

Expedited Action Requested

BEFORE THE  
SURFACE TRANSPORTATION BOARD

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ARKANSAS ELECTRIC COOPERATIVE )  
CORPORATION – PETITION FOR A )  
DECLARATORY ORDER )

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Finance Docket No. 35305

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PETITION TO REOPEN AND FOR INJUNCTIVE RELIEF  
PENDING BOARD-SUPERVISED MEDIATION

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**SURFACE  
TRANSPORTATION BOARD**

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Dated: August 11, 2011

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**PETITION TO REOPEN AND FOR INJUNCTIVE RELIEF PENDING  
BOARD-SUPERVISED MEDIATION**

The Western Coal Traffic League (“WCTL”) files this Petition to Reopen and for Injunctive Relief Pending Board-Supervised Mediation and states as follows<sup>1</sup>:

**PREFACE AND SUMMARY**

In its Decision served in this proceeding on March 3, 2011 (“*March 2011 Decision*”), the Board found that BNSF Railway Company’s (“BNSF”) Original Coal Dust Tariff<sup>2</sup> constituted an unreasonable practice. The Board strongly urged BNSF to work cooperatively with its coal shippers to devise a reasonable substitute. Unfortunately, that has not happened. Instead, BNSF, without prior consultation,

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<sup>1</sup> All references to party filings are to filings made in this case (hereinafter referred to as “*Dust I*”) prior to March 3, 2011.

<sup>2</sup> “Original Coal Dust Tariff” refers to Item 100, entitled “Coal Dust Mitigation Requirements,” initially published on April 29, 2009 in Revision 011 to BNSF’s Price List 6041-B and Item 101, entitled “Coal Dust Requirements Black Hills Sub-Division,” initially published on May 27, 2009 in Revision 012 to BNSF’s Price List 6041-B.

recently published a Revised Coal Dust Tariff.<sup>3</sup> The Revised Coal Dust Tariff is an unreasonable practice because it fails to inform coal shippers of the penalties they face if shippers fail to comply with its terms; shippers have not been afforded access to the test results and procedures underlying the revised tariff compliance terms and the material concerning these results and procedures that is available indicates that the results and procedures are fatally flawed; all compliance costs are placed on coal shippers; all liability for use of BNSF-mandated surfactants is placed on coal shippers; and the tariff cannot be applied lawfully to Union Pacific Railroad Company (“UP”) shipments (if that is BNSF’s intent).

WCTL wishes to avoid another long, drawn-out coal dust proceeding. To achieve this objective, WCTL requests that the Board take three actions: reopen the record in this case to address a new development – BNSF’s publication of the Revised Coal Dust Tariff; initiate a Board-supervised, non-binding mediation; and stay or enjoin the effective date of the Revised Coal Dust Tariff during the pendency of the mediation to permit an orderly consideration of the parties’ arguments and to avoid long-term irreparable injury. Expedited action is requested because the first “compliance” deadline in the Revised Coal Dust Tariff is September 1, 2011.

If the mediation does not produce a negotiated resolution, WCTL reserves all of its legal rights. WCTL presents two verified statements in support of this Petition,

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<sup>3</sup> “Revised Coal Dust Tariff” refers to Item 100, entitled “Coal Dust Mitigation Requirements,” as published on July 20, 2011 in Revision 017 to BNSF’s Price List 6041-B. A copy of the Revised Coal Dust Tariff is included as Counsel’s *Exhibit 1*.

one by WCTL's President, Duane L. Richards ("Richards V.S."), and the second by Dr. Mark J. Viz ("Viz V.S."), an expert on coal dust mitigation.<sup>4</sup>

### **BACKGROUND**

(1) BNSF published the Original Coal Dust Tariff in the Spring of 2009. The Original Coal Dust Tariff required that all BNSF coal shippers using the Joint Line or the Black Hills Subdivision in the Wyoming Powder River Basin ("PRB") "ensure" that their loaded coal trains meet a specified load "profile[]" and that the trains "not emit more than an Integrated Dust Value [{"IDV"}] . . . of 300 units" on the Joint Line and "245 [IDV] . . . units" on the Black Hills Line. See Original Coal Dust Tariff, Item 100 and Item 101.

(2) In a letter dated August 17, 2009, WCTL urged BNSF "to cancel immediately the coal dust provisions [in the Original Coal Dust Tariff] which call for the unilateral imposition of highly controversial, and unsupported, 'Integrated Coal Dust Value' standards." (Richards V.S., *Attachment 1* at 1). While opposing BNSF's proposed IDV standards, WCTL informed BNSF that it "stands ready to work with BNSF and UP to address coal dust issues in a manner that is mutually beneficial to us all." (*Id.*, *Attachment 1* at 3). BNSF and UP rejected WCTL's invitation. (*Id.*, *Attachment 2.*)

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<sup>4</sup> WCTL is including three requests in a single petition because each request involves the same set of inter-related operative facts. WCTL asks that the Board treat pages 1 to 9 of this filing as setting forth WCTL's petition to reopen for purposes of applying the 20-page limit incorporated by reference in 49 C.F.R. § 1115.4. Alternatively, WCTL asks that the Board waive the 20-page limit.

(3) In October of 2009, Arkansas Electric Cooperative Corporation (“AECC”) filed a petition asking that the Board declare that BNSF’s pursuit of the Original Coal Dust Tariff constituted an unreasonable practice under 49 U.S.C. § 10702(2). At the request of WCTL and other coal shippers, the Board permitted all interested shippers and rail carriers to participate in the petition proceeding as parties of record. *See Dust I*, (STB served Dec. 1, 2009) at 3. The proceeding included extensive discovery, three rounds of evidentiary filings, and an extensive oral argument. WCTL actively participated in all phases of the case and presented substantial evidence and argument in support of AECC’s petition.

(4) The Board inquired at the *Dust I* oral argument whether the parties would be interested in discussing a negotiated resolution of the issues raised in the case, with the Board supervising the negotiations. Following the hearing, WCTL sent a letter to the Board expressing its strong interest in seeking a negotiated resolution of the issues raised in the case. (*See Richards V.S., Attachment 3*). Both BNSF and UP opposed Board-supervised negotiations, and none occurred. (*Id., Attachment 4*).

(5) On March 3, 2011, the Board issued a decision finding that BNSF’s publication of the Original Coal Dust Tariff constituted an unreasonable practice. In so holding, the Board found that coal dust was a “harmful ballast foulant,” but that fact alone did not trump BNSF’s obligation under 49 U.S.C. § 10702 to adopt a reasonable approach for addressing coal dust ballast fouling. *March 2011 Decision* at 6, 11. The Board held that BNSF’s Original Coal Dust Tariff approach was unreasonable for several reasons: the Tariff “does not explain what consequences coal shippers would face” if

they failed to meet the IDV standards; shippers were not given “access to equipment testing and other technical data” that BNSF claimed supported the IDV measurement system; the data BNSF did provide indicated that the IDV measurements produced “unreliable results;” and the Tariff offered no “cost effective safe harbor” provision. *Id.* at 14, 12.<sup>5</sup> After finding BNSF’s Original Coal Dust Tariff unlawful, the Board urged the parties to work together to “develop reasonable solutions to the problems presented in this case.” *Id.* at 14.

(6) Following the Board’s *March 2011 Decision*, WCTL once again reached out to BNSF to engage the carrier in coal dust mitigation discussions “to avoid a replay of the events that resulted in long and costly proceedings” at the STB. (Richards *V.S.*, *Attachment 5* at 2). For the third time, WCTL was rebuffed. (*Id.*, *Attachment 6*). Instead, as it had in the past, BNSF has once again decided to act unilaterally, this time through the publication of the Revised Coal Dust Tariff.

(7) BNSF published the current version of its Revised Coal Dust Tariff on July 20, 2011. The Revised Tariff calls for BNSF PRB coal shippers to reduce coal dust emissions from their loaded coal cars “by at least 85 percent,” starting on “October 1, 2011.” *Id.* BNSF’s PRB coal shippers are also required to provide “written notice” to BNSF “[a]t least 30 days prior to loading cars” on how they plan on “compl[ying]” with

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<sup>5</sup> In light of these findings, the Board determined it was unnecessary to decide coal shippers’ requests that compliance costs be shared, that BNSF’s Original Coal Dust Tariff provisions could not apply to UP trains, and that shippers not be required to indemnify BNSF for BNSF-mandated coal dust mitigation. *Id.* at 15-16.

the 85 percent reduction standard. *Id.* For most PRB shippers, the compliance notice deadline will be September 1, 2011.

(8) According to the Revised Coal Dust Tariff, a BNSF PRB shipper “will be deemed in compliance” with the 85 percent reduction standard if it meets BNSF’s train profiling requirements and either “ensures” that one of three “acceptable topper agents” listed in Appendix B to the Revised Tariff is applied to each loaded train or demonstrates, using “appropriate testing” that another topper agent, or form of dust suppression, meets the 85 percent reduction standard. *Id.*

(9) BNSF refers to its list of “acceptable topper agent[s]” as a “safe harbor” provision. *Id.* According to BNSF, “[a]n acceptable topper agent is one that has been shown to reduce coal dust loss in transit by 85%” and “[i]n recent tests carried out in the PRB, [the] three topper agents [listed in Tariff Appendix B] meet this criteria when properly applied.” *Id.*

(10) Like the Original Coal Dust Tariff, the Revised Coal Dust Tariff places all costs of BNSF-mandated coal dust mitigation on coal shippers and coal mines, the Revised Coal Dust Tariff does not state what penalties shippers may incur if they do not comply with BNSF’s coal dust mitigation rules, and the Revised Coal Dust Tariff requires coal shippers to guarantee that BNSF-approved topper agents “shall not adversely impact railroad employees, property, locomotives or owned cars.” *Id.*

## ARGUMENT

BNSF refused to engage PRB coal shippers in any meaningful dialogue concerning its development of the Original Coal Dust Tariff. BNSF's intransigence forced WCTL, and other coal shippers, to expend substantial time and effort to demonstrate in proceedings before this Board what was obvious to the shipping community from the outset – that BNSF's Original Coal Dust Tariff was unlawful. Despite the Board's strong admonition to BNSF to avoid a "*Dust II*" case by working with coal shippers to address their concerns, BNSF has once again opted for unilateral action in publishing its Revised Coal Dust Tariff.

WCTL's concerns are well known at this point: the costs and benefits of coal dust mitigation should be shared fairly between BNSF and its PRB customers; shippers should be afforded access to BNSF's coal dust mitigation studies, procedures, and data before being asked to incur expense and liability based on those studies; coal dust mitigation standards should be supported by sound science; shippers should be told what penalties BNSF will impose for failing to meet any approved coal dust standards; and shippers should not be held liable for any damages caused by their use of BNSF-approved coal dust mitigation measures. These are reasonable concerns.

BNSF's Revised Coal Dust Tariff ignores all of them. Under the Revised Coal Dust Tariff, all costs of coal dust mitigation fall squarely on coal shippers and coal mines even though all of the benefits flow directly to BNSF in the form of reduced maintenance costs. BNSF has not provided the detailed study data and statistical analyses it used to develop its list of approved "safe harbor" sprays and, based on the

limited information that is available, it appears that BNSF's analyses are flawed and unreliable. The Revised Coal Dust Tariff continues to leave coal shippers in the dark as to what penalties BNSF may apply to non-compliant shippers, though BNSF has hinted strongly in the past that it would refuse service to such shippers, and BNSF continues to mandate that coal shippers guarantee that "topper agents" – whose use BNSF is mandating – not harm BNSF's equipment and employees. Adding insult to injury, BNSF is endeavoring to jam its Revised Coal Dust Tariff down shippers' throats by giving them only a few weeks to "comply" with the Revised Tariff or face the implied threat of service shutdowns or other draconian financial penalties that threaten the coal supply chain.

There has to be a better way to deal with coal dust. WCTL respectfully requests that the Board reopen this proceeding, order mediation, and stay or enjoin the effective date of the Revised Coal Dust Tariff during the pendency of the mediation. WCTL hopes that these three Board actions will facilitate a fair and final resolution of coal dust mitigation issues between BNSF and its PRB coal shippers.

**I.  
THE BOARD SHOULD REOPEN THE RECORD**

The Board has "broad discretion" to reopen the record in a proceeding "at any time . . . because of 'material error, new evidence, or substantially changed circumstances.'" *Major Issues in Rail Rate Cases*, STB Ex Parte No. 657 (Sub-No. 1) (STB served Oct. 30, 2006) at 6 (quoting 49 U.S.C. § 722(c)); accord 49 C.F.R. § 1115.4. The Board can and should exercise its broad discretion to reopen the record in this case.

The statutory prerequisites for reopening are easily satisfied. BNSF's unilateral promulgation of its Revised Coal Dust Tariff clearly constitutes both "new evidence" and "changed circumstances." More importantly, reopening the record in this case will allow both the parties and the Board to address these new developments without having to go back to square one – a whole new case.

Reopening the record will also facilitate mediation, as the parties will be able to refer and utilize the extensive materials already in the record, many of which were designated by BNSF as highly confidential, and, under the terms of the governing protective order, can only be used in this case.

Finally, reopening of the record will provide the Board with an appropriate vehicle to advance its clear admonition to the parties in its *March 2011 Decision* – work cooperatively to develop a consensus plan to address coal dust mitigation.

## **II. THE BOARD SHOULD ORDER MEDIATION**

In its *March 2011 Decision*, the Board contemplated that BNSF would work with its coal shippers to address the concerns they raised about BNSF's Original Coal Dust Tariff. *Id.* at 14 ("In light of the importance of the coal transportation supply chain to the national and world economy, we are confident that railroads and coal shippers can develop reasonable solutions to the problems presented in this case."). Unfortunately, that has not occurred. (*See Richards V.S.* at 2-4).

WCTL requests that upon reopening the record, the Board exercise its authority to institute a Board-sponsored, non-binding mediation to address coal shippers'

concerns with BNSF's Revised Coal Dust Tariff. If BNSF agrees to mediate, the Board can initiate a mediation under 49 C.F.R. § 1109.1. WCTL assumes BNSF will inform the Board of its willingness to mediate voluntarily when it files its reply to this Petition.

If BNSF refuses to mediate voluntarily, the Board should exercise its general statutory authority over proceedings before the agency (49 U.S.C. § 721(a)) to order BNSF to participate in a non-binding, mandatory mediation. Mandatory mediation is appropriate here for the same reasons the Board has ordered mandatory mediation in other disputes between shippers and railroads – “mandatory mediation, if properly administered, could encourage full or partial settlements”<sup>6</sup> and can “reduc[e] the time and expense of litigating such disputes in other instances.”<sup>7</sup> Indeed, BNSF and other carriers have championed the use of mandatory, non-binding mediation for these very reasons:

[M]andatory, non-binding mediation . . . overseen by Board staff would be consistent with the approach taken by federal courts to assist parties in reaching negotiated settlements and would be consistent with the Board's objective of encouraging consensual resolutions. It also would allow parties to benefit from the expertise of a dedicated corps of Board officials . . . . Moreover, the Board could adopt a mediation program without obtaining new statutory authority, since such a program would not supplant Board decisionmaking, but . . . would provide an alternative to formal Board procedures.

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<sup>6</sup> See *Procedures to Expedite Resolution of Rail Rate Challenges to Be Considered Under the Stand-Alone Cost Methodology*, STB Ex Parte No. 638 (STB served Apr. 3, 2003) at 2.

<sup>7</sup> See *Simplified Standards for Rail Rate Cases*, STB Ex Parte No. 646 (Sub-No. 1) (STB served Sept. 5, 2007) at 103.

Initial Comments of the Association of American Railroads, *Arbitration – Various Matters Relating to Its Use As an Effective Means of Resolving Disputes that Are Subject to the Board’s Jurisdiction*, STB Ex Parte No. 586 (filed Nov. 21, 2001) at 11.

Ordering mediation – either voluntary or, if necessary, mandatory – is particularly appropriate in this case since BNSF continues to pursue unilateral, as opposed to consensual, solutions to coal dust mitigation, despite the Board’s clear directions to the contrary. It is also consistent with the Board’s policy urging parties to consider and utilize the Board’s mediation services. *See, e.g.*, STB News Release No. 11-13 (July 7, 2011) at 1 (STB Chairman Elliott invites shippers to utilize the Board’s informal and formal mediation programs); Hon. Daniel R. Elliott III, Remarks to Midwest Shippers Association (Oct. 5, 2010) (reproduced at [www.stb.dot.gov](http://www.stb.dot.gov)) at 3 (“The Board is especially well-suited to successfully mediate disputes because we have the experts on staff who understand issues backwards and frontwards, making each side feel comfortable.”).

WCTL hopes that a Board-supervised mediation can lead to a fair and lawful coal dust tariff that is supported both by coal shippers and BNSF. To advance this objective, WCTL requests that the Board order mediation; that the Board appoint one or more staff members to supervise the mediation; that all parties in *Dust I* be invited to participate; and that an initial mediation session be scheduled at the Board’s headquarters as soon as practicable. WCTL also suggests that the Board encourage all parties to have company representatives participate in the mediation.

**III.  
THE BOARD SHOULD STAY OR ENJOIN THE  
REVISED COAL DUST TARIFF**

WCTL requests that the Board issue an order staying or enjoining the effective date of the Revised Coal Dust Tariff pending Board-supervised mediation. WCTL expects that mediation can be started and completed in a few months, so the stay/injunction WCTL is initially requesting should not be lengthy. The Board clearly has the authority to grant this relief either as an exercise of its inherent authority to issue short “housekeeping” stays or as an exercise of its jurisdiction to issue injunctions of longer duration under 49 U.S.C. § 721(b)(4).

**A. The Board Can Issue A Short Housekeeping Stay**

The STB has the inherent authority to issue short housekeeping stays, including housekeeping stays that enjoin the effective date of carrier publications. The Board typically issues such stays for administrative convenience “to provide sufficient time for the Board to fully consider the issues presented by the parties.” *See, e.g., Buffalo S. R.R., Inc. – Acquisition & Operation Exemption*, STB Finance Docket No. 34903 (STB served July 3, 2006) at 2 (STB issues housekeeping stay of the effective date of a carrier’s exemption notice “to provide sufficient time for the Board to fully consider the issues presented by the parties”).<sup>8</sup>

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<sup>8</sup> *Accord Middletown & N.J. R.R. – Lease & Operation Exemption – Norfolk S. Ry.*, STB Finance Docket No. 35412 (STB served Sept. 29, 2010); *Ashland R.R. – Lease & Operating Exemption – Rail Line in Monmouth County, NJ*, STB Finance Docket No. 34986 (STB served Feb. 27, 2007).

The Board should issue a short housekeeping stay enjoining the effective date of the Revised Coal Dust Tariff pending completion of Board-ordered mediation because such an order would “provide sufficient time for the Board to fully consider the issues presented by the parties” in a Board-sponsored mediation. *Buffalo S. R.R.* at 2; accord *Bell Oil Terminal, Inc. v. BNSF Ry.*, STB Docket No. 35302 (STB served June 4, 2010) at 1 (STB issues housekeeping stay “to permit . . . Board-supervised mediation”).

A housekeeping stay will also remedy BNSF’s failure to give shippers and mines a reasonable period of time to meet BNSF’s self-imposed compliance deadlines. The Revised Coal Dust Tariff requires coal shippers to start spraying their trains by October 1, 2011, and to provide BNSF “[a]t least 30 days prior to loading cars . . . [a] written notice of compliance efforts.” For most PRB shippers, the 30-day period equates to a September 1, 2011 notification date.

Shippers and mine operators are now scrambling as best they can to comply with BNSF’s unilaterally imposed timetable. (*See Richards V.S.* at 6-8). Among the many issues that mines and shippers are being forced to address on impossibly tight schedules devised by BNSF without any shipper/mine input are: how to select an approved spray supplier; the costs of the spray; the infrastructure/permitting needed to apply the spray; who will provide the infrastructure (mines or suppliers); the time-tables for constructing new spray related facilities; whether approved suppliers have enough spray to meet the Revised Coal Dust Tariff requirements; what new contract arrangements are needed between coal suppliers and their customers or between customers and the spray suppliers; whether suppliers or mines will have access to

sufficient water reserves to mix the spray; and related issues. (*Id.*). A short housekeeping stay will allow shippers and mines additional needed time to make these consequential decisions.

**B. The Board Can Issue A § 721 Injunction**

Alternatively, if it chooses to do so, the Board can exercise its authority under 49 U.S.C. § 721(b)(4) to issue an injunction staying the effective date of the Revised Coal Dust Tariff. The Board will exercise this authority under § 721(b)(4) if a party shows: (1) it is likely to prevail on the merits; (2) it will be irreparably harmed in the absence of an injunction; (3) issuance of the injunction will not substantially harm other parties, and (4) granting the injunction is in the public interest. *See Stagecoach Group PLC & Coach USA, Inc. et al. – Acquisition of Control, Twin America, LLC*, STB Docket No. MC-F-21035 (STB served Mar. 9, 2011) at 2 (“*Stagecoach Group*”) (*citing Washington Metro. Area Transit Comm’n v. Holiday Tours, Inc.*, 559 F.2d 841, 842-43 (D.C. Cir. 1977) and *Virginia Petroleum Jobbers Ass’n v. Fed. Power Comm’n*, 259 F.2d 921 (D.C. Cir. 1958)). These criteria are easily satisfied here.

**1. WCTL Is Likely to Succeed On the Merits**

The Revised Dust Tariff appears to be BNSF’s answer to the Board’s *March 2011 Decision*. However, the Board made it very clear in this decision that it “expect[ed] that railroads and their customers will collaborate” to “develop reasonable solutions to the problems presented in this case.” *March 2011 Decision* at 14. BNSF ignored the Board’s directive. By pursuing unilateral action BNSF is not only failing to adhere to the Board’s *March 2011 Decision*, it is making the same mistakes that led the

Board to reject the Original Coal Dust Tariff.<sup>9</sup>

**First**, the Revised Coal Dust Tariff, like the Original Coal Dust Tariff “does not explain what consequences coal shippers would face if they are found to have tendered loaded coal cars to the railroad that subsequently released coal dust during transport.” *Id.* The Revised Coal Dust Tariff sets a standard – an 85% reduction in dust emissions – and establishes a “safe harbor” compliance standard if a shipper properly applies a BNSF-approved topper agent – but does not tell shippers what the consequences will be if they do not use a topper agent, do not use an approved topper agent, improperly apply an approved topper agent, etc. Similarly, BNSF’s Revised Coal Dust Tariff does not provide coal shippers with any guidance on how BNSF will determine the level of coal dust emissions from any PRB train. Looming behind all of this is the veiled threat that if a coal shipper does not apply one of BNSF’s approved sprays, BNSF will violate its common carrier obligation by attempting to cut-off service to that shipper or by imposing draconian financial penalties.<sup>10</sup>

**Second**, BNSF's Original Cost Dust Tariff's IDV methodology was developed in secret by BNSF with no meaningful input by rail shippers concerning the associated “science” behind the methodology. BNSF's closed-door policy left shippers with no alternative other than to challenge the Original Coal Dust Tariff in proceedings

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<sup>9</sup> It is well-settled that a party seeking injunctive relief need not demonstrate the likelihood that it will succeed on the merits with mathematical precision; it can be enough to show that a “serious legal issue is presented.” *Holiday Tours*, 559 F.2d at 844.

<sup>10</sup> See WCTL Op. at 49; WCTL Reply at 29.

before this Board, and then use the Board's discovery processes to try to obtain the material necessary to understand and fairly evaluate BNSF's IDV "science."

Once BNSF's closed door was pried open in the *Dust I* proceedings, it was easy to see why BNSF did not want to let shippers see the innards of its IDV calculations. WCTL and other coal shippers demonstrated that BNSF's IDV-based approach to dust monitoring was fatally flawed in numerous respects: the E-Samplers BNSF relied on to collect dust from coal trains were not isolating coal dust; the E-Samplers produced wildly different readings in "side-by-side" testing; the E-Sampler filters were not being used, in contravention of the manufacturer's instructions; the IDV values purportedly being calculated using the E-Sampler results were the product of some unproduced computer program; and to the extent the program mechanics could be deciphered, they appeared to have significant statistical flaws.<sup>11</sup> In short, coal shippers demonstrated that BNSF's IDV-based system was based on garbage in/garbage out, rendering the IDV results unreliable, and a tariff based on them unreasonable.

In its *March 2011 Decision*, the STB agreed with the coal shippers' demonstration:

The Board is . . . concerned with the technical aspects of BNSF's monitoring system and emission standards. The Shipper Interests claim that the monitoring system produces variable and unreliable results. For example, the Shipper Interests contend that the monitoring system does not account for the fact that dust dispersion is sporadic because of factors like wind speed, and they emphasize that when BNSF placed

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<sup>11</sup> See, e.g., WCTL Op. at 25-33; WCTL Reply at 17-19; WCTL Rebuttal at 30, 50.

two E-Samplers next to each other for testing, one monitor had 31% higher readings than the other . . . .

The Shipper Interests also claim that the monitors do not measure coal dust deposited on the tracks; instead, the monitors measure a variety of particles in the air many feet from the tracks. . . .

The Shipper Interests assert that BNSF violated the Board's rules of practice when it did not provide the computer program it uses to convert the E-Sampler data into IDV.2 values, and that the "detailed logic and assumptions" that BNSF states it provided are insufficient for a full analysis. The Shipper Interests contend that the statistical analysis BNSF used to develop the IDV.2 standards is flawed and that BNSF was unable to find a third party to validate the methodology. . . .

The Board shares many of the Shipper Interests' concerns regarding the methods of effective compliance and the proprietary IDV.2 measurement system. . . .

. . . .

. . . . [T]he railroad's trackside coal dust emission monitoring system raises additional questions. Shippers have raised legitimate concerns about their lack of access to equipment testing and other technical data before being asked to accept the equipment's measurements and the subsequent liability that would be triggered by those measurements.

*Id.* at 12-14 (footnotes omitted).

BNSF's Revised Coal Dust Tariff "safe harbor" reflects the same closed-door approach. BNSF claims that "recent tests carried out in the PRB" demonstrate that three topper sprays, if properly applied and used in conjunction with train profiling, will reduce coal train emissions by 85%. *Id.* The "tests" BNSF is referring to appear to be the so-called "Super Trial" tests BNSF conducted in 2010. WCTL, and other coal

shippers, have not had access to any dust sample data or statistical analyses that BNSF used in its Super Trial. (*See Richards V.S.* at 5). Shippers are being asked once again to accept BNSF's test results without first being afforded access to the information needed to evaluate these results in a meaningful fashion.

Moreover, what is known strongly suggests that BNSF's development of its "safe harbor" standard – application of sprays purportedly shown to reduce dust emissions by 85% – is fatally flawed. The purpose of BNSF's Super Trial was to identify dust suppression sprays that, when applied to shippers' profiled trains, would meet BNSF's minimum IDV values. (*See Richards V.S., Attachment 7* at 1). 1,633 treated trains were tested, with IDV values calculated for 1,518 trains. BNSF claimed that the test results showed that different topically applied sprays produced different IDV values, but all produced dust reductions when compared to unsprayed trains. (*Id., Attachment 8* at 2). The testing on these 1,518 trains must be thrown out for the same reasons the STB rejected the Original Coal Dust Tariff – BNSF's attempt to calculate train IDVs does not produce reliable estimates of actual coal dust emissions.

The remaining 115 trains – only 7% of the total trains tested – were composed of trains where one-half of the cars on a train were treated with a particular topper or full body spray and one-half of the cars on the same train were untreated. (*Id., Attachment 8* at 1). BNSF placed passive collectors on a few treated and untreated cars in each train, collected particulate samples, and purported to process the results in a manner that identified the percent reduction in coal dust emissions between the sprayed and unsprayed particulate samples. *Id.*

WCTL asked Dr. Viz to comment on BNSF's passive collector study. He found that this study suffers from many of the same types of flaws that led the Board to reject BNSF's IDV study results:

- Dust sprays were designed for use in “static coal stockpiles at coal-burning power plants.” (Vis V.S. at 3). Sprays can “work when applied to a large pile of coal that is stationary, but there are still many aspects of their performance in moving railcars that have not yet been verified.” (*Id.*). Indeed, in some instances, spraying can lead to increased dust emissions. (*Id.*).

- BNSF's 115 train size sample was too small to “make any statistically significant inferences” concerning the effectiveness of broad-scale train spraying. (*Id.* at 10).

- The passive collectors BNSF is using “collect any and all particulate matter above a certain size” and BNSF has not “offered any scientific or engineering data to establish exactly what entrained particles the collectors actually collect.” (*Id.* at 4).

- “It is difficult, if not impossible, to use a simple field measurement technique to establish a percentage reduction in particulate emissions” given the small size of the particulates. (*Id.* at 8).

- Based upon these, and other, “fundamental flaw[s]” in BNSF's passive collector procedures, it appears likely that BNSF's passive collector study results, like its IDV results, do not provide a reasonable measure of actual coal dust emissions from any train, and certainly “cannot be used to scientifically establish an 85% reduction

in fugitive particulate emissions from railcars with certainty, reliability or repeatability.”  
(*Id.* at 3-4).

**Third**, BNSF has ignored the Board’s very clear edict that any coal dust mitigation system be “cost effective.” *March 2011 Decision* at 12. At this time, no one knows exactly how much it will cost to spray all BNSF trains – or all PRB trains – but all projections to date indicate that the costs to spray will be high. For example, National Coal Transportation Association previously estimated that these costs would be in the \$50 to \$150 million range annually. (*See Richards V.S.* at 4).

BNSF does not care how much spraying costs, and to the best of WCTL’s knowledge, BNSF has not engaged in discussions with shippers concerning the development of “cost effective” coal dust mitigation strategies, because under the Revised Coal Dust Tariff, all of the costs of spraying fall on BNSF’s coal shippers. Thus, BNSF has no incentive to seek a “cost effective” coal dust mitigation program because it bears none of the costs, but, ironically, reaps all of the benefits, if any, from mandated spraying in the form of reduced maintenance costs (if approved sprays in fact meaningfully reduce coal dust emissions).<sup>12</sup> WCTL submits that the Board cannot approve a Revised Coal Dust Tariff as “cost effective” unless and until the costs of the spraying that BNSF is mandating are known – which costs are not known right now.

Also, once the costs of reasonable mitigation procedures are known, WCTL submits that any “cost effective” coal dust mitigation program should include a fair

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<sup>12</sup> *See also* WCTL Op. at 37.

allocation of compliance costs between BNSF and its coal shippers. The record in this case is clear that the amount of coal in trains that may emit dust is due to multiple factors, some of which shippers' coal mines control (*e.g.*, how coal is loaded into cars), some of which railroads control (*e.g.*, how fast trains are operated), and some of which no one controls (*e.g.*, how fast the wind is blowing).<sup>13</sup>

A reasonable, cost-effective system for allocating the costs of coal train dust mitigation spraying would place responsibility for covering those costs on parties to the transportation that are responsible for emitting dust – both railroads and shippers – not shippers alone. *See* U.S. Department of Transportation, Rebuttal Comments (June 4, 2010) at 5 n.4 (“fairness (at least) might favor a shifting of or sharing in the responsibility for coal dust emissions that inevitably follow in the real-world motions of rail carriage”). However, BNSF has refused to date to broach this topic with WCTL. WCTL is also unaware of any other carrier that does not contribute to the cost of train spraying for dust mitigation purposes.<sup>14</sup>

**Fourth**, the Revised Coal Dust Tariff provides no liability “safe harbor.” As written by BNSF without consultation with its shippers, the Revised Coal Dust Tariff provides that any compliance method used by shippers to control coal dust emissions “shall not adversely impact railroad employees, property, locomotives or owned cars.” It is fundamentally unfair for BNSF to mandate train spraying, and then turn around and say that shippers are responsible if this spraying adversely impacts BNSF’s employees or

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<sup>13</sup> *See* WCTL Reply at 24-25; *March 2011 Decision* at 13-14.

<sup>14</sup> *See* WCTL Rebuttal at 21 n.3.

property. Instead of placing this liability on shippers, the rule should be revised to provide that BNSF will bear all responsibility for any “adverse[] impact[s]” that BNSF-approved dust mitigation methods have on BNSF.

**Fifth**, BNSF promulgated a Joint Line operating rule mandating that all UP trains loaded on the Joint Line comply with BNSF's Original Cost Dust Tariff IDV standards.<sup>15</sup> In the *Dust I* proceedings, UP claimed BNSF did not have the legal authority to enforce this rule,<sup>16</sup> but this issue was mooted, and not decided by the Board, when the Board found BNSF's Original Coal Dust Tariff unlawful.<sup>17</sup> Neither BNSF nor UP have informed their shippers whether BNSF has promulgated a new Joint Line operating rule directing that UP trains comply with BNSF's Revised Coal Dust Tariff. If BNSF has done so, any attempt by BNSF to enforce this requirement on UP shippers is unlawful for the reasons explained by UP and WCTL in *Dust I*.

**2. Coal Shippers Will Be Irreparably Injured In the Absence of An Injunction**

The Board did not enjoin the effective date of the Original Coal Dust Tariff because it determined there was no need to do so: BNSF had represented to the Board it would not enforce the terms of the Original Cost Dust Tariff without first giving PRB shippers sixty days advance notice and “[h]ence there is no imminent, irreparable harm to any shippers given that shippers face no current possibility of a sanction for noncompliance.” *Dust I* (STB served Nov. 5, 2010) at 3. The Board added, “[s]hould

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<sup>15</sup> See BNSF Op. at 26.

<sup>16</sup> See UP Op. at 19-20.

<sup>17</sup> *March 2011 Decision* at 15.

BNSF . . . attempt to impose penalties for violating the tariff without giving 60-days notice, the Board could act quickly to enjoin such actions upon a petition for injunction from the penalized shipper.” *Id.*

In contrast to its *Dust I* actions, BNSF has not represented to shippers that it will provide any notice – much less 60 days notice – of the penalties it plans to impose on any shippers that fail to provide, as mandated in the Revised Coal Dust Tariff, the required compliance notice by September 1, or that fail to employ BNSF-approved sprays starting on October 1, 2011. However, based on its prior statements in *Dust I*, these penalties may be draconian, *e.g.*, cessation of service or huge fines. *See* WCTL Op. at 49; WCTL Reply at 29.

The practical effect of BNSF's Revised Coal Dust Tariff is to require mines and shippers to make arrangements to obtain and spray one of BNSF's approved topper sprays. (*See Richards V.S. at 8*). These arrangements are likely to require term supply contracts with the topper spray producers. If, as appears likely, BNSF's Revised Coal Dust Tariff is found to be an unreasonable practice because, like its predecessor, it is not based on sound science, shippers and mines could find themselves locked into long-term contracts requiring them to treat trains with topper sprays that are not shown to be effective in reducing coal dust emissions, or are far less effective than other sprays, or are far more costly than other means of addressing coal dust ballast fouling. Thus, shippers and coal suppliers could end up suffering irreparable financial harm by being forced into spray supply contract arrangements driven by the terms of a coal dust tariff the Board later determines is unreasonable, with no recourse against anyone for money damages.

(*Id.*).<sup>18</sup> As discussed above, the cost to spray is unknown, but if current cost estimates are correct, the harm could be in the \$50 to \$150 million range annually.

Also, the shipping and mining industries do not know at this time whether there will be a sufficient supply of BNSF-approved topper agents to meet the BNSF-created demand for these products, or whether the mines/suppliers will have adequate access to water needed to create the spray. (*Richards V.S.* at 6-7). Coal shippers may suffer irreparable injury if there simply is not enough product to meet the demand, or if there is not an adequate means of delivering it, and BNSF refuses service. Finally, shippers and mines must expend substantial time and incur substantial expenses to develop compliance plans. (*Id.* at 6-8). These costs cannot be recovered if the Board finds the Revised Coal Dust Tariff constitutes an unreasonable practice.<sup>19</sup>

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<sup>18</sup> See *Stagecoach Group* at 2 (finding irreparable injury where “monetary damages would not be available to compensate for losses that could result” from Board actions); accord *Am. Fed’n. of Labor & Congress of Indus. Org. v. Chao*, 297 F. Supp. 2d 155 (D.D.C. 2003) (applying *Holiday Tours* irreparable injury standard and staying application of new rule pending judicial review where unions subject to new rule would have to incur major expenses to comply with the new rule which could not be recouped if the new rule was vacated on appeal); *Mfg. Chemists Ass’n v. Costle*, 451 F. Supp. 902, 905 (W.D. La. 1978) (applying standard analogous to *Holiday Tours*, and staying application of new regulation pending appeal where companies subject to the new rule would otherwise be irreparably injured because they “would be forced either to cease operations completely or to spend millions of dollars . . . to purchase and install the new control systems necessary to bring the facilities into compliance with the regulations, even before a final determination on the actual validity of the regulations has been rendered”).

<sup>19</sup> Cf. *Minnesota Power, Inc. v. Duluth, Missabe & Iron Range Ry.*, STB Docket No. 42038 (STB served Apr. 18, 2000) at 1-2 (STB issues stay of prior order directing carrier to construct a new accounting system pending Board reconsideration of that order “in light of the substantial startup costs” the carrier would incur in complying with the Board’s order which costs could not be recouped if the Board set aside the order on reconsideration).

**3. Issuance of An Injunction Will Not Injure BNSF and Advances the Public Interest**

BNSF has been transporting PRB coal for over 35 years without any comprehensive coal dust spraying. A short injunction staying the effective date of the Revised Coal Dust Tariff pending a Board-supervised mediation will not injure BNSF.

Granting the injunction also advances the public interest. The Board held in its *March 2011 Decision* that the public interest was best served if BNSF worked cooperatively with its shippers to develop a consensus approach to coal dust mitigation. *Id.* at 14. BNSF failed to follow the Board's advice, and instead opted for unilateral action. Additionally, UP has stated in this proceeding that it is closely monitoring the situation, and it has discussed generally with its customers the possible implementation of distinct and separate coal dust compliance programs involving the same Joint Line and the same involved mines, which raises significant new compliance and coordination issues.

A short injunction pending a Board-supervised mediation will advance the public interest in trying to obtain a consensus coal dust mitigation plan.

**CONCLUSION**

WCTL respectfully requests that the Board issue an order on an expedited basis reopening this proceeding, directing Board-supervised mediation, and staying or

enjoining the effective date of the Revised Coal Dust Tariff.

Respectfully submitted,

/s/ John H. LeSeur  
William L. Slover  
John H. LeSeur  
Peter A. Pfohl  
Slover & Loftus LLP  
1224 Seventeenth St., N.W.  
Washington, D.C. 20036  
(202) 347-7170

*Attorneys for Western Coal  
Traffic League*

Dated: August 11, 2011

**CERTIFICATE OF SERVICE**

I hereby certify that this 11th day of August, 2011, I have caused the forgoing Petition to be served by first-class mail, or by more expedited means, on all parties of record.

/s/ Peter A. Pfohl  
Peter A. Pfohl

## Exhibit 1

**BNSF 6041-B**

**BNSF RAILWAY COMPANY**

**Title Page**



**BNSF PRICE LIST 6041-B  
(Cancels BNSF Freight Tariff 6041-A)**

**PROVIDING**

**RULES AND REGULATIONS GOVERNING UNIT TRAIN AND VOLUME ALL-RAIL**

**COAL SERVICE, ALSO ACCESSORIAL SERVICES AND CHARGES THEREFOR**

**APPLYING AS PROVIDED IN PRICE LIST**

**ISSUED: July 20, 2011**

**EFFECTIVE: July 20, 2011**

**Issued by BNSF Price Management, P.O. Box 961069, Ft. Worth, TX 76161-0069**

**RULES AND OTHER GOVERNING PROVISIONS**

**ITEM 100  
COAL DUST MITIGATION REQUIREMENTS**

1. To prevent contamination of the rail ballast caused by fugitive coal dust, BNSF is modifying the loading requirement applicable to all coal cars loaded at Powder River Basin ("PRB") mines by shippers whose coal transportation is subject to this Rules Book.
2. Effective October 1, 2011, shippers loading coal at any PRB mine must take measures to load coal in such a way that any loss in transit of coal dust from the shipper's loaded coal cars will be reduced by at least 85 percent as compared to loss in transit of coal dust from coal cars where no remedial measures have been taken. At least 30 days prior to loading cars for shipment by BNSF, a Shipper shall provide BNSF with written notice of compliance efforts.
3. A shipper will be deemed to be in compliance with the loading requirement set out in this Item if the shipper satisfies Sections 3.A and 3.B below or pursues the option in Section 4 below:
  - A. Shipper ensures that loaded uncovered coal cars will be profiled in accordance with BNSF's published template entitled "Redesigned Chute Diagram" located in Appendix A to this publication.
  - B. Shipper ensures that an acceptable topper agent (e.g., surfactant) will be properly applied to the entire surface of all loaded coal cars at an effective concentration level and in accordance with the manufacturer's specifications. An acceptable topper agent is one that has been shown to reduce coal dust loss in transit by 85%. In recent tests carried out in the PRB, three topper agents meet this criteria when properly applied. Appendix B to this publication lists these topper agents. Proper use of any one of the topper agents on the approved list in accordance with the manufacturer's specifications and at the application rates specified in Appendix B, will satisfy this safe harbor provision. BNSF will consider other topper agents to be acceptable for purposes of this safe harbor provision if the shipper can demonstrate that appropriate testing has shown that the topper agent achieves compliance with this Item. Guidelines for the testing of new topper agents will be provided upon request.
4. Shipper may seek inclusion of any other method of coal dust suppression (e.g., compaction or other technology) in the safe harbor provision of Section 3.B above by submitting a compliance plan to BNSF that provides evidence demonstrating that an additional proposed compliance measure will result in compliance with this Item. Shipper must also satisfy the profiling requirement of Section 3.A above. Any product including topper agents, devices or appurtenance utilized by the Shipper or Shipper's mine agents to control the release of coal dust shall not adversely impact railroad employees, property, locomotives or owned cars.

ISSUED: July 20, 2011

EFFECTIVE: July 20, 2011

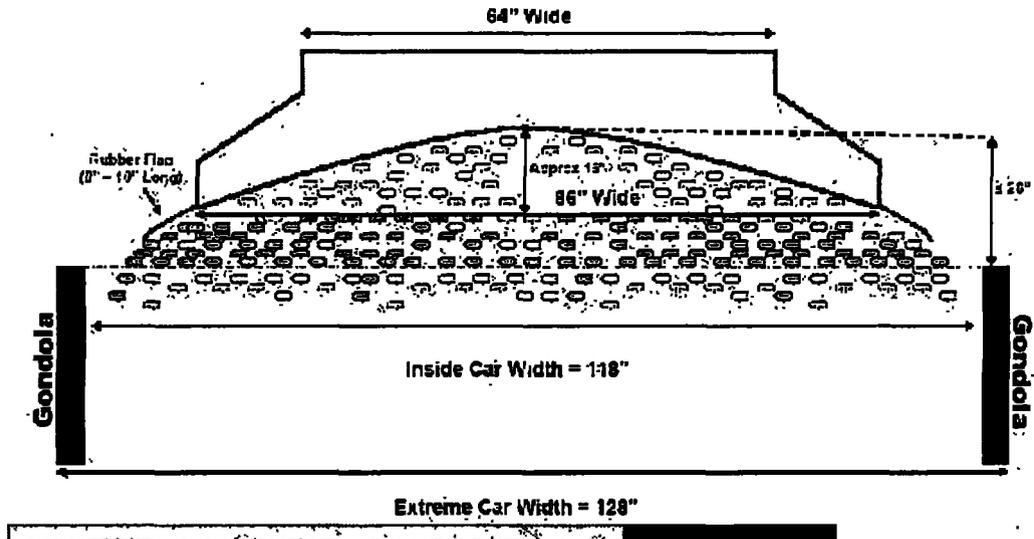
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RULES AND OTHER GOVERNING PROVISIONS

APPENDIX A

REDESIGNED CHUTE DIAGRAM

**Redesigned Chute Diagram**



## RULES AND OTHER GOVERNING PROVISIONS

## APPENDIX B

## Acceptable Topper Agents and Application Rates

<u>Topper Agents</u> <sup>(1)</sup>	<u>Concentration Rate</u> <u>per Car</u> <sup>(2)</sup>	<u>Total Solution Applied</u> <u>per Railcar</u> <sup>(3)</sup>
Nalco Dustbind Plus	2.0 gal	20 gal
Midwest Soil-Sement	1.25 gal	18.75 gal
AKJ CTS-100	1.36 gal	15 gal

(1) For Topper Application only.

(2) The amount of topper agent mixed into a solution for each Railcar. These concentration rates were established during testing carried out in the PRB in 2010.

(3) The amount of topper agent applied to each Railcar.

ISSUED: July 20, 2011

EFFECTIVE: July 20, 2011

Issued by BNSF Price Management, P.O. Box 961069, Ft. Worth, TX 76161-0069

**VERIFIED STATEMENT  
OF  
DUANE L. RICHARDS**

My name is Duane L. Richards and my business address is P.O. Box 33424, Denver, Colorado 80233. I am Chief Executive Officer of Western Fuels Association, Inc. (“WFA”) and I also serve as President of the Western Coal Traffic League (“WCTL”).

WFA is a not-for-profit cooperative that supplies coal and transportation services to consumer-owned electric utilities throughout the Great Plains, Rocky Mountain and Southwest regions. WFA currently purchases and arranges for the transportation of approximately 17 million tons of coal annually, most of which is mined in the Powder River Basin (“PRB”). Through affiliated companies, WFA also operates two coal mines, one of which is located in the PRB – the Dry Fork Mine.

WCTL is an association whose membership is composed of organizations that purchase and transport coal mined west of the Mississippi River. WCTL members currently pay to transport approximately 170 million tons of coal annually. Most of this coal transportation originates in the PRB.

I have been actively engaged in coal dust issues for several years in three capacities: as a purchaser of PRB coal and coal transportation, as an operator of the Dry Fork Mine, and as a member, and president, of WCTL. I appear here today in support of WCTL’s Petition asking the Board to reopen the Coal Dust Case (STB Finance Docket No. 35305), to order mediation, and to stay BNSF Railway Company’s (“BNSF”) new

Coal Dust Tariff (Price List 6041-B, Item 100, Revision 17) during the pendency of the mediation.

### **MEDIATION**

I have always believed that the problems associated with coal dust emissions from PRB coal cars can and should be resolved cooperatively among PRB railroads, PRB coal mine operators and PRB coal shippers. This is the logical approach because dust coming from rail cars is the product of the actions of PRB coal shippers in purchasing and providing open top rail cars to haul coal (a practice approved by all railroads), the actions of PRB suppliers in loading the coal, and the actions of PRB coal carriers in the manner in which the coal is transported. Of course, certain elements are beyond the control of each party in the supply chain – for example, how strong the wind is blowing on a particular day.

I have endeavored to seek cooperative solutions to coal dust issues, but to date these efforts have been singularly unsuccessful. After BNSF published its first Coal Dust Tariff in 2009, I worked closely with the WCTL leadership in crafting a letter asking BNSF, and Union Pacific Railroad Company (“UP”) to engage cooperatively with WCTL to craft a coal dust mitigation plan. That letter was sent to both carriers in August of 2009 (*see my Attachment 1*). I also personally followed up on this letter with calls to BNSF’s CEO Matt Rose. However, both carriers declined WCTL’s invitation (*see my Attachment 2*).

Next, at the Board’s oral hearing in the Coal Dust Case in July of 2010, the Board asked the parties whether they were interested in addressing the issues raised in a

Board-sponsored negotiation. WCTL informed the Board that it was very interested in seeking a negotiated resolution. A copy of my letter conveying this message is appended as my Attachment 3. BNSF and UP responded to WCTL's letter and informed the Board that they had no interest in negotiation involving WCTL. Copies of these responses are appended in my Attachment 4.

Most recently, and following the Board's rejection of BNSF's initial Coal Dust Tariff, I wrote a letter in May of 2011 (copy in Attachment 5) asking BNSF to engage WCTL in cooperative discussions to reach a consensus on dust mitigation issues. As it had in the past, BNSF rejected WCTL's offer, this time just days before BNSF filed its new Coal Dust Tariff. BNSF's response is reproduced in my Attachment 6.

BNSF and UP have offered different reasons why they had no interest in talking to WCTL. The Board can see for itself what these reasons are by reviewing my Attachments 2, 4 and 6. For example, BNSF has said that it prefers to discuss coal dust issues with its customers on an individual, customer-by-customer basis. UP has said that discussion of common carrier tariff dust terms violates the antitrust laws. My own view is that neither BNSF nor UP want to discuss coal dust mitigation with an organization like WCTL, or others, that have the resources to address the technical aspects of BNSF's coal dust testing procedures and methodology and that want to discuss sharing responsibility for, and sharing costs to mitigate coal dust emissions from trains in common carrier service.

On the latter, WCTL's presentations in the Coal Dust Case, as well as in the recent Competition Case (Ex Parte No. 705), show that BNSF's and UP's profits on their

PRB coal traffic are at all time highs, and that BNSF and UP are already obtaining full reimbursement in their very profitable coal freight rates for all coal dust mitigation costs they incur. It is also clear that if surfactant spraying is shown to be an effective way to reduce PRB coal dust emissions from moving coal cars, the beneficiaries will be BNSF and UP in the form of reduced maintenance costs. Under these circumstances, there is no reason for BNSF and UP not to discuss sharing the costs for coal dust mitigation through spraying or other means, other than their hope that regulators will permit them to assign all spraying costs to their customers. I would add here that while no one knows how much it will cost to spray all PRB trains, the National Coal Transportation Association has estimated that these costs will be in the \$50 million to \$150 million range annually.

Since BNSF and UP have repeatedly refused WCTL's invitations to negotiate, and to avoid a potential second round of costly coal dust litigation, I encourage the Board to carefully consider, and direct, non-binding mediation of the outstanding coal dust issues as presented in WCTL's Petition.

### **SUPER TRIAL**

In October of 2009, BNSF contacted its PRB shippers, including WFA, and announced that it planned on conducting field tests "using statistically significant measures" to determine whether spraying of coal reduced coal dust emissions and to compare the relative effectiveness of "topper application, body feed application, and, possibly, mechanical vibration." See my Attachment 7 at 1. "Topper application" refers to the spraying of the tops of loaded coal cars, "body feed application" refers to spraying

coal as it is being loaded into coal cars, and “mechanical vibration” refers to compacting coal in coal cars.

BNSF invited interested coal shippers to participate in the field tests, and WFA was one of the shippers that took up BNSF’s invitation. The topper and body feed testing, which came to be known as the “Super Trial,” took place in 2010. The results were summarized in a report that BNSF released publicly in February of 2011 (copy in my Attachment 8). As shown in that report, the focus of BNSF’s Super Trial testing was the development of Integrated Dust Values (“IDVs”) for treated and untreated trains. In all, BNSF reports that it developed IDV values for 1,518 tested trains. BNSF also reports that it developed passive collector data from 115 trains. On these 115 trains, one-half of the train was treated with a particular topical or body spray, and one-half of the train was left untreated. As further explained by BNSF, “Passive Dust Collectors were attached to the rear sill of seven treated and seven untreated cars on each train. The coal dust collected from the Passive Dust Collectors during the train’s movement was then analyzed to compare the amount of coal dust emitted from the treated and untreated cars.” (Attachment 8 at 1). While WFA and other coal shippers participated in BNSF’s Super Trial, participating shippers did not control the methods BNSF selected to test the effectiveness of particular sprays, nor did we have access to the statistical analyses that BNSF used to evaluate the data it was collecting from the test trains. Shippers had input into the sprays that were selected for testing, and saw the study results, but otherwise the testing process was controlled by BNSF and its consultants.

## STAY

BNSF released its new Coal Dust Tariff in mid-July of 2011. The new tariff calls for shippers to utilize one of three BNSF-approved topper sprays by October 1, 2011 or face unknown consequences that I and other shippers fear could be cessation of train service or huge financial penalties. BNSF is also demanding in its new Coal Dust Tariff that shippers tell BNSF by September 1, 2011 how they intend to comply on October 1st with the tariff terms. I believe a stay of this tariff is in order to address both short-term and long-term issues.

The short-term issue for WFA is a simple one. It is very unclear at this point whether WFA's Dry Fork Mine can meet BNSF's October 1, 2011 deadline to start using approved sprays. The Dry Fork Mine has never applied any topper sprays, and in order to do so, there are a multitude of things that the Mine must do, and do quickly. A non-exclusive list includes the following:

- Determine for each approved surfactant its chemical properties, including strength, effect of weather on suppressant performance, temperature related performance, and boiler performance impacts;
- Determine for each approved surfactant performance/application criteria, including necessary coal conditions, coal size, water requirement (including amount, temperature and purity), conditions necessary during application (*e.g.*, protection from elements), clean up and product removal procedures;
- Determine impact on worker health and safety including review of comprehensive Material Safety Data Sheets, liquid/airborne particle contact/inhalation/ingestion hazards, emergency procedures for accidental contact, required protective equipment, volatile organic compounds compliance, chemical degradation mechanisms, and other potential user issues (*e.g.*, odor);

- Determine impact of spray application on the environment including containment of fugitive spray emissions, water run-off requirements, and permitting requirements (air, water or disposal);
- Determine infrastructure/application equipment requirements including personnel, training, structures, storage, transportation, energy needs, water delivery, compressed air, plumbing and disposal facilities;
- Determine maintenance requirements including availability of technical support personnel, maintenance procedures, availability and sourcing for replacement parts;
- Engage in procurement actions to obtain pricing, installation, operation, maintenance and product bids, along with offered warranties, guarantees and packages (*e.g.*, supplier provides all equipment);
- Obtain input from customers concerning their requirements (*e.g.*, need to obtain any permits to burn sprayed coal);
- Obtain bids; if one or more bids are acceptable, select supplier, negotiate contract terms, construct necessary facilities, obtain necessary permits, etc.; and
- Negotiate terms of supply contracts with customers to address new spraying requirements and/or customer negotiation of contracts with the surfactant supplier.

At this point, I do not know whether the Dry Fork Mine will be able to complete all of these steps by October 1st. However, I do know that even Dry Fork is able to do so, it will only be by cutting corners because of an arbitrary and unnecessarily tight compliance schedule. Also, I do not know at this point whether suppliers on BNSF's approved list have sufficient supplies of surfactant to meet PRB mine needs or whether they will offer reasonable prices. Finally, I do not know how customers of the Dry Fork Mine can provide any meaningful notice to BNSF by September 1st of their

compliance plans, since those plans necessarily must tie into the Mine's plans, which plans will not be in place by September 1st.

While I do not speak for other PRB coal suppliers, I believe that most of them are facing similar issues with BNSF's compliance timeline. Also, as a purchaser of rail transportation at mines other than Dry Fork, I know that WFA will not be in a position to provide any meaningful notice of "compliance" plans to BNSF by September 1st.

Turning to long-term concerns, it is my expectation that the contracts mines or shippers enter into with surfactant suppliers will be for multiple years, and be limited to one supplier per mine. If the Board were to find that BNSF's new Coal Dust Tariff is unlawful – for example, because the testing used to identify approved sprays was significantly flawed and did not show that the sprays considered effectively reduced coal dust emissions, or that it misidentified the most effective sprays – shippers and mines will be unnecessarily locked into major financial commitments, likely to total in the hundreds of millions of dollars, based on flawed testing. This disastrous result can be avoided only if the Board acts to delay BNSF's imposition of the new Coal Dust Tariff pending Board review.

I believe the prudent step for the Board to take now is to stay the effective date of the new BNSF Coal Dust Tariff until, at a minimum, the requested mediation is completed. If that mediation does not produce a negotiated resolution, the Board could then decide whether to extend the stay during the duration of any further coal dust litigation at the Board. In this way, shippers and mines would be given some very

necessary short-term breathing room, and the parties could focus – with the Board’s assistance – on reaching a fair long-term resolution of the issues raised in WCTL’s Petition.

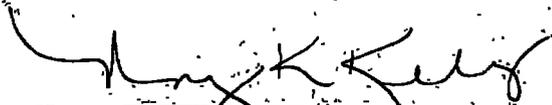
**VERIFICATION**

STATE OF COLORADO        )  
  ) ss:  
COUNTY OF ADAMS        )

Duane L. Richards, being duly sworn, deposes and says that he is the Chief Executive Officer of Western Fuels Association, Inc.; that has read the foregoing Verified Statement and knows the contents thereof; and that the same are true as stated, except as to those statements made on information and belief, and as to those, that he believes them to be true.

  
Duane L. Richards

Subscribed and sworn to before me  
this 4<sup>th</sup> day of August, 2011.

  
Notary Public for the State of Colorado

My Commission expires 9-22-2014

ATTACHMENT 1



## WESTERN COAL TRAFFIC LEAGUE

1224 Seventeenth Street, N.W.  
Washington, D.C. 20036-3003

(202) 659-1445

### Officers

**Barry Williams**  
CPS Energy  
San Antonio, Texas  
*President*

**Rich Singer**  
MidAmerican Energy Co.  
Davenport, Iowa  
*Vice President*

**Marc Flippin**  
Lower Colorado River Authority  
*Treasurer*

### Executive Board

**Kansas City Power & Light Co.**  
Kansas City, Missouri

**MidAmerican Energy Co.**  
Davenport, Iowa

**Lower Colorado River Authority**  
Austin, Texas

**Arizona Electric Power Coop., Inc**  
Benson, Arizona

**CPS Energy**  
San Antonio, Texas

**Minnesota Power**  
Duluth, Minnesota

**Omaha Public Power District**  
Omaha, Nebraska

**Xcel Energy**  
Minneapolis, Minnesota

August 17, 2009

**Mr. Stevan B. Bobb**  
Group Vice-President Coal Marketing  
BNSF Railway Company  
2650 Lou Menk Drive  
Fort Worth, Texas 76131-2830

**Mr. Douglas J. Glass**  
Vice President & General Manager Energy  
Union Pacific Railroad  
1400 Douglas Street  
Omaha, NE 68179-1260

Re: Coal Dust

Dear Mr. Bobb and Mr. Glass:

Many members of the Western Coal Traffic League ("WCTL") have received communications from either you, or members of your staffs, concerning what you refer to as "coal dust mitigation" or "coal dust abatement," including communications relating to the BNSF's Item 100 in its Freight Tariff 6041-B ("Coal Dust Mitigation Requirements Powder River Joint Line"). The purpose of this letter is to discuss WCTL's concerns about coal dust issues, based upon the reports we have received to date from our membership.

First, WCTL is concerned that UP and BNSF are addressing coal dust issues in the context of safe loading of rail cars. This approach is simply not correct. Coal has been safely loaded into open top rail cars for over a century without the need to spray coal or take other measures to address coal dust. That continues true today. Clearly, coal can be safely loaded and transported today without coal suppliers changing their current loading practices.

Mr. Stevan B. Bobb  
Mr. Douglas J. Glass  
August 17, 2009  
Page 2

Second, coal dust mitigation correctly is viewed as a maintenance-of-way issue. Coal dust, along with other factors, may contribute to the fouling of rail ballast. Historically, BNSF, UP and other railroads have addressed track fouling through maintenance procedures designed to clean the ballast. That remains the case today and certainly these standard procedures can continue in the future. Stated another way, coal can be transported in a safe manner, and carriers can continue to maintain their rail track, with no changes in current coal loading and current rail maintenance procedures.

Third, WCTL understands that what BNSF and UP are really interested in is lowering your current maintenance-of-way costs by reducing the amount of dust emissions from the coal cars in high volume rail corridors. The STB agrees:

[C]oal dust fouling of a railroad's right-of-way is a source of maintenance expenses for railroads. Railroads and coal shippers are exploring ways to reduce the amount of coal dust lost in transit, such as altering the shape of car loads or spraying agents on the coal, thereby reducing the amounts necessary to be spent on maintenance.

Major Issues in Rail Rate Cases, STB Ex Parte No. 657 (Sub-No. 1) at 43 (STB served Oct. 30, 2006). Parenthetically, we note that to date there has been no clear linkage demonstrated between the application of sprayed agents and reduction in maintenance-of-way costs.

Fourth, WCTL members would be happy to work with BNSF and UP to devise methods to reduce your coal dust-related maintenance costs provided that the economic benefits of these reductions are shared with affected coal shippers. We emphasize here that coal shippers are currently paying BNSF and UP extraordinarily profitable rates for your coal services. These rates include full compensation for all rail maintenance-of-way costs. What will not be acceptable for WCTL members is any form of carrier action where coal shippers incur costs for coal dust "mitigation" but the economic benefits, in the form of reduced maintenance costs and increased utilization of your facilities, all flow to BNSF and UP.

Mr. Stevan B. Bobb  
Mr. Douglas J. Glass  
August 17, 2009  
Page 3

Fifth, WCTL members report that the "Integrated Dust Value" standards referenced in BNSF Tariff 6041-B, and other "mitigation" standards now being considered by BNSF and UP, are the result of work undertaken by a consulting firm (Simpson Weather Associates) at the joint request of BNSF and UP. WCTL members also report that the consultant's work is very controversial and subject to extensive critiques that have been prepared at the request of coal shippers. WCTL urges BNSF and UP not to pursue unilateral actions to address coal dust issues in the absence of a clear consensus between BNSF, UP, and the coal shipping community as to the best procedure (if any) to reduce BNSF's and UP's rail maintenance costs associated with coal dust and how to fairly allocate the associated costs and benefits.

Sixth, as a first step toward reaching a consensus result, WCTL urges BNSF to cancel immediately the coal dust provisions set forth in Freight Tariff 6041-B which call for the unilateral imposition of highly controversial, and unsupported, "Integrated Coal Dust Value" standards. WCTL also urges BNSF and UP to make available to coal shippers, upon request, all of your coal dust study data, procedures, and results, as well as all results of any on-going activities that attempt to measure coal dust emissions from passing trains.

WCTL appreciates the opportunity to present its concerns to both of you and WCTL stands ready to work with BNSF and UP to address coal dust issues in a manner that is mutually beneficial to us all.

Sincerely,

  
Barry Williams  
President

# ATTACHMENT 2

RECEIVED SEP 3 2009



Stevan B. Bobb  
Group Vice President  
Coal Marketing

BNSF Railway Company  
2650 Lou Menk Drive  
Fort Worth, Texas 76131-2830  
P. O. Box 961051  
Fort Worth, Texas 76161-0051  
tel 817 867-6242  
fax 817 352-7940  
Stevan.Bobb@bnsf.com

August 31, 2009

Mr. Barry Williams, President  
Western Coal Traffic League  
1224 Seventeenth Street NW  
Washington, DC 20036-3003

Dear Mr. Williams:

I am in receipt of your letter dated August 17, 2009 sharing the Western Coal Traffic League's concerns about coal dust issues.

BNSF is currently working to address coal dust questions and issues directly with our customers. We think mine and coal user steps to control coal dust are necessary to help protect critical rail infrastructure and service and are environmentally sound. As we have previously communicated to customers, we also firmly believe that a timely private sector solution to this issue is in all parties' best interest. We will continue the ongoing dialogue we have with our customers on coal dust mitigation efforts.

Sincerely,

A handwritten signature in black ink, appearing to read "Stevan B. Bobb".

Stevan B. Bobb

September 8, 2009



Barry Williams  
President, Western Coal Traffic League  
1224 Seventeenth Street, N.W.  
Washington, D.C. 20036-3003

Coal Dust

Dear Mr. Williams:

This letter responds to the Western Coal Traffic League ("WCTL") dated August 17, 2009. Because WCTL's August 17 letter raises serious antitrust concerns and because the WCTL letterhead confirmed that the law firm of Slover & Loftus is the headquarters of your association, I am replying on UP's behalf. I will point out a potential antitrust violation proposed by WCTL, reply to WCTL's suggestion on how UP should respond to data requests from its members, and respond to the opinions expressed in WCTL's letter.

First and most important, WCTL's August 17 letter suggests a course of conduct that many would characterize as a violation of the antitrust laws. When "WCTL urges BNSF and UP not to pursue unilateral actions ... in the absence of a clear consensus between BNSF, UP, and the coal shipping community" on "how to fairly allocate the associated costs and benefits" relating to coal dust mitigation and track maintenance on page 3, WCTL appears to solicit collective action to set prices and terms of coal transportation contracts or tariffs. UP rejects this invitation and we are surprised that WCTL would make such a suggestion. Not only do UP and BNSF compete for WCTL members' business, but your members compete with one another when buying and selling electricity on the grid and when acquiring coal supplies from the SPRB producers. Consequently, participating in the suggested consensus would expose WCTL members to potential antitrust enforcement action.

UP policy is to comply with the antitrust laws. Therefore, while we do and will negotiate individually with customers or potential customers, UP will continue to determine the rates and terms that it offers to, or accepts from, those customers unilaterally.

Louise Anne Blinn  
Associate General Counsel

UNION PACIFIC RAILROAD  
1400 Douglas St., Stop 1580, Omaha, NE 68179-1580  
ph. (402) 544-3309 fax (402) 501-0129  
larinn@up.com

Second, WCTL also urges UP to provide all coal dust study data, procedures, results including results of on-going activities to measure coal dust emissions. UP has already informed its customers and the SPRB mines of its efforts to provide information on how cars are loaded and emissions through its customer website. We will update them on our progress on a regular basis.

Third, WCTL's August 17 letter is full of opinions and assertions, but provides no facts in support of the positions that WCTL espouses. UP will not reply to those claims, but our silence should not be construed as agreement. Instead, I will note that since 2005 UP has participated in numerous efforts to develop and share data about coal dust with the stakeholders in the SPRB. BNSF and UP, as co-owners of the Joint Line, shared the results and the methodology of their consultant, Simpson Weather Associates at National Coal Transportation Association ("NCTA") meetings. UP also participated with NCTA teams that developed information about the sources of coal emissions and the relative effectiveness of different methods to reduce emissions. We also cooperated in a NCTA-commissioned study by Exponent, an engineering firm, to explore the feasibility and the relative performance of applying surfactants. So while UP has actively supported the collection and dissemination of data regarding coal dust and that data demonstrates that coal dust presents a serious problem and that practicable means to reduce coal dust are available, WCTL has contributed no data to the best of my knowledge.

Please note that UP's cooperation in various efforts to develop and disseminate information about coal dust emissions and alternative mitigation techniques materially differs from WCTL's proposal. Unlike WCTL's suggestion to develop a consensus on allocation of costs and benefits, UP's participation in those other efforts has increased the information available to stakeholders when making their individual decisions, but we have not joined in or ever advocated a collective decision on how to proceed.

In summary, UP is committed to communicating about coal dust and discussing mitigation with its customers whether they belong to WCTL or not. We intend to remain focused on direct dialogue with our customers to inform UP's business decisions. We decline to participate in a WCTL-sponsored effort to develop a consensus among competitors instead of exercising our independent business judgment consistent with the antitrust laws.

Respectfully,



**Cc: Doug Glass**

# ATTACHMENT 3



# WESTERN COAL TRAFFIC LEAGUE

1224 Seventeenth Street, N.W.  
Washington, D.C. 20036-3003

(202) 659-1445

## Officers

**Duane L. Richards**  
Western Fuels Association, Inc.  
*President*

**Barry Williams**  
CPS Energy  
*Vice President*

**Marc Flippin**  
Lower Colorado River Authority  
*Treasurer*

## Executive Board

**Kansas City Power & Light Co.**  
Kansas City, Missouri

**MidAmerican Energy Co.**  
Davenport, Iowa

**Lower Colorado River Authority**  
Austin, Texas

**Arizona Electric Power Coop., Inc**  
Benson, Arizona

**CPS Energy**  
San Antonio, Texas

**Minnesota Power**  
Duluth, Minnesota

**Omaha Public Power District**  
Omaha, Nebraska

**Xcel Energy**  
Minneapolis, Minnesota

**Western Fuels Association, Inc.**  
Denver, Colorado

August 6, 2010

**Chairman Daniel R. Elliott III**  
Surface Transportation Board  
395 E Street, S.W.  
Washington, D.C. 20423-0001

Re: Finance Docket No. 35305, *Arkansas Electric Cooperative Corp. – Petition for Declaratory Order “(Coal Dust Case)”*

Dear Chairman Elliott:

At last week's hearing in the Coal Dust Case, Board members asked whether any parties would be interested in discussing a negotiated resolution of the issues raised in the Case. The purpose of this letter is to inform the Board that the Western Coal Traffic League is interested in participating in Board-supervised negotiations, should any negotiations be initiated. Any inquiries concerning this letter, which is being served on all parties of record, can be directed to the undersigned.

Sincerely yours,

Duane L. Richards  
President

cc: Vice Chairman Francis P. Mulvey  
Commissioner Charles D. Nottingham  
Hon. Cynthia T. Brown  
Parties of Record

# ATTACHMENT 4

STEPTOF & JOHNSON LLP  
ATTORNEYS AT LAW

227633

Samuel M. Sipe Jr  
202 429.6486  
ssipe@stepsto.com

1330 Connecticut Avenue, NW  
Washington, DC 20036-1795  
Tel 202 429 3000  
Fax 202 429 3902  
stepsto.com

August 11, 2010

VIA ELECTRONIC FILING

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

ENTERED  
Office of Proceedings  
AUG 11 2010  
Part of  
Public Record

Re: *Petition of Arkansas Electric Cooperative Corporation for a Declaratory Order,*  
STB Finance Docket 35305

Dear Ms. Brown:

On August 6, 2010, the Western Coal Traffic League advised the Board of its interest in participating in Board-supervised negotiations to resolve issues in the captioned proceeding "should any negotiations be initiated." The prospect of multi-party negotiations was a topic of discussion at the Board's July 29 hearing in this proceeding. On behalf of BNSF Railway Company, I am writing to confirm BNSF's position regarding negotiations in this particular proceeding.

BNSF strongly favors private resolutions of commercial issues with shippers. With regard to coal dust, BNSF has been and continues to be actively engaged in bilateral discussions with its individual shippers. BNSF has successfully negotiated contracts that address coal dust issues with many of its shippers and anticipates that it will continue to do so successfully. BNSF is also working cooperatively with a number of coal shippers that are participating in the ongoing trial of coal dust suppression technologies, and BNSF expects that that participation will lead to continued bilateral discussions with those BNSF shippers.

There are compelling reasons why it would not be workable to pursue negotiations of coal dust issues among a broader multi-party group of shipper interests. First, most of BNSF's coal transportation business, as well as the majority of Union Pacific's coal transportation business, is handled under confidential bilateral contracts. Those contracts expire at different points in time, and negotiations over terms of new contracts occur at different points in time. It would not be appropriate to address in a public, multi-party context issues that normally are

STEPTOE & JOHNSON

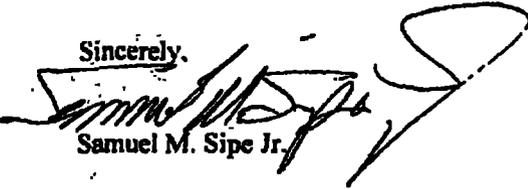
addressed confidentially in bilateral commercial discussions between one railroad and one shipper.

In addition, as the Board knows, BNSF and UP compete vigorously for substantial portions of the coal traffic that originates on the Joint Line. To the extent that the issues raised in this case have commercial overtones, such as the costs of coal dust remediation technology and how those costs are borne, those issues are not an appropriate subject of discussion among competing carriers or, for that matter, among electric utility shippers that compete with one another in power generation markets.

Moreover, a majority of the shipper representatives that were present at the hearing and that have submitted written comments to the Board, including WCIL, have announced their unalterable opposition to virtually every aspect of BNSF's coal dust emissions standards and directly oppose a carrier's right to require shippers to keep their freight inside railcars. In fact, most of the shipper representatives that appeared at the hearing would not accept Commissioner Nottingham's straightforward stipulation that coal dust escapes from railcars with negative effects. It appears that certain shipper representatives view the Board's offer of facilitating cooperative approaches as an opportunity to delay implementation of a coal dust mitigation requirement.

BNSF is concerned that initiating a phase of Board-sponsored negotiations would delay the resolution of this proceeding. The Board has overseen the completion of the record in this proceeding with admirable efficiency and expedition. The Board should move promptly to decide the pending issues so that the parties can proceed with further bilateral negotiated resolutions knowing the rules that will apply.

Sincerely,



Samuel M. Sipe Jr.

cc: Chairman Daniel R. Elliot III  
Vice Chairman Francis P. Mulvey  
Commissioner Charles D. Nottingham  
Parties of Record



August 12, 2010

Via Electronic Filing

**PUBLIC VERSION – CONFIDENTIAL AND  
HIGHLY CONFIDENTIAL INFORMATION  
HAS BEEN REDACTED**

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

Re: *Petition of Arkansas Electric Cooperative Corporation for a Declaratory Order,*  
STB Finance Docket 35305

Dear Ms. Brown:

Western Coal Traffic League (“WCTL”) has written the Board that “it is interested in participating in Board-supervised negotiations, should any negotiations be initiated.” Union Pacific remains committed to discussing coal dust issues and solutions with its customers and coal producers, but we believe the WCTL willingness to participate in group negotiations would not advance resolution of the issues in this proceeding for the following reasons.

First, negotiations with a group of shippers instead of individual customers presents antitrust risks that the WCTL letter does not attempt to address, let alone resolve. Not only are Union Pacific and BNSF competitors for coal originated on the Joint Line, but WCTL members also compete with each other in the sale and purchase of electricity on the grid. Union Pacific has directed WCTL’s attention to the antitrust risks in such negotiations before, which makes the failure to address this concern inexplicable. (See Reply of Union Pacific to WCTL Petition to Intervene filed October 27, 2009 attached for convenient reference).

Louise Anne Rinn  
Associate General Counsel

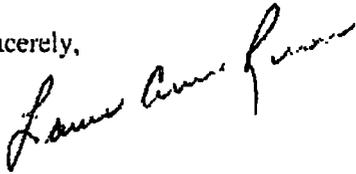
UNION PACIFIC RAILROAD  
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ph. (402) 544-3309 fx. (402) 501-0129  
larinn@up.com

Second, Union Pacific has stated repeatedly its willingness to negotiate directly with its customers – in its customer communications, on the record in this proceeding, and in September 2009 reply to WCTL. We have gone beyond statements. {

Accordingly, the members of WCTI, can pursue negotiations individually with Union Pacific. }

Finally, Union Pacific believes that leaving stakeholders in PRB coal transportation free to negotiate with one another will foster the development and implementation of optimal solutions to fugitive coal dust emissions.

Sincerely,



Louise Anne Rinn

cc: Chairman Daniel R. Elliott III  
Vice Chairman Francis P. Mulvey  
Commissioner Charles D. Nottingham  
Parties of Record

# ATTACHMENT 5



# WESTERN COAL TRAFFIC LEAGUE

1224 Seventeenth Street, N.W.  
Washington, D.C. 20036-3003

(202) 659-1445

May 4, 2011

### Officers

**Duane L. Richards**  
Western Fuels Association, Inc.  
President

**Barry Williams**  
CPS Energy  
Vice President

**Marc Filppin**  
Lower Colorado River Authority  
Treasurer

### Executive Board

**Kansas City Power & Light Co.**  
Kansas City, Missouri

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Benson, Arizona

**CPS Energy**  
San Antonio, Texas

**Minnesota Power**  
Duluth, Minnesota

**Omaha Public Power District**  
Omaha, Nebraska

**Xcel Energy**  
Minneapolis, Minnesota

**Western Fuels Association, Inc.**  
Denver, Colorado

**Mr. Stevan B. Bobb**  
Group Vice President Coal Marketing  
BNSF Railway Company  
2650 Lou Menk Drive  
Fort Worth, Texas 76131-2830

Dear Steve:

You mentioned during your presentation last week at the NCTA meeting that BNSF plans to publish another coal dust tariff. WCTL actively participated in the STB proceedings concerning BNSF's first coal dust tariff. As you know, the STB found that tariff to be unlawful and urged BNSF and its customers to "develop reasonable solutions to the problems presented in this case." (STB Decision at page 14, dated March 3, 2011).

WCTL believes that any reasonable solution to the coal dust issue requires, at a minimum, a consensus between BNSF and its shippers as to (1) the best procedure (if any) to address coal dust and (2) the best method to fairly allocate the associated costs and benefits.

We also believe that the Board expects BNSF and its customers to work together to try to devise fair and reasonable solutions concerning coal dust issues. WCTL stands ready to discuss these issues with BNSF and this letter constitutes a formal invitation from the League to BNSF to start such talks.

In making this offer, WCTL would like to avoid a replay of the events that forced WCTL and other shippers to challenge BNSF's first coal dust tariff at the STB. As you will recall, BNSF simply declared in its first tariff that its shippers would be responsible for all coal dust mitigation costs, even though BNSF would reap significant benefits in the form of reduced maintenance costs. Following the publication of that tariff, WCTL attempted to start a dialogue with BNSF both in letters

Mr. Stevan B. Robb

May 4, 2011

Page 2

including one to you dated August 17, 2009, and in informal communications I undertook with Matt Rose. Unfortunately, BNSF was not willing to start a dialogue with us at that time, which forced WCTL and other shippers to bring their concerns to the Board.

We urge BNSF to avoid a replay of the events that resulted in long and costly STB proceedings by engaging in discussions now with WCTL, and any other shipper associations or individual shippers that may be interested in participating, to try to reach consensus solutions, before BNSF makes any final decisions on how it plans on proceeding with a second dust tariff.

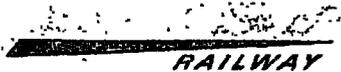
I will be happy to discuss WCTL's offer with you by phone. I can be reached at (303) 254-3075 or by email at [duane@westernfuels.org](mailto:duane@westernfuels.org)

Sincerely yours,



Duane Richards  
President

**ATTACHMENT 6**



Stevan B. Bobb  
Group Vice President  
Coal Marketing

BNSF Railway Company  
2650 Lou Menk Drive  
Fort Worth, Texas 76131-2810  
P.O. Box 961051  
Fort Worth, Texas 76161-0051  
Phone (817) 867-6242  
Fax: (817) 352-7940  
Stevan.Bobb@bnsf.com

July 12, 2011

Mr. Duane Richards  
President  
Western Coal Traffic League  
1224 Seventeenth Street NW  
Washington, DC 20036-3003

Dear Duane:

I write in response to your May 4, 2011 letter. BNSF has spent years working with mines and utilities in an attempt to find a way forward to solve the problem of coal dust impacts on our railroad ballast near origin loading mines. Based on years of discussion and subsequent significant STB litigation, I'm convinced that there is no opportunity for the "uniform consensus" your letter mentions on the best procedure to control dust or who pays mitigation costs.

That said, I am confident that there is a path forward. I'm confident because (1) the March 3, 2011 STB decision provides a framework to implement an expectation to control dust emissions, (2) solutions to control dust emissions currently exist, and (3) BNSF has commercial terms covering the majority of tons we handle that address dust mitigation responsibility.

I believe a reasonable approach can be based upon the March 3 STB decision, which sets out some parameters I believe enable BNSF to proceed. In my mind, those parameters are:

- Coal dust is bad for ballast.
- Coal dust is getting into the ballast from the tops of open rail cars.
- More frequent maintenance to clean up coal dust from the ballast after being emitted doesn't make sense.
- It is reasonable for BNSF to expect that coal remain in rail cars while moving across our system.

Clearly there are mitigation methods that work. We know this from extensive mitigation testing conducted last summer by a group of mines and utilities. While we know there are methods that currently work, we don't want to preclude future effective alternatives. BNSF believes there are additional mitigation methods that may be developed. For example, an equipment vendor, a mine, and some utilities are currently assessing the operation of a coal compaction device and its ability to reduce dust emissions.

Based on WCTL positions taken in the STB case, I quite frankly don't see productive ground for dialogue. BNSF has and will continue to work with individual customers. The approach will reflect individual commercial agreements as we move forward to implement a solution.

Sincerely,

Stevan B. Bobb

**ATTACHMENT 7**



Stevan B. Bobb  
Group Vice President  
Coal Marketing

**BNSF Railway Company**

2650 Lou Menk Drive  
Fort Worth, Texas 76131-2830  
P. O. Box 961051  
Fort Worth, Texas 76161-0051  
tel 817 867-6242  
fax 817 352-7940  
Stevan Bobb@bnsf.com

October 21, 2009

Mr. Duane Richards  
Chief Executive Officer  
Western Fuels Association, Inc.  
P.O. Box 33424  
Denver, CO 80233

Dear Duane:

As you know, BNSF has put considerable time and resources toward identifying coal dust mitigation requirements that provide effective control with minimal burden, and we have continually engaged our customers and the mines that serve them in that effort. We have set reasonable and effective coal dust emission compliance standards for coal shippers as described in our operational rules and BNSF rule book. BNSF remains confident that it has established maximum dust emission standards that are reasonable and necessary to ensure the safety and efficiency of coal transportation. We have not specified particular mitigation measures that must be adopted by coal shippers to meet the BNSF coal dust emission standard, but have instead left to the shippers and their coal suppliers the discretion to identify and adopt appropriate mitigation measures.

BNSF has been presented with a number of customer requests to provide additional input regarding individual shipper compliance implementation programs. In addition, a consortium of vendors has proposed that BNSF allow them to design and facilitate a broad trial to assess the effectiveness of various mitigation methods. The suggested trial would align with requests made by a group of utilities who have requested that BNSF help facilitate their mitigation measurement study. To accelerate implementation of solutions to the coal dust problem, we are planning to take the steps identified below. We believe this will provide our customers with significant additional data to assist in identifying mitigation measures that will comply with BNSF's emission standards.

BNSF proposes a large-scale trial of mitigation measures in which all participants can obtain information on the effectiveness of various proposed mitigation measures. Based on prior feedback, we envision that the mitigation trial would include topper application, body feed application and, possibly, mechanical vibration.

While the details would need to be agreed to, we propose that application locations be set up at a subset of mine loadouts in order to provide economic density and minimize costs of the trial. Several mine sites appear to have fairly robust infrastructure for topper and body feed application and those properties may be the best places to perform applications. Those locations are Black Thunder, East Thunder, and North Antelope Rochelle. BNSF is, of course, open to discussions regarding the use of temporary infrastructure at other sites.

A major goal of the trial is to provide statistically significant measures on each result achieved using different mitigation approaches. To that end, BNSF would provide data support to the exercise, and would support providing integrated dust value (IDV.2) information on all measured trains to all trial participants. This may require some masking of train IDs to protect shipper confidentiality.

October 21, 2009  
Mr. Duane Richards  
Western Fuels Association, Inc.

Page Two

As part of our effort to promote voluntary compliance with BNSF's coal dust emissions standard, BNSF will suspend the effective date of the standard until August 1, 2010. We hope and expect to achieve substantial compliance with the standard by that date, and we also expect that the Surface Transportation Board will by that date affirm the reasonableness of BNSF's emissions standard. We believe that the coal supply chain (utilities, mines, and BNSF) can and should use this interim period to increase its comfort with the various mitigation approaches that have been proposed.

we would expect that you will pay for any chemical or application cost incurred during this trial period. As a trial participant, you will have access to all the data generated in the tests.

Please let me know as soon as possible of your interest in participating in the proposed trial as well as who at your company will be able to participate in planning this effort and be in a position to make commitments regarding trial participation. Thank you for your support in addressing this important issue and enabling PRB coal to remain a reliable, low-cost fuel source for electricity generation.

Sincerely,



Steve Bobb

cc: Angela Caddell

# ATTACHMENT 8

## **Summary of BNSF/UP Super Trial 2010**

Over a seven-month period from March – September 2010, BNSF Railway Company (BNSF) and Union Pacific Railroad Company (UP) facilitated a field evaluation of coal dust suppressants in the Powder River Basin. The purpose of this "Super Trial" was to develop and provide to coal shippers information on coal dust suppression technologies that the shippers can use to implement effective coal dust curtailment measures.

### **Super Trial Procedures**

The Super Trial tested the effectiveness of seven different chemical agents in suppressing coal dust emissions from loaded trains. Four of the chemical agents were used in a "body treatment," where the chemical was applied to the coal before the coal was loaded into the railcars. Five of the chemical agents were used in a "topical treatment," where the chemical was applied to the coal after the coal was loaded into railcars. Two of the chemical agents were tested both in a body treatment and a topical treatment. The concentration and application rates for each chemical agent were established by the individual chemical vendors. Most of the vendors whose products were tested were selected by coal shippers and their mines. Attachment 1 to this Summary identifies the seven chemical agents tested in the Super Trial.

Altogether, 1,633 trains were treated with a coal dust suppression agent in either a body treatment or a topical treatment during the Super Trial. Each of these trains was tested under real world operating conditions to determine the effectiveness of the treatment agent in suppressing coal dust emissions. The treatments were applied on participating coal shippers' trains loaded at six Wyoming coal mines.

Of these 1,633 trains, 115 trains were tested using Passive Dust Collectors and portable weather stations. Attachment 2 shows the equipment used to conduct these tests. On each of these 115 trains, half of the cars were treated with a coal dust suppression agent and the other half were left untreated. Passive Dust Collectors were attached to the rear sill of seven treated and seven untreated cars on each train. The coal dust collected from the Passive Dust Collectors during the train's movement was then analyzed to compare the amount of coal dust emitted from the treated and untreated cars.

The remaining 1,518 trains were treated with a coal dust suppression agent in either a body treatment or a topical treatment and monitored at TrackSide Monitors located at Milepost 90.7 (on the Orin Line) and Milepost 558.2 (on the Black Hills Subdivision). Attachment 3 contains a photograph of a TrackSide Monitor. An electronic dust monitor mounted on the TrackSide Monitor measures the amount of coal dust emitted while the train passes the dust monitor and an Integrated Dust Value (IDV.2) is determined for the train. In some cases, such as where two trains passed the TrackSide Monitor at the same time, the IDV.2 data were excluded from the study because the coal dust measured by the TrackSide Monitor could not be reliably associated with a test train.

## **Super Trial Results**

At the beginning of the Super Trial, tests were carried out using two of the chemical agents to determine whether there was a correlation between coal dust measured by the TrackSide Monitors and coal dust measured by the Passive Dust Collectors. These tests showed that the results of both monitoring approaches were correlated. This correlation is confirmed by the overall results of the Trackside Monitor and Passive Dust Collector tests.

The results of the TrackSide Monitor tests showed that the use of a topical treatment substantially reduces the amount of coal dust emitted from a loaded coal car. As shown in Attachment 4, 90 percent of the trains that received a topical treatment had IDV.2 readings at Milepost 90.7 below 91. (BNSF's IDV.2 coal dust standard for Milepost 90.7 is 300.) The corresponding IDV.2 value for untreated trains was 332, more than three times higher. For the trains monitored at Milepost 558.2, more than 90 percent of the trains that received a topical treatment had no measurable IDV.2 value at all. At both Milepost 90.7 and 558.2, the number of trains showing any measurable amount of coal dust emissions dropped significantly when a topical treatment was applied to the train. Trains that received a body treatment showed only a limited reduction in coal dust emissions.

The results of the Passive Dust Collector tests on the 115 tested trains confirmed that the use of a topical treatment substantially reduces coal dust emissions. Attachment 5 shows the percentage reduction of coal dust for each tested chemical agent. As shown in Attachment 5, there is significant variation in the effectiveness of different topical treatments. The coal dust reductions ranged from 75 to 93 percent depending on the topical treatment used in the test. Three topical treatment agents showed coal dust reductions of 85 percent or more -- AKJ CTS-100, Midwest Soil-Sement and Nalco Dustbind Plus. As shown in Attachment 5, the Passive Dust Collector tests also showed that there was no statistically significant reduction in coal dust emissions in trains that received a body treatment.

Finally, during the course of the Super Trial, field audits of treated trains showed that there was at times significant variation in the quality and consistency of the physical application of topical treatments at the mines. This was not surprising due to the fact that the application procedures were being done on a test basis with temporary facilities. However, the quality of application of the topical treatment could make a significant difference in the effectiveness of the application in suppressing coal dust emissions. In addition, audits of the load profile show that proper load profiling is not being consistently achieved at the mines. Effective coal dust reduction will require that careful attention be given to controlling the quality of the application process and the load profiling when coal dust suppression measures are implemented.

An additional phase of the Super Trial is planned to commence in early 2011 to test a railcar compaction and shaping prototype. The prototype is designed to apply physical forces to a loaded railcar to drive coal fines away from the open top of a railcar, displacing coal dust particles from the upper profile of a loaded car, which is most vulnerable to winds during transport. Final results from this portion of the Super Trial are expected to be available in mid-2011.

**ATTACHMENT 1**

**Dust Suppressants Used During Super Trial**

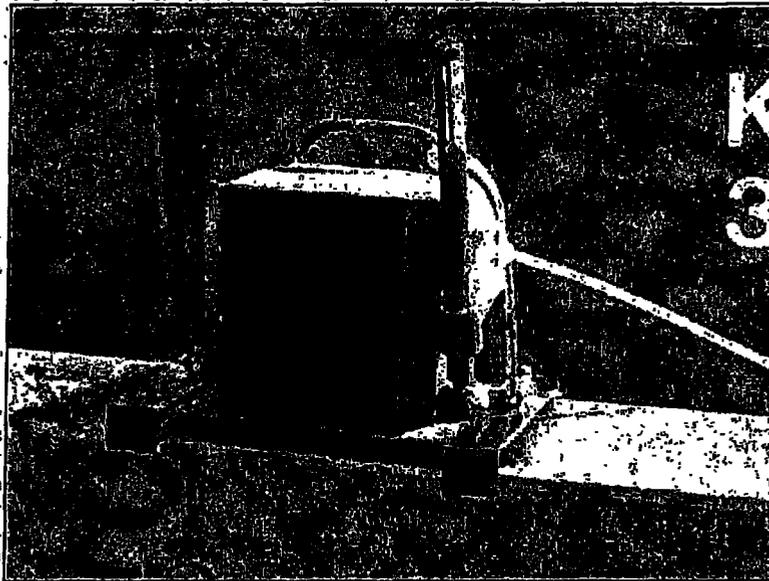
<b>Test Period</b>	<b>Body Treatment</b>	<b>Topical Treatment</b>
<b>March – May 2010</b>	<b>GE DC-9144</b>	<b>Rantec Capture 3000L</b>
<b>June 2010</b>	<b>Freedom CTS-1000</b>	<b>Midwest SoilSement</b>
<b>July 2010</b>	<b>Benetech BT-553</b>	<b>AKJ CTS-100</b>
<b>August 2010</b>	<b>Nalco DustBind Plus</b>	<b>Freedom CTS-1000</b>
<b>September 2010</b>	<b>N/A</b>	<b>Nalco DustBind Plus</b>

**ATTACHMENT 2**

**Equipment Used to Determine the Effectiveness of In-Transit Dust Suppressants**



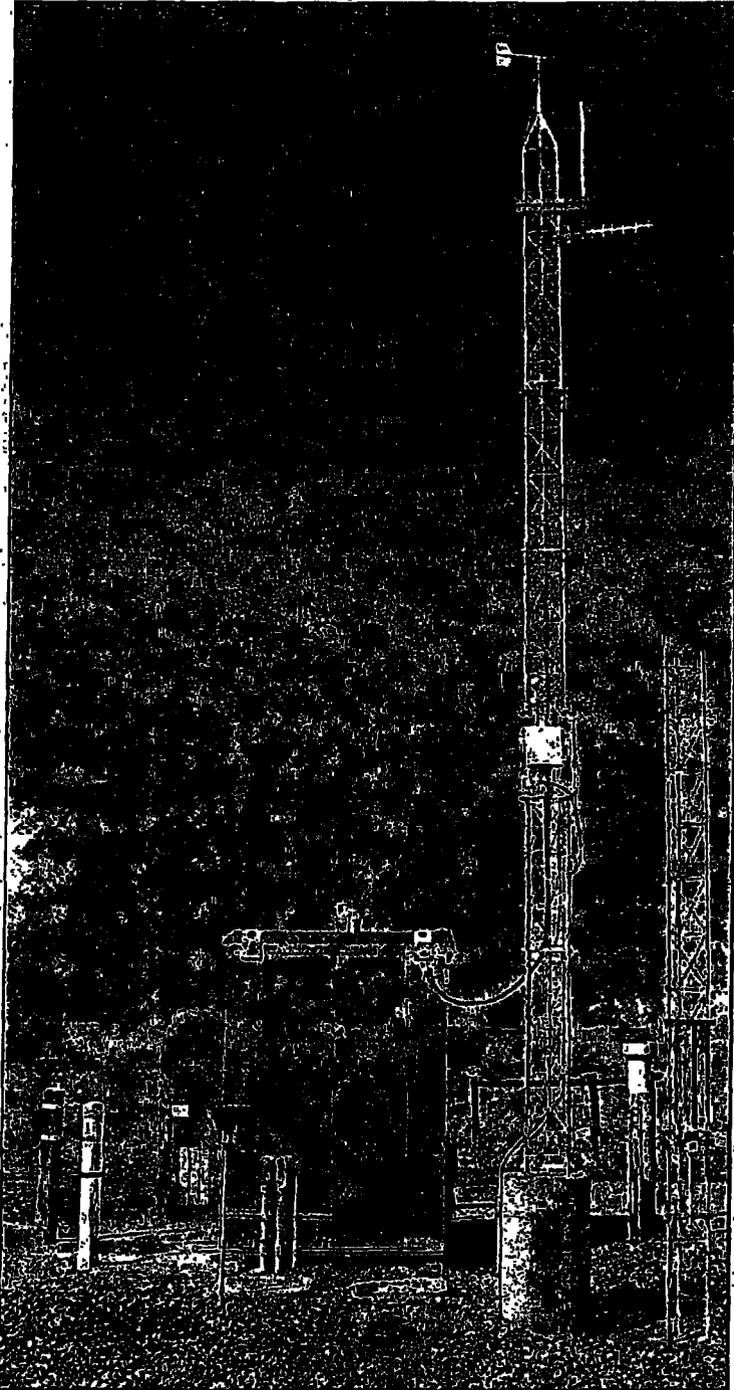
**Rail Transport Emission Profiling System (RTEPS)**



**Passive Collector**

**ATTACHMENT 3**

**TrackSide Monitoring System**



**TrackSide Monitor (TSM) weather/aerosol monitoring station. The TSM includes a real-time aerosol monitor anemometer, temperature/relative humidity sensor, and rain gage.**

ATTACHMENT 4

**TrackSide Monitor Results of Dust Suppressants Used During Super Trial**  
**(March - September 2010)**

**Topical Treatment**

	MP 90.7		MP 558.2	
	Treated Trains	Untreated Trains from Topper-Treating Mines	Treated Trains	Untreated Trains from Topper-Treating Mines
<b>Number of Usable Trains:</b>	249	1466	230	700
<b>90% of trains have IDV.2 values below this level:</b>	91	332	0	74
<b>Percentage of trains with measurable dusting events:</b>	24.9	39.4	7.0	23.3

**Body Treatment**

	MP 90.7		MP 558.2	
	Treated Trains	Untreated Trains From Body-Treating Mines	Treated Trains	Untreated Trains From Body-Treating Mines
<b>Number of Usable Trains:</b>	243	1827	20	142
<b>90% of trains have IDV.2 values below this level:</b>	136	223	93	183
<b>Percentage of trains with measurable dusting events:</b>	25.5	32.8	20.0	26.8

**ATTACHMENT 5**

**Passive Collector Results of Coal Dust Suppressants**

<b>Topical Treatment</b>	<b>Topical Treatment Dust Reduction</b>
Rantec Capture 3000L	73%
Midwest SoilSement	92%
AKJ CTS-100	85%
Freedom CTS-1000	75%
Nalco DustBind Plus	93%

<b>Body Treatment</b>	<b>Body Treatment Dust Reduction</b>
GE/Crown DC-9144	No Statistical Difference From Untreated
Freedom CTS-1000	No Statistical Difference From Untreated
Benetech BT-553	No Statistical Difference From Untreated
Nalco DustBind Plus	No Statistical Difference From Untreated

BEFORE THE  
SURFACE TRANSPORTATION BOARD

FINANCE DOCKET NO. 35305

ARKANSAS ELECTRIC COOPERATIVE CORPORATION –  
PETITION FOR A DECLARATORY ORDER

VERIFIED STATEMENT OF

MARK J. VIZ, Ph.D., P.E.

ON BEHALF OF

WESTERN COAL TRAFFIC LEAGUE

DATED: AUGUST 11, 2011

## **1. Introduction.**

- a. My name is Mark J. Viz. I am a principal engineer with Exponent, Inc., an engineering, scientific, health and environmental consulting firm headquartered in Menlo Park, California. I am based in Exponent's Chicago, Illinois, office. For the past twelve years I have performed engineering and/or engineering consultation work in a variety of aspects of mechanical performance, material handling, transportation and unintended releases of hazardous materials, and certain aspects of derailment cause and origin studies particular to rail transportation. From 2007 through 2009, I was the project manager and technical lead for a detailed study of coal loss, monitoring and measurement issues involving the movement of coal by rail on the "Joint Line" in the Powder River Basin. Part of that study involved the use of "Passive Dust Collectors," supplied to us by BNSF, for the performance of lengthy and detailed field testing of railcars loaded with coal and then profiled for full-scale wind testing. This study was funded by a consortium of member companies of the National Coal Transportation Association (NCTA). I have attached a copy of my current curriculum vitae (Exhibit MJV-1) to this statement.
  
- b. Previously, I had been requested by the Western Coal Traffic League (WCTL) to analyze some of the means and methods that BNSF has used and apparently intends to continue to use to attempt to monitor and measure coal dust emissions from loaded railcars in transit. Presently, I have been asked to comment on BNSF's use of "Passive Dust Collectors" (also referred to as "passive collectors") as a means to measure whether the use of a topper spray in conjunction with coal heap profiling actually reduces the fugitive emissions from railcars by at least 85%, as required by the newly issued "Revised Coal Dust Tariff" by BNSF.<sup>1</sup> Passive Dust Collectors, as designed and implemented for use by Simpson

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<sup>1</sup> "Revised Coal Dust Tariff" refers to item 100, entitled "Coal Dust Mitigation Requirements," as published on July 20, 2011, in Revision 017 to BNSF's Price List 6041-B.

Weather Associates, a consultant to BNSF, were used in BNSF's "Super-Trial" tests performed from March to September of 2010 to establish whether this goal of 85% reduction in fugitive particulate emissions was achieved.<sup>2</sup>

- c. Passive Dust Collectors, as designed and implemented for use by Simpson Weather Associates (SWA) and as used by BNSF (to the extent that their methods and procedures have been disclosed), cannot be used to scientifically establish an 85% reduction in fugitive particulate emissions from railcars with certainty, reliability or repeatability.
- d. I also note at the outset that many if not all of the topper sprays / surfactants were designed for use in dust mitigation from static coal stockpiles at coal-burning power plants. In this regard these products are generally recognized to work when applied to a large pile of coal *that is stationary*, but there are still many aspects of their performance *in moving railcars* that have not yet been verified. I have observed from my own field work that crusting agents and other topper sprays essentially break apart when a railcar gets shaken or bumped going over the track. Frequently other events can also occur to either upset the efficacy of the topper agent or in certain cases to make the fugitive loss even worse by a process known as "saltation," i.e., the greater entrainment of particles in a moving air stream as a result of released particles impacting the surface and therefore releasing yet greater amounts of dust. The performance of topper agents during precipitation events and long exposure to wind and solar radiation are also not that well-understood.

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<sup>2</sup> Reference document titled, "Summary of BNSF / UP Super Trial 2010," p. 1: "Of these 1,633 trains [involved in the Super Trial testing], 115 trains were tested using Passive Dust Collectors and portable weather stations. ... On each of these 115 trains, half of the cars were treated with a coal dust suppression agent and the other half were left untreated. Passive Dust Collectors were attached to the rear sill of seven treated and seven untreated cars on each train. The coal dust collected from the Passive Dust Collectors during the train's movement was then analyzed to compare the amount of coal dust emitted from the treated and untreated cars."

**2. A fundamental flaw with the Passive Dust Collectors is that they collect any and all particulate matter above a certain size based on the particular design parameters of the collectors. No testing, calculations or other engineering data have been produced by SWA or BNSF to establish what this so-called “cut point” is. In fact, it’s quite possible that they simply do not know.**

a. The Passive Dust Collectors, as designed by SWA and used by BNSF, are essentially metal boxes that have an inlet opening with a certain cross-sectional area that is connected to a vertical channel that is then connected to a removable box at the bottom of the vertical channel. To facilitate air flow through the collector, the vertical channel is equipped with a “volute,” which is essentially a circular opening in the side of the channel that is then covered by a mesh screen. A combination of the fluid dynamics properties of the air flow in the channel and volute along with the “blocking” provided by the mesh screen allow entrained particles smaller than a certain size to exit the collector while larger particles drop into the collector box. The “cut point” that determines which particles pass-through and which are collected is to a large extent established by the detailed design and wind-tunnel testing of the collector. SWA has claimed that they have performed extensive wind-tunnel studies on their passive collector design; however, SWA neither presented the results from any such claimed testing nor have they published the results from any such claimed studies in the relevant technical literature. Given this lack of information and ability to verify the design and setting of the collector’s cut point, neither SWA nor BNSF have offered any scientific or engineering data to establish exactly what entrained particles the collector’s actually collect.

b. In addition to the ambiguity involved with the establishment of the cut point, the material that remains in the collector box can contain a whole variety of foreign, non-coal content such as insects, other organic matter, other airborne materials like pollen, etc. During the field testing that Exponent performed and that I

directed (as mentioned in the **Introduction**), we experienced first-hand this phenomena. We routinely found foreign matter such as insects and what appeared to be wood chips in the passive collector boxes that we used during our field testing. Exponent's understanding is that the passive collector samples taken during field testing performed by BNSF were also not checked for foreign content. This has been a concern regarding the use of the passive collector device as it will retain whatever is blown into it above a certain size. One solution to this clear problem is to perform a chemical or even simple visual / microscopic analysis of the materials found in each collector box. No evidence or data have been provided by BNSF or SWA to substantiate that the material they collected in each passive collector and then weighed to establish percentage dust reduction was actually all coal.

- c. Consider certain details from the technical literature that describe the use of passive collectors on tests of coal railcars in Europe: "All the dust collectors used in the four equipped wagons are of the same design, for the sake of comparison. Each wagon was equipped with a pair of dust collectors.... The lower part of each dust collector consists of a cylindrical container, where dust filters, previously weighted, were installed at the very beginning of the train run. At the end of the run, the weight of each filter was recorded, and qualitative analyses of the coal dust sample were conducted."<sup>3</sup> And from the same reference: "Due to the location of the flow sensors, specifically the proximity of the sensors to the wagon, it is expected that the measurements performed were influenced by the wagons and structures located upstream. Even so, since the flow erosion occurs through the top gap, the recorded information for the flow velocity and direction, near the top, is very important for the characterization of some parameters influencing the erosion process."

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<sup>3</sup> Ferreira, A.D., Viegas, D.X. and Sousa, A.C.M., "Full-scale measurements for evaluation of coal dust release from train wagons with two different shelter covers," *J. Wind Eng. Ind. Aerodynamics*, v. 91, pp. 1271-1283, 2003.

- 3. Another fundamental flaw with the Passive Dust Collectors is that no testing, calculations or other engineering data have been produced by SWA or BNSF to establish that the concentration of particulate matter in the entrained air flow “sampled” by the collector is the same as the concentration in the entire air flow over the top of the railcar so equipped. In addition, effects due to the collector geometry, dimensions and particle characteristics are not addressed by BNSF or SWA in any meaningful way.**
- a. Much like BNSF and SWA’s failed efforts to show that the track-side E-Samplers are actually measuring something that is meaningful and able to be checked against a normative standard, this same general deficiency is present with the passive dust collectors. No evidence, wind tunnel test data, scale studies or calculations have been provided to establish that the entrained flow sampled by the passive collectors installed at certain locations on the top chord of the railcar is at all representative of the particulate concentrations found in the larger air flow currents over and around the entire railcar.
  - b. A variety of citations in the relevant technical literature point to the importance of this very issue, sometimes referred to as “sampling efficiency.” Consider the following excerpt: “There are many factors affecting the penetration efficiency, such as impaction, gravitational settling, and turbulent or laminar diffusion. After particles enter the sampling inlet, some particles are inevitably deposited on the internal walls by a combination of inertial impaction, gravitational deposition, diffusive deposition, and electrostatic deposition during transmission inside the sampling tube and the sampler. Such internal particle loss from the sampled air will lead to an effective reduction in the overall efficiency of sampling. The magnitude of this effect depends on the internal shape of the sampler, the

dimension of sampling tube, the sampling flow rate, and the physical properties of the particles.”<sup>4</sup>

- c. Consider another relevant excerpt from the technical literature: “Six sets of BSNE collectors [BSNE collectors operate on the same basic principle as a passive dust collector] were deployed at the windward and leeward positions in the field to measure saltation and suspension. One set of collectors consisted of five BSNE collectors mounted on a pole at heights of 0.1, 0.2, 0.5, 1, and 1.5 m. Two creep collectors were deployed at each field position to measure discharge to a height of 0.025 m. Sample collections were periodic due to the remoteness of the field sites and generally occurred immediately after a high-wind event. Sediment collected by BSNE and creep samplers was air-dried prior to weighing. For those events with sufficient sediment catch in the BSNE (more than 0.5 g), the sediment was separated into 10, 45, 100, and 150  $\mu\text{m}$  diameter size fractions using a sonic sieve. Since the BSNE is inefficient in collecting all suspended sediment (Goossens and Offer, 2000), we ascertained the catch efficiency of the BSNE for suspended Ritzville silt loam sediment (particle size  $<125 \mu\text{m}$ ) and PM10. Catch efficiency was determined in a wind tunnel by (1) placing a 50 mm extension on the front of a BSNE collector, (2) attaching a funnel to the top of the extension and (3) introducing a known amount of sediment or PM10 into the collector via the funnel. Catch efficiency was determined at wind speeds (measured using a pitot tube located adjacent to the opening of the BSNE collector) of 5, 10 and 18  $\text{m s}^{-1}$  and computed as the ratio of mass of sediment or PM10 collected in the BSNE to the amount of sediment or PM10 introduced into the collector.”<sup>5</sup>

#### **4. Field test results from BNSF / SWA and tests performed independently by Exponent show that the total amount of material retained in the collector can**

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<sup>4</sup> Wang, X., Zhang, Y. and Tan, Z., “Comparison of different instruments for particle concentration measurements,” *ASHRAE Trans., Part 2*, v. 111, pp. 467-475, 2005.

<sup>5</sup> Sharratt, B., Feng, G. and Wendling, L., “Loss of soil and PM10 from agricultural fields associated with high winds on the Columbia Plateau,” *Earth Surf. Process. Landforms*, v. 32, pp. 621-630, 2007.

**vary widely from fractions of a gram to hundreds of grams. It is difficult, if not impossible, to use a simple field measurement technique to establish a percentage reduction in particulate emissions when mass data from collector to collector can span 2 to 3 orders of magnitude in significant figures.**

- a. During field testing performed by Exponent, each test car was equipped with four passive collectors during each test. Total material collected in all four collectors per test ranged from 3.45 g to 503.47 g. The electronic balance that Exponent used for these measurements had a 0.01 g precision, and it was calibrated daily using a 200 g calibration mass traceable to a NIST standard. Neither BNSF nor SWA have produced any detailed procedures as to what equipment was used to perform their field measurements of sample mass or whether their methods involved regular calibration traceable to a NIST standard. Without this basic information it is difficult, if not impossible, to establish any measure of repeatability or error in their measurements. Error estimates are extremely important when an attempt is made to establish a percentage reduction from one measurement to the next when the actual measured masses are each on the order of a gram or less.

**5. Passive dust collector handling, cleaning, installation and removal, sample removal and sample measurements all need to be performed in adherence to a well-defined, written protocol that all field personnel obey. No evidence has been produced by BNSF or SWA to substantiate that uniform procedures were in place and that they were being strictly followed.**

- a. Field methods for measuring the mass of material samples from passive collectors should involve collection bag “blinking” and collector cleaning steps. Even then, sample mass measurements will still have variability. To my knowledge, neither BNSF nor SWA produced any type of field procedure for sample handling and

measurement nor has either performed any analysis to estimate variability associated with such measurements.

- b. BNSF and / or SWA did not use certified-clean sample collection bags in the passive collectors used in field testing; the use of such collection bags constitutes good procedure. Such bags were used by Exponent in our field work. In our field work with passive collectors, each passive collector was equipped with a certified-clean, pre-weighed sample bag that once removed (performed inside a climate controlled structure) was measured two times for post-test mass gain and estimate of measurement repeatability.
- c. No evidence has been produced to establish that either BNSF or SWA “conditioned” their material samples after they were removed from the collectors. “Conditioning” typically involves holding each sample for a fixed period of time in a controlled environment at a fixed temperature and relative humidity. In this manner sample mass variability attributed to moisture content can be normalized. In fact, no evidence has been provided to establish how BNSF / SWA accounted for moisture content in the passive collector samples.
- d. During BNSF-sponsored field testing from 2007 to 2009, I was informed that field personnel were instructed to avoid applying passive dust collectors to railcars with “unusual loading profiles or unusual dimensions (height or capacity).” It is not clear if what constituted “unusual” was left to the discretion of the person involved in the field installation at the time. If an “unusual” profile or dimensions were observed, the field personnel were instructed to skip to the adjacent railcar or to apply the passive collectors to the most regular variety of railcar and coal profile seen in each particular consist.
- e. As SWA commented in email correspondence to the undersigned when they transmitted RTEPS (“Rail Transport Emission Profiling System”) data to Exponent: “For each vendor’s test, two half-treated/half-untreated trains (PC

trains) were equipped with an RTEPS unit to determine the relative stressfulness of each trip. These data should be used to supplement the passive collector data distributed by [BNSF].” The data presented by SWA analyzed RTEPS data with test train information and trip stress metrics such as wind speed, coal surface temperature, airborne dust, precipitation, etc. So, in essence, BNSF and SWA are asserting that numerous factors such as wind speed, coal surface temperature, airborne dust concentrations, precipitation, coal moisture content, etc. all influence how much particulate material might be retained in the passive dust collectors. But ... most importantly, neither BNSF nor SWA provide any method, procedure, calculations, etc. to establish just how these quantities should be used to “supplement the passive collector data” or perhaps to somehow normalize it to adjust the passive collector sample data for these variables.

- 6. During the Super Trial tests performed by BNSF in 2010, only 115 trains out of a population of 1,633 were equipped with passive dust collectors. Given the numerous sources of variability already described, the lack of any error analysis, and the additional apparent lack of any statistical calculations involving the passive collector data derived from the 115-train sample, it is highly unlikely that BNSF or SWA could make any statistically significant inferences about percentage dust reductions from the 115-train set behavior to the entire population of trains tested.**

**VERIFICATION**

I, Mark J. Viz, Ph.D., P.E., verify under penalty of perjury that I have read the foregoing Verified Statement and know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

  
Mark J. Viz

Executed on: August 10, 2011

**Mark J. Viz, Ph.D., P.E.**  
**Principal Engineer**

**Professional Profile**

Dr. Mark J. Viz is a Principal Engineer in Exponent's Mechanical Engineering and Materials/Metallurgy practice. He specializes in performance evaluation and mechanical analysis of railcar and aircraft structures. He also specializes in risk, reliability, and mechanical integrity assessments of a variety of process plant equipment such as pressure vessels and tanks, and certain types of transportation vessels including railcar tanks, intermodal vehicles, and over-the-road tank trailers. Dr. Viz also has experience in component life reliability assessments, "repair or replace" risk decisions, and statistical analysis of in-service component performance. Other areas of Dr. Viz's specific academic expertise include nonlinear finite element analysis, metal and composite material testing, fatigue and fracture mechanics, and statistical data reduction methods. He has investigated and/or consulted in matters involving railcar derailments, tank car ruptures, releases of hazardous materials in transportation, coal mining haulage accidents, rotor failures, bus rollovers, pressure vessel explosions, and other industrial accidents.

Given his expertise in engineering mechanics, Dr. Viz also performs engineering evaluations and analyses involving the mechanical performance of a variety of machines and products. Some of these devices include elements of cranes and lifting devices (e.g., wire rope failures, hydraulic and valve failures), elements of elevators, a variety of industrial machines (e.g., printing equipment, CNC machine tools, pumps, compressors), certain aspects of machine guarding and lock-out/tag-out procedures, and specialized evaluations of consumer products. Dr. Viz's involvement in these types of cases typically involves the synthesis and execution of a variety of engineering mechanics calculations and analyses.

Prior to joining Exponent, Dr. Viz was a Product Development Engineer at the GATX Rail Corporation. His responsibilities included new rail car design and development, budget and schedule management, and sales and marketing support. Dr. Viz was also heavily involved in the regulatory environment concerning the transportation of hazardous materials in rail tank cars. Dr. Viz also served as a Specialist Engineer in the Structural Damage Technology group at the Boeing Company. He was responsible for the durability and damage tolerance analysis and testing of a wide variety of aircraft structures from wing and fuselage sections to individual fasteners. He has also taught probability, statistics, and mechanics of materials at the college level.

**Academic Credentials and Professional Honors**

Ph.D., Cornell University, Theoretical and Applied Mechanics, 1996  
B.S., Massachusetts Institute of Technology, Aeronautics and Astronautics, 1990

## **Licenses and Certifications**

Licensed Professional Engineer, Illinois, #062.062247  
Mining Safety and Health Administration (MSHA) Part 46 and Part 48 trained  
Respirator and SCBA fit-tested and trained

## **Publications and Presentations**

Viz MJ. Failure analysis in the design cycle. Presented as a guest lecture for CIV-ENG 395-0 Engineering Forensics course, Evanston, IL, April 16, 2008.

Viz MJ, Momsen RH. Reliability and risk management of railcar truck castings in high mileage, high gross rail load service: A case study. Presented at the Annual Meeting of the Society for Risk Analysis, Baltimore, MD, December 5, 2006.

Morrison III DR, Ogle RA, Viz MJ, Carpenter AR, Su YS. Investigating chemical process accidents: Examples of good practices. *Process Safety Progress* 2006; 25:71–77, March.

Ogle RA, Morrison III DR, Viz MJ. Emergency response to a non-collision HAZMAT release from a railcar. *Process Safety Progress* 2005; 24:81–85, June.

Morrison III DR, Ogle RA, Viz MJ, Carpenter AR, Su YS. Investigating chemical process accidents: Examples of good practices. Presented at the Process Plant Safety Symposium, 2005 Spring National Meeting, American Institute of Chemical Engineers, Atlanta, GA, April 11–13, 2005.

Zehnder AT, Viz MJ. Fracture mechanics of thin plates and shells under combined membrane, bending, and twisting loads. *Applied Mechanics Reviews* 2005; 58:37–48, January.

Ogle RA, Viz MJ, Morrison III DR, Carpenter AR. Bulk transportation of hazardous materials by rail: Lessons learned from non-collision accidents. Presented at the 2004 Annual Symposium, Mary Kay O'Connor Process Safety Center, Texas A&M University, College Station, TX, October 2004.

Ogle RA, Morrison III DR, Viz MJ. Emergency response to a non-collision HAZMAT release from a railcar. Presented at the 19<sup>th</sup> Annual CCPS International Conference, Emergency Planning: Preparedness, Prevention and Response, American Institute of Chemical Engineers, Orlando, FL, June 2004.

Ogle RA, Viz MJ, Carpenter AR. Lessons learned from HAZMAT accident investigations. Presented at the 17<sup>th</sup> Annual AAR/BOE Hazardous Materials Seminar, Association of American Railroads/Bureau of Explosives, Houston, TX, May 2004.

Zehnder AT, Potdar YK, Viz MJ. Fatigue fracture in plates in tension and out-of-plane shear. *Fatigue and Fracture of Engineering Materials and Structures* 2000; 23:403–415.

Viz MJ. Fatigue fracture of 2024-T3 aluminum plates under in-plane symmetric and out-of-plane anti-symmetric mixed-mode deformations. Ph.D. Dissertation, Cornell University, 1996.

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Viz MJ, Zehnder AT, Ingraffea AR. Fatigue fracture in thin plates subjected to tensile and shearing loads: Crack tip fields,  $J$  integral and preliminary experimental results. *Proceedings, 7<sup>th</sup> International Congress on Experimental Mechanics, Society of Experimental Mechanics*; 1992: 44–50.

### **Prior Experience**

Director of Applied Mechanics, Packer Engineering, 2001–2003

Product Development Engineer, GATX Rail, 1999–2001

Specialist Engineer – Structural Damage Tolerance, Boeing, 1997–1999

### **Project Experience**

Directed, managed, and performed numerous rail tank car failure cause and origin investigations, most involving the release of hazardous materials. Projects typically involve extensive field investigations, including confined space entry of tank cars, mechanical and metallurgical analysis, mechanical integrity assessments, non-destructive examination, and sample collection.

Managed and performed numerous rail tank car loading and unloading incident investigations, often involving worker injuries or fatalities.

Investigated the unintentional uncoupling of mining service cars in a Virginia underground coal mine. The uncoupling resulted in a runaway car situation that led to the fatalities of two miners. Project work included incident modeling and reconstruction, performance calculations, and inspections.

Actively directing a lengthy study involving the investigation of railroad track ballast fouling and coal dust mitigation evaluations for coal transport out of the Powder River Basin in Wyoming. Project work includes measurement of fugitive dust emissions, static and dynamic

(over-the-road) monitoring of dust loss from railcars, cost analysis for proposed mitigation techniques, and analysis of health and safety issues.

Managed and performed projects for multiple clients involving the mechanical integrity assessment and fitness-for-service evaluations of railcar truck castings (bolsters and side frames). These projects have typically involved the development and implementation of non-destructive examination procedures for both on-car and off-car examination, cyclic fatigue testing, mechanical and metallurgical testing, engineering evaluation of test results with respect to mechanical performance, and development of engineering plans to manage fleet components over the projected remaining useful service life. Have presented findings to the Association of American Railroads (AAR) for multiple clients.

Performed risk, reliability, and mechanical integrity assessments for a variety of process plant equipment including piping and tanks. Select assignments have involved flash train tanks at a bauxite to alumina processing plant, piping and vessels at a district cooling ammonia refrigeration plant, liquid carbon dioxide storage tanks, baghouse equipment at cement kilns, and a variety of other equipment subject to OSHA PSM (process safety management) and EPA RMP (risk management plan) regulations.

Directed, managed, and performed numerous incidents involving the release of hazardous materials from transportation vessels, including rail tank cars, intermodal containers, and over-the-road tank trailers. Projects typically have involved extensive field investigations, including confined space entry of tank cars, mechanical and metallurgical analysis, mechanical integrity assessments, non-destructive examination, and sample collection.

Performed design evaluation and risk assessment of a manufacturer's new product offering that provides GPS location and condition monitoring of railcars while in-transit. System includes remote sensing, GPS and satellite uplink equipment, all packaged in a field-hardened package. Project work included FMEA (failure modes and effects analysis), reliability modeling, and predictions for warranty structuring and material compatibility analyses.

Performed mechanical performance and stress analysis calculations for a fleet of coal railcars that exhibited top chord and side sheet buckling failures. The project involved performing detailed field inspections of the damaged railcars, finite element analysis (FEA) of the cars, and a determination of the in-service loads that were needed to produce the exhibited damage.

Managed and performed a collision damage assessment and engineering repair oversight for a major accident involving a monorail train in the Pacific northwest. Project work included responsibility for oversight of repair plans, mechanical contractor selection and qualification review, quality assurance oversight, schedule analysis, and general technical consulting. Project involved extensive field work and multiple presentations to technical staff and insurance adjusters.

Performed numerous mechanical performance analyses/evaluations for a variety of machines and products including:

- Manufacturing machinery (printing and binding equipment, forming and cutting machines, product conveying equipment, certain types of CNC machine tools)
- Elements of machine guarding and lock-out/tag-out procedures (drum foamers, printing and binding equipment, packaging equipment)
- Elements of crane and lifting devices (e.g., scissor lifts), including wire rope failures, hydraulic cylinder failures, holding valve failures, and stability issues
- Elements of consumer product performance including structural performance and mechanical response.

#### **Academic Appointments**

- Adjunct Professor, Mathematics Department, Pierce College, WA

#### **Professional Affiliations**

- American Society of Mechanical Engineers—ASME (member)
- American Institute of Aeronautics and Astronautics—AIAA (member)
- Society for Risk Analysis—SRA (member)