attached to EPA’s Petition).

<sup>3</sup> See, e.g., Letter from AAR, BNSF, and Union Pacific to Jared Blumenfeld, Regional Administrator, Region IX, U.S. EPA (Sept. 12, 2012) (Attached to EPA’s Petition).

operations create such an extreme risk of balkanized regulation that they are preempted under ICCTA under all circumstances – whether or not the rules have been “federalized” through EPA approval of a state SIP. Even if EPA’s approval of the state SIP would require an inquiry into whether the local rules can be harmonized with ICCTA, an inquiry that would not be made without EPA’s inclusion of the local rules in the state SIP, the answer is easy: Local government rules that directly seek to regulate railroads cannot possibly be harmonized with Congress’ grant of exclusive jurisdiction to the Board to regulate railroads. In other words, under either a classic preemption analysis or a harmonization analysis, these rules cannot stand.

It is important to note that this case does not involve rules enacted by EPA under its own CAA authority to implement national environmental regulations. Indeed, the EPA has adopted national rules addressing diesel locomotive emissions, and those rules are very different from the more expansive and intrusive local rules at issue here. Instead, this case involves rules developed by a local government that seeks to impose burdensome regulation directly on railroads operating in a local area. Depending on how a state constructs its CAA implementation regime, local governments may have a role in implementing the CAA. However, the Board’s own case law acknowledges that the role of local governments in enforcing federal environmental statutes does not extend to direct regulation of rail operations, particularly where, as here, such direct regulation would have significant and adverse operational impacts and raise serious safety concerns.

A finding of preemption is particularly compelling in this case since a federal court has already found that the local SCAQMD rules at issue here are not even lawful under California state law. Given the District Court’s finding on this issue, it is difficult to see how the EPA could justify accepting the proposed SIP amendments. But even if EPA disregarded the District

Court's ruling and approved the SIP amendments, EPA's approval would not change the District Court's finding that the rules are unlawful under California law. That finding – which is the law of the case – should be dispositive of the ICCTA preemption question. Given Congress' clear intent to broadly preempt local attempts to regulate railroads, Congress cannot possibly have intended that ICCTA's grant of exclusive authority to the Board to regulate railroads could be trumped by local government rules that a federal court has determined are *unlawful* under the local government's own state law merely because they were passed forward through the SIP approval process.

BNSF believes that the preemption inquiry can be easily resolved here without a fact-intensive inquiry. Even if the SCAQMD rules were lawful under state law, they could not be squared with the goal of ICCTA to avoid patchwork local regulation of rail activities. However, if the Board were to conclude that a more fact-intensive inquiry were appropriate, BNSF would be prepared to present evidence on the multitude of reasons why the Board should conclude that the rules are preempted by ICCTA by virtue of their actual impacts on rail transportation. Much of the evidence that would be relevant to such an inquiry, including evidence of the burdens that would be imposed by the SCAQMD rules on rail operations and the adverse safety impacts, has already been developed in the District Court proceeding. However, that record would need to be updated and expanded. If the Board were to conclude that a fact-bound inquiry into harmonization is necessary, the Board should establish procedures that would permit the creation of an updated record.

The EPA has also asked the Board for expedited handling of its request for a declaratory order, noting that the EPA has a statutory deadline of February 28, 2014, to take action on the proposed SIP amendments. BNSF does not oppose the EPA's request for expedited treatment

because, for reasons explained above, BNSF believes the Board can easily dispose of the EPA's inquiry in light of the District Court's ruling and well established precedent involving ICCTA preemption. For this reason, BNSF encourages the Board to issue a decision promptly.

However, if the Board requires more time to evaluate the question posed by EPA, it should not feel pressured to act because of EPA's statutory deadline. EPA has many reasons to reject the proposed SIP amendment that are unrelated to the ICCTA preemption issue EPA has raised with the Board. If EPA feels compelled to act on the SIP amendments before the Board responds to the Petition, it can reject the proposed SIP amendments on other grounds.

## **II. BACKGROUND**

The EPA's Petition is the latest development in a long history of SCAQMD efforts to impose the locomotive idling rules it now seeks to implement through the SIP process. While some of the relevant historical materials are appended to the EPA Petition, resolution of the question posed by the EPA to the Board fortunately does not require extensive review of the history of dealings between the State of California, the railroads, SCAQMD and the courts or a review of the complex arguments contained in the materials attached to the Petition on issues that are largely unrelated to the question posed by EPA. The Board can respond to the EPA's request based on a few salient background facts.

BNSF adopts the discussion of the regulatory and factual background presented by AAR in its concurrently filed reply and emphasizes the following points that are of particular importance.

### **Railroads' Cooperative Efforts To Mitigate Diesel Locomotive Emissions**

BNSF has a long history of working with the State of California to address air quality concerns relating to emissions from diesel locomotives. In 1998, BNSF, Union Pacific and

CARB executed a MOU titled “Memorandum of Mutual Understandings and Agreements South Coast Locomotive Fleet Average Emissions Program.” In this MOU, the railroads voluntarily agreed to accelerate the introduction of cleaner burning locomotives into Southern California to achieve a 65% reduction of nitrogen oxide emissions by the year 2010 (Attached as Exhibit 1).

Following the 1998 MOU, BNSF and UP in 2005 entered into another statewide voluntary agreement with the State of California titled “[C]ARB/Railroad Statewide Agreement—Particulate Emissions Reduction Program at California Rail Yards.” (Attached as Exhibit 2). Among other things, the railroads agreed to limit non-essential idling of locomotives and to install automatic idling-reduction devices over a three-year period on intrastate locomotives used in California. The railroads also agreed to establish a statewide locomotive visual emission reduction and repair program and to maximize the use of low-sulfur fuel in locomotives. The railroads further agreed to prepare emissions inventories and collect rail-yard specific data for designated rail yards, including several in Southern California, and to cooperate with CARB in its development of health risk assessments for those yards. The railroads agreed to be subject to penalties for failure to meet the requirements.

CARB has concluded that these state-wide agreements have been highly successful in reducing air emissions from diesel locomotives. CARB found that the MOUs “have yielded significant emission reductions and environmental benefits, especially in Southern California.” Letter from Richard Corey, Executive Officer, Air Resources Board to Carl Ice, President and Chief Operating Officer, BNSF and Lance Fritz, Executive Vice President of Operations, Union Pacific (Dec. 4, 2013) (Attached as Exhibit 3). By 2006, according to CARB, railroad emissions accounted for only 3.5% of the nitrogen oxide emissions in Southern California. CARB stated that 96% of intrastate locomotives in California “are now equipped

with idle reduction devices. . . . This is more than twice the rate of installations that have occurred to date in the rest of the country.” CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY, AIR RESOURCES BOARD, UPDATE ON THE IMPLEMENTATION OF THE 2005 ARB/RAILROAD STATEWIDE AGREEMENT 1 (Apr. 11, 2008) (Attached as Exhibit 4). CARB also recognized that under the MOUs, “the railroads consistently met or exceeded each and every obligation they signed on to.” Letter from Richard Corey, Executive Officer, Air Resources Board to Mary Nichols, Chairman, Air Resources Board (Dec. 4, 2013) (Attached as Exhibit 5); Letter from Cynthia Marvin, Chief, Stationary Source Division, Air Resources Board to Michael Stanfill, Director, Environmental Engineering and Program Development, BNSF Railway Company (Sept. 13, 2012) (finding that BNSF fully complied with the 1998 MOU for its operations in 2010) (Attached as Exhibit 6). These MOUs are subject to termination if the SCAQMD rules are implemented.

### **SCAQMD’s Efforts To Undermine The State-Wide Voluntary Measures**

The SCAQMD has not been satisfied with the state-wide efforts being pursued collaboratively by the railroads and CARB. Notwithstanding its lack of authority under state law (or federal law) to regulate diesel locomotives, SCAQMD embarked on an aggressive campaign to impose different and more disruptive regulations on railroads operating in Southern California. In late 2005 and 2006, SCAQMD adopted rules concerning locomotive idling aimed directly at freight rail operations in Southern California, two of which are the subject of EPA’s present request. Rule 3501 requires freight railroads to

- record every “idling event” of more than 30 minutes and provide weekly and annual electronic reports of those “events,” certifying the accuracy of the reports, and maintaining auditable files to be used to confirm the accuracy of the reports; or

- install an idling-control device on each locomotive set to shut down a locomotive after 15 minutes of idling; or
- use locomotives operated with an “alternative technology.”

Rule 3502 limits the amount of time that an operator may idle “unattended” or “trailing”

locomotives:

- The idling requirement provides that “unattended” or “trailing” locomotives (locomotives other than the lead locomotive) shall not idle for over 30 minutes under various scenarios, including that the “unattended” locomotive “is within the railyard.”
- The idling requirement does not apply if the railroad installs an idling-control device on each locomotive intended to shut down a locomotive after 15 minutes.
- The idling requirement does not apply if the railroad submits an “Emissions Equivalency Plan” for each locomotive demonstrating that the locomotive will achieve an equivalent emissions reduction.

Both rules provide for a fine of up to \$75,000 per violation per locomotive per day.

SCAQMD knew full well that its aggressive attempts to regulate rail operations through the diesel locomotive rules were not authorized. As one SCAQMD Board member commented at a hearing, “I’m fully cognizant of the fact that the [District] doesn’t have the authority to regulate railroads. But we’ll keep pecking at you and pecking at you until we get our way.” SCAQMD Board Hearing on Rule 3503, Partial Transcript (October 7, 2005) (Attached as Exhibit 7).

### **The Railroads’ Legal Challenge To The SCAQMD Rules**

BNSF, the AAR, and Union Pacific challenged SCAQMD’s rules in the United States District Court for the Central District of California. Among other arguments, the railroads claimed that SCAQMD’s rules were preempted under ICCTA and violated California state law. The railroads sought permanent injunctive relief.

A full record was created and a bench trial was held on the merits. BNSF showed that the SCAQMD's rules would severely impact BNSF's operations in Southern California. Among other things, BNSF's evidence showed that:

- The rules would cause substantial delays. *See* Direct Trial Testimony Declaration of Chris A. Roberts (Attached as Exhibit 8). Mr. Roberts explained that it would take substantial time to shut down and to restart locomotives, particularly in trains with distributed power. Testing and recharging the air brake systems would contribute to further delays when the lead locomotive is shut down for more than four hours. These delays would directly impact the trains with locomotives that have to be shut down, and the delays on these trains' movements would cascade throughout the system.
- The rules would expose railroad employees to increased safety risks. Employees would be at risk of injury when they manually set hand brakes when the lead locomotive is shut down. There would be a risk of a runaway train if air brake pressure falls below safe levels. Mr. Roberts explained that because of these safety risks, compliance with the rules would violate BNSF's internal operating rules. Mr. Roberts also explained that the rules would conflict with federal regulations and contractual requirements governing working conditions.
- The rules would diminish crew productivity. Mr. Roberts estimated that the rules would meaningfully decrease yard crew time per day simply due to the requirements to record locomotive "idling events." Crew productivity would also decrease while train crews wait for the delayed trains to move. Many crews would exceed their maximum hours of service, further degrading crew productivity and the efficiency of rail operations.
- The rules would effectively reduce rail capacity by creating delays and imposing inefficiencies on rail operations. BNSF's witness Mr. Steve Branscum described the commercial disruptions that would result from the reduced capacity. A prominent rail shipper stated that it would have to move traffic to long-haul trucks. Mr. Branscum noted that removing a single double-stack intermodal train from rail operations would be the equivalent of adding 280 trucks to the congested highways of Southern California. Mr. Branscum's Trial Declaration is attached as Exhibit 9. Mr. H. Randall Welch's Trial Declaration is attached as Exhibit 10.
- BNSF's witness Mr. Mark Stehly explained that if the SCAQMD rules were allowed to go into effect, they would lead to a patchwork of locomotive emissions regulations that would severely impact BNSF's operations nationwide. Mr. Stehly noted that other state and local government entities were considering their own forms of locomotive emissions regulations. Mr. Stehly's Trial Declaration is

attached as Exhibit 11, and a portion of Mr. Stehly's Trial Testimony is attached at Exhibit 12.

### **The District Court Enjoined the SCAQMD Rules**

After a full bench trial on the merits, the District Court struck down the SCAQMD rules. *Ass'n of Am. R.R.*, 2007 U.S. Dist. LEXIS 65685. As discussed further below in the Argument section of this Reply, the District Court concluded that the SCAQMD rules are unlawful under California law, incompatible with the framework for implementing the CAA by local governments in California, and preempted under ICCTA. The District Court granted the railroads' request for a permanent injunction against enforcement of the rules, ordering that 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." *Ass'n of Am. R.R. v. S. Coast Air Quality Mgmt. Dist.*, No. No. CV 06-01416-JFW (PLAx), Doc. No. 193 (C.D. Cal. May 18, 2007) (Attached to EPA's Petition at Enclosure 2 of the September 12, 2012 Letter from AAR, BNSF and Union Pacific to Jared Blumenfeld, Regional Administrator, U.S. EPA). That injunction remains in place.

### **The Ninth Circuit Agreed that SCAQMD's Rules are Preempted Under ICCTA**

On appeal, the Ninth Circuit affirmed the District Court's conclusion that the rules were preempted under ICCTA. Noting that the rules "apply exclusively and directly to railroad activity, requiring the railroads to reduce emissions and to provide, under threat of penalties, specific reports on their emissions and inventory," the Ninth Circuit concluded that the rules impermissibly seek to manage or govern rail transportation and are preempted by ICCTA. *Ass'n of Am. R.R. v. S. Coast Air Quality Mgmt. Dist.*, 622 F.3d 1094, 1098 (9th Cir. 2010). The Ninth Circuit did not address the District Court's conclusion that the rules were unlawful under state

law, finding that the rules would be preempted by ICCTA even if they were lawful. *See id.* at 1096 n.1, 1098. The Ninth Circuit observed in dicta that the preemption inquiry might be different for valid rules that had been incorporated into an EPA-approved SIP, but the court expressed no opinion on how such an inquiry would come out, or what it would consist of, in the case of the SCAQMD rules. In other words, the Ninth Circuit did not hold that inclusion of the rules in a SIP would allow them to be implemented.

### **EPA's Nationwide Locomotive Emissions Regulations**

The CAA reflects Congress' intent that local governments would have a highly circumscribed role in regulating diesel emissions from locomotives. The CAA provides that "No State or any political subdivision thereof shall adopt or attempt to enforce any standard or other requirement relating to the control of emissions" from new locomotives or locomotives considered new. 42 U.S.C. § 7543(e)(1).<sup>4</sup> Moreover, Congress expressly instructed the EPA to "promulgate regulations containing standards applicable to emissions from new locomotives and new engines used in locomotives." 42 U.S.C. § 7547(a)(5).

Shortly after the District Court issued its injunction of the SCAQMD rules, the EPA, pursuant to Congress' authorization in the CAA, adopted its own nationwide regulations regarding diesel emissions from idling locomotives. 73 Fed. Reg. 37096, 37123 (June 30, 2008). EPA's comprehensive, nationwide federal scheme of locomotive idling regulation required that new locomotives and remanufactured locomotives must be equipped with an Automatic Engine Stop/Start System (idling-reduction device) set to shut down the locomotive after 30 minutes of continuous idling. 73 Fed. Reg. at 37123; 40 C.F.R. § 1033.115(g)(1).

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<sup>4</sup> With respect to locomotives that are not considered new, a state may seek a waiver to adopt local regulations if it demonstrates and EPA finds "extraordinary conditions." 42 U.S.C. § 7543(e)(2)(A). No such waiver has been sought here.

SCAQMD's rules go far beyond the EPA regulations and in some areas conflict with the EPA's nationwide regulations. EPA's regulations apply only to new and remanufactured locomotives, while SCAQMD rules apply to all freight locomotives. In fact, federal law only grants EPA authority to regulate new and remanufactured locomotives. In addition, even as to the new and remanufactured locomotives, EPA's regulations require railroads to install idling-control devices designed to shut down after 30 minutes of idling, while the SCAQMD's rules would effectively require railroads to use idling-control devices designed to shut down after 15 minutes of idling. Moreover, EPA's regulations allow railroads to restart or continue idling to maintain air pressure for brakes, to perform maintenance, to comply with federal regulations, or to heat or cool the cab when necessary. The SCAQMD's rules do not permit idling under these circumstances, even though EPA has stated that locomotive idling may be necessary to "maintain critical functions," such as air brake pressure. EPA, *Control of Emissions from Idling Locomotives*, EPA-420-F-08-014 (Mar. 2008, Rev 9/2012) (Attached as Exhibit 13).

#### **FRA Has Raised Safety Concerns About The District's Rules**

FRA recently cautioned EPA that SCAQMD's rules raise safety concerns. *See* Letter from Joseph Szabo, Administrator, Federal Railroad Administration to Jared Blumenfeld, Regional Counsel, Region 9, U.S. EPA (Sept. 27, 2013) (Attached as Exhibit 14). FRA pointed out that the SCAQMD rules could conflict with rules established by FRA on train brake systems. The SCAQMD rules would require unnecessary setting of handbrakes, with important safety implications for employees. In addition, the FRA expressed concern about the impact of the SCAQMD rules on the integrity and operation of the air brake system given the additional time that brakes would be removed from a source of compressed air. FRA also expressed concerns that the SCAQMD rules would create delays, which would add substantial costs to rail

operations. As the agency charged with the regulation of rail safety, FRA's views on the rules are entitled to substantial weight.

### III. ARGUMENT

#### A. **The Rules Are Preempted By ICCTA Because Direct Regulation Of Rail Operations By Local Government Entities Is Fundamentally Repugnant To The Scheme Of Uniform Rail Regulation Established By Congress In ICCTA.**

The District Court found without qualification that the type of regulation that the SCAQMD sought to impose on railroads was incompatible with Congress' grant of exclusive jurisdiction over rail operations to the Board. The Court expressly found that "the Rules at issue in this case are exactly the type of local regulation Congress intended to preempt by enacting ICCTA to prevent a 'patchwork' of such local regulation from interfering with interstate commerce." *Ass'n of Am. R.R.*, 2007 U.S. Dist. LEXIS 65685, at \*23-24. The Court found that "the District is attempting to directly regulate rail operations." *Id.* at \*20. Local governments simply do not have that authority under ICCTA: "[T]he STB and courts around the country have consistently held that the enforcement of any law which would result in the imposition of regulations on the way that a railroad company operates its trains is preempted by ICCTA." *Id.* at \*20-21.

Actions by local governments that seek directly to regulate rail operations are fundamentally different from other types of local regulations that might affect rail operations. As the Board has explained, "for those categories of actions [i.e., attempts to directly regulate railroad operations], the preemption analysis is addressed not to the reasonableness of the particular state or local action, but rather to the act of regulation itself." *CSX Transportation, Inc.—Petition for Declaratory Order*, STB Fin. Docket No. 34662, slip op. at 3-4 (STB served May 3, 2005). Efforts by state and local governments to impose direct regulations on railroad

operations “are a *per se* unreasonable interference with interstate commerce.” *Id.* Such regulations are *per se* preempted by ICCTA because they “would directly conflict with the Board’s regulatory authority over rail operations.” *Id.*

There are numerous cases finding that efforts by local governments to regulate railroad operations directly are automatically preempted under ICCTA. *See e.g., Friberg v. Kansas City S. Ry. Co.*, 267 F.3d 439, 443-44 (5th Cir. 2001) (state statute limiting the time a train could block a street or rail crossing expressly preempted by ICCTA); *Pace v. CSX Transp., Inc.*, 613 F.3d 1066, 1069 (11th Cir. 2010) (state law claims based on noise and emissions from trains expressly preempted by ICCTA). The District Court found that the SCAQMD rules fall into this category of *per se* preempted regulation. *See Ass’n of Am. R.R.*, 2007 U.S. Dist. LEXIS 65685 at \*21-22 (“Because the Rules directly regulate rail operations such as idling, they are preempted without regard to whether they are undue or unreasonable.”).

The District Court evaluated the SCAQMD rules before they had been included in a proposed SIP amendment for approval by the EPA, concluding that the rules are not a valid exercise of police powers by the local government under ICCTA. EPA’s approval of the SIP amendments would not change the District Court’s finding that “the Rules at issue in this case are exactly the type of local regulation Congress intended to preempt.” *Ass’n of Am. R.R.*, 2007 U.S. Dist. LEXIS 65685, at \*23-24. The rules are not federal rules promulgated by the EPA itself. Regardless of their status under federal law in an EPA-approved SIP, the SCAQMD rules at issue here would continue to be “the type of local regulation Congress intended to preempt.”

EPA’s Petition implicitly raises the question whether this finding by the District Court needs to be revisited since (a) EPA-approved SIPs have the force of federal law, and (b) a different preemption standard applies to federal laws that conflict with ICCTA, namely that an

inquiry must be made into whether the federal law can be harmonized with ICCTA. Petition at 2, 4. But even if one were to accept that, as a technical matter, EPA's approval of the SIP amendments would require further inquiry into whether direct regulation of rail operations by SCAQMD could be "harmonized" with ICCTA, the answer would be same. Because the local SCAQMD rules seek to directly regulate railroad operations, and would in fact significantly disrupt such operations, the rules are fundamentally repugnant to Congress' grant of exclusive jurisdiction to the Board to regulate railroads, and they cannot be harmonized with ICCTA.

Whether they are included in a SIP or not, the rules are essentially local rules in character – they seek directly to tell railroads how to operate in a local area.<sup>5</sup> Congress sought to preclude direct regulation of rail operations through localized regulation due to the risk that such regulation could lead to the "balkanization and subversion of the Federal scheme of minimal regulation of rail operations." H.R. Rep. No. 104-311, at 96, as reprinted in 1995 U.S.C.C.A.N. at 808; *see also Tex. Cent. Bus. Lines Corp. v. City of Midlothian*, 669 F.3d 525, 532 (5th Cir. 2012) ("[The] purpose [of federal rail regulation] is to promote 'uniformity in such operations and expediency in commerce.' Those enactments that 'have the effect of managing or governing,' and not merely incidentally affecting, rail transportation are expressly or categorically preempted under the ICCTA.") (citations omitted); *Providence & Worcester R.R. Co.—Petition for Declaratory Order—Gardner Branch*, STB Fin. Docket No. 35393, slip op. at 4 (STB served May 26, 2011) ("The purpose of the federal preemption is to prevent a patchwork of state and local law and regulation from unreasonably interfering with interstate commerce.");

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<sup>5</sup> The CARB's legal analysis of ICCTA preemption recognized the special concerns that arise when "state or local actions hav[e] the effect of regulating train operations." CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY, AIR RESOURCES BOARD, JUNE 2005 ARB/RAILROAD STATEWIDE AGREEMENT ON PARTICULATE EMISSIONS FROM RAIL YARDS, PUBLIC COMMENTS RAISING LEGAL ISSUES AND AGENCY RESPONSES 12 (Oct. 24, 2005) (Attached as Exhibit 15).

*City of Cayce v. Norfolk S. Ry. Co.*, 706 S.E.2d 6, 11 (S.C. 2011) (ICCTA sought “to prevent the development of a patchwork of local and state regulations affecting the railroad industry, as the enactment of differing standards and requirements would inevitably be detrimental to the orderly functioning of the industry as a whole.”).<sup>6</sup>

Congress’ concern about balkanized regulation of railroads has been particularly strong in the area of locomotive regulation. As the Supreme Court recently stated, Congress has “manifested the intention to occupy the entire field of regulating locomotive equipment.” *Kurns v. R.R. Friction Prod. Corp.*, 132 S. Ct. 1261, 1267-1268 (2012).

EPA’s approval of the rules as part of the California SIP would not avoid these concerns about balkanized regulation of locomotives, or more generally, of railroad operations. To the contrary, EPA’s approval of the rules at issue here would only encourage more local government entities to try out their own versions of rail regulation and regulation of locomotive emissions. At the trial before the District Court, BNSF pointed out that other state and local government entities were considering their own forms of locomotive emissions regulations. *See* Testimony of Mark Stehly, Excerpt from Transcript of Court Trial—Day 1, at 35-36, No. 06-1416-JFW (C.D. Cal. Nov. 28, 2006) (Attached as Exhibit 12). If EPA were to allow the SCAQMD to impose direct regulations on railroad operations here, it would open the floodgates to more attempts by local governments to regulate rail operations through the SIP process. Indeed, California itself has 34 other air quality districts in addition to the SCAQMD. What if each of them were to propose for inclusion in the SIP some different set of rail idling rules? This is

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<sup>6</sup> The 1998 MOU between BNSF, Union Pacific and CARB expressly acknowledged that “[a] patchwork of different state and local programs would be an inefficient, costly and time-consuming disruption of interstate commerce.” Exhibit 1 at 4 (citing EPA, *Proposed National Locomotive Emission Standards*, 62 Fed. Reg. 6366, 6368 (Feb. 11, 1997)).

precisely the result that Congress sought to avoid through the broad preemption provision in 49 U.S.C. § 10501(b).

In the most recent federal court decision to address the question of ICCTA preemption in the context of federal environmental laws, the court distinguished between rules directly seeking to regulate railroads and rules of general application that nevertheless have an impact on rail operations. *See United States v. St. Mary's Ry. W., LLC*, No. CV 513-28, 2013 U.S. Dist. LEXIS 181015 (S.D. Ga. Dec. 4, 2013). There, the court found that EPA's enforcement of certain Clean Water Act provisions was not preempted by ICCTA. In that case, EPA was acting independently of localized considerations so the risk of balkanized regulation of railroads by local governments was not a concern. However, the court still found it important to distinguish between overt attempts to regulate railroads and rules that incidentally affect rail operations because the direct regulation of railroads by any entity other than the Board (or FRA on matters of rail safety) could undermine the uniformity of rail regulation under ICCTA. The court found that the EPA's enforcement actions were not preempted precisely because EPA's enforcement actions were "in no way a direct regulation on Defendants' activities." *Id.* at \*11. Unlike the rules at issue here, EPA's enforcement actions did "not discriminate against those operating in the rail transportation industry, but instead applie[d] generally to 'any person.'" *Id.* at \*12.

Whether regulation by a local government aimed directly at railroad operations is preempted under a *per se* rule or because such regulation cannot be harmonized with Congress' grant of exclusive regulatory authority to the Board is beside the point. The bottom line is that local regulation of the type at issue in the SCAQMD rules is repugnant to the scheme of uniform rail regulation that is at the heart of ICCTA's preemption provision. Even if the local regulation had been a valid exercise of authority under a federal environmental statute (which is not the

case here as discussed below), it would still be repugnant to the scheme of uniform regulation underlying ICCTA. The Board recently explained that action under federal environmental statutes can generally be harmonized with ICCTA “unless the federal environmental laws are being used to regulate rail operations or being applied in a discriminatory manner against railroads.” *Grafton & Upton R.R. Co.—Petition for Declaratory Order*, STB Fin. Docket No. 35779, slip op. at 6 (STB served Jan. 27, 2014) (citing *Ass’n. of Am. R.R. v. S. Coast Air Quality Mgmt. Dist.*, 622 F.3d 1094, 1098 (9th Cir. 2010)). The SCAQMD rules fall directly into this category of localized rules that cannot be harmonized with Congress’ grant of exclusive jurisdiction to the Board to regulate railroads.

The risk of balkanized regulation of railroads is so great when local governments seek to directly regulate rail operations that such regulation cannot possibly coexist with the exclusive jurisdiction to regulate rail operations that Congress gave to the Board in ICCTA. There is no need for a fact-intensive inquiry to reach the conclusion that the SCAQMD rules would be preempted under ICCTA whether or not the rules are incorporated into an EPA-approved SIP.

**B. Local Government Rules Regulating Rail Operations That Are Unlawful Under State Law Cannot Possibly Usurp ICCTA’s Exclusive Authority To Regulate Railroads.**

As discussed above, the SCAQMD rules would be preempted by ICCTA even if they were otherwise a lawful exercise of authority by a local government under a federal environmental statute. But this case presents the unique circumstance that the rules at issue have been found by a federal court not to have been lawful in the first place. That finding alone would support a conclusion that the SCAQMD rules are preempted under ICCTA.

The starting point – and it should also be the ending point – of an ICCTA preemption analysis should be the legally binding conclusion of the District Court that the rules are unlawful under California law. The District Court expressly found that “in Section 40702 [of the CHSC],

the California legislature explicitly restricted the District from regulating locomotives: ‘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.’” *Ass’n of Am. R.R.*, 2007 U.S. Dist. LEXIS 65685, at \*17. The SCAQMD rules seek to regulate locomotive emissions, but “the Court finds that the District does not have the authority under the CHSC to regulate air contaminants from locomotives.” *Id.* at \*18.

The District Court went further. Not only are the rules unlawful under California law, they are also incompatible with the California framework for implementing the CAA through local government actions. As the Court explained, “‘a local legislature’s power to regulate in this area is subject not only to the minimum standards of the CAA, but also to limitations placed upon that power by the state.’” *Ass’n of Am. R.R.*, 2007 U.S. Dist. LEXIS 65685, at \*17-18 (quoting *Southeastern Oakland County Resource Recovery Auth. v. City of Madison Heights*, 5 F.3d 166, 169 (6th Cir. 1993)). Since the SCAQMD rules were not lawful under state law, the SCAQMD “was not acting under the CAA when it adopted the Rules.” *Id.* at \*18. Indeed, the District Court noted that “it appears that the decision to invoke the CAA was ‘pretextual’.” *Id.* at \*18 n.6.<sup>7</sup>

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<sup>7</sup> This is not the first time that a local government has sought to regulate railroads under the pretext of federal environmental law authority. *See Joint Petition for Declaratory Order—Boston & Maine Corp. & Town of Ayer, Ma.*, STB Fin. Docket No. 33971, slip op. at 10 (STB served May 1, 2001) (“[I]t appears that Ayer is simply using [federal environmental laws] as a pretext to do what Congress expressly precluded: interfere with interstate commerce by imposing a local permitting or environmental process as a prerequisite to the railroad’s ability to conduct its operations.”). The Board has struck down such pretextual efforts to regulate railroads as preempted under ICCTA.

In considering the EPA's Petition, the Board's preemption analysis must therefore start with the premise – which is the law of the case – that the SCAQMD rules at issue are unlawful under state law and that they were not adopted under the framework developed by California to implement the CAA. The Board need not get into potentially difficult questions of state law here. The necessary legal analysis has already been done by a federal court and, indeed, it should be dispositive. When the Court was informed that SCAQMD had made a formal representation to CARB in seeking inclusion of the rules in the SIP that the rules were authorized under state law, the Court responded that SCAQMD had “blatantly ignored the Court’s determination that the District lacked authority to adopt the Rules” and stated that it was “confident that this misrepresentation will be raised . . . in any further proceedings relating to this matter.” *Ass’n of Am. R.R. v. S. Coast Air Quality Mgmt. Dist.*, No. CV 06-01416-JFW (PLAx), Doc. No. 269 at 4 n.2 (C.D. Cal. Feb. 24, 2012) (Attached to EPA’s Petition at Tab 5 of the October 19, 2012 Letter from Barbara Baird, District Counsel, SQAMD to Jared Blumenfeld, Regional Administrator, U.S. EPA).

Given the District Court’s clear rulings on the invalidity of the proposed rules, it is difficult to see how the EPA could possibly approve any SIP amendments that include the SCAQMD rules. Indeed, the CAA anticipates the problem presented by efforts to federalize through SIP inclusion local rules that are invalid as a matter of state law. CAA Section 110(a)(2)(E) requires that the agency implementing the SIP “have adequate authority under State . . . law to carry out such implementation” and not be “prohibited by any provision of Federal or State law from carrying out [any portion of the SIP].”<sup>8</sup> 42 U.S.C. §7410(a)(2)(E). Without even

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<sup>8</sup> EPA’s own regulations provide that the submission to the EPA “must show that the legal authorities . . . are available to the State at the time of the submission of the plan.” 40 C.F.R. § 51.231(b).

considering the District Court’s permanent injunction prohibiting their implementation, the District’s rules fail under both prongs of this provision.

But the Board need not base its ruling in this matter on the CAA. Rather, the EPA has asked the Board whether EPA’s approval of the rules (putting aside whether it *can* approve the rules) would make any difference in assessing ICCTA preemption.<sup>9</sup> The District Court’s finding that the rules were unlawful under state law should easily resolve that question. Attempts by a local government to regulate rail operations that are not even lawful under the local government’s own state law cannot possibly trump the Board’s exclusive authority to regulate railroads.

The courts and the Board have consistently recognized that Congress intended to give ICCTA broad preemptive scope, particularly as to actions supposedly taken under local law. Indeed, “[i]t is difficult to imagine a broader statement of Congress’s intent to preempt state regulatory authority over railroad operations.” *City of Auburn v. U.S. Government*, 154 F.3d 1025, 1030 (9th Cir. 1998) (quoting *CSX Transp., Inc. v. Georgia Public Service Comm’n*, 944 F. Supp. 1573, 1581 (N.D. Ga. 1996)); *Union Pac. R.R. Co. v. Chicago Transit Auth.*, 647 F.3d 675, 678 (7th Cir. 2011) (“Congress’s intent in the Act to preempt state and local regulation of railroad transportation has been recognized as broad and sweeping.”); *Friberg v. Kansas City S. Ry. Co.*, 267 F.3d 439, 443 (5th Cir. 2001) (The preemption provision of ICCTA “is so certain and unambiguous as to preclude any need to look beyond that language for congressional intent.”); *Guckenberg v. Wisc. Cent. Ltd.*, 178 F. Supp. 2d 954, 958 (E.D. Wis. 2001) (“Indeed,

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<sup>9</sup> By asking the Board to address the preemption issue before any action has been taken on the proposed SIP revisions, the EPA’s Petition allows the Board to address the preemption question at an early stage and based on an objective analysis, without concern that a finding of preemption might disrupt any existing environmental program or cause conflict with a sister federal agency.

the language is ‘clear and broad,’ and it is apparent that the ‘ICCTA has preempted all state efforts to regulate rail transportation.’”); *CSX Transp., Inc.—Petition for Declaratory Order*, STB Fin. Docket No. 34662, slip op. at 7 (STB served Mar. 14, 2005) (“Every court that has examined the statutory language has concluded that the preemptive effect of section 10501(b) is broad and sweeping, and that it blocks actions by states or localities that would impinge on the Board’s jurisdiction or a railroad’s ability to conduct its rail operations.”).<sup>10</sup>

Congress’ intent to narrowly circumscribe localized actions that interfere with rail operations could not be clearer. Even if EPA’s approval of the rules (assuming the approval was valid) would imbue the rules with federal status under the CAA,<sup>11</sup> the rules would be the same ones that a federal court has found were unlawfully promulgated in the first instance. The SCAQMD rules are a creature of state law and would remain as such even if “federalized” through inclusion in the SIP. As one court explained, “[t]he federal Clean Air Act merely provides the authority for the state to enact the SIP. The SIP retains its character as state law. As such, claims based on the scope and application of the SIP are essentially ones of state law,

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<sup>10</sup> In its 2005 legal analysis, CARB noted that “[t]he decisions of the Fifth and Ninth and Eleventh Circuits, as well as STB, clearly reflect that Congress intended ICCTA preemption to be broadly construed.” CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY, AIR RESOURCES BOARD, JUNE 2005 ARB/RAILROAD STATEWIDE AGREEMENT ON PARTICULATE EMISSIONS FROM RAIL YARDS, PUBLIC COMMENTS RAISING LEGAL ISSUES AND AGENCY RESPONSES 14 (Oct. 24, 2005) (Attached as Exhibit 15). The CARB’s legal analysis concluded that there are “serious questions as to whether [an idling-reduction regulation] would be preempted by the ICCTA or other federal laws.” *Id.* at 9.

<sup>11</sup> The Ninth Circuit noted that the District Court had found that the SCAQMD rules were unlawfully promulgated, but it found that the rules were invalid under ICCTA even if they had been lawful under state law. *See Ass’n of Am. R.R. v. S. Coast Air Quality Mgmt. Dist.*, 622 F.3d 1094, 1096 n.1, 1098 (9th Cir. 2010). The Ninth Circuit did not make any finding on whether rules that were unlawful under state law could become valid federal law under the CAA through EPA approval or whether EPA’s approval of the rules would override the concerns leading the District Court to find that the rules were preempted under ICCTA.

and do not arise out of federal law.” *Riverside Labs., Inc. v. Illinois EPA*, 1987 WL 7836, at \*2 (N.D. Ill. 1987).

The rules at issue here are not rules that the EPA has independently promulgated under its authority under the CAA. Rather, they are rules purported to be developed under state law for inclusion in a state SIP that in material respects “retains its character as state law.” If there is any conflict to be resolved for purposes of an ICCTA preemption analysis, it would be a conflict between (a) Congress’ grant of exclusive authority to the Board to regulate railroads and (b) a local government’s attempt to regulate railroads under state law as part of a state SIP. Such a conflict can be easily resolved in favor of ICCTA preemption where the local action is not even valid under state law. Unlawful action under state law should be given no weight in resolving such a conflict. As the Board has recognized, there must be a *valid* attempt to regulate railroads to avoid ICCTA preemption. See *Joint Petition for Declaratory Order—Boston & Maine Corp. & Town of Ayer, Ma.*, STB Fin. Docket No. 33971, slip op. at 10 n. 28 (STB served May 1, 2001) (“Section 10501(b) need not be read to preempt *valid regulation* under the CWA and the SDWA where regulation under these statutes, fairly enforced, does not unreasonably interfere with railroad operations”) (emphasis added).<sup>12</sup>

In light of Congress’ clear intent to broadly preempt local government interference with the Board’s regulation of railroads, it is inconceivable that Congress intended to allow local government actions that are *not even lawful* under state law to interfere with the Board’s exclusive jurisdiction, whether or not as a technical matter those unlawful actions are “federalized” by EPA’s approval of a state’s SIP. The Board does not have to put aside its

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<sup>12</sup> Thus, as reflected in the Board’s own precedent, the possibility of avoiding ICCTA preemption would have to begin with a regulation that, apart from the question of preemption, is legally valid and relates in some way to railroad operations. Here, the argument for avoiding preemption fails at step 1 of the analysis.

common sense in addressing the preemption issue here. This is a unique case where the local government rules at issue were unlawfully promulgated under state law, as a federal court has already found. When Congress said without qualification that ICCTA preempts state and federal law attempts to regulate railroads, it certainly did not intend to carve out an exception to this broad preemption for *unlawful* actions under state law.

**C. If The Board Concludes That A Fact-Based Preemption Inquiry Is Needed, The Board Should Establish Procedures That Will Permit Creation Of A Full Record.**

For the reasons explained above, a fact-intensive preemption inquiry is not necessary in this case. Even if EPA's approval of the SIP amendments gave the rules at issue here the effect of federal law, it would not change the conclusion that the rules are preempted under ICCTA. Regardless of their status under federal law, the rules were unlawfully promulgated in the first instance and would remain localized regulations seeking to impose direct controls on rail operations. No extensive fact analysis is needed to find that local government rules of this nature are preempted.

Under other circumstances, the Board has said that a conflict between ICCTA and a valid exercise of federal authority under a federal environmental statute may need to be resolved through a fact-intensive preemption inquiry. *See Joint Petition for Declaratory Order—Boston & Maine Corp. & Town of Ayer, Ma.*, STB Fin. Docket No. 33971, slip op. at 3-4 (STB served Oct. 5, 2001) (stating that harmonization “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.”) (“*Town of Ayer*”).

The type of inquiry contemplated in *Town of Ayer* is unnecessary here. But if the Board nonetheless believes that a fact-based inquiry is warranted in this case, BNSF will show that such

an inquiry would result in the same conclusion that the SCAQMD rules, whether or not included in a federally approved SIP, are repugnant to the Board's regulation of railroads under ICCTA. Among other things, BNSF would show that (1) the rules would undermine environmental objectives by conflicting with other existing approaches to achieving air quality goals; (2) the rules violate Congress' desire for uniform regulation of rail locomotives; (3) the rules would severely burden and impair rail transportation, while also posing serious safety concerns; and (4) allowing the rules to move forward would create an unacceptable risk of additional regulation by other state and local entities that could severely impair efficient rail transportation.

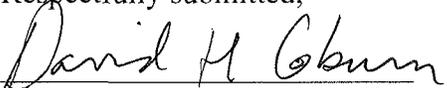
Much of the record that would be necessary to show why the SCAQMD rules could not be harmonized with ICCTA under a fact-based balancing test has already been created in the District Court proceeding. However, BNSF would update and expand the record if the Board were to conduct a fact-based harmonization inquiry. If the Board decides to engage in such an inquiry, it should initiate a proceeding that will allow the parties to fully develop the factual record.

#### **IV. CONCLUSION**

For the reasons set out above, the Board should declare without further factual inquiry that the rules at issue in the Petition are preempted under the ICCTA, 49 U.S.C. §10501(b). If the Board believes that a more detailed investigation needs to be conducted, the Board should initiate a proceeding that will allow for the development of an adequate record.

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February 14, 2014

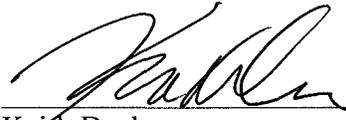
**CERTIFICATE OF SERVICE**

I hereby certify that on this 14th day of February 2014, I caused a copy of the foregoing to be served by e-mail upon all parties of record in this case as follows:

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Keith Decker

**BNSF Railway Company’s Reply to United States Environmental Protection Agency’s  
Petition for Declaratory Order**

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# EXHIBIT 1

MEMORANDUM  
OF  
MUTUAL UNDERSTANDINGS AND AGREEMENTS  
South Coast Locomotive Fleet Average Emissions Program

July 2, 1998

DEPOSITION EXHIBIT  
3-31-06  
Janice Schutzman  
CSR #9509 RMR

MEMORANDUM  
OF  
MUTUAL UNDERSTANDINGS AND AGREEMENTS

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MEMORANDUM  
OF  
MUTUAL UNDERSTANDINGS AND AGREEMENTS

This MEMORANDUM OF MUTUAL UNDERSTANDINGS AND AGREEMENTS dated as of July 2, 1998 ("Memorandum"), is entered into between and among the following (collectively, the "parties"):

- California Air Resources Board ("ARB"), and
- The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company, which are the Class I freight Railroads operating within the boundaries of the South Coast Nonattainment Area (individually, a "Participating Railroad", and together, the "Participating Railroads").

In order to achieve the emissions reductions contemplated herein, the parties have voluntarily arrived at the following mutual understandings and agreements:

- I. MUTUAL UNDERSTANDINGS AND AGREEMENTS. MUTUAL UNDERSTANDINGS AND AGREEMENTS.
- A. Locomotive Emissions Program Statement of Principles. Locomotive Emissions Program Statement of Principles.

The parties have entered into this Memorandum in recognition of the Statement of Principles - South Coast Locomotives Program ("Statement of Principles") agreed to by the U.S. Environmental Protection Agency ("EPA"), ARB, and the Participating Railroads, and dated as of May 14, 1997.

- B. National Emissions Standards for Locomotives. National Emissions Standards for Locomotives.

Section 213 of the Federal Clean Air Act directs EPA to adopt emissions standards applicable to new locomotives and new engines used in locomotives. EPA proposed regulations

establishing such emission standards on February 11, 1997 (62 Fed.Reg. 6366) and promulgated the final regulation on April 16, 1998 (63 Fed. Reg. 18978) (the "Final EPA National Locomotive Rule"). EPA adopted national emission standards consisting of several tiers, applicable to remanufactured and new locomotives as specified in the Final EPA National Locomotive Rule. EPA promulgated each of these emission standards to "achieve the greatest degree of emission reduction achievable through the application of technology which the Administrator determines will be available for the locomotives or engines to which such standards apply, giving appropriate consideration to the cost of applying such technology within the period of time available to manufacturers and to noise, energy, and safety factors associated with the application of such technology." (Clean Air Act § 213(a)(5)).

C. Participating Railroads' Affirmative Proposal for the South Coast Nonattainment Area.  
Participating Railroads' Affirmative Proposal for the South Coast Nonattainment Area.

In 1993, the Participating Railroads proposed to EPA, ARB and others the establishment of a locomotive fleet average emissions program in the South Coast Nonattainment Area tied to promulgation of the Final EPA National Locomotive Rule and intended to accelerate introduction into the South Coast Nonattainment Area of newer, lower emitting locomotives. The Participating Railroads, EPA and ARB have since discussed improvements and refinements of the fleet average program, resulting in the mutual understandings, agreements and covenants herein. Measure M14 of the 1994 California State Implementation Plan recognizes the uniqueness of the Participating Railroads' fleet average proposal: "In essence, this fleet average requirement represents the most aggressive scrappage and replacement program of any transportation source . . ."

D. Projected Emission Reductions from 1994 California State Implementation Plan Measure M14.  
Projected Emission Reductions from 1994 California State Implementation Plan Measure M14.

1. California developed and adopted the 1994 California State Implementation Plan ("1994 SIP") to attain the federal ozone air quality standard in the South Coast Nonattainment Area and certain other areas of California. EPA approved the 1994 SIP on September 26, 1996.

2. Measure M14 of the 1994 SIP anticipates that locomotive fleets operating in the South Coast Nonattainment Area in 2010 and later will emit on average no more than the

5.5 grams per brake horsepower-hour ("g/bhp-hr") Tier 2 (2005 and later) new locomotive oxides of nitrogen ("NO<sub>x</sub>") emission standard included in the Final EPA National Locomotive Rule. Measure M14 further states that this fleet average emission level will achieve about a two-thirds reduction in locomotive NO<sub>x</sub> emissions from the 1994 SIP's projection of the 2010 emissions level for locomotives operating in the South Coast Nonattainment Area. As indicated in the Statement of Principles, the Parties fully expect that the locomotive fleet average emissions program specified herein, when fully implemented, will achieve the emissions reductions contemplated by M14 in 2010, beyond the reductions expected to result through implementation of EPA's national emissions standards for new locomotives and new engines used in locomotives.

E. SIP Credit for Emissions Reductions E. SIP Credit for Emissions Reductions

Measure M14 was included in EPA's September 26, 1996 approval of the 1994 SIP (62 Fed.Reg. 1149 (January 8, 1997)). As stated in the Statement of Principles, EPA intends to commit to adopt regulations as necessary that would assure that the emissions reductions called for in this Memorandum are achieved from the railroads and/or, if necessary, from other national transportation sources. EPA intends to promulgate such a commitment and establish appropriate SIP credits through notice and comment rulemaking at the conclusion of the Public Consultative Process established in conjunction with approval of the South Coast attainment demonstration (see 40 C.F.R. § 52.238). In that rulemaking, EPA intends to propose adoption of the backstop commitment provision attached to the Statement of Principles.

F. Implementation Impacts on Participating Railroads F. Implementation Impacts on Participating Railroads

The parties understand and acknowledge that implementation of the Locomotive Fleet Average Emissions Program in the South Coast Nonattainment Area will have substantial capital cost and operational impacts on the Participating Railroads. These costs and impacts result from the Participating Railroads' accelerated introduction into the South Coast Nonattainment Area of lower emitting locomotives, and are in addition to the impacts that will result from implementation of the Final EPA National Locomotive Rule. These impacts include: costs of purchasing additional reserve power, purchasing and installing necessary metering and monitoring equipment, and constructing, maintaining, and operating power changeout facilities; train delay due to power changeouts; and reductions in operating flexibility due to the need

concentrate lower-emitting locomotives in the South Coast Nonattainment Area.

G. Relationship with EPA's National Locomotive Emissions Standards.  
Relationship with EPA's National Locomotive Emissions Standards.

Under sections 209 and 213 of the Federal Clean Air Act, EPA has the exclusive authority to "promulgate regulations containing standards applicable to emissions from new locomotives and new engines used in locomotives." States and political subdivisions are prohibited from adopting or attempting to enforce "any standard or other requirement relating to the control of emissions from . . . new locomotives or new engines used in locomotives." In the Final EPA National Locomotive Rule promulgated under sections 209 and 213, EPA addressed the issue of the scope of preemption under section 209, and specified that a prohibited "other requirement" includes mandatory fleet average standards. In this Memorandum, the parties voluntarily consent to their mutual participation herein solely for the South Coast Nonattainment Area and solely for the purposes set forth herein, and further agree that the state has the authority to enter into this Memorandum. Under California law, ARB is the state agency with the appropriate jurisdiction to participate in this Memorandum.

H. Unique Features of Railroads. Unique Features of Railroads.

1. Railroads operate national locomotive fleets that travel between states daily, moving more than forty percent of the total intercity revenue ton-miles of freight in the United States. The interconnected nature of the rail network and the ability of locomotives to travel freely throughout the country allow for efficient deployment of locomotives to meet customer needs. Segmentation of the national locomotive fleets into multiple geographic areas would be very burdensome for the railroads because of the very high capital costs of the additional locomotives needed to establish area-specific locomotive fleets, creation of inefficient operations, and delay of time-sensitive customer shipments. A patchwork of different state and local programs would be an inefficient, costly and time-consuming disruption of interstate commerce. See EPA, Proposed National Locomotive Emission Standards, 62 Fed. Reg. 6366, 6368 (February 11, 1997).

2. Because of the expense of purchasing new locomotives and the resulting economic necessity to keep them operating for as long as possible, railroads spend considerable time and money to maintain their locomotives in equivalent to new condition for at least 30 years.

3. Railroads are an environmentally efficient way to move goods. See, for example, the discussion at 62 Fed. Reg. 6368. Railroads continue to improve their efficiency and reduce emissions per ton-mile of freight moved.

4. Price is usually the significant determinant in a shipper's choice of modes or routes, with the result that railroad traffic levels and patterns are very sensitive to increases in costs. Overly stringent regulation can severely impact railroad traffic and divert international trade away from California ports.

I. Unique Features of Locomotives. I. Unique Features of Locomotives.

1. Only two companies manufacture most of the locomotives used in the United States. Only about 500 new locomotives are manufactured for use in the United States per year. This means that railroads have a limited ability to purchase new locomotives in any particular year. In addition, the price of locomotives is high (upwards of \$2.5 million each in 1997) because the manufacturers' costs must be spread over such a small production level.

2. Locomotives continue in active service for 30 to 40 years. Given proper maintenance, their NO<sub>x</sub> emissions rates do not significantly deteriorate over time. Most locomotives are remanufactured periodically, allowing them to remain in equivalent to new condition for their entire lives. In contrast to the usual 30-40 year fleet turnover rate as noted in Measure M14, the locomotive fleet average program for the South Coast Nonattainment Area would, in effect, result in 100 percent scrappage/replacement with the lower-emitting locomotives over 5 years from 2005-2009.

3. Technologies from other mobile sources that have been successfully applied to reduce NO<sub>x</sub> emissions from locomotives include retarded injection timing, increased charge air cooling and increased injection pressure. However, locomotive engines cannot readily use several key cooling mechanisms (e.g., ram air and air-to-air aftercooling) that can be used on other engines to reduce NO<sub>x</sub> emissions. Other potential NO<sub>x</sub> emission reduction techniques also cannot be used on locomotives due to very high vibration levels, the need for all locomotive components to withstand shock loading of up to five times the force of gravity, locomotive size and weight restrictions, and air flow characteristics affecting locomotive operations in tunnels.

J. Unique Features of the South Coast Nonattainment Area. Unique Features of the South Coast Nonattainment Area

1. The South Coast Nonattainment Area has, and under any conceivable future circumstances will continue to have, unique air quality problems which require unique, exceptional solutions. Despite the great strides made in California and the South Coast to clean up the air by controlling emissions from virtually all sources of air pollution over the past several decades, the South Coast area continues to have the worst ozone problem in the country and is the only region classified as an extreme nonattainment area. From 1990 to 1992, the average number of exceedance days in each year was 134.3. The South Coast's unique air quality problems are the result of massive emissions generated within the region, exacerbated by especially adverse meteorology and topography. "Southern California . . . violates the [federal ozone] standard on almost one out of every three days—25 times more frequently than the next most polluted urban areas." EPA, Proposed Approval of the California SIP, 61 Fed.Reg. 10920, 10922 (March 18, 1996).

2. The movement of goods through the South Coast Nonattainment Area is essential to the economic vitality of the area and of the nation, and the rail transportation network in the South Coast Nonattainment Area is an essential part of the regional, national and global transportation systems. This network already provides substantial environmental and economic benefits to the region. These benefits can increase over the long term. The parties agree that the use of rail transportation for goods movement in the South Coast Nonattainment Area is consistent with the goal of maintaining economic vitality in an environmentally beneficial manner.

II. GLOSSARY OF TERMS USED. GLOSSARY OF TERMS USED.

"Adjustment" means a downward adjustment to either a locomotive's EL<sub>i</sub> or a Participating Railroad's FA due to quantifiable and verifiable emissions reduction measures undertaken by a railroad that are not accounted for in the CL or FA. Adjustments shall be made pursuant to paragraph III.C.3 or paragraph III.D.1, as applicable.

"CL" is a locomotive's certified NO<sub>x</sub> emission rate in g/bhp-hr, as determined pursuant to 40-C.F.R. Part 92 for the line haul duty cycle.

"Correction" means a downward mathematical change to a Participating Railroad's FA for 2010 and later years, to reflect differences between the atmospheric conditions specified in EPA's test procedure for establishing certified emission levels for locomotives pursuant to the Final EPA National Locomotive Rule and the atmospheric conditions in the South Coast Nonattainment Area, as specified in paragraph III.D.2.

"EL<sub>i</sub>" is the NO<sub>x</sub> emission rate in g/bhp-hr for an individual locomotive, as calculated and adjusted pursuant to subsection III.C.

"Exclusive Use" or the phrase "exclusive use of locomotives with CLs at or below the Fleet Average Target" means the use of locomotives with CLs at or below the Fleet Average Target in the South Coast Nonattainment Area by a Participating Railroad during a year such that either of the following is true: (1) 100% of the locomotives used have CLs at or below the Fleet Average Target; or (2) no less than 99.9% of the Locomotive Days of Operation are generated by locomotives with CLs at or below the Fleet Average Target.

"FA" means a Participating Railroad's fleet average NO<sub>x</sub> emission rate, in g/bhp-hr, for locomotives operated in the South Coast Nonattainment Area, as calculated pursuant to subsection III.B.

"FAC" means fleet average emission credits, expressed in g/bhp-hr, calculated pursuant to subsection III.F.

"Final EPA National Locomotive Rule" means the final regulation promulgated by EPA on April 16, 1998 (63 Fed. Reg. 18978) establishing emission standards for new locomotives and new engines used in locomotives and appearing at Title 40, Code of Federal Regulations,

Part 92, commencing at § 92.1, and addressing preemption of state and local locomotive emission standards at Title 40, Code of Federal Regulations, § 85.1603(c).

"Final FA" means a Participating Railroad's final fleet average NO<sub>x</sub> emission rate, in g/bhp-hr, for a calendar year, after application of any adjustments and any correction to FA, and subtraction from the adjusted/corrected FA of any FAC or other emission reductions available to the Participating Railroad in accordance with this Memorandum and needed to reduce that Participating Railroad's adjusted/corrected FA. The Final FA is calculated as specified in subsection III.D.

"Fleet Average Target" means EPA's NO<sub>x</sub> emission standard for freight locomotives manufactured in 2005 and later, for the line-haul duty cycle, or 5.5 g/bhp-hr, whichever is greater.

"Locomotive Day of Operation" means a calendar day, from midnight to midnight, during any portion of which a locomotive is operated in the South Coast Nonattainment Area.

"Locomotive Fleet Average Emissions Program" means the program established in the South Coast Nonattainment Area by the Participating Railroads pursuant to this Memorandum of Mutual Understandings and Agreements.

"Measure M14" means the control measure pertaining to locomotive emissions and adopted by the ARB on November 15, 1994, as part of the 1994 California State Implementation Plan required under the Federal Clean Air Act, and approved by EPA on September 26, 1996 (62 Fed.Reg. 1149 (January 8, 1997)), and any amendments to the control measure made to incorporate revised locomotive NO<sub>x</sub> emission reductions expected to occur in the South Coast Nonattainment Area for the years 2005 through 2009.

"Proposed EPA National Locomotive Rule" means the proposed regulation published in the Federal Register on February 11, 1997 (62 Fed.Reg. 6366), identifying expected emission standards for new locomotives and new engines used in locomotives, and further proposing provisions to preempt state and local locomotive emission standards.

"South Coast Nonattainment Area" means the area of Los Angeles, Orange, Riverside, and San Bernardino Counties designated in 40 C.F.R. § 81.305 as of July 1, 1996 as a federal "Extreme" ozone nonattainment area and described more specifically in Appendix A.

"ULEL" means ultra-low emitting locomotive. For the purposes of this Memorandum, through 2011 a ULEL is a locomotive with an EL<sub>1</sub> equal to or less than 4.0 g/bhp-hr, and for 2012 through 2014 a ULEL is a locomotive with an EL<sub>1</sub> less than 3.0 g/bhp-hr.

"Year" means a calendar year beginning on January 1 and continuing until the following December 31, except as otherwise specified herein.

III. PARTICIPATING RAILROADS' FLEET AVERAGE OBLIGATIONS IN THE SOUTH COAST NONATTAINMENT AREA. III. PARTICIPATING RAILROADS' FLEET AVERAGE OBLIGATIONS IN THE SOUTH COAST NONATTAINMENT AREA.

A. Annual Obligation. A. Annual Obligation.

1. In each calendar year beginning in 2010, each Participating Railroad's Final FA shall not exceed the Fleet Average Target.

2. Beginning April 1, 2011, each Participating Railroad shall annually demonstrate that it has satisfied paragraph III.A.1 for the preceding year, by calculating its FA pursuant to paragraph III.B.1 or paragraph III.B.3, and determining its Final FA pursuant to subsection III.D. As an alternative, a Participating Railroad may show that it has satisfied the definition of Exclusive Use.

B. Calculation of FA. B. Calculation of FA.

1. The formula for calculating a Participating Railroad's FA in a particular year shall be:

$$FA = \frac{\sum_{i=1}^n (EL_i) (MWhr_i)}{\sum_{i=1}^n (MWhr_i)}$$

where  $MWhr_i$  = the total number of megawatt-hours an individual locomotive operated in the South Coast Nonattainment Area in the applicable year, measured at the generator, or, at the Participating Railroad's option, the number of gallons of fuel consumed by the locomotive while it operated in the South Coast Nonattainment Area.

$n$  = the total number of locomotives the Participating Railroad operated in the South Coast Nonattainment Area in the applicable year.

For the purposes of this calculation,  $n$  may include nominal locomotive(s) to represent one or more alternative operating scenarios for a particular physical locomotive. Alternative operating scenarios may include, but are not limited to, operation of a locomotive on more than one fuel where a different CL has been determined for the locomotive's operation on each fuel, and circumstances where a physical locomotive operates for less than an entire calendar year

under a particular combination of quantifiable and verifiable emission reductions for which adjustments may be made to the  $EL_i$  or FA.

2. A Participating Railroad may use either megawatt-hours or gallons of fuel for determining any individual locomotive's MWhr<sub>i</sub>, but the use of one or the other measurement for all of a Participating Railroad's locomotives is encouraged. A Participating Railroad shall be permitted to convert gallons of fuel to megawatt-hours, or vice-versa, pursuant to the procedure in Appendix B or any other formula agreed to by the parties.

3. If, for a particular year, a Participating Railroad attempts to satisfy its fleet average obligation through the exclusive use of locomotives with CLs at or below the Fleet Average Target, but is unable to satisfy the definition of Exclusive Use, the Participating Railroad may calculate its FA for that year by using the formula in paragraph III.B.1 or by using the following formula:

$$FA = \frac{\sum_{i=1}^n (EL_i) (Days_i) (Factor_i)}{\sum_{i=1}^n (Days_i) (Factor_i)}$$

where Days<sub>i</sub> = the total number of Locomotive Days of Operation for an individual locomotive in the South Coast Nonattainment Area in the applicable year.

n = the total number of locomotives the Participating Railroad operated in the South Coast Nonattainment Area in the applicable year.

Factor<sub>i</sub> = the locomotive horsepower weighting factor applicable to an individual locomotive, as specified in the following table:

Locomotive Horsepower	Factor
1999 or less	1
2000 to 2999	2
3000 or more	5

C. Calculation of  $EL_i$ ; C. Calculation of  $EL_i$

1.  $EL_i$  for a locomotive shall be the CL for that locomotive, unless the  $EL_i$  is adjusted pursuant to this subsection III.C.

2. Prior to 2005, the parties shall mutually agree upon default CL's for locomotive models with no CL for NO<sub>x</sub>.

3. A locomotive's EL may be adjusted downward to account for quantifiable and verifiable emissions reductions not included in the CL. Adjustments to the EL may be made pursuant to paragraphs 2 through 5 of Appendix D.

4. When quantifiable and verifiable emissions reductions for a particular locomotive apply to only a portion of that locomotive's operations in the South Coast Nonattainment Area in a given year, the locomotive shall be treated in the fleet average calculation as two or more nominal locomotives, pursuant to paragraph III.B.1. For each nominal locomotive, a separate EL shall be calculated, based upon the quantifiable and verifiable emissions reductions that apply to that nominal locomotive. In calculating the FA, the megawatt-hours operated or fuel usage for each nominal locomotive shall be the number of megawatt-hours operated or gallons of fuel used under the operating conditions that apply to that nominal locomotive.

D. Calculation of Final FA.D. Calculation of Final FA.

1. In lieu of adjusting each locomotive's EL downward under paragraph III.C.3 due to applicable quantifiable and verifiable emissions reductions not accounted for in the CL, a Participating Railroad may adjust FA for such reductions after FA has been calculated pursuant to subsection III.B, but only if the adjustment is mathematically equivalent to or less than the cumulative adjustment that would have occurred by adjusting each locomotive's EL.

2. If necessary to achieve the Fleet Average Target for 2010 and later, after adjusting a Participating Railroad's FA pursuant to paragraph III.D.1, if applicable, the Participating Railroad's FA or adjusted FA may be corrected downward to account for atmospheric conditions, as specified in paragraph 1 of Appendix D.

3. After making applicable adjustments and/or a correction pursuant to paragraphs III.D.1 and III.D.2, a Participating Railroad's resultant FA shall be rounded to the nearest 0.1 g/bhp-hr in accordance with Appendix C. If this adjusted/corrected FA still exceeds the Fleet Average Target, the Participating Railroad may subtract from the adjusted/corrected FA emission reductions to reduce the adjusted/corrected FA using either or both of the following:

a. A Participating Railroad may in any year subtract from its adjusted/corrected FA not more than 1.3 g/bhp-hr of FAC created prior to 2010. A Participating Railroad also may in any year subtract from its adjusted/corrected FA not more than 0.3 g/bhp-hr of emission reductions other than FAC generated under this Memorandum (with those emission reductions converted to g/bhp-hr using Table E-1 in Appendix E), provided that the 1.3 g/bhp-hr limit on the use of FAC created prior to 2010 shall be reduced by the amount of any non-FAC emission reductions subtracted pursuant to this sentence.

b. A Participating Railroad may in any year subtract from its adjusted/corrected FA any quantity of FAC created in 2010 or later.

4. The Participating Railroad's Final FA shall be the FA calculated pursuant to subsection III.B, as adjusted and, if necessary, corrected, and after subtraction pursuant to paragraph III.D.3 of any FAC or other emission reduction.

E. Data Collection and Calculations. E. Data Collection and Calculations.

1. No later than January 1, 2010, and for any year prior to 2010 for which a Participating Railroad wishes to generate FAC (other than FAC created through the use of ULELs), each Participating Railroad shall track megawatt-hour usage or fuel consumption through the use of track-side transponders that read megawatt-hour or fuel data for all locomotives as they enter and leave the South Coast Nonattainment Area. The transponders shall be located at the South Coast Nonattainment Area borders or at a close distance past the borders. A Participating Railroad and ARB may agree to alternative means of tracking megawatt-hour usage or fuel consumption. If the Participating Railroad elects to achieve the Fleet Average Target through the exclusive use of locomotives with CLs at or below the Fleet Average Target, instead of tracking megawatt-hours or fuel consumption, that Participating Railroad shall collect data to identify all locomotives used in the South Coast Nonattainment Area for the applicable year for the purpose of demonstrating that the definition of "Exclusive Use" is satisfied or, if necessary to calculate the Participating Railroad's FA using the formula provided in paragraph III.B.3 or to document the quantity of FAC created by the use of ULELs, records specifying the number of Locomotive Days of Operation for each locomotive used in the South Coast Nonattainment Area for the applicable year.

2. Calculation of FA shall be based on all data in a Participating Railroad's possession. For FA calculations made using the formula specified in paragraph III.B.1., if such data represent less than 90 percent of a Participating Railroad's locomotives operating within the South Coast Nonattainment Area, the Participating Railroad shall use estimated data for enough missing locomotives so that the calculated FA for the year represents at least 90 percent of the Participating Railroad's locomotives operated within the South Coast Nonattainment Area. Estimation of the missing data shall be based on data for locomotives operated on similar trains within the South Coast Nonattainment Area, as provided in Appendix F.

3. The rules in Appendix C shall apply to any rounding of calculations performed in connection with this Memorandum.

F. Fleet Average Emission Credits F. Fleet Average Emission Credits.

1. For the year 2010 and thereafter, a Participating Railroad may generate FAC in any year in which its Final FA (if based on FA calculated using the formula specified in paragraph III.B.1) is below the Fleet Average Target. FAC created in 2010 and later, other than FAC created by the use of ULELs, shall be calculated as follows:

$$\text{FAC} = \text{Fleet Average Target} - \text{Final FA}$$

2. A Participating Railroad may generate FAC for emissions reductions in the 2005 - 2009 time period, as specified in this paragraph. To generate such credits, a Participating Railroad must calculate its Final FA for the year for which emissions reductions are to be credited, using the formula for FA specified in paragraph III.B.1. FAC for the 2005 - 2009 time period shall be calculated as follows:

$$\text{FAC} = ((1-y) \times 15.4 \text{ g/bhp-hr}) - \text{Final FA},$$

where  $y$  = a specified percentage reduction from 1990 baseline NO<sub>x</sub> emission levels (15.4 g/bhp-hr). For the purpose of calculating FAC pursuant to this paragraph, the percentage reductions from baseline emission levels which constitute "y" shall be as follows: 27.8% (2005), 32.9% (2006), 37.8% (2007), 41.8% (2008), and 47.8% (2009).

3. FAC shall be denominated in g/bhp-hr. FAC calculated pursuant to this subsection III.F shall be rounded to the nearest 0.1 g/bhp-hr. For purposes of generating FAC

pursuant to this subsection III.F, the Final FA shall not include any correction for absolute humidity and ambient temperature levels in the South Coast Nonattainment Area.

4. FAC shall not be discounted or expire.

5. Except as otherwise provided herein, a Participating Railroad may retain FAC for its own future use and may engage in the purchase, sale, trade or other transfer of FAC with the other Participating Railroad. A Participating Railroad may acquire and use FAC from another Participating Railroad for any purpose for which FAC may be used under this Memorandum, including the use of FAC to calculate a Participating Railroad's Final FA under paragraph III.D.3 or to provide mitigation as required under paragraph IV.C.4 and Appendix E.

6. A Participating Railroad may generate FAC from the use of ULELs in any calendar year beginning on or after the effective date of this Memorandum, through December 31, 2014. The opportunity to create FAC through the use of ULELs is provided as an incentive for the introduction of ultra-low emitting locomotives into the South Coast Nonattainment Area. Calculation of FAC created by a Participating Railroad's use of ULELs in a particular calendar year is independent of the calculation of FAC pursuant to paragraphs III.F.1 and III.F.2 and shall be performed as follows:

a. The Participating Railroad's weighted average ULEL emission rate ("w") for the year shall be calculated by using the following formula:

$$w = \frac{\sum_{i=1}^k (EL_i) (Days_i) (Factor_i)}{\sum_{i=1}^k (Days_i) (Factor_i)}$$

where Days<sub>i</sub> = the total number of Locomotive Days of Operation for an individual ULEL in the South Coast Nonattainment Area in the applicable year;

k = the total number of ULELs the Participating Railroad operated in the South Coast Nonattainment Area in the applicable year;

Factor<sub>i</sub> = the locomotive horsepower weighting factor applicable to an individual ULEL, as specified in the following table:

Locomotive Horsepower	Factor
1999 or less	1
2000 to 2999	2
3000 or more	5

- b. The Participating Railroad's maximum possible FAC from the use of ULELs ("m") for the particular year shall be determined according to the following formula:

$$m = \text{Fleet Average Target} - w$$

- c. The Participating Railroad's usage of ULELs in the South Coast Nonattainment Area ("u") for the particular year shall be determined according to the following formula:

$$u = \sum_{i=1}^k (\text{Days}_i)$$

where  $\text{Days}_i$  = the total number of Locomotive Days of Operation for an individual ULEL in the South Coast Nonattainment Area in the applicable year;

k = the total number of ULELs the Participating Railroad operated in the South Coast Nonattainment Area in the applicable year.

- d. The usage level ("s") (in Locomotive Days of Operation) at which the Participating Railroad would earn the maximum amount of FAC from the use of ULELs shall be calculated according to one of the following formulas, as applicable:

- i. When the weighted average ULEL emission rate ("w") for the year is more than 3.0 g/bhp-hr and less than or equal to 4.0 g/bhp-hr,

$$s = 30000 w - 70500$$

- ii. When the weighted average ULEL emission rate ("w") for the year is equal to or less than 3.0 g/bhp-hr,

$$s = 2500 w + 12000$$

- e. The Participating Railroad's FAC from the use of ULELs for the particular year shall be determined according to the following formula, but shall not exceed m:

$$FAC = m \left( \frac{u}{s} \right)$$

- G. No Locomotive or Railroad Operating Limit. No Locomotive or Railroad Operating Limit.

The purpose of this Memorandum is to reduce emissions from railroad operations in the South Coast Nonattainment Area consistent with Measure M14 through implementation of a locomotive fleet average emission standard; however, nothing herein constitutes, or shall be interpreted to constitute, any restriction or limit on the operation or activity of locomotives or railroads in the South Coast Nonattainment Area pursuant to their common carrier obligations under the Interstate Commerce Act, or on total railroad emissions in that area.

- H. Participation in South Coast Nonattainment Area Emission Credit Trading Programs. Participation in South Coast Nonattainment Area Emission Credit Trading Programs.

Except as specified in this subsection, nothing herein shall impair the ability of a Participating Railroad to participate in any emission banking or trading programs effective in the South Coast Nonattainment Area, provided that "double crediting" (use of the same credits twice) shall not be permitted. Subject to the requirements of such emission banking and trading programs, a Participating Railroad may use emission credits from such programs to calculate its Final FA under subparagraph III.D.3.a, or to mitigate excess emissions pursuant to Appendix E, or may transfer FAC to other persons for use in such programs.

- I. Contribution of Emission Reductions. Contribution of Emission Reductions.

The Participating Railroads have voluntarily undertaken the obligation to implement the fleet average program established herein. During the term hereof, each Participating Railroad hereby irrevocably contributes the resulting emission reductions (other than FAC created in accordance herewith) to the State of California for the benefit of the citizens of the South Coast

Nonattainment Area.

IV. ADMINISTRATION OF THE FLEET AVERAGE PROGRAM FOR THE SOUTH COAST NONATTAINMENT AREA. IV. ADMINISTRATION OF THE FLEET AVERAGE PROGRAM FOR THE SOUTH COAST NONATTAINMENT AREA.

A. Recordkeeping. A. Recordkeeping.

1. Beginning in 2010, and for any year prior to 2010 for which a Participating Railroad wishes to generate FAC (other than FAC from the use of ULELs), each Participating Railroad shall keep supporting documentation showing megawatt-hour usage or fuel consumption, as appropriate, by locomotive. If the Participating Railroad elects to achieve the Fleet Average Target through the exclusive use of locomotives with CLs at or below the Fleet Average Target, the Participating Railroad shall instead keep records identifying all locomotives used in the South Coast Nonattainment Area for the applicable year, and, if necessary to demonstrate that the definition of "Exclusive Use" is satisfied or to calculate the Participating Railroad's FA using the formula provided in paragraph III.B.3, records specifying the Locomotive Days of Operation for each locomotive used in the South Coast Nonattainment Area for the applicable year. If a Participating Railroad elects to create FAC from the use of ULELs in any year, the Participating Railroad shall keep records identifying all ULELs used in the South Coast Nonattainment Area for the applicable year and the Locomotive Days of Operation for each such ULEL.

2. Each Participating Railroad shall keep supporting documentation for all FAC generated, used, retained, purchased or transferred, and for adjustments and any correction made to the fleet average calculation.

3. Records required to be retained pursuant hereto shall be kept for two years following the submittal of the report required by paragraph IV.B.1 or IV.B.3 and, for records pertaining to the generation of FAC, for two years after the FAC have been used. In any situation in which records required to be retained pursuant hereto are pertinent to a noncompliance determination or dispute resolution process proceeding in accordance with subsection IV.C, such records shall be retained for one year following (i) issuance of the final compliance determination or (ii) final resolution of the dispute, whichever is later.

4. Notwithstanding the recordkeeping and reporting requirements herein, each Participating Railroad retains all rights under law to protect confidential business information

and other information protected by law from disclosure.

B. Reporting. Reporting.

1. By April 1, 2011, and each April 1 thereafter, each Participating Railroad shall report to ARB its Final FA for the previous calendar year. Should a Participating Railroad elect to calculate its Final FA for any year in the 2005 -- 2009 period for the purpose of generating FAC, it shall report the results of its calculation to ARB by December 31 of the following year. Should a Participating Railroad elect to generate FAC by the use of ULELs, it shall report the results of its FAC calculation to ARB by December 31 of the following year (for years 2002 through 2009) and by April 1 of the following year (for years 2010 through 2014). Reports made pursuant to this subsection IV.B shall include the information specified in Appendix F. Upon request by a Participating Railroad, ARB may, for good cause, extend the deadline for any report made pursuant to this subsection IV.B.

2. Upon reasonable request by ARB, a Participating Railroad shall provide the requesting agency with additional data or information related to the calculation of its Final FA.

3. If for any year a Participating Railroad achieves the Fleet Average Target through the exclusive use of locomotives with CLs at or below the Fleet Average Target, in lieu of calculating and submitting its Final FA for that year pursuant to subsection III.D and paragraph IV.B.1, respectively, the Participating Railroad shall submit to ARB by April 1 of the following year the list of locomotives used in the South Coast Nonattainment Area for the applicable year, their identification number, year of manufacture or remanufacture, CL, and if necessary to demonstrate that the definition of "Exclusive Use" is satisfied, the number of Locomotive Days of Operation.

4. Each Participating Railroad must include in the report submitted pursuant to paragraph IV.B.1 information regarding the source and quantity of any FAC or other emission reduction used by the Participating Railroad to achieve the Fleet Average Target or otherwise comply with this Memorandum during the year for which the report is filed.

5. By September 30, 2002, the Participating Railroads and ARB will meet and confer to determine what constitutes sufficient information to be submitted by the Participating Railroads for the years 2002-2004 to explain the railroads' implementation plans and their progress toward meeting the Fleet Average Target in 2010 and beyond. The Participating

Railroads will submit the agreed-upon information on April 1, 2003, 2004 and 2005 for each of the preceding calendar years. For calendar years 2005-2009, the Participating Railroads will submit to ARB the information submitted to EPA pursuant to a backstop commitment regulation adopted as described in subsection I.E and the Statement of Principles. In complying with this paragraph IV.B.5, the Participating Railroads shall not be subject to the mitigation and liquidated damages provisions of paragraph IV.C.4 or Appendix E.

6. All reports submitted by the Participating Railroads pursuant to paragraphs IV.B.1, 3, and 4 shall include a certification by a management-level employee with sufficient authority to act for the Participating Railroad pursuant to the terms hereof, that the report is submitted on behalf of the Participating Railroad and that the information submitted is, to the best of the railroad's knowledge and belief, true, accurate and complete, and is consistent with Appendix F.

7. The purpose of Appendix F is to provide all information necessary for a Participating Railroad to demonstrate compliance with the annual obligation set forth in paragraph III.A.1 by providing the information necessary to perform the calculations under subsections III.B, C, D, E and F, as applicable, and to provide the information required under paragraphs IV.B.1, 3 and 4, as applicable.

C. Enforcement Procedure and Agreed Remedies. Enforcement Procedure and Agreed Remedies.

1. The ARB is designated as the agency responsible for enforcement of the obligations undertaken by the Participating Railroads. The enforcement authorities specified herein may only be exercised by ARB. Nothing herein shall be interpreted as granting any rights to the public or to any person not a party hereto.

2. Consultations.

a. A Participating Railroad may at any time initiate informal consultations with ARB to identify and resolve concerns or other issues regarding compliance herewith.

b. ARB may at any time initiate informal consultations with either or both of the Participating Railroads to identify and resolve concerns or other issues regarding Participating

Railroad compliance herewith.

3. Completeness and Noncompliance Determinations

- a.i. ARB shall review the report submitted each year by each Participating Railroad pursuant to paragraph IV.B.1, 3 and 4, as applicable. If ARB has not received such report from a Participating Railroad by April 1, ARB shall promptly notify that Participating Railroad.
- ii. Within thirty days of receipt of a report submitted pursuant to paragraph IV.B.1, 3 and 4, as applicable, ARB shall notify the Participating Railroad if it determines that the report is incomplete when compared to the report elements specified in Appendix F, and shall provide the Participating Railroad a written notice of incompleteness identifying any deficiencies. Upon receipt of a notice of incompleteness issued by ARB pursuant to this clause IV.C.3.a.ii, a Participating Railroad shall have an opportunity to meet and confer with ARB regarding the completeness of the report with respect to the report elements specified in Appendix F, within 30 days of the Participating Railroad's receipt of ARB's notification. The Participating Railroad shall provide any information needed to correct any incompleteness within 30 days after its receipt of the notice of incompleteness and agreement between the Participating Railroad and ARB specifying the information needed to correct any incompleteness. If the Participating Railroad requires more than 30 days to respond, it may request, and ARB will not unreasonably deny, a further extension. If the Participating Railroad and ARB, after consultation, do not reach agreement regarding the completeness of the report or the need for additional information, each party shall submit its position to the administrative appeals panel within 30 days of the last day of consultation for resolution pursuant to the limited dispute resolution process set forth in paragraph IV.C.5.
- iii. ARB shall review the complete report and, if necessary, make a preliminary determination that the Participating Railroad did not satisfy its fleet average emissions obligation under subsection III.A for the previous year or was otherwise not in compliance with its obligations hereunder. ARB shall provide the Participating Railroad with its written preliminary determination as expeditiously as practicable but not later than 120 days after initial receipt of the

Participating Railroad's report submitted pursuant to paragraph IV.B.1, 3 and 4, as applicable, or 30 days after receipt of a complete report, whichever is later. The time periods provided for ARB to make a preliminary compliance determination may be extended by written agreement between ARB and the Participating Railroad.

b. A Participating Railroad shall have 45 days to respond to ARB's preliminary determination that the Participating Railroad is or was not in compliance herewith. The Participating Railroad's response may contain such information and analysis as the Participating Railroad believes appropriate to demonstrate its compliance with this Memorandum of Mutual Understandings and Agreements.

c. If, after review and consideration of the Participating Railroad's response to a preliminary determination, ARB confirms its preliminary determination that the Participating Railroad is or was not in compliance herewith, within 30 days of its receipt of the Participating Railroad's response ARB shall provide an opportunity for the Participating Railroad to meet and confer with ARB in an effort to resolve the parties' differences.

d. If, after meeting with a Participating Railroad pursuant to subparagraph IV.C.3.c, ARB confirms its preliminary determination that the Participating Railroad is or was not in compliance herewith, within 45 days after that meeting ARB shall provide to the Participating Railroad a final written determination of noncompliance.

e. A preliminary or final determination of noncompliance shall specifically identify the portion or portions hereof with which ARB contends the Participating Railroad is or was not in compliance, and the reasons for the determination. Where ARB has determined that the Participating Railroad did not achieve the Fleet Average Target for the year in question, any preliminary or final determination of noncompliance shall state, with the greatest precision possible based on data submitted by the Participating Railroad, ARB's calculation of the difference between the Participating Railroad's Final FA and the Fleet Average Target.

f. The ARB and Participating Railroads shall use their respective best efforts to expedite submission and review of the report under this paragraph IV.C.3.

4. Mitigation and Liquidated Damages

a. The parties agree that any determination of damages resulting from a Participating Railroad's failure to achieve the Fleet Average Target, or from any other breach of this Memorandum would be speculative and uncertain. The parties therefore agree to mitigation of excess emissions as measured in g/bhp-hr and the payment of reasonable liquidated damages for any such noncompliance, as follows:

- i. Where a Participating Railroad did not achieve the Fleet Average Target for a calendar year and received ARB's preliminary determination of noncompliance within the time period specified in subparagraph IV.C.3.a, the Participating Railroad shall mitigate excess emissions as measured in g/bhp-hr and pay liquidated damages as specified in Appendix E.
- ii. Where a Participating Railroad failed to collect data as provided in paragraph III.E, to keep records as provided in paragraph IV.A.1, or to submit a timely annual compliance report as provided in paragraph IV.B.1, the Participating Railroad shall pay liquidated damages as specified in Appendix E.
- iii. ARB may for good cause waive or reduce the amounts otherwise payable pursuant to this paragraph IV.C.4.

b. If ARB determines that a Participating Railroad is in noncompliance with this Memorandum because of disapproval of an adjustment, correction, or calculation methodology used in an annual compliance report, the railroad shall not be subject to mitigation or liquidated damages as a result of such noncompliance if the Participating Railroad relied in good faith upon such adjustment, correction or calculation methodology. For purposes of this paragraph, good faith includes reliance on an adjustment, correction or calculation methodology when the adjustment, correction or methodology has been approved or accepted by ARB in accordance with Appendix D.

c. As provided in Appendix D, a Participating Railroad may at any time submit to ARB an adjustment, correction or calculation methodology to be used in determining compliance with the annual fleet average obligation, or may present such an adjustment, correction or calculation methodology in an annual compliance report.

5. Limited Dispute Resolution.

a. In the event of any disagreement regarding a determination of noncompliance, the magnitude of noncompliance, the increment by which the Final FA exceeded the Fleet Average Target for any year, or any other issue arising hereunder (except for an ARB determination made pursuant to clause IV.C.4.a.iii), a Participating Railroad may appeal the issue to an administrative appeals panel. The panel shall be comprised of one member selected by ARB, one member selected by the Participating Railroad, and a third member selected by the initial two members. The panel shall evaluate evidence provided by the parties, shall make decisions by majority vote, and shall render its decision as expeditiously as practicable under the circumstances. Decisions of the panel shall be binding on the parties unless judicial review is sought pursuant to subparagraph IV.C.5.b.

b. Any party dissatisfied with the outcome of the administrative appeals process established pursuant to subparagraph IV.C.5.a may seek de novo review of the disagreement in any court of competent jurisdiction located in California.

6. Any liquidated damages payable pursuant to this paragraph IV.C.6 and Appendix E shall be deposited in an escrow account established for this purpose. All fees for the escrow account may be paid out of interest earned. All liquidated damages funds shall be used for air quality-related projects, including clean technology projects, mutually agreeable to ARB and the Participating Railroad that paid the liquidated damages. Any liquidated damages not expended or allocated to a specific project within 36 months of payment shall revert to the state Air Pollution Control Fund. The provisions of this Memorandum are for the benefit only of the parties, and no third party may seek to enforce or benefit from this paragraph or any other provisions of this Memorandum.

7. The measures expressly identified in this subsection IV.C are the exclusive remedy for any noncompliance herewith, except as otherwise agreed to in writing between ARB and a Participating Railroad. The parties expressly agree that the Participating Railroads' obligation to achieve the Fleet Average Target pursuant to this Memorandum cannot be enforced by an order for specific performance or similar injunction intended to compel establishment of a fleet average program consistent with this Memorandum. The parties specifically disavow any desire or intention to create any third party beneficiary under this Memorandum, and specifically declare that no person or entity, except the parties hereto, shall

have any remedy or right of enforcement hereof.

8. In the event that a Participating Railroad fails in whole or in part to fulfill its obligations to mitigate pursuant to paragraph IV.C.4, ARB may file suit and seek any and all remedies available under state law for damages for failure to provide the unmitigated quantity of regional emissions reductions (plus 10 percent of such unmitigated quantity).

D. Effective Date and Term. D. Effective Date and Term.

1. Effective Date.

a. This Memorandum shall take effect on January 1, 2002, unless:

- i. ARB or EPA has not approved an amendment to Measure M14 to incorporate revised projections of the locomotive NO<sub>x</sub> emission reductions expected to occur in the South Coast Nonattainment Area from 2005 through 2009 no greater than those set out in paragraph III.F.2; or
- ii. A court has entered a final, unappealable order invalidating or remanding the Tier II NO<sub>x</sub> emissions standard or the preemption provisions in the Final EPA National Locomotive Rule; or
- iii. Any litigation challenging the Tier II NO<sub>x</sub> emissions standard or the preemption provisions of the Final EPA National Locomotive Rule has not yet been resolved and a final, unappealable order entered.

2. The term of this Memorandum commences on the Effective Date and expires on January 1, 2030, unless earlier terminated pursuant to subsection IV.F or by mutual written agreement of the parties, or unless extended by mutual written agreement of the parties.

E. Modifications. E. Modifications.

1. The terms hereof may be modified at any time, and from time to time, by mutual written agreement between the parties.

2. All parties hereto agree to meet to discuss and negotiate any revisions hereof which, in the judgment of any party, are needed to address significant changes in circumstances or to assure that this Memorandum continues to accomplish the objectives of the parties.

3. No amendment hereto shall be binding on the parties unless in writing and signed by authorized representatives of all parties, except as otherwise expressly provided herein.

F. Termination.

1. ARB may terminate this Memorandum by providing written notice to the Participating Railroads in the event that:

a. ARB determines, after conclusion of the dispute resolution process provided in subsection IV.C, that the Participating Railroads have materially breached their obligation to achieve the Fleet Average Target by 1.0 g/bhp-hr or more in three or more consecutive years; provided, however, that ARB may make such determination regarding the third year of noncompliance upon issuance of a final written determination of noncompliance under subparagraph IV.C.3.d. Notwithstanding ARB's exercise of its termination right under the preceding sentence, the Participating Railroad may elect to exercise its rights to use the limited dispute resolution process under paragraph IV.C.5 for the purpose of resolving any matter identified in subparagraph IV.C.5.a.

b. The Participating Railroads do not comply with the annual obligation set out in paragraph III.A.1 as the result in part or in whole of one or more events of force majeure continuing 36 months or more.

2. The Participating Railroads may terminate this Memorandum by providing written notice to ARB in the event that:

a. The State of California or any political subdivision thereof takes any action to establish (i) locomotive emission standards; (ii) any mandatory locomotive fleet average emissions standard; 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; or

b. EPA or any agency of the United States government takes any action to establish or approve any mandatory locomotive fleet average emissions standard or revises the preemption provisions of the Final EPA National Locomotive Rule; or

c. The California Legislature or U.S. Congress take or require any action which if taken administratively by EPA or ARB would allow the Participating Railroads to terminate this Memorandum pursuant to this paragraph IV.F.2; or

d. The effective date for the Tier II NO<sub>x</sub> emission standard is later than January 1, 2005; or

e. Their noncompliance is the result in part or in whole of one or more events of force majeure continuing 36 months or more.

3. Prior to giving notice of termination pursuant to this subsection IV.F, a party shall provide the other parties with at least 30 days notice of intent to terminate, and, upon request of the other parties, shall meet to discuss the issues giving rise to the proposed termination.

4. Except as noted below, in the event any party gives notice of termination of this Memorandum, the obligation of the Participating Railroads to achieve the Fleet Average Target shall terminate on December 31 of the year prior to the year in which the notice of termination was given. If the ARB gives notice of termination under subparagraph IV.F.1.a, the obligation of the Participating Railroads to achieve the Fleet Average Target shall terminate on April 1 of the year in which the notice of termination was given and any railroad obligations (including any obligations to mitigate and pay liquidated damages) hereunder shall be prorated as of such date.

5. As an alternative to termination, the parties may agree to suspend the Participating Railroads' continuing obligation under this Memorandum for a time certain, which may be extended from time-to-time by agreement of the parties.

6. In the event this Memorandum is terminated by any party, any outstanding noncompliance issues, whether asserted or unasserted at the time of termination, shall continue to be resolved pursuant to the procedures specified in subsection IV.C and Appendix E. A Participating Railroad's obligation, if any, to mitigate excess g/bhp-hr and pay liquidated damages arising from any noncompliance for any year ending before termination of the

Memorandum, asserted by the ARB prior to termination, shall survive termination, as shall any defenses the Participating Railroad may have. The ARB shall allege any previously unasserted claims of noncompliance within one year from the date of termination.

G. Force Majeure. G. Force Majeure.

Parties shall not be responsible for failure to perform the terms hereof where nonperformance is based upon events or circumstances that are beyond the reasonable control of the nonperforming party, and the events or circumstances affect a Participating Railroad's ability to comply with the terms hereof. Events of force majeure are not limited to Acts of God, may occur on any part of the system of a Participating Railroad, and include, but are not limited to, flood, earthquake, storm, fire and other natural catastrophes, epidemic, war (whether declared or undeclared), riot, civic disturbance or disobedience, strikes, labor disputes, sabotage of facilities, any order or injunction made by a court or public agency, accommodations to the government made in connection with a state of emergency, whether or not formally declared, or the inability of a Participating Railroad to obtain or operate sufficient locomotives to make any of the compliance demonstrations specified in paragraph III.A.2 (including but not limited to the availability in each of the years 2005 to 2009 of sufficient quantities of locomotives with CLs at or below the Fleet Average Target to enable the Participating Railroads to meet their obligations under this Memorandum), and include the secondary effects of any such event. This paragraph is to be construed in recognition of the understanding that the Participating Railroads are end users, not manufacturers, of locomotives. Upon becoming aware that an occurrence constitutes an event of force majeure, the Participating Railroad must promptly notify ARB and must use its best efforts to resume performance as quickly as possible, and may suspend performance only for such period of time and to the extent necessary as a result of the event or circumstances that constitutes a force majeure.

H. Notices. H. Notices.

All notices and other communications to be given hereunder shall be in writing and shall be deemed to have been duly given if delivered personally, delivered by U.S. Mail or a recognized overnight commercial carrier, or telecopied with receipt acknowledged, to the party at the address set forth below or such other address as such party shall have designated by 10 days prior written notice to the other parties. Each party's designated contact person shall be a management-level employee, with sufficient authority to act for the party pursuant to the terms hereof.

If to ARB:

California Air Resources Board  
2020 L Street  
Sacramento, California 95814  
Attention: Executive Officer  
Telephone: (916) 445-4383

If to The Burlington Northern and Santa Fe Railway Company:

The Burlington Northern and Santa Fe Railway Company  
2650 Lou Menk Drive  
Ft. Worth, TX 76131  
Attention: Matthew K. Rose  
Sr. Vice President and Chief Operating Officer  
Telephone: (817) 352-6100

If to Union Pacific Railroad Company:

Union Pacific Railroad Company  
1416 Dodge Street  
Omaha, NE 68179  
Attention: Chief Mechanical Officer - Locomotive  
Telephone: (402) 271-4739

I. Entire Understanding/References. I. Entire Understanding/References.

This Memorandum, the Appendices hereto, and the Statement of Principles constitute all understandings and agreements among the parties with respect to the Locomotive Fleet Average Emissions Program, and supersede all prior oral or written agreements, commitments or understandings with respect thereto. The appendices hereto are made part of this Memorandum. "Herein," "hereto," and like terms refer to this Memorandum and all Appendices attached to it. Headings are for convenience only and shall not be deemed a part hereof.

J. Choice of Law. J. Choice of Law.

This Memorandum shall be interpreted according to the laws of the United States and internal laws of the State of California.

K. Counterparts. K. Counterparts.

This Memorandum may be executed in any number of counterparts, each of which shall

be considered an original, but all of which together constitute one and the same instrument.

L. Assignment L. Assignment.

This Memorandum and the rights, duties and obligations under it may not be assigned by any party without the prior written consent of the other parties, except that a Participating Railroad shall not need the consent of any other Participating Railroad to make any assignment. Any assignment or delegation of rights, duties or obligations hereunder made without the prior written consent contemplated by this subsection shall be void and of no effect. This Memorandum shall be binding upon, and inure to the benefit of, the successors and approved assigns of the parties.

M. Severability M. Severability.

Wherever possible, each provision of this Memorandum shall be interpreted in such manner as to be effective and valid under applicable law. If any provision hereof shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent to such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions hereof. Notwithstanding the previous sentence, if any party determines, in its sole discretion, that in the absence of the invalidated provision or provisions this Memorandum no longer properly serves the purposes for which it was prepared, within 75 days of the entry of a final non-appealable order invalidating one or more provisions hereof such party may terminate this Memorandum upon 12 months advance notice.

N. Time N. Time.

In interpreting this Memorandum, time is of the essence, "days" means calendar days and "months" means calendar months.

\*\*\*\*\*

IN WITNESS WHEREOF, the parties have executed this Memorandum as of  
July 2, 1998.

CALIFORNIA AIR RESOURCES BOARD,  
an agency of the State of  
California

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name (printed)

\_\_\_\_\_  
Position

\_\_\_\_\_  
Date

UNION PACIFIC RAILROAD  
COMPANY,  
a Utah Corporation

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name (printed)

\_\_\_\_\_  
Position

\_\_\_\_\_  
Date

THE BURLINGTON NORTHERN AND SANTA  
FE RAILWAY COMPANY,  
a Delaware Corporation

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name (printed)

\_\_\_\_\_  
Position

\_\_\_\_\_  
Date

# EXHIBIT 2

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**ARB/Railroad Statewide Agreement**

**Particulate Emissions Reduction Program at California Rail Yards**

**June 2005**

**A. Parties**

*The BNSF Railway Company ("BNSF") and Union Pacific Railroad Company ("UPRR") (collectively, the "Participating Railroads") and the California Air Resources Board ("ARB") (collectively, "the parties" or, individually, a "party").*

**B. Background**

1. The factual background, regulatory setting, administrative history and current rail yard issues are complex and important. Key background information is included in Attachment C, which is incorporated into this Agreement in its entirety.

2. The parties understand and acknowledge that the joint understandings and future voluntary actions described in this Agreement will contribute to efforts in California to improve the environment and economy of California. The parties acknowledge the important relationship of this Agreement to California's broader statewide efforts on goods movement. This Agreement has been developed based on the key principles of California's goods movement efforts: (a) that the state's economy and quality of life depend upon the efficient and safe delivery of goods to and from our ports, rail yards, and borders, and, at the same time, (b) the environmental impacts associated with California's goods movement must be managed to ensure the protection of public health.

3. ARB and the Participating Railroads are committed to working together to ensure that this Agreement achieves its objectives. In entering this Agreement, the parties recognize that rail yards operated by the Participating Railroads are located throughout the state and that emissions from rail yards are a matter of state concern. Certain measures to reduce these emissions can be best addressed on a statewide rather than local level.

4. The parties also recognize that the Participating Railroads are federally regulated and that aspects of state and local authority to regulate railroads are preempted. The parties believe that a consistent and uniform statewide approach to addressing emissions at rail yards is necessary and will provide the greatest and most immediate health and welfare benefits to the people of California. Nothing in this Agreement is intended to affect the scope of existing preemption or ARB's regulatory authority.

5. The parties agree that this Agreement takes another step in the near and mid-term efforts to improve the environment for the citizens of California, and that ARB and the

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Participating Railroads will continue to collaborate in order to address the environmental impacts of railroads in California.

**C. Program Elements**

These Program Elements apply to the California rail yards identified herein and will take effect as of June 30, 2005 (the "Effective Date"). For purposes of this Agreement, "feasible" and "feasibly" refer to measures and devices that can be implemented by the Participating Railroads, giving appropriate consideration to costs and to impacts on rail yard operations.

**1. Locomotive Idling-Reduction Program.**

*The goal of this Program Element is to effectively eliminate non-essential locomotive idling, both inside and outside of rail yards. It is anticipated that the locomotive idling-reduction program will expedite the installation of locomotive idling reduction devices and implement highly-effective locomotive operational idling reduction procedures in California.*

(a) Automatic Idling-Reduction Devices Shall Be Installed on Intrastate Locomotives Expeditiously.<sup>1</sup> The Participating Railroads shall install automatic idling-reduction devices on all intrastate locomotives based in California that are not already so equipped as of the Effective Date in accordance with the following schedule:

<b>Date</b>	<b>Cumulative Percent of Unequipped Intrastate Locomotives To Be Equipped by Date</b>
June 30, 2006	35%
June 30, 2007	70%
June 30, 2008	>99%

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<sup>1</sup> All new locomotives purchased by the railroads that are used in interstate service come from the manufacturer already equipped with automatic shutdown devices. "Intrastate locomotives" have the same meaning as in 13 Cal. Code Regs. § 2299(b)(5) and 17 Cal. Code Regs. § 93117(b)(5). Note: These regulations have been adopted by the California Air Resources Board, and submitted to the California Office of Administrative Law ("OAL") for approval. OAL has until July 5, 2005 to make a determination.

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(b) Performance Standards for Locomotives Equipped with Automatic Idling-Reduction Devices. The automatic idling-reduction devices shall limit locomotive idling to no more than 15 consecutive minutes. If the engine characteristics of a particular locomotive model will not allow a 15 minute shut-down cycle without risking excessive component failures, the automatic idling-reduction devices required pursuant to subsection (a) shall reduce locomotive idling by the maximum amount that is feasible.

(c) Inventory of Intrastate Locomotive Fleet. Within 60 days after the Effective Date, the Participating Railroads will provide information on their intrastate locomotive fleet based in California, including locomotive manufacturer, model number, certification level, locomotive number, the availability of automatic idling-reduction devices for each locomotive make and model, and the idling reduction limits these devices can feasibly achieve. The Participating Railroads will also provide information regarding intrastate locomotives based in California already equipped with automatic idling-reduction devices. This information shall include locomotive number, manufacturer, and model of the automatic idling-reduction device installed, the idling reduction limits that the device can feasibly achieve, date of installation, and any other information the railroad or ARB may deem necessary. Every April thereafter, the Participating Railroads agree to submit the same information for each intrastate locomotive equipped with an automatic idling-reduction device under subsection (a) during the previous 12 months. As part of its annual report to ARB, the Participating Railroads will also report the number of locomotives and overall percentage of locomotives owned by them nationwide that foreseeably may operate in California and that have been equipped with automatic idling-reduction devices during the previous 12 months.

(d) Performance Standards for Locomotives Not Equipped with Idling-Reduction Devices. Notwithstanding the Participating Railroads' obligation to install automatic idling-reduction devices on at least 99 percent of their intrastate locomotives by June 30, 2008, the Participating Railroads agree to exert their best efforts to limit the non-essential idling of locomotives not equipped with automatic idling-reduction devices. In no event shall a locomotive be engaged in non-essential idling for more than 60 consecutive minutes. The Participating Railroads shall limit non-essential idling of locomotives installed with automatic idling reduction devices to the limits specified in subsection (b).

(e) Exceptions to Idling Limits. Subsections (b) and (d) shall not apply when it is essential that a locomotive be idling. It shall be considered essential for a locomotive to idle to ensure an adequate supply of air for air brakes or for some other safety purpose, to prevent the freezing of engine coolant, to ensure that locomotive cab temperatures in an occupied cab remain within federally required guidelines, and to engage in necessary maintenance activities. The parties agree that necessary maintenance includes, but may not be limited to, fueling, testing, tuning, servicing, and repairing. Within 60 days after the Effective Date, the Participating Railroads may submit to ARB for consideration a more exhaustive listing of necessary maintenance activities that require extended idling, which shall be used in enforcement of this Program Element. An unoccupied locomotive shall include either an individual locomotive with no personnel on-board, or the trailing locomotives in a consist where only the lead locomotive

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has personnel on-board. It shall be considered essential for an unoccupied locomotive not equipped with an automatic idling-reduction device to idle when the anticipated idling period will be less than 60 minutes. The Participating Railroads shall make efforts to notify train crews of anticipated wait times for such events such as train meets, track repair, emergency activities, etc. which could result in idling events greater than 60 minutes.

(f) Participating Railroads' Idling Reduction Training Programs. Within 90 days after the Effective Date, the Participating Railroads and ARB agree to establish procedures, training and any other appropriate educational programs necessary to implement and execute the provisions of this section. ARB will provide the necessary training for ARB inspectors and, if a district desires to participate in this Program Element, for inspectors from local districts. The Participating Railroads will provide the necessary training for locomotive operators, local rail yard and regional dispatchers, and any other appropriate rail yard employees. Such training shall include instruction that appropriate rail yard employees shall shut down locomotives not equipped with idling-reduction devices if they become aware that nonessential idling will exceed 60 minutes. The Participating Railroads and ARB shall undertake efforts to assure compliance with the provisions of this section, including maintaining records of training. The Participating Railroads and ARB shall make every reasonable effort to minimize the amount of time to complete this training. Information on the establishment, implementation (including training schedules), and compliance with the training components of this subsection, and any other information the railroad or ARB may deem necessary, shall be provided to the designated ARB representative within 120 days of the Effective Date of this Agreement, and every April thereafter.

(g) Participating Railroads' Rail Yard Idling Reduction Program Coordinators. This subsection applies to the rail yards listed in Attachment A (the "Designated Yards"), plus the rail yards listed in Attachment B (the "Covered Yards"). To implement the standards established by this section, the Participating Railroads will establish a single point of contact (a Program Coordinator) for all Covered Yards who will be responsible for maintaining and providing records required to demonstrate compliance with this section. The name and contact information for the program coordinator for each Covered Yard shall be provided to ARB within 30 days after the Effective Date.

(h) Idling Reduction Program Community Reporting Process. Within 60 days after the effective date and in conjunction with ARB and local residents, the respective Participating Railroad shall establish a process at each Covered Yard in the state for informing members of the community regarding how they can report excessively idling locomotives and notifying them of what actions have been taken by the railroad in addressing any identified problems.

(i) ARB Locomotive Idling-Reduction Enforcement Program. A detailed enforcement protocol to determine the specific procedures for enforcing this Program Element will be developed by ARB no later than December 31, 2005, and updated as necessary, to ensure that each ARB or participating air district staff who is enforcing the provisions of this Program

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Element is knowledgeable of the provisions, intent and protocols governing this section. Each notice of violation (NOV) issued for this Program Element shall include a detailed description of the alleged violation, including time, identification and location of the locomotive; all facts relating to subsection (b) (in the case of locomotives equipped with automatic idling-reduction devices); and all facts relating to subsection (d) (in the case of locomotives not equipped with automatic idling-reduction devices). If possible, every NOV shall include the Program Coordinator's acknowledgment of receipt of the railroad's copy of the notice by fax or otherwise. Copies of notices for violation of this Program Element will be provided to the Program Coordinator (or designee) upon completion or as soon as practical if the contact is not available. For an NOV issued by an air district, the district shall, within 48 hours, mail, fax or electronically transmit a copy of the NOV to the designated ARB representative. ARB shall have sole authority to assess or modify a penalty, to waive any penalty or to determine that no violation has occurred under this Program Element. In the event of a dispute between ARB and the Participating Railroad concerning a penalty, either party may activate the appeal procedures set forth in subsection (a)(iii) of Program Element 10.

**2. Early Introduction of Lower Sulfur Diesel in Locomotives.**

*The goal of this Program Element is to achieve emission benefits from the use of cleaner, lower sulfur on-highway diesel fuel in locomotives earlier than is required under existing federal and California regulations.*

(a) Supply of Lower Sulfur On-Highway Diesel Fuel to Locomotives within California. The Participating Railroads agree to maximize the use of lower sulfur on-highway diesel fuel in locomotives operating in California, and agree to ensure that, after December 31, 2006, at least 80 percent of the fuel supplied to locomotives fueled in California meets the specifications for either California diesel fuel (CARB diesel) or U.S. EPA on-highway diesel fuel.

(b) Nothing in this Program Element 2 is intended to supersede title 13, California Code of Regulations ("CCR"), section 2299, or title 17, CCR, section 93117.<sup>2</sup>

**3. Visible Emission Reduction and Repair Program.**

*The goal of this Program Element is to ensure that the incidence of locomotives with excessive visible emissions is very low, so that the compliance rate of the Participating Railroads' intrastate and interstate locomotive fleets operating within California is at least 99 percent. This Program Element will also ensure that a locomotive with excessive visible emissions is repaired expeditiously.*

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<sup>2</sup> These regulations have been adopted by the California Air Resources Board, and submitted to the California Office of Administrative Law ("OAL") for approval. OAL has until July 5, 2005 to make a determination.

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(a) Fleet Average Performance Standard for Visible Emissions. Within 60 days after the Effective Date, the Participating Railroads shall establish and provide ARB with a detailed statewide visual emission reduction and repair program. This program shall be designed to ensure that the visible emissions compliance rate for each of the Participating Railroads is at least 99 percent of the Participating Railroads' intrastate and interstate locomotive fleets that operate within California, and that locomotives with excessive visible emissions are repaired in a timely manner.

(b) Statewide Visual Emission Reduction and Repair Program Components. The statewide visual emission reduction and repair program established by the Participating Railroads pursuant to subsection (a) shall include all of the following components, at a minimum:

(i) An annual inspection of each locomotive that operates in California either through the use of an opacity meter or a certified Visible Emissions Evaluator.

(ii) A process whereby any locomotive observed by any qualified railroad employee as having excessive visible emissions is expeditiously sent either for testing through the use of an opacity meter or a certified Visible Emissions Evaluator or to a repair facility pursuant to subsection (vii).

(iii) The annual number of visible emission locomotive inspections in the yards and in the field that each railroad commits to conduct in order to develop a base case for determining compliance with the applicable standard(s).

(iv) Provisions that the inspectors conducting inspections for the Participating Railroads under this subsection will maintain qualifications as "Visible Emissions Evaluators."

(v) Provisions that identify and screen locomotives exceeding a steady state opacity measurement of 20 percent and to repair locomotives that exceed the currently applicable visible emissions standards. "Steady state" excludes start-up, shut-down and transitional states.

(vi) The currently applicable visible emissions standard.

(vii) Provisions for routing locomotives operating in California with excessive visible emissions to the nearest Participating Railroad's repair facility within 96 hours. If travel along its scheduled route will take a locomotive with excessive visible emissions out of the state, it is the intent of the Participating Railroads to repair the locomotive expeditiously, and commit that in no event shall the locomotive reenter California without appropriate testing and

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repairs having been made. Units that have been identified as having excessive visible emissions may be returned to service after demonstrating compliance with appropriate locomotive certification standards. Locomotive emissions occurring during test and repair operations shall not be considered subject to the opacity or emissions standards.

(viii) Provisions for training key employees<sup>3</sup> and reporting locomotives with excessive visible emissions, as prescribed in subsection (f) of this Program Element.

(ix) Provisions to promptly meet and confer on any disagreements between the Participating Railroad and ARB relating to the Program.

(c) Visible Emission Inspection and Repair Program Recordkeeping Requirements. As part of its visual emission reduction and repair program, each Participating Railroad shall record the locomotive manufacturer, model number, certification standard, unit number, test(s) performed, date, time and location of test(s), inspection or excessive visible emissions and the results of such tests. For each locomotive (including those locomotives that were repaired out of state) identified as having excessive visible emissions, the Participating Railroads shall also record which additional test(s), if any, were performed, where the defect(s) was corrected, what defect(s) was repaired, and when the unit was returned to service. These records will be retained for a period of no less than two years.

(d) Report on the Number of Visible Emissions Inspections. Within 90 days after the Effective Date, and every April thereafter, the Participating Railroads shall provide to the designated representative of ARB the total number of visible emissions inspections conducted by the railroad and the results of those inspections, and other information the railroad or ARB may deem reasonably necessary.

(e) Failure to Meet Compliance Standard. If, in any calendar year, a Participating Railroad's visible emissions compliance rate is less than the 99 percent performance standard specified in subsection (a), the affected Participating Railroad and ARB will meet and confer to agree on additional measures necessary to return the locomotive fleet to the performance standard.

(f) Training Requirements for Key Employees for Each Covered Yard. Within 90 days after the Effective Date, the Participating Railroads agree to develop and implement a training program for key employees for each Covered Yard in the State. Additionally, the Participating Railroads agree to have personnel who are certified as "Visible Emissions Evaluators" present at or near the Designated Rail Yards where locomotives are

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<sup>3</sup> Examples include managers, supervisors and dispatchers.

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maintained. Key elements of the training program include opacity inspection training to identify excessively smoking locomotives and development of company procedures explaining how an employee will report locomotive units exceeding opacity limits. The Participating Railroads shall make every reasonable effort to complete this training expeditiously.

(g) Report on Training Information. Information on the establishment, implementation (including training schedules), and compliance with the training components of this subsection shall be provided within 120 days after the Effective Date of this Agreement, and every April thereafter.

(h) Annual Review of Visible Emission Inspection and Repair Program. At least once each year, representatives of each Participating Railroad shall meet with the designated representative of ARB to review trends and issues in the locomotive visible emission inspection and repair program under this Program Element and to consider possible adjustments to the program.

(i) Participating Railroads' Visible Emission Inspection and Repair Program Coordinators. Within 30 days after the Effective Date, the Participating Railroads will establish a single point of contact (a "Program Coordinator") for each Covered Yard in the State with assigned employees who will be responsible for maintaining and providing records required demonstrating compliance with this section, including tracking units that have been reported as deviating and making certain that reported locomotives are corrected. The Program Coordinator may be an employee or a contractor. The Participating Railroads shall promptly forward the name and contact information of the selected program coordinators to the designated ARB staff.

(j) Community Reporting Process. Within 60 days after the Effective Date and in conjunction with ARB, the local district and local residents, the respective Participating Railroad shall establish a process at each Covered Yard for informing members of the community on how they can report locomotives which they believe have excessive visible emissions and notifying them of what actions have been taken by the railroad in addressing any identified problems.

**4. Early Review of Impacts of Air Emissions from Designated Yards.**

*Feasible measures that can be implemented to reduce the impact of air emissions from rail yards should be pursued expeditiously. The goal of this Program Element is to expedite the implementation of actions that are feasible in the Designated Yards.*

(a) Early Review of Existing Impacts of Air Emissions from Rail Yards. Within 120 days after the Effective Date, each Participating Railroad will review the air emissions from each of the Designated Yards identified on Attachment A to determine if feasible changes could lessen the impacts of locomotive and associated rail yard equipment emissions in adjacent residential neighborhoods while maintaining the Participating Railroad's ability to operate the yard efficiently. As part of this review, the Participating Railroads shall meet with

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members of the community and local air districts to discuss the concerns of the community and ways to address their concerns.

(b) Early Evaluation of Feasible Mitigation Measures at Rail Yards. Within 180 days after the Effective Date of this Agreement, the Participating Railroads shall provide ARB with a progress report on how the Participating Railroads plan to implement feasible mitigation measures in the Designated Yards. Measures which should be considered include, but are not limited to, providing a greater buffer between emission sources and the community, local modifications to the Participating Railroads' system-wide idling requirements for anticipated low temperatures, and efficiency measures that reduce emissions. ARB and the Participating Railroads shall meet and confer as appropriate to expeditiously finalize the draft Plan.

(c) Meeting on the Health Risk Assessment Data. Within 60 days after finalization of a health risk assessment developed under Program Element 5 below, ARB, the air district, community member representatives and the Participating Railroads will meet to discuss the findings of the health risk assessment and to discuss the concerns of the community. The plan developed under subsection (b) shall be updated to include any additional feasible measures identified in the Designated Yards.

(d) Annual Updates on the Implementation of Mitigation Measures at Rail Yards. At least once each year, the Participating Railroads will meet and confer with the appropriate ARB, air district, and community member representatives with a progress report, which will include any new alternative practices or other feasible actions that have been implemented in the Designated Yards (including measures implemented under other provisions of this Agreement). ARB and the Participating Railroads shall also meet and confer to update the plan developed under subsection (b) to include any additional feasible measures identified in the Designated Yards.

**5. Assessment of Toxic Air Contaminants from Designated California Rail Yards.**

*ARB, the local air districts and the Participating Railroads have worked collaboratively to start developing uniform statewide criteria and guidelines for the evaluation of toxic air contaminants from rail yards in California. Many factors may influence the risks from toxic air contaminants at a particular rail yard, including population density, rail yard activity, rail yard diesel engine population and meteorology, all of which make the extrapolation of findings from one rail yard to another difficult. The goal of this Program Element is to conduct evaluations at all Designated Yards expeditiously in order to identify the risk from toxic air contaminants that these rail yards represent in relation to risks represented by other sources in the affected communities.*

(a) ARB Criteria and Guidelines. ARB will continue to develop criteria and guidelines for the identification, monitoring, modeling and evaluation of toxic air contaminants from Designated Rail Yards throughout California. ARB will continue to work collaboratively

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with affected local air districts, cities, counties and the Participating Railroads to develop consistent, comprehensive and accurate criteria and guidelines for use in evaluating toxic air contaminants from Designated Yards and other sources in the affected communities statewide.

(b) Collection of Data for Overall Health Risk Assessment. Within 90 days after the Effective Date, the Participating Railroads shall submit a proposed study plan which provides an outline and timeline of components and data that will be provided to ARB in order that a health risk assessment may be completed for each Designated Yard. The timeline set forth in the proposed study plan will provide for a staggered start of the health risk assessments to better manage the associated financial and administrative burdens. Based on the study plan submitted by the Participating Railroads and approved by ARB, the railroads or their contractors will assemble the required information regarding Designated Yards at their reasonable expense for half of the Designated Yards within 18 months of the approval of the study plan, and for all of the Designated Yards within 30 months of the approval of the study plan, as set forth in Attachment A. At a minimum, for each Designated Yard, this information shall include rail yard specific activity data, an emission inventory of any resident or transient major diesel equipment (including locomotives, on- and off-road vehicles, and non-road engines) operating in the rail yard, dispersion modeling results (concentrations) of diesel emissions, collection of appropriate meteorological and demographic data, and any other information deemed reasonable and appropriate by the Participating Railroads and ARB. ARB will be responsible for assembling the required information for other sources significantly affecting the community. The Participating Railroads and ARB agree to meet and confer as to the specific nature of the data reasonably necessary for completion of the health risk assessment for the affected community, including the selection of an appropriate model(s), data formats and prioritization of the Designated Yards to be evaluated.

(c) Health Risk Assessments. After receiving the data provided in subsection (b), or any other appropriate data, ARB shall complete draft health risk assessments for the communities affected by each of the Designated Yards. The draft health risk assessments shall be performed using a methodology deemed appropriate by ARB and, to the extent possible, consistent with previous health risk analyses involving rail yards performed by ARB.

(d) Release of Health Risk Assessment Findings and Further Actions. Upon completion of a draft health risk assessment, ARB, the local air district, representatives from the affected community and the Participating Railroads will meet and confer to discuss the draft results. Within 90 days after the completion of each health risk assessment, ARB and Participating Railroads will meet and confer to finalize the risk assessment and 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.

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**6. Funding of Mitigation Measure Components in the Agreement.**

*Because many of the mitigation measures specified in the Agreement will come at some expense, the parties agree that they will work cooperatively to seek any available private and public funding sources.*

(a) Potential Funding Sources for Mitigation Components in the Agreement.

Potential funding sources for the mitigation components contained in this Agreement, whether specifically identified or potentially to be included in the future after a feasibility determination, include, but are not limited to:

- (i) The Participating Railroads and other industries.
- (ii) The Carl Moyer program.
- (iii) U.S. EPA programs, including the West Coast Diesel Collaborative.
- (iv) Any other similar, innovative or available private and public funding sources, including funding jointly sought by both the Participating Railroads and ARB.

**7. Agreement to Evaluate Remote Sensing to Identify High-Emitting Locomotives.**

*Several studies have been conducted with motor vehicles to demonstrate technology that can identify high-emitting in-use vehicles along roadways. It has been suggested that this same technology can be similarly employed to identify emissions from in-use locomotives along sections of track. However, to date, only one study has been conducted on locomotives, and it was not designed to demonstrate the ability to identify emissions from locomotives in relation to federal certification levels. The goal of this Program Element is to evaluate the feasibility of using this technology to measure emissions from in-use locomotives.*

The parties agree to implement a locomotive remote sensing pilot program based on AB 1222 (Jones), as amended as of May 27, 2005. If AB 1222 passes the Legislature as amended on May 27, 2005, and is signed by the Governor, carrying out the provisions of that Act will serve as the pilot project in lieu of this Program Element. If the bill fails passage, is altered from its May 27th version or is not signed by the Governor, the parties agree to meet by no later than January 1, 2006 and discuss how to implement this Program Element.

**8. Agreement to Evaluate Other, Medium-Term and Longer-Term Alternatives.**

*This Agreement will implement the foregoing currently available and feasible mitigation measures at rail yards. EPA has commenced a further rulemaking regarding "Tier 3"*

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*locomotive emission standards, which, together with existing and potential technologies, could achieve greater than a 90 percent reduction in diesel particulate matter emissions from locomotives at uncontrolled levels. It is also envisioned that additional measures will be deemed to be feasible. The goal of this Program Element is to ensure that the evaluation and implementation of feasible mitigation measures continues expeditiously.*

(a) Diesel Particulate Filters and Oxidation Catalysts. The parties previously agreed to cooperatively evaluate the feasibility of developing Diesel Particulate Filters or Oxidation Catalysts for use on Roots Blown switcher engines. This Agreement included provisions for the Participating Railroads to commit up to \$5 million dollars towards this evaluation. Within 120 days after the Effective Date, the parties will determine whether to continue this evaluation. Unless the parties agree to terminate the evaluation before it is completed, the evaluation, including recommendations on the feasibility of this technology, shall be completed by December 31, 2005. A detailed description of the evaluation findings to date, as well as an assessment of the current application of this technology to locomotives in Europe, will also be completed by December 31, 2005.

(b) Funding Sources for Additional Other, Medium- and Longer-Term Alternatives. To date, the diesel particulate filter and oxidation catalyst study identified above in subsection (a) has expended approximately \$1.5 million. Upon completion or termination of this study, the Participating Railroads will propose to the Executive Officer a spending plan for, at a minimum, putting any remaining funds towards the evaluation or implementation of the projects identified below in subsection (c) or of other elements required by this Agreement. Approval of the plan will be at the discretion of the Executive Officer. The parties will also work cooperatively to assure the full use of other potential funding sources for the evaluation of the projects identified below in subsection (c).

(c) Additional Measures. The parties agree to continue to meet and confer to evaluate additional measures that are feasible at the Designated Rail Yards. The initial list of possible measures includes:

(i) Accelerated replacement of line haul locomotives operating outside of the South Coast Air Basin with lower emitting locomotives.

(ii) Retrofit or rebuild of existing line haul locomotives with lower emitting technology.

(iii) The use of other lower-emitting technologies, such as LNG- or CNG-fueled locomotives, truck engine switch locomotives or battery/electric hybrid switch locomotives in Designated Yards.

(iv) Retrofit of non-locomotive diesel rail yard equipment with diesel particulate filters or other diesel particulate matter emission reduction devices.

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(v) The use of cleaner fuels, including alternative diesel fuels.

(d) Meetings to Evaluate Future Potential Measures. Technical evaluation meetings will occur no less frequently than every 6 months and will be held at a time and place of mutual convenience. Community leaders, local air districts and other interested parties will be invited to attend these meetings and offer their perspectives. Within 30 days after the second meeting, the parties will jointly prepare a brief written progress report on these consultations and make the information available to any interested parties.

**9. Compliance Reporting.**

*The goal of this Program Element is to develop effective compliance reporting for all Program Elements in this Agreement.*

(a) Development of Compliance Reporting Protocols. Within 180 days after the Effective Date, the parties intend to develop a mutually acceptable compliance reporting and inspection protocol. The parties also shall meet and confer as needed regarding the sufficiency of the data provided under this Agreement.

(b) Commitment to Program Reviews. The parties will conduct periodic joint program effectiveness reviews on all elements of this Agreement upon a party's reasonable request and will consider modifying each of the Program Elements as field results are developed and reviewed.

(c) Development of Program Review Protocol. Additionally, within 180 days after the Effective Date, the Participating Railroads will develop a review protocol to ensure the highest level of program effectiveness. ARB will be asked to review and comment on the draft protocol. The results of the Participating Railroads' summarized submittals under the Program Elements in this Agreement will be provided to ARB no less than once a year.

**10. Enforcement and Penalties.**

*The goal of this Program Element is to assure compliance with certain Program Elements specified in this Agreement.*

(a) Individual Violations.

(i) Noncompliance with Idling Provisions. Violations of Program Element 1(b) or (d) (Locomotive Idling Performance Standards) or Program Element 3(b)(vii) (repair of locomotives with excessive visible emissions) of this Agreement occurring on or after September 30, 2005 shall be assessed on an individual locomotive basis (by locomotive identification number) during each calendar year according to the following schedule:

- \$400 for the first violation on any day during a calendar year.

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- \$800 for the second violation on any subsequent day during the same calendar year.
- \$1,200 for the third and any subsequent violation on any subsequent day(s) during the same calendar year.

(ii) Noncompliance with other Provisions. For all other individual violations of Program Elements specified in this Agreement, ARB will notify the Participating Railroad of any alleged noncompliance, and will provide the Participating Railroad a reasonable opportunity to remedy the alleged noncompliance. If the Participating Railroad fails to remedy the alleged noncompliance within a reasonable time, ARB may assess a penalty up to the amounts specified in subsection (a) for each day of alleged noncompliance during a calendar year.

(iii) Appeal to Administrative Law Judge or Mediator. A Participating Railroad may review all information relating to an alleged violation, may present additional information and defenses and may appeal alleged violations to an independent mediator. The parties agree to develop an efficient and fair appeal process under this subsection (a) within 90 days after the Effective Date. The adjudicatory official in the process shall be an independent mediator or arbitrator selected in a manner to be determined by the parties. The parties agree to share any costs associated with any such appeal equally. Any penalties received for violations of Program Elements specified in this Agreement will be deposited into the Carl Moyer Program account and will be distributed to the air district where the violation occurred.

(iv) Repeated Individual Violations. If ARB determines that a Participating Railroad has repeatedly committed individual violations of this Agreement in a manner that substantially impairs the goals of this Agreement, it shall meet and confer with the Participating Railroad. If, after conferring with ARB, a Participating Railroad's pattern of noncompliance is confirmed, ARB may seek the penalties provided in subsection (b) of this Program Element.

(b) Penalties for Failure to Meet Program Requirements. Failure by a Participating Railroad to implement the necessary steps to meet the performance standards, training and/or compliance date requirements specified in:

- Section 1(a) [Installation of Automatic Idling Reduction Devices];
- Section 1(f) [Idling Reduction Training Program];
- Section 2(a) [Supply of Lower Sulfur On-Highway Diesel Fuel];
- Section 3(a) [Establishment of Visible Emission Reduction and Repair Program];
- Section 3(f) [Visible Emission Training Requirements for Key Employees at Each Rail Yard];

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- Section 4 [Review of Operating Practices in Each Designated Yard]; or
- Section 5 (b) [Collection of Data for Overall Health Risk Assessment],

where such failure substantially impairs the goals of this Agreement, shall result in the following penalties:

(i) After 30 calendar days beyond the compliance date: up to \$10,000.

(ii) After 60 calendar days beyond the compliance date up to 180 days after the compliance date: up to \$20,000 per month.

(iii) After 180 calendar days beyond the compliance date and beyond: up to \$40,000 per month.

(iv) The penalties prescribed above will be waived if meeting a performance standard, training requirement and/or compliance date within this Agreement was not possible due to unforeseen and/or uncontrollable circumstances on behalf of the Participating Railroad(s). In the event that unforeseen or uncontrollable circumstances prevent a Participating Railroad from complying with any of the sections of this Agreement cited above, every reasonable effort will be made by the Participating Railroad to inform ARB as soon as possible, and shall include an explanation of the circumstances for noncompliance and how compliance will be achieved in the most expeditious manner.

(v) In determining the amount of the penalties prescribed above, ARB or any administrative appeals panel convened under section 11(a) below shall take into consideration all relevant circumstances, including, but not limited to, the extent of harm caused by the violation, the compliance history of the Participating Railroad involved under this Agreement, and the corrective action taken by the Participating Railroad.

If ARB reaches a preliminary determination that a Participating Railroad has substantially failed to meet a performance standard, training and/or compliance date requirement under this Agreement, as specified in this subsection (b), ARB shall provide notice to the Participating Railroad. ARB and the Participating Railroad shall meet and confer regarding the determination within 30 days of receipt of ARB's notification. If ARB and the Participating Railroad do not reach agreement after such consultation, within 30 days ARB and the Participating Railroad shall submit their respective positions to an administrative appeals panel, in accordance with the procedures set forth in section 11(a).

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(c) Enforcement of Existing Visible Emission Statutes and Regulations.

Nothing in this Agreement shall limit the ability of ARB or a local air district to cite a Participating Railroad for visible emission violations as prescribed under any other appropriate, federal, state or local regulation or statute nor shall the Agreement affect the rights and defenses of a Participating Railroad.

**11. Administration**

(a) Consultation and Arbitration. In the event of a dispute concerning the meaning, implementation or enforcement of this Agreement, the party seeking to clarify or enforce this Agreement shall provide notice to the other party or parties affected. ARB and the Participating Railroad(s) involved shall meet and confer regarding the determination within 30 days after receipt of notification. If ARB and the Participating Railroad(s) do not reach agreement after such consultation, within 30 days ARB and the Participating Railroad(s) involved shall submit their respective positions to an administrative appeals panel. The panel shall be comprised of one member selected by ARB, one member selected by the Participating Railroad(s), and a third member selected by the initial two members. The panel shall evaluate evidence provided by the parties, shall make decisions by majority vote, and shall render its decision as expeditiously as practicable under the circumstances. If the panel finds in favor of ARB, it shall take into consideration the conduct of the Participating Railroad(s) during the pendency of the dispute, and determine whether the Participating Railroad(s) should be assessed a penalty for the period during which the matter was in dispute, considering the factors listed in section 10(b)(v). Any party dissatisfied with the outcome of the administrative appeals process may seek de novo review of the disagreement in any court of competent jurisdiction located in California. If judicial review is not sought, then the decision of the appeals panel will be binding on the parties. Each party to proceedings hereunder shall bear its own costs and fees, except that the costs and fees of the administrative appeal panel shall be split evenly among the participating parties.

(b) Full Understanding of the Parties.

(i) This Agreement constitutes all understandings and agreements among the parties with respect to the Program Elements in this Agreement, and supersedes all prior oral or written agreements, commitments or understandings with respect to the Program Elements in this Agreement. This Agreement shall be interpreted according to the laws of the United States and internal laws of the State of California.

(ii) A Participating Railroad may at any time initiate informal consultations with ARB to identify and resolve concerns or other issues regarding compliance with this Agreement. ARB may at any time initiate informal consultations with either or both of the Participating Railroads to identify and resolve concerns or other issues regarding Participating Railroad compliance with this Agreement. All parties to the Agreement agree to meet to discuss and

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negotiate any revisions to the Agreement which, in the judgment of any party, are needed to address significant changes in circumstances or to assure that this Agreement continues to accomplish the objectives of the parties. Nothing in this Agreement shall limit the ability of ARB or Participating Railroads to meet and confer, upon 30 days notice, to replace or modify one or more Program Elements of this Agreement with further agreements that meet the goals and purposes of this Agreement.

(iii) No amendment to the Agreement shall be binding on the parties unless in writing and signed by authorized representatives of all parties. Parties shall not be responsible for failure to perform the terms of the Agreement where nonperformance is based upon events or circumstances that are beyond the reasonable control of the nonperforming party, and the events or circumstances affect a Participating Railroad's ability to comply with the terms of the Agreement.

(c) Release from Obligations of this Agreement. The parties agree that the Participating Railroads shall not be required to comply with more than one agreement, regulation, statute or other requirement to meet the same goal of any Program Element contained in this Agreement. If any agency proposes to adopt any requirement addressing the goal of any Program Element set forth in this Agreement and affecting any area in California, the parties agree to meet and confer regarding any such proposal before the Participating Railroads take any action that would otherwise release them from their obligations under this Agreement. The parties agree that the Participating Railroads shall perform all obligations set forth in the Program Elements of this Agreement, unless (i) an agency or political subdivision of California adopts or attempts to enforce any requirement addressing the goal of any Program Element set forth in this Agreement (other than ARB enforcement of this Agreement) and affecting any area in California, or (ii) U.S. EPA adopts or attempts to enforce more stringent requirements addressing the goal of any Program Element set forth in this Agreement and affecting any area in California. At any time when any of these events occurs, the Participating Railroads may elect in their sole discretion to be released from their obligations under the specific Program Elements of this Agreement that address the same goal as any such requirements, *provided* that the Participating Railroads shall notify ARB at least 30 days in advance of their election. Nothing in this Agreement shall limit the rights of a Participating Railroad to challenge in any forum any requirement addressing the goal of any Program Element set forth in this Agreement.

(d) Rights and Responsibilities under this Agreement. Except as otherwise provided with regard to enforcement of visible emissions under Program Element 3, ARB is designated as the agency responsible for enforcement of the obligations undertaken by the Participating Railroads under this Agreement. The parties agree that the measures expressly identified in Program Element 10 are the exclusive remedy for any breach of this Agreement, and that the Participating Railroads' obligations under this Agreement cannot be enforced by an order for specific performance or similar injunction. Nothing in this Agreement shall modify

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any existing rights of the public or any person or entity not a party to this Agreement. This Agreement does not create any new rights to any person or entity not a party to the Agreement.

(e) Notice. By notice given to the person listed on the signature page, the parties may specify the name of the person to whom notice must be given to satisfy any notification requirement of this Agreement.

(f) Unless terminated in writing by mutual agreement of the parties, this Agreement shall remain in effect until December 31, 2015.

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*IN WITNESS WHEREOF, the parties have executed this Agreement as of June 30, 2005.*

CALIFORNIA AIR RESOURCES  
BOARD, an agency of the State of  
California

  
\_\_\_\_\_  
Signature

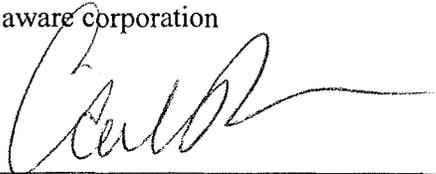
Catherine Witherspoon  
\_\_\_\_\_  
Name (printed)

Executive Officer  
\_\_\_\_\_  
Position

June 24, 2005  
\_\_\_\_\_  
Date:

Address for notice:  
1001 "I" Street  
P.O. Box 2815  
Sacramento, CA 95812

THE BNSF RAILWAY COMPANY, a  
Delaware corporation

  
\_\_\_\_\_  
Signature

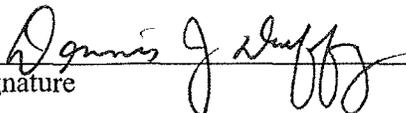
Carl Ice  
\_\_\_\_\_  
Name (printed)

Executive Vice President, Operations  
\_\_\_\_\_  
Position

June 23, 2005  
\_\_\_\_\_  
Date: June 23, 2005

Address for notice:  
2650 Lou Menk Drive, Second Floor,  
Fort Worth, TX 76131-2830

UNION PACIFIC RAILROAD  
COMPANY, a Delaware corporation

  
\_\_\_\_\_  
Signature

Dennis J. Duffy  
\_\_\_\_\_  
Name (printed)

Executive Vice President of Operations  
\_\_\_\_\_  
Position

June 23, 2005  
\_\_\_\_\_  
Date:

Address for notice:  
1400 Douglas Street  
Omaha, NE 68179

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**ATTACHMENT A**  
**DESIGNATED YARDS**

<b>YARDS FOR WHICH A HEALTH RISK ASSESSMENT HAS BEEN COMPLETED UNDER PROGRAM ELEMENT 5</b>		
<b><u>Yard Name</u></b>	<b><u>Operated By</u></b>	<b><u>Address</u></b>
Roseville	UPRR	

<b>YARDS FOR WHICH RAILROADS WILL ASSEMBLE DATA WITHIN 18 MONTHS AFTER THE EFFECTIVE DATE UNDER PROGRAM ELEMENT 5</b>		
<b><u>Yard Name</u></b>	<b><u>Operated By</u></b>	<b><u>Address</u></b>
Commerce	UPRR	4341 E. Washington Blvd., Commerce, CA 90023
Hobart	BNSF	3770 East Washington, Los Angeles, CA 90023
Commerce/Eastern	BNSF	Eastern Avenue, Commerce, CA
Watson/Wilmington	BNSF	1302 Lomita Boulevard Wilmington, CA 90744
LATC	UPRR	750 Lamar Street Lamar, CA 90031
Mira Loma	UPRR	4500 Etiwanda Avenue Mira Loma, CA 91752
Richmond	BNSF	303 Garrad Avenue Richmond, CA 94801

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Stockton	BNSF	
Stockton	UPRR	833 East 8 <sup>th</sup> Street Stockton, CA 95206

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<b>YARDS FOR WHICH RAILROADS WILL ASSEMBLE DATA WITHIN 30 MONTHS AFTER THE EFFECTIVE DATE UNDER PROGRAM ELEMENT 5</b>		
Barstow	BNSF	200 North "H" Street Barstow, CA 92311
City of Industry	UPRR	17525 E. Areth Avenue, City of Industry, CA 91748
Colton	UPRR	19100 Slover Avenue Colton, CA 92316
Dolores/ICTF	UPRR	2401 E. Sepulveda Blvd., Long Beach, CA 90810
Oakland	UPRR	1408 Middle Harbor Road Oakland, CA 94607
San Bernardino	BNSF	1535 West 4th Street, San Bernardino, CA 92410
San Diego	BNSF	

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**ATTACHMENT B**  
**COVERED YARDS**

**1. All Designated Yards**

**2. UPRR additional yards:**

Anaheim

Fresno

Martinez

Milpitas

Montclair

Portola

Yermo

**3. BNSF additional yards:**

Fresno (Calwa)

Bakersfield

Pico Rivera

La Mirada

Needles

Pittsburg

Riverbank

Watson

**4.** If ARB subsequently determines that it would be appropriate to include additional yards as covered yards under this Agreement, ARB will notify the respectively affected Participating Railroads, and the parties will meet and confer regarding the inclusion of the identified rail yards on the list of covered yards.

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**ATTACHMENT C**

1. The Participating Railroads operate national locomotive fleets that travel between California and other states daily, currently moving more than 40 percent of the total intercity revenue ton-miles of freight in the United States. Railroad networks are geographically widespread across the country, serving every major city in California and the United States. Efficient train transportation is an important factor in California and national economy. Railroads continue to improve their efficiency and reduce emissions per ton-mile by utilizing more efficient locomotives, improving freight movement operations, and by other means.

2. Railroads need rail yards. Rail yards perform essential functions such as making up cross-country trains, transferring containers to and from trucks and testing and repairing locomotives. Rail yard operation, maintenance, repairs, modification and capacity improvements are also essential. The railroads have decommissioned and removed many rail yards in California since WWII. This has benefited the immediate neighbors and communities where rail yards have been removed. At the same time, the railroads have found ways to increase efficiency and reduce rail congestion within the remaining rail yards. Intermodal transfer facilities are a good example of technical improvements that benefit the economy and environment of California. California will need more new, well-sited, environmentally superior facilities like these in the near future.

3. ARB has conducted an initial risk-assessment study of the Roseville Rail Yard, and concluded that the magnitude of diesel PM emissions and the size of the area impacted by these emissions justified short- and long-term mitigation measures to significantly reduce diesel PM emissions at the rail yard. ARB believes that similar emissions and exposure levels may exist at other rail yards in the state. Therefore, ARB has determined that taking feasible, practicable, cost-effective actions to lower emissions associated with rail yard operations is both necessary and prudent.

4. Following public notice and opportunity for comment, the United States Environmental Protection Agency (EPA) promulgated final emissions standards applicable to new locomotives and new engines used in locomotives on April 16, 1998 (63 Fed. Reg. 18978) under Section 213 of the Federal Clean Air Act (the "Final EPA National Locomotive Rule"). EPA adopted national emission standards consisting of several tiers, applicable to locomotives as specified in the Final EPA National Locomotive Rule. These standards include Tier 0, 1 and 2 opacity standards that govern visible emissions from locomotives covered by the EPA standards. EPA promulgated each of these emission standards based on an evaluation of technology and costs at the time of promulgation of the rule.

5. The California Health and Safety Code designates ARB as the air pollution control agency "for all purposes set forth in federal law" (H&S Code § 39602). ARB has primary authority under California law to carry out the state's mobile source programs. For

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more than thirty years, ARB has adopted stringent emission standards applying to on-road and off-road vehicles under approved EPA waivers/authorizations of preemption. The railroads operate many ARB certified heavy-duty vehicles in California now and are anticipated to operate more of them to meet goods movement demand in the future.

6. To help attain state and federal air quality standards in the South Coast Air Basin (the "South Coast"), the railroads and ARB entered into the "MEMORANDUM OF MUTUAL UNDERSTANDINGS AND AGREEMENTS — South Coast Locomotive Fleet Average Emissions Program, dated as of July 2, 1998 ("1998 MOU") to implement the "Statement of Principles — South Coast Locomotives Program," agreed to by EPA, ARB, and the Participating Railroads, and dated as of May 14, 1997 ("1997 SOP"). All conditions to the effectiveness of the 1998 MOU were satisfied or removed and the 1998 MOU took effect on January 1, 2002 in accordance with its terms. The 1998 MOU has not been amended or terminated and remains in effect on the date of this Agreement. The railroads are implementing the 1998 MOU as anticipated.

7. To implement the 1998 MOU, the railroads are purchasing and/or installing clean locomotive technologies and preparing for the rollout of the cleanest available locomotive technologies certified by the EPA during 2005-2010 period in the South Coast. The binding and enforceable program in the 1998 MOU continues to set one of the most successful public-private partnerships to achieve clean air in California. To address more recent statewide concerns about major rail yards in California, the railroads and ARB now wish to enter into a further statewide agreement to build on the emission reduction benefits achieved by the 1998 MOU.

8. It has been widely recognized that railroads need consistent and uniform regulation and treatment to operate effectively. A typical line-haul locomotive is not confined to a single air basin and travels throughout California and into different states. The U.S. Congress has recognized the importance of interstate rail transportation for many years. The Federal Clean Air Act, the Federal Railroad Safety Act, the Federal Interstate Commerce Commission Termination Act and many other laws establish a uniform federal system of equipment and operational requirements. The parties recognize that the courts have determined that a relatively broad federal preemption exists to ensure consistent and uniform regulation. Federal agencies have adopted major, broad railroad and locomotive regulatory programs under controlling federal legislation. At the state level in California, the California Legislature has specifically limited the authority of local air districts to adopt regulations affecting the design of equipment, type of construction, or particular methods to be used in reducing the release of air contaminants from locomotives. (Health and Safety Code section 40702.) The Legislature has also specifically entrusted ARB to adopt regulations pertaining to locomotives. (Health and Safety Code sections 43013(b) and 43018(d)).

9. The parties agree that reductions in locomotive idling and the reduction in operational emissions from switch locomotives are feasible methods to reduce emissions of toxic air contaminants and to protect the health and welfare of citizens of California who live near rail yard operations in the state. The parties also recognize that operation of locomotives in the

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idling and switching modes is necessary for certain railroad operations. For example, it takes time to move railcars into line, and larger locomotives must wait while smaller yard locomotives assemble trains in the yard. By the same token, smaller locomotives must wait while larger road locomotives enter the yard, couple to trains and move trains safely out of the yard. The parties have determined that automatic idling-reduction devices are available for most locomotives and locomotive engines and that most of those devices should be able to limit idling to no more than 15 consecutive minutes.

10. Although the Participating Railroads have taken steps to reduce the amount of idling and switch locomotive emissions through introduction of new technologies, ARB has concluded that it is necessary to take additional steps to reduce idling on a uniform statewide basis. ARB has determined that it has authority to identify toxic air contaminants and adopt Airborne Toxic Control Measures (ATCMs) to reduce emissions from such contaminants, such as ARB's recent control measure that requires intrastate locomotives to exclusively use CARB diesel fuel starting in January 2007.

11. To address the emissions impact from rail yards across the state expeditiously, the parties agree that it is in the state's best interest to establish a statewide program that implements a uniform and consistent approach for controlling emissions of toxic air contaminants from rail yards. Statewide action is appropriate for several reasons:

(a) ARB has the resources, knowledge, and expertise to conduct a statewide program addressing toxic air contaminants from California rail yards.

(b) A uniform statewide approach would ensure that emissions from rail yards throughout the state are reduced and that all neighboring local communities receive the benefits of the reductions. At the same time, it would afford the Participating Railroads a consistent and effective way to address the emissions at its facilities.

(c) ARB has over the years been effective in developing locomotive emission reduction programs in California. ARB was the agency in California that developed, negotiated and is implementing the 1998 Memorandum of Understanding with the Participating Railroads providing for the introduction of the cleanest available locomotives in the South Coast Air Basin by 2010. The 1998 South Coast Locomotive MOU is one of the most innovative and aggressive programs for turning over an entire fleet of mobile sources anywhere.

(d) Based on the railroads' performance since the 1998 MOU, the parties anticipate that the 1998 MOU and this ARB/Railroad Statewide Agreement will ensure that feasible measures to reduce emissions of toxic air contaminants from rail yards are achieved in the most expeditious manner. ARB and the railroads wish to confirm all of their mutual understandings and agreements in the 1998 MOU and the 1997 SOP (as implemented in the 1998 MOU). Moreover, they wish to confirm and ensure that the 1998 MOU will remain fully in effect as executed and approved and that the 1998 MOU will continue to be implemented as anticipated without interference.

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12. It is in the best interest of the State and its affected communities and the railroads to rely on the MOU process as the principal means to continue to make progress in reducing emissions in the future. ARB believes that this can best be accomplished through continuing cooperative efforts between the Participating Railroads and ARB that ensure statewide actions and involve communities in expanding on yard-specific assessment and mitigation efforts. All parties agree that they will continue to meet and confer so that this can be accomplished.

# EXHIBIT 3



**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](http://www.arb.ca.gov)



**Edmund G. Brown Jr.**  
Governor

December 4, 2013

Mr. Carl R. Ice  
President and Chief Operating Officer  
BNSF Railway  
2650 Lou Menk Drive, 2<sup>nd</sup> Floor  
Fort Worth, Texas 76131-2830

Mr. Lance Fritz  
Executive Vice President, Operations  
Union Pacific Railroad  
1400 Douglas Street  
Omaha, Nebraska 68179

Dear Mr. Ice and Mr. Fritz:

Over the past three years, BNSF Railway and Union Pacific Railroad (the Railroads) and the Air Resources Board (ARB or Board) have worked together to develop proposed agreements, known as the Railyard Commitments, to reduce diesel particulate matter emissions at four high priority railyards in Southern California. The Board held a public hearing on the draft Commitments in June 2010 and delegated authority to the Executive Officer to conduct the required environmental analysis and make a determination, based on that analysis, on the Commitments.

I have decided not to approve the Commitments, but rather initiate a public process that can lead to a more holistic path for reducing emissions from rail and other freight operations. The decision is driven by my belief that we need to explore more comprehensive vehicles for achieving long-term emission reductions from the freight sector, including rail operations. For example, the Scoping Plan Update provides a public platform to describe the need for a sustainable freight strategy to transition to a cleaner, more efficient freight system in California and a process to get there.

Over the past fifteen years, the Railroads have in good faith continued to meet or exceed obligations and responsibilities under the 1998 and 2005 Railroad/ARB Agreements. Our collective efforts have yielded significant emission reductions and environmental benefits, especially in Southern California.

I believe we can tap into this effective collaboration as we look to the future. There is much more to do to meet all of California's environmental objectives. ARB is seeking to continue working closely with the Railroads, together with other interested stakeholders, to explore all options for achieving the greatest emission reductions possible from the freight system in California and to develop the most effective strategies for moving forward.

*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. Carl Ice and Mr. Lance Fritz  
December 4, 2013  
Page 2

I thank you and your staff for the time, resources, and energy invested in both developing the draft Commitments and successfully implementing the existing agreements. If you have any questions, please contact me at (916) 445-4383.

Sincerely,

  
Richard W. Corey  
Executive Officer

cc: Mary D. Nichols, Chairman  
Honorable Board Members

# EXHIBIT 4

California Environmental Protection Agency

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**Air Resources Board**

## **Update on the Implementation of the 2005 ARB/Railroad Statewide Agreement**



*Ultra Low Emissions Diesel Genset Switchers – UPY 2715 & 2749  
(UP City of Industry)*

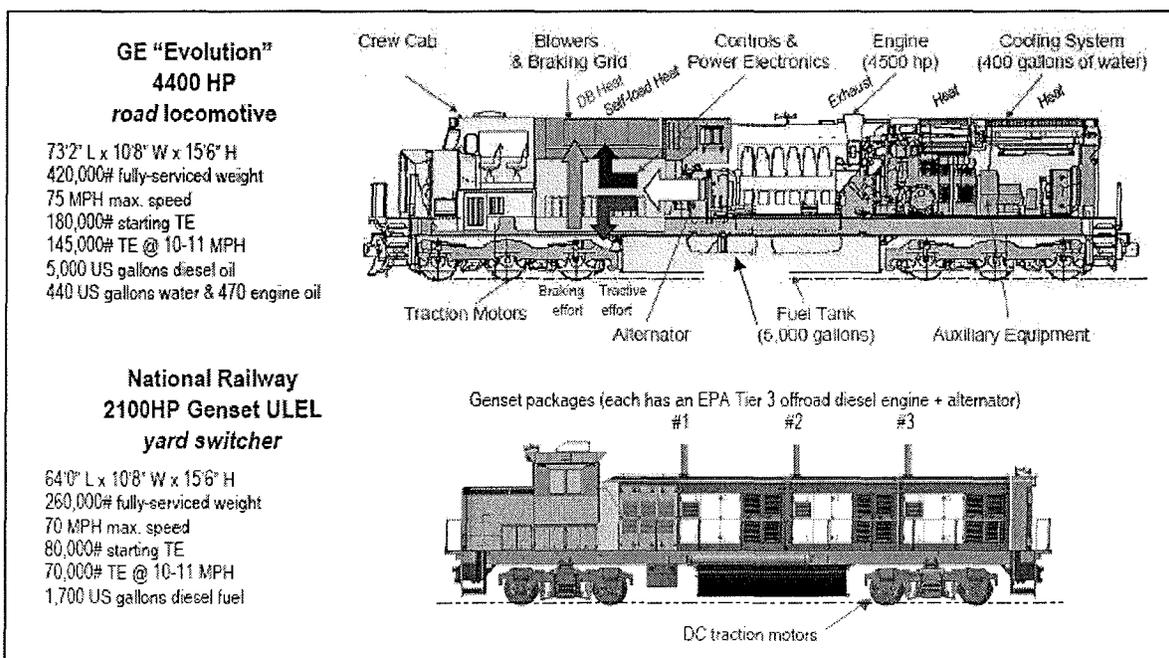
**Release Date: April 11, 2008**

## Front Cover Photo Details

	Front Cover	Compared to typical line haul / road locomotive
Manufacturer:	National Railway Equipment Company (NREC)	General Electric (GE) Company
Model:	3GS-21B (3-engine)	GE "Evolution"
Locomotive Type:	Switcher	Road or Line Haul
Emissions Level: (g/bhp-hr)	Tier 2+: NOx = 2.7, PM = 0.07, HC = 0.1, CO = 1.2 (see note A)	Tier 2: NOx=5.5, PM=0.20, HC=0.30, CO=1.5 (see note B)
Size:	62'6" L x 10'6" W x 16'3" H	73'2" L x 10'8" W x 15'6" H
Weight:	268,000 pounds	420,000 pounds
Max Speed:	~70 MPH	75 MPH
Engine Type (cycle):	Cummins QSK19, In-line 6, 4 cycle, diesel	GEVO V-12, 4 cycle, diesel
Horse Power:	~700 HP or 522Kw per engine or x 3 = ~2,100 HP (1,566 Kw) total	4,400 HP or 3,281 Kw
Total Engine Displacement :	~1,159 cubic inches (in <sup>3</sup> ) or 19 liters (L) per engine or x 3 = 2.0 ft <sup>3</sup> or 57 L	~ 6.7 cubic feet (ft <sup>3</sup> ) or ~ 190 Liters (L)
Number of Cylinders:	6 per engine	12
Single Cylinder Displacement:	~193 cubic inches (in <sup>3</sup> ) or 3.2 Liters (L)	~ 950 cubic inches (in <sup>3</sup> ) or ~ 15.7 Liters (L)
Rated Engine Speed:	1,500 – 2,000 RPM	1,050 RPM
Tractive Effort (pulling force starting):	~77,000 pounds	180,000 pounds
Tractive Effort (@ 10-11 MPH):	~52,000 pounds	145,000 pounds
Fuel Tank Volume:	1,700 - 2,900 gallons (diesel)	5,000 gallons (diesel)
Engine Cooling Fluid:	44 U.S. Quarts or 41.6 Liters (L) per engine or x 3 = 33 gallons	440 gallons (water)
Engine Oil:	80 U.S. Quarts or 76 Liters (L) per engine or x 3 = 60 gallons	470 gallons

A: U.S. EPA locomotive certification data - <http://www.epa.gov/omswww/certdata.htm#locomotive>, family - 7NREG0060LOC.  
 B: U.S. EPA Tier 2 locomotive emission standard – Final rule April 1998.

## Compared to typical line haul / road locomotive



Source: UP - GE Green Locomotive Technology Tour Presentation, February 20-28, 2007

**State of California  
California Environmental Protection Agency  
AIR RESOURCES BOARD  
Stationary Source Division**

**Update on the Implementation of the  
2005 ARB/Railroad Statewide Agreement**

**Date of Release: April 11, 2008  
Board Meeting Date: April 24, 2008**

**Location:**

**California Department of Transportation  
111 Grand Avenue  
1st Floor, Auditorium  
Oakland, California 94612**

This report has been reviewed by the staff of the Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

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## **Acknowledgments**

This report was prepared with the assistance and support from the other divisions and offices of the Air Resources Board.

In addition, we would like to acknowledge the assistance and cooperation that we have received from many individuals and organizations.

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Update On The Implementation Of The 2005 ARB/Railroad Statewide Agreement

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## I. SUMMARY

### A. Introduction

On June 24, 2005, the Executive Officer of the Air Resources Board (ARB or Board) entered into a statewide railroad pollution reduction agreement (Agreement) with Union Pacific Railroad (UP) and BNSF Railway (BNSF). This Agreement was developed to implement near term measures to reduce diesel particulate matter (PM) emissions in and around railyards by approximately 20 percent.

On January 27, 2006, the Board heard public testimony, accepted clarifications to the Agreement, received a status report on implementation of the Agreement, and directed staff to return with status reports. On July 20, 2006, January 25, 2007, and July 27, 2007, the Board received semi-annual status reports on the implementation of the Agreement. This document provides the fifth status report on the implementation of the Agreement covering a period of thirty months, with an emphasis on the implementation efforts that have occurred over the past six months.

### B. Progress on Implementation of the Agreement

Staff and the railroads began implementing the Agreement in July 2005. A summary of the status of the key implementation requirements is provided in Table 1. As Table 1 illustrates (see page 8), the railroads and staff have met, or are on schedule to meet, each of the requirements specified for the second year of implementation. Details on the progress made to implement the program elements are provided in Chapter II. Details on other efforts are provided in Chapter III. A review and summary of the recent promulgation of the U.S. EPA locomotive regulations is presented in Chapter IV.

#### 1. Implementation Activities

Summarized below are the key implementation milestones that have been accomplished within the past six months.

#### *Install Idle Reduction Devices On Over 99 Percent of Unequipped Intrastate Locomotives by June 30, 2008:*

- Since July 26, 2007, 15 new idle reduction devices have been installed on UP and BNSF's California-based locomotives. 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.

*Dispense CARB Diesel for all Intrastate Locomotives and a Minimum of 80 Percent Low Sulfur Diesel for Locomotives by January 1, 2007:*

- Staff's review of diesel fuel data from both railroads indicates that both railroads continue to comply with both:
  - The CARB diesel fuel regulation for intrastate locomotives; and
  - The Agreement's requirements to dispense a minimum of 80 percent low sulfur (15 ppmw) diesel fuel (CARB or U.S. EPA diesel fuel) to interstate locomotives fueled in California.

Today UP and BNSF are fully complying by dispensing virtually 100 percent ultra-low sulfur diesel in California. About 70 percent is CARB diesel and the remaining 30 percent is U.S. EPA ultra-low sulfur diesel fuel. This is well in excess of the requirements for fuel quality and is five years before U.S. EPA requirement that locomotives be fueled with 15 ppmw sulfur fuels.

*Visible Emission Reduction*

- Under the Agreement, the railroads are required to achieve a 99 percent compliance rate for visible emissions over a calendar year. Over the past six months, more than 21,691 visible emission inspections were performed by railroad personnel resulting in more than 64,000 visible emission inspections performed since June 2005. Overall, both UP and BNSF have maintained a 99 percent compliance rate since June 2005.
- Overall, about 4,600 employees in numerous classifications (e.g., managers, supervisors, dispatchers, etc.) have received visible emission evaluation training.

*Health Risk Assessments at Designated Yards*

- Under the Agreement, sixteen health risk assessments at designated railyards are required to be completed in two phases; nine in the first phase and seven in the second phase.
- Staff completed the first nine draft health risk assessments in May 2007. Public meetings were held in the affected communities in May and June 2007 to release and explain the draft assessments. Each initial meeting was followed about one month later by a second meeting to allow for questions and public comments and to discuss possible mitigation. After considering the public comments, staff finalized the first nine health risk assessments in November 2007.
- The assessments show that the diesel PM emissions from the railyards result in higher risks in nearby communities. The largest impacts are associated with the four railyards in the City of Commerce. The combined potential cancer risk from these four railyards is about 700 per million for an exposed population of 5,000 people and about 200 per million for an exposed population of about 80,000 people. The assessments for the other railyards have lower potential cancer risks and expose fewer people, but risks are still significant and need to be reduced.

Update On The Implementation Of The 2005 ARB/Railroad Statewide Agreement

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- The assessments also included estimated pollution risks from other sources around the railyards. The most significant source of toxic emissions is diesel truck traffic (not associated with the railyards) within a one to two mile zone surrounding the railyards. Generally, offsite diesel PM emissions from trucks result in similar or higher diesel PM exposures than the railyard-related emissions.
- In addition, staff began a separate, but parallel effort to develop an interim methodology to quantify the noncancer health benefits around the railyards and to identify and evaluate potential mitigation options needed to reduce the risks. ARB is currently working with OEHHA to develop an approved statewide methodology to quantify non-cancer health effects of diesel PM.
- The next seven health risk assessments are scheduled to be completed by mid 2008. The draft assessments for the UP railyards (i.e., City of Industry, Colton, ICTF/Dolores, and Oakland) were released in March 2008. The draft assessments for the three BNSF railyards (i.e., San Diego, Barstow, and San Bernardino) will be released in April 2008.
- Staff held initial public meetings in November 2007 to discuss additional mitigation measures for the ten railyard HRAs (Phase 1) that were finalized in November 2007. Staff will conduct additional public meetings this summer to discuss mitigation plans for each of the ten railyards. Also, staff will hold initial meetings for the seven remaining railyard HRAs (Phase 2) once they have been finalized.

Locomotive Remote Sensing Pilot Program

- Assembly Bill (AB) 1222, authored by Assemblyman Jones, was signed into law in 2005, and requires the ARB, in consultation with an advisory group, to develop a locomotive remote sensing pilot program.
- Staff has been working with an advisory group on a three phase test program to assess the ability of remote sensing to effectively and accurately measure locomotive emissions. The first phase of test program was designed to ensure that the equipment will work in practice. This first phase (Phase 1) was conducted at a locomotive test track in Pueblo Colorado and was completed in March 2007. Phase 1 testing revealed problems with the line haul remote sensing device which resulted in its operation being discontinued. The yard extraction remote sensing system, however, provided more favorable operation and the advisory committee decided to go forward with further utilization of that system before being applied to mainline operation. The advisory group concluded that additional evaluation of the yard extraction remote sensing system was needed to resolve technical issues before implementation of field testing in Phase 2.
- To address the technical issues, a second round of testing was conducted at the Pueblo test track in May 2007. Although there were still technical issues identified, the advisory group felt that the Phase 2 field testing should be pursued. In this phase, the equipment was located at specific sites within a railyard and along a railroad track to measure as many locomotives in the field

as possible to determine the potential of the equipment to identify gross polluters in the locomotive fleet. This testing occurred at the UP Colton railyard and a BNSF Cajon site in October 2007. Also, additional Phase 2 field testing was conducted in Northern California at Weimar in February 2008.

- Phase 3 was conducted jointly by Environmental Systems Products (ESP) and Southwest Research Institute (SwRI). This testing compares the remote sensing results to the approved federal locomotive test procedure to determine the accuracy of the measurements from the remote sensor. This testing occurred in February 2008. A final report is anticipated by mid 2008.

*Ongoing Evaluation of Other, Medium Term, and Longer Term Emission Control Measures for Existing Locomotives*

- Staff and the railroads agreed to cooperatively evaluate the feasibility of developing diesel particulate filters or diesel oxidation catalysts for use on a typical switch locomotive representative of the current California switcher fleet. UP and BNSF indicated they would commit up to \$5 million towards this evaluation. To date, about \$4 million of this funding has been expended on prototype and demonstration testing at Southwest Research Institute (SwRI) through January 1, 2008. The current status of efforts is summarized below.
  - The UP diesel particulate filter equipped switch locomotive (UPY 1378) arrived in Oakland, California back in October 2006. It started its field service in Oakland, California, and was later transferred to Roseville, California. The move to Roseville was prompted by the need to expose the locomotive to a higher activity level. In February 2008, after accomplishing more than 12 months of service, SwRI performed federal emissions testing.
  - The BNSF diesel particulate filter equipped switch locomotive is BNSF 3703. This locomotive recently received a second generation diesel particulate filter manufactured by HUG. Testing at the SwRI facility in San Antonio, Texas, continued through 2007. It is anticipated to arrive in Los Angeles, California, in mid 2008.
  - Emission testing for DPF equipped locomotives (UPY 1378 and BNSF 3703) shows PM reductions of 80 percent and HC reductions of 30 percent. Additional testing and development are ongoing to improve the efficiency of the DPFs.
  - If the current in-use demonstration testing is successful, both UP and BNSF have committed to retrofit one additional switch locomotive each and operate these locomotives in California.
- The U.S. EPA and UP began a test program in 2006 to demonstrate and test a diesel oxidation catalyst with an existing line haul locomotive by retrofitting a 3,800 horsepower line haul locomotive (UP 2368), built in 1992 by EMD (Model SD-60M), with a diesel oxidation catalyst. This locomotive was assigned to helper/hauler service in the Los Angeles basin in November 2006. Over the next twelve months, the locomotive compiled approximately 2,800 hours of field

Update On The Implementation Of The 2005 ARB/Railroad Statewide Agreement

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service. No significant impacts to engine performance (e.g., maintaining power, fuel penalty, and backpressure) have been noted at this time, but failures involving the catalyst elements did occur. During scheduled inspection intervals, three separate failures occurred involving the catalyst elements and their supports. Currently the DOC device is undergoing failure analysis by the manufacturer Miratec. UP 2368 continued to operate in service, but without the catalyst elements. Once Miratec completes its failure analysis and repair plan, the DOC will be reinstalled in early 2008 for continued testing.

- ARB recently funded a contract with Southwest Research Institute (SwRI) to research a compact SCR system offered by Engine Fuel and Emissions Engineering, Inc. (EF&EE) with catalysts parts supplied by Haldor Topsoe, a Danish Catalyst Company. The SCR device tested by SwRI was a urea-SCR catalyst technology retrofitted to an EMD 12-710G3 engine at SwRI's test facility. By November 2007, the initial engine tests (e.g., baseline, backpressure, and crankcase blowby) were completed and the SCR device was installed to perform preliminary SCR testing. During performance testing, significant issues occurred ranging from structural design to improper urea dosing. EF&EE is currently working to address these issues.
- ARB and the railroads conducted the first semi-annual technology symposium on April 25, 2006, at the ARB offices in El Monte. The second symposium occurred on July 13, 2006, at the Cal/EPA building in Sacramento. A report summarizing the two symposiums was released in December 2006. The third technology symposium was held on June 6, 2007, and a fourth technology symposium held on November 28, 2007. A report summarizing the two symposiums held in 2007 will be released by mid 2008.

### Enforcement of the Agreement

- In the second half of 2007, the ARB Enforcement staff visited the 31 designated and covered railyards and inspected 1,015 locomotives and issued 29 notices of violation for idling infractions and one notice of violation issued for a smoking locomotive. For comparison in the first half of 2007, Enforcement staff inspected 964 locomotives and issued 40 notices of violation for idling. Since inspections began in 2006, Enforcement staff have inspected 3,299 locomotives and issued 103 notices of violation.

## **2. Other Activities**

As discussed in Chapter III, staff and the railroads have been engaged in activities not specifically required in the 2005 Agreement. These are summarized below.

### Modernization of Locomotive Fleet

Mostly in response to the 1998 Railroad Agreement to reduce locomotive NOx emissions in the South Coast, both UP and BNSF have made significant progress to

transition to advanced technology line-haul and switch locomotives that have or will operate in California. Together, the two railroads have done the following:

- The combined railroads are currently operating about 9,900 new and rebuilt Tier 0, 1, and 2 locomotives. Of those, about 2,100 locomotives are expected to meet Tier 2 standards by the end of 2008. In total, UP and BNSF have over 65 percent of their 15,000 national locomotive fleet meeting at least Tier 0 standards and 49 percent are equipped with idle reduction devices.
- Since 2005, 12 new electric-hybrid, ultra low emitting, locomotives (Green Goats) have been placed into service in California. Eleven are located in the Los Angeles area and one is located in Northern California (Fresno). These locomotives were recently returned to the manufacturer (Railpower) to remedy a potential fire hazard associated with the large bank of 300 lead-acid batteries. These locomotives are in the process of being upgraded so they can be reintroduced into revenue service.
- In southern California, UP now has 61 ultra low emitting Gen-set switch locomotives operating in the Los Angeles basin. These 61 Gen-sets were funded by UP. These new ultra low-emitting switch locomotives will provide up to a 90 percent reduction in NOx and diesel PM emissions when compared to the higher emitting older switch locomotives that are replaced.
- In northern California, BNSF has 11 Gen-sets in their fleet that are located Richmond (6) and San Joaquin Valley (5). By June of 2008, four UP Gen-set switch locomotives are scheduled to arrive and be assigned to the UP Roseville railyard. These fifteen northern California Gen-set locomotives were co-funded by the railroads and the ARB's Carl Moyer Program.
- Today there are 72 gen-sets, 12 Green Goats, and 4 LNG locomotives operating in California service. Another four gen-sets are expected to be in service by June of 2008. A goal in the goods movement strategy is to upgrade the rest of the intrastate switching fleet to ultra-low emitting emission levels by 2010.

#### Community Complaint Process

- Both railroads have established and implemented procedures to process, handle, and respond to community complaints. The systems operate 24 hours a day and 365 days a year. Mechanisms are in place to track and forward complaints to appropriate company staff to respond.
- In the last six months, both railroads have received a combined average of 29 idling complaint calls per month. By comparison, for the first six months of 2006 both railroads received a combined average of 27 idling complaint calls per month.

#### **C. U.S. EPA Rulemaking**

The U.S. EPA released its proposed draft Tier 4 locomotive and marine rulemaking in April 2007 with a public comment period until July 2, 2007. In July 2007 the ARB staff and many other parties provided comments on the U.S. EPA proposed locomotive

rulemaking. ARB's comments were supportive of most elements included in the April 3, 2007 proposal, but suggested significant acceleration of the implementation schedule (see link - <http://www.arb.ca.gov/railyard/ryagreement/0707epaloco.pdf>). On March 14, 2008, the U.S. EPA formally announced its final locomotive and marine rule.

U.S. EPA's final locomotive rulemaking sets new Tier 4 new line haul locomotive standards for PM and NOx in 2015. The standards require emission reductions for new locomotives of 85 and 75 percent, respectively, below current Tier 2 standards. In addition, Tier 3 new line haul locomotive standards for PM will be required in 2012 and provides a 50 percent reduction beyond the Tier 2 PM standard. Existing Tier 0-2 line haul locomotives will be required to provide about a 50 percent PM (relative to current levels) reduction upon remanufacturing beginning in 2008 through 2013. Further, existing Tier 0 line haul locomotives will be required to provide about a 16 to 22 percent NOx reduction by when they are rebuilt. Finally, idle emission controls are required for newly manufactured and remanufactured locomotives.

The California State Implementation Plan relies upon the U.S. EPA program to provide both highly effective and expeditious pollution reductions from locomotives. The new federal locomotive emission standards will eventually provide the level of reductions needed, but they will not provide California with the necessary emission reductions in the timeframes needed for initial attainment of federal standards for PM 2.5.

Consequently, a combination of strategies to more expeditiously reduce locomotive emissions, including replacement of switch locomotives, exhaust aftertreatment retrofits on older line haul locomotives, and acceleration of the introduction of new Tier 4 interstate line haul locomotives in California service need to be pursued. Accordingly, the ARB staff will need to continue to work with U.S. EPA, the railroads, and other stakeholders to identify innovative ways to accelerate the reduction of locomotive emissions in California.

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**Table 1  
Implementation Status of Individual Program Elements**

PROGRAM REQUIREMENTS	2005	2006	2007	2008					
				Mar	Apr	May	Jun	July	Dec
<b>IDLING REDUCTION</b>									
Program Coordinators	✓								
Locomotive Inventories	✓	✓	✓						
Community Reporting Process	✓								
Railroad Training Programs	✓								
Adjudicatory Appeal Process	✓								
Training Implementation Status	✓	✓	✓						
Percent Idle Reduction Device Install Requirement - 35% 2006, 70% 2007, >99% June 2008		✓	✓						
<b>VISIBLE EMISSION (VE)</b>									
Program Coordinators	✓								
Program Establishment	✓								
Community Reporting Process	✓								
Railroad Training Programs	✓								
VE Inspection Report	✓	✓	✓						
Training Implementation Status	✓	✓	✓						
Annual Program Review	✓	✓	✓						
<b>EARLY REVIEW OF EMISSIONS / MITIGATION</b>									
Emission Inventory	✓								
Community Meetings (Due Date 10/31/05)		✓							
Mitigation Plans	✓								
<b>HEALTH RISK ASSESSMENTS</b>									
Railroad Study Plan	✓								
Health Risk Assessment Guidelines		✓							
Health Risk Assessments (two phases: Phase 1 - Final, Phase 2 - Draft = 2D, Phase 2 - Final = 2F)				1	2D	2D			2F
<b>TECHNICAL ASSESSMENTS</b>									
Continue Study of Diesel Particulate Filter and Diesel Oxidation Catalysts	✓	✓	✓						
Diesel Particulate Filters and Diesel Oxidation Catalysts Use -Europe & U.S.	✓								
Remote Sensing Pilot Program (Original Due Date 12/31/06)*	✓	✓	✓						▪
Public Meetings (Due Date 12/31/05)	✓	✓	✓						
Joint Report on Public Meetings		✓							
<b>COMPLIANCE</b>									
Inspection / Program Review Protocols	✓								
Railyard Inspections - Idle Reduction Devices & Visible Emissions - semiannual		✓	✓						

✓ = Satisfied or ongoing per Agreement requirements. (May have reoccurring future date requirements specified in Agreement), ▪ = Future milestone date.  
\* = AB 1222 Remote Sensing Pilot Program – Initiated by 12/31/05; Report to Legislature original due date 12/31/06, estimate completion by mid 2008.

## II. UPDATE ON THE IMPLEMENTATION OF THE AGREEMENT

Staff and the railroads began implementing the Agreement in July 2005. As presented in Table 1, the railroads and staff have met the requirements that are specified for the first year and a half of implementation of the Agreement. The key program elements are identified below:

- Idle Reduction Program;
- Low Sulfur Diesel Fuel Program;
- Visible Emission Reduction Program;
- Health Risk Assessments at Designated Railyards Program;
- Ongoing Evaluation of Other, Medium-Term, and Longer-Term Emission Control Measures.

This chapter more fully describes the progress made to date with an emphasis on the last six months.

### A. Idle Reduction Program

#### 1. Requirements of the Agreement

Under the Agreement, intrastate and interstate locomotives must limit non-essential idling through the use of automated idle reduction devices or by manually shutting down engines to prevent non-essential idling in excess of 60 consecutive minutes. Essential idling is defined as idling necessary to:

- Ensure adequate air brake pressure for locomotive and railcars;
- Ensure other safety related purposes;
- Prevent freezing of engine coolant;
- Ensure compliance with federal guidelines for occupied locomotive cab temperatures; and
- Engage in necessary maintenance activities.

The preferred method of all parties to reduce non-essential idling is the use of automated idle reduction devices. Under the Agreement, where locomotives are equipped with idle reduction devices, non-essential idling is limited to no more than 15 consecutive minutes. For locomotives not equipped with idle reduction devices, locomotives are to be shutdown as soon as it is clear that essential idling is not required and, in no case, is non-essential idling to exceed more than 60 consecutive minutes. In those situations where there is uncertainty over the expected duration of idling, the railroads are obligated to make efforts to notify their train crews if the anticipated wait time could be greater than 60 consecutive minutes so that train crews can shut down their locomotive(s). Railroad training programs are required to inform and educate train crews and other railroad operational employees about the need to faithfully observe the restrictions on idling.

## 2. Installation of Idle Reduction Devices

The railroads are on schedule to meet the commitments to install idle reduction devices on their intrastate locomotive fleets. Specifically, the railroads were to install idle reduction devices on their unequipped locomotives with the final goal of installing idle reduction devices on at least 99% of these locomotives by June 30, 2008.

In the last six months, the railroads installed 15 idle reduction devices on unequipped locomotives. As shown in Table 2, these additional installations bring the total number of idle reduction devices installed on unequipped locomotives to about 95 percent by January 31, 2008. The installation rate is expected to achieve the greater than 99 percent requirement by June 30, 2008, as required by the Agreement.

**Table 2**  
**Annual Requirements for Installation of**  
**Idle Reduction Devices on Unequipped Locomotives - March 2008**

Year	Number Of Locomotives (Intrastate Fleet)	Cumulative Number of Idle Reduction Devices Installed	Percent Achieved
2005	428	117 <sup>1</sup>	NA
2006	438	113	35%
2007	450	379	80%
2008	413	394*	95%

1. Number of idle reduction devices installed at Agreement signing.

\* As of March 2008. Expect 99% by June 30, 2008 as required by MOU.

Based on the information provided by the railroads, there are now 413 intrastate locomotives operating in the State. This represents a decrease in total intrastate locomotives from 450 in 2007 (438 in 2006 and 428 in 2005). As can be seen in Table 3, 96 percent of the 413 intrastate locomotives in California operation are now equipped with idle reduction devices. This is more than twice the rate of installations that have occurred to date in the rest of the country. Staff expects that the Agreement will ensure that progress in California will continue to be accelerated relative to the rest of the nation.

**Table 3**  
**Installation of Idle-Reduction Devices on**  
**All California Intrastate Locomotives Relative to National Fleet**

California Switcher & Local Fleet			National Switcher & Local Fleet		
Current Inventory	Installed By June 30, 2007	Percent of Fleet*	Current Inventory	Installed By June 30, 2007	Percent of Fleet*
413	398	96%	3,421	1,499	44%

### 3. Idle Reduction Training Programs

The training of locomotive operators and other appropriate railroad employees on the idling provisions and requirements of the Agreement is an ongoing process. Since some employees, such as dispatchers and potentially some train crews, are impacted by the Agreement but may not be stationed in California, a significant number of railroad employees outside of California have also been trained on the idling provisions and requirements of the Agreement and are included in this total. Nearly 9,700 railroad employees have been trained or have been scheduled for training by January 31, 2008, as provided in Table 4.

**Table 4  
Number of Railroad Employees Trained Regarding  
the Idle Reduction Program**

<b>Employee Classification</b>	<b>Idle Training by June 30, 2007</b>
Managers	219
Supervisors	188
Dispatchers	46
Response Center	21
Train Crews	6,298
Mechanical	716
Other	18
<b>Total Trained</b>	<b>9,696</b>

#### B. Low Sulfur Diesel Fuel Program

Effective January 1, 2007, the Agreement requires both railroads to dispense CARB diesel fuel only to the 418 intrastate locomotives. Under this regulation, staff estimates that about seven percent of the total diesel fuel dispensed to locomotives in California by both railroads is required to be CARB diesel. Staff estimates that both railroads have used CARB diesel for nearly 70 percent of the diesel fuel dispensed to locomotives in California, or nearly ten times the volumes required under the regulation.

Under the 2005 Agreement, the railroads also agreed to dispense a minimum of 80 percent of low sulfur level (15 ppmw) diesel fuels, either CARB or U.S. EPA onroad, to locomotives fueled in California. This low sulfur diesel fuel requirement in the 2005 Agreement also became effective on January 1, 2007. Staff estimates that both railroads' dispensed 99 percent or greater volumes of low sulfur (15 ppmw) diesel fuel to their locomotives fueled in California in during 2007. Note that the diesel fuel types and volumes dispensed to locomotives can fluctuate based on fuel market conditions and business practices.

To ensure compliance, staff reviewed both railroad's diesel fueling records and discussed fuel shipments with California's major pipeline operator. In addition, fuel testing by ARB was able to confirm the types and quality of diesel fuels dispensed in

major railyards. Based on these assessments, staff is confident that the railroads continue to comply with both sets of California's locomotive diesel fuel requirements which became effective January 1, 2007.

**C. Visible Emission Reduction Program**

The railroads have been conducting visible emission inspections over the past year as specified under their visible emission reduction and repair programs as shown in Table 5. Locomotives operating in California and exceeding a steady state opacity measurement of 20 percent must be sent to maintenance facilities to determine whether repairs are needed to comply with applicable visible emission standards as set forth in the national railroad regulation.

Under the Agreement, the railroads are required to achieve a 99 percent compliance rate for visible emissions over a calendar year. The railroads became subject to the opacity compliance level on January 1, 2006. In the last six months, over 21,691 visible emission inspections were performed by BNSF and UP. Visible emission inspections for both BNSF and UP since June 2005 to now are compiled in Table 5. The overall compliance rate for the three types of visible emission inspections performed is 99 percent. The locomotives that failed were repaired to meet Federal opacity standards.

**Table 5  
Results of Visible Emission Inspections  
Cumulative Total Since June 2005**

<b>BNSF &amp; UP</b>	<b>Certified Opacity Meter</b>	<b>Certified U.S. EPA Method 9</b>	<b>Non- certified Visible</b>	<b>Total</b>	<b>Overall Compliance Rate</b>
<b># Inspected</b>	9,325	37,743	17,819	64,887	99%
<b># passed*</b>	9,324	37,463	17,732	64,519	

\* Opacity not greater than 20 percent

**1. Visible Emission Reduction Training Programs**

Similar to the idle reduction program, both railroads have submitted information on the development of their visible emission reduction and repair training programs, and their plans to train appropriate railroad staff regarding the programs. Both railroads have been conducting their training programs over the past two years. The railroads have indicated they intend to train the same staff (i.e., managers, supervisors, dispatchers, response center, train crews, mechanical, and other) as trained on the provisions of the idle reduction program. Information on the railroads' visible emission reduction and repair training programs has been posted on the ARB railyard website under "Railroad Submittals" ([www.arb.ca.gov/railyard/ryagreement/rsubmittal.htm](http://www.arb.ca.gov/railyard/ryagreement/rsubmittal.htm)).

The number of employees trained by January 31, 2008, for both railroads is shown in Table 6. Employees outside of California are also being trained because they either work with or operate locomotives that operate in the State. Overall, since June 2005, over 4,600 employees in numerous classifications (e.g., managers, supervisors, dispatchers, etc.) have received visible emission evaluation training.

**Table 6  
Number of UP and BNSF Employees Trained  
Cumulative Total Since June 2005**

<b>Certified U.S. EPA Method 9</b>	<b>Non-Certified VE Training</b>	<b>General Awareness Training</b>	<b>Total</b>
248	710	3,712	4,670

**D. Health Risk Assessments at Designated Yards Program**

**1. Requirements of the Agreement**

In the 2005 Agreement, staff and the railroads committed to prepare health risk assessments (HRAs or assessments) for 16 designated railyards. This was done to quantify pollution risk levels near railyards, identify specific emission sources, and to allow development of measures to reduce health risks. The assessments were to be completed in two phases; nine in the first phase and seven in the second phase. To facilitate this effort, draft health risk assessment guidelines were completed in July 2006.

For the first time for these railyards, it was possible to use health risk assessments to estimate pollution exposures and resulting potential lifetime cancer risks associated with railyard activities. Health risk assessments do not gather information or health data on specific individuals, but provide estimates for the potential health impacts on a population at large. The health risk assessment process uses standardized general assumptions designed to assure that public health is fully protected. In this case, the assumptions used in the health risk assessments were a residential setting with the exposed population living at the same location for 70 years, doing moderate activity outdoors for 24 hours a day, for 350 days of the year. The information derived from the railyard health risk assessments also serves as a basis to identify the greatest opportunities for emission reduction measures.

One of the first tasks in performing a railyard health risk assessment is to quantify air toxic emissions released within a railyard and significant sources of air toxic emissions nearby the railyard. Railyard emission data are developed for the activities occurring in the railyards. This is the responsibility of the railroad that operates the railyard, and subject to ARB review and approval. These included emission estimates for line haul locomotives, switch locomotives, cargo handling equipment such as cranes and fork lifts, trucks, light duty vehicles, generators, off-road fueled equipment, and fuel storage tanks. Also the geographical and temporal distribution of these emissions are documented. To support dispersion modeling, meteorological data are summarized.

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Dispersion modeling is then conducted. The results of all of this work are then are presented to ARB staff. The ARB staff uses this data, in conjunction with other sources of information, to characterize the distributions of emissions within the railyards and significant sources of emissions nearby the railyard (e.g., freeways, refineries, trucks operating outside the railyard). Using this information, staff prepares estimates of air pollution exposure and develops the health risk assessments.

**2. Revised Schedule for Completion of All Health Risk Assessments**

The first nine draft health risk assessments were released in May 2007 and finalized in November 2007. The second group of draft health risk assessments are scheduled to be completed by mid 2008. Table 7 identifies the schedule for completion of the health risk assessments at the 16 designated railyards.

**Table 7  
Schedule for Completing Health Risk Assessments**

Final Health Risk Assessments November 2007		Draft Health Risk Assessments to be Completed by <i>March/April, 2008</i>	
Railyard	Company	Railyard	Company
Commerce (Eastern/Sheila)	BNSF	Barstow <sup>2</sup>	BNSF
Hobart	BNSF	San Bernardino <sup>2</sup>	BNSF
Richmond	BNSF	San Diego <sup>2</sup>	BNSF
Stockton	BNSF	Colton <sup>1</sup>	UP
Wilmington (Watson)	BNSF	Dolores (ICTF) <sup>1</sup>	UP
Commerce	UP	Industry <sup>1</sup>	UP
LA (LATC)	UP	Oakland <sup>1</sup>	UP
Mira Loma	UP		
Stockton	UP		

1. Draft HRA's released March 2008
2. Draft HRA's scheduled to be released in April 2008

**3. The First Nine Railyard Health Risk Assessments**

Assessments for nine designated railyards, and one additional non-designated railyard (BNSF Sheila), were finalized in November 2007. ARB staff prepared the health risk assessment portions of the draft HRAs. UP and BNSF provided the railyard emissions inventories and exposure modeling pursuant to ARB guidelines. The railyard HRAs are similar to the assessments for the UP Roseville Railyard (2004) and the combined Port of Los Angeles and Port of Long Beach (2006).

Staff and the railroads held public meetings to present the results of the first nine draft HRAs in May and June 2007. At the meetings, staff and the railroads discussed what we learned, what is being done to reduce railyard pollution, and answered questions. The release of the draft HRAs was followed by at least a 30 day public comment period. Following the comment period, a second series of community meetings were held in

late June and early July to: 1) allow another opportunity for comment and questions, and 2) to seek community suggestions on how best to further reduce emissions. Based on these results, ARB finalized the first nine HRAs. We are now in the early stages of working with the railroads, local air pollution control districts, and communities to identify additional feasible mitigation measures that can be implemented to reduce diesel PM emissions.

#### **4. Health Risks from Exposure to Toxic Air Pollutants**

The staff estimates that the excess cancer risk from breathing toxic air contaminants (TACs) in ambient air in the South Coast Air Basin is on the average, about 1,000 per million in the year 2000. Potential cancer risk in the San Francisco Bay Area and the San Joaquin Valley are about one-third lower. About 70 percent of this risk is attributed to one TAC, diesel particulate matter (diesel PM). The average regional risk for diesel PM in urban areas was between 500 to 800 excess cancers per million in the year 2000.

Emissions from freight transport activities, also called goods movement, are a very significant source of diesel PM in California. These sources include ships, trucks, locomotives, and cargo handling equipment. Some residential areas are in close proximity to ports, railyards, and freeways where many diesel fueled sources operate. In these areas, increases in cancer risk from nearby diesel sources are often significant. In a few cases, the localized risk can double and be as great as the regional background levels. The concentration of diesel PM in the air declines rapidly with distance from any one source, and the impact of even a large facility, measured as a percent of the regional risk level, is much smaller for those living a mile or more from the source area.

#### **5. Results of the First Nine Railyard Health Risk Assessments**

The assessments show that the diesel PM emissions from the railyards result in significantly higher pollution exposure and related risks in nearby communities. The largest impacts are associated with the four railyards in Commerce. Diesel PM emissions from these four yards (combined) were about 40 tons per year in 2005. This is about 0.5 percent of the regional diesel PM emissions, and much less than the emissions at the basin's ports. However, the Commerce yards emissions are concentrated and occur next to and generally upwind of the city's populated areas. The elevated exposures result in an estimated 70 percent increase in exposure to TACs (over regional levels) for about 5,000 local residents. Exposure increases from the other yards in the Los Angeles area are significantly less and fewer people are highly impacted<sup>1</sup>. Risk increases range from about 5 to 20 percent increase over regional levels. Consistent with the findings of Roseville Railyard Study (ARB, 2004), the cancer risks decrease significantly within a one mile distance from railyards.

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<sup>1</sup> HRA reports and fact sheets are available at <http://www.arb.ca.gov/railyard/hra/hra.htm>

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In the first group of assessments finalized in November 2007, staff also estimated pollution risks from other sources of diesel PM. The major emission source is diesel truck traffic in a one to two mile zone around each railyard. Generally, offsite diesel PM emissions result in similar or higher diesel PM exposure than railyard related emissions. A summary of diesel PM emissions from each railyard and air basin regional levels is presented in Table 8.

**Table 8**  
**Summary of Railyard, Port, Off-Site, and Air Basin Diesel PM Emissions (2005)**

<b>PORT OR RAILYARDS</b>	<b>FACILITY Diesel PM (Tons Per Year)</b>	<b>OFFSITE* Diesel PM (Tons Per Year)</b>	<b>AIR BASIN Diesel PM (Tons Per Year)</b>
<b>Los Angeles Region</b>			
Port of LA and Long Beach	1,760	N/A	7,800
Four Commerce Yards Combined	40	113	
UP LATC	7	33	
UP Mira Loma	5	31	
BNSF Watson	2	5	
<b>Other Areas</b>			
UP and BNSF Stockton Combined	10	10	4,000
BNSF Richmond	5	20	4,600
UP Roseville	25 <sup>1</sup>	N/A	2,400

\* Off-site diesel PM emissions were estimated within 1 mile of the railyard boundaries, except for the four Commerce railyards in which diesel PM emissions were estimated within 2 miles of the railyard boundaries. <sup>1</sup> Locomotive diesel PM emissions only.

**6. Draft Results from the Second Set of Railyard Health Risk Assessments**

The draft emissions inventories for UP (ICTF/Dolores, Colton, City of Industry, Oakland) and BNSF (San Bernardino, Barstow, and San Diego) railyards, along with UP Roseville (released in 2004), and the first ten railyard HRAs finalized in November 2007 are presented in Table 9. The draft HRAs also estimate exposure (population) impacts from other sources of diesel PM, such as truck traffic, within a one-mile zone around each railyard. The seven railyards also have significantly less exposure impact than the four Commerce railyards due to a lower population within their vicinity. However, BNSF San Bernardino has near source areas (less than ¼ mile from the north-eastern portion of the railyard) with diesel PM cancer risks equal to the South Coast Air Basin regional average background cancer risk level of 1,000 in a million.

A detailed draft summary of diesel PM emissions from eighteen railyards is presented in Table 9. This table identifies the primary emission sources within the railyard and grouped by air district or region of the state.

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**Table 9**  
**Diesel PM Emissions from Eighteen Major California Railyards**  
**(tons per year)**

Railyard	Locomotive	Cargo Handling Equipment	On-Road Trucks	Others (Off-Road Equipment, TRUs, Stationary Sources, etc.)	Total <sup>§</sup>
<b>South Coast Air Quality Management District</b>					
BNSF Hobart	5.9	4.2	10.1	3.7	<b>23.9</b>
UP ICTF/Dolores <sup>1</sup>	9.8	4.4	7.5	2.0	<b>23.7</b>
BNSF San Bernardino <sup>1</sup>	10.6	3.7	4.4	3.4	<b>22.0</b>
UP Colton <sup>1</sup>	16.3	N/A	0.2	0.05	<b>16.5</b>
UP Commerce	4.9	4.8	2.0	0.4	<b>12.1</b>
UP City of Industry <sup>1</sup>	5.9	2.8	2.0	0.3	<b>10.9</b>
UP LATC	3.2	2.7	1.0	0.5	<b>7.3</b>
UP Mira Loma	4.4	N/A	0.2	0.2	<b>4.9</b>
BNSF Commerce Eastern	0.6	0.4	1.1	1.0	<b>3.1</b>
BNSF Sheila	2.2	N/A	N/A	0.4	<b>2.7</b>
BNSF Watson	1.9	N/A	<0.01	0.04	<b>1.9</b>
<b>Bay Area Air Quality Management District</b>					
UP Oakland <sup>1</sup>	3.9	2.0	1.9	3.4	<b>11.2</b>
BNSF Richmond	3.3	0.3	0.5	0.6	<b>4.7</b>
<b>San Joaquin Valley Unified Air Pollution Control District</b>					
UP Stockton	6.5	N/A	0.2	0.2	<b>6.9</b>
BNSF Stockton	3.6	N/A	N/A	0.02	<b>3.6</b>
<b>San Diego Air Pollution Control District</b>					
BNSF San Diego <sup>1</sup>	1.6	N/A	0.007	0.04	<b>1.7</b>
<b>Mojave Desert Air Quality Management District</b>					
BNSF Barstow <sup>1</sup>	27.1	0.03	0.04	0.75	<b>27.9</b>
<b>Placer County Air District/Sac Metro AQMD</b>					
UP Roseville <sup>2</sup>	25.1	N/A	N/A	N/A	<b>25.1</b>
STATEWIDE RY TOTAL	136.8	25.3	31.2	17.0	<b>210.1<sup>§</sup></b>
Statewide RY Percent	65%	12%	15%	8%	<b>100%</b>

1. Draft results from second set of railyard HRAs. Final HRAs for these railyards are expected by mid 2008.
2. UP Roseville Health Risk Assessment (ARB, 2004a) was based on 1999-2000 emission estimate, only locomotive diesel PM emissions were reported in that study. The actual emissions were estimated at a range of 22 to 25 tons per year.

## **7. Actions to Reduce Diesel PM Emissions In and Around Railyards**

The recently developed health risk assessments confirm that diesel PM levels, both regionally and near ports, freeways and railyards, are far too high, and provide additional reasons to move as rapidly as possible to implement the control programs that have already been initiated. In 2000, ARB adopted a Statewide Diesel Risk Reduction Plan. Recognizing the problems posed by the rapid growth in freight movement, the Board adopted a Goods Movement Emission Reduction Plan (GMERP) in 2006. One of the elements of the GMERP is to reduce locomotive emissions by up to 85 percent by 2020.

ARB's efforts to comprehensively reduce locomotive and railyard emissions include voluntary agreements, state and federal regulations, and incentive mitigation programs, including early replacement of California's line haul and yard locomotive fleets (see Fact Sheet Strategies to Reduce Locomotive and Associated Railyard Emissions, <http://www.arb.ca.gov/railyard/hra/hra.htm>).

Locomotives represent between one-third and to almost 100 percent of the diesel PM emissions at the designated railyards. Large classification railyards like UP Roseville and Colton and BNSF Barstow generate almost their entire diesel PM emissions from locomotives, with line haul and yard switcher locomotives split evenly in their contributions. Large intermodal railyards like BNSF Hobart and UP ICTF/Dolores have about a 1/3 split between locomotive, cargo handling equipment, and heavy-duty diesel truck diesel PM emissions.

Staff estimates that the following fully implemented measures have provided up to 30% reduction in railyard diesel PM emissions between 2005, the inventory year for the HRA, and early 2008.

- 2005 Statewide Railroad Agreement (up to 20%)
- ARB diesel fuel regulation for intrastate locomotives (up to 14%)
- Replacement of switcher locomotives (up to 90%)

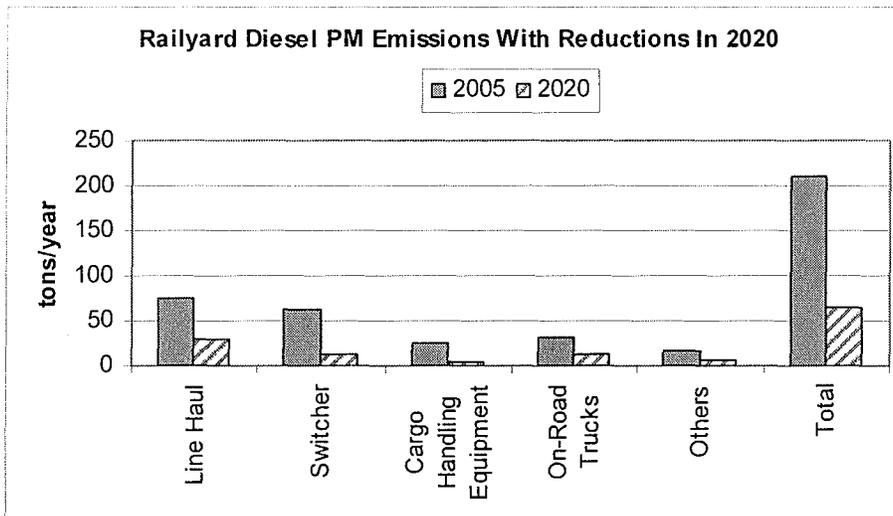
An additional 30% reduction is expected to be generated by measures implemented between 2008 and 2010:

- Locomotive NOx Fleet Average Agreement in South Coast (up to 50%)
- ARB Cargo Handling Equipment Regulation (up to 40%)
- Port and Intermodal Drayage Truck Railyard Regulation (up to 90%)
- Transport Refrigeration Unit Airborne Toxic Control Measure (up to 65%)

These measures will achieve very large reductions by 2010 and will be nearly fully implemented by 2015. The goal with all of these measures combined is to reduce

locomotive and railyard related diesel PM emissions by up to 85% between 2015 and 2020. Figure 1 below illustrates implementation of these measures.

**Figure 1**



**E. Locomotive Remote Sensing Pilot Program**

Assembly Bill 1222 became law in January 2006. Under the provisions of AB 1222, the ARB is required to design and implement a remote sensing pilot program in consultation with an advisory group consisting of up to 14 specified members. These members were appointed by the South Coast Air Quality Management District, Sacramento Metropolitan Air Quality Management District, UP, and BNSF. AB 1222 required a report to the legislature by December 31, 2006 on the feasibility and cost effectiveness of the use of remote sensing with locomotives.

The objectives of AB 1222 are to determine whether remote sensing devices can accurately and reliably determine, with a reasonable level of precision:

1. The levels of nitrogen oxides, particulate matter, and carbon monoxide emissions from locomotives;
2. Whether a locomotive is subject to tier 0, 1, or 2 federal certification standards; and
3. Whether the measured results can be calibrated to determine compliance with applicable federal emission certification levels.

To date, there have been 30 advisory group meetings. The members of the advisory group expressed a desire to take the time necessary to implement an effective and comprehensive pilot program. The design of the test program was more challenging than anticipated and the existing remote sensing technology needed to be adapted to measure locomotive emissions.

Staff, in consultation with the Advisory Group, developed a three phase approach towards implementing and achieving the objectives of this bill. Phase 1 involved an initial field test to determine the ability of remote sensing devices to measure the emissions from locomotive exhaust stacks. This part of Phase 1 was conducted at the Transportation Technology Center Inc. (TTCi) in Pueblo, Colorado, in February 2007. Phase 2 includes installation of the remote sensing devices at several locations in Northern and Southern California and monitoring emissions of locomotives that travel through these monitoring locations. The objective of Phase 2 is to assess the ability of the devices to evaluate locomotive emissions in the real world. Phase 3 is designed to compare measurements from remote sensing devices against U.S. EPA locomotive certification emission testing pursuant to 40 CFR Part 92. This phase is designed to determine the accuracy and precision of remote sensing devices as compared with the measurement of locomotive emissions required under the federal locomotive test procedures.

The Phase 1 work in Pueblo, Colorado was completed by March 2007. Phase 1 testing revealed problems with the line haul remote sensing device which resulted in its operation being discontinued. The yard extraction remote sensing system, however, provided more favorable operation and the advisory committee decided to go forward with further utilization of that system before being applied to mainline operation. The advisory group concluded that additional evaluation of the yard extraction remote sensing system was needed to resolve technical issues before implementation of field testing in Phase 2.

As a result, the Advisory Group agreed to create a pre-Phase 2 element (known as Phase 2a). This added Phase 2a testing element pushed back the project completion date from summer to fall 2007. Phase 2a testing occurred in May 2007. However, technical issues were still encountered in Phase 2a testing. The Advisory Group decided that these issues could be resolved during early testing in Phase 2. In this phase, the equipment was located at specific sites within a railyard and along a railroad track to measure as many locomotives in the field as possible to determine the potential of the equipment to identify gross polluters in the locomotive fleet. This testing occurred at the UP Colton railyard and a BNSF Cajon site in October 2007. Also, additional, Phase 2 testing occurred in northern California at Weimar (east of Auburn) in February 2008.

Phase 3 was conducted jointly by Environmental Systems Products (ESP) and Southwest Research Institute (SwRI). This testing compares the remote sensing results to the approved federal locomotive test procedure to determine the accuracy of the measurements from the remote sensor. This testing occurred in February 2008. A final report is anticipated by mid 2008.

## **F. Ongoing Evaluation of Other, Medium-Term, and Longer-Term Emission Control Measures**

### **1. Requirements of the Agreement**

Under the Agreement, the ARB and the railroads agreed to continue to evaluate and implement other feasible mitigation measures. These measures included funding and research of diesel particulate filters and diesel oxidation catalysts studies and demonstrations for switch locomotives and additional measures to evaluate and demonstrate advanced technologies for locomotives and the use of alternative fuels. In addition, the ARB and railroads committed to conduct semi-annual technical evaluation meetings with the public to evaluate future potential emission reduction measures.

### **2. Diesel Particulate Filters and Oxidation Catalysts**

Staff and the railroads have been cooperatively evaluating the feasibility of developing diesel particulate filters or diesel oxidation catalysts for use on a typical locomotive representative of the current California switcher fleet. UP and BNSF indicated they would commit up to \$5 million towards this evaluation. About \$4 million of this money had already been expended for prototype and demonstration testing of a locomotive diesel particulate filter through January 1, 2008.

The next step in the diesel particulate filter locomotive demonstration is in-use durability testing in California. As part of the demonstration, both BNSF and UP agreed to retrofit California switch locomotives. These older switch locomotives are powered by 1,500 horsepower roots blown engines that have operated for 35 years or more. The UP diesel particulate filter equipped switch locomotive (UPY 1378) arrived in Oakland, California, in December 2006 and was later moved to Roseville, California.

The move to Roseville was prompted by the need to expose the locomotive to a higher activity level. In February 2008, after accomplishing more than 12 months of service, SwRI performed Federal emissions testing to evaluate performance of the DPF. The BNSF diesel particulate filter equipped switch locomotive (BNSF 3703) received a second generation diesel particulate filter manufactured by HUG. Testing of BNSF 3703 continued through 2007 at the SwRI facility in San Antonio, Texas. The locomotive is scheduled to arrive in Los Angeles, California, in the first half of 2008. If the in-use DPF demonstration is successful, both UP and BNSF have committed to retrofit one additional locomotive each for a total of four diesel particulate filter switcher locomotives operating in California.

In a separate test program, UP recently collaborated with the U.S. EPA to test an older freight locomotive retrofitted with a diesel oxidation catalyst to reduce diesel PM emissions. UP 2368, a 3,800 horsepower line haul locomotive and originally built in January 1992, was retrofitted with a diesel oxidation catalyst. This locomotive arrived in California in November 2006 and began in-use testing in the Los Angeles area for

approximately one year starting in early 2007. This locomotive was assigned to helper/hauler service in the Los Angeles basin. Over the next twelve months, the locomotive compiled approximately 2,800 hours of field service. No significant impacts to engine performance (e.g., maintaining power, fuel penalty, and backpressure) have been noted at this time, but failures involving the catalyst elements did occur. During scheduled inspection intervals, three separate failures occurred involving the catalyst elements and their supports. Currently the DOC device is undergoing failure analysis by the manufacturer Miratec. After the most recent failure, the DOC was removed and UP 2368 continued to operate in full service. Once Miratec completes its failure analysis and repair plan the DOC will be reinstalled in early 2008 for continued testing.

### **3. ARB Locomotive SCR Project**

ARB recently funded a contract with Southwest Research Institute (SwRI) to research a compact SCR system offered by Engine Fuel and Emissions Engineering, Inc. (EF&EE) with catalysts parts supplied by Haldor Topsoe, a Danish Catalyst Company. The SCR device tested by was a urea-SCR catalyst technology originally developed for heavy duty truck applications in Europe modified for use in locomotive applications. This SCR device is also being used in the SCAQMD test program to retrofit an SCR device to a Metrolink passenger locomotive. The SwRI tests were conducted on an EMD 12-710G3 engine which is also the same engine family commonly used on pre-2000 freight line haul locomotives (~75%), passenger locomotives (most in California), and marine vessels. The research effort consisted of performance and emission testing of the compact SCR device retrofitted onto an EMD 12-710G3 engine. The test program objectives at SwRI were to perform baseline emission testing without the SCR, study the effects of higher exhaust back pressure on engine performance to simulate exhaust aftertreatment devices, characterize crankcase blowby, and perform preliminary screening of the SCR device installed on an EMD 12-710G3 engine. All testing was performed at SwRI's facility. By November 2007, the initial engine tests (e.g., baseline, backpressure, and crankcase blowby) were completed and the SCR device was installed to perform preliminary SCR testing. During the performance testing, significant issues occurred ranging from structural design issues that involved failures with catalyst retainers and covers, the need for better turbo charger outlet and SCR device flow characterization, along with a redesign of the urea/air mixing system to achieve a more homogeneous distribution. As a result, the SCR system was unable to dose the urea properly. Ammonia concentrations in the exhaust were higher than expected. Liquid urea was observed leaking from the catalyst inlet gasket and the catalyst covers. This imbalance in the dosing of the urea resulted in large amounts of ammonia slip and dried urea crystals deposited in the turbo outlet and SCR device. EF&EE is currently working to address these issues.

### **4. Symposiums to Evaluate Future Potential Measures**

Under the Agreement, the ARB and railroads are required to conduct public semi-annual technical evaluation symposiums to identify and evaluate future emission reduction measures for locomotive and railyard emissions. The initial technical

evaluation symposium was held on April 25, 2006 at the ARB offices in El Monte, California. The second symposium was held on July 13, 2006 at the Cal/EPA building in Sacramento, California. The ARB and railroads prepared a written report on progress and findings from the symposiums which was posted in December 2006. This report as posted on the ARB railyard website in December 2006 and is available at: [http://www.arb.ca.gov/railyard/ryagreement/102006rpt\\_rrtech.pdf](http://www.arb.ca.gov/railyard/ryagreement/102006rpt_rrtech.pdf). A third symposium was held on June 6, 2007, at the Cal/EPA building in Sacramento, California. The fourth and most recent technology symposium was held on November 28, 2007, in El Monte, California. At this meeting the ARB summarized the need for additional emission reductions beyond U.S. EPA's proposed locomotive rulemaking and the railroads provided their perspectives of the successes and limitations of new technologies. In addition updates were provided on locomotive exhaust aftertreatment retrofit technology for freight and passenger. Finally, other technologies in development such as a BNSF fuel cell locomotive, GE's hybrid locomotive, and a question and answer report on "Natural Gas-fueled Locomotives" were released. A report summarizing the two symposiums held in 2007 will be released in early 2008.

## **G. ARB Enforcement Inspections**

Consistent with the Agreement, staff implemented an idling enforcement training program for ARB and local air district enforcement personnel, and coordination with the railroads to provide visible emission training to railroad employees. Enforcement Division staff conducted railyard inspections to evaluate compliance with the requirements specified in the Agreement.

### **1. Inspection Results and Preliminary Findings For 2007**

Two statewide inspections occurred in 2007. As shown in Table 10, a fourth statewide inspection was completed by Enforcement staff during the second half of 2007. Staff visited 31 designated and covered railyards and inspected over 1,000 locomotives. In this fourth round of inspections, staff inspected 1,015 locomotives and issued 29 notices of violation for idling infractions and one notice of violation issued for a smoking locomotive.

Most of the idling NOV's (~2/3) were issued to locomotives equipped with idle reduction devices and were observed idling beyond the 15 minute requirement. The remaining NOV's were issued to locomotives that exceeded the 60 minute requirement and were not equipped with idle reduction devices. The reasons why the locomotives exceeded the 15 or 60 minute requirement ranged from idle reduction device malfunctions to essential idling. Idle reduction device malfunctions are sent to the nearest maintenance facility for repair. Essential idling occurs when the locomotive is maintaining a key operational parameter (e.g., pressure for air brakes, low battery voltage, engine coolant temperature) and is allowed to exceed the 15 or 60 minute requirement specified in the Agreement. In either instance the reason why the locomotive exceeds its idle time is not always immediately evident at the time of inspection and requires the assistance of railroad technical personnel for investigation. Enforcement staff work with railroad

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technical personnel to not only identify the root cause for the locomotive exceeding its allowed idle time, but to also ensure the locomotive is operating correctly and repaired if necessary.

The results represent about a 97 percent compliance rate for the second half of 2007. For comparison, in 2006, over 1,300 locomotives were inspected during two separate rounds of railyard inspections. As a result of these inspections, Enforcement staff issued 32 notice of violations for idling infractions and one notice of violation issued for a smoking locomotive. This is about a 98 percent compliance rate for the locomotives sampled for all of 2006. Since inspections began in 2006, about 3,300 locomotives were inspected, 101 notices of violation for idling infractions were issued, and two notices were issued for smoking locomotives. Overall, for 2006 and 2007, this represents about a 97 percent compliance rate for the last two years.

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**Table 10**  
**Inspection Results Summary 2006 & 2007**

Air Basin	# of Railyards Visited	Idling Locomotives Observed	Non-Idling Locomotives Observed <sup>5</sup>	Total Number of Locomotives Inspected	Notice of Violations <sup>4</sup>
2006 Total	31	372	948	1,320	33 <sup>3</sup>
March – May 2007 (Round 1)					
Mojave Desert	3	24	158	182	5
Mountain Counties	2	35	112	147	4
Sacramento Valley <sup>1</sup>	0 <sup>1</sup>	9	10	19	9
San Diego	1	0	6	6	0
San Joaquin Valley	6	15	120	135	8
SF Bay Area	5	5	25	30	3
South Coast	14	12	433	445	11
2007 subtotal	31	100	864	964	40
September – November 2007 (Round 2)					
Mojave Desert	3	8	144	152	0
Mountain Counties	1	11	133	144	9
San Diego	2	3	7	10	3
San Joaquin Valley	6	5	94	99	2
SF Bay Area	5	3	39	42	3
South Coast <sup>2</sup>	14	18	550	568	13
2007 subtotal	31	48	967	1,015	30 <sup>3</sup>
2007 Total	31	148	1,831	1,979	70
2006 / 2007 Total	31	520	2,779	3,299	103

1. Non-Railyard area. UP bridge fire event – traffic congestion occurred at a railroad siding in Elk Grove, California.
2. Includes BNSF and UP off-site (non-railyard) inspections.
3. Includes one visible emissions violation.
4. Final resolution status not reflected in totals.
5. Locomotive engine not running, but present during inspection.

### III. OTHER IMPLEMENTATION EFFORTS

#### A. Modernization of the Locomotive Fleet

ARB and others have taken a number of actions to address the impacts of locomotive emissions throughout the State. This includes the 1998 Memorandum of Understanding with the railroads to reduce locomotive oxides of nitrogen (NOx) emissions in the South Coast, requirements for the use of cleaner fuel in intrastate locomotives, Carl Moyer Program funding by some local air districts, and the current Agreement. As a result, the railroads have undertaken a number of steps that will provide significant reductions in the emission impacts of railyards on local communities.

The combined railroads are currently operating about 9,900 new and rebuilt Tier 0, 1, and 2 locomotives. Of those, over 2,100 locomotives are expected to meet Tier 2 standards by the end of 2008. In total, UP and BNSF have over 65 percent of their 15,000 national locomotive fleet meeting at least Tier 0 standards and 49 percent are equipped with idle reduction devices.

Green Goats are electric hybrid switch locomotives that operate primarily through energy provided by over 300 lead acid batteries weighing 25 tons. Both railroads, combined, have placed 12 Green Goats into service in California over the past couple of years. However, these locomotives were recently returned to the manufacturer (Railpower) to remedy a potential fire hazard associated with the large bank of 300 lead-acid batteries. These locomotives are in the process of being upgraded so they can be reintroduced into revenue service.

Other railroad modernization efforts to reduce emissions include the introduction of gen-sets switch locomotives. In southern California UP now has 61 ultra low emitting Gen-set switch locomotives operating in the Los Angeles basin. These 61 Gen-sets were funded by UP. These new ultra low-emitting switch locomotives will provide up to a 90 percent reduction in NOx and diesel PM emissions when compared to the higher emitting older switch locomotives that are replaced. In northern California, BNSF has 11 Gen-sets in their fleet that are located Richmond (6) and San Joaquin Valley (5). By June of 2008, four UP Gen-set switch locomotives are scheduled to arrive and be assigned to the UP Roseville railyard. These fifteen northern California Gen-set locomotives were co-funded by the railroads and the ARB's Carl Moyer Program.

Today there are 72 gen-sets, 12 Green Goats, and 4 LNG locomotives operating in California service. Another four gen-sets are expected to be in service by mid 2008. These 92 locomotives brings California closer to one of the goals outlined in the Goods Movement Emission Reduction Plan (GMERP) to upgrade the rest of the intrastate switching fleet to ultra-low emitting emission levels by 2010.

## **B. Community Complaint Process**

This section discusses the railroads' implementation efforts to establish and implement a community complaint process for idling and smoking locomotives.

### **1. Pre-existing Railroad Complaint Process**

Prior to the implementation of the Agreement, each railroad had established procedures to process, handle, and respond to community complaints. Under these procedures, each railroad utilizes a national phone call center to receive and record complaints regarding its operations instead of individual local phone centers. The national phone systems allow the railroads to utilize a centrally trained staff and existing mechanisms that allows the public to register complaints about idling or smoking locomotives from all locations in the state at any time. The systems operate 24 hours a day and 365 days a year, and utilize computerized mechanisms to track and forward complaints to the appropriate company staff to respond.

The call center phone numbers for each railroad are:

- **Union Pacific Railroad**

*1-888-UPRR COP or 1-888-877-7267*

- **BNSF Railway**

*1-800-832-5452*

While each railroads call center system is different, they are similarly structured in that calls received are logged and appropriate railroad employees are directed to respond.

### **2. Establishment of Railroad Complaint Process Under the Agreement**

By August 31, 2005, both railroads submitted their plans to develop a process for informing members of the community on the results of their investigations of complaints. Under their programs, the railroads utilize their existing call centers and phone numbers for community members to report locomotive complaints by augmenting their national systems to be able to respond to and provide complaint resolution information to complainants. Each complaint is logged in a central database upon receipt, and generates a complaint report, which is forwarded to the appropriate railroad operations, environmental, or safety management personnel. Management reviews the complaints and based on the type of complaint and need for action, assigns the appropriate local railroad staff to investigate the complaint and correct the problem. Daily emails are now being automatically generated to environmental staff that must follow-up on the incidents and, in some cases, provide a response back to the individual who reported

the complaint. The transition to the new system-wide protocols has been developed and implemented. It will take time to evaluate and make any necessary program adjustments.

Staff continues to work with the railroads to evaluate the existing processes, and develop recommendations on how the system can be more responsive and accountable. This includes the establishment of protocols for better system tracking and recording of the complaint investigation process at the local level, and protocols for notifying individuals who file a complaint on the findings of the railroads' investigations, including any corrective actions taken.

### 3. Status of Railroad Complaint Process Under the Agreement

Table 11 summarizes complaint activity for the six month period from June 2007 through December 2007 and compares the activity to two previous periods. During the most recent six month period, UP and BNSF received a combined average of about 29 calls per month to their 800 numbers reporting idling locomotives. The first two months of 2008 averaged 31 calls per month. During the current period, there were some special events which may have affected the number of calls. In December 2007 there was severe flooding in Oregon and Washington that had ripple effects on California rail operations for both UP and BNSF. In January 2008 there was a mudslide in Oregon that spread 60 acres; the track is still not open as of this report.

By comparison, in the preceding six month reporting periods there were approximately 27, 21, and 36 calls per month, respectively. To put these call rates in context, the railroads have thousands of locomotives operating in California each month.

**Table 11**  
**1-800 Call Summary 2005 thru 2007**

	Jan – Feb 2008	Jun 2007 thru Dec 2007	Dec 2006 thru May 2007	Jun 2006 thru Nov 2006	Dec 2005 thru May 2006
Average Monthly Calls to 800 Numbers	31	29	27	21	36

Since the July 2007 staff report, both railroads have continued to track and improve on how the community 800 number calls are processed. As before, citizens, the ARB, local air quality districts, and other local government agencies have been using the call center phone numbers to register complaints they have regarding specific locomotive events. Each railroad has been utilizing this information source to address identified problems. Both railroads have developed a follow-up process providing feedback to the caller, as appropriate, detailing problems that were identified and what actions could be taken.

Both railroads continue to further improve the process for gathering the necessary information for timely close-outs.

#### **4. Development of an ARB Railyard Website**

On August 1, 2005, staff established a "Railyard Emission Reduction" website at: <http://www.arb.ca.gov/railyard/railyard.htm>. This website is intended to provide information to the public about the ARB's ongoing efforts to reduce the emission impacts of railyard operations, including staff's activities to implement the Agreement and other related railroad information. The release of the first group of nine health risk assessments, which were finalized in November, and the recent release of the second group of seven draft health risk assessments can be found at <http://www.arb.ca.gov/railyard/hra/hra.htm>. In addition, the U.S. EPA released its proposed locomotive and marine rulemaking in April 2007 with a public comment period until July 2, 2007. In July 2007 the staff provided comments on the U.S. EPA proposed locomotive rulemaking. These comments can also be found at <http://www.arb.ca.gov/railyard/railyard.htm> under "What's New" and "Locomotives" links.

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**C. Other Outreach Efforts**

Besides the community meetings required under the Agreement, the railroads have initiated a number of other outreach activities and events with the public. Table 11 lists all examples of the outreach activities conducted in the last six months.

**Table 12  
Railroad Community Meetings / Outreach  
October 2007 thru March 2008**

Year 2007	
10/10	Locomotive Remote Sensing Project Site Visits Colton, Cajon
11/5	HRA BNSF Watson/Wilmington Community Meeting
11/5	RR 101 to Oakland Maritime Air Quality Improvement Plan stakeholders group
11/5	HRA BNSF Hobart BNSF, Commerce-Eastern, BNSF Sheila Community Meeting
11/7	HRA UP LATC Community Meeting
11/7	HRA UP Mira Loma Community Meeting
11/8	HRA UP Commerce Community Meeting
11/28	RR/CARB Technology Symposium
12/4	HRA UP Stockton Community Meeting
12/5	HRA BNSF Stockton Community Meeting
12/6	HRA BNSF Richmond Community Meeting
Year 2008	
1/11	HRA BNSF Richmond Community Meeting with EJ group
2/25-2/27	Faster Freight Cleaner Air Conference at LA Convention Center
2/5	Locomotive Remote Sensing Project Site Visits at Roseville
3/11	HRA UP meeting Industry
3/12	HRA UP meeting Colton
3/18	HRA UP meeting ICTF
3/ 19	HRA UP meeting Oakland
5/6	HRA BNSF meeting – San Diego (Tentative)
5/7	HRA BNSF meeting – Barstow (Tentative)
5/8	HRA BNSF meeting – San Berardino (Tentative)

#### IV. PROMULGATION OF U.S. EPA'S LOCOMOTIVE EMISSION REGULATIONS

The U.S. EPA released its proposed draft Tier 4 locomotive and marine rulemaking in April 2007 with a public comment period until July 2, 2007. In July 2007, the staff provided comments on the U.S. EPA proposed locomotive rulemaking and were supportive of most elements included in the April 3, 2007 proposal (see link - <http://www.arb.ca.gov/railyard/ryagreement/0707epaloco.pdf>). On March 14, 2008, the U.S. EPA formally announced its final locomotive and marine rule (see link - <http://www.epa.gov/omswww/locomotv.htm#2008final>).

U.S. EPA's final locomotive rulemaking would set Tier 4 new line haul locomotive standards for PM and NO<sub>x</sub> in 2015 and achieve emission reductions of 85 and 75 percent respectively, below current Tier 2 standards. In addition, Tier 3 new line haul locomotive standards for PM will be required in 2012 that would provide a 50 percent reduction beyond the Tier 2 PM standard. Existing Tier 0-2 line haul locomotives will be required to provide about a 50 percent PM reduction upon remanufacturing beginning in 2008 through 2013. Further, existing Tier 0 line haul locomotives with a separate loop intake air cooling will be required to provide about a 22 percent NO<sub>x</sub> reduction by 2010 and Tier 0 locomotives without a separate loop intake air cooling would be required to provide about a 16 percent NO<sub>x</sub> reduction by 2010. Finally, idle emission controls are required for newly manufactured and remanufactured locomotives. See Tables 13 and 14 for a summary NO<sub>x</sub> and PM standards for line-haul and switcher locomotives.

The new standards for locomotives are a significant advancement over the current standards, and the ARB commends the U.S. EPA for strengthening several aspects of the proposal it made last year. For example, the ARB supports the new Tier 4 locomotive standards which take effect in 2015 for both PM and NO<sub>x</sub>, instead of 2015 for PM and 2017 for NO<sub>x</sub> as contained in the proposal. In addition, the ARB recognizes and supports the U.S. EPA's action to require significant PM reductions from existing engines as they undergo periodic rebuilds. However, the ARB is disappointed with the long lead times before full control will be achieved. The lack of NO<sub>x</sub> control for engines built before 2015 and the long lead time required to achieve sufficient fleet turnover with new or remanufactured locomotives is a concern for California. Tier 0-3 locomotives may represent up to 90 percent of the national locomotive fleets through 2020 or longer. This could have been addressed by the U.S. EPA rulemaking should have providing regulatory contingencies to further reduce NO<sub>x</sub> and PM emissions upon future U.S. EPA certification of NO<sub>x</sub> or PM aftertreatment devices that can be retrofitted to Tier 0-3 locomotives. Under this approach, U.S. EPA would have had the authority to require a certified NO<sub>x</sub> and PM aftertreatment device for Tier 0-3 locomotives upon remanufacturing (every 7-10 years).

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**Table 13**  
**U.S. EPA Final Locomotive NOx Emission Standards**

Type	Tier	Date of Original Manufacture	Existing NOx Standard (g/bhp-hr)	New NOx Standard New or Remanufactured (g/bhp-hr)	Percent Control When Engine is New or Remanufactured
Line-haul locomotives	Uncontrolled	Pre-1973	13.5	8.0 or 7.4	41% or 45%
	Tier 0	1973 - 2001	9.5	8.0 or 7.4	16% or 22%
	Tier 1	2002 - 2004	7.4	7.4	0%
	Tier 2	2005-2012	5.5	5.5	0%
	Tier 3	2012	N/A	5.5	0%
	Tier 4*	2015-2017	N/A	1.3	76% (vs. Tier 2)
Switcher locomotives	Uncontrolled	Pre-1973	19.8	11.8	40%
	Tier 0	1973 - 2001	14.0	11.8	16%
	Tier 1	2002 - 2004	11.0	11.0	0%
	Tier 2	2005-2011	8.1	8.1	0%
	Tier 3	2011	N/A	5.0	48% (vs. Tier 2)
	Tier 4*	2015	N/A	1.3	84% (vs. Tier 2)

\* See Table 14

**Table 14**  
**U.S. EPA Final Locomotive PM Emission Standards**

Type	Tier	Date of Original Manufacture	Existing PM Standards (g/bhp-hr)	New PM Standards New or Remanufactured (g/bhp-hr)	Percent Control When Engine is New or Remanufactured
Line-haul locomotives	Uncontrolled	Pre-1973	0.34	0.22	35%
	Tier 0	1973 - 2001	0.60	0.22	63%
	Tier 1	2002 - 2004	0.45	0.22	49%
	Tier 2	2005-2011	0.20	0.10	50%
	Tier 3	2012	N/A	0.10	50% (vs. Tier 2)
	Tier 4*	2014	N/A	0.03	85% (vs. Tier 2)
Switcher locomotives	Tier 0	1973 - 2001	0.72	0.26	64%
	Tier 1	2002 - 2004	0.54	0.26	48%
	Tier 2	2005-2010	0.24	0.13	54%
	Tier 3	2011	N/A	0.10	58% (vs. Tier 2)
	Tier 4*	2015	N/A	0.03	87% (vs. Tier 2)

\* Interim provision, in-use compliance add-on allowed. Option 1 allows a NOx add-on of up to 1.3 g/bhp-hr (i.e., 2.6 g/bhp-hr for in-use testing) for model years 2015 thru 2017. Option 2 allows a NOx add-on of 0.6 g/bhp-hr (i.e., 1.9 g/bhp-hr for in-use testing) for model years 2015 thru 2022. Option 1 or 2 must be declared when certifying engine family.

Note: In most cases, gen-set switchers have been certified at levels below 0.15 g/bhp-hr, without aftertreatment.

Update On The Implementation Of The 2005 ARB/Railroad Statewide Agreement

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California needs both effective and expeditious pollution reductions from locomotives. The new federal locomotive emission standards will help, but they will not provide California with the necessary emission reductions in the timeframes in which they are needed. The final rulemaking will not provide the 85 percent NO<sub>x</sub> or PM emission reductions needed to meet the GMERP goals by 2020 or the NO<sub>x</sub> reductions needed to meet the South Coast PM 2.5 SIP by 2014. The final rulemaking leaves California with a 60 to 80 percent NO<sub>x</sub> and 25 to 50 percent PM shortfall through 2025 or later.

The new federal locomotive emission standards will help, but they will not provide California with the necessary emission reductions in the timeframes in which they are needed. California needs a combination of strategies to reduce locomotive emissions in California including full replacement of switch locomotives, exhaust aftertreatment retrofits on older captive line haul locomotives, and acceleration of the introduction of new Tier 4 interstate line haul locomotives directed towards California. Consequently, the ARB will continue to work with U.S. EPA, the railroads, and other stakeholders to identify innovative ways to accelerate the reduction of locomotive emissions in California.

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# EXHIBIT 5



## 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

TO: Mary M. Nichols  
Chairman

Honorable Board Members

FROM: Richard W. Corey  
Executive Officer

DATE: December 4, 2013

SUBJECT: REDUCING EMISSIONS FROM RAILYARDS

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On June 24, 2010, the Board held a public hearing and considered public testimony on the draft 2010 Railyard Commitments to reduce diesel particulate matter (PM) emissions from 2005 levels at four high priority railyards in Southern California by 85 percent by 2020. The draft Commitments were designed as voluntary agreements between the Air Resources Board (ARB or Board) and two major railroads – BNSF Railway and Union Pacific (UP) Railroad and built upon two prior successful enforceable voluntary agreements between the same parties. The staff has concluded that for both earlier agreements the railroads consistently met or exceeded each and every obligation they signed on to. ARB staff proposed this voluntary approach based on the belief that the Commitments represented the most certain and most effective way to achieve additional emission reductions at the highest risk railyards. Representatives of impacted communities, as well as the South Coast Air Quality Management District, opposed the draft Commitments and advocated a regulatory approach.

**Board Action.** At the 2010 meeting, the Board directed the prior Executive Officer to further negotiate with the railroads to strengthen the draft Commitments and to complete the environmental analysis. The Board then delegated two decisions to the Executive Officer: (1) approval of the environmental analysis and findings, once completed; and (2) whether or not to approve and execute the Commitments, and send them to the railroads for signature.

**Staff Follow Up.** ARB staff engaged in an extensive, multi-year process to: negotiate with the railroads to add several new provisions consistent with the Board's intent and publish the revised draft Commitments; update and publish the technical data on emissions and health risk; conduct and publish the required environmental analysis; and respond to public comments on that analysis.

*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

Mary D. Nichols, Chairman  
Honorable Board Members  
December 4, 2013  
Page 2

Decision. I have decided not to approve the Commitments, but rather initiate a public process that can lead to a more holistic path for reducing emissions from rail and other freight operations. This memorandum describes the rationale for the decision, as well as our next steps to protect communities near rail and other freight operations.

Need for Action. California must take further action to reduce emissions from rail operations to protect community health, attain ambient air quality standards, and achieve our greenhouse gas reduction targets for climate change. We need a comprehensive strategy that increases the efficiency of the freight system while driving down emissions to near zero levels. Meeting all of these objectives will require collaborative efforts that produce significant emission reductions and participation from more freight sectors than just rail. Freight transportation is a complex system, with essential national and international links. It is critical to approach the challenge of transforming it from a system-wide perspective.

Scoping Plan Update. The Scoping Plan Update offers a transparent public platform and process for describing how ARB (in conjunction with local air districts, transportation planning agencies, rail and other transportation providers, cargo shippers and owners, environmental justice communities, and others) can proceed to develop a long-term, comprehensive strategy for getting the substantial emission reductions needed from California's freight system, including railroad operations.

Sustainable Freight Strategy. The next version of the Scoping Plan Update will describe the elements of, and the public process to develop, a Sustainable Freight Strategy. These elements include:

- A stakeholder coalition;
- System-wide efficiency metric(s);
- Technology assessments;
- Emissions and activity reporting;
- Measures, actions, and schedules;
- Principles and criteria for funding transportation infrastructure projects; and
- Principles and criteria for new/expanded freight facilities.

Mary D. Nichols, Chairman  
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Page 3

Next Steps. ARB expects to release the next version of the Scoping Plan Update in late January 2014 for public review and comment, followed by discussion at a Board meeting in February 2014, and a final Board hearing in Spring 2014 on this Plan. Concurrently, staff will initiate a public process throughout 2014 to develop the actions and recommendations for a comprehensive Sustainable Freight Strategy.

If you have any questions on this subject, please contact me at (916) 445-4383 or Cynthia Marvin, Chief of the Stationary Source Division, at (916) 324-0062.

cc: Cynthia Marvin, Chief  
Stationary Source Division

# EXHIBIT 6



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](http://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. <sup>mike</sup> 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

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](mailto:cmarvin@arb.ca.gov), or Mr. Harold Holmes, Manager, Rail Strategies Section at (916) 324-8029 or [hholmes@arb.ca.gov](mailto: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

# EXHIBIT 7

SCAQMD Board Hearing on Rule 3503  
October 7, 2005  
Partial Transcript of Mayor Yates' Statements

SPEAKER (Dr. Burke):

Are there any questions by Board members? We're going to have to wait for counsel and \_\_\_\_\_ to come back, but Mayor Yates has a question.

MAYOR YATES:

Not really a question, Dr. Burke, just a comment. I'm the city representative from San Bernardino County, representing 16 cities in the Inland Empire. Those, two of those being San Bernardino and Colton, with an extension train spurs in that area. I've also visited on two occasions, the City of Commerce and have observed with my eyes and breath with my lungs the emissions being omitted from the City of Commerce spur yard. I have to tell you I was extremely upset about the MOU, behind the closed door MOU, that was written between the executive staff, the bureaucrats at CARB, and the railroads. I can understand the railroads not wanting individual areas to govern their different rail spurs, but the railroads do not understand, or don't want to be inconvenienced or spend any money on addressing the South Coast Air Quality's area because we probably have or do have, including my area, San Bernardino, the worst pollution in the United States. Because of that, the South Coast Air Quality Management District has the added responsibility to clean up this area over and above any other AQMD area in the state. So, therefore, yes, we're being very aggressive, yes, our rules are stiffer than probably any one area in the United States. We have several pieces of legislation in Sacramento that the railroad companies are spending millions of dollars buying off the politicians up there, I would tell you that for a fact. There are spending probably \$300/hour to have that lawyer to sit there with his head in his hand right now. They have no problem with spending millions of dollars, but fighting what should be done to protect the health of this community and the communities in San Bernardino County. The expansion of the railroad spur that the ladies referred to, we are quite aware of, in fact, I had asked Barry Wallerstein to send a letter to all the surrounding communities that if anybody from the railroad stations had, are to come in and ask for a permit to take over that park, we're aware that that's going on too. They immediately would notify the South Coast Air Quality Management District so that we could step in or not promoting the expansion of those rail yards, and now they have the deal I read in the paper, and watched on television about wanting to put the rail yard down, is it Long Beach, Barry? The new . . .

SPEAKER (Barry Wallerstein):

Down in the Port, yeah.

MAYOR YATES:

Yeah, down in the Port, and I'm watching on the news last night, and the railroad persons are all going to have green locomotives, we're going to have electrified lifts, and all of that good stuff,

and on the other side, they're telling me, and this Board, they can't do that in City of Commerce, they can't do that in Colton, and they can't do that in San Bernardino. How can they do it at the Port - I don't understand, and the railroads preached to the politicians in Sacramento that those bills that we have up there are job killers. We're not wanting to kill any jobs, we want to kill the equipment that are killing our children and our \_\_\_\_\_ We don't want to kill jobs, we want them to replace that equipment that's polluting our air. And so, I wholeheartedly support Rule 3503. I wholeheartedly support the legislation that's in Sacramento, and I know it's going to be a tough job to bring these railroads to their knees, and have them cooperate with us to clean up our air. And I'm fully cognizant of the fact that the AQMD doesn't have the authority to regulate railroads. But we'll just keep pecking at you and pecking at you until we get our way. And the railroads don't like it because I've had personal dealings in the City of Chino, with the railroads, they are lousy corporate citizens. I've stated that in public before. All the answers I ever get from the railroad is, "you don't have any authorities, we answer to the EPA." Well, folks, now you're going to have to answer to the people. You have to answer to the people. And, this rule is one step forward in moving forward to answer the people, and with that, Mr. Chairman, I would move this rule to be adopted.

NEW SPEAKER:

I'd like to second that, but if I could make a friendly amendment, Mayor Yates. I would also like to include in our proposed rule looking at being able to set up monitoring stations if they are in violations or set-up, if it's not already in there. And having that paid for by the railroad.

SPEAKER (Barry Wallerstein):

Well, I'm assuming that what you are asking us to do is to look into that issue and report back to the Board at the earliest possible time.

SPEAKER (Mayor Yates):

Yeah, that will be great. They could pay for it if they let that lawyer go home.....so that's easy.

CHAIRMAN BURKE:

Okay, we have a motion and a second. I always like to listen to Mayor Yates. I \_\_\_\_\_, something \_\_\_\_\_ - should have been a preacher instead of a politician.

NEW SPEAKER:

Chairman Burke - If I might, it's always tough to follow Mayor Yates because he's an eloquent. But I certainly support what words that he brought forward and they have been a very irresponsible community partner, and its time to bring to responsibility. So, I certainly support this \_\_\_\_\_.

CHAIRMAN BURKE:

Councilman Perry.

COUNCILMAN PERRY:

I was going to be quiet and just go ahead and vote, but as one who represents an area where the rail lines traverse east/west from boundary to boundary, I want to echo that or second that bad corporate citizen, very bad, dirty easements, tearing up the intersections, never interested in helping cleaning it up. You're right behind single family homes, historically, they have always been, made any entreaties to Burlington Northern Santa Fe, what's the other one..... Union Pacific, and never any follow through. And I too, was amused last night when I watched the news and saw the lady, and maybe they put the woman on because it's more emotive about \_\_\_\_\_ PC, you know, to talk about greening, Green rail yards, and I just had to laugh. I was just so amused by that because whenever I've asked even the minimum, come over here and pick up the trash. I was told by Burlington Northern that, "no you can't, the city can't pick it up and charge us for it because of our Union rules", and they don't pick it up either. I remember I had a case where we had a dead dog on the easement for months and months, and months, went back and forth, and, finally, we had to get our own city folks to go out there and get it, but. You know, you can't even get that level of cooperation, not even indication of respect for the communities that they impact, and so I'm ready to push by button in a big way.

CHAIRMAN BURKE:

Is a roll call necessary on this time? We're going to call \_\_\_\_\_

NEW SPEAKER:

May I just make one little comment? I wasn't going to say anything, but then since Jan said something, I

CHAIRMAN BURKE:

You weren't going to say anything.....laughter.....

SPEAKER:

You know, I think we all need to realize that the railroads do serve the entire nation and so we really need the railroads as far as moving the freight and the commerce the business for the entire nation. What really gripes me though, is that the technology is out there. They could very easily have—lower their emissions with the technology that is out there. They choose not to, it's a pocket book issue. That, I highly resent because what they are spewing, the diesel they are spewing is killing people, is harming people. If the technology wasn't out there that's one thing, but the technology is out there and I think it is time to become part of the community and to be good neighbors, and regarding the dog, I did not know that about the dog. I am dog lover—animal lover, and you know what, if that would have been your pet dog out there, I'm sure it wouldn't have stayed there for weeks. I'm ready to vote.

MAYOR YATES:

Dr. Burke, I just want to make a comment for Councilwoman Jan Perry. What's happened, unfortunately, to the railroads, is the railroads have come into my cities and made messes and

we've fought with them, blown their whistles at 3:00 am in the morning behind people's houses and polluting and they've done it to Ontario, and they are doing it in Los Angeles. Their worst nightmare has come true -- all three of us have been elected to this board. They've got a problem.

CHAIRMAN BURKE:

We have a motion and a second. I don't think is a roll call necessary? No roll call is necessary—unanimously approved.

Cheers.....

# EXHIBIT 8

FILED

2006 NOV -3 PM 4:05

CLERK, U.S. DISTRICT COURT  
CENTRAL DISTRICT OF CALIF.  
LOS ANGELES

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8 Attorneys for  
9 BNSF RAILWAY COMPANY

10 UNITED STATES DISTRICT COURT  
11 CENTRAL DISTRICT OF CALIFORNIA, WESTERN DIVISION

13 ASSOCIATION OF AMERICAN  
14 RAILROADS, BNSF RAILWAY  
COMPANY, and UNION PACIFIC  
15 RAILROAD COMPANY,

16 Plaintiffs.

17 vs.

18 SOUTH COAST AIR QUALITY  
19 MANAGEMENT DISTRICT; THE  
GOVERNING BOARD OF SOUTH  
20 COAST AIR QUALITY MANAGE-  
MENT DISTRICT,

21 Defendants.

CASE NO. CV06-1416 JFW (PLAx)

DIRECT TRIAL TESTIMONY  
DECLARATION OF CHRIS A.  
ROBERTS

Date: November 14, 2006  
Time: 10:00 am  
Place: Courtroom of the Hon.  
John F. Walter  
U.S. District Judge

1 I, CHRIS A. ROBERTS, declare as follows:

2 1. I make this declaration as direct testimony for the plaintiffs in this  
3 case. I have personal knowledge of the facts stated in this declaration and, if  
4 called upon to do so I could and would competently testify thereto in person at  
5 trial.

6 2. I am currently Region Vice-President—South Operations for BNSF  
7 Railway Company, 2600 Lou Menk Drive, Fort Worth, Texas 76131. As Region  
8 Vice President, I am responsible for all BNSF operations in the South Region,  
9 which encompasses Southern California as well as BNSF's transcontinental main  
10 line from Chicago to California. The South Coast Air Basin that concerns the  
11 South Coast Air Quality Management District ("SCAQMD") is with BNSF's  
12 South Region.

13 3. I joined BNSF's predecessor in 1975 as a switchman/brakeman and  
14 progressed through a series of increasingly responsible Operations positions,  
15 including engine foreman, yardmaster, power distributor, assistant trainmaster,  
16 trainmaster, General Director Locomotive Utilization, and Terminal  
17 Superintendent Los Angeles. I became Assistant Vice President, Transportation,  
18 in 1994, and was named to lead Operations South in 1997. I completed the  
19 Program for Management Development at Harvard University's Graduate School  
20 of Business in 1995.

21 4. At the preliminary injunction stage of these proceedings, BNSF's  
22 principal operations testimony was presented by John Quilty. Since he presented  
23 his testimony, Mr. Quilty has retired from BNSF. I worked closely with Mr.  
24 Quilty in the formulation of his reply declaration, and I generally agree with the  
25 testimony he presented there and in his opening declaration in support of the  
26 motion for preliminary injunction.

27 ///

28 ///

1           5.     In this declaration, I discuss the ways in which implementation of  
2     SCAQMD's Rules 3501 and 3502 would interfere with BNSF's rail operations. I  
3     begin with a general discussion of the ways in which trains are put together and  
4     operated through BNSF's rail yards and over its rail lines. I note that BNSF  
5     operates with limited infrastructure and that many of its facilities, particularly in  
6     the South Coast Air Basin, are operating at or near the limit of their capacity. I  
7     then discuss how the enforcement of the strict 30-minute idling restrictions in  
8     SCAQMD's Rule 3502 would compromise railroad safety, interfere with the  
9     efficient management of BNSF's crews, and significantly reduce the throughput  
10    capacity of BNSF's infrastructure in the Air Basin. I conservatively estimate that  
11    some 15-20 trains per day would be at risk of not moving through the Air Basin if  
12    SCAQMD's Rule 3502 were implemented. I then discuss how implementation of  
13    the requirements in SCAQMD's Rule 3501 for recording and electronically  
14    reporting every "idling event" would further degrade the safety and productivity of  
15    BNSF's operations.

16           6.     Attached hereto are a number of demonstrative exhibits, all of which  
17    are true and correct copies of documents created and/or kept in the ordinary course  
18    of BNSF's regularly conducted business activity.

19                   **Background on BNSF's Trains, Operations, and Infrastructure**

20           7.     Freight trains are assembled from two basic building block:  
21    locomotives and cars. Long-haul (or "line-haul") trains can range from a mile to  
22    two miles in length. The longer and heavier the train, the more locomotives are  
23    required to pull it. A group of locomotives connected together for purposes of  
24    pulling a train is called a "consist." A majority of line-haul trains are pulled by a  
25    consist at the front of the train, ranging from three to five locomotives. Usually  
26    only the lead locomotive in a consist is occupied, by a two-man crew. (The other  
27    locomotives in the consist are called "trailing" locomotives.) A "distributed  
28    power" train is a train in which there is not only a locomotive consist at the front

1 of the train, but also a locomotive or locomotive consist at the rear and/or in the  
2 middle of the train. In a distributed power train, the "remote" locomotives in the  
3 middle or rear of the train are controlled by radio signals from the lead locomotive  
4 at the front of the train.

5 8. Trains rely on air brakes to slow or stop the train or to hold an  
6 assembled train in place. Each car and each locomotive has brakes that are  
7 activated by air pressure. The air brake "pipe" is assembled as the train is  
8 assembled by coupling hoses from car to car from the front of the train to the rear.  
9 The "pipe" is "charged" with air pressure by compressors located on the lead  
10 locomotive. (The air brake "pipe" can also be charged by compressors in other  
11 locomotives, and in trains using distributed power the remote consist is frequently  
12 used to assist in charging the air brake system.) Once the air brake system is fully  
13 charged, the brakes on the locomotives and cars in the train can be activated. If  
14 the lead locomotive is shut down, the air pressure in the air brake pipe bleeds off  
15 through the numerous couplings in the train, and the system has to be tested and, if  
16 necessary, recharged before the train can move. If the brake system on the train is  
17 deprived of air for more than four hours, federal regulations require a complete  
18 "terminal air brake test" and safety inspection of the train. This necessitates not  
19 only charging the entire air brake system, but walking the entire length of the train  
20 to determine, car by car, whether the brakes are functioning properly on each car  
21 and whether each car and locomotive is otherwise in good working order.

22 9. Line-haul locomotives contain a large diesel power plant that  
23 generates power to operate electric traction motors that drive the axles. The diesel  
24 engine generates anywhere from 3,000 to 6,000 horsepower, depending on the  
25 model and age of the locomotive. (Switch locomotives, which operate in and  
26 around rail yards and are used to sort inbound rail cars and assemble outbound  
27 cars into trains, have engines that generate anywhere from 1,000 to 2,500  
28 horsepower, depending on model and age.) Manually starting or shutting down

1 these large power plants is an involved process, which differs for different  
2 locomotive models, and can take anywhere from 5 to 10 minutes per locomotive.  
3 As discussed in the declaration of BNSF's witness Mark P. Stehly, the newest  
4 locomotives in BNSF's fleet are equipped with automatic start-stop ("AESS")  
5 devices, and some have been retrofitted with such devices, but the majority of  
6 BNSF's locomotives must be manually started or shut down.

7 10. BNSF has rules—its "Air Brake and Train Handling Rules"—which  
8 govern the start up and shut down of locomotives, as well as the maintenance of  
9 air brake pressure in trains. Section 106 of those rules addresses shut down  
10 requirements. Because locomotive engines do not contain antifreeze, most  
11 locomotives must be kept running whenever there is a danger of freezing  
12 temperatures, and occupied locomotives must also be kept running to maintain air  
13 conditioning in the cabin. BNSF's rules also requires that the lead locomotive in a  
14 train be kept running to maintain air brake pressure for the train. Further,  
15 distributed power remote consists may not be shut down. Thus, trailing  
16 locomotives in the lead consist of an assembled train are the only locomotives that  
17 are to be shut down, if the crew determines that those locomotives "will not be  
18 utilized for one hour or more" (Section 106.3). Switch locomotives are also to be  
19 shut down if the ambient temperature is above 40 degrees Fahrenheit, the  
20 locomotive does not need to be kept running to maintain air conditioning in the  
21 cabin, and the crew determines that the locomotive will not be used for an hour or  
22 more.

23 11. As discussed in the declaration of BNSF's witness Mark P. Stehly, in  
24 2005 BNSF and Union Pacific Railroad ("UPRR") entered into a Memorandum of  
25 Understanding ("2005 MOU") with the California Air Resources Board ("CARB")  
26 which, among other things, committed BNSF and UPRR to limit non-essential  
27 idling in locomotives. Consistent with BNSF's rules, idling under 60 minutes was

28 ///

1 specifically deemed essential, as was idling to maintain air brake pressure in a  
2 train.

3 12. As I will discuss in more detail below in connection with SCAQMD's  
4 regulatory efforts, BNSF has serious operational and safety reasons for its rules.  
5 As background, it is important to recognize the limitations of the BNSF's and  
6 other railroads' operating environment. If trains are delayed because locomotives  
7 are not up and running when they need to be, the effects on the railroad's  
8 throughput capacity can be substantial.

9 13. Railroads have limited infrastructure, and trains do not have the same  
10 routing flexibility as, for example, trucks or airplanes. Freight railroads must build  
11 and maintain their own rail lines, and frequently a railroad has only one economic  
12 route between rail markets. That route may have only a single track, or, in some  
13 instances, a double track with one-way traffic in each direction. These routes,  
14 depending on conditions, can handle anywhere from 60 to 120 trains per day (an  
15 average of 3 per hour per track). Trains generally exceed a mile in length, and  
16 there are a limited number of yards and sidings where a train can pull off of the  
17 main line to allow another train to pass, to wait to enter a port or shipper facility,  
18 to pick up or drop off blocks of cars, to change crews, to fuel locomotives, or to  
19 deal with mechanical problems. If a train stops on a main line, it slows or stops all  
20 trains behind it and, in the case of a single track, all trains in front of it as well. On  
21 a busy main line, every minute that that train sits is effectively a minute that other  
22 trains must slow or stop, waiting for it to proceed.

23 14. Railroads rely on a combination of track signals and periodic  
24 communications with dispatchers to know when they may enter or leave a  
25 particular track segment. If a train is sitting in a yard or on a siding and it receives  
26 an indication to proceed from that yard or siding onto the main line, it "seizes" the  
27 main track segment for a safe distance on both sides of the yard or siding. No  
28 other train may enter or exit that segment until that train has either cleared the

1 segment or communicated with the dispatcher that it cannot move and the signals  
2 have been changed so that another train can safely move through that segment.  
3 Every minute that the train delays in exiting the yard or siding and moving through  
4 the track segment that it has "seized" is a minute during which every other train on  
5 the line that needs to move through that segment is potentially delayed. If trains  
6 can move over that line segment at 20-minute intervals, a half-hour delay  
7 effectively prevents two other trains from moving through that segment. If the  
8 dispatcher can be contacted and informed of such a delay, the dispatcher may  
9 "release" the track segment to permit other trains to move through and attempt to  
10 find another window of opportunity for the train to exit the yard or siding.

11 15. On a busy line, if a train cannot move out of a yard or siding when the  
12 track is first available, it may take hours for another window to appear for the train  
13 to be able to move. While that is going on, the crew is on duty and those hours are  
14 counted against the 12-hour maximum that it can remain on duty under federal  
15 law. At some point, the dispatcher and crew caller must determine whether the  
16 train will be able to leave in time to make the next crew change point. This is a  
17 critical determination, because if the crew "dies" (reaches its 12-hour maximum)  
18 while on the main line, it must stop right there, and the railroad must find a way to  
19 get a replacement crew to that point, and pick up the crew that has "died." And  
20 while that train is sitting there, as discussed above, no other trains can move over  
21 the same track. If the determination is made that there is a risk that a crew may  
22 "die" before it reaches a crew change point, then the train must wait for a fresh  
23 crew before it can exit the yard or siding. This entire time, under BNSF's safety  
24 rules, the lead locomotive on the train sitting in the yard or on the siding must be  
25 idling to maintain air pressure for the brakes on the train. Of course, if a train is  
26 slowed or stopped on the main line by another train's delay in entering the main  
27 line from a yard or siding, then the entire locomotive consist will run longer than it  
28 would have absent the other train's delay. The adverse effects on fuel efficiency

1 and air emissions are multiplied through every train that is affected by the delay of  
2 a single train in moving onto the main line when it receives the signal to do so.

3 16. It is not just other trains waiting to move through a track segment that  
4 are adversely affected by a train that has “seized” the track but cannot timely exit a  
5 yard. Yards have limited capacity. If a train cannot timely exit a yard, it occupies  
6 track that another train cannot use to itself prepare to move. Typically, there are  
7 not many tracks in a yard that are capable of holding a full train, and only one  
8 track that exits onto the main line. Thus, a delay in moving a train out of a yard  
9 means, at the least, that the exit to the yard is plugged and other trains in the yard  
10 must wait until it exits (or is backed off the exit track) to move themselves. If the  
11 few tracks capable of holding a full train become clogged, then trains cannot be  
12 made up at all until they clear. Even more significantly, trains that must use the  
13 yard to leave the main line and either wait to enter a port or shipper facility or be  
14 broken up to form new trains cannot get off the line because all of the tracks  
15 capable of receiving a train are full. The main line is then blocked—with all the  
16 consequences in terms of slowing or stopping other trains and adverse effects on  
17 fuel efficiency and air emissions that I discussed above.

18 17. Further, if the yard crews cannot efficiently build trains and move  
19 them onto staging tracks because those tracks are full, their switching work grinds  
20 to a halt. Trains cannot be made up at all until the staging tracks are cleared. This  
21 means that yard crews sit longer, and idle their yard locomotives more than they  
22 do if the yard is functioning fluidly. More significantly from the standpoint of rail  
23 operations, the yard effectively becomes a choke point that can adversely affect  
24 not only the ability of trains and blocks of traffic to move through that yard, but  
25 also the ability of blocks of traffic to reach other yards for additional switching  
26 and onward movement in other trains.<sup>1</sup>

27 <sup>1</sup> This can quickly have severe ramifications. A well-known example of this is  
28

(cont'd)

1           18. Railroads are at or close to their ability to maintain fluidity on their  
2 systems in many areas. This is particularly true of the South Coast Air Basin. The  
3 problem in the South Coast Air Basin is heightened by the congestion in the Ports  
4 of Los Angeles and Long Beach. BNSF has managed to keep its lines and yards  
5 reasonably fluid, but they are running at or near full capacity, and it does not take  
6 much by way of impedances to have a significant impact on their operations.

7                   **Impact of SCAQMD's Rule 3502 on Yard and Line Operations**

8           19. SCAQMD's Rule 3502(d) would prohibit BNSF crews from idling  
9 any "unattended" or "trailing" locomotive for more than 30 minutes in a variety of  
10 circumstances that would interfere significantly with BNSF's operations. Perhaps  
11 most significantly, under Rule 3502(d)(1)(C), a railroad cannot idle any  
12 "unattended" locomotive for more than 30 minutes within a railyard.

13 "Unattended" is defined in Rule 3502(c)(16) to mean "where no crew member is  
14 on board a locomotive." Thus, when a train is in a yard waiting to move out onto  
15 the main line, all of the locomotives in the train other than the lead locomotive is  
16 "unattended." A strict 30-minute shut down requirement under these  
17 circumstances would be highly problematic.

18           20. A high percentage of BNSF's trains in the South Coast Air Basin  
19 either begin their long-haul movement in a rail yard or must wait in a rail yard in  
20 the Basin en route to a port or customer facility in the Basin. Once the crew  
21 notifies the dispatcher that it is ready to proceed, it must wait for a proceed

22           (... cont'd)

23 UPRR's problems in the late 1990s when a UPRR line and yard in the Houston area  
24 became jammed. It took months for UPRR's system to recover, and the ripple  
25 effects were felt not only by UP but by the rest of the nation's rail system and by  
26 the shipping public. The Surface Transportation Board was forced to step in to help  
27 resolve the crisis. Hundreds of millions of dollars of traffic were adversely  
28 affected, and many shippers switched from rail to truck service. Those UPRR  
customers who were able to switch to other railroads found that those railroads  
struggled to handle the surge in business. I know from personal experience the  
operating strain BNSF was put under trying to cope with the increased volume  
which it received in that period as the result of UPRR's service crisis.

1 indication given by signal light or verbally by the dispatcher. This is rarely  
2 instantaneous. It is not uncommon for a crew to have to wait a significant amount  
3 of time for the indication to proceed.

4 21. Absent SCAQMD's rule, a crew can move a train onto the main line  
5 instantly in response to an indication to proceed, because the locomotive consist is  
6 up and running and the train is ready to move. If a 30-minute shutdown rule is in  
7 effect, however, a train is unlikely to be in a position to move. The reason, as I  
8 noted earlier, is that it can take 5-10 minutes per locomotive to manually shut  
9 down a locomotive. (This is a process which generally must be undertaken by  
10 only one crew member, since the other crew member usually needs to stay in or  
11 near the cab of the lead locomotive to listen for communications from the  
12 dispatcher and to perform other functions.) With a strict 30-minute rule, the crew  
13 of a train ready to exit a yard would have little, if any, margin of time to begin  
14 shutting down the trailing locomotives to avoid SCAQMD's fines. In fact, if the  
15 locomotive consist has four or more locomotives or distributed power, the crew  
16 may not be able to meet the deadline even if it begins to shut down the trailing  
17 locomotives as soon as they pull up to the signal light. (This is so even if  
18 locomotives with idling control devices are included in the consists, because crews  
19 will usually need to visually confirm that the locomotive has in fact ceased  
20 operating and, if not, shut the locomotive down by hand.)

21 22. It must be recognized that the potential for \$25,000 to \$75,000 fines  
22 under SCAQMD's rule will effectively require that BNSF and its crews shut down  
23 locomotives whenever there is a possibility that the 30-minute rule will be  
24 violated. In contrast, as I understand it, the 60-minute rule in the 2005 MOU is  
25 patterned on operating rules the railroads already had in place. Sixty minutes  
26 gives the crews considerably more time to determine whether they are likely to  
27 experience a long delay, including more time to establish contact with the  
28 dispatcher. Moreover, the 2005 MOU provides BNSF with the flexibility to keep

1 locomotives running if safety or operational efficiency require doing so, even  
2 longer than 60 minutes—because the 2005 MOU applies only to “non-essential”  
3 idling. If, for example, a crew has been waiting 50 minutes to exit a yard with a  
4 train and has good reason to believe that in 15 more minutes it will receive an  
5 indication to proceed, it would not make any sense for it to shut down the trailing  
6 locomotives in order to meet a 60-minute “non-essential” idling shutdown  
7 requirement. In that situation, continuing to run the trailing locomotives is clearly  
8 essential, since serious operational interference, and more emissions, would result  
9 from shutting down the locomotives than keeping them running and enabling the  
10 train timely to exit the yard.

11 23. My best estimate is that a strict 30-minute shutdown rule could be  
12 expected on average to result in 15-30 minute delays in a train leaving a yard.  
13 Rarely does a train that is ready for departure get immediate authority to leave.  
14 The crew or yardmaster must “tone” the dispatcher, and the dispatcher must  
15 determine when it is safe for the train to depart. BNSF’s main line through the Air  
16 Basin is so heavily traveled, both by its own freight trains and by local commuter  
17 trains, that some time typically passes before authorization to proceed can be  
18 given. (Local commuter trains have priority over freight trains; accordingly,  
19 anytime one or more of them need to occupy the track segment outside the yard,  
20 the freight train wanting to exit the yard must wait.) If any time at all passes,  
21 however, the crew is exposed to severe penalties under SCAQMD’s 30-minute  
22 rule unless it immediately begins to shut down. Accordingly, it must begin  
23 shutting down its trailing locomotives. It may have shut down some or all of those  
24 locomotives by the time it gets authorization to proceed. And that amount of delay  
25 will result in many instances in the train losing the window of opportunity  
26 available for it to exit the yard—which means that it will have to start the whole  
27 shutdown sequence over again if it has gotten the “unattended” locomotives  
28 restarted but no longer has an indication to proceed. (The delay for trains with

1 distributed power would be even longer than for those with a single consist at the  
2 front of the train, since shutting down the locomotives in consists in the middle or  
3 end of the train not only requires walking to the middle or back of a train that is up  
4 to two miles long, but it cuts the radio link that enables the crew to control all of  
5 the consists in the train from the lead locomotive. Reestablishing that radio link  
6 and restarting the locomotives in the remote consists adds even more time to the  
7 process.) I believe that this additional delay will add an average of at least 10  
8 more minutes to the 15-30-minute average delay experienced under a strict 30-  
9 minute shutdown requirement by trains waiting to exit a yard.

10 24. Such a delay would seriously compromise the ability of the railroads  
11 to get their trains out of yards during the limited windows that are available for  
12 them to get onto a main line. At this point, approximately 100 BNSF freight trains  
13 and 48 commuter train move per day over BNSF's principal lines through the  
14 Basin. On average, these trains are a mile-and-a-half long, and some are as long  
15 as two miles. The amount of time ("headway") between trains is as little as 20  
16 minutes. If a train misses the window it is given to get out onto the main line, it  
17 means not only that that train cannot move, but, as I discussed earlier, (a) other  
18 trains are slowed or stopped on the main line waiting for the segment "seized" by  
19 that train to clear and (b) the train behind it cannot move, with all of the  
20 consequences for clogging the yard that comes from the staging and exit tracks  
21 being jammed. And the crew must shut down the trailing locomotives again in  
22 anticipation of exceeding the 30-minute rule, which means that the next time a  
23 window opens, it may well not make that window either. Aside from the main line  
24 and yard being hung up by this shut-down, start-up cycle, the crew's hours of  
25 service soon become imperiled, and the train is further delayed waiting for a new  
26 crew. Of course, this only exacerbates the problem for the yard, which soon is at  
27 risk for performing its most basic switching functions.

28 25. The problem is magnified exponentially when this scenario is

1 repeated at the many rail yards throughout the South Coast Air Basin. For  
2 example, Hobart Yard in Los Angeles is critical to BNSF's operations in the Air  
3 Basin. Hobart is the principal BNSF yard to which intermodal containers and  
4 trailers are trucked from the Ports of LA and Long Beach for transfer ("lifts") to  
5 railroad flat cars and assembly of those cars into outbound trains for transport  
6 around the country. (Inbound trains carrying export traffic and empty containers  
7 and cars are also processed at the yard.) Hobart also handles substantial domestic  
8 interstate intermodal traffic. Hobart is currently operating at capacity and has little  
9 margin for "recoverability." At the yard, a train generally arrives or departs an  
10 average of one an hour around the clock. Because the yard is so full, a train that  
11 needs to enter the yard generally cannot do so until a train in the yard departs.

12 26. As I explained earlier, were SCAQMD's 30-minute shutdown rule to  
13 become effective, a train waiting to depart the yard is likely to be delayed at least  
14 30 minutes by the need to shut down its trailing locomotives to avoid violating the  
15 30-minute cut-off and then start them back up when it gets the indication to  
16 proceed. At Hobart, an average 30-minute delay in one train departing will also  
17 mean at least an average 30-minute delay in another train entering the yard. Since  
18 Hobart Yard has an average lift capacity of 150 units (trailers or containers) per  
19 hour, the one hour of delay occasioned by each application of the 30-minute  
20 shutdown rule will result in a daily loss of productivity equal to 1200 lifts  
21 (assuming conservatively that 8 pairs of trains would be delayed each day). This  
22 is because, if a train cannot depart, BNSF cannot use the track that it is sitting on  
23 to reset other equipment, to load, or to bring another train in to unload.  
24 Accordingly, the 30-minute shutdown rule will result in a significant loss of  
25 capacity at Hobart Yard, which will in turn increase pressure on the remaining  
26 capacity, lead to increased delays and congestion, and encourage traffic to move  
27 from rail to truck. Conservatively, a loss of 1200 lifts per day equates to a loss of  
28 4-5 trains per day for BNSF and its customers (1200 lifts divided by a

1 conservative average of 255 units per train), because if the trailers and containers  
2 cannot be loaded or unloaded, they cannot be moved.

3 27. Similarly, BNSF serves nine on-dock terminals in the Ports of Los  
4 Angeles and Long Beach. Each of those on-dock terminals on average handles  
5 two trains per day (one in and one out), and a train cannot enter the ondock  
6 terminal until the train at the terminal departs. Moreover, trains can only enter the  
7 on-dock terminals during limited windows totaling approximately 9 hours each  
8 day because of restrictions on train operations when longshoremen are working  
9 loading and unloading ships. Finally, these terminals operate off of common  
10 trackage that is not only used for ingress to and egress from the terminals but also  
11 for switching blocks of cars to make up trains at the terminals.

12 28. If a train is delayed for 30 minutes leaving one of the on-dock  
13 terminals, it not only delays that train leaving the terminal, but also the train that is  
14 prepared (usually on the main line) to enter the terminal. When that train has to  
15 wait on the main line, it backs up all of the trains behind it on the main line. (This  
16 includes not only BNSF trains but also UPRR trains, because the two railroads  
17 share the principal lines into the port areas.) Furthermore, because the common  
18 trackage has been "seized" to permit the train to exit the area on that line,  
19 switching operations in the other terminals between the affected terminal and the  
20 main line are delayed because the crews in those terminals cannot use the common  
21 trackage to put together trains. The overall delay would snowball further if each  
22 of those trains were also delayed for 30 minutes by a 30-minute shutdown rule.  
23 And it is exacerbated in the case of these on-dock terminals by the limited 9hour  
24 window available for trains to enter those terminals. If a train misses that window,  
25 it must wait for the next available window for accessing the terminal. And that  
26 train must be held somewhere while it is waiting. When BNSF's yards and sidings  
27 are working at or near full capacity, as they often are in the Air Basin, the  
28 necessity to hold one or more trains for up to 15 hours not only means that those

1 trains are not moving but that they create serious congestion problems. (This can  
2 not only adversely affect rail operations, but also cause ships to stack up at the  
3 ports waiting to unload.) Given the combination of all of these factors, if a strict  
4 30-minute locomotive shutdown rule were in effect for all of the “unattended”  
5 locomotives in these terminals, I estimate that at least a quarter of the trains that  
6 would otherwise move in a day would be unable to move. Since an average of 20  
7 BNSF trains a day normally enter or exit these terminals, that is approximately 5  
8 trains a day that would not move.

9         29. I have not attempted to make a yard-by-yard calculation of the impact  
10 a strict 30-minute shut-down rule would have on the rest of BNSF’s operations in  
11 the Air Basin, but with a total of some 100 BNSF trains a day operating in the Air  
12 Basin, I think that a very conservative estimate would be that another 5-10 trains a  
13 day would not move if a strict 30-minute shutdown rule were in effect. Thus, I  
14 estimate that in the range of 15-20 BNSF freight trains **per day** would be exposed  
15 to not moving if a strict 30-minute no-idling rule were imposed on “unattended”  
16 locomotives in trains in rail yards in the Air Basin.

17         30. An important point here is that this loss of throughput capacity in the  
18 Air Basin would not be a one-time occurrence. There would be no “recovering”  
19 from the problems created one day by a strict 30-minute shutdown requirement,  
20 because the same scenario would repeat itself the following day, and the yard and  
21 terminal facilities at issue could not otherwise increase their output to make up for  
22 that loss. Moreover, it is not just yards and terminal facilities in the Air Basin that  
23 have limited recoverability. Some of BNSF’s lines in the Air Basin are also  
24 operating at or near full capacity. If 15-20 trains are delayed from moving over  
25 those lines on a given day, BNSF cannot simply push through 15-20 additional  
26 trains the following day. The congestion problem will cascade through BNSF’s  
27 yards and lines until there is a volume drop sufficient to allow capacity to catch up  
28 with demand.

1           31. To test my analysis that 15-20 BNSF freight trains per day would not  
2 move if a strict 30-minute no-idling rule were imposed on “unattended”  
3 locomotives in trains in rail yards in the Air Basin, BNSF conducted a modeled  
4 sensitivity analysis, which is attached as Trial Exhibit 427. I routinely have  
5 models run in the ordinary course of my duties at BNSF and am well versed in  
6 interpreting the results of the model. For example, we use these models—which  
7 are designed to be conservative—to justify certain capital expenditures. In this  
8 instance, the model assumes that crews would need to start shutting down  
9 locomotives 15 minutes after stopping to avoid violating Rule 3502 and analyzes  
10 how many trains would not move assuming a range of different times needed to  
11 restart locomotives (*i.e.*, 15, 20, 25 and 30 minutes). As shown on Exhibit 427, if  
12 only 15 minutes are needed to restart locomotives, 12.5 fewer trains would move  
13 through the District. If 20 minutes are needed to restart locomotives, 16.6 fewer  
14 trains would move through the District. If 25 minutes are needed to restart  
15 locomotives, 20.8 fewer trains would move through the District. And if 30  
16 minutes are needed to restart locomotives, 24.9 fewer trains would move through  
17 the District. Significantly, the model does not include information from the Ports  
18 of Los Angeles and Long Beach; thus, the actual numbers would be larger. The  
19 results of this modeled sensitivity analysis are completely consistent with my  
20 analysis, as discussed in earlier paragraphs.

21           32. Additional operational problems would be created by the prohibition  
22 in Rule 3502(d)(1)(A) and (B) on idling an unattended locomotive for more than  
23 30 minutes when the crew of a locomotive consist has been relieved and the next  
24 crew has not arrived, or when the crew of the locomotive consist has left for a  
25 meal. In that situation, under BNSF’s Air Brake and Train Handling Rules and the  
26 2005 MOU, if the crew expected the train to move within an hour, it would leave  
27 the consist running, and set handbrakes as additional safety protection. (Under  
28 BNSF’s rules, the number of hand brakes to be applied on the locomotives and rail

1 cars in a train that is left unattended depends on several factors, including the  
2 grade and adhesion, the number of loaded and empty cars, and the weather  
3 conditions (wind and temperature). On a level grade, BNSF's rules require that  
4 hand brakes be set on only 1% of empty cars and 2% of loaded cars. See Section  
5 104.14.) Since many, if not most, of the trains subject to SCAQMD Rule 3502's  
6 shut down requirement will be on a level or nearly level grade in a yard or  
7 elsewhere, the hand brakes on only a few cars would have to be set and then  
8 released. This would take 15 minutes at most. If the crew had left all the  
9 locomotives in the consist running, the train it would be ready to move at that  
10 point under BNSF's rules and the 2005 MOU.

11 33. In contrast, under the SCAQMD rule, the crew would have to shut  
12 down *all* of the locomotives, including the lead locomotive, because the 30-minute  
13 rule could well be violated if they left any of the locomotives in the consist  
14 running. Rule 3502 contains no exception for running the lead locomotive to  
15 maintain air pressure. On return to the train, therefore, the crew would have to  
16 start up all of the locomotives in the consist, recharge the air brakes, and run an  
17 application and release test of the air brakes, *before* releasing the hand brakes on  
18 the locomotives and rail cars. (The hand brakes cannot be released at the same  
19 time the locomotives are started, because BNSF's safety rules require setting the  
20 air brakes before the hand brakes are released.) Instead of less than 15 minutes,  
21 the train would be subject to a delay of 45-60 minutes.

22 34. Even if the crew leaving a train expected a delay of over an hour and  
23 shut down the trailing locomotives under BNSF's rules and the 2005 MOU, under  
24 BNSF's rules and the 2005 MOU the lead locomotive would remain running to  
25 maintain air brake pressure. BNSF does not permit its crews to rely on hand  
26 brakes alone to secure a train that will be left unattended. Thus, at the least, a  
27 crew returning from a meal or a new crew taking over a train does not have to  
28 charge the air brakes and run an application and release test before it could depart.

1 Even more importantly, in circumstances in which a train must wait for a crew  
2 more than four hours, if the lead locomotive has been turned off, under federal law  
3 the new crew must not only recharge the air brake system (which itself can take  
4 considerable time when a train has been "off air" for that length of time) but under  
5 federal law must walk the entire length of the train checking each car to make sure  
6 that the air brakes on that car are working and performing a comprehensive safety  
7 check with respect to the other mechanical functions of each car and locomotive.  
8 This can take hours, and significantly delay train departures.

9 35. Significant operational problems would also be created by Rule  
10 3502(d)(2)(A) and (B), which prohibits a trailing locomotive from idling anywhere  
11 in the Air Basin, including main lines, if a "dispatcher or yardmaster notifies the  
12 operator of a delay that will exceed 30 minutes" or "there is a locomotive failure  
13 or breakdown that will result in a delay of more than 30 minutes." Initially, it is  
14 unclear how the SCAQMD inspector citing a locomotive for violating the 30-  
15 minute rule can be convinced that no such notice was received. Moreover, it is  
16 uncertain what will happen if a crew has been sitting for say, 20 minutes, outside a  
17 yard, on a siding or on the main line, because there has been some sort of delay,  
18 and it receives notice that the delay will exceed 30 minutes. The crew cannot shut  
19 down the trailing locomotives in time to avoid being penalized. Indeed, even if  
20 the crew has been delayed only a few minutes and gets notice of a likely 30-  
21 minute delay, it may not be able to shut down in 30 minutes.

22 36. A different concern applies to 3502(d)(2)(B). If there is a locomotive  
23 failure or breakdown that results in a delay of over 30 minutes, nothing in Section  
24 3502(d)(2)(B) requires that the crew be notified of the reason for the delay in order  
25 for penalties under that section to accrue. Even if the crew finds out and it cannot  
26 shut down in time to meet the 30 minute rule, it appears that it will be fined. And  
27 if there is debate about any of this, apparently crews be required to take time off

28 ///

1 and railroads be required to produce dispatcher or yardmaster records to  
2 demonstrate whether the crew did or did not get notice.

3 37. Of course, if a crew has shut down trailing locomotives (including  
4 remote consists in a distributed power train) to avoid being penalized under Rules  
5 3502(d)(2)(A) or (B), and the crew receives the indication to proceed, the start-up  
6 of the trailing locomotives will delay actual train movement from a siding or over  
7 a main line for the time it takes to start up those locomotives (and, in the case of  
8 remote consists in a distributed power train, reestablish radio connections between  
9 the remote consist and the lead locomotive in the train). If the train cannot get out  
10 of a siding during the available window, then it will have the same start-up/shut-  
11 down delay problems as a train waiting to exit a yard. If the train is stopped on the  
12 main line, then operations on the entire line will be slowed by the delay in re-  
13 starting.

14 38. The bottom line is that implementation of Rule 3502's strict 30-  
15 minute idling prohibition could seriously impact BNSF's operations in the South  
16 Coast Air Basin. The day-to-day operation of many of BNSF's trains could be  
17 significantly delayed and throughput capacity of BNSF's yards and lines could be  
18 significantly reduced. Moreover, as I discuss next, implementation of Rule 3502  
19 would also compromise with the safety of BNSF's operations.

#### 20 **Impact of Rule 3502 on Rail Safety**

21 39. BNSF does not allow a train to be secured by a crew leaving the train  
22 using handbrakes alone. Under BNSF's Air Brake and Train Handling Rules,  
23 handbrakes are a supplement to air brakes, not a substitute. Even if a BNSF crew  
24 determines that the train and its locomotives will not move for an hour or more,  
25 the crew must leave the lead locomotive running to maintain air brake pressure.  
26 SCAQMD's Rule 3502, however, would require a crew that had reached the end  
27 of its shift and was securing the train for the next crew to shut down *all*  
28 locomotives—thereby depriving the train of its source of air brake pressure. That

1 is not the safest practice. A runaway train is a terrible event, and BNSF has  
2 determined through long experience that a fail-safe approach of using both the air  
3 brake system and hand brakes to secure a train is necessary to protect its own  
4 personnel and the public.

5 40. SCAQMD appears to have been under a misimpression that “no train  
6 will lose air brake pressure on graded territory because the railroads do not leave  
7 trains unattended on mountain grades.” SCAQMD Opposition Memorandum at  
8 \_\_\_. This is wrong for two reasons. First, BNSF’s rule regarding maintaining air  
9 brake pressure applies to all terrain, regardless of the degree of grade. A train can  
10 roll off even on the slightest grade. Accordingly, the rule applies to all terrain.  
11 Second, using the dual safety features of air brake pressure and hand brakes allows  
12 BNSF’s crews to leave trains unattended on all but the steepest terrain. The  
13 requirement that BNSF not leave a train unattended applies only to grades over  
14 two percent, which account for less than one percent of BNSF’s track.  
15 Accordingly, there is no doubt that under SCAQMD’s rules a train could lose air  
16 brake pressure on graded territory if the lead locomotive were required to be shut  
17 down. The only alternative would be to keep a crew with the train under  
18 circumstances where there would be no need to do so under BNSF’s rules. Given  
19 the federal limits on the time that a crew may remain on duty, this is a very  
20 significant constraint, because if a new crew must be brought in to sit on a train  
21 just to ensure that air brake pressure is maintained, every hour that crew sits there  
22 is an hour that the crew is unavailable to actually move the train once it gets the  
23 indication to proceed.

24 41. Another way in which SCAQMD’s Rule 3502 would compromise  
25 safety is that it would expose crews to having to run a complete “terminal air brake  
26 test” and inspection of the train if the train were “off air” for more than four hours  
27 as a result of having to shut down the lead locomotive. That requires crews to  
28 walk the entire length of the train, checking the function of the air brakes and

1 performing a safety inspection on each car. Of necessity, the crews must walk on  
2 the uneven ballast (i.e., bed of rocks) that hold the ties and rail, and they frequently  
3 must cross over the couplings between cars to perform their air brake and safety  
4 checks. Injury incidents from unintentional accident events and mishaps can occur  
5 from inadvertently slipping and falling while walking on uneven ballast.

6 42. That same safety concern applies to the requirement of SCAQMD's  
7 Rule that BNSF crews shut down "unattended" remote locomotive in a distributed  
8 power train under the strict 30-minute shutdown requirement. A crew member  
9 will have to walk the length of a train as long as two miles in length to shut down  
10 the locomotives in a remote consist at the end of the train, and then walk the length  
11 of the train again to start the consist back up and reestablish radio contact with the  
12 controlling locomotive. That is up to four miles of walking on ballast necessitated  
13 by SCAQMD's Rule that would not otherwise occur.

14 43. In sum, SCAQMD's Rule 3502 would interfere with BNSF's  
15 operations not only by delaying train movements and diminishing the throughput  
16 capacity of its facilities in the Air Basin, but by compromising the safety of those  
17 operations.

#### 18 **Impact of Rule 3501 on Rail Operations and Safety**

19 44. SCAQMD's Rule 3501 requires, first, that BNSF and other railroads  
20 annually provide detailed information to SCAQMD regarding every locomotive  
21 that has operated in the Air Basin in the past year and the specific equipment they  
22 have. Rule 3501(e)(2). Second, on a daily basis the railroads must record every  
23 instance in which any locomotive not equipped with an idling control device  
24 (whether occupied or not) idles for more than 30 minutes anywhere in the Air  
25 Basin for any reason. (If the locomotive idles for more than two hours, the  
26 specific reason must be given.) The railroad is required to record the name of the  
27 locomotive operator (and name of the owner, if different), the serial number of the  
28 locomotive, the specific location of the "idling event," the date and time of "idling

1 event onset,” and the duration of the idling event. Rule 3501(d)(1). The railroad  
2 must weekly electronically submit all of the “idling event” information. Rule  
3 3501(e)(3). Third, a “responsible company official” must certify to the accuracy  
4 of the reports submitted. Rule 3501(e)(4). Fourth, the railroad must maintain  
5 auditable records from which SCAQMD can “verify and substantiate” the  
6 accuracy of the railroad’s “idling event” recordkeeping. Rule 3501(d)(2). The  
7 railroad is subject to the same penalties “for each locomotive for each day of non-  
8 compliance” to which it is subject under Rule 3502. Rule 3501(j). SCAQMD  
9 provides the “choice” to the railroad to avoid the requirements of Rule 3501 by  
10 agreeing to a schedule to equip all of its locomotives with idling control devices  
11 (or to use “alternative technology,” which BNSF’s witness Stehly has testified is  
12 technologically unattainable for line-haul locomotives). Rule 3501(f).

13 45. Rule 3501 would significantly interfere with railroad operations.  
14 BNSF locomotives stop hundreds of times a day in the Air Basin. Yard operations  
15 particularly are the subject of repeated stops and starts, and switch locomotives  
16 often idle for more than 30 minutes between jobs. For all intents and purposes, a  
17 yard or line-haul crew would have to record virtually every time a locomotive  
18 stopped, because it is often impossible to be sure that the locomotive will not be  
19 stopped more than 30 minutes. The crew would then have to keep track of the  
20 time after each stop and record any stops that exceeded thirty minutes. Often,  
21 however, yard and line-haul locomotives are moved in yards by individuals that  
22 are not assigned to a locomotive for a particular shift, such as hostlers and  
23 maintenance personnel. If the locomotive is running when such an individual  
24 boards it, he or she has no way of knowing under BNSF’s current operating  
25 procedures precisely how long that locomotive has been running, and after the  
26 locomotive has been moved, the next individual or crew member to board it has no  
27 way of knowing precisely when it stopped. The same occurs between regular  
28 crew shifts.

1           46. Under BNSF's current rules, no such recordkeeping is required. The  
2 crew or individual that last operates a locomotive determines whether the  
3 locomotive is likely to be unutilized for an hour or more and, if so, shuts it down  
4 (unless it is the lead locomotive required to maintain air brake pressure for an  
5 assembled train). If the locomotive will be utilized within the hour, it is left  
6 running. SCAQMD's rule would impose a burdensome recordkeeping  
7 requirement, backed by severe fines, that do not exist at all today.

8           47. Even aside from the recordkeeping burden, the electronic reporting  
9 burden would be significant. A single yard locomotive is usually operated by  
10 three different crews (each on an eight-hour shift). Over a 24-hour period, each  
11 may have to record a half dozen "idling events" and the results of those records  
12 would have to be electronically inputted. Each shift could take as much as 20  
13 minutes at the end of their shift electronically inputting at computer terminals in  
14 the yard the data required for each of those idling events. Multiplied by three  
15 crews over a 24-hour period, that is an *hour* of lost yard crew time per day, or  
16 4.2% of the available crew time. The productivity of BNSF's yard crews would  
17 suffer significantly. Road crews would be unlikely to have to report as many  
18 "idling events," but when such events occurred, the road crew would have to  
19 electronically report the information required for every locomotive in the train.  
20 Thus, fewer "idling events" might require just as much time to electronically  
21 input, assuming that the road crew was at a point where it had access to a terminal  
22 to input the data. If the crew were not at a point where it had access to a terminal,  
23 procedures would need to be developed whereby the crew could call in the  
24 information at the end of its shift for electronic inputting by someone else.  
25 Effectively, this would shorten its shift, since the time the crew would spend either  
26 electronically inputting the data or calling in the information would be "on duty"  
27 time that would count against its hours of service. Here again, crew productivity  
28 would suffer.

1           48. One of the most significant and difficult requirements of Rule 3501 is  
2 the requirement in Rule 3501(e)(4) that a company official “certify” the accuracy  
3 of the records submitted. Compliance with this requirement would necessitate that  
4 an extraordinary amount of time and attention be paid by company officials to  
5 ensure that no mistakes were made at any stage of (1) the recordation of each of  
6 the hundreds of potential “idling events” that would be likely to occur each day in  
7 the Air Basin, (2) the transfer of those records into electronic form, and (3) the  
8 compilation of the electronic records for submission to the District. BNSF rarely  
9 has any such certification requirement in any of its business dealings, and the  
10 burden of establishing such a requirement for recordation, data entry, and  
11 compilation of this information by thousands of employees is tremendous. The  
12 audit responsibility alone would consume substantial managerial resources. It is  
13 difficult to conceive of a more burdensome regulatory requirement from the  
14 standpoint of BNSF’s management.

15           49. Further, if SCAQMD were able to impose this special recording and  
16 reporting requirement on the railroad, there would be nothing to prevent other  
17 localities from adopting their own information-gathering requirements on the  
18 railroads—with similarly stiff penalties for failure to comply. BNSF and other  
19 railroads would find significant crew time being spent in training and then  
20 gathering and reporting whatever kinds of data different local agencies or  
21 municipalities desired to have. If a crew operated a train through multiple  
22 jurisdictions, it could be required to comply with multiple data-gathering  
23 requirements, and to report all of them at the end of its shift. The more time they  
24 spent on such extraneous regulatory tasks, the less time they would have to do  
25 their jobs.

26           50. Safety would also be a significant concern. Railroad crews and  
27 individual hostlers and maintenance personnel operate massive machinery, and  
28 railroads seek to minimize unnecessary tasks and distractions, so as to minimize

1 accidents. Given the potentially severe fines for failure to report an "idling event"  
2 and the requirement for "certification" of the information reported, crews and  
3 individual hostlers and maintenance personnel would be required to pay inordinate  
4 attention to recording and reporting the data required by Rule 3501. That is  
5 attention not being paid to duties that are mission-critical for their jobs. Here  
6 again, it bears emphasizing that if SCAQMD were able to impose this burden on  
7 railroad employees and management, there would be nothing to prevent other local  
8 jurisdictions from doing the same. Different requirements in different jurisdictions  
9 would further compound the potential confusion, distraction, and risk.

10 51. In sum, implementaion of the "idling event" recordkeeping and  
11 reporting requirements of Rule 3501 and the strict 30-minute shutdown  
12 requirements of Rule 3502 would cause serious operating and safety problems for  
13 BNSF.

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

15 Executed this 2 day of NOV 2006 in FT. WORTH TX.

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18 Chris A. Roberts

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# EXHIBIT 9

FILED

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**UNITED STATES DISTRICT COURT**  
**CENTRAL DISTRICT OF CALIFORNIA, WESTERN DIVISION**

ASSOCIATION OF AMERICAN  
RAILROADS, BNSF RAILWAY  
COMPANY, and UNION PACIFIC  
RAILROAD COMPANY,

Plaintiffs.

vs.

SOUTH COAST AIR QUALITY  
MANAGEMENT DISTRICT; THE  
GOVERNING BOARD OF SOUTH  
COAST AIR QUALITY MANAGE-  
MENT DISTRICT,

Defendants.

CASE NO. CV06-1416 JFW (PLAx)

DECLARATION OF STEVE  
BRANSCUM [REDACTED]

Trial Date: Nov. 14, 2006  
Time: 10:00 a.m.  
Place: Courtroom of the Hon. John  
F. Walter, U.S. Dist. Judge

I, STEVE BRANSCUM, declare as follows:

1. I make this declaration as my direct testimony in this case. I have personal knowledge of the facts stated in this declaration and if called upon to do so I could and would testify competently thereto.

2. I am currently employed by BNSF Railway Company ("BNSF") as

1 Group Vice President, Consumer Products, of the Marketing Department. In this  
2 position, I am responsible for marketing, sales, and logistics for BNSF's intermodal  
3 and automotive traffic. I began my career with the former Santa Fe Railway in  
4 1980 in the industrial engineering department, where I held various positions in  
5 Kansas City and Topeka, Kansas. In 1989, I was named General Director,  
6 Intermodal Planning and Control, in Chicago, Illinois, when the Intermodal  
7 Business Unit was formed. I moved to the position of General Director, Intermodal  
8 Equipment, in 1991; was appointed Assistant Vice President, Intermodal Equipment  
9 and Hub Operations in 1992; became Assistant Vice President, Intermodal Hub  
10 Operations for BNSF Railway, in Fort Worth, Texas, in January 1996; and Vice  
11 President, Intermodal Marketing, in July 1996.

12 3. I received a Bachelor of Science degree in Industrial Engineering from  
13 New Mexico State University. I pursued graduate studies toward an MBA at the  
14 University of Missouri and Washburn University and completed the Advanced  
15 Executive Program at the Kellogg School of Business of Northwestern University.  
16 I am a member of the Board of the Intermodal Transportation Institute at the  
17 University of Denver and a member of the Board of the Intermodal Association of  
18 North America.

19 4. As I understand it, the South Coast Air Quality Management District  
20 ("SCAQMD") seeks to enforce a rule, Rule 3502, that would impose a strict 30-  
21 minute limit on the amount of time freight railroad locomotives could idle under  
22 certain circumstances in the South Coast Air Basin (which includes the Ports of Los  
23 Angeles and Long Beach, much of the greater Los Angeles area, and the Inland  
24 Empire). A parallel SCAQMD rule, Rule 3501, would impose time-consuming  
25 record-keeping and electronic reporting requirements for every "idling event" that  
26 takes place in the Air Basin. BNSF's witness Chris A. Roberts has testified about  
27 the interference with train operations and diminished BNSF system capacity that  
28 could result if these rules were allowed to go into effect. The purpose of my

1 testimony is to discuss the adverse marketing and financial impact that such  
2 capacity limitations could have on BNSF's interstate business—particularly its  
3 intermodal business—and on the efficiency and productivity of the supply chain on  
4 which so many of BNSF's customers depend.

5 5. I begin my testimony by describing the kind of freight rail traffic that  
6 moves through the Air Basin. I then discuss that traffic's dependence on efficient  
7 rail service, and the adverse effects that capacity limitations created by SCAQMD's  
8 rules would have on BNSF and its customers. Not only would they interfere with  
9 BNSF's business, but they would interfere with the efficient and productive  
10 movement of hundreds of millions of dollars worth of goods across the country. If  
11 SCAQMD's idling regulations were not enjoined, and other local jurisdictions and  
12 states are encouraged to adopt their own regulations interfering with rail operations,  
13 the adverse impact on interstate commerce would be multiplied manyfold.

14 **A Major Portion of Interstate Commerce in This Country Moves by Rail**  
15 **Through the South Coast Air Basin**

16 6. The Los Angeles metropolitan area is both a major producing and  
17 consuming area in its own right and the gateway to a major portion of the  
18 international trade that moves throughout the country. As usefully summarized in  
19 the "Goods Movement Action Plan" issued by the State of California in September  
20 2005:

21 The Los Angeles/Inland Empire Region (Los Angeles,  
22 Orange, Riverside, San Bernardino, and Ventura  
23 Counties) is the nation's largest international trade  
24 attractor and consumer, rivaled only by the New York  
25 city/tri-state area. In the area covered by the Southern  
26 California Association of Governments (SCAG), there are  
27 more than 17 million people with more than 6.9 million  
28 jobs, approximately 550,000 of which are directly related  
to handling goods through the region (including Imperial  
County). Thirty-seven percent of all U.S. containerized

1 international trade moves through the region's seaports.  
2 [Exh. 15-6 at V-2-3.]

3 7. Much of the international and interstate commerce moving through the  
4 Air Basin moves by rail. This is particularly true of long-haul "intermodal" traffic.  
5 Intermodal traffic is traffic that moves by more than one transportation "mode."  
6 For example, container ships docking at the Ports of Los Angeles and Long Beach  
7 each contain thousands of containers of goods that can be moved from the Ports by  
8 rail or truck, or both. Containers destined for the Los Angeles market are usually  
9 moved by truck to local warehouses or distribution centers in the area. The  
10 majority of containers, however, contain goods destined elsewhere in the state or  
11 the country. Trucks can and do carry much of this traffic as well. Trucks enjoy the  
12 benefit of the interstate highway system and direct road access to every corner of  
13 the country, while railroads are confined to the rail lines, yards, and other facilities  
14 they construct themselves. Nevertheless, over longer distances, railroads have  
15 significant advantages of scale that enable them to be competitive. A single  
16 "double-stack" intermodal train (with containers stacked two-high on each flat car)  
17 can carry the equivalent of approximately 280 truckloads—with a two-man crew  
18 and three times the fuel efficiency (and three times less emissions) per ton-mile as  
19 truck movements. (See the Goods Movement Action Plan, Exh. 15-6 at V-24.)

20 8. When intermodal traffic moves by rail from the Ports of Los Angeles  
21 and Long Beach, it may do so in several different ways. After being offloaded from  
22 ships, containers may be loaded directly onto rail cars, which are combined to form  
23 long-haul trains at on-dock terminals. Containers may also be trucked from the  
24 Ports to rail yards in the Los Angeles/Inland Empire area and then transferred from  
25 the trucks onto rail cars, which are combined to form long-haul trains at those  
26 yards. Containers may also be trucked from the Ports to  
27 consolidation/deconsolidation centers, where the goods in the "international"  
28

1 containers (usually 40-foot containers) are transferred to 53-foot domestic  
2 containers and then trucked to rail yards for long-haul rail shipment. Domestic  
3 containers or trailers may also be packed with goods produced in or trucked into the  
4 Los Angeles/Inland Empire area, and trucked to rail yards for long-haul rail  
5 shipment. (For simplicity, I focus here on containers imported through or packed in  
6 the Los Angeles/Inland Empire area, but substantial export traffic also moves by  
7 rail through the same area from all parts of the country.)

8         9. The products packed in intermodal containers and trailers moving by  
9 rail from the Los Angeles/Inland Empire area run the gamut from consumer goods  
10 (e.g., consumer electronics like television sets, radios, cameras, and  
11 telecommunications equipment; computers and accessories; toys, sporting goods,  
12 and bicycles; furnishings like furniture, clocks, household and kitchen appliances,  
13 apparel and household textiles, footwear, food products); to finished machinery  
14 used to manufacture goods or provide services in the United States (e.g., electric  
15 apparatuses, photo machinery, business machinery, generators, transformers,  
16 medical machinery, and the parts to maintain that machinery); to parts and products  
17 used to manufacture goods in the United States (e.g., auto and truck parts,  
18 semiconductors, industrial engines, pumps, compressors, boxes, belting, glass,  
19 abrasives, chemicals, steel and other metal products); to products used to build  
20 structures in the United States (e.g., shingles, molding, wallboard, cement); to  
21 express packages containing everything from documents to consumer goods to  
22 industrial products. Other products moving by rail to and from the Los  
23 Angeles/Inland Empire area, often not moving in containers or trailers but in rail  
24 cars suited to those particular products, include finished motor vehicles, grain and  
25 grain products, lumber, coal, steel products, beverages, chemical products, plastics,  
26 and petroleum products.

27         10. The customers for these products are quite varied as well. They  
28 include "big box" retailers like WalMart and Home Depot, automobile

1 manufacturers like Ford and Toyota, furniture companies like Ikea and Bombay, oil  
2 companies like Exxon and Conoco, and clothing companies like JCPenney and The  
3 Limited. BNSF also has as major customers companies like UPS, which relies on  
4 BNSF for a wide range of package delivery services, J.B. Hunt, which works with  
5 BNSF to provide integrated intermodal services to customers all over the country,  
6 and Maersk, which provides the ocean shipping leg of much of BNSF's intermodal  
7 business.

8 **Infrastructure Capacity Constraints and Customer Service Requirements**  
9 **Place a Premium on Efficient Rail Service**

10 11. As the U.S. economy has become increasingly integrated with the  
11 global economy, the efficiency and capacity of the long-distance supply chains that  
12 knit the trade system together has become increasingly important. Trade to and  
13 from Asia alone has increased enormously, and much of that trade moves through  
14 the Ports of Los Angeles and Long Beach. Because of the efficiency of long-haul  
15 rail transportation, BNSF and other railroads have been able to garner a significant  
16 amount of this increased traffic, which could otherwise move overland only by  
17 truck.

18 12. This increase in rail traffic has placed a premium on the most efficient  
19 possible use of railroad facilities, equipment, and personnel. As discussed in the  
20 declaration of BNSF's witness Roberts, BNSF and other railroads depend on  
21 largely fixed infrastructure to load and unload cars, make up trains, and move rail  
22 traffic through the Air Basin and around the rest of the country. Many of the  
23 terminals and rail lines necessary to handle that traffic are operating at or near the  
24 limits of their capacity. Terminal switching operations and over-the-road service  
25 are extremely sensitive to train delays. A delay in one train leaving an intermodal  
26 yard, for example, can impede not only that train's service, but the service of other  
27 trains attempting to enter the yard, the switching of cars and making up of other  
28 trains within the yard, the transfer of containers from trucks to rail cars, and the

1 service of trucks bringing containers to and from the yard. Roberts conservatively  
2 estimates that BNSF's capacity to move traffic through the Air Basin could be  
3 reduced by some 15-20 BNSF trains per day if SCAQMD's idling rules were  
4 implemented. If other localities and states adopted similar rules, the adverse effects  
5 on the systemwide capacity of BNSF and other railroads would be substantially  
6 magnified.

7       13. Such a decrease in rail capacity would not just adversely affect the  
8 railroads but also the customers for rail service. When rail capacity is inadequate,  
9 businesses dependent on rail service suffer. In fact, the ability of the nation's  
10 railroads to meet the demand for rail service is a matter of such concern to the  
11 federal Surface Transportation Board that in recent years the STB has required the  
12 railroads to provide annual reports of how they plan to efficiently handle their  
13 customers' needs. The STB has singled out concerns about capacity constraints,  
14 and the railroads have made substantial capital commitments and plans for  
15 improving the velocity of the rail system to keep up with the demand for their  
16 services. Nevertheless, as BNSF's witness Roberts discusses, many of BNSF's  
17 facilities currently operate at or near the limit of their capacity. SCAQMD's rules,  
18 by diminishing the throughput capacity and productivity of the railroads' facilities  
19 and equipment, would work at cross purposes with the STB's and the railroads'  
20 efforts to meet their customers' service and capacity requirements.

21       14. I will discuss further below the commercial problems that train delays  
22 can create for BNSF and its customers, but it bears emphasizing here that the  
23 effects of train delays on interstate commerce extend to truck and ship operations  
24 on which BNSF's customers depend, as well as to rail operations. For example, as  
25 BNSF's witness Roberts explains in his declaration, the on-dock terminals at the  
26 Ports of Los Angeles and Long Beach are highly susceptible to disruption arising  
27 from train delays. When BNSF's trains cannot efficiently remove containers off-  
28 loaded from the docks, then either ships must sit in the harbor with their cargoes

1 waiting to unload, or customers must attempt to substitute trucks for direct rail  
2 service at the docks. The Ports' facilities for truck service, however, are already  
3 congested, as are the roads and freeways leading into and out of the Ports, and the  
4 intermodal rail yards elsewhere in the Los Angeles/Inland Empire area with which  
5 they connect. Adding more trucks to this already saturated situation slows down  
6 service and increases costs and emissions for all concerned.

7 15. Of course, customers experiencing diminished rail service as a result  
8 of train delays may opt to bypass rail operations altogether and use long-haul  
9 trucking operations to fill their needs, but this is usually a decidedly more expensive  
10 approach for the customer than long-haul rail service. Increases in the price of  
11 diesel fuel and a serious shortage of long-haul truck drivers have recently combined  
12 to drive trucking costs even higher. Furthermore, the Los Angeles/Inland Empire  
13 area is not the only area in the country suffering from highway congestion and  
14 stressed highway infrastructure. The more long-haul traffic shifts from rail to truck,  
15 the worse the highway congestion problem becomes, and the less capacity the roads  
16 have to accommodate the needs of businesses and ordinary motorists who have no  
17 choice but to use the interstate highway system.

18 **The Adverse Impact on Interstate Commerce of Train Delays Arising From**  
19 **the Imposition of Locomotive Idling Regulations Would Be Substantial**

20 16. In this portion of my testimony, I discuss in more detail the kinds of  
21 commercial disruption that BNSF and its customers suffer when the throughput  
22 capacity of its equipment and infrastructure is reduced by train delays and  
23 diminished crew productivity. BNSF, like other railroads, incurs very high costs  
24 for the infrastructure required to provide freight rail service. The more utilization  
25 railroads can get out of their assets, the more they lower the average cost of their  
26 service, the better able they are to compete for business, and the more they can  
27 afford to plough back into the business to enhance their capacity. Lower utilization  
28

1 has the opposite effect. It raises average costs, makes it more difficult to compete  
2 for business, and reduces the railroad's ability and incentive to make further  
3 investments to improve its capacity.

4 17. Not only do railroads spend very large amounts on investments like  
5 rail lines and yards, but those investments are effectively "fixed" and "sunk."  
6 Freight railroads cannot pick up and move their businesses if confronted with  
7 unfavorable conditions. If the flow of rail business supporting a railroad's  
8 operations is disrupted or diminished, the railroad's fixed costs do not go away.  
9 When the contribution that the lost traffic made to help cover those costs and  
10 provide revenues for reinvestment goes away, the railroad will seek to recover those  
11 costs from the traffic that remains. Insofar as it succeeds in raising its rates, its  
12 customers pay more for the transportation services they buy, which is ultimately  
13 reflected in the costs of goods to consumers. If the railroad is unable to raise its  
14 rates, it must economize however it can. Railroads are publicly traded companies.  
15 They cannot invest in capacity improvements that do not meet their shareholders'  
16 expectations of a reasonable overall return. State or local regulatory impediments  
17 to efficient operation of the railroads' equipment and facilities not only can reduce  
18 the capacity of the equipment and facilities but act as a disincentive to additional  
19 investment.

20 18. In the case of the idling regulations SCAQMD seeks to impose, the  
21 loss of even one trainload of traffic is significant. As I mentioned above, a single  
22 intermodal train carries the equivalent of around 280 trucks. BNSF has worked  
23 hard to increase the average length of trains in the Air Basin, in order to get greater  
24 utilization out of its equipment, crews, and facilities. For example, BNSF has  
25 adopted a strategy of operating 8,000-foot container trains (more than a mile and a  
26 half), whereas it operated 5,000-foot to 6,000-foot trains in the past. Other types of  
27 trains have also gotten longer.

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Of course, many of

1 the trains moving through the Air Basin are not intermodal trains, and the rates that  
2 customers pay vary widely, depending on the particular commodities involved, the  
3 length of the trip, and market conditions. But hundreds of thousands of dollars in  
4 charges are typically involved with most long-haul BNSF trains originating in the  
5 Air Basin. All of that revenue and the contribution that BNSF derives from this  
6 traffic would be at risk each day for every train that did not move as a result of  
7 SCAQMD's idling rules.

8 19. This is just an indication of the potential impact on BNSF arising from  
9 such regulation in the Air Basin alone. The application of SCAQMD's rules to all  
10 railroads, and the spread of such regulation to other jurisdictions, would mean that  
11 BNSF and other railroads could be deprived of additional substantial contribution to  
12 their fixed costs. Moreover, the adverse commercial impact of lost rail capacity  
13 would extend far beyond BNSF and other railroads.

14 20. Many of BNSF's customers rely on "just-in-time" inventory processes  
15 that require consistent and timely delivery of retail goods and manufacturing parts  
16 to stock stores and keep their manufacturing plants in operation. By keeping their  
17 stocks low and turnover high they reduce their inventory costs and enhance their  
18 flexibility to respond quickly to demand for new products. If the rail system in the  
19 Air Basin does not have the capacity to meet these and other customers' needs, then  
20 they may seek out other gateways for import or export (such as ports in Oakland,  
21 California, Seattle/Tacoma, Washington, and Houston, Texas) and alternative rail  
22 service to and from those gateways. The problem with those gateways, and the rail  
23 yards and lines and streets and highways serving them, is that they too have  
24 capacity problems. They do not have anything close to the port and supporting  
25 intermodal rail transportation infrastructure that the Ports of Los Angeles and Long  
26 Beach have, and they cannot handle a significant increase in traffic. Moreover, if  
27 SCAQMD were permitted to implement the local idling regulations it has proposed,  
28 there is nothing to prevent local authorities in other jurisdictions, including other

1 port areas, from adopting similar regulations with similar adverse effects on rail  
2 operations.

3 21. Another alternative, as I discussed earlier, is for BNSF's customers to  
4 turn to trucks. Even when truck service is available to handle the traffic, it is almost  
5 always more expensive. BNSF's intermodal traffic through the Air Basin has  
6 grown in significant part because it is more cost-efficient than trucking, and the  
7 recent run-up in the cost of diesel fuel has widened that cost gap. (The cost of  
8 diesel fuel has increased for BNSF as well, but rail transportation is so much more  
9 fuel efficient per ton-mile than truck transportation that the comparative cost  
10 increase is much greater for trucks than for railroads.) When the comparatively  
11 high cost of recruiting, training, and retaining long-haul truck drivers is added in,  
12 the additional cost of running some 280 trucks in place of a single train can be  
13 significant. Highway congestion is also taking its toll on truck service, resulting in  
14 longer trips, more fuel consumed, and more trucks and drivers required to handle  
15 the traffic. In short, even assuming that alternative truck service is available,  
16 diversion to trucks would adversely affect both the competitiveness and profitability  
17 of BNSF's customers—not to speak of the adverse environmental trade-off between  
18 rail and truck traffic.

19 22. Ultimately consumers in this country pay for the kind of interference  
20 with interstate commerce that would be caused by SCAQMD's rules and any  
21 copycat rules in other localities and states. Efficient supply chains are substantially  
22 responsible for the ability of manufacturers and retailers across the country to keep  
23 their prices low and respond quickly to technological change. On average, each of  
24 the intermodal trains that runs through the South Coast Air Basin carries over \$10  
25 million worth of goods. If BNSF and other railroads cannot provide the level of  
26 service upon which markets across the country have come to rely, then  
27 manufacturers and retailers will either curtail their outputs and offerings or pay  
28 more for alternative service. Either way, the consumer suffers from reduced

1 choices, higher prices, or both.

2 23. Export traffic would also be adversely affected by diminished capacity  
3 in the Air Basin. The competitiveness of American manufacturers and suppliers in  
4 an increasingly global economy depends to a substantial extent on efficient supply  
5 chains. If the costs of exports are driven up by a lack of efficient rail capacity to  
6 handle their transportation, then export business will suffer, and jobs dependent on  
7 that business will be lost.

8 24. Thus, from the standpoint of interstate commerce, the implementation  
9 of SCAQMD's rules would have serious adverse effects across the board. BNSF  
10 and other railroads would suffer from diminished capacity to provide the efficient  
11 service their customers require. Not only would this cause the railroads significant  
12 financial harm, but it would require their shipping customers to scramble to find  
13 other ways to get their goods delivered. If they cannot find other ways, their output  
14 will be reduced. If they can find other ways, those ways are likely to be more  
15 expensive, which will make them less competitive and increase the costs to  
16 consumers and exporters. Any diversion to trucks will also increase congestion on  
17 the highways and result in significantly more fuel consumption and emissions than  
18 rail transportation.

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

Executed this 30<sup>th</sup> day of Oct. 2006 in \_\_\_\_\_



STEVE BRANSCUM

# EXHIBIT 10

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**UNITED STATES DISTRICT COURT**  
**CENTRAL DISTRICT OF CALIFORNIA, WESTERN DIVISION**

ASSOCIATION OF AMERICAN  
RAILROADS, BNSF RAILWAY  
COMPANY, and UNION PACIFIC  
RAILROAD COMPANY,

Plaintiffs.

vs.

SOUTH COAST AIR QUALITY  
MANAGEMENT DISTRICT; THE  
GOVERNING BOARD OF SOUTH  
COAST AIR QUALITY MANAGE-  
MENT DISTRICT,

Defendants.

CASE NO. CV06-1416 JFW (PLAx)

DECLARATION OF H. RANDALL  
WELCH

Trial Date: Nov. 14, 2006

Time: 10:00 a.m.

Place: Courtroom of the Hon. John  
F. Walter, U.S. Dist. Judge

I, H. Randall Welch, declare as follows:

1. I submit this declaration as my direct testimony in the above-captioned case. I have personal knowledge of the facts stated in this declaration and, if called upon to do so I could and would competently testify thereto.

2. I am Vice President, Transportation for United Parcel Service, Inc.

1 (“UPS”). I have been a UPS employee for 35 years. I am currently responsible  
2 for UPS’s Intermodal Operations and Control Center. This encompasses  
3 operations, service, and design for rail operations, truck driver team operations,  
4 and contract carrier (truckload) operations. I am also responsible for  
5 transportation technology development and hub automation technology  
6 development. Prior to being promoted to my current position in 2000, I held a  
7 variety of transportation management positions with UPS, including Region  
8 Transportation Manager in the North Central Region, Region Transportation  
9 Manager in the Northeast Region, and Transportation Manager in Southeast and  
10 Northeast Texas.

11 3. UPS is the world’s largest package delivery company, delivering  
12 more than 14 million packages a day to more than 200 countries around the world.  
13 UPS employs approximately 400,000 people—340,000 in the United States and  
14 60,000 internationally. UPS uses package cars, trucks, airplanes, and trains to  
15 provide its package delivery services. UPS manages one of the largest ground  
16 fleets in the world, with nearly 90,000 vehicles. UPS runs the world’s ninth  
17 largest airline. Finally, UPS is one of the largest users of rail service in the  
18 country.

19 4. UPS’s parcel network operates on a “hub and spoke” model.  
20 Individual packages are gathered by truck, taken to hubs or “centers,” sorted by  
21 destination and service category, and usually packed in trailers for delivery by  
22 truck tractor to another hub for: (a) sorting and final truck delivery; (b) movement  
23 by air to another hub for sorting and final truck delivery; or (c) movement by rail  
24 to another hub for sorting and final delivery. For example, a parcel being shipped  
25 from Wilmington, North Carolina, to San Francisco, California is picked up by a  
26 driver and taken to the UPS center in Wilmington, where it is loaded on a trailer  
27 and driven to the UPS hub in Raleigh, North Carolina. There, the package joins  
28 packages from all over North Carolina, and is carried by truck to the Chicago Area

1 Consolidated Terminal in Hodgkins, Illinois. It is then loaded onto a trailer and  
2 sent by “trailer-on-flat-car” (TOFC) rail service to North Bay, California, where  
3 the trailer is unloaded, forwarded to the delivery center, sorted, loaded onto the  
4 delivery truck, and transported to its final destination.

5 5. UPS offers a variety of different service options to its customers and  
6 there are numerous variations on the ways packages move through its system. All  
7 of those ways, however, have one thing in common—efficiency. UPS uses the  
8 mode, or combination of modes, that produces the necessary service at the lowest  
9 cost. The on-time package delivery business is highly competitive. In addition to  
10 the United States Postal Service, UPS faces competition from other private  
11 delivery providers like Federal Express and DHL. If UPS cannot provide  
12 competitive, quality service, its customers may choose other providers.

13 6. My particular responsibility at UPS is making sure that the  
14 intermodal operations that UPS uses for much of its business can meet the  
15 competitive schedules that are necessary for that business. UPS uses every major  
16 railroad in the United States to provide the rail leg of at least some of its long-haul  
17 business. In the western two-thirds of the country, UPS has the equivalent of  
18 several trainloads of traffic moving every day on trains operated by BNSF  
19 Railway Company and Union Pacific Railroad. UPS also uses the trains of  
20 Norfolk Southern Railway Company and CSX Transportation, Inc. to handle some  
21 of its business in the eastern third of the country. Finally, UPS also utilizes the rail  
22 services of FEC, CN, and Kansas City Railroads.

23 7. BNSF, Union Pacific, and the Association of American Railroads  
24 maintain that proposed regulations promulgated by the South Coast Air Quality  
25 Management District related to idling would result in diminished rail capacity and  
26 substantial train delays. They believe that the throughput capacity of BNSF and  
27 Union Pacific could be diminished by as many as 30-40 trains per day. The kinds  
28 of substantial train delays and diminished capacity they predict could have a

1 serious impact on UPS's rail operations.

2 8. UPS offers guaranteed package delivery times. When it says  
3 packages will arrive, they must arrive, or our customers will find other providers  
4 who can meet their commitments. Recently in the eastern United States, we found  
5 that we were losing business to Federal Express and other package delivery  
6 services because we could not meet their delivery schedules for ground services.  
7 The reason was that, in some corridors, the eastern railroads could not consistently  
8 provide the kind of intermodal service we needed to compete. Accordingly, we  
9 redesigned our ground package network in the East to move significant traffic  
10 volume off intermodal trains and onto long-haul trucks. We were not happy to do  
11 that. It was costly to build up our truck fleet and to recruit and train the drivers for  
12 long-haul service, and the cost to transport by truck is significantly higher than to  
13 transport shipments by rail.

14 9. In the West, we have been able to maintain most of our intermodal  
15 business against our competitors' long-haul trucking offerings. However, the  
16 trains have to operate on very tight schedules. For example, between Los Angeles,  
17 California and Dallas, Texas, if a train carrying UPS's trailers is one hour late, it  
18 misses the sorting schedule at UPS's Dallas hub and our packages arrive late to  
19 our customers.

20 10. Sometimes we can adjust our sorting schedules to accommodate a  
21 slower train schedule for one leg of a shipment, but that has adverse ramifications  
22 for other legs of the shipment. That is exactly what happened earlier this year for  
23 packages moving in trailers from Los Angeles, California that required sorting  
24 first at our Dallas, Texas hub and then at our Memphis, Tennessee hub. Because  
25 trains were unable to meet our Dallas sort schedule consistently, we adjusted our  
26 operations to permit trains to arrive later and still permit us to provide competitive  
27 service to customers in the Dallas area. However, that adjustment meant that some  
28 packages that were destined for the Memphis area could not be sorted and

1 reloaded in time to continue on by train to Memphis. Accordingly, we were  
2 required to reorganize our service to move this traffic between Dallas and  
3 Memphis by truck. The same thing could happen to the Los Angeles-Dallas traffic  
4 if we cannot get consistent, timely train delivery under our current schedule. If  
5 further, persistent delays developed, we may have no choice but to move each  
6 trailer from Los Angeles to Dallas using two-man "sleeper" driver teams.

7 11. Our Los Angeles to Portland, Oregon train service is similarly on a  
8 very tight schedule. If we cannot get consistent, timely delivery by intermodal  
9 train, we may be forced to use long-haul trucks to carry the trailers from Los  
10 Angeles to Portland and back.

11 12. Current railroad capacity constraints already impact our operations.  
12 For example, UPS found it necessary for competitive reasons to drop the transit  
13 time for some of our ground service from California to New York from five days  
14 to four days. The UPS trailers had been moving by rail from Los Angeles,  
15 California to Chicago, Illinois, and then interchanged with another railroad in  
16 Chicago. Because of capacity constraints, however, the western railroad was  
17 unable consistently to meet our requirements from Los Angeles to Chicago.  
18 Accordingly, some of that traffic is now moved by teams of drivers from Los  
19 Angeles to Iowa, where they meet another group of drivers who carry the trailers  
20 the rest of the way to Chicago. The trailers are then loaded on an intermodal train  
21 for the rest of the trip to our New York hub.

22 13. If additional capacity constraints are placed on the railroads, as  
23 predicted under the implementation of the proposed regulations, or even if  
24 additional delays are introduced, UPS may be forced to seek other transportation  
25 options, including long-haul trucking, none of which are as cost-effective as  
26 intermodal rail service. UPS uses the cost advantage it has with intermodal  
27 service to keep the cost of its delivery services down and provide a quality service  
28 to its customers at a good price. If UPS's transportation costs are increased, then

1 the cost increases may have to be passed on to our customers.

2 14. The bottom line is that, it is not only UPS and its customers that have  
3 an important stake in seeing the railroads maximize the fluidity and capacity of  
4 their operations in the South Coast Air Basin and elsewhere, but also the public at  
5 large. When train delays result in capacity constraints for rail service, the traffic  
6 will seek out other ways to move. In the absence of intermodal rail service which  
7 is capable of addressing UPS's capacity needs, as well as its needs for time-critical  
8 deliveries, UPS will be forced to consider other transport options to remain  
9 competitive, including the use of long-haul trucks. Unfortunately, such a shift will  
10 likely result in higher costs of service, and ultimately higher prices to consumers.

11  
12 I declare under penalty of perjury that the foregoing is true and correct.

13 Executed this 1 day of Nov 2006 in Atlanta, GA.

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16 H. Randall Welch

# EXHIBIT 11

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ASSOCIATION OF AMERICAN  
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MANAGEMENT DISTRICT; THE  
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COAST AIR QUALITY  
MANAGEMENT DISTRICT,

Defendants.

Case No. CV06-1416 JFW (PLAx)

DIRECT TRIAL TESTIMONY  
DECLARATION OF MARK P.  
STEHLY

Trial Date: Nov. 14, 2006  
Time: 10:00 a.m.  
Place: Courtroom of the Hon. John  
F. Walter, U.S. Dist. Judge

1 I, Mark P. Stehly, declare as follows:

2 1. I submit this declaration as my direct testimony in the above-captioned  
3 case. I have personal knowledge of the facts stated in this declaration and if called  
4 upon to do so I could and would testify competently thereto.

5 2. I am currently the Assistant Vice-President, Environment and  
6 Research and Development, for BNSF Railway Company, 2500 Lou Menk Drive,  
7 Fort Worth, Texas 76131. I have had thirty-three years of railroad environmental  
8 engineering and hazardous materials experience. I worked with the Burlington  
9 Northern Railroad from 1972 to 1982, and then with the Atchison Topeka and  
10 Santa Fe Railway Company from 1982 to 1995, which then merged into the BNSF  
11 Railway Company in 1995. I have worked for the BNSF Railway Company from  
12 1995 to the present. I have obtained a BS in Forestry from the University in  
13 Minnesota in 1970, an MS in Water Resources from the State University of New  
14 York at Syracuse University and a BS In Civil Engineering from the University of  
15 Minnesota in 1981. I have written several papers on train resistance published in  
16 American Society of Mechanical Engineering Proceedings. Other articles include  
17 treatment and disposal of wastewater sludges and groundwater contamination at  
18 railroad facilities. I contributed to the Association of American Railroads'  
19 Hazardous Materials Symposium on Handling Distressed Tank Cars and AAR's  
20 First Hazardous Materials Seminar. I authored a paper entitled "Energy and  
21 Environment: The Railroad Perspective" for the National Research Council's  
22 Transportation Research Board. I am BNSF Railway Company's primary  
23 representative for the railroad industry effort on locomotive emission regulations.

24 3. My responsibilities at BNSF include supervising the railroad's  
25 Environmental and Hazardous Materials division, representing the railroad before  
26 federal, state, and local environmental bodies, managing the railroad's compliance  
27 with its environmental obligations, and directing the railroad's research and  
28 development of infrastructure, rolling stock, and new materials. I also regularly

1 work with the Association of American Railroads ("AAR") on environmental  
2 matters.

3 4. In addition to having worked on environmental matters generally in  
4 the railroad industry for 33 years, I have been specifically involved for 23 years in  
5 managing environmental issues for BNSF (and its predecessor companies) in  
6 California. This includes working with the California Environmental Protection  
7 Agency ("Cal/EPA") and the California Air Resources Board ("ARB") on  
8 statewide issues, including the development of statewide emission control plans and  
9 mobile source emission control measures and with air quality management districts,  
10 ports, cities, and counties on issues of regional or local concern. I have provided  
11 ARB with BNSF's statewide rail operation emission inventory for their inclusion in  
12 the mobile source portion of the State Implementation Plan. I have been directly  
13 involved in the development and implementation of the ARB/Railroad Statewide  
14 Agreement—Particulate Emissions Reduction Program in California Rail Yards  
15 (the "2005 MOU"). I, my staff or representative, have also attended California  
16 legislative hearings on proposed legislation which would have impacted BNSF rail  
17 operations. Finally, I have been directly involved in numerous meetings and  
18 hearings regarding the subsequent adoption by the South Coast Air Quality  
19 Management District ("SCAQMD") of SCAQMD's Rules 3501, 3502, and 3503  
20 that are at issue in this proceeding. I have seen and am familiar with these Rules.  
21 Attached hereto as Exhibits 1 through 3 are true and correct copies of SCAQMD's  
22 Rule 3501, 3502 and 3503, respectively. Attached hereto as Exhibit 4 is a true and  
23 correct copy of the 2005 MOU.

24 5. In this declaration, I first discuss the interstate nature of railroad  
25 operations, the comparative environmental impacts of rail operations, and the  
26 limitations on use of "alternative technologies" to reduce locomotive emissions. I  
27 then discuss the railroads providing statewide rail operation emission inventories to  
28 ARB for ARB's inclusion in the State Implementation Plan. I also discuss the

1 railroads participation in ARB hearings to consider and adopt emission control  
2 plans relating to mobile sources and the consideration and adoption of mobile  
3 source emission control measures. I then discuss the background and specifics of  
4 the various voluntary statewide initiatives that BNSF and other railroads, with the  
5 cooperation and assistance of the ARB and other state agencies, have undertaken to  
6 help reduce emissions from rail operations in California. I will then discuss  
7 SCAQMD's failed legislative attempts to expand its jurisdiction to include mobile  
8 sources. Following that, I discuss SCAQMD's adoption of Rules 3501, 3502, and  
9 3503, and I discuss the costs and adverse effects on BNSF of SCAQMD's Rule  
10 3503. (The separate Declarations of Chris Roberts and Douglas W. Willis discuss  
11 additional adverse operational and safety impacts of Rules 3501 and 3502.)  
12 Finally, I discuss in general why it is critical for railroads to have uniform operating  
13 rules and training requirements for crews, and why a patchwork of different  
14 operational requirements in different air districts, municipalities, and other  
15 jurisdictions would seriously handicap BNSF's operations.

16 The Nature of Interstate Rail Operations

17 6. BNSF is the second largest of seven "Class I" freight railroads in  
18 North America. Union Pacific Railroad ("UPRR") is the largest. BNSF and UPRR  
19 are the only Class I railroads operating in California. There are other, much  
20 smaller, railroads operating in California, often providing local switching or  
21 terminal services to BNSF and UPRR. Two such railroads, Pacific Harbor Line  
22 ("PHL") and Los Angeles Junction Railway Company ("LA Junction") operate in  
23 the South Coast District. (LA Junction is a wholly owned subsidiary of BNSF.)

24 7. BNSF, like every other Class I railroad, provides freight service across  
25 multiple state and local jurisdictions. BNSF operates in 28 states in the West and  
26 Midwest. It is the product of some 390 predecessor companies that were merged or  
27 acquired over the past 150 years to form a unified interstate system. Through  
28 interchange arrangements with other railroads, BNSF offers rail service throughout

1 North America. Through intermodal arrangements with maritime and trucking  
2 companies, BNSF offers international "intermodal" service as well as service to  
3 communities and shippers that are not rail-served.

4 8. Most rail freight business in the United States is interstate business,  
5 originating in one state and terminating in another. That is true in California as  
6 well. The majority of the traffic originates or terminates (or both) outside  
7 California. In the South Coast Air Basin (the "Basin"), a substantial percentage of  
8 that interstate business is intermodal traffic moving in containers to destinations  
9 across the country. The Basin's seaports constitute the nation's largest gateway for  
10 such traffic, which can move across the country either by long-haul truck or by  
11 intermodal train. Attached hereto as Exhibit 5 is a true and correct copy of a chart  
12 produced by the U.S. Department of Transportation showing rail intermodal traffic  
13 flows in the United States in 2002 that provides a good illustration of the interstate  
14 nature of this business.

15 9. BNSF and other railroads compete head-to-head for overland business  
16 with trucks, which carry the majority of long-haul merchandise freight business in  
17 the United States, and in California. Unlike freight railroads, which must build and  
18 maintain their own rail infrastructure, trucks use the public highway system, which  
19 gives them a significant competitive advantage. Railroads can compete more  
20 effectively with trucks over longer distances, but only by getting the most efficient  
21 possible use out of their equipment, crews, yards, and rail lines.

22 10. One key to efficient rail operations is efficient use of locomotives,  
23 particularly the long-haul locomotives that do the lion's share of hauling interstate  
24 traffic. BNSF, like other Class I railroads, maintains fleets of long-haul  
25 locomotives that operate around the clock and that can be used anywhere on the  
26 railroad's system that they are needed. Locomotives are expensive to buy and  
27 maintain. Only two companies manufacture most of the locomotives used in the  
28 United States, and only about 750 new locomotives are manufactured for use in this

1 country each year. A new long-haul locomotive costs upwards of \$2.5 million. It  
2 is crucial that they be operated as many hours of the day as possible and used as  
3 efficiently as possible. This means that they are allocated wherever the need is  
4 greatest. They cannot economically be assigned in perpetuity to a particular  
5 service. BNSF and other railroads not only regularly move locomotives around  
6 their own systems, but they have arrangements that permit them to use each other's  
7 locomotives where that is the most efficient means to handle the traffic.

8 11. As a general matter, segmentation of a railroad's locomotive fleet into  
9 multiple geographic areas would be very burdensome for the railroads because of  
10 the very high capital costs of the additional locomotives needed to establish area-  
11 specific locomotive fleets, creation of inefficient operations, and delay of time-  
12 sensitive customer shipments. Most of the line-haul locomotives operating to,  
13 from, and through California and the Basin are "interstate" locomotives that cannot  
14 economically or efficiently be segregated by geographic region. Nor can they  
15 economically be taken off line for retrofitting to install idling-control devices  
16 except as part of long-term programs that combines such retrofitting with other  
17 major repairs and remanufacturing. In some cases, however, BNSF has fleets of  
18 locomotives based in a geographic region that are used to provide shorter hauls of  
19 trains and tend to stay in that area. The so-called "intrastate" fleet of locomotives  
20 described in the 2005 MOU are of that type. They are defined as locomotives that  
21 spend over 90% of their time in California. They are just as heavily used as the  
22 "interstate" locomotives, but they normally operate only within the state.

23 **Efficiency and Environmental Impact of Rail Operations**

24 12. As with every other form of motorized transport—including trucks,  
25 ships, and automobiles—rail transportation has environmental impacts. However,  
26 railroads provide the most efficient, safest, and most environmentally friendly form  
27 of overland transportation. That is why the policy of the State of California is to  
28 increase the use of rail service in the state. Attached hereto as Exhibit 6 are true

1 and correct copies of excerpts from the State of California's "Goods Movement  
2 Action Plan," dated September 2005, confirming that "[i]ncreasing the use of rail is  
3 essential to reducing traffic congestion, reducing and improving emissions and  
4 providing more efficiency in the flow of goods in California." Ex. 6 at VI-20. The  
5 evidence is clear:

6 In terms of air quality, fuel efficiency and manpower, railroads are . . . the  
7 most efficient means of transporting freight. . . . Locomotives are three times  
8 more fuel-efficient than trucks. Railroads are also a key to reducing highway  
9 congestion. One intermodal train can take up to 280 trucks off the highway.

10 [Ex. 6 at V-24.]

11 The EPA estimates that "locomotives are on the order of three times cleaner than  
12 trucks on an emissions per ton-mile basis." 69 Fed. Reg. 6366, 6368 (1997).

13 13. The two types of emissions of greatest concern to the state and to  
14 SCAQMD are nitrogen oxide ("NOx") and particulate matter ("PM"). The  
15 contribution that trains make to these types of emissions is relatively small.  
16 Attached hereto as Exhibits 7 and 8 are two charts that summarize the ARB's  
17 calculations of the percentage contribution made by rail operations to NOx and PM  
18 in the Basin in 2005. It is 3.5% for NOx and 0.8% for PM. These charts also show  
19 the relative emissions contributions made by other heavy-duty mobile sources, and  
20 how the relative contribution has changed since 1995, and is projected to change in  
21 2010. These data are drawn from the ARB's Almanac Emission Projection Data,  
22 available at [www.arb.ca.gov/app/emsinv/emssumcat.php](http://www.arb.ca.gov/app/emsinv/emssumcat.php) (2005). Since locomotive  
23 idling contributes only a part of the emissions made by rail operations in the Basin,  
24 the percentage of NOx and PM emissions contributed by locomotive idling in the  
25 Basin is even less than 3.5% for NOx and 0.8% for PM.

26 14. As I discuss further below, part of the reason that railroad operations  
27 make such a low contribution to NOx and PM in the District is that the railroads  
28 have been working with U.S. EPA and the ARB for some years to support

1 locomotive technologies that reduce emissions and to make voluntary agreements  
2 regarding a wide range of programs to further reduce emissions. There are  
3 significant limitations, however, to the railroads' ability to implement commercially  
4 practicable locomotive engine technologies. Railroads do not manufacture  
5 locomotives. They can only buy what is commercially available, and significant  
6 changes in locomotive engine technology often take many years to develop.

7 15. Typically, significant locomotive technological changes "cascade  
8 down" from automotive applications to truck applications, to offroad applications,  
9 such as construction equipment, and then to locomotive applications. (Electronic  
10 fuel injection, for example, was introduced into the auto market in the early 1980s,  
11 entered the truck market in the late 1980's, and entered the locomotive market in  
12 the mid-1990s.) Engine technologies cannot be quickly and simply "scaled up,"  
13 particularly when it comes to the demands of large line-haul locomotives, which  
14 must be capable of pulling the equivalent of 250-350 truckloads of traffic at high  
15 speed and over significant mountain grades. Smaller switcher locomotives, which  
16 typically move a few rail cars at a time, at low speed, can more readily adopt newer  
17 technologies. BNSF, for example, has been experimenting with switcher  
18 locomotives that run on liquefied natural gas, and various "hybrid" and "gen-set"  
19 switcher locomotives have entered the market and show significant promise in  
20 helping to reduce emissions over time.

21 16. Not only do new locomotive technologies take years to develop, but  
22 neither BNSF nor any other railroad can swap out their locomotive fleets every time  
23 there is a new development in locomotive engine technology. Locomotives cost  
24 millions of dollars apiece and typically have a useful life of upwards of 40 years or  
25 longer. They represent one of the largest investments that BNSF makes in rail  
26 equipment, and they cannot be retired or remanufactured except as they near the  
27 end of their useful life and retirement becomes economic. Thus, once a new  
28 technology becomes commercially available, the introduction of new models of

1 locomotives incorporating that new technology must be phased into the railroad's  
2 locomotive fleet over many years. No other approach is economically feasible.

3       17. Locomotive idling reduction is a technology that has recently been  
4 included on new locomotives. Aftermarket systems are available for older  
5 locomotives; however, the integration of newer systems with older locomotives is  
6 complicated by the reliance of newer systems on computer power that is often  
7 lacking in earlier generations of locomotives. "Start-stop" systems generally  
8 operate by monitoring the time that a locomotive at rest has been idling and shut  
9 down the engine after a preset time if the ambient temperature is sufficiently high  
10 and water temperature, air brake pressure, and battery charge are sufficiently high.  
11 (Most locomotive engines do not use anti-freeze; accordingly, absent a separate  
12 heater, they cannot be shut down if the temperature falls below 40 degrees  
13 Fahrenheit. Air brake pressure for the entire train is also maintained by the  
14 locomotive engine, and pressure gradually "bleeds" out of the lines when the engine  
15 is turned off, unless there is an auxiliary power source.) If water temperature, air  
16 brake pressure, or battery charge fall below acceptable levels, the idling reduction  
17 device will restart the engine. These systems generally do not maintain the  
18 locomotive's HVAC systems, lighting, or communications systems. Other, more  
19 expensive systems use auxiliary power units that provide those functions as well as  
20 maintaining water and oil temperature, air brake pressure and battery charging.  
21 However, with limited capital available, BNSF must weigh the additional  
22 functionality of these systems against the constraints their extra cost places on the  
23 number of locomotives that can be retrofitted.

24       18. BNSF and other railroads have been experimenting with a variety of  
25 aftermarket idling reduction devices to determine where and when they are safe and  
26 cost effective, and how retrofitting can be accomplished without disrupting the  
27 railroad's operations. BNSF cannot take all of its interstate locomotives off-line for  
28 the installation of aftermarket idling reduction devices without serious disruption of

1 service to their customers and loss of business. It is a major and costly undertaking  
2 to retrofit entire fleets of locomotives with a new technology.

3 (a) BNSF must confirm, first, that the technology works in a wide range  
4 of applications. Climactic conditions and terrain vary widely across BNSF's  
5 system, and BNSF's locomotives, as I discussed above, must be able to operate  
6 anywhere on its system.

7 (b) Second, BNSF must confirm that the technology does not compromise  
8 safety or locomotive performance. Brake pressure in particular is a critical aspect  
9 of safe train operations, and BNSF must be completely convinced that the  
10 technology it adopts will not degrade train safety.

11 (c) Third, locomotive performance is vital to economic operation of the  
12 railroad. If a technology interferes, for example, with optimal engine function, it  
13 could adversely affect the ability of a train to make some of the steep grades that  
14 characterize many of BNSF's routes.

15 (d) Fourth, BNSF must adopt as uniform a technology as possible.  
16 Maintenance must be capable of being provided anywhere on BNSF's system using  
17 uniform procedures and training.

18 (e) Fifth, BNSF must make sure that the technology is durable and will  
19 not create maintenance problems that outweigh its benefits. If BNSF commits to a  
20 particular technology or a particular vendor that later proves unreliable or  
21 ineffective, it may be required to incur the high cost and disruption of starting over  
22 with a different technological application.

23 (f) Sixth, BNSF must assess the extent to which retrofitting can be  
24 accomplished during regular locomotive maintenance cycles, so as to minimize the  
25 downtime of motive power needed to serve our customers. Locomotives are in  
26 short supply, and BNSF cannot afford to have any locomotive out of service longer  
27 than absolutely necessary.

28 (g) Seventh, BNSF must be sure that the idling reduction technology is

1 easily operated by crews, so that they are not deterred from using it, and that the  
2 technology is easily disabled when necessary for performance or safety reasons.

3 19. The bottom line is that the decision whether and when to install an  
4 idling reduction technology cannot be made quickly. It can take years to test the  
5 technologies and assess the factors I have just described. BNSF has every interest  
6 in making the right decisions. It is possible that BNSF could realize savings in fuel  
7 and maintenance costs from the adoption of an idling reduction technology, as well  
8 as helping to reduce locomotive emissions. But the evaluation process cannot be  
9 rushed, and neither can a reasonable schedule for retrofitting. As I discuss below,  
10 BNSF and UPRR have been willing to make some voluntary commitments with the  
11 ARB to a three-year program of installing locomotive idling technology on  
12 "intrastate" California locomotives that in our judgment is practicable, and BNSF  
13 intends to use the information and experience it gains from that program to help it  
14 decide whether and when to install such a technology on locomotives in its national  
15 fleet.

16 20. In the meantime, with or without idling control technology, rail  
17 transportation remains by far the most efficient and environmentally friendly form  
18 of overland freight transportation. If individual jurisdictions like SCAQMD were  
19 permitted to dictate to the railroads when and where they must adopt new  
20 technologies—or to impose onerous data collection, reporting requirements, and  
21 operating controls on the railroads for failing to adopt such technologies—such  
22 intrusive, disruptive, and costly requirements would adversely affect both the  
23 economy and the efficiency of the railroads' performance.

24 The Railroads Providing Statewide Rail Operation Emission Inventories to  
25 ARB for ARB's Inclusion in the State Implementation Plan.

26 21. Representatives of the ARB have requested me to provide to ARB,  
27 BNSF's state wide rail operation emission inventory, so they can prepare the  
28 mobile source portion of the 2007 State Implementation Plan. This is consistent

1 with past requests from the ARB, and is the typical procedure followed during the  
2 preparation of prior State Implementation Plans, and I have provided the  
3 information to them.

4 The Railroads Participation in ARB Hearings to Consider and Adopt Emission  
5 Control Plans Relating to Mobile Sources and the Consideration and Adoption  
6 of Mobile Source Emission Control Measures.

7 22. I, my staff or representative, have participated in ARB hearings where  
8 the ARB has considered and adopted mobile source emission control measures,  
9 including measures for mobile sources used by BNSF at its railyards. Attached  
10 hereto as Exhibits 400-2, 400-3 and 400-4 are true and correct copies of excerpts  
11 enacting such measures.

12 The California Cargo Handling Equipment Rule. This rule, which was  
13 proposed and approved by the ARB on December 8, 2005, established a statewide  
14 program to reduce emissions from cargo handling equipment at ports and rail  
15 intermodal terminals. In the staff report for this regulation, ARB described this  
16 program as one of several such statewide regulations, and specifically stated that  
17 local air districts are not authorized to adopt requirements for equipment subject to  
18 this regulation:

19 "The ARB is responsible for implementation and enforcement of the  
20 proposed regulation. Districts are not authorized to adopt requirements for  
21 equipment subject to the proposed regulations." [Ex. 400-3 at I-3.]

22 The Marine Auxiliary Engine Rule. This rule implemented a statewide  
23 approach to regulating auxiliary engines on large merchant ships calling at  
24 California ports. ARB clearly recognized the need and preference for a unified  
25 statewide approach over local regulations:

26 "BE IT FURTHER RESOLVED that the Board hereby urges the districts to  
27 support a single statewide regulation for diesel auxiliary and diesel-electric  
28 engines on oceangoing vessels.

1 BE IT FURTHER RESOLVED that the Board directs the Executive Officer  
2 to enforce the approved regulation on a statewide basis, precluding the need  
3 for enforcement by individual districts and ensuring uniform implementation  
4 of the regulation.” [Ex. 400-4 at 8.]

5 ARB’s Transport Refrigeration Unit (TRU) Rule. This rule, which regulates  
6 auxiliary diesel engines used for mobile refrigeration on rail boxcars, shipping  
7 containers, and trailers attached to trucks, and trucks, also follows a statewide  
8 approach to regulating moving sources. As stated in a response to a comment in its  
9 Final Statement of Reasons for Rulemaking:

10 “Local air districts have no direct role in enforcing any of the provisions of  
11 the regulation.” [Ex. 400-2 at 38.]

12 I have heard the SCAQMD, which was also present at many of these  
13 hearings, submit comments to the ARB on these proposed measures. These  
14 measures are included as exhibits. [Ex. 400-2, 400-3 and 400-4.]

15 I also attended ARB hearings regarding the adoption of the Emission  
16 Reduction Plan for Ports and Goods Movement in California, whereat the ARB  
17 considered and adopted a plan which addresses mobile source emissions at ports  
18 including those associated with ships, trucks, cargo handling equipment, and  
19 locomotives. Attached hereto as Exhibit 404 is a true and correct copy of the  
20 Emission Reduction Plan for Ports and Goods Movement in California. As  
21 recognized by the ARB in the Emission Reduction Plan for Ports and Goods  
22 Movement in California:

23 “Federal law limits the ability of states and local jurisdictions to control  
24 locomotive emissions, or to enforce rules that affect national railroad  
25 transportation. Due to these statutory restrictions, states and local agencies  
26 have limited authority to require the reduction or mitigation of emissions  
27 from locomotives....Because of federal preemption, the establishment of  
28

1 aggressive national locomotive emission standards is essential.” [Ex. 404 at  
2 95, 101.]

3 The Railroads’ Voluntary Agreement to Emissions-Reduction Programs

4 23. Freight railroads operating in California have long been supportive of  
5 efforts to reduce locomotive emissions. Working with the AAR, BNSF and UPRR  
6 in the mid-1990’s were heavily involved in supporting the U.S. EPA’s development  
7 and implementation of new national locomotive emission standards consisting of  
8 several tiers (“Tier 0,” “Tier 1,” and “Tier 2”), with increasingly rigorous emissions  
9 standards applied to locomotives manufactured or remanufactured after certain  
10 dates. (Attached as Exhibit 9 is U.S. EPA’s June 29, 2004 Notice of Proposed  
11 Rulemaking regarding new Tier 3 requirements, which summarizes U.S. EPA’s  
12 prior regulations in this area.) EPA promulgated each of these emission standards  
13 to “achieve the greatest degree of emission reduction achievable through the  
14 application of technology which the Administrator determines will be available for  
15 the locomotives or engines to which such standards apply, giving appropriate  
16 consideration to the cost of applying such technology within the period of time  
17 available to manufacturers and to noise, energy, and safety factors associated with  
18 the application of such technology.” Clean Air Act § 213(a)(5). When fully phased  
19 in, these emission standards will reduce NO<sub>x</sub> emissions from locomotives by nearly  
20 *two-thirds*, and PM and hydrocarbon (HC) emissions by *half*. Ex. 9 at p. 15. I  
21 have participated in the recent Tier 3 rule making hearings. During the course of  
22 those hearings I have learned EPA is considering addressing locomotive idling  
23 emissions.

24 24. In addition, in 1998 BNSF and UPRR entered into an agreement with  
25 the ARB—the Memorandum of Mutual Understandings and Agreement, South  
26 Coast Locomotive Fleet Average Emissions Program (“1998 MOU”), a true and  
27 correct copy of which (without appendices) is attached hereto as Exhibit 10. The  
28 1998 MOU commits BNSF and UPRR to accelerate the reduction of locomotive

1 NOx emission in the South Coast air basin. In the 1998 MOU the parties  
2 recognized that the U.S. EPA had specified in its Final National Locomotive Rule  
3 that Section 209 of the Clean Air Act preempted mandatory locomotive fleet  
4 average emission standards, because “[a] patchwork of different state and local  
5 programs would be an inefficient, costly, and time-consuming disruption of  
6 interstate commerce.” Ex. 10 at 4-5 (citing 62 Fed. Reg. 6366, 6368 (February 11,  
7 1997). Currently, there are only a small number of in-use locomotives (1500 of  
8 6600) that are not considered to be “new” for purposes of Section 209 and therefore  
9 subject to federal preemption. Nevertheless, BNSF and UPRR voluntarily agreed  
10 to a ground-breaking fleet average target for locomotive emissions in the South  
11 Coast air basin:

12         In essence, this fleet average requirement represents the most aggressive  
13         scrappage and replacement program of any transportation source in the  
14         [South Coast air basin] . . . . It would lead to an overall emission reduction  
15         of 67 percent by 2010.

16 California State Implementation Plan for Ozone, Vol. II: The Air Resources  
17 Board’s Mobile Source and Consumer Products Elements, App. B, at B-20  
18 (November 15, 1994). A true and correct copy of relevant excerpts from this  
19 document are attached hereto as Exhibit 11.

20         25. The 1998 MOU designated the ARB as the sole agency responsible for  
21 enforcement of the emissions obligations undertaken by the railroads. Ex. 10 at 24.  
22 Further, the 1998 MOU contains a “release clause” permitting the railroads to  
23 terminate the MOU if, among other things, the State of California or any of its  
24 political subdivisions attempted to establish rules setting locomotive emission  
25 standards, locomotive fleet average standards, or any requirement applicable to  
26 locomotives or locomotive engines and within the scope of preemption established  
27 by EPA in its Final National Locomotive Rule. Exh. 10 at 30-31.

28         26. The railroads faithfully carried out, and continue to carry out, their

1 obligations under the 1998 MOU. Moreover, the railroads in 2000 created an end-  
2 user research and development program for new technologies and in 2001 provided  
3 \$5 million in funding for particulate trap research at the Southwest Research  
4 Institute. As noted earlier, the railroads are also funding and demonstrating new  
5 technologies, including testing different idling-reduction systems and testing new  
6 switch engines using LNG fuel, new “gen-set” truck engine technologies, and  
7 “hybrid” technologies. Further, in 2005 the railroads entered into a comprehensive  
8 new voluntary agreement with the ARB—the ARB/Railroad Statewide Agreement,  
9 Particulate Emissions Reduction Program at California Rail Yards (the “2005  
10 MOU”) (Ex. 4)—that commits the railroads to a comprehensive program of  
11 emissions reduction activities (“program elements”) throughout the state.

12       27. The program elements in the 2005 MOU include commitments by the  
13 railroads:

- 14       (1) to limit non-essential idling to locomotives (not to exceed 60  
15 consecutive minutes);
- 16       (2) to install automatic idling-reduction devices over a three-year period  
17 on “intrastate” locomotives based in the state;
- 18       (3) to establish a statewide visual emission reduction and repair program  
19 which includes the identification and repair of locomotives with  
20 excessive visible emissions;
- 21       (4) to maximize the use of low-sulfur fuel in locomotives;
- 22       (5) to prepare emissions inventories and collect rail-yard specific data for  
23 designated rail yards;
- 24       (6) to cooperate with the ARB on its development of health risk  
25 assessments for those yards;
- 26       (7) to evaluate with the ARB risk mitigation measures for those yards;
- 27       (8) to develop compliance reporting and program review protocols; and  
28       (9) to be subject to penalties for failure to meet the various program

1 requirements.

2 28. Like the 1998 MOU, the 2005 MOU contains a "release clause" that  
3 permits the railroads to withdraw from participation in a program element if the  
4 ARB or another entity, like SCAQMD, adopts or implements a law or regulation  
5 that covers the same subject matter. Ex. 4 at 17. The reasons for this key "release  
6 clause" provision were straightforward. BNSF and UPRR were prepared to agree  
7 in the MOU to major emissions reduction programs statewide, which neither the  
8 ARB nor any other state or local entity could otherwise impose; but the railroads  
9 needed protection against being whipsawed by having to comply with both  
10 voluntary and involuntary programs in the same area, and they needed protection  
11 against the possibility that they could be subjected to different requirements in  
12 different parts of the state.

13 29. The railroads have been diligently complying with the 2005 MOU  
14 since its June 30, 2005 effective date, including working with individual air districts  
15 to develop protocols for implementing the 2005 MOU in their districts. For  
16 example, the railroads have recently entered into an Implementation Protocol with  
17 the San Joaquin Valley Unified Air Pollution Control District, a true and correct  
18 copy of which is attached hereto as Exhibit 18. The ARB estimates that when fully  
19 implemented the 2005 MOU will achieve a 20 percent reduction in locomotive  
20 diesel particulate matter emissions near rail yards across the state. "Reducing  
21 Locomotive Emissions: New Actions Agreed to by UP and BNSF Railroads"  
22 (August 2005), a true and correct copy of which was obtained from the ARB's  
23 website and is attached hereto as Exhibit 12.

24 **SCAQMD'S FAILED LEGISLATIVE ATTEMPTS TO EXPAND ITS**  
25 **JURISDICTION TO INCLUDE MOBILE SOURCES**

26 30. During the past few years, I have attended California legislative  
27 hearings addressing draft legislation, proposed or endorsed by SCAQMD, which  
28 would have expanded SCAQMD's authority beyond stationary sources to mobile

1 sources. None of the proposed Legislation passed into law. Some of the bills  
2 included: AB 1063 (Firebaugh) in 2003-2004 (would have given the SCAQMD  
3 broad regulatory authority over port-related and goods-movement-related mobile  
4 emission sources) (Ex. 411); SB 1397 (Escutia) in 2003-2004 (would have granted  
5 SCAQMD authority over non-road diesel engines) (Ex. 413); SB 459 (Romero) in  
6 2006 (would have granted SCAQMD authority to impose fees as part of a  
7 locomotive emission mitigation program) (Ex. 410); and AB 1101 (Oropeza) in  
8 2006 (would have given SCAQMD authority over diesel 'hot spots' such as rail  
9 yards, ports, and airports) (Ex. 412). As noted in each of these Exhibits, each one  
10 of these proposed measures failed in the State Legislature.

11 SCAQMD's Opposition to the 2005 MOU  
12 And Pursuit of Its Own Regulatory Agenda

13 31. Despite the railroads' demonstrated readiness to work with the state to  
14 achieve substantial emissions reductions by voluntary agreement, SCAQMD  
15 opposed the 2005 MOU, and actively sought to have the ARB rescind it. Although  
16 the more comprehensive MOU provides broader emissions reduction benefits than  
17 the rules that SCAQMD planned to adopt—and provides them statewide, in every  
18 air district—SCAQMD was not satisfied with every aspect of the MOU's program  
19 elements. SCAQMD also objected to the release clause in the MOU, since it would  
20 permit the railroads to withdraw from participation in a program element of the  
21 MOU statewide if SCAQMD or another jurisdiction adopted and implemented a  
22 law or regulation that covers the same subject matter. The ARB gave ample  
23 consideration to SCAQMD's position. However, after receiving comments and  
24 conducting public hearing in both Los Angeles and Sacramento, to allow both  
25 opponents and supporters of the 2005 MOU to express their views, the ARB did not  
26 rescind the agreement. It continues to work with the railroads to carry out the  
27 programs to which they agreed.

28 32. SCAQMD was still not satisfied. It continued to conduct regulatory

1 proceedings to adopt and implement a quartet of regulations aimed at railroad  
2 operations and facilities in the South Coast District that SCAQMD has  
3 denominated "Regulation XXXV." The individual Rules in that Regulation are  
4 Rules 3501, 3502, 3503, and 3504. All are aimed at directly regulating the  
5 railroads. BNSF, along with UPRR, the AAR, LA Junction, and PHL, actively  
6 participated in SCAQMD's proceedings and repeatedly advised SCAQMD that its  
7 proposed Rules were unlawful and would place a significant burden on the  
8 railroads.

9 33. As mentioned above, I participated in the rule-making process for Rules  
10 3501, 3502 and 3503. During the course of that rulemaking, SCAQMD staff advised  
11 the railroads that in interpreting Rule 3502(d)(1) which regulates idling of  
12 "unattended" locomotives, when a train has two or more locomotives in the consist,  
13 any locomotive that does not have a crew aboard is considered "unattended" for  
14 purposes of Rule 3502. Thus, even if the lead locomotive is attended, other  
15 locomotives in the consist, which typically do not have active crews aboard, would be  
16 subject to shutdown. This information provided by SCAQMD appears consistent with  
17 the definition of "unattended" found in Rule 3502(c)(16) which states that  
18 "UNATTENDED means where no crew member is on board a locomotive."

19 I personally took part in hearings before the SCQAMD Board and meetings  
20 with SCAQMD staff to stress the multiple problems with their proposed rules, to no  
21 avail. The following comment by one of the Board members at one hearing,  
22 concerning Rule 3503, was unfortunately symptomatic:

23 I know it's going to be a tough job to bring these railroads to their knees, and  
24 have them cooperate with us to clean up our air. And I'm fully cognizant of  
25 the fact that the AQMD doesn't have the authority to regulate railroads. But  
26 we'll just keep pecking at you and pecking at you until we get our way.

27 Partial Transcript of October 7, 2005 SCAQMD Board Hearing, a true and correct  
28 copy of which is attached hereto as Exhibit 13 at 1. (The hearing is available at

1 [http://www.aqmd.gov/aqmd/webcast/webcast\\_calendar.htm](http://www.aqmd.gov/aqmd/webcast/webcast_calendar.htm)). In the same vein, at  
2 the hearing on rules 3501 and 3502, another Board member is reported to have said:  
3 “I’d rather take a position and get sued and dance around it . . . We can definitely  
4 do better. . . . I think we do need a statewide standard, but it should be to the higher  
5 standard we’re trying to adopt—not a lower standard.” “Expected Railroad Suit  
6 Over South Coast Idling Rules Clouds MOU,” INSIDE Cal/EPA (February 10,  
7 2006), a true and correct copy of which us attached hereto as Exhibit 14.

8 34. SCAQMD adopted Rules 3501 and 3502 on February 3, 2006. Exs. 1  
9 and 2. These rules effectively attempt to force the railroads to install idling-  
10 reduction devices on all locomotives that the railroads operate in the District.  
11 Under Rule 3501, a railroad must agree to a timetable to install idling-control  
12 devices on *all* locomotives, whether “intrastate” or “interstate” (Ex. 1, § (f)), or it  
13 must use only locomotives with a technologically unattainable “alternative  
14 technology” (Ex. 1, §§ (c) (1) and (f)), or it must record every “idling event” of  
15 more than 30 minutes and provide weekly and annual reports of those “events” (Ex.  
16 1, §§ (d) and (e)). In addition to recording and reporting idling events, absent a  
17 plan approved by SCAQMD for installing anti-idling devices or using “alternative  
18 technology,” starting April 4, 2006, the railroads must submit an extensive report to  
19 the SCAQMD of every locomotive in their fleets that has made even one trip  
20 through the District in the preceding calendar year, including details about the type  
21 of service the locomotive performed, when it was manufactured or remanufactured,  
22 what emissions control devices it has, whether it is equipped with a GPS tracking  
23 device, and the method the railroad intends to use to record “idling events” for that  
24 locomotive. Ex. 1, § (e)(2).

25 35. Rule 3502 provides further coercive “inducement” for the railroads to  
26 install idling-reduction devices on all their locomotives. Under that rule, if a  
27 locomotive is not equipped with an idling-reduction devices intended to shut down  
28 the locomotive after 15 minutes (Ex. 2, § (d) (1)), or if the railroad does not submit

1 an Emissions Equivalency Plan for each locomotive demonstrating an alternative  
2 emissions reduction scheme (Ex. 2, § (e)), the railroad operating the locomotive is  
3 subject to a fine of up to \$75,000 per day for each “unattended” or “trailing”  
4 locomotive that idles for over 30 minutes for various prescribed reasons (Ex. 2, §§  
5 (d) and (i)).

6 36. Together, Rules 3501 and 3502 place a significant burden on the  
7 economy, efficiency, and safety of railroad operations. Railroads operate with the  
8 minimum number of locomotives, crews, and dispatchers required to safely conduct  
9 their interstate business. Not only is retrofitting a locomotive with an idling-control  
10 device itself an expensive proposition, but pulling locomotives off-line for such  
11 retrofitting can cause a shortage of motive power that seriously impacts the  
12 railroads’ service. The “choice” that Rule 3501 offers of using locomotives with  
13 “alternative technologies” is no choice at all, since such technologies do not exist  
14 for long-haul locomotives; and the “choice” of keeping detailed records of “idling  
15 events” is not only a significant burden for crews and dispatchers but would result  
16 in significant adverse effects on the reliability, efficiency and safety of rail  
17 transportation. The only way that railroads can operate efficiently and safely with  
18 limited personnel is to have uniform operating rules across state, regional, and local  
19 lines that avoid any confusion, distractions, and additional workload. Rule 3502  
20 seriously compounds the problem by imposing significant monetary penalties for  
21 “violations” of SCAQMD’s own parochial 30-minute definition of an unsanctioned  
22 “idling event.” If air districts and other local jurisdictions were permitted willy  
23 nilly to adopt their own rules as to what railroad operations were sanctioned and  
24 what were not, the economy and efficiency of the interstate rail system would be  
25 severely compromised.

26 37. In the event rail operations become delayed, history has demonstrated  
27 that shippers shift to trucking to assure the timely delivery of their goods. Based  
28 upon the emissions per ton mile differential between rail and trucks, this will result

1 in adverse air quality impacts.

2 38. SCAQMD adopted Rule 3503 on October 7, 2005. Ex. 3. This rule  
3 requires freight railroads, first, to conduct an extensive inventory of emission  
4 sources (both mobile and stationary) at all rail yards located in the South Coast  
5 District. The requirement is in two parts. For each rail yard, the operator must  
6 identify all sources of emissions within the yard, a description of how the railroad  
7 intends to measure the emissions from each source, and detailed maps and other  
8 descriptive information about the rail yard. Ex. 3, § (d)(1). For each rail yard and  
9 every emissions source, the railroad must provide measurements of the emissions  
10 and engine information that is specific to each source. *Id.* § (d)(2). For mobile  
11 sources, which constitute as source of emissions in rail yards, the railroads are  
12 required to use SCAQMD's own methodology for measuring emissions. *Id.* § (d)  
13 (3).

14 39. And that is just the beginning. The railroads are required to perform air  
15 dispersion modeling and then perform detailed "health risk assessments" using a  
16 methodology approved by SCAQMD. Ex. 3, § (e). The purpose of these  
17 assessments is to estimate the upper bound cancer risk posed by the rail yards. *Id.* §  
18 (a). The cancer risk will be driven by a diesel slope factor, which EPA has not  
19 approved. Then, if the cancer risk identified by the health risk assessment exceeds  
20 certain levels, the railroads are required to provide notification to everyone within  
21 the "impact area," which extends as far as 50 kilometers downwind in any  
22 direction. *Id.* §§ (h), (c) (5) and (11). All of this is intended as a precursor to a  
23 fourth rule, proposed Rule 3504, a true and correct copy of which is attached hereto  
24 as Exhibit 15. Proposed Rule 3504 would use the rail yard emissions data and  
25 health risk assessments developed pursuant to Rule 3503 to require railroads to  
26 prepare and implement "risk reduction plans" to reduce emissions from rail yards  
27 below a cancer risk level established by SCAQMD. Ex. 15, §§ (d)-(e). Since some  
28 of the emissions from rail yards are attributable to locomotive operations in those

1 yards, the necessary objective of these rules, as with Rules 3501 and 3502, is to  
2 regulate the railroads' locomotive equipment and use. Rule 3504 has not yet been  
3 adopted, but it is on SCAQMD's rulemaking calendar for consideration in 2006,  
4 after SCAQMD's staff reports on the implementation of Rule 3503. A true and  
5 correct copy of a calendar on SCAQMD's website is attached hereto as Ex. 16.

6 40. The clear purpose of Rule 3504 is to force railroads, once again, to  
7 reduce emissions from locomotives, which constitute a source of rail yard  
8 emissions. Rule 3503, then, is the precursor to a rule that would be extremely  
9 problematic for the railroads. Even leaving that aside, however, Rule 3503 itself  
10 places a substantial economic and public relations burden on the railroads. First,  
11 the cost of performing the detailed emissions inventories, health risk assessments,  
12 and risk notifications required by this rule would be in the millions of dollars.  
13 (Almost all of the inventories involve mobile sources—primarily locomotives—  
14 which are much more difficult to test than stationary sources.) BNSF cannot  
15 recover those substantial costs from anyone. BNSF and UPRR have already  
16 voluntarily agreed in the 2005 MOU with the ARB to perform emissions  
17 inventories at designated rail yards around the state, including several in the South  
18 Coast District. The requirements of SCAQMD's emissions inventory, however, are  
19 much more costly, and SCAQMD is requiring that they be performed at every  
20 freight rail yard in the District. Moreover, unlike the MOU, which requires a one-  
21 time risk assessment, with the railroad providing the emission inventories and air  
22 dispersion modeling, Rule 3503 requires inventories every other year and a new  
23 health risk assessment if the traffic increases 10% or there are changes in operations  
24 that alter the risk.

25 41. Furthermore, the requirement that BNSF perform health risk  
26 assessments using SCAQMD's methodology for mobile sources is a requirement  
27 that BNSF sponsor a methodology with which it disagrees. BNSF does not believe  
28 that the available toxicity and epidemiology data provide an adequate basis today

1 for quantifying cancer risk for diesel exhaust. In the 2005 MOU, it has agreed to  
2 work with the ARB to help the ARB develop appropriate methodologies for the  
3 ARB to perform its own health risk assessment at designated rail yards, but  
4 SCAQMD in Rule 3503 is insisting on something quite different. SCAQMD is  
5 insisting that the railroads be required to sponsor health risk assessments  
6 themselves, using a methodology which they do not endorse, and then to sponsor  
7 public notices to everyone within the "impact area," using the "Public Notification  
8 Procedures for Phase I and II Facilities under the Air Toxics Hot Spots Information  
9 and Assessment Act [of 1987]." Ex. 3 at (h)(2).

10 42. Railroad yards, however, have never been subject to California's Air  
11 Toxics Hot Spots Information and Assessment Act, because railroad operations  
12 have never been subject to state or local regulatory control. SCAQMD may wish to  
13 assert regulatory control over BNSF's operations—and that is what its proposed  
14 Rule 3504 would clearly do—but SCAQMD should not be permitted to use Rule  
15 3503 to attempt to do indirectly what it cannot do directly. If Rule 3504, which  
16 would directly assert the authority to require the railroads to reduce emissions from  
17 rail yards, would be preempted, then Rule 3503, which seeks to regulate emissions  
18 by burdening railroads with involuntary and costly emissions inventory, health risk  
19 assessment, and risk notification requirements should also be disallowed. The  
20 railroads are working diligently with the ARB under the 2005 MOU not only to  
21 provide emissions inventories at designated yards, but also to evaluate risk  
22 mitigation options. If individual air districts were permitted to impose their own  
23 individual requirements around the state, without regard to the ARB's and the  
24 railroads' collaborative work, the MOU's promise of uniform and workable  
25 requirements statewide will have been lost.

26 43. Most freight rail traffic in California is interstate or international  
27 traffic. Most passenger rail traffic is intrastate traffic, operated by local or regional  
28 governmental authorities. Passenger trains are pulled by diesel locomotives that

1 idle and passenger train operators maintain rail yards that emit NOx and PM. Yet  
2 SCAQMD's Rules 3501, 3502, and 3503 do not apply to the passenger train  
3 operations. Only freight railroads are required either to install idling-control  
4 devices or be subjected to onerous "idling event" reporting and penalties for  
5 violating SCAQMD's rules. Only freight railroads are required to perform  
6 emissions inventories and health risk assessments and provide risk notifications.  
7 There is no explanation, other than discrimination, for why largely interstate freight  
8 railroads should be saddled with these onerous requirements, but not largely  
9 intrastate passenger railroads. More generally, I am not aware of any comparable  
10 industry in the District that is being subjected to the kind of regulatory scrutiny that  
11 the railroads are being subjected to. Trucks, for example, which contribute far  
12 more to NOx and PM emissions in the South Coast District than trains, are subject  
13 to an ARB idling reduction regulation, but there is no onerous self-reporting  
14 requirement. And stationary sources of NOx and PM, like power stations, are not  
15 required to include mobile sources of emissions that move to, from, or through their  
16 facilities. Nor are they required to perform emissions inventories and health risk  
17 assessments annually.

18 44. Finally, it is important to emphasize here that the issue under Rules  
19 3501, 3502, and 3503 is not just the adverse impact that one air district's effort to  
20 regulate railroad operations could have on the economy and efficiency of the  
21 railroads, but the adverse impact that a patchwork of individual regulations by  
22 different air districts and other jurisdictions could have on the economy and  
23 efficiency of the railroads. If SCAQMD is permitted to pursue its own agenda,  
24 there is no reason to think that other air districts and jurisdictions will not be  
25 emboldened to do the same. BNSF and UPRR each operate through over 20 states  
26 and multiple regional and local jurisdictions within each state that could as easily as  
27 SCAQMD claim the right to dictate to a railroad what kind of equipment it may  
28 use, or give it the "choice" of submitting to onerous data collection, reporting, and

1 operating requirements.

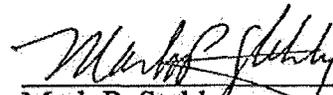
2 45. California alone has 35 air districts. "California Air District Resource  
3 Directory," Cal/EPA-Air Resources Board (February 24, 2006), a true and correct  
4 copy of which is attached hereto as Exhibit 17. BNSF and UPR are having good  
5 success working with the air districts other than SCAQMD to adopt protocols for  
6 implementing the 2005 MOU in their jurisdictions. But if SCAQMD's rogue Rules  
7 are not set aside, there is no reason to believe that other jurisdictions—not only in  
8 California, but in other states and localities—will decide that they too can adopt  
9 their own rules. (Even if BNSF attempted to meet SCAQMD's locomotive idling  
10 requirements, there is nothing to prevent another jurisdiction from deciding that  
11 idling control devices should be set to shut down at 10 minutes, rather than 15  
12 minutes; that an "idling event" should be defined to include situations in which the  
13 locomotive is "attended" as well as "unattended"; that different records should be  
14 kept of such events than SCAQMD requires; that the particular criteria for  
15 assessing when an "idling event" may be penalized should be different than the  
16 criteria adopted by SCAQMD, et cetera. By the same token, different jurisdictions  
17 could adopt different emissions inventory requirements, different health risk  
18 assessment requirements, different risk notification requirements, or other  
19 independent regulatory requirements.) If permitted, these kind of ad hoc regulatory  
20 activities would severely exacerbate the problems caused by SCAQMD's Rules,  
21 and there is no reason to think that others might not attempt the same thing if  
22 SCAQMD's Rules are allowed to stand. Indeed, BNSF has been working closely  
23 with the Seattle Seaport Industry and has entered a voluntary agreement addressing  
24 issues related to diesel emissions and train idling in the Seattle port area. Among  
25 the methods considered are the implementation of shut-down standards and gate  
26 technologies. In reaching their agreement, however, both the Seattle Seaport and  
27 BNSF recognized that locomotive idling should be limited only to the extent that  
28 doing so does not result in delays in moving cargo or increased traffic congestion.

1 The State of Kansas has notified BNSF of the State's interest in entering into an  
2 enforceable agreement regarding locomotive idling. Finally, the State of Illinois'  
3 environmental agency has agendized locomotive idling for a future meeting.

4 46. Like BNSF's locomotives, BNSF's crews and dispatchers do not work  
5 in the South Coast District alone, and they cannot work efficiently or safely if they  
6 can be subjected to different requirements every time they move from one  
7 jurisdiction to another. Uniformity of rules, uniformity of training, and uniformity  
8 of operations are the key to economic and efficient interstate rail operations. BNSF  
9 has done its best, and will continue to do its best, to cooperate in helping to address  
10 state and local concerns without endangering the economy and efficiency of its  
11 operations. But BNSF cannot accede to the kind of regulatory interference  
12 represented by SCAQMD's Rules. BNSF simply cannot operate economically or  
13 efficiently with a patchwork of different regulatory requirements in different states  
14 and localities.

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

16 Executed this 2<sup>nd</sup> day of November 2006 in Ft Worth, Texas.  
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20 Mark P. Stehly  
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# EXHIBIT 12

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UNITED STATES DISTRICT COURT  
CENTRAL DISTRICT OF CALIFORNIA - WESTERN DIVISION  
HONORABLE JOHN F. WALTER, U.S. DISTRICT JUDGE

- - -

ASSOCIATION OF	)	
AMERICAN RAILROADS, et al.,	)	
	)	
Plaintiffs,	)	Case No.
	)	
vs.	)	06-1416-JFW
	)	
SOUTH COAST AIR QUALITY	)	
MANAGEMENT DISTRICT, et al.,	)	
	)	
Defendants.	)	
	)	

REPORTER'S TRANSCRIPT OF  
COURT TRIAL - DAY 1  
TUESDAY, NOVEMBER 28, 2006  
8:30 A.M.  
LOS ANGELES, CALIFORNIA

**VICTORIA L. VALINE, CSR 3036, RMR, CRR**  
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1 words, what BNSF's primary concern is with Rules 3501,  
2 3502, and 3503.

3 A. Well, as a suite of rules, this would have  
4 tremendous snowball effect in going through the rest of  
5 California. The railroads operate in 22 districts in  
6 California, and then we alone operate in 28-some states.

7 A number of these states have issues about air  
8 quality around our yards, and they all want unique things  
9 that they would require us to do. If it's deemed that the  
10 South Coast has -- a local district has this authority,  
11 it's going to embolden all those other districts and all  
12 these other locations to write their own rules interfering  
13 with our rail operations trying to achieve these local  
14 improvements.

15 MR. O'NEILL: Objection, move to strike as  
16 speculative.

17 THE COURT: Motion will be denied.

18 THE WITNESS: I personally have knowledge of  
19 working with the government entities in Dallas, in  
20 Houston, in Kansas, and the other -- some of the other air  
21 districts here in the State of California that personally  
22 either have written us or we've had negotiations or  
23 discussions over what we could do, uniquely, to help these  
24 areas improve their air quality. If they had the  
25 authority to regulate us, it would make discussion

1 negotiations very difficult.

2 As it is, we're able to discuss with them and  
3 fashion some things that we can do that does improve air  
4 quality without acceding any authority to them. For  
5 instance, in the State of Texas, both in Dallas and in  
6 Houston, they wanted localized --

7 MR. O'NEILL: Objection, hearsay.

8 THE COURT: Sustained.

9 BY MR. KRAMER:

10 Q. Let me ask you this, Mr. Stehly: Do you deal with  
11 federal regulators?

12 A. I do.

13 Q. And do you do that on a constant basis?

14 A. Very regular basis.

15 Q. Could you tell the Court some of the rules and  
16 regulations that the railroads are required to pursue or  
17 some of the rules and regulations the railroads are  
18 required to do with respect to federal regulation.

19 MR. O'NEILL: Objection, irrelevant.

20 THE COURT: Sustained.

21 BY MR. KRAMER:

22 Q. Okay. Let me move on to the specific rules in  
23 this case. Let me take two examples Rule 3502 and 3503,  
24 what are some of BNSF's concerns with these particular  
25 rules?

# EXHIBIT 13

## Control of Emissions from Idling Locomotives

**I**n 2008, The U.S. Environmental Protection Agency (EPA) adopted new more stringent emissions standards and mandated the application of idle-emission controls on newly manufactured and remanufactured locomotives. This fact sheet provides technical background on the issue of locomotive idling and describes what EPA is doing to reduce emissions from this source.

### Why do railroads allow locomotives to idle?

During normal railroad operations, locomotives sometimes must wait for freight cars to be switched and/or picked up, for another train to clear track on which the locomotive is to proceed, or for mechanical service. Historically, locomotives have been left idling while they are waiting. In some cases, there are practical or safety reasons why locomotives need to be left idling. In other cases, locomotive operators might simply idle the engines due to custom, habit, or misunderstandings about diesel engines. As we describe in this fact sheet, EPA is working to address all of these causes.

The reasons why current locomotives may need to be left idling can be technological or related to worker and passenger needs. First, diesel engines can be difficult to start in extremely cold temperatures, especially larger diesel engines such as those used in locomotives. Also, locomotive engines are typically designed to use water without antifreeze because water is more efficient at cooling the engine. However, the water can freeze in cold weather and crack the engine block. As a result, shutting locomotives off in cold weather has historically been avoided as much as possible.

Locomotive engines may also need to idle in order to maintain critical functions such as air pressure for the braking and starting systems and battery charge. Maintaining air pressure for braking is especially important since it can directly affect safety. Finally, in some cases, locomotives will idle to supply air-conditioning or heat to its crew and/or passengers, in part to comply with regulations and contractual requirements related to working conditions for the crew. (Note that the requirements related to working conditions are not regulated by EPA).

## **What is EPA doing to control idle emissions from locomotives?**

EPA is working hard to reduce emissions from locomotives, both while they are pulling freight and while they are idling. However, the Clean Air Act does not give EPA unlimited ability to regulate locomotives. Section 213(a)(5) and related provisions provide EPA the authority to establish emission standards for newly manufactured and remanufactured locomotives, as well as to prohibit railroads or anyone else from tampering with emission controls. For locomotives not yet required to use the idle reduction technologies, the Clean Air Act provisions do not appear to provide EPA with particular authority to prevent railroads from allowing them to idle. Thus, as described below, EPA's regulatory efforts to reduce emissions from idling locomotives focus on requiring the application of automatic idle reduction technologies to the locomotives themselves rather than directly regulating when railroads may allow locomotives to idle.

EPA's 2008 rulemaking represents an important step in its efforts to reduce emissions from idling locomotives, which began in 1998, when EPA finalized emission standards for locomotives that provided significant emission reductions for all types of operation. Those initial standards went into effect in 2000. In addition to applying to all newly manufactured locomotives, the standards also require most existing locomotives be retrofitted with emissions controls when they are remanufactured. (This generally happens every five to 15 years, depending on the locomotive). These retrofit requirements have already begun reducing emissions from existing locomotives. Note that by requiring overall reductions in emissions, the requirements have led to locomotive exhaust being cleaner when a locomotive is idling, and will continue to make them even cleaner in the future.

In our 2008 rulemaking we adopted new requirements to further reduce emissions from idling locomotives by requiring technology that reduces the amount of time a locomotive spends idling and applying tighter emission standards to new locomotives generally. EPA is requiring that all newly manufactured and nearly all remanufactured locomotives be equipped with idle reduction technology that will automatically shut locomotives down if they are left idling unnecessarily. While such devices cannot eliminate all idling, they can reduce most unnecessary idling. These automatic controls offer more opportunities for a locomotive to be shut down by monitoring multiple critical system parameters to determine when it is safe to shut down a locomotive, relieving crews that may not have the manpower to monitor all of these parameters. In the field, these devices have proven themselves to be safe, reliable and extremely cost effective by providing reduced fuel consumption that can pay for the equipment in short order. We believe the cost savings associated with these devices will provide significant incentives for railroads to fully utilize this equipment.

Our regulations also include a rigorous emission testing program to make sure locomotives comply with our emission standards for their operational life. Our complete program will reduce NO<sub>x</sub>, HC, and PM emissions by about 90 percent. These standards will also significantly reduce smoke emissions and exhaust odors.

In designing this locomotive emission-control program, we established several provisions to ensure that emissions are reduced at all operating conditions, including while idling. First, we require that most locomotives comply with the emission standards over two different duty cycles: a high-power cycle that represents cross-country operation and a low-power cycle that

represents freightyard operation. To comply with these requirements, locomotive manufacturers need to reduce emissions for all power levels from idle to full power. We also require railroads to improve their maintenance practices so that when locomotives are idling, their emissions are kept as low as would be expected from a brand new locomotive. Finally, we require that malfunctioning idle reduction equipment be repaired in a timely manner.

### **When will these mandatory emission reductions occur?**

Emission standards and other requirements began reducing idle emissions as early as 2000. However, because it is common for locomotives to remain in service for as long as 50 years, the number of new ultralow-emission locomotives in a railroad's fleet will be small during the start of this program. Therefore, we have designed other parts of our program to achieve more immediate reductions, such as the requirement that older locomotives be retrofitted with emission controls when they are remanufactured and provisions that require the use of automatic engine-shutdown features. Even so, it may take several years before these regulatory improvements approach full effectiveness as the fleet turns over from older locomotives to new less polluting locomotives.

### **What are railroads doing to control idle emissions from locomotives?**

EPA has been working with the nation's major railroads to implement voluntary efforts to reduce idle emissions beyond the mandated reductions. All Class I railroads have joined the SmartWay Transport Program: CSX Transportation, Norfolk Southern, Canadian National Railway, BNSF Railway Co., Canadian Pacific Railway, Kansas City Southern Railway, and Union Pacific Railroad Co. As part of their SmartWay commitment, each railroad has submitted action plans describing the steps they are taking to significantly reduce carbon dioxide, NO<sub>x</sub>, and PM emissions, and to conserve considerable amounts of diesel fuel. Every Class I railroad action plan includes efforts to reduce idling through a variety of technologies and strategies, including automatic engine stop-start systems, auxiliary power units or diesel-driven heating systems, electrical shorepower connections, and company idle-shutdown policies.

### **What can I do about locomotives idling in my neighborhood?**

You should first contact the local railroad facility and ask about its operating practices, including the shutdown policy. If they are unable to help you, you might want to contact the corporate headquarters. Addresses and phone numbers for the major railroads are listed below.

BNSF Railway  
2650 Lou Menk Dr.  
Fort Worth, TX 76131-830  
800-795-2673

CN (includes Canadian National Railway  
and its U.S. operating subsidiaries,  
including Grand Trunk Western, Illinois  
Central and Wisconsin Central).  
935 de La Gauchetier St. W.  
Montreal, Quebec H3B2M9  
Canada  
888-888-5909

Canadian Pacific Railway (Includes  
SOO lines)  
501 Marquette Ave.  
Minneapolis, MN 55402  
1-800-776-7912

CSX Transportation  
500 Water St.  
Jacksonville, FL 32202  
904-359-3100

Kansas City Southern Railway Company  
PO Box 219335  
Kansas City, MO 64121-9335  
816-983-1303

Norfolk Southern Corp.  
3 Commercial Pl.  
Norfolk, VA 23510-2191  
757-629-2600

Union Pacific Railroad  
1400 Douglas St.  
Omaha, NE 68179  
888-877-7267

### **For More Information About EPA's Locomotive Control Program**

You can access documents related to our regulation of locomotives on EPA's Office of Transportation and Air Quality Web site at:

[www.epa.gov/otaq/locomotv.htm](http://www.epa.gov/otaq/locomotv.htm)

Documents related to EPA's voluntary idle-reduction programs are available at:

[www.epa.gov/smartway/idling.htm](http://www.epa.gov/smartway/idling.htm)

For further information, please contact us at:

#### **Contact for Regulatory Programs**

Assessment and Standards Division  
U.S. EPA  
2000 Traverwood Drive  
Ann Arbor, MI 48105  
734-214-4636  
[asinfo@epa.gov](mailto:asinfo@epa.gov)

#### **Contact for Voluntary Programs**

SmartWay Transport Partnership  
U.S. EPA  
2000 Traverwood Drive  
Ann Arbor, MI 48105  
734-214-4767  
[smartway\\_transport@epa.gov](mailto:smartway_transport@epa.gov)

# EXHIBIT 14



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 written in a cursive style with a large initial "J" and "S".

Joseph C. Szabo  
Administrator

# EXHIBIT 15

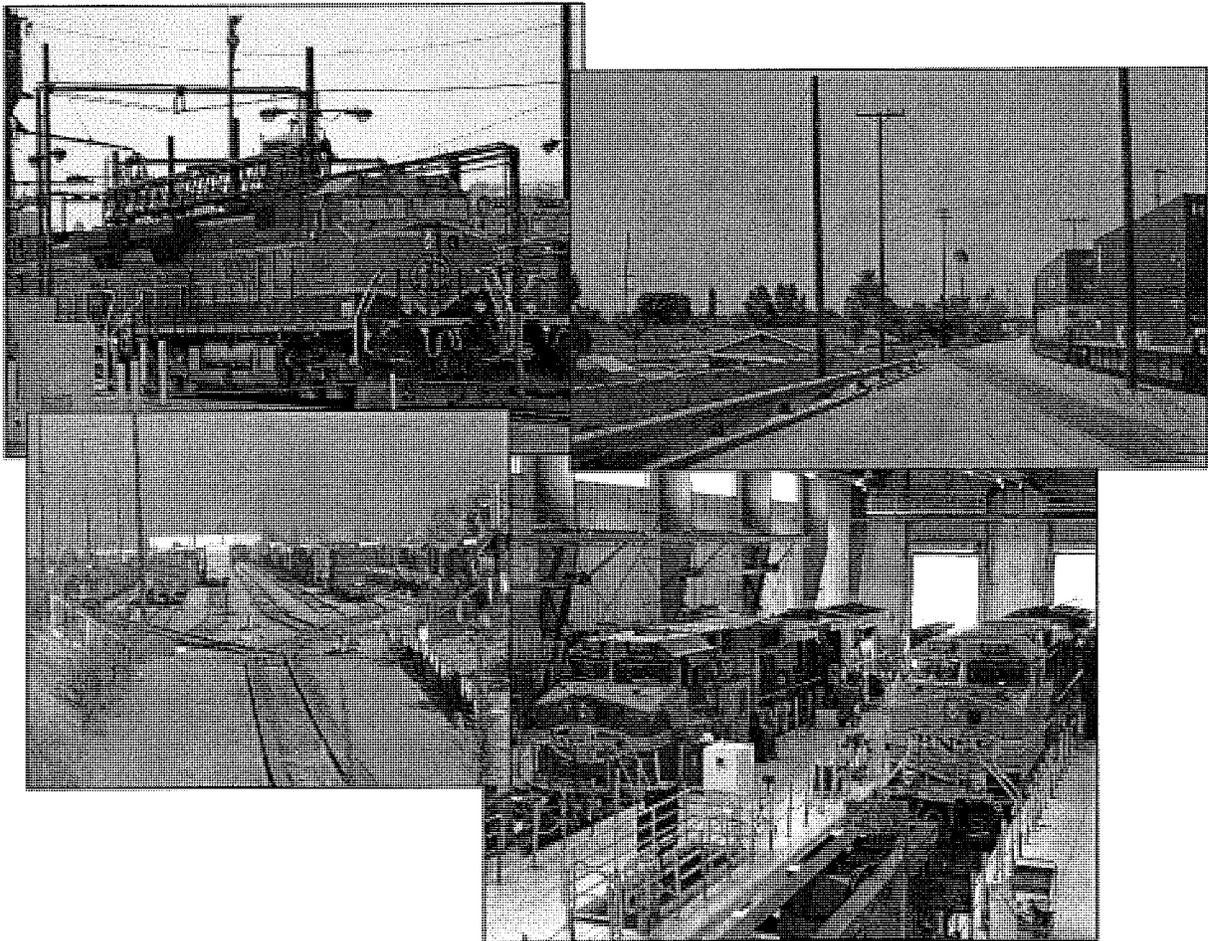
California Environmental Protection Agency



**Air Resources Board**

**JUNE 2005 ARB/RAILROAD STATEWIDE AGREEMENT ON  
PARTICULATE EMISSIONS FROM RAIL YARDS**

**PUBLIC COMMENTS RAISING LEGAL ISSUES  
AND AGENCY RESPONSES**



**Release Date: October 24, 2005**

**State of California  
California Environmental Protection Agency  
AIR RESOURCES BOARD**

**JUNE 2005 ARB/RAILROAD STATEWIDE AGREEMENT ON  
PARTICULATE EMISSIONS FROM RAIL YARDS**

**PUBLIC COMMENTS RAISING LEGAL ISSUES  
AND AGENCY RESPONSES**

**Date of Release: October 24, 2005**

Office of Legal Affairs, Air Resources Board  
W. Thomas Jennings, General Counsel  
Michael Terris, Senior Attorney

## Introduction

On June 24, 2005, the Executive Officer of the Air Resources Board (ARB or Board) entered into a pollution reduction agreement (Agreement) with Union Pacific Railroad Company (UP) and BNSF Railway Company (BNSF). The Agreement secured the commitment of UP and BNSF to expeditiously implement a number of feasible and cost-effective measures to reduce emissions from locomotives and rail yards throughout California. The Board is scheduled to review the Agreement at a public meeting on October 27, 2005, at the ARB offices in El Monte, California. A Staff Report has been developed to explain the background, context, and provisions of the Agreement and to summarize and respond to the public comments received by staff since the Agreement was signed last June. The Staff Report can be found at: <http://www.arb.ca.gov/railyard/railyard.htm>.

Four attorneys have submitted legal opinions taking issue with ARB's legal premises in entering into the Agreement, or the procedures followed in connection with the Agreement. The first three legal opinions were commissioned by the South Coast Air Quality Management District:

- August 30, 2005 opinion letter from Seth P. Waxman, Wilmer Cutler Picking Hale and Dorr LLP (Waxman)
- August 30, 2005 opinion letter from David Nawi, Law Firm of Shute, Mihaly & Weinberger LLP (Nawi)
- August 30, 2005 Memorandum Re: Preemption Analysis of June 2005 ARB/Railroad Memorandum of Understanding, from former Justice Cruz Reynoso, Professor of Law, U.C. Davis School of Law (Justice Reynoso)

The fourth is an August 31, 2004 opinion letter from Melissa Lin Perrella, Senior Project Attorney, Natural Resources Defense Council (NRDC).

This document provides the responses of ARB's attorneys to these submittals.

## Federal Preemption – In General

1. Comment: The vast majority of provisions in the Agreement would survive a preemption challenge even if they were adopted as regulations in exactly their present form, and the remaining provisions could be easily rephrased to avoid preemption concerns while achieving the same regulatory objectives. (Waxman)

It is our conclusion that neither CAA section 209(e) nor any other federal authority would preclude state and local entities from adopting and enforcing regulations that require the actions identified in the Agreement or actions having the same effect. (Nawi)

The Agreement provisions deal principally with instate regulations that do not effectively impact the design or production of locomotive engines. Accordingly, the state regulation will not be preempted. Thus, I conclude that the Agreement provisions do not affect interstate commerce and are therefore subject to state regulation. There is one possible exception. The Agreement calls upon the Participating Railroads to install anti-idling devices. It seems to me that this affects the designs of locomotives and therefore would be preempted. (Justice Reynoso))

Agency Response: ARB's attorneys disagree with the commenters' opinions that all or a vast majority of the Agreement provisions clearly are not preempted by federal law. The four sources of potential preemption are federal Clean Air Act (CAA) section 209(e), the Interstate Commerce Commission Termination Act of 1995 (ICCTA), the Locomotive Boiler Inspection Act (Boiler Act), and the dormant Commerce Clause of the U.S. Constitution. Responses to the specific assertions made by the commenters in these four areas are set forth in the remaining portions of this document.

As indicated in the Staff Report, the key elements of the Agreement that are expected to achieve near-term reductions of diesel particulate emissions from locomotives in the State's rail yards require the following:

- Installing idling reduction devices on California-based locomotives within 3 years;
- Phasing out non-essential idling by locomotives within six months;
- Identifying and expeditiously repairing locomotives with excessive smoke; and
- Maximizing the use of ultra low sulfur (15 parts per million (ppm)) diesel fuel by January 1, 2007, six years before such fuel is required by federal regulation.

ARB's attorneys believe there is little doubt that a state or district regulation requiring the installation of idling reduction devices on California-based locomotives would be preempted by CAA section 209(e), the ICCTA, and the Boiler Act. The commenters generally do not dispute this. However, they believe that a regulation could be crafted having the effect of making the railroads install idling reduction devices without actually mandating the devices, and that such a regulation would avoid preemption. ARB's attorneys are not so confident that a regulation presenting installation of the devices as a more practical compliance option compared to a "default" option of resource-intensive operational and reporting requirements would be found to be safe from preemption.

ARB's attorneys also believe that while the other three listed elements would probably be found not to be preempted by CAA section 209(e) if adopted as regulations, there would be significant cause for concern regarding ICCTA preemption.

Another important element of the Agreement – the requirement for health risk assessments at specified rail yards – would probably not be found to be preempted under any of the pertinent federal provisions if adopted as an ARB or district regulation. However, many of the potential mitigation measures that might be identified and implemented under the Agreement process as a result of the health risk assessment could be vulnerable to preemption challenges.

Faced with a strong potential of preemption and the likelihood that the railroads could effectively contest ARB's regulatory authority over at least some aspects of its plans to attain immediate emission reductions from the railroads – e.g. adopting idling control measures and requiring that all locomotives that operate in California use on-road low sulfur diesel fuel – ARB decided that the best course would be to determine if the railroads would mutually agree to implement variations of such measures through a voluntary agreement. By entering into negotiations with the railroads, ARB avoided unnecessary litigation risk and delay and was able to obtain commitments for immediate emission control actions that benefit the entire State, while protecting the existing rights of ARB, local air districts, and local jurisdictions to continue with their existing emission control programs.

2. Comment: No matter what label is put on an alleged preemption inquiry – (1) express preemption, (2) field preemption, (3) conflict preemption – ultimate determination rests on congressional intent: if Congress intended to preempt a category of state and local laws, then such laws are preempted; if there was no such purpose, the laws will stand. See *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 485 (1996). (Waxman)

Agency Response: ARB's attorneys do not disagree with this characterization of principles in the U.S. Supreme Court's *Medtronic* decision. Indeed, in the key decisions relied upon by ARB and discussed below – e.g. *City of Auburn v. United States*, 154 F.3d 1025, 1029-1031 (9th Cir. 1998) and *Friberg v. Kansas City Southern Railway Co.*, 267 F.3d 439 (5th Cir. 2001) – expressly considered Congress' intent in determining the broad preemptive effect of the ICCTA.

In a passage frequently quoted by the Surface Transportation Board (STB) and courts, one of the first federal district courts considering ICCTA preemption stated that, "It is difficult to imagine a broader statement of Congress' intent to preempt state regulatory authority over railroad operations" than Congress provided in the preemption provision of the ICCTA (49 U.S.C. sec. 10501(b).) *CSX Transp. v. Georgia Public Service Com'n*, 944 F.Supp. 1573, 1581 (N.D. Ga. 1996), quoted in *Borough of Riverdale – Pet. for Declaratory Order – The New York Susquehanna & W. Railway Corp.*, 1999 WL 715272, at \*4 (S.T.B.), and *City of Auburn* (154 F.2d at 1039).

3. Comment: The courts have been sure footed in ruling that “The States traditionally have had great latitude under their police powers to legislate as ‘to the protection of the lives, limbs, health, comfort, and quiet of all persons.’” (*Metropolitan Life Ins. Co. v. Massachusetts*, 471 U.S. 724, 756 (1985) – quoting from *Slaughter-House Cases*, 16 Wall. 36, 62, 21 L.Ed. 394 (1873) additional internal quotes omitted.) The Supreme Court has held that “[i]t is impossible to ignore its overarching concern that pre-emption occur only where a particular state requirement threatens to interfere with a specific federal interest.” (*Medtronic*, 518 U.S. 470, 471-472.) Indeed, the Supreme Court also noted the “considerable burden of overcoming ‘the starting presumption that Congress does not intend to supplant state law.’” (*DeBuono v. NYSAL-ELA Med. & Clinical Servs. Fund*, 520 U.S. 806, 814 (1997) – quoting from *New York State Conference of Blue Cross & Blue Shield Plans v. Travelers Ins. Co.*, 514 U.S. 645, 654 (1996).)

Federal regulations have recognized that when states exercise traditional police power, the preemptive effect of federal statutes is narrowly construed. (*Medtronic, supra*, 518 U.S. at 485.) Specifically, the Supreme Court has confirmed that state environmental legislation designed directly to protect the health and safety of its citizens is generally not preempted. (*Id.*) The Agreement’s provisions deal principally with instate regulations that do not effectively impact the design or production of locomotive engines. Accordingly, the state regulation will not be preempted. (Justice Reynoso)

Agency Response: The preemption principles identified by Justice Reynoso are obviously important in construing the preemptive effect of CAA section 209(e), the ICCTA, and the Boiler Act. But none of the cases he cites actually involve any of these federal laws, despite the fact that there are a substantial number of cases and administrative determinations specifically addressing whether the federal laws – particularly the ICCTA – preempt specific state and local regulations. The relevant cases and administrative determinations are described in the responses to subsequent comments focusing on the particular federal laws. In reaching their decisions in these matters, the courts and boards accounted for the principles cited by Justice Reynoso.

#### **Preemption Under Clean Air Act section 209(e)**

4. Comment: CAA Section 209(e)(1)(B) establishes an express preemption prohibiting states and local subdivisions from adopting or enforcing any standard or other requirement relating to the control of emissions from locomotives or locomotive engines. The U.S. Environmental Protection Agency (U.S. EPA) has interpreted the preemption broadly to encompass not just state and local regulations that target new locomotives before sale to end uses, but also those that require the installation of “aftermarket” equipment when such requirements “would affect how a manufacturer designs or produces new . . . locomotives or locomotive engines.” (*Final Rulemaking, Emission Standards for Locomotives and Locomotive Engines (Final Locomotive Rule)*, 63 Fed. Reg. 18978, 18994 (April 16, 1998); see 40 CFR § 85.1602.)

At the same time, Congress limited the scope of these otherwise sweeping provisions by providing, in CAA section 209(d), that “[n]othing in this part shall preclude or deny to any state or political subdivision thereof the right otherwise to control, regulate, or restrict the use, operation, or movement of registered or licensed vehicles.” Although section 209(d) explicitly refers only to “motor vehicles,” a category that does not extend to locomotives, U.S. EPA has determined, and the D.C. Circuit has upheld the determination, that section 209(d) carves out the same exception to section 209(e)’s preemption for nonroad engines and vehicles. See EPA’s *Final Rule, Air Pollution Control; Preemption of State Regulation for Nonroad Engine and Vehicle Standards*, 59 Fed. Reg. 36969, 36973-74 & n.15 (July 20, 1994) (*Final Nonroad Rule*), *aff’d in relevant part, Engine Mfrs. Ass’n [EMA] v. EPA*, 88 F.3d 1075, 1093-94 (D.C. Cir. 1996). The D.C. Circuit further observed, in language that anticipates a key preemption issue here, that the CAA “has always permitted the states to adopt in-use regulation – such as carpool lanes, restrictions on car use in downtown areas, and programs to control extended idling of vehicles – that are expressly intended to control emissions.” 88 F.3d at 1094.

Section 209(d) would preserve against preemption the vast majority of the Agreement’s provisions if they were enacted into state or local law or regulations. For example, section 1(d) of the Agreement requires railroads to exert their best efforts to limit all non-essential idling and prohibits non-essential idling for more than 60 minutes. This is precisely the type of operational regulation that CAA section 209(d) is designed to save. (Waxman)

In its 1998 regulation interpreting section 209(e), U.S. EPA concluded that, in addition to preempting regulations targeting new locomotives prior to sale to end users, section 209(e) also preempted certain regulations of locomotives already “in-use.” “Any state control that would affect how a manufacturer designs or produces new . . . locomotives or locomotive engines is preempted by section 209(e)(1).” (*Final Locomotive Rule*, 63 Fed. Reg. at 18994.) Conversely, section 209(e) does not bar “standards directed primarily at intrastate activities where the burden of compliance does not effectively impact manufacturers and distributors.” (*Notice of Proposed Rulemaking for Locomotives and Locomotive Engines*, 62 Fed. Reg. 6336, at 6397 (February 11, 1997).)

The U.S. EPA has also recognized that despite the language of section 209(e), some state or local regulation of nonroad engine emissions is permissible under section 209(d). Although on its face section 209(d) refers only to “motor vehicles,” U.S. EPA has interpreted section 209(d) to apply to section 209(e) preemption of nonroad engine standards. (59 Fed. Reg. at 36973.) The *EMA* Court upheld U.S. EPA’s position on this issue. (*EMA* 88 F.3d at 1093-1094.) (Nawi)

While CAA section 209(e) preempts any requirement relating to the “control of emission” from new or used locomotives, a great deal of power is left for the state. The D.C. Circuit has ruled in favor of the “[r]eservation of states’ rights to impose in-use regulations found in section 209(d). (*EMA*, *supra*, 88 F.3d 1075, 1094.).

The Court supports its conclusion by a footnote which quotes two senators who spoke after the senate had amended preemption provision found in the house bill. Senator Chafee said that the states “[c]an continue to require existing and in-use nonroad engines to reduce emissions by setting fuel requirements, operational conditions or limits on the use of such equipment.” (*Id.* at 1094 fn. 58.) Senator Baucus, similarly, explained that, “States also fully retain existing authority to regulate emissions from all types of existing or in-use non-road engines.” (*Id.*) (Justice Reynoso).

Agency Response: ARB’s attorneys agree with Waxman’s characterization of the broad preemptive effect of CAA section 209(e)(1)(B) with regard to adoption or enforcement by a state or political subdivision of standards or other requirements relating to the control of emissions from locomotives or locomotive engines. However, it is quite speculative to apply the D.C. Circuit’s *EMA* holding to locomotives.

The *EMA* decision is only directed at U.S. EPA’s determination that CAA section 209(d) applies to nonroad engines used in equipment and vehicles covered by the *Final Nonroad Rule*. Locomotives and locomotive engines are expressly exempted from that rule’s coverage. (See *Final Nonroad Rule*, 59 Fed. Reg. at 36970; 40 CFR Part 89.1.) And while U.S. EPA’s Preamble discussion of preemption for the *Final Nonroad Rule* specifically stated that CAA section 209(d) is applicable to the nonroad engines affected by the rule, in the Preamble discussion of preemption for the subsequently adopted *Final Locomotive Rule* U.S. EPA made no express mention of CAA section 209(d) or its possible effect on state or local in-use regulation of locomotives. (*Final Locomotive Rule*, 63 Fed. Reg. 18978, 18993-95 (April 16, 1998).) If anything, this suggests that U.S. EPA believes there is some difference between applicability of CAA section 209(d) to state in-use controls for other nonroad engines compared to its possible applicability to in-use controls for locomotives.

Contrary to the assertions of the commenters, the legislative history in adopting section 209(e) and the question of whether section 209(d) carves out an exception for locomotive operational controls is not clarified by the comments of Senators Baucus and Chafee. As the Court in *EMA* stated.

[W]e find the historical record to be of little assistance.

\* \* \* \* \*

There are, in fact, only a few scattered pieces of evidence about what the conferees intended, or what the members of both Houses thought they were voting for when the bill emerged from conference. In the end-of-session haste in which this huge bill was passed, the conference committee did not produce a section-by-section analysis of the conference bill. Senators Chafee and Baucus, who were among the Senate managers, placed their explanation of five titles of the 1990 Amendments in the Congressional Record, but it largely paraphrases the statutory language. In remarks on the Senate floor, both Senators stated that the

only engines that the states were preempted from regulating were those covered by § 209(e)(1). According to Senator Chafee, "States retain their existing authority to regulate all remaining new nonroad engines or vehicles." Senator Baucus, after describing the two categories preempted in § 209(e)(1), said: "The preemption is limited only to these categories of nonroad vehicles; states retain all of their existing authority to fully regulate all other types of new nonroad equipment." . . . A perhaps more plausible reading [than provided by either U.S. EPA or EMA in the court proceeding would be that] the Senators appeared to convey the impression that the only preemption in § 209(e) was the express preemption in § 209(e)(1).

\* \* \* \* \*

In sum, the legislative history is unhelpful. In determining what the members of Congress intended to vote for, the legislative history provides no basis for the court to conclude that they voted for a regulatory scheme other than that provided by the words in the statute. (*EMA*, 88 F.3d at 190-192, footnotes omitted.)

Thus, one of the few things made very clear by the comments of Senators Baucus and Chafee, is that Congress expressly intended that locomotives and locomotive engines are preempted. To read anything beyond that – i.e., exemption from preemption of locomotive operational controls – is beyond the pale of the CAA legislative history.

In the interest of full disclosure, we note that U.S. EPA did refer to the right of states to control local operations of locomotives in its *Summary and Analysis of Comments on the Notice of Proposed Rulemaking for Emission Standards for Locomotives and Locomotive Engines*, December 16, 1997, stating:

states may regulate the use and operation of locomotives in a manner that does not significantly affect the design or manufacture of a new (including remanufactured) locomotive or engine, potentially allowing states to control nuisances." (*Id.* at 20.)

But U.S. EPA issued the caveat in its discussion of preemption in the *Final Locomotive Rule* that "certain categories of potential state requirements, while not expressly preempted by section 209(e)(1) or [U.S.] EPA's regulations implementing section 209(e)(1), are preempted because they would directly conflict with federal regulations." (*Final Locomotive Rule*, 63 Fed. Reg. at 18994.)

Finally, even if operational control measures as they directly apply to locomotives are not preempted by CAA section 209(e), they may be preempted by other federal laws – particularly the ICCTA.

5. Comment: CAA section 209(d) would preserve against preemption a state regulation imposing Agreement section 2, the on-highway diesel requirement. The diesel fuel requirement merely mandates what type of fuel locomotives must use inside of California, and to our knowledge requires no changes in engine design. (Waxman)

Agency Response: Based on U.S. EPA's clear implication, ARB's attorneys believe that a state locomotive diesel fuel provision would be a fuels requirement not falling under CAA section 209(e) and accordingly not preempted by that section. When U.S. EPA issued its regulations requiring the use of low-sulfur diesel fuel in nonroad diesel engines, the Preamble included a discussion on how the federal regulations affected state diesel fuel programs. (*Control of Emissions of Air Pollutants From Nonroad Diesel Engines and Fuel; Final Rule (Nonroad Diesel Fuel Final Rule)*, 69 Fed. Reg. 38958, 39072-3 (June 29, 2004).) Since the entire discussion focuses on the effects of CAA section 211(c)(4) – the CAA's fuels preemption provision – ARB's attorneys have concluded that locomotive fuels preemption under the CAA is governed by section 211(c)(4) rather than section 209(e). The Preamble for the *Nonroad Diesel Fuel Final Rule* states:

Thus, today's action does not preempt state controls or prohibitions respecting the characteristics or components of fuel or fuel additives used in nonroad, locomotive, or marine engines or nonroad, locomotive, or marine vehicles under the provisions of section 211(c)(4)(A).

\* \* \*

A court may consider whether a state control for fuels or fuel additives used in nonroad engines or nonroad vehicles is implicitly preempted under the supremacy clause of the U.S. constitution. (69 Fed. Reg. 39072-3)

Notwithstanding the lack of preemption under the CAA, there are substantial concerns about possible preemption of the fuels element under the ICCTA and possibly other federal laws. See the response to Comment 19.

6. Comment: Program Element 3 of the Agreement, which addresses visible emissions, ensures that railroads comply with preexisting federal standards for visual emissions, not with any independent state law requirement. Although the Agreement requires in-use testing for compliance with federal standards, it specifies no non-federal testing protocol and thus permits the use of the federal test protocol established in the *Final Locomotive Rule*. See 63 Fed. Reg. at 18993-94 (declining to preempt such testing requirements). (Waxman)

Agency Response: First, the Agreement provides specifically that Program Element 3 does not preempt any district enforcement of preexisting visible emission regulations. (Program Element 10(c).) The existing visible emission programs of the districts may very well exceed the smoke opacity programs established under the *Final Locomotive Rule*, which recognizes three different levels of smoke opacity, depending upon whether the locomotive was manufactured with a tier 0, 1, or 2 engine. If ARB

were to adopt language similar to that enforced by some districts, the language may very well be preempted – if not by the CAA, then by the ICCTA. By entering into the voluntary Agreement, ARB made every effort to avoid such potential preemption and nullification of local district rules.

Second, Program Element 3 requires the railroads to submit to ARB for review and approval a defined statewide visual emission reduction and repair program. At this time, it remains to be seen if the final version of the program will be identical or exceed the federal program. It is thus premature to say that the final program would not be preempted if it were mandated by a regulation.

7. Comment: The only Agreement requirement that, if adopted as a regulation in its current form, could raise significant issues under the CAA is the obligation that railroads install devices that automatically shut engines off after 15 consecutive minutes of idling (or whatever longer period might be necessary to protect particular engines against excessive component failures). These devices might qualify as the type of “aftermarket” equipment included within the preemptive scope of CAA section 209(e)(1) as interpreted by U.S. EPA. That concern, however, could be easily avoided simply by revising the rule to require railroads to limit their idling to the same extent using any effective means, including reliance on manual shut-down. (Waxman)

The requirement that idling reduction devices be installed on intrastate locomotives appears to be an “aftermarket equipment requirement” expressly preempted under CAA section 209(e) and 40 CFR section 85.1603(c)(2). We therefore conclude that it would likely be found to be preempted. One might nonetheless argue that it is not the kind of “aftermarket equipment” U.S. EPA intended to be included within the preemptive ambit of section 209(e) because it would not affect manufacturer’s incentive in designing or remanufacturing locomotives or engines. Regardless of whether an idling control device requirement would be preempted, ARB or the SCAQMD could achieve the same result by promulgating a performance standard limiting idling time without specifying how the railroads achieve that standard. The limitation of non-essential idling to no more than 60 minutes clearly falls within ARB’s Health and Safety Code section 43013 authority. Furthermore, because this requirement is properly characterized in the Agreement as a performance standard. (Nawi)

Agency Response: ARB’s attorneys agree, notwithstanding commenter Nawi’s conjecture, that the Agreement provisions requiring idling reduction devices would likely be preempted under CAA section 209(e)(1)(B) and 40 CFR section 85.1603(c)(2), because such devices would be expected to affect the design and manufacture of the locomotive or locomotive engine.

As the commenters are aware, the Agreement provides that while the maximum idling time for idling reduction devices is 15 minutes, the operational control limits for locomotives without idling reduction devices is less than 60 minutes for nonessential idling. In drafting the idling limits in the Agreement, ARB recognized the railroads’ stated concerns that strict idling limits less than 60 minutes could potentially adversely

affect some locomotives operations and interrupt their rail operational services. The commenters' contention that the language of the Agreement could have been recast as a regulation to effectively require installation of idling reduction devices – presumably an operational requirement that all locomotives be required to idle no more than 15 minutes – would seem to be a prescriptive requirement that all locomotives be manufactured or remanufactured with or retrofitted with idling reduction devices. There is certainly a significant possibility that such a requirement would found to be preempted by the CAA and the ICCTA.

Under an ARB or district regulation, the use of idling reduction devices is presented by the commenters as an “option” to meet a performance standard, with the alternative option being clearly more burdensome and costly (e.g. SCAQMD’s Proposed Rule 3501 requiring compliance through either a 30-minute operational idling limit, accompanied by burdensome recordkeeping and reporting requirements, or by installing an idling reduction device). This may not be sufficient to avoid preemption under CAA section 209(e). (*See Egelhoff v. Egelhoff ex re. Briener*, 532 U.S. 141,150 (2001) (The fact that a state law regarding designation of beneficiaries allowed employers the option of opting out of the state law requirements does not save the law from preemption under the federal ERISA express preemption statute. As the court stated, “differing state regulations affecting an ERISA plan’s “system for processing claims and paying benefits” impose ‘precisely the burden that ERISA pre-emption was intended to avoid.’”))

Finally, even if an idling-reduction regulation could be worded in a way that avoids preemption under CAA section 209(e), there are still serious questions as to whether it would be preempted by the ICCTA or other federal laws.

8. Comment: Program Element 7 implements the same remote-sensing technology contemplated in pending state legislation (AB 1222). This program element would therefore be preempted only if the state bill would also be preempted. And it likely would not be: it subjects railroads to no design requirements of any kind, and simply requires them to reimburse the state for part of the cost of the remote-sensing program. (Waxman)

Agency Response: Program Element 7 was included in the Agreement because of uncertainty whether AB 1222 would be passed by the Legislature and signed by the Governor. The Agreement ensures that a remote sensing pilot project will be implemented even if the bill did not come into law. AB 1222 was signed by the Governor October 6, 2005.

#### **Potential Preemption of Elements of the Agreement Under the Interstate Commerce Commission Termination Act of 1995**

9. Comment: The ICCTA would not preempt the Agreement provisions. The ICCTA, which establishes the STB, preempts state regulation that significantly impairs railroad operations, such as advance permitting requirements for the deployment of

railroad facilities. It does not preempt self-executing and economically unintrusive rules like the provisions specified in the Agreement, which preserve the public's interesting environmentally sound use of locomotive engines. (Waxman)

The ICCTA has broad preemptive effect with respect to state or local economic regulation or regulations in the nature of discretionary permitting requirements. Other state or local regulations that are within the state's traditional police power to protect the environment or public health and safety and that do not interfere with interstate operations of railroads are not preempted. The provisions of the Agreement do not fall within the preemptive ambit of the ICCTA. (Nawi)

If adopted as ARB regulations, the provisions of the Agreement would not be preempted by the ICCTA. (Justice Reynoso)

Agency Response: ARB's attorneys have concluded that the ICCTA (49 U.S.C.A. section 10501, et seq.) could well preempt most of the key elements of the Agreement were they to be adopted as regulations by ARB or districts. The overall basis for this conclusion is provided in this response. More detailed analyses are presented in the responses to the more specific comments laid out in the responses to subsequent comments.

Congress enacted the ICCTA, which effectively deregulated the rail and motor carrier industries, to ensure the economic viability of the two industries.<sup>1</sup> As generally interpreted by the courts and the STB – the administrative agency entrusted by Congress to implement and interpret the Act in the first instance – the ICCTA broadly preempts states, and even conflicting federal programs, from adopting rules that affect national railroad transportation. Section 10501(b) sets forth the jurisdiction of the STB over rail carriers that are part of an interstate rail network. Its jurisdiction over the following is exclusive:

- (1) transportation by rail carriers, and the remedies provided in this part with respect to . . . rules (including car service, interchange, and other operating rules), practices, routes, services and facilities of such carriers; and
- (2) the construction, acquisition, operation, abandonment, or discontinuance of . . . switching, or side tracks, or facilities, even if the tracks are located, or intended to be located, entirely in one State, is exclusive. Except as otherwise provided in this part, the remedies provided under this part with respect to regulation of rail transportation are exclusive and preempt the remedies provided under Federal or State law. (emphasis added.)

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<sup>1</sup> *Who's Driving the Train? Railroad Regulation and Local Control*, Maureen E. Eldredge, 75 U. Colo. L. Rev. 549, 550, Spring 2004.

The term “transportation” is also broadly defined and specifically includes locomotives and rail yard facilities. (49 U.S.C.A. section 10502(9).) The Ninth Circuit Court of Appeals, among other courts, has broadly interpreted the program to preempt any regulation that has an integral economic effect on a railroad’s interstate rail operations. In *City of Auburn v. U.S.*, 154 F.3d 1025 (Ninth Cir. 1998) the Ninth Circuit considered the question of whether the ICCTA preempted a county’s authority to require an environmental review and permit prior to Burlington Northern’s initiation of a project to repair and resume operations of an interstate rail line over Washington’s Stampede Pass. The court answered in the affirmative, stating:

[G]iven the broad language of §10501(b)(2), (granting the STB exclusive jurisdiction over construction, acquisition, operation, abandonment, or discontinuance of rail lines) the distinction between “economic” and “environmental” regulation begins to blur. For if local authorities have the ability to impose “environmental” permitting regulations on the railroad, such power will in fact amount to “economic regulation” if the carrier is prevented from constructing, acquiring, operating, abandoning, or discontinuing a line.

We believe the congressional intent to preempt this kind of state and local regulation of rail lines is explicit in the plain language of the ICCTA and the statutory framework surrounding it. [Emphasis added.] Because congressional intent is clear, and the preemption of rail activity is a valid exercise of congressional power under the Commerce Clause, we affirm the STB’s finding of federal preemption. (*City of Auburn v. U.S.*, *supra*, 154 F.3d at 1031.)

The Fifth Circuit has similarly found a broad preemption under the ICCTA as it applies to a state law directly regulating railroad operations rather than requiring an environmental review and permit. The Court found that a Texas statute prohibiting railroad trains from blocking roadways was expressly preempted, stating:

The language of the statute could not be more precise, and it is beyond peradventure that regulation of [Kansas City Southern Railway (KCS)] train operations, as well as the construction and operation of the KCS side tracks, is under the exclusive jurisdiction of the STB unless some other provision in the ICCTA provides otherwise. The regulation of railroad operations has long been a traditionally federal endeavor, to better establish uniformity in such operations and expediency in commerce, and it appears manifest that Congress intended the ICCTA to further that exclusively federal effort, at least in the economic realm. (*Friberg v. Kansas City Southern Railway*, 267 F.3d 639, 643 (5th Cir. 2001).)

The Court further stated:

Regulating the time a train can occupy a rail crossing impacts . . . the way

a railroad operates its trains, with concomitant economic ramifications that are not obviated or lessened merely because the provision carries a criminal penalty. (*Id.*)

Other courts have found state or local actions having the effect of regulating train operations to be similarly preempted by the ICCTA (*Rushing v. Kansas City Southern Railway Co.*, 194 F.Supp. 2d 493 (S.D. Miss. 2001) (Homeowners' nuisance and negligence claims based on excessive noise and vibrations from trains operated in nearby switch yard are preempted by ICCTA); *City of Seattle v. Burlington Northern Railroad Co.*, 145 Wash.2d 661 (2002) (Seattle ordinances prohibiting railroad switching activities from interfering with the use of any street or alley, or impeding property access, for a period of time longer than four consecutive minutes, and prohibiting switching on arterial streets during peak hours, were preempted by the ICCTA).

Moreover, decisions of the STB have consistently found that the ICCTA preempts the type of state or local regulation of railroad operations addressed in these court decisions. In a March 2005 decision finding a District of Columbia statute preempted by the ICCTA, the STB stated:

As the courts have observed, “[i]t is difficult to imagine a broader statement of Congress’ intent to preempt state regulatory authority over railroad operations” than that contained in section 10501(b) [of the ICCTA]. *CSX Transp., Inc. v. Georgia Pub. Serv. Comm’n*, 944 F.Supp. 1573, 1581-84 (N.D. Ga. 1996) (Georgia PSC). Every court that has examined the statutory language has concluded that the preemptive effect of section 10501(b) is broad and sweeping, and that it blocks actions by states or localities that would impinge on the Board’s jurisdiction or a railroad’s ability to conduct its rail operations.”

(*CSX Transportation, Inc. – Petition For Declaratory Order (CSX II)* 2005 WL 584026, \*6 (S.T.B. March 14, 2005).) The STB cited nine cases for this proposition, the first of which was the Fifth Circuit *Friberg* decision holding that the Texas anti-blocking statute was preempted by the ICCTA.

Justice Reynoso does not provide a serious analysis of preemption under the ICCTA and its application to elements of the Agreement. He cites no court decisions or STB decisions construing the preemptive effect of the ICCTA.

10. Comment: The introduction of railroads necessarily brought legislative, regulatory and decisional changes. One author notes, “In the 1820s and 1830s railroad companies were typically sponsored by local commercial interests and municipal leaders who hoped to increase business activity and divert trade from rival cities.” [citation omitted] These railroads were often within state borders, but eventually, with encouragement from the federal government, especially in the West, railways were connected and the government created a national transportation system. [citation omitted.] By the late 1800’s rail transportation was all-important to interstate commerce.

Congress acted to protect the flow of goods and persons by exercising its power of preemption. However, as indicated, each state retained the responsibility to protect the health and welfare of its people. [*Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218 (1947), *Medtronic*, 518 U.S. 470 (1996)] (Justice Reynoso)

Agency Response: The Eleventh Circuit in *Florida E. Coast Railway Co. v. City of W. Palm Beach*, 266 F.3d 1324 (11th Cir. 2001) – a case in which the Court held that a city zoning ordinance was not preempted as it applied to an aggregate rock distributor which leased property from the railroad for non-railway purposes – sets forth a detailed analysis of the legislative history of the ICCTA. A summary of the Court’s analysis provides:

Our conclusion as to the meaning of the ICCTA pre-emption provision is bolstered by the history and purpose of the ICCTA itself. The statutory changes brought about by the ICCTA reflect the focus of legislative attention on removing *direct* [emphasis by Court] economic regulation by the *States*, as opposed to the *incidental effects* [emphasis by ARB] that inhere in the exercise of traditionally local police powers such as zoning. The pre-ICCTA statute expressly authorized regulation of certain railroad activities to be undertaken concurrently by the federal and state governments, while still other regulation would be the exclusive province of state law. For example, former section 10103 of Title 49 provided that “[e]xcept as otherwise provided in this subtitle, the remedies provided under this subtitle are *in addition to* remedies existing under another law or at common law.” 49 U.S.C. § 10103 (1988) [emphasis added by the Court]. Concurrent federal-state authority was also contemplated for much intrastate railroad activity. See, e.g., 49 U.S.C. § 10501(b)-(d) (1988). Federal law also recognized exclusive state authority over “the construction, acquisition, operation, abandonment, or discontinuance of spur, industrial, team, switching, or side tracks if the tracks are located, or intended to be located, entirely in one State....” 49 U.S.C. § 10907(b)(1) (1988). See also 49 U.S.C. § 11501(b) (1988) (acknowledging regulatory role of States over railroads). The ICCTA removed the authority of the States to regulate those railroad activities that had previously been subject to state regulation or to concurrent federal-state regulation, providing instead for federal uniformity in the regulation of rail transport. See 49 U.S.C. § 10501 (1994 & Supp.1998).<sup>10</sup> [Emphasis added by ARB.]

<sup>10</sup> The loss of that state regulatory authority has been the focus of much of the case law on the pre-emptive effect of the ICCTA. See, e.g., *Burlington N. Santa Fe Corp. v. Anderson*, 959 F.Supp. 1288 (D.Mont.1997) ; *CSX Transp., Inc. v. Ga. Pub. Serv. Comm’n*, 944 F.Supp. 1573 (N.D.Ga.1996) ; *Burlington N. R.R. Co. v. Page Grain Co.*, 249 Neb. 821, 545 N.W.2d 749 (1996). While these cases have addressed the extent to which States still may be able to prevent stations from closing or tracks from moving, none have involved the general exercise of local police powers against a third party which has an incidental effect upon a railroad’s activities. [Emphasis added by ARB]

When identifying the principles of national “rail transportation policy” under the ICCTA, Congress deleted the previous statutory reference to “cooperat[ion] with the States on transportation matters to assure that intrastate regulatory jurisdiction is exercised in accordance with the standards established in this subtitle.” *Compare* 49 U.S.C. § 10101a(9) (1998) *with* 49 U.S.C. § 10101 (1994 & Supp. 1998). This deletion emphasizes the focus of the ICCTA on removing direct state regulation of railroads previously permitted for intrastate rail transport. . . . *One House Report emphasized the balance sought to be achieved between the rights of States in the exercise of their police powers and the need for exclusivity in the “Federal scheme of economic regulation. . . . Any other construction would undermine the uniformity of Federal standards and risk the balkanization and subversion of the Federal scheme of minimal regulation for this intrinsically interstate form of transportation.”* H.R. Rep. 104-311, at 96 (1995), *reprinted in* 1995 U.S.C.C.A.N. 793, 808. One Senate Report noted the following:

[N]othing in this bill should be construed to authorize States to regulate railroads in areas where Federal regulation has been repealed by this bill .... The hundreds of rail carriers that comprise the railroad industry rely on a nationally uniform system of economic regulation. Subjecting rail carriers to regulatory requirements that vary among the States would greatly undermine the industry's ability to provide the “seamless” service that is essential to its shippers and would waken the industry's efficiency and competitive viability. . . . (*Florida E. Coast Railway*, 266 F.3d at 1337-1338.)

As commenter Waxman noted in referring to *Medtronic*, “if Congress intended to preempt a category of state and local laws, then such laws are preempted; if there was no such purpose, the laws will stand.” (Waxman at p. 6, referencing *Medtronic*, 518 U.S. at 485.) The decisions of the Fifth and Ninth and Eleventh Circuits, as well as STB, clearly reflect that Congress intended ICCTA preemption to be broadly construed. ARB’s attorneys are concerned that while states may use their police powers in ways that are generally applied and have an incidental economic effect on the railroads, they may be prohibited from applying direct, discriminatorily applied regulations – such as those covered by the Agreement – that when applied have an economic impact on the railroads.

11. Comment: It is true that in *City of Auburn, supra*, the Ninth Circuit found that Congress intended a “broad reading” of the ICCTA’s preemption provision and that classifying a regulation as “environmental” does not, or itself, shield the regulation from preemption. But it does not follow from *City of Auburn* that Congress intended to preempt every state or local regulation that has some effect on railroads, no matter how economically insignificant. Indeed, in that case, the Ninth Circuit upheld a preemption ruling of the STB that itself made clear that the ICCTA does not preempt state-level

environmental requirements that, like these, that pose no unreasonable burden on interstate commerce.

The STB's reasoning in its decision under review in *City of Auburn* is instructive and likely to be controlling. According to the STB, "[a] key element in the preemption doctrine is the notion that only 'unreasonable' burdens, i.e., those that 'conflict with' Federal regulation, 'interfere with' Federal authority, or 'unreasonably burden' interstate commerce, are superseded. The courts generally presume that Congress does not lightly preempt state law." *Cities of Auburn & Kent, Wash. – Petition for Declaratory Order – Burlington Northern Railroad Company – Stampede Pass Line*, 1997 WL 362017, at \*5 (S.T.B. 1997). For example, the STB explained,

[a] railroad that violated a local ordinance involving the dumping of waste could be fined or penalized for dumping by the state or local entity. The railroad also could be required to bear the cost of disposing of the waste from the construction in a way that did not harm the health or well being of the local community. We know of no court or agency ruling that such a requirement would constitute an unreasonable burden of, or interfere with, interstate commerce. Therefore, such requirements are not preempted. *Id.* at \*6. (Waxman)

Agency Response: Along with *King County, WA – Petition for Declaratory Order – Burlington Northern Railroad Company – Stampede Pass Line*, 1996 WL 545598 (S.T.B. 1996), *Cities of Auburn & Kent* was the first STB decision to address the preemptive effect of the ICCTA on state and local regulatory actions.<sup>2</sup> A number of subsequent STB decisions have refined and clarified the STB's position in this area, and *Cities of Auburn & Kent* must accordingly be read in the context of the later decisions. Taken together, these decisions make clear that if the STB were to be presented today with state or local regulations containing the key elements of the Rail Yard Agreement, there is a likelihood – at the very least a substantial possibility – that the STB would conclude those elements are preempted by the ICCTA, specifically by 49 U.S.C. section 10501(b).

The key consideration is that the sort of non-preempted waste disposal ordinance referred to in the passage of *Cities of Auburn & Kent* quoted by Waxman – and the hypothetical local law prohibiting a railroad from dumping excavated earth into local

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<sup>2</sup> While the commenter states that the STB's *Cities of Auburn & Kent* decision was the ruling "upheld" by the Ninth Circuit in *City of Auburn*, it is important to recognize that the STB's discussion of what sort of hypothetical state or local regulations might not be preempted was never referred to or commented upon by the Ninth Circuit panel. The only decision of the STB that was affirmed by the Ninth Circuit was the determination that the state and local permitting laws at issue in the case were preempted by the ICCTA; the Ninth Circuit also found that the STB did not abuse its discretion or render an arbitrary and capricious ruling under the National Environmental Policy Act by approving the railroad line reopening without conducting a full environmental impact statement. *City of Auburn, supra*, 154 F.2d at 1032-1033.

waterways also referred to by the STB – are nondiscriminatory, generally applicable prohibitions that do not target railroads and do not adversely affect railroad operations. In contrast, all of the significant elements of the Rail Yard Agreement are specifically designed to reduce emissions from railroad locomotives, and they affect how the railroads are permitted to use and operate those locomotives. With that in mind, the four most significant subsequent STB decisions are reviewed below.

First, in *Borough of Riverdale – Petition for Declaratory Order – The New York Susquehanna and Western Railway Corp. (Riverdale I)*, 1999 WL 715272 (S.T.B. 1999), the STB announced it was initiating a declaratory order proceeding to determine the extent to which efforts of a New Jersey town to require construction permits and regulate a railroad’s construction of a truck terminal and corn processing plant in a residential zone were preempted by the ICCTA. To provide initial guidance, the STB reviewed at length the preemption discussion in *Cities of Auburn & Kent. (Riverdale I at \*4-5.)* Then, characterizing its understanding of *Cities of Auburn & Kent*, the STB stated:

. . . [W]hile state and local government entities such as the Borough retain certain police powers and may apply non-discriminatory regulation to protect public health and safety, their actions must not have the effect of foreclosing or restricting the railroad’s ability to conduct its operations or otherwise unreasonably burdening interstate commerce. (*Id.* at \*6.)

The STB went on to observe, “it appears to us that state and local entities can enforce in a non-discriminatory manner electrical and building codes, or fire and plumbing regulations, so long as they do not do so by requiring the obtaining of permits as a prerequisite to the construction or improvement of railroad facilities.” (*Id.*)

Second, in *Borough of Riverdale – Petition for Declaratory Order – The New York Susquehanna and Western Railway Corp. (Riverdale II)*, 2001 WL 192584 (S.T.B. 2001), the STB announced that the town and railroad in the *Riverdale I* proceeding had settled their differences. In terminating the proceeding, the STB decided to summarize “additional agency and court precedent that may provide guidance in resolving preemption issues in other contexts.” (*Id.* at \*1). In describing the New Jersey Supreme Court case of *Village of Ridgefield Park v. New York, Susquehanna & Western Ry.*, 750 A.2d 57 (N.J. 2000), the STB focused first on the Court’s finding that the ICCTA “preempted local zoning regulations and precluded the state court from adjudicating common law nuisance claims involving noise and air pollution from a railroad maintenance facility.” (*Id.* at \*2; emphasis added.) Nothing in the STB’s discussion indicated any disagreement of the *Ridgefield Park* Court’s decision that the noise and air pollution common law claims were preempted. The STB also noted the *Ridgefield Park* Court’s conclusion that “generally, localities may enforce their local fire, health, plumbing, safety, and construction regulations and that the railroad may not deny the local government access for reasonable inspection of its maintenance facility.” (*Id.*)

Third, *Joint Petition for Declaratory Order – Boston and Maine Corp. and Town of Ayer (Ayer III)*, 2001 WL 458685 (S.T.B. 2001) involved the proposed construction of an automobile unloading facility, with unloading and support tracks, next to a rail line within the town of Ayer Massachusetts. The STB first described pertinent principles of preemption:

This does not mean that all state and local regulations that affect railroads are preempted. As we stated in *Stampede Pass*, 2 S.T.B. at 337-38 and *Riverdale I*, state and local regulation is permissible where it does not interfere with interstate rail operators, and localities retain certain police powers to protect public health and safety. For example, non-discriminatory enforcement of state and local requirements such as building and electrical codes generally are not preempted. (*Id.* at \*6.)

The town of Ayer argued that it could regulate the automobile unloading and storage facility because most of the regulation it sought to impose was rooted in the federal Safe Drinking Water Act and the federal Clean Water Act. (*Id.*) However, the STB concluded that the town was using the two federal Acts merely as a pretext. And the STB found that the efforts of the town's Planning Board to prohibit construction of the facility on the ground it would violate the local "noisesome trade ordinance" was preempted by the ICCTA. (*Id.* at 7.) With respect to this ordinance, the STB agreed with the characterization by the American Association of Railroads that it was "similar to the nuisance ordinance involving air and noise pollution that the court found to be preempted in *Ridgefield Park*." (*Id.* at 7, fn. 30.) The STB found that the town's permit process, and a Conservation Commission's preconstruction approval process, were preempted as well. (*Id.* at 7.)

Finally, in the *CSX II* decision issued earlier this year, the STB found that the "Terrorism Prevention in Hazardous Materials Transportation Emergency Act of 2005" enacted by the Washington D.C. City Council was preempted by the ICCTA. The STB's discussion of the scope of ICCTA preemption is informative. The STB stated at \*6:

As the courts have observed, "[i]t is difficult to imagine a broader statement of Congress' intent to preempt state regulatory authority over railroad operations" than that contained in section 10501(b) [of the ICCTA]. *CSX Transp., Inc. v. Georgia Pub. Serv. Comm'n*, 944 F.Supp. 1573, 1581-84 (N.D. Ga. 1996) (Georgia PSC). Every court that has examined the statutory language has concluded that the preemptive effect of section 10501(b) is broad and sweeping, and that it blocks actions by states or localities that would impinge on the Board's jurisdiction or a railroad's ability to conduct its rail operations." *Friberg v. Kansas City S. Ry.*, 267 F.3d. 439, 443 (5th Cir. 2001) (*Friberg*) (state statute restricting a train from blocking an intersection preempted, even though there is no Board regulation of that matter.) [followed by citations to eight additional cases]

If the STB believes that a state statute limiting the time a train may block a roadway is preempted by the ICCTA, it is apparent that there would be substantial preemption vulnerability for ARB or district regulations requiring the installation of idling reduction devices on locomotives, phasing out non-essential locomotive idling, identifying and expeditiously repairing locomotives with excessive smoke, and maximizing the use of ultra-low sulfur fuel in locomotives. And it is notable that none of these decisions turn on whether the impact on railroad operations is “substantial” or “unreasonable.”

Lastly, one of the notable elements of several of the STB decisions is the STB’s positive view of voluntary agreements between governmental entities and railroads as an alternative to efforts to regulate in areas that may well be preempted. In *Riverdale II* (a proceeding which itself was resolved by a voluntary, mutual agreement of the parties), the STB pointed out that it had previously

. . . expressed our view that a town may seek court enforcement of two noise abatement agreements that the town had entered into with a railroad, notwithstanding the broad sweep of the statutory preemption provisions. We explained that the railroad had voluntarily entered into the agreements, and thus the preemption provisions should not be used to shield the carrier from its own commitments. (*Riverdale II* at \*2, discussing *Township of Woodbridge v. Consolidated Rail Corporation, Inc.*, 2000 WL 1771044, (S.T.B.) [STB Docket No. 42053])

In *Ayer III*, *supra*, 2001 WL 458685, the STB observed:

Like any citizen or business, railroads have some responsibility to work with communities to seek ways to address local concerns in a way that makes sense and protects the public health and safety, and to assume responsibility if they act negligently. But at the same time, literal compliance with state or local laws often may be impractical in cases involving railroad facilities. Thus, as the court indicated in *Ridgefield Park*, a certain degree of pragmatism on the part of communities and cooperation on the part of railroads is necessary to reach reasonable solutions to state and local concerns that do not unreasonably interfere with interstate commerce. (*Id.* at \*7; citation omitted.)

The Rail Yard Agreement represents this sort of pragmatism and cooperation, and its mechanisms will provide for significant community involvement. This sort of a reasonable solution has been endorsed and sanctioned by the STB in *Ayer III*.

As previously stated, neither the STB nor the courts have to date addressed the specific substantive matters included in the Agreement. Considering the acknowledged broad preemption of the ICCTA, ARB wanted to be certain that immediate statewide emission reductions were attained through voluntary agreements with the railroads. The likelihood of a legal challenge by the railroads of a rulemaking seeking, at a minimum,

the emission reductions guaranteed by the Agreement, would have been to the detriment of the health and welfare of the state as a whole.

12. Comment: The STB's reasoning in its decision under review by the Ninth Circuit in *City of Auburn* is likely to be controlling. In *Green Mountain Railroad Corp. v. State of Vermont*, (2nd Cir. 2005), the Court stated, [a]s the agency authorized by Congress to administer the Termination Act, the Transportation Board is uniquely qualified to determine whether state law should be preempted by the Termination Act." Further, in *Indus. Truck Ass'n, Inc. v. Henry*, 125 F.3d 1305, 1311 (9th Cir. 1997), the Court stated, "An agency's interpretation of the preemptive effect of its regulations is entitled to deference where Congress has delegated authority to the agency, the agency's interpretation is not contrary to a statute, and agency expertise is important to determining preemption." Also, because (under the "Hobbs Act," 28 U.S.C. § 2342) Congress gave the courts of appeal exclusive jurisdiction to review the validity of STB orders on direct appeal, private parties may not collaterally challenge the STB's legal conclusions in other proceedings to which the STB is not a party. See, e.g., *Baros v. Tex. Mexican Ry. Co.*, 400 F.3d 1112, 1120 (5th Cir. 2005); see generally *U.S. W. Commc'ns v. MFS Intelenet, Inc.*, 193 F.3d 1112, 1120 (9th Cir. 1999). As a result, the STB's interpretation of the limits of federal preemption under the ICCTA may well be binding on any court that hears a preemption challenge to requirements of the type contained in the Agreement. (Waxman)

Agency Response: ARB's attorneys are aware of no decision holding that a determination by the STB is binding on a court reviewing the same issue – that certainly was not the conclusion of the Ninth Circuit in *City of Auburn, supra*. In the STB's recent *CSX II* decision, the Board certainly did not characterize its decision as determinative of the pending lawsuit in the U.S. District Court for the District of Columbia challenging the same District of Columbia statute. But most importantly, ARB's attorneys firmly believe that the weight of the STB decisions discussed in the response to the previous comment simply do not represent an STB view that key elements of the Agreement would not be preempted if adopted as state or district regulations.

13. Comment: Our position on preemption is supported by two additional cases. First, in *Boston & Maine Corp. v. Town of Ayer*, 330 F.3d 12 (1st Cir. 2003), the court stated that "[T]he STB found state and local regulation to be permissible where it does not interfere with interstate rail operations and localities retain certain police powers to protect public health and Safety." (*Id.* at 16-17.) The court characterized the STB as having declared that "Section 10501(b) of the ICCTA should not be interpreted as intending to interfere with the role of state and local agencies in implementing federal environmental statutes."

Second, in *Florida E. Coast Railway Co. v. City of W. Palm Beach*, 266 F.3d 1324 (11th Cir. 2001), the court stated, "Reliance on the presumption against pre-emption limits 'congressional intrusion into the States' traditional prerogatives and general authority to regulate for the health and welfare of their citizens.'" (*Florida E. Coast Railway Co. v.*

*City of W. Palm Beach*, 266 F.3d 1324, 1328 (11th Cir. 2001), quoting *City of Boerne v. Flores*, 521 U.S. 507, 534 (1997).) (Waxman)

Agency Response: The STB decision characterized in the quote from *Boston & Maine Corp.* is *Ayer III*, *supra*, described in the response to Comment 11. As explained in that response, *Ayer III* in no way supports the commenter's position.

The often cited local police powers that have typically been found by the STB and the courts to not be preempted are such ordinances as building and electrical codes, measures that are generally applied across the community and are not specifically, or discriminatorily, applied to railroad operations. The measures covered by the elements of the Agreement, although environmental, are designed to be applied specifically to railroad operations. As the STB stated, its evaluation of whether a state or local measure is preempted or not is a factual question. ARB considered the facts and concluded that the program elements, applied specifically to railway operations, may very well be preempted. Upon its evaluation, ARB concluded that entering into the Agreement with the railroads was the proper course of action – ensuring that immediate emission reductions are achieved and avoiding potentially protracted litigation.

As discussed in the response to Comment 15, the STB's decisions assure that the executed Agreement is clearly enforceable and the railroads cannot subsequently argue that the subject matter of the Agreement's program elements is preempted.

In *Florida East Coast Railway Co. v. City of West Palm Beach*, *supra*, the Court affirmed the trial court's determination that the ICCTA does not preempt the city's application of its zoning and licensing ordinances to a railroad lessee's development of a aggregate terminal on railroad property, finding that the ICCTA definition of "transportation" does not include services provided by lessee of railroad in receiving, handling and distributing aggregate. In so finding, the court noted that Congress narrowly tailored the preemption to "displace only 'regulation,' i.e., those state laws that may reasonably be said to have the effect of 'manag[ing]' or 'govern[ing]' rail transportation ... while permitting the continued application of laws having a more remote or incidental effect on rail transportation." (*Id.*, 266 F.3d at 1331.) The Court's analysis supports ARB's hesitancy in pursuing state and local regulation of the railroads and instead entering into the Agreement.

14. Comment: Additional cases that support our position are *Village of Ridgefield Park v. New York, Susquehanna and W. Railway Corp.*, 750 A.2d 57, 64 (N.J. 2001); *Boston & Maine Corp. & Town of Ayer, Mass. – Joint Petition for Declaratory Order [Ayer III]*, 2001 WL 458685 at \*7 ("Like any citizen or business, railroads have some responsibility to work with communities to seek ways to address local concerns in a way that makes sense and protects the public health and safety, and to assume responsibility to work with the communities to seek ways to address local concerns in a way that makes sense and protects the public health and safety, and to assume responsibility if they act negligently."); and *Borough of Riverdale – Petition for Declaratory Order – The New York Susquehanna & W. Railway Corp. [Riverdale I]*,

1999 WL 715272. “[S]tate and local government entities such as the Borough retain certain police powers and may apply non-discriminatory regulation to protect public health and safety.” (Waxman)

Agency Response: None of these cases support the commenter’s position. In *Village of Ridgefield Park*, discussed further in the response to Comment 17, the New Jersey Supreme Court held that, while the Village may enforce its local fire, health, plumbing, safety and construction regulations to the extent they do not require pre-construction review, its common law nuisance causes of action for alleged noise and air pollution were preempted by the ICCTA. (*Village of Ridgefield Park, supra*, 163 N.J. at 462, 750 A.2d at 67.) Thus the case strongly suggests that the key elements of the Agreement, directed at reducing emissions of air pollutants from locomotives, may be preempted as well.

The commenter’s quote from *Ayer III, supra*, discussed in the response to Comment 11, reflects the STB’s support of voluntary agreements such as the Agreement. The STB suggested that, in order to address local concerns between railroads and communities the railroads should, among other things, attempt to meet periodically with citizen groups or local government entities to seek mutually acceptable ways to address local concerns and submit environmental monitoring or testing information to local government entities for an appropriate period of time after operations begin. (*Id.* at \*7.) This is exactly what the Agreement provides for – it is an effort to achieve state and local emission reductions by requiring the railroads to conduct meetings with the local communities, local air districts, and ARB on how they intend to mitigate excessive emissions that affect the neighboring communities. Consistent with the above, the railroads also must share and attempt to mitigate environmental risk assessment monitoring and testing results. This is a solution that might otherwise be preempted under the ICCTA.

As discussed in the response to Comment 11, the STB stated in *Riverdale I* that a municipality could apply nondiscriminatory regulations to protect public health and safety only to the extent those regulations do not have the effect of foreclosing or restricting the railroad’s ability to conduct its operations or otherwise unreasonably burdening interstate commerce. (*Riverdale I, supra*, at \*6.) Before the Agreement was entered into, staff fully considered these principles in the context of court and STB decisions. Not having a crystal ball, ARB’s attorneys concluded that the Program Elements that were discussed and negotiated could likely be found by the courts to restrict the ability of the railroads to run their operations, or to unreasonably burden interstate commerce.

15. Comment: In *Green Mountain R.R. Corp. v. State of Vermont*, 404 F.3d 638, 643 (2d Cir. 2005), *petition for cert. filed*, 74 U.S.L.W. 3050 (U.S. Jul. 13, 2005) (No. 05-89), the Second Circuit recently stated that placing broad discretion in the hands of public officials to stop railroads literally in their tracks is a key precondition to preemption under the ICCTA:

Nevertheless, as the district court observed, “not all state and local regulations are preempted [by the ICCTA]; local bodies retain certain police powers which protect public health and safety.” *Id.* It therefore appears that states and towns may exercise traditional police powers over the development of railroad property, at least to the extent that the regulations protect public health and safety, are settled and defined, can be obeyed with reasonable certainty, entail no extended or open-ended delays, and can be approved (or rejected) without the exercise of discretion on subjective questions. Electrical, plumbing and fire codes, direct environmental regulations enacted for the protection of the public health and safety, and other generally applicable, non-discriminatory regulations and permit requirements would seem to withstand preemption. (Emphasis added by commenter; quotations by commenters merged to more fully reflect the Court’s actual text.)

(Waxman and Nawi)

Agency Response: There are several notable elements of the *Green Mountain Railroad* decision that are not acknowledged by the commenters and that together make clear that the decision does not provide meaningful authority for the commenters’ position.

First, the only issue before the *Green Mountain Railroad* Court was whether the State of Vermont’s environmental land use statute that mandates preconstruction permits for land development was preempted when applied to a railroad’s plans to build transloading facilities on its rail properties. The Second Circuit ruled that the statute was preempted – the railroad won the case. The passage quoted by the commenters was dicta that was in no way necessary for the Court’s disposition of the case.

Second, as the STB has stated,

Of course, whether a particular . . . local regulation is being applied so as to not unduly restrict the railroad from conducting its operations, or unreasonably burden interstate commerce, is a fact-bound question. Accordingly, individual situations need to be reviewed individually to determine the impact of the contemplated action on interstate commerce and whether the statute or regulation is being applied in a discriminatory manner, or being used as a pretext for frustrating or preventing a particular activity, in which case the application of the statute or regulation would be preempted. (*Ayer III* at \*6.)

The *Green Mountain Railroad* Court had no specific factual situation before it, as the quoted passage was referring to general concepts not before the Court. Therefore the decision provides no authority for how the Court would actually rule in a specific factual situation involving an environmental regulation that affects railroad operations.

Third, the commenters' quotation omits the one case cited by Second Circuit at the conclusion of the quoted passage:

*Cf. Vill. Of Ridgefield Park v. New York, Susquehanna & W. Ry. Corp.*, 163 N.J. 446, 750 A.2d 57, 64 (2000) (noting the Transportation Board's position that: (1) 'while state and local government entities . . . retain certain police powers and may apply non-discriminatory regulation to protect public health and safety, their actions must not have the effect of foreclosing or restricting the railroad's ability to conduct its operations or otherwise unreasonably burdening interstate commerce'; and (2) 'railroads are exempt from the traditional permitting process but not . . . from most other generally applicable laws'). (*Green Mountain Railroad, supra*, at 643.)

Yet *Ridgefield Park* was the very case in which the New Jersey Supreme Court found that the Village's common law nuisance claim in connection with noise and air pollution was preempted – a holding specifically cited by the STB in *Riverdale II* (*supra* at \*2).

Finally, and perhaps most importantly, the *Green Mountain Railroad* Court expressly acknowledged that, "As the agency authorized by Congress to administer the Termination Act, the Transportation Board is uniquely qualified to determine whether state law should be preempted by the Termination Act. (*supra* at 642; internal quotation marks and punctuation omitted.) Thus the *Green Mountain Railroad dicta* must be read in the context of the STB decisions described in the response to Comment 11.

ARB's attorneys have concluded after closely and thoroughly reading the Court and STB decisions cited above that there is a reasonable likelihood that state and local regulation of the subject areas covered by the Agreement could be found preempted. Through the Agreement process, ARB attempted to avoid the pitfalls of preemption and gain the immediate benefits promised by the Agreement.

16. Comment: California courts have also held that regulations that will not interfere with the construction of railroad facilities or operation of the railroads are not preempted by the ICCTA. *Jones v. Union Pacific R.R. Co.*, 79 Cal. App. 4th 1053, 1060-61 (2000) (holding that a nuisance suit based on train idling would not be preempted by ICCTA so long as the challenged idling was non-essential, *i.e.*, "not safety related or [taken] in furtherance of [the railroad's] operations").

In *Jones v. Union Pac. R.R. Co.*, 79 Cal. App. 4th 1053 (2000) a California Court of appeal held that the ICCTA did not necessarily preclude state-law remedies for the conduct of a railroad that was alleged to have sounded train horns and parked idling trains near the plaintiff's homes for long periods of time, and engaged in other harassing conduct because, the court reasoned, that conduct may not even have been "in furtherance of Union Pacific's railroad operations." The substantive terms of the final Agreement do not substantially interfere with the regulated parties to "operate railroad

business and safely and efficiently,” and therefore satisfy the criteria in *Jones* for avoiding preemption. (Waxman)

Agency Response: The *Jones* case is the only California case cited by the commenters. And it is the only case cited by the first commenter in which a court found that the state activity before the court was not preempted by the ICCTA. A reading of the *Jones* decision makes clear that it does not support the commenters’ arguments.

In *Jones*, the ICCTA preemption issue came before the appellate court after the lower court made a summary judgment ruling dismissing the case as being preempted under the ICCTA. The plaintiffs were the owners of one of two homes located adjacent to UP tracks in Yermo, who had filed a civil action against the railroad for nuisance, nuisance per se, negligence, and intentional infliction of emotional distress. The appellate court noted that “Plaintiffs alleged that Union Pacific employees parked idling trains in front of their home for lengthy periods of time and blew train horns in front of their house for no reason other than to harass them.” (*Id.* at 1058.) Declarations by the homeowners stated “that the train noise in question appeared to serve no legitimate purpose, and worsened after the plaintiffs and [their neighbor] began complaining.” (*Id.*) The Court of Appeal reversed the trial court’s grant of summary judgment for the railroad, concluding:

This evidence cited in plaintiffs’ summary judgment opposition is sufficient to raise a triable issue of fact as to whether Union Pacific’s activities were committed solely to harass plaintiffs, and were not safety related or in furtherance of Union Pacific’s railroad operations. There, thus, is a triable issue as to whether plaintiffs’ state tort claims fall within the purview of state police powers or are federally preempted under the ICCTA by 49 United States Code section 10501. (*Id.* at 1061.)

In characterizing this case, the first commenter has taken a court decision expressly premised on evidence that the railroad’s retaliatory actions may have had nothing to do with furtherance of the railroad’s operations, and has transformed it into a holding that actions which are in furtherance of railroad operations can be regulated or prohibited as long as they are “non-essential.” This interpretation misleadingly supports an argument that key Agreement provisions may not, in fact, be preempted if adopted as regulations. For example, the commenter’s reference to “non-essential” locomotive idling stems of course from the fact that the Agreement provides an exception to the operational idling limits “when it is essential that a locomotive be operating.” (Agreement Section C.1.(e).) And while the second commenter takes fewer liberties with the *Jones* case, the *Jones* decision in no way holds, as implied by the second commenter, that state regulations must substantially interfere with a railroad’s ability to operate the railroad’s business safely and efficiently before they are preempted by the ICCTA.

17. Comment: There is some consensus in the case law that, despite the broad preemption language of the ICCTA, states and localities may adopt environmental regulations that do not rely on open-ended discretion, at least so long as they also do not substantially interfere with the business of railroad operations.

I base this conclusion on the *Green Mountain Railroad* decision and the following additional cases: *Jones v. Union Pac. R.R. Co.*, 79 Cal. App. 4th 1053 (2000) (holding that the ICCTA did not necessarily preclude state-law remedies for the conduct of a railroad that was alleged to have sounded train horns and parked idling trains near the plaintiff's homes for long periods of time, and engaged in other harassing conduct because, the court reasoned, that conduct may not even have been "in furtherance of Union Pacific's railroad operations"); *Florida E. Coast Ry. v. City of W. Palm Beach*, 266 F.3d 1324, 1332-37 (11th Cir. 2001) (holding that the operation of an aggregate business by non-railroad company on railroad property was not rail transportation and thus not preempted); *Native Village of Eklutna v. Alaska R.R. Corp.* 87 P.3d 41, 57 (Alaska 2004) (holding that a railroad's operation of a gravel quarry was not integrally related to rail operations); *In re Appeal of Vermont Ry.*, 769 A.2d 648, 654-55 (2000) (holding that local regulatory constraints on truck operations do not interfere with railway operations); *State of Oklahoma v. Burlington N. & Santa Fe Ry.*, 24 P.3d 368, 371-372 (Okla. 2000) (local order that railroad repair three-tenths of mile of fence did not have any impact on the railroad's interstate operations and thus was not preempted); *Town of Milford, Mass. – Pet. For Declaratory Order*, 2004 WL 1802301, at \*3 (S.T.B. 2004) (holding that the operation of a steel fabrication business by non-railroad on railroad property is not rail transportation.); *Hi Tech Trans, LLC, – Pet. For Declaratory Order*, 2003 WL 21952136, at \*3-5 (S.T.B. 2003) (operation of transload facility by non-railroad, not under the auspices of a railroad, not rail transportation.) (Waxman)

Agency Response: ARB's attorneys fundamentally disagree with this assertion.

The significance of the first two cases referred to – *Green Mountain Railroad* and *Jones* – is addressed in the responses to the two immediately preceding comments.

Of the remaining six cases relied upon by the commenter, all but the Oklahoma case stand for the proposition that a state or municipality is not preempted by the ICCTA from applying its zoning or licensing ordinances to activities that are not integrally related to rail transportation. This is apparent from the commenter's capsule descriptions of the cases, and is confirmed by a closer reading. In fact, in each of these five cases the court upheld state or local requirements that the railroad's or railroad lessee's activity receive some sort of permit or authorization before the railroad or its lessor could proceed. As the commenter would surely acknowledge, had these permit requirements pertained to railroad operations they would obviously have been found to be preempted. The state and local permitting requirements were found not to be preempted by the ICCTA because the activities in question did not involve rail transportation or railroad operations – they involved activities such as operation of a gravel quarry or a steel fabrication business. Thus the commenter's cited cases have no bearing on the authority of state or local entities to impose "environmental regulations" that affect railroad operations – for instance regulations designed to reduce emissions from railroad locomotives.

On the other hand, there are cases – not cited by the commenter – that have found state or local restrictions similar to elements of the Agreement to be preempted when

they were involuntarily imposed on a railroad rather than being the product of a mutual agreement.

In *Friberg v. Kansas City Southern Railway, supra*, the Fifth Circuit found that a Texas statute prohibiting railroads from blocking of roadways was expressly preempted by the ICCTA. The Court reversed a jury verdict in favor of the plaintiffs in a negligence action by the owner of a failed landscape nursery seeking damages against a railroad for repeatedly allowing standing trains to block the primary road to the nursery in violation of the Texas Anti-Blocking Statute. The Court found that “The regulation of railroad operations has long been a traditionally federal endeavor, to better establish uniformity in such operations and expediency in commerce, [Citation omitted] and it appears manifest that Congress intended the ICCTA to further that exclusively federal effort, at least in the economic realm.” (*supra*, 267 Fed.3d at 643.) “Regulating the time a train can occupy a rail crossing impacts . . . the way a railroad operates its trains, with concomitant economic ramifications that are not obviated or lessened merely because the provision carries a criminal penalty.” (*Id.*) As noted in the response to Comment 11, the STB has cited and relied upon this decision.

In *Rushing v. Kansas City Southern Railway Co., supra*, 194 F.Supp. 2d 493, the Court held that homeowners’ nuisance and negligence claims based on excessive noise and vibrations from trains operated in a nearby switch yard were preempted by ICCTA. In reaching its conclusion the court opined:

. . . the Court finds that Congress, under the ICCTA, explicitly granted the STB exclusive jurisdiction over claims involving railroad operations, except as otherwise provided under the ICCTA. (*Id.* at 499.)

\* \* \*

The “damaging vibrations” appear to be caused by techniques used by the Defendant to switch railroad cars in the switch yard. The Court finds that to the extent the Plaintiffs seek to use state common law to regulate the manner in which the Defendant conducts operations in its switch yard, which in turn would result in an economic impact on the Defendant, the state law has been preempted by the ICCTA which vests exclusive jurisdiction in the STB over such matters.

. . . The Court finds, for the reasons discussed above, that to the extent the Plaintiffs seek to use state law to control noise production by regulating the manner in which the Defendant operates its switch yard, for example by restricting the hours at which time it may conduct switching and whistle-blowing activities, controlling the number of trains engaged in switching operations at any given time, and by requiring that the Defendant employ different techniques when braking its trains, all of which would result in an economic impact on the Defendant, the state law has been preempted by the ICCTA which vests exclusive jurisdiction in the STB over such matters. (*Id.* at 500-501.)

Notably, the *Rushing* Court did not require that the economic impacts on the railroad operations be “substantial” before they would be found preempted under the ICCTA.

In *City of Seattle v. Burlington Northern Railroad Co.*, *supra*, 145 Wash.2d 661, the Washington State Supreme Court held that Seattle ordinances prohibiting railroad switching activities from interfering with the use of any street or alley, or impeding property access, for a period of time longer than four consecutive minutes, and prohibiting switching on arterial streets during peak hours, were preempted by the ICCTA. The court affirmed the dismissal of citations for violations of the ordinance. The Court concluded that “Congress explicitly designated switching activities as falling within the jurisdiction of the STB under the ICCTA; ‘express preemption’ federal preemption applies to the City’s ordinances.” (*Id.* at 668.)

Finally, in *Village of Ridgefield Park*, *supra*, 163 N.J. 446, the Supreme Court of New Jersey declined to enjoin an action to stop the railroad from operating a train maintenance facility near a residential area. The Court opined that while the Village may enforce its local fire, health, plumbing, safety and construction regulations to the extent they are applicable to the existing maintenance facility,” (*Id.* at 461), the Village’s common law nuisance claim in connection with the noise and air pollution was preempted by the ICCTA. (*Id.* at 462). The Court concluded that to issue an injunction would infringe on the STB’s exclusive jurisdiction over the location and operations of railroad facilities. (*Id.* at 462.)

These cases indicate that the ICCTA basically protects the railroads from any regulation – environmental or not – that has a potential economic impact on railroad operations. For example, Program Element 2 requires that 80 percent of the locomotive fleet operated in California – including both intrastate and interstate locomotives – use low-sulfur CARB or U.S. EPA onroad diesel fuel. On its face, this is a requirement that inherently affects railroad economics and railway operations; and, thus, could very likely be found preempted. So too, the operational idling requirements.

18. Comment: If adopted as regulatory requirements, the Agreement’s program elements would not be preempted by the ICCTA. Nothing in the Agreement involves the sort of “pre-clearance” regulations, such as discretionary permitting requirements, that have been held to fall within the ICCTA’s preemptive ambit. Rather, the Agreement program elements constitute “direct environmental regulations enacted for the protection of the “public health and safety” that regulate the use of locomotives. (Nawi)

Agency Response: As explained in the responses to Comments 11, 15 and 17, neither the STB rulings nor relevant court rulings limit ICCTA preemption to environmental regulations that require pre-clearance or permits. The key program elements of the Agreement that will reduce emissions are closer to the kinds of regulations or laws found to be preempted by the ICCTA in the *Friberg*, *Rushing*, and *City of Seattle* cases described in the response to Comment 17.

19. Comment: Requiring locomotives to refuel with CARB or EPA on-highway diesel while in California likewise does not appear to interfere with railroad operations, as there does not appear to be any evidence, for example, that the requisite fuel is incompatible with existing fueling facilities or unavailable due to inadequate supplies. The visible emission repair program element gives the railroads considerable flexibility in deciding when and how to repair locomotives with excessive visible emissions: locomotives operating within California are given 96 hours and locomotives leaving California are given as long as they are outside the state.

The enforcement and penalty provisions only impose reasonable penalties and “meet and confer” requirements on violators of the substantive provisions of the Agreement. Such enforcement provisions would not prohibit the railroads from continuing to operate even if they were found in violation. As noted above, if the substantive program elements of the Agreement were adopted as regulations, they would be subject to the enforcement provisions of the Health and Safety Code. Given that the underlying substantive regulations would not be preempted, their enforcement also would not be preempted. The remaining program elements, such as the monitoring, data reporting, and training requirements, impose no restrictions whatsoever on the railroads’ operations. (Nawi)

Agency Response: The cases cited in the response to Comment 15 indicate that the ICCTA basically protects the railroads from any regulation – environmental or not – that has a potential economic impact on railroad operations. Program Element 2 of the Agreement requires that 80 percent of the locomotive fleet operated in California – including both intrastate and interstate locomotives – use low-sulfur CARB or U.S. EPA on-road diesel fuel. On its face, this is a requirement that inherently affects railroad economics and railway operations; and, thus, could very possibly be found preempted by the ICCTA. Moreover, having a patchwork of different fuel specification standards throughout California, let alone across the nation, would potentially significantly impact interstate railway operations. In light of these considerations, staff decided that the most prudent course would be to address fuel specification use requirements for interstate locomotive through the Agreement process. The Agreement guarantees that a large portion of the railroads’ interstate fleet will be using low sulfur fuel more than six years before federal low sulfur fuel regulations go into effect nationally.

The requirements for repairing locomotives with excessive visible emissions also impact railroad operations.

The preemption vulnerability of the enforcement provisions depends on the vulnerability of the underlying elements being enforced, which has been discussed in the responses to previous comments. It is clear that environmental regulations directed at railroad operations do not have to prevent those operations before they can be found to be preempted under the ICCTA.

ARB’s attorneys agree that program elements such as monitoring, reasonable data reporting, and training requirements are probably not preempted. But those

requirements are less important than the key elements that are identified in the response to Comment 1 and have a significant vulnerability to ICCTA preemption.

### **Preemption Under the Locomotive Boiler Inspection Act**

20. Comment: The Boiler Act does not preempt the subjects covered by the Agreement. The Boiler Act provides that the “parts and appurtenances” on locomotives must be in proper condition according to federal regulations set forth by the Department of Transportation. In 1926, the Supreme Court held that “state legislation [regulating locomotive equipment] is precluded, because the Boiler Act . . . was intended to occupy the field.” (*Napier v. Atlantic Coast Line R.R. Co.* (1926) 272 U.S. 605, 613.)

Here, as a general matter, even the Agreement provisions that impose performance requirements do not mandate that railroads include (or exclude) any specific type of equipment in order to meet those requirements. In *Southern Pacific Transportation Co. v. Public Utility Commission of Oregon*, 9 F.3d 807, 811 (9th Cir. 1993), the Court held that the Boiler Act did not preempt an Oregon scheme restricting the sounding of locomotive whistles, because that restriction “neither limits nor expands the type of equipment with which locomotives are required to be equipped.”

With one possible exception, neither does any provision of the Agreement. The possible exception is Element 1(a) of the Agreement, which might be preempted if enacted into law because it proscribes the installation of particular locomotive equipment (an anti-idling device). As discussed above, however, that program element could be modified to avoid similar preemption problems under the CAA simply by rephrasing it as explicit use restriction. So modified, the provision could pose no serious risk of preemption under the Boiler Act either. (Waxman)

Subject to one likely exception, the Boiler Act also would not preempt regulations mandating the actions set out in the Agreement, because although they may affect the use or operation of locomotives, they do not mandate or prohibit the installation of use of locomotive equipments. *Union Pacific RR. Co. v. Cal. Pub. Utils. Comm’n* 346 F.3d 851, 869 (9<sup>th</sup> Cir. 2003) (noting that the Boiler Act “occup[ies] the field of locomotive equipment, but not locomotive use.”) The provision of the Agreement that, if adopted as a regulation, would likely be preempted is the requirement that railroads install automatic idling-reduction devices on all intrastate locomotives based in California that are not already so equipped. Nevertheless, the same result, *viz.*, elimination of non-essential locomotive idling, could be achieved with an idling performance standard that requires railroads to limit locomotive idling, where “non-essential idling” is clearly defined. (Nawi)

Agency Response: The Agreement requires that the railroads retrofit locomotives with idling-reduction devices. This clearly would be contrary to both the CAA preemption that proscribes requirements that affect the design and that affect the manufacture of locomotives and locomotive engines. Second, the Boiler Act, as conceded by the commenter, similarly proscribes “parts and appurtenances on locomotives” unless they

meet regulations prescribed by the Department of Transportation. It is hard to see how the idling-reduction device requirement could not be preempted under the Boiler Act.

With respect to the assertion that the preemption could be avoided by recasting the idling reduction requirement as an explicit use description, see the response to Comment 7. The commenters' attempt to recast the specific requirement of the Agreement that idling-reduction devices be installed by June 2008, by identifying it as a performance standard, could be seen as a round-about way of attempting to establish a prescriptive standard. For example, proposed SCAQMD Rule 3501 establishes seemingly burdensome recordkeeping requirements on the railroads unless they add-on idling reduction devices or order new locomotives with idling reduction devices already installed. A second example would be the commenter's suggested alternative performance standard that would be to set the operational limitations so low that they would effectively mandate installation of idling reduction devices because of the difficulty of manually meeting the operational limits.

### **Dormant Commerce Clause**

21. Comment: If adopted as regulations, the requirements in the Agreement, with one conceivable and easily remedied exception – the visible emission inspection program – would not be unlawful under the dormant Commerce Clause of the U.S. Constitution. (Waxman)

The Constitution's Commerce Clause, U.S. Const. art. I, § 8, which grants Congress the authority to regulate interstate commerce, has been interpreted to have a "dormant" aspect, prohibiting state and local governments from interfering with interstate commerce. *Maine v. Taylor*, 477 U.S. 131, 137 (1986). If a state or local regulation affirmatively discriminates either on its face or in practical effect against interstate commerce, "the burden falls on the State [or local government] to demonstrate both that the statute serves a legitimate local purpose, and that this purpose could not be served as well by available nondiscriminatory means." *Id.* at 138. "'Discrimination' simply means differential treatment of in-state and out-of-state economic interests that benefits the former and burdens the latter." *Oregon Waste Sys. Inc. v. Dept. of Env'tl. Quality*, 511 U.S. 93, 99 (1994). Such discriminatory regulations are "virtually *per se* invalid" under the dormant Commerce Clause. *Id.* By contrast, if the effect of a state or local locomotive regulation on interstate commerce is only incidental to an otherwise legitimate regulatory purpose, the regulation will be upheld under the dormant Commerce Clause unless the burden imposed on interstate commerce is clearly excessive in relation to the local benefits. *See Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142 (1970).

We do not believe that any of the program elements of the Agreement would be barred by the dormant Commerce Clause. In any event, any question about those elements could certainly be resolved by slight modification of the elements requirements.

None of the program elements in the Agreement discriminates against interstate commerce, either facially or in effect. No program element requires locomotives from outside of California to comply with any requirements not imposed on in-state locomotives. The idling reduction program affects only intrastate locomotives and thus exempts all locomotives that travel outside of California. Similarly, the on-highway diesel requirement applies to all locomotives when fueled in California (Program Element 2), but does not affect their refueling outside of the state.

The only program element that could possibly be construed to discriminate against out-of-state economic interests is found in section 3(b)(vii) of the Visible Emission Reduction and Repair Program. This program element requires locomotives operating in California that exceed visible emission standards to be repaired within 96 hours or, if the locomotive's route causes it to leave the state within that period, to be repaired before it returns to the state. We are doubtful that this would be found to discriminate against out-of-state interests. The same federal visible emissions standards are applied to all locomotives, and the same response is required of all locomotives regardless of whether they are purely intrastate, have just entered California from out-of-state, or are just leaving the state: the locomotive must be routed into a repair facility and repaired expeditiously. Moreover, since locomotives leaving the state can be repaired at any time prior to returning to the state, they will in many cases have more flexibility in conducting the necessary repairs than locomotives that remain within the state, which must be repaired within 96 hours.

In any event, the repair requirement could easily be modified to avoid even the appearance of discrimination without substantially undermining its purpose. The requirement could provide that locomotives that leave California after being found to have excess visible emissions shall be routed for repair within 96 hours after returning to the state. With such a modification, the regulation on its face and in effect would treat intrastate and interstate locomotives identically.

Nor do the facially neutral Agreement program elements disproportionately burden interstate commerce. In contrast to discriminatory regulations, "nondiscriminatory regulations that have only incidental effects on interstate commerce are valid unless the burden imposed on such commerce is clearly excessive in relation to the putative local benefits." *Oregon Waste Sys.*, 511 U.S. at 99 (internal quotation marks omitted) (citing *Pike*, 397 U.S. at 142). For a regulation to violate this balancing test, "the burdens of the statute must so outweigh the putative benefits as to make the statute unreasonable or irrational." *Alaska Airlines, Inc. v. City of Long Beach*, 951 F.2d 977, 983 (9th Cir. 1992).

The Agreement provisions satisfy this test. The visible emission repair program would appear to have incidental effects on interstate commerce as trains operating in California would need to be diverted temporarily from planned routes-including interstate routes for repair. Any such burden would, however, be minimal, as the Agreement gives railroads broad flexibility in deciding when to divert a locomotive for repair. This minimal burden does not appear disproportionate to the public health

benefits of requiring the repair of smoking locomotives that fail to meet nationwide emission standards.

Likewise, the program element requiring fueling with on-highway diesel fuel (Program Element 2) does not appear to impermissibly burden interstate commerce. As noted previously, we are not aware of any evidence that the railroads will have any more difficulty fueling locomotives with on-highway diesel as required by the Agreement than they would fueling with ordinary diesel. Absent that evidence, and absent a showing that the burden of complying with the fueling requirement outweighs the significant public health benefits of the use of on-highway fuel, the on-highway diesel requirement would not run afoul of the dormant Commerce Clause.

A regulation with extra-territorial effect may also violate the dormant Commerce Clause. *See Union Pac. R.R.*, 346 F.3d at 872. The elements of the Agreement have no such effect. Although the visible emissions program requires repair of locomotives out of state in some cases, it does so to enforce a national standard, not a California standard. It therefore does not raise the specter of multiple conflicting state standards. *See id.* at 871. In any event, any appearance of extraterritorial effect can be eliminated with a slight modification of the regulation, such as that suggested above, under which no out of state repairs are required. (Nawi)

Agency Response: The Commerce Clause of the United States Constitution (U.S. Const., Art. I, §8, cl. 3), grants Congress the power “[t]o regulate Commerce with foreign Nations, and among the several States. . . .” (*Id.*) Congress, in enacting the ICCTA and its predecessor, the Interstate Commerce Act, ch. 104, 24 Stat. 379 (1887), acted pursuant to the express grant of authority of the Commerce Clause. As stated throughout these responses, the Congress crafted a broad express preemption when adopting the ICCTA. (See *City of Auburn, supra*, 154 F.3d at 1029-1031; *Florida E. Coast Railway Co., supra*, 266 F.3d at 1337-1338). The ICCTA was adopted for the purpose of ensuring the economic viability of the railroads as one of the primary interstate modes of transportation of goods movement. To that end, Congress fashioned the ICCTA preemption to eliminate state economic, including environmental, regulations that could have a negative effect on the railroads continued economic viability (see *City of Auburn, supra*, 154 F.3d at 1029-1031) and to prohibit direct state regulation of railroads that could result in a Balkanization of different rules and regulations that interstate railroads would have to operate under in moving goods and people throughout the United States. (See *Florida E. Coast Railway Co., supra*, 266 F.3d at 1337-1338.)

ARB’s attorneys acknowledge that the U.S. Supreme Court has recognized that the Commerce Clause, in addition to granting Congress an affirmative grant of authority, “also encompasses an implicit or ‘dormant’ limitation on the authority of the States to enact legislation affecting interstate commerce.” (*Healy v. The Beer Institute*, 491 U.S. 324, 326, fn.1 (1989).) But in this case, where Congress has affirmatively established a broad-based preemption that could reasonably be read to directly prohibit states and local authorities from adopting rules and regulations that directly affect how national

railway systems can operate, the dormant Commerce Clause does not come into play. ARB accordingly agrees with the commenters that the dormant Commerce Clause would not preempt ARB or local air district regulations covering the various elements of the Agreement.

### **ARB and District Authority Under State Law**

22. Comment: We believe that ARB or the SCAQMD or both have adequate authority under the California Health and Safety Code to implement as regulations all of the terms of the Agreement. ARB clearly has that authority, pursuant to H&SC section 43013. The District's authority is limited by H&SC section 40702, but most of the provisions of the MOU fall within the District's regulatory authority notwithstanding the limits contained in section 40702. (Nawi)

With one possible exception, ARB has the authority to promulgate regulations which cover the provisions of the Agreement. The ARB enjoys specific authority to regulate locomotive emissions under to H&SC section 43013(b). Further authority is found in to H&SC sections 43018(a), 42400 et seq., and 40701(g). Local air quality districts have jurisdiction over locomotives. However, it is not clear what the District Boards can do in the light of the restriction found in to H&SC section 40702, which states, "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." (Justice Reynoso)

Agency Response: The Legislature entrusted local air districts with primary authority to regulate nonvehicular sources under Health and Safety Code sections 39002 and 40000. Under the definitions of Health and Safety Code sections 39039, 39043, 39059, and 39069, there is no dispute that a locomotive – while mobile – is a nonvehicular source. However, the districts' authority to regulate locomotives is considerably constrained by section 40702 of the Health and Safety Code. That section provides:

No order, rule, or regulation of any district shall . . . specify the design of equipment, type of construction, or particular method to be used in reducing the release of air contaminants from railroad locomotives.

While constraining the authority of the districts, the Legislature expressly vested ARB with authority to regulate locomotives in the California Clean Air Act of 1988. ARB was directed to adopt standards and regulations for nonvehicular engine categories, including locomotives. (Health and Safety Code section 43013(b); *see also* section 43018(a) ("endeavor to achieve the maximum degree of emission reduction possible from vehicular and other mobile sources...").)

The extent to which the districts' authority has been constrained by section 40702 is subject to some debate; however, for purposes of addressing this comment, the exact constraints placed on district authority by California law is secondary to the potential

constraints that federal law placed on both state and district authority. As explained in the previous responses to comments, ARB made its decision to enter into voluntary negotiations with the railroads after concluding that the authority of both ARB and the districts was potentially significantly constrained by federal law.

### Other Legal Issues

23. Comment: In entering into the Rail Yard Agreement, we believe ARB violated the California Administrative Procedure Act (APA). The APA prohibits a state agency from issuing or enforcing a “regulation” without first complying with the APA’s notice and comment provisions. See Cal. Gov’t Code § 11340.5(a). Here, we believe the Agreement constitutes a “regulation” triggering the APA’s procedural requirements.

An agency action constitutes a “regulation” if it satisfies a two part test. First, the agency action must apply generally, rather than in a specific case. See *Tidewater Marine Western, Inc. v. Bradshaw*, 14 Cal. 4th 557, 571 (1996). For example, a rule applies generally if it appears to “all of the members of a class, kind, or order.” *Roth v. Dept. of Veterans Affairs*, 110 Cal. App. 3d 622, 630 (1980). Importantly, however, “[t]he rule need not . . . apply universally.” *Tidewater*, 14 Cal. 4th at 571. Second, the action must “implement, interpret, or make specific the law enforced or administered” by the agency. *Id.*

The Agreement applies “generally” because it pertains to “all the members of a class, kind, or order.” Specifically the Agreement applies to UP and BNSF, which constitute *all* of the Class I railroads that operate in the state of California. Further, the Agreement implements the statutory provision requiring ARB to “adopt standards and regulations for locomotives” (Cal. Health & Safety Code § 43013(b)), and contrary to statements by staff, this agency has the authority to impose and implement the overwhelming majority, if not all, of the provisions of the Agreement as formally adopted regulations.<sup>3</sup>

Accordingly, given that a court would likely find the Agreement to be a “regulation” under the APA, ARB was required to follow the procedures under that act before adopting the agreement. In particular, ARB was required to give the public notice of its proposed regulatory action. (Cal. Gov’t Code, §§ 11346.4, 11346.5); issue a complete text of the proposed regulation with a statement of the reasons for it (Cal. Gov’t Code, § 11346.2(a), (b)); give interested parties an opportunity to comment on the proposed regulation (Cal. Gov’t Code, § 11346.8); respond in writing to public comments (Cal. Gov’t Code, §§ 11346.8(a), 11346.9); and forward a file of all materials on which the agency relied in the regulatory process to the Office of Administrative Law (Cal. Gov’t Code, § 11347.3(b)), which reviews the regulation for consistency with the law, clarity,

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<sup>3</sup> In addition, it is important to note that the “form” of an agency action – here a voluntary contract – is not determinative of whether an agency action constitutes a “regulation” under the APA. Indeed, “[t]he APA . . . defines ‘regulation’ very broadly,” *Tidewater*, 14 Cal. 4th at 571, and California law provides that a “regulation” can take a variety of forms including, for example: guidelines, criterion, bulletins, manuals, instructions, and orders. See Cal. Gov’t Code § 11340.5(a).

and necessity (Cal. Gov't Code, §§ 11349.1, 11349.3). Because ARB failed to follow these procedures, ARB likely violated the APA, and the Agreement may be void. (NRDC)

Agency Response: The Agreement is not a regulation, and ARB did not violate the APA when BNSF and UP voluntarily entered into the Agreement with ARB.

Government Code section 11342.600 defines "Regulation" as "every rule, regulation, order, or standard of general application or the amendment, supplement, or revision of any rule, order, or standard adopted by a state agency to implement, interpret, or make specific the law enforced or administered by it, to govern its procedures." And we agree that, under Gov. Code section 11340.5(a), a "guideline, criterion, bulletin, manual, instruction, [or] order" can be a regulation if it constitutes a standard of general application. But a key element of all of these terms is that they describe something that is unilaterally imposed by a government agency upon a party. There is a fundamental difference between an obligation that is unilaterally imposed by an agency upon a party and an obligation of a party that results from a voluntary mutual agreement between the party and a government agency. None of the examples of potential regulations in the *Tidewater* and *Roth* cases cited by the commenter represent voluntary, mutual agreements, and those cases in no way hold that a voluntary agreement is a "regulation."

Interestingly, the Federal Court of Appeals for the First Circuit has addressed a very similar issue in *Association of International Automobile Manufacturers v. Commissioner, Massachusetts DEP*, 208 F.3d 1 (1st Cir., 2000). In 1996, ARB amended its zero-emission vehicle (ZEV) regulations to remove the obligations of manufacturers to produce and deliver for sale minimum percentages of ZEVs for the first five years of the program, model years 1998-2002. At the same time, ARB entered into Memoranda of Agreement (MOAs) with seven major auto manufacturers by which the manufacturers agreed to develop ZEV technology and introduce a limited number of advance technology ZEVs in California during 1998-2002; ARB agreed to facilitate infrastructure support for ZEV implementation. Massachusetts had previously adopted a regulatory program under which the State was administering the California ZEV requirements pursuant to CAA section 177. After ARB took its 1996 actions, Massachusetts amended its ZEV regulations to postpone the manufacturers' percentage ZEV obligations through model year 2002. The State also adopted regulations imposing on the manufacturers the obligations that the manufacturers had agreed to in the California MOAs. The automakers then brought a federal lawsuit to invalidate the Massachusetts regulations patterned after the manufacturers' obligations under their MOAs with ARB. They claimed that the Massachusetts regulations (1) constituted preempted motor vehicle emission standards under CAA section 209(a), and (2) were not standards identical to California standards for which waiver has been granted (which could then be exempted by CAA section 177 from CAA section 209(a) preemption).

After finding that the Massachusetts regulations were motor vehicle emission control “standards” subject to CAA section 209(a) preemption, the First Circuit held that those regulations were not saved from preemption by section 177 – agreeing with the District Court that “the MOAs entered into California and the automakers are not standards within the meaning of section 177, because they are voluntarily contractual agreements rather than legislation or formal administrative regulations.” (*Id.*, 208 F.3d at 7) The Court pointed out that this ruling is

. . . consistent with Supreme Court precedents holding that federal preemption is generally confined to formal state laws and regulations and not applicable to contracts and other voluntary agreements. See *American Airlines, Inc. v. Wolens*, 513 U.S. 219, 228-29, 115 S.Ct. 817, 130 L.Ed.2d 715 (1995 (contractual obligations not “standards” within the meaning of federal preemption statute); *Cipollone v. Liggett Group, Inc.*, 505 U.S. 504, 526, 112 S.Ct. 2608, 120 L.Ed.2d 407 (1992) (holding that voluntary contractual agreements not preempted by federal statute). (*Id.*)

The First Circuit’s observation that, unlike state regulations, voluntary agreements are not subject to federal preemption shows the potential irony of the commenter’s position. ARB entered into the Agreement to achieve locomotive emission reductions that would not be achievable by a comparable regulation if the regulation were to be found preempted. Construing the California APA to prohibit voluntary agreements in this situation could result in the loss of those emission reductions.

24. Comment: The California Environmental Quality Act (CEQA) requires that state and local agencies consider the environmental consequences of their actions. An agency’s obligations under CEQA are triggered when it approves a project and none of the applicable exemptions apply. Here, ARB “approved” a “project” *not* exempt from CEQA when it entered into the MOU.

There can be little doubt that when ARB’s Executive Officer signed the MOU, ARB became committed to a definite course of action with regard to a project that was intended to be carried out by ARB – namely, the performance of the MOU.

Further, the MOU is a “project” under CEQA. CEQA defines “project” broadly as:

[A]n activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and which is any of the following:

- (a) An activity directly undertaken by any public agency.
- (b) An activity undertaken by a person which is supported, in whole or in part, through contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.

(c) An activity that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.

Cal. Pub. Res. Code § 21065; *see also Azusa Land Reclamation Co. v. Main San Gabriel Basin Watermaster*, 52 Cal. App. 4th 1165, 1188 (1997) (“CEQA defines ‘project’ extremely broadly”); *City of Santa Ana v. City of Garden Grove*, 100 Cal. App. 3d 521, 526 (1976) (referring to the definition of project under CEQA as “sweeping”). At the very least, ARB’s execution and performance of the MOU qualifies as a project because it may cause a direct physical change in the environment and reasonably foreseeable indirect changes in the environment. Further, this project was “directly undertaken” by ARB, a public agency.

Moreover, ARB’s adoption of the MOU does not appear to fall within any of the statutory or categorical exemptions under CEQA, *see* CEQA, Cal. Pub. Res. Code § 21000 *et seq.*, and since ARB did not undergo the process associated with ARB’s Certified Regulatory Program, it cannot claim that the MOU fell under that exception. Additionally, this project does not fall within the “common sense” exception to CEQA because there is no indication that ARB is “*certain* that there is *no possibility* the project may cause significant environmental impacts.” *See* CEQA Guidelines, Cal. Code Regs. Tit. 14, § 15061(b)(3) (emphasis added); *see also Davidson Homes v. City of San Jose*, 54 Cal. App. 4th 106, 117 (1997).

Since ARB’s obligations under CEQA were triggered when it entered into the MOU, it was required to conduct an initial study to examine whether the project would have a significant environmental impact, and then determine whether to prepare an Environmental Impact Report, Negative Declaration, or a Mitigated Negative Declaration. Because ARB failed to undertake these actions, it violated CEQA.

Agency Response: Whether or not entering into the Agreement constituted a “project” under CEQA, we believe that, pursuant to title 14, CCR, section 15061(b)(3) it is exempt from CEQA because it is, as the regulation provides,

. . . covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not covered by CEQA.

“Significant effect on the environment means a substantial, or potentially substantial, adverse change in the environment.” (Pub. Res. Code section 21068.) The Agreement will not result in a substantial or potentially adverse change in the environment as it exists today. While some parties have suggested that the release clause in the Agreement could discourage districts from adopting more stringent regulations governing rail yards, even if that were to happen it would not have an adverse impact on current baseline environmental conditions.