

STEPTOE & JOHNSON ^{LLP}
ATTORNEYS AT LAW

213268

Anthony J. LaRocca
202.429.8119
alarocca@steptoe.com

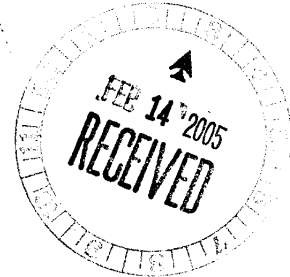
1330 Connecticut Avenue, NW
Washington, DC 20036-1795
Tel 202.429.3000
Fax 202.429.3902
steptoe.com

February 14, 2005

Via HAND DELIVERY

The Honorable Vernon A. Williams
Secretary
Surface Transportation Board
1925 K Street, NW
Washington, DC 20423

ENTERED
Office of Proceedings
FEB 14 2005
Part of
Public Record



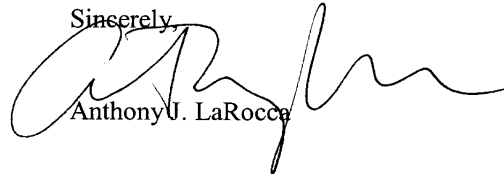
Re: **STB Docket No. 41191 (Sub-No.1), AEP Texas North Company v. The Burlington Northern and Santa Fe Railway Company**

Dear Secretary Williams:

Enclosed for filing in the above-captioned matter are the original and ten copies of the BNSF Railway Company's Response to Complainant's Post-Rebuttal RTC Analysis. Included with the filing are three copies of a CD containing a PDF version of the Response as well as three copies of a separate CD containing the highly confidential electronic workpaper files.

Please date stamp the extra copy of this Response and return it to the messenger who delivered this filing.

Sincerely,



Anthony J. LaRocca

Enclosures

cc: Counsel for Complainant

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

AEP TEXAS NORTH COMPANY,

Complainant,

v.

THE BURLINGTON NORTHERN AND
SANTA FE RAILWAY COMPANY,

Defendant.

213268
Docket No. 41191 (Sub-No. 1)

ENTERED
Office of Proceedings

FEB 14 2005

Part of
Public Record

**DEFENDANT'S RESPONSE TO COMPLAINANT'S
POST-REBUTTAL RTC ANALYSIS**

Pursuant to the Board's January 14, 2005 order in this proceeding, defendant BNSF Railway Company¹ ("BNSF") hereby responds to the new Rail Traffic Controller ("RTC") analysis submitted by complainant AEP Texas North Company ("AEP Texas") on November 8, 2004. As described below, AEP Texas' post-rebuttal RTC analysis suffers from two flaws carried forward from AEP Texas' prior RTC simulations that render the post-rebuttal RTC analysis fatally deficient. BNSF demonstrates that if those flaws are corrected, it is clear that AEP Texas has not posited a SARR that is capable of handling the traffic in its SARR shipper group.

I. INTRODUCTION

On July 27, 2004, AEP Texas filed its Rebuttal Evidence in the above-captioned proceeding. That rebuttal evidence contained a new RTC analysis that BNSF moved to strike on

¹ BNSF has changed its name from The Burlington Northern and Santa Fe Railway Company to BNSF Railway Company.

September 9, 2004. BNSF's motion to strike, on which the Board has not acted, demonstrated that AEP Texas' rebuttal RTC model analysis exceeded the proper scope of rebuttal. As BNSF explained, one reason that the Board has imposed strict limits on the submission of new evidence on rebuttal is the possibility that the new evidence will contain flaws that render the new evidence unreliable or incompetent. In fact, as BNSF pointed out, AEP Texas' new RTC model analysis contained serious and obvious flaws.²

AEP Texas contested BNSF's position that the new RTC model analysis exceeded the scope of permissible rebuttal, but it did acknowledge that the new analysis contained a serious flaw. This admission of error should have ended consideration of AEP Texas' rebuttal RTC model. However, AEP Texas filed a petition on November 8, 2004, to supplement the record with yet *another* RTC analysis. This petition was accompanied by the proposed new post-rebuttal RTC analysis that is the subject of this response. In opposition to the petition for leave to file new evidence, BNSF demonstrated that whether or not the Board's rules governing rebuttal evidence allowed AEP Texas to file new evidence at the rebuttal stage, there was no basis whatsoever for allowing AEP Texas to file new *post-rebuttal* evidence. As BNSF explained, the errors in AEP Texas' Rebuttal RTC analysis were due to its own carelessness. Accordingly, there was no basis on which the Board, under its precedent, could grant AEP Texas' petition.³

By an order dated January 14, 2005, the Board deferred consideration of BNSF's opposition to AEP Texas' petition to supplement the record and directed that "to protect its

² See BNSF Motion to Strike, at 13-20 (filed Sept. 9, 2004).

³ See BNSF Opposition to Complainant's Petition to Supplement the Record, 4-11 (filed November 24, 2004).

interests, BNSF should submit a separate pleading responding to the supplemental evidence submitted by AEP Texas.”⁴ This filing constitutes BNSF’s response.

AEP Texas’ post-rebuttal RTC simulation is different from its rebuttal simulation. AEP Texas’ post-rebuttal simulation contains a different traffic group, a different set of trains and a different track configuration. However, the critical problem with AEP Texas’ post-rebuttal RTC simulation is that AEP Texas carried forward two fundamental modeling errors from its prior RTC simulations that render the post-rebuttal RTC analysis deficient and unusable. First, AEP Texas persists in making unrealistic operating assumptions relating to the impact of unplanned, random track outages. AEP Texas acknowledges that such track outages would occur on the SARR. However, AEP Texas rejected all but a handful of the outages that actually occurred on the real-world lines replicated by the SARR based on faulty assumptions and a complete misunderstanding of the underlying data and the process used by BNSF to model the impact of those outages. Second, AEP Texas’ post-rebuttal RTC model continues to assume that the operating plan for the TNR does not have to account for the presence of UP trains occupying limited capacity at the mines used by the TNR. As discussed further below, the Board has already rejected operating plans that fail to account for capacity constraints at PRB mines.

BNSF demonstrates in this response to AEP Texas’ post-rebuttal RTC evidence that when either of these defects is corrected, even if no other changes are made in AEP Texas’ RTC model, AEP Texas’ post-rebuttal RTC simulation cannot run to completion, which indicates that irresolvable gridlock has occurred on the SARR. For this reason, the Board could not use the new RTC analysis in the assessment of AEP Texas’ SAC evidence, even if the Board permitted

⁴ January 14, 2005, Order at 1.

the filing of AEP Texas' post-rebuttal evidence. This response is supported by verifications from BNSF's witnesses Messrs. Mueller and Wheeler.

II. AEP TEXAS' POST-REBUTTAL RTC ANALYSIS RUNS TO COMPLETION ONLY IF NEARLY FAILURE-FREE OPERATIONS ARE ASSUMED

In its opening RTC simulation, AEP Texas assumed that no random failures would occur on the SARR during the peak period. Not a single track outage or equipment failure was assumed in the opening RTC model simulation. On rebuttal, AEP Texas acknowledged that "random events that affect track and operations are part of everyday railroading, and can occur during peak periods." AEP Texas Rebuttal Nar. at III-C-39. Notwithstanding this concession, AEP Texas rejected BNSF's approach to modeling the impact of unplanned track and operating outages, which used data from the actual outages that occurred on the real world lines at issue during the fifteen-day period that AEP Texas used as the basis for its RTC analysis.⁵ AEP Texas subsequently explained that "[i]t is impossible to determine when 'random' outages will occur in the future, and it is wrong to assume that outages that actually occurred on the replicated BNSF lines in 2002 would occur on the TNR in 2020."⁶ Nevertheless, AEP Texas' witness Mr. Reistrup purported to review the outages identified by BNSF to eliminate outages that would supposedly not occur on the TNR and "concluded that the TNR would be likely to incur 13 of the [137] outages simulated by BNSF." AEP Texas Rebuttal Nar. at III-C-40. AEP Texas' post-

⁵ AEP Texas' RTC model purported to simulate operations in 2020, but it used as the starting point for its 2020 simulation the actual operations of BNSF trains during the peak fifteen-day traffic period of 2002. BNSF used the random failure data for the same fifteen-day period in 2002 that AEP Texas used to produce a simulation of 2020 operations.

⁶ Verified Statement of Paul H. Reistrup (Reistrup V.S.) at 6-7 (filed with AEP Texas' Oct. 20, 2004, Reply to Motion to Strike).

rebuttal RTC simulation contains the same 13 outages previously incorporated in its rebuttal RTC model.

Failure to model random outages as BNSF did on reply is fatal to AEP Texas' post-rebuttal RTC simulation. AEP Texas' reasons for excluding more than 90 percent of the real world outages identified by BNSF reflect a fundamental misunderstanding of the data relied on by BNSF and the methodology BNSF used to model the outages.

As described in BNSF's Reply Evidence at III.B-20 to 21, BNSF witnesses Mueller and Albin reviewed the real-world experience of BNSF on the same lines replicated by the TNR during the same time period that is the subject of the RTC simulation to identify random failures to be used in Mr. Wheeler's RTC analysis. Messrs. Mueller and Albin reviewed two sets of data. The first data set was generated by the MOW Trouble Call desk in BNSF's Network Operations Center in Fort Worth in the ordinary course of business and related generally to occurrences affecting track.⁷ This "track exception" data set consists of a log that records a wide variety of events associated with track-related failures that occur on BNSF's network, such as problems with grade crossing gates, signals, and track. The events are logged when a call reporting the problem is made to the MOW Trouble Call desk. From this overall list of exceptions, Mr. Mueller and Mr. Albin selected as "random failures" *only* those events which, by their nature, would have resulted in the track signal system producing a red or "stop" signal, meaning that trains would be forced to stop at the signal and either wait there or proceed, with permission from the dispatcher, at restricted speed.⁸

⁷ See BNSF Reply electronic workpaper "June to July Engineering Data.xls."

⁸ See Rule 9.12, General Code of Operating Rules (4th ed. April 2, 2000).

The second set of data reviewed by Messrs. Mueller and Albin related primarily to operating and mechanical failures. This data set also was generated in the ordinary course of business by the Service Interruption desk in the Network Operations Center.⁹ This second set of data covers a broad range of operating and mechanical events such as train equipment failures, fires, and floods. From this second set of data, Messrs. Mueller and Albin selected only those events that would have resulted in a track obstruction, such as a train stopped because it had broken down.

All of the “random failures” selected were true random failures in the sense that they were unexpected events that would have halted traffic or would have resulted in reduced train speeds. None of the events involved previously scheduled maintenance. Although it is extremely conservative to assume that a real-world railroad with the characteristics of the SARR could go for an entire week without scheduled maintenance, BNSF accepted AEP Texas’ assumption that no scheduled maintenance would be performed during the peak operating period for purposes of the RTC modeling exercise. The track and signal random failures that BNSF selected were events that produced red signals requiring the train to stop and then proceed at reduced speeds or were events such as train or car malfunctions that completely impeded train operations over a particular line. There is no basis for assuming that a SARR operating over the same lines at issue under similar operating conditions could avoid the same type of random outages experienced in the real world by BNSF.

Mr. Reistrup asserts that he had reason to ignore nearly all of the random failures proposed by BNSF, but his discussion of the issue reflects a misunderstanding of BNSF’s approach and the data used by BNSF. Each of Mr. Reistrup’s assertions is flawed.

⁹ See BNSF.RP.WP.III.B-0005 to 0116.

First, Mr. Reistrup claims that “it is impossible to determine from the documentation provided by BNSF what specific maintenance activity was being conducted, or whether the activity was of a nature that it had to be undertaken immediately as opposed to being scheduled at the discretion of the dispatcher.”¹⁰ This statement is both incorrect and beside the point. Mr. Reistrup either overlooked or ignored the workpapers cited in BNSF’s Reply Evidence which describe the nature of each of the failures in detail. *See* BNSF Rep. Nar. at III.B-20 to 21. The underlying data for the failures is contained in the workpapers provided by Messrs. Mueller and Albin to Mr. Wheeler. *See* BNSF Reply electronic workpaper “June to July Engineering Data.xls” and BNSF.RP.WP.III.B-0005 to 0116. More important, the specific maintenance work that was done to address the failure is not relevant. The important point is that the failure produced a red signal on the affected lines that required trains to stop and restrict their speed. The RTC model must account for the *failure*, which was a random and unavoidable occurrence. The absence of such failures when attempting to replicate railroad operations in the RTC model results in understated transit times and capacity requirements.

Second, Mr. Reistrup mistakenly characterizes many of the random failures used in the BNSF RTC simulation as “track maintenance” that can be planned in advance to minimize train delays. Because he believed that many of the random failures involved discretionary maintenance, Mr. Reistrup chose to ignore them. Mr. Reistrup’s understanding is, again, incorrect. As described above, all of the outages identified by BNSF were of the type that produce a red signal or “stop indication” on the line that requires trains to stop until the event causing the red signal is identified or until the train can receive permission to proceed at reduced speeds. Each of the random failures identified by BNSF was an event that actually occurred and

¹⁰ Reistrup V.S. at 8.

that required an immediate maintenance personnel response to identify and correct the problem to permit the railroad to resume normal operations. Mr. Reistrup should have been able to discern this from the BNSF workpapers cited on Reply.

An example demonstrates the flaws in Mr. Reistrup's claim that the track outages he characterized as "track maintenance" could be ignored. Mr. Reistrup rejected all random failures involving switch points as events relating to routine "track maintenance." Reistrup V.S. at 8-9. While it is true that switch points are routinely maintained, that is beside the point. The switch-point related outages identified by BNSF involve switch point *failures*. When a switch point *failure* occurs, the dispatcher does not know precisely what has occurred. The switch point failure causes a signal system reaction, which results in a red signal or "stop indication" for all trains on the segment of track that is governed by the signal. This fail-safe signal reaction is required. As noted above, the General Code of Operating Rules prohibits trains from moving at normal speeds when the nature of the failure that resulted in the "stop indication" is unknown.¹¹

It is the signal system reaction to the switch point failure that alerts the dispatcher to a signal or track-related malfunction. The dispatcher must then contact the maintenance of way department to send the appropriate personnel to the segment of track governed by the restricted signal indications to determine the nature of the malfunction and the appropriate remedy. The nature of the failure, *e.g.*, a switch point that has broken or gone out of alignment, only becomes known after maintenance personnel have arrived to diagnose the problem. Once the switch point problem has been diagnosed, it must be corrected in order to clear the signaling system and to permit the railroad to resume normal operations.

¹¹ Mr. Reistrup criticizes BNSF for limiting train speeds to 10 miles per hour when they are subject to a signal restriction, but AEP Texas used that same speed restriction for the few outages that it did accept. See AEP Texas Supplemental electronic workpaper "TNR OCT 22B.FORM_B."

In rejecting this entire class of random failures, Mr. Reistrup appears to have confused what can be accomplished during scheduled inspections and maintenance with the actions that must be taken when an actual failure occurs. The random failures relating to switch points used in BNSF's evidence had nothing to do with routine inspections or servicing. Instead, they involved actual switch point malfunctions. When a switch point malfunctions and results in a restricted signal indication, the General Code of Operating Rules require the railroad to immediately stop all trains at that signal, and if the dispatcher determines that it is safe to proceed, allow the train to proceed at restricted speed to the next signal. In the meantime, the railroad must send a maintenance crew to identify and correct the malfunction as quickly as possible. This is the procedure that Mr. Wheeler modeled in BNSF's RTC simulation.¹²

Third, Mr. Reistrup's treatment of signal failures is illogical. Mr. Reistrup acknowledged that the SARR would experience unexpected signal outages, and he accepted such failures in his supplemental RTC simulation for some segments of the SARR. His rationale for including these failures was that the BNSF line segments on which these failures occurred in the real world are reasonably comparable to the SARR, since they were recently constructed and have been well maintained. *See* Reistrup V.S. at 10. But Mr. Reistrup excluded all signal outages on other BNSF lines replicated by the SARR because, he claimed, those lines are not comparable to the SARR in age or level of maintenance. As a result, Mr. Reistrup's model assumes that signal outages occur on some parts of the SARR but not on others. There is no logical reason to assume that signal outages will only occur on a limited segment of the SARR.

Fourth, Mr. Reistrup asserts that virtually no equipment-related failures would occur on the TNR. Reistrup V.S. at 11. As a result, Mr. Reistrup completely ignores locomotive failures.

¹² Mr. Wheeler simulated this process by reducing the track speed to 10 mph for trains passing a restricted signal to the next signal.

He also ignores other equipment-related events such as “broken knuckles,” where the metal coupler (knuckle) between coal cars breaks.¹³ When the knuckle breaks, the train splits into two parts and the brakes are automatically applied, bringing the train to an immediate stop. Such a failure results in a complete shutdown of the affected track while the conductor carries a new knuckle, weighing fifty pounds or more, down the side of the track to replace the broken knuckle. The engineer then reconnects the train through radio communication with the conductor. This repair, depending on the location of the break in the train, is extremely time consuming given that a conductor can walk on the right of way at a rate of only one to two miles per hour.

Mr. Reistrup claims that such failures can be ignored because the TNR will start out with state-of-the-art equipment and the Board’s DCF analysis assumes regular replacement of locomotives and railcars. Again, Mr. Reistrup is simply wrong. The DCF analysis makes no provision whatsoever for replacement of locomotives and railcars. Locomotive ownership costs are based on an assumption that locomotives are acquired at the start of SARR operations under 20-year leases. Incremental locomotives are added only for new traffic. Railcars are treated similarly. As a result, the vast majority of TNR-owned equipment will be 20 years old in 2020, the time period covered by the RTC simulation.

More important, only a fraction of the locomotives and railcars operating on the TNR at a given time will belong to the TNR. Most of the traffic on the TNR is interchanged with the residual BNSF. As a result, most of the locomotives on the TNR will belong to the residual

¹³ Without explanation, while rejecting all other “broken knuckle” events, Mr. Reistrup does include a single incident which was labeled a “train failure” in BNSF Reply electronic workpaper “RTC Track failure-maintenance summary.xls,” at line 50. The workpapers supporting Mr. Wheeler’s list of random failures show that the incident involved a “failed knuckle.” BNSF.RP.WP.III.B-0036.

BNSF. Similarly, most of the TNR coal shipments occur in shipper-owned cars. Mr. Reistrup is not free to assume that equipment not owned by the TNR will be in pristine condition or totally free from the normal equipment malfunctions that affect real-world railroads.

* * * *

As the discussion above demonstrates, AEP Texas' treatment of the random failures in its post-rebuttal RTC simulation, as in its rebuttal RTC simulation, was unprincipled and improper. It is not feasible to posit a SARR on which essentially no random failures would occur and therefore it is not appropriate to model such a SARR. AEP Texas' rejection of the vast majority of actual failures that occurred on the same lines replicated by the SARR under similar operating conditions was unjustified.

To determine what would have happened had AEP Texas properly modeled random failures, Mr. Wheeler reran the AEP Texas post-rebuttal RTC simulation, keeping all assumptions as AEP Texas presented them in its post-rebuttal evidence, except that he replaced AEP Texas' random failure assumptions with BNSF's. When he did so, the simulation could not run to completion.¹⁴ Therefore, if AEP Texas had properly accounted for random failures in its model, it would have concluded that the TNR cannot handle the shipper group posited by AEP Texas without experiencing gridlock.

III. AEP TEXAS' POST-REBUTTAL RTC ANALYSIS RUNS TO COMPLETION ONLY WHEN THE NEED FOR STAGING EMPTY TRAINS IS IGNORED

AEP Texas' opening RTC model assumed that empty TNR trains could move to the mines to be loaded without accounting for the need to share limited capacity at the mines with Union Pacific ("UP") trains. On reply, BNSF pointed out that AEP Texas' RTC model failed to

¹⁴ See BNSF Supplemental electronic workpaper "AEP RTC files_Failures_2-05.zip."

account for the presence of UP trains at the mines occupying limited mine loading capacity. To account for the need to coordinate the loading of TNR trains with UP at Orin Line mines, BNSF's witness Mr. Wheeler included in BNSF's RTC simulation an assumption that UP trains would occupy the same mine loading tracks that the UP trains occupied in the real world during the same time period that was the basis for the RTC simulation. *See* BNSF Reply Nar. at III.B-4 to B-5 and III.B-19 to 20. This corrected for AEP Texas' unrealistic assumption that TNR trains could occupy a mine's loading capacity that was already occupied by another railroad's trains.

On rebuttal, AEP Texas rejected BNSF's model assumptions relating to the presence of UP trains and it made no changes to its opening RTC model to account for the presence of UP trains at the mines. In its post-rebuttal RTC analysis, AEP Texas continued to use the same modeling assumptions relating to UP trains that it used on opening – *i.e.*, it totally ignored the UP trains. This failure to account for the presence of UP trains is fatal to its post-rebuttal RTC simulation, independent of the flaw described above relating to random failures on the SARR lines.

AEP Texas argues that it does not need separately to account for the presence of UP trains at the Orin subdivision mines in its RTC simulation because the 5.5 hours it allows for loading at those mines already accounts for the possible presence of UP trains: “Mr. Reistrup allotted 5.5 hours of dwell time for TNR trains at each of these [Orin Line] mines. He did so precisely to allow a time cushion for the possible presence of UP trains at the mine.” AEP Texas Reb. Nar. at III-B-10. In support of this “time cushion” theory, Mr. Reistrup asserts that all of the jointly served mines on the Orin Line can load trains in two hours, so the extra time in the RTC simulation for loading must be sufficient to account for the presence of UP trains. There are several flaws in this argument.

First, and most important, the “time cushion” theory confuses two distinct issues: (1) how much time does a train spend at the mine after it is admitted to the mine’s limited track capacity; and (2) is there any space available at the mine for a train to enter. The parties agree on the first issue: once a train is admitted to an Orin Line mine, it takes on average 5.5 hours to go through the entire loading process. As discussed below, this loading time covers numerous activities and some of the time may even be attributable to the presence of other trains at the mine. The problem with AEP Texas’ “time cushion” theory is that it utterly ignores the question whether the mine has sufficient capacity to admit a new train. A train cannot enter the mine until there is physical capacity available to accommodate it. If the available capacity is already occupied by other trains, the new train must wait somewhere outside the mine – at a yard, a siding or on the mainline track – for the physical capacity to become available.

AEP Texas’ RTC model fails to consider whether capacity at the mine is available to admit a new train. Mr. Reistrup notes that many of the Orin Line mines have more than one loop track. AEP Texas Reb. Nar. at III-B-9. This is true, but it does not mean that mine capacity can be totally ignored. If, for example, a mine can accommodate two trains at a time, but the two trains happen to be UP trains, there simply is not enough physical capacity to allow a TNR train to enter. The TNR train must wait until one of the UP trains has departed before the TNR train can enter the mine. If the TNR train is required to wait, there must be sufficient capacity somewhere outside the mine to hold the waiting train. Thus, by ignoring the fact that UP trains will occasionally occupy limited capacity available at the mine, AEP Texas’ RTC model failed accurately to assess the capacity needs of the SARR.

Second, Mr. Reistrup’s assertion that AEP Texas added an extra “time cushion” to TNR loading times by choosing to use 5.5 hours of loading time at Orin Line mines is incorrect.

BNSF accepted Mr. Reistrup's use of 5.5 hours because that approximates the real-world time spent by BNSF trains loading at Orin Line mines from arrival at the mine (which assumes capacity is available) to spot to release. See BNSF Reply electronic workpaper "Linesegment2002.pdf," at 11-14. Arrival-to-spot is measured as the time from the arrival of the train at the entrance to the mine (again, assuming capacity is available) until the first car is spotted under the tipple for the actual loading of the cars. This time will include, among other things, inspection of the cars, closing of doors as required, and movement over a weigh-in-motion scale at approximately 2 MPH enroute from the receiving track to the tipple. Spot-to-release is the actual time the train moves under the tipple while coal is being loaded into each car, from the time the first car is loaded until the last car is loaded and has moved over the weigh-in-motion scale, when the train is deemed to have been released and is waiting for departure.¹⁵ During the spot to release period, activities other than simply loading the coal onto the train may occur. For example, time may be required to deal with coal spills that could cause the train to derail if it continued to move forward, the weigh-in-motion scale may malfunction, it may be necessary to wait for mine loading crews to become available, or quality or specification problems with the coal in the tipple may be detected and require resolution. In any case, the 5.5 hours represents the actual loading time required, on average, at the Orin Line mines and there is no extra "time cushion" in that loading time assumption.

¹⁵ Consistent with the Board's discussion in *TMPA*, BNSF did *not* include in the 5.5 hours of loading time the amount of time spent from the release of the loaded train to the return of the train to the mainline. That time might have included some time attributable to the real-world sharing of Orin Line capacity by BNSF and UP. As the Board noted in *TMPA*, "a [SARR] train would be unlikely to incur delays waiting to reenter the main line after it is loaded." *Texas Municipal Power Agency v. The Burlington Northern and Santa Fe Railway Company*, STB Docket No. 42056, at 75 (served Mar. 24, 2003). However, while the SARR does not share its mainline with the UP, it does share the *mine capacity* at Orin Line mines with the UP and that sharing of mine capacity cannot be ignored in the SARR's operating plan and capacity model.

Third, the actual, real-world loading time of 5.5 hours could only be accomplished by the TNR if it carried out the same staging activities that the real-world railroads carry out to make such a loading time possible. If the real world railroads did not coordinate their access to the mines and try to avoid sending trains to the mines when available mine loading capacity is taken up by other trains, loading times would increase substantially. Indeed, without staging, the entire loading process could come to a grinding halt. Staging means that access to the mines is managed in such a way as to avoid whenever possible sending a train to a mine that has no space for another empty train. AEP Texas' RTC model ignores staging altogether.

BNSF, UP (formally CNW) and the mines have been working jointly for over 20 years to manage the loading of coal at the jointly served mines on the Orin Line. They have developed a protocol that allows all parties to maximize their loading opportunities in light of limited capacity in the mine loading area. Using a confidential system called the Coal Forecasting Tool, loading slots are allocated to BNSF and UP based on expected tonnage requirements. This allocation is the basis for the scheduling of empty trains to each mine by the Coal Superintendents (three to four positions working around the clock) that man the joint BNSF/UP Coal Operations group in the BNSF Network Operations Center. Every four hours, the Coal Operations group issues a tentative lineup of BNSF and UP trains to be loaded at each mine, with a 72 hour projection of the trains that are expected to be loaded and an approximate arrival time.

The projection of train loading time is continuously refined and altered as trains approach the PRB. The most precise scheduling of a loading slot occurs when the UP trains arrive at North Platte, Nebraska, and the BNSF trains arrive at either Alliance, Nebraska, or Guernsey, Wyoming. At this point, if congestion at any given mine is discovered, the Coal Superintendents can delay the train at different locations until a slot designated for them is available.

Alternatively, they can attempt to get authority from the utility to divert the train to another mine that has a contract that allows the utility to load and that has an available slot. But even with the efforts of the Coal Operations group, there are occasions when the best scenario is simply to hold the train at some location (e.g., Bill, Wyoming or Donkey Creek, or on an available siding) until a slot is available.

Thus, the 5.5 hours of loading time in the real world is only accomplished because the real world railroads using the jointly served mines recognize that mine slots are not available at all times. By staging trains for access to the mines only when loading slots are available, the real world railroads avoid creating an inefficient free-for-all in the PRB that would produce immediate gridlock. AEP Texas cannot assume that the TNR would be able to avoid these staging requirements.

The Board in *Xcel* made it clear that a SARR serving PRB mines must account for the staging of empty trains in the PRB. There, the Board stated:

[T]he assumptions used in the SAC analysis, including the operating plan, must be realistic, i.e., consistent with the underlying realities of real-world railroading. A real-world railroad could not place empty trains at mines at its convenience, without regard to whether the trains could be accommodated at the mine at that time. Staging facilities would be required, whether at the mine or elsewhere. It does not matter where the operating plan would stage the trains, so long as the trains would flow into and out of the PRB region in a reasonable fashion.¹⁶

AEP Texas has made no provision for such staging. The RTC model used by AEP Texas does precisely what the Board cautioned against – it assumes that the SARR can “place empty trains at mines at its convenience, without regard to whether the trains could be accommodated at the

¹⁶ *Public Service Co. of Colorado v. The Burlington Northern and Santa Fe Railway Co.*, STB Docket No. 42057, at 12 (served Jan. 19, 2005).

mine at that time.” AEP Texas’ post-rebuttal RTC model is therefore flawed and fails to account for the capacity that is needed to handle the traffic needs of its SARR shipper group.

In contrast to AEP Texas’ approach, BNSF’s RTC simulation accounted for the UP presence at the mines in the same manner that the real-world BNSF does so. *See* BNSF Reply Nar. at III.B-4 to B-5 and III.B-19 to 20. First, BNSF’s RTC model replicated the actual mine capacity by including in the model the same number of loading tracks for each mine that exist in the real world. Second, BNSF determined the time that UP trains in the real world occupied the actual loading tracks at each mine during the 15-day period that was the basis of both parties’ simulation. Mr. Wheeler instructed the RTC model to assume that a UP train occupied a loading track at the same mine for the same period of time in the simulation of TNR operations.

This simple set of modeling assumptions allowed the RTC to assess the capacity needs of the SARR in light of the limited capacity that exists at the mines. Thus, in BNSF’s RTC simulation, if a mine has two loading tracks and only one is occupied by a UP train, a TNR train seeking to enter the mine would have no impediment to entry. The RTC model would allow the TNR train to enter, as in the real world, and the loading process would then take the same 5.5 hours that it takes in the real world to load trains. If that same mine had two UP trains occupying the loading tracks (or if the two available tracks were occupied by one UP train and another TNR train), the RTC model would not allow the newly arriving TNR train to enter the mine until one of the other trains left. The SARR, like the real world BNSF, would have to have enough capacity outside the mine to hold empty trains until the limited mine capacity becomes available.

BNSF’s witness Mr. Wheeler applied the same treatment of mine slot availability to the AEP Texas post-rebuttal RTC simulation to determine what would have happened had AEP Texas properly accounted for the presence of UP trains at the mines. Mr. Wheeler reran the AEP

Texas post-rebuttal RTC simulation, keeping all assumptions as AEP Texas presented them in its supplemental evidence, except that he treated mine slots as unavailable in the same manner as was done in the BNSF simulation. When the AEP Texas post-rebuttal RTC simulation was run with the correct assumptions about mine loading slot availability, the simulation could not run to completion.¹⁷

IV. THE AEP TEXAS POST-REBUTTAL RTC SIMULATION ALSO ENDS IN GRIDLOCK WHEN THE EFFECTS OF BOTH RANDOM FAILURES AND UP PRESENCE AT THE MINES ARE INCLUDED

Mr. Wheeler performed an additional test of the AEP Texas post-rebuttal RTC simulation to determine what would happen if the effects of both random failures and UP presence at the mines were accounted for. Mr. Wheeler reran the AEP Texas post-rebuttal RTC simulation, again keeping all assumptions as AEP Texas presented them in its supplemental evidence, but including both random failures and the unavailability of mine slots due to UP trains at the mines. The simulation again could not run to completion.¹⁸

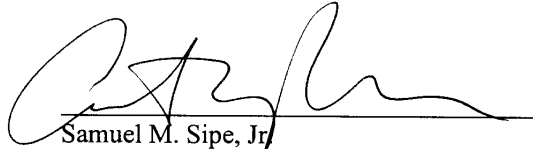
V. CONCLUSION

As demonstrated by the discussion above, AEP Texas' RTC simulation remains fatally flawed. While the Board need not evaluate the merits of the simulation since it is not properly before the Board in the first place, such an evaluation could only lead the Board to reject AEP Texas' new evidence based on its post-rebuttal RTC simulation.

¹⁷ See BNSF Supplemental electronic workpaper "AEP RTC files_UP_Slots_2-05.zip."

¹⁸ See BNSF Supplemental electronic workpaper "AEP RTC files_Failures and UP_Slots_2-05.zip."

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Samuel M. Sipe, Jr.', is written over a horizontal line.

Samuel M. Sipe, Jr.
Anthony J. LaRocca
Frederick J. Horne
Steptoe & Johnson LLP
1330 Connecticut Avenue, N.W.
Washington, DC 20036
(202) 429-3000
Attorneys for Defendant

Richard E. Weicher
Michael E. Roper
The Burlington Northern and Santa
Fe Railway Company
2500 Lou Menk Drive
Fort Worth, TX 76131
(817) 352-2353

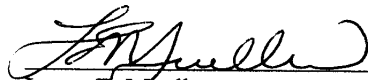
February 14, 2005

Witness Qualifications and Verification of Loren E. Mueller

I am Loren E. Mueller. My business address is 614 Regency Crossing, Southlake, TX 76092. My qualifications as a witness are set forth in BNSF's May 24, 2004 reply evidence and are not restated here. I am sponsoring the evidence in this response to AEP Texas' post-rebuttal evidence relating to railroad operations, including random failures and rail operations related to the mines.

I declare under penalty of perjury that I have read the supplemental evidence that I have sponsored and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on February 10, 2005

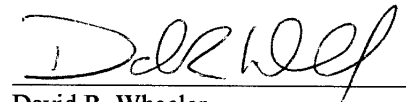

Loren E. Mueller

Witness Qualifications and Verification of David R. Wheeler

I am David R. Wheeler. I am the founder and President of Rail Network Analytics and part of FTI Consulting. My business address is 9222 Nottingham Way, Mason, Ohio 45040. My qualifications as a witness are set forth in BNSF's May 24, 2004 reply evidence and are not restated here. I am sponsoring the evidence in this response to AEP Texas' post-rebuttal evidence relating to the RTC simulations of BNSF and AEP Texas.

I declare under penalty of perjury that I have read the supplemental evidence that I have sponsored and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

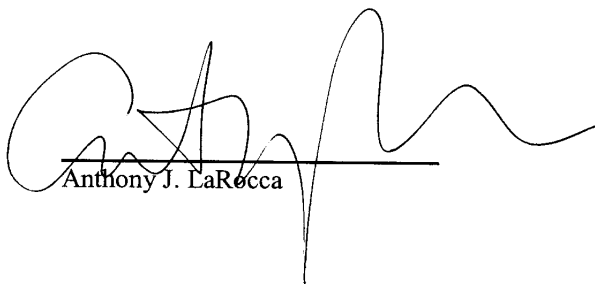
Executed on February 9, 2005


David R. Wheeler

CERTIFICATE OF SERVICE

I hereby certify that this 14th day of February, I served a copy of the foregoing Response to Complainant's Post-Rebuttal RTC Analysis on the following by hand delivery:

William L. Slover
Kelvin J. Dowd
Christopher A. Mills
Daniel M. Jaffe
Slover & Loftus
1224 Seventeenth Street, N.W.
Washington, DC 20036



Anthony J. LaRocca