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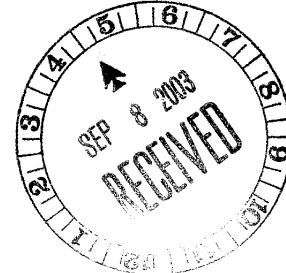
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208868

September 8, 2003



via Hand Delivery

Hon. Vernon A. Williams
Secretary
Surface Transportation Board
1925 K Street, N.W.
Washington, D.C. 20423

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PUBLIC VERSION

**Re: *Public Service Company of Colorado d/b/a Xcel Energy v.
The Burlington Northern and Santa Fe Railway Company,
Docket No. 42057***

Dear Secretary Williams:

Enclosed for filing in the above-captioned matter are the original and 15 copies of the Public Version of the Final Brief of Defendant The Burlington Northern and Santa Fe Railway Company. A copy of the filing is also included on the three (3) attached diskettes.

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Anthony J. LaRocca'.

Anthony J. LaRocca

Enclosures

cc: Counsel for Complainant

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PUBLIC VERSION

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SURFACE TRANSPORTATION BOARD

STB Docket No. 42057



PUBLIC SERVICE COMPANY OF COLORADO D/B/A/ XCEL ENERGY

v.

THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY

**Final Brief of
The Burlington Northern and Santa Fe Railway Company**

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September 8, 2003

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ABBREVIATIONS

Terms

AEP	American Electric Power
BNSF	The Burlington Northern and Santa Fe Railway Company
Board	Surface Transportation Board
DARA	Density Adjusted Revenue Allocation Method
DCF	Discounted Cash Flow
Elec.	Electronic
Exh.	Exhibit
ICC	Interstate Commerce Commission
LCRA	Lower Colorado River Authority
LG&E	LG&E Energy
MMP	Modified Mileage Prorate
MOW	Maintenance of Way
Nar.	Narrative
Op.	Opening
PRB	Powder River Basin
RCAF-A	Rail Cost Adjusted Factor -- Adjusted
RCAF-U	Rail Cost Adjusted Factor -- Unadjusted
Reb.	Rebuttal
Rep.	Reply
RPI	Road Property Investment
RSAM	Revenue Shortfall Allocation Method

RTC	Railroad Traffic Controller Model
SAC	Stand-Alone Cost
SARR	Stand-Alone Railroad
STB	Surface Transportation Board
Surreb.	Surrebuttal
UP	Union Pacific Railroad Company
V.S.	Verified Statement
WP	Work Paper
WRPI	Western Railroad Properties, Inc.

Pleadings

Sum. Disp. Motion	BNSF Motion for Summary Disposition and Stay (filed Feb. 6, 2003).
Surreb. Motion	BNSF Motion for Leave to File Limited Surrebuttal Evidence (filed June 6, 2003).
Xcel Errata to Reb.	Xcel Errata to Complainant's Rebuttal Evidence (filed June 26, 2003).
Xcel Rep. to Sum. Disp. Motion	Xcel Reply to Motion for Summary Disposition and Stay (filed Feb. 26, 2003).

ICC or STB Proceedings

<i>AEPCO</i>	<i>Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Ry. Co. and Union Pacific R.R. Co.</i> , STB Docket No. 42058 (STB served Aug. 20, 2002).
<i>APL</i>	<i>Arkansas Power & Light Co. v. Burlington Northern R.R. Co.</i> , 3 I.C.C.2d 757 (1987).
<i>Duke</i>	<i>Duke Energy Corp. v. CSX Transp., Inc.</i> , STB Docket No. 42070, (STB served Mar. 25, 2003).
<i>Gen. Procedures</i>	<i>General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases</i> , Ex Parte No. 347 (Sub-No. 3) (STB served Mar. 12, 2001).

<i>Guidelines</i>	<i>Coal Rate Guidelines -- Nationwide</i> , 1 I.C.C.2d 520, 544 (1985), <i>aff'd sub nom. Consolidated Rail Corp. v. United States</i> , 812 F.2d 1444 (3d. Cir. 1987).
<i>McCarty Farms</i>	<i>McCarty Farms, Inc. v. Burlington Northern, Inc.</i> , 2 S.T.B. 460 (1997).
<i>Nevada II</i>	<i>Bituminous Coal -- Hiawatha, Utah to Moapa, Nevada Power</i> , 10 I.C.C.2d 259 (1994).
<i>OPPD</i>	<i>Omaha Public Power Dist. v. The Burlington Northern R.R. Co.</i> , 3 I.C.C.2d 853 (1987).
<i>PPL I</i>	<i>PPL Montana, LLC v. The Burlington Northern & Santa Fe Ry. Co.</i> , STB Docket No. 42054 (STB served Aug. 19, 2002).
<i>PPL II</i>	<i>PPL Montana, LLC v. The Burlington Northern & Santa Fe Ry. Co.</i> , STB Docket No. 42054 (STB served Mar. 21, 2003).
<i>TMPA</i>	<i>Texas Municipal Power Agency v. The Burlington Northern and Santa Fe Ry. Co.</i> , STB Docket No. 42056 (STB served Mar. 24, 2003).
<i>WPL</i>	<i>Wisconsin Power & Light Co. v. Union Pacific R.R. Co.</i> , STB Docket No. 42051 (STB served Sept. 13, 2001).
<i>WTU</i>	<i>W. Tex. Utilities Co. v. Burlington N.R.R. Co.</i> , 1 S.T.B. 638 (1996).

FINAL BRIEF OF DEFENDANT BNSF

Pursuant to the Board's August 8, 2003 Order, BNSF hereby files its final brief.

I. INTRODUCTION

The circumstances leading to this rate reasonableness challenge have become common. Prior to the filing of the complaint, BNSF provided transportation of PRB coal to Xcel's Pawnee electricity generating station in unit trains under a transportation contract. Months before the contract was to expire, the parties began negotiation of a new, replacement contract. BNSF offered new contract rates significantly below the expiring contract rate.¹ Xcel rejected BNSF's offer, requested that BNSF publish a common carrier rate to establish STB jurisdiction for a rate reasonableness challenge, and then initiated this litigation.

This case, like others that have recently been brought against BNSF, is the product of an increasingly widespread view among coal shippers that the Board's regulation of rail rates has become a business opportunity for electric utilities to improve their profits, not a protection against the abuse of market power by regulated common carriers. There was no market failure in this case that justifies Xcel's complaint seeking regulatory intervention. Xcel's transportation costs for the two movements previously bundled under the expiring contract declined. BNSF Op. Nar. at II-76. Xcel had an opportunity to obtain even lower transportation rates through private, market-based negotiations. It passed up that opportunity for the prospect of a regulatory windfall.

While Xcel may have been encouraged to litigate by some Board decisions in the 1990s, it had no valid reason to expect the Board to prescribe rates here that are lower than those that

¹ The transportation rate under the expiring contract was { }\$. Xcel Op. Nar. at II-B-13. BNSF offered to renew the contract at { } a rate { } below the expiring contract rate. *Id.* at II-B-14.

were available to Xcel through contract negotiations. Coal transportation rates have declined over the past two decades, but even Xcel acknowledges that the railroads are under financial pressure to increase coal rates.² In exercising its rate reasonableness jurisdiction, the Board cannot and does not ignore these financial concerns. Low rates on coal transportation, resulting in part from shippers' threats to seek unpredictable regulatory action, have contributed to BNSF's continuing revenue inadequacy. BNSF Op. Nar. at II-90-94. The overall R/VC ratio for BNSF's year 2000 coal movements with R/VC ratios over 180 percent was only { } percent, far lower than the revenues that the Board has determined in its RSAM calculations that BNSF needs to generate to become revenue adequate. *Id.* at II-85-86. If regulation further constrains BNSF's coal transportation rates, the prospects for achieving revenue adequacy will be greatly diminished.

Xcel argues that the Board should ignore BNSF's revenue inadequacy in assessing the rates at issue here. Xcel Rep. Nar. at I-3. The statute plainly states the contrary. It expressly instructs the Board to "recogniz[e] the policy . . . that rail carriers shall earn adequate revenues" in determining the reasonableness of rates in individual cases. 49 U.S.C. § 10701(d)(2). This statutory mandate is not satisfied simply by applying the SAC test, as opposed to some other regulatory methodology, to assess rate reasonableness. The SAC test is not a self-executing formula -- not like winding up a clock -- its application in an individual case requires dozens of methodological and evidentiary determinations by the Board. The Board's statutory obligation to take revenue adequacy into account means that the Board must assure itself that the SAC

² As Xcel states on rebuttal, "Financial analysts and industry observers . . . publicly express their expectation that coal rates generally are on the rise, as the remaining large railroads come under increased investor pressure to grow revenues." Xcel Reb. Nar. at III-A-90.

analysis is being implemented in particular cases consistent with the economic principles and policies that underlie the SAC methodology.

One of the foundations of Constrained Market Pricing is that revenue inadequate railroads must be able to charge higher rates to shippers with inelastic demand. BNSF Op. Nar. at I-6-9. This differential pricing policy is reflected in the Board's RSAM calculations, which indicate that shippers with inelastic demand would have to pay rates that are significantly higher than the 180 percent R/VC jurisdictional threshold if BNSF were to have any hope of achieving revenue adequacy. Xcel is precisely the type of shipper that should be paying high rates because of its inelastic demand for coal transportation service. *Id.* at II-76-90. Xcel does not contest BNSF's evidence on this matter, arguing instead that Xcel's demand elasticity, like BNSF's revenue inadequacy, is irrelevant to the application of the SAC test. But if regulation prevents BNSF from charging a shipper like Xcel rates that significantly exceed the jurisdictional threshold, then the regulatory standard has become an obstacle to revenue adequacy, not a vehicle for achieving financial health as Congress intended.

The policies of promoting differential pricing and revenue adequacy are essential guideposts for the Board's implementation of the SAC test. When forced to resolve questions of SAC methodology in a particular case, the Board needs to consider how its methodological decisions will advance the policies that led to the adoption of the SAC test. It would be irrational to adopt a test for rate reasonableness that was designed to give railroads the opportunity to achieve revenue adequacy through differential pricing but then apply the test in a way that severely constrained railroads' ability to charge higher rates to shippers with inelastic demand.

There are two critical methodological issues in this case that the Board must resolve in light of these policies underlying the SAC test. The first involves traffic grouping. Xcel seeks to

distort the SAC results by assuming that revenues from traffic to Western Resources' Jeffery plant would be available to cover the costs of facilities that the Jeffery traffic does not use. Xcel's proposed rerouting of the Jeffery movement is a major focus of BNSF's reply and Xcel's rebuttal evidence. As BNSF explains, revenues from the Jeffery movement should not be included in the SAC analysis because those revenues *do not* today offset the cost of facilities that are replicated by the SARR, those revenues *could not* be used by BNSF to offset the cost of those facilities due to binding contractual commitments, and they *would not* be available to offset the cost of SARR facilities in the stand-alone world because of the operating difficulties associated with the proposed revised route.

The second issue involves Xcel's treatment of cross-over traffic. Almost all of the revenue claimed by Xcel's SARR is derived from an arbitrary allocation of revenues on cross-over traffic. Cross-over traffic is subject to manipulation that can distort the results of the SAC test and lead the Board to conclude that rates are unreasonable when in fact they would be found reasonable under a properly performed SAC analysis. Xcel seeks just such an outcome here. Its revenue allocation on cross-over traffic must be rejected.

The Board should also implement the statutory revenue adequacy policy by giving teeth to the requirement that the complainant meet its burden of proof. The Board cannot accept vague or conclusory evidence in support of the complainant's case-in-chief. Therefore, when Xcel assumes operating, personnel and construction costs that are unparalleled in the real world, the Board cannot accept those assumptions based merely on Xcel's assertion that its SARR is assumed to be a least cost, efficient railroad. Xcel must be required to demonstrate with specific evidence how the SARR could achieve unprecedented cost savings. This brief addresses the principal areas of disagreement between the parties on the calculation of SAC costs. As BNSF

explains, Xcel has not carried its burden of proof on the critical cost assumptions underlying its SAC calculations.

When the SAC test is applied in a way that is consistent with the economic principles that led to its adoption and the evidence is evaluated in light of the complainant's burden of proof, the Board must conclude that the challenged rates do not exceed a reasonable maximum.

II. TRAFFIC GROUPING

While the complainant has the right to select the traffic base for its SARR network, there are limitations to this right. As the ICC explained, "[t]he proponent of a particular stand-alone model must . . . be prepared to defend, the assumptions and selections it has made." *Guidelines*, at 544. In several areas, discussed below, BNSF showed that Xcel's assumptions about the traffic and revenues that would be available to the SARR were unsupported and unjustified.

A. Exclusion of Riverside/Highbridge Traffic

Xcel improperly included in its SARR network coal movements to Xcel's own Riverside/Highbridge plants for the full 20 year DCF period. However, the evidence shows that Xcel plans to convert these plants from coal to gas when the existing coal transportation contract with BNSF expires. BNSF Rep. Nar. at III.A-35-36. In fact, in discovery, Xcel told BNSF that those plants would not be included in its SARR network and declined to produce any information about them. *Id.* at III.A-36. It would therefore be unreasonable to assume that the SARR handles any traffic to these plants beyond the amounts required by the existing transportation contract or to include any traffic to these plants after the existing contract expires.

B. Exclusion of Traffic for Consistency with BNSF's 2003 and 2004 Forecasts

For plants other than its own plants, Xcel developed its traffic volumes for the years 2003 and 2004 based upon BNSF's internal forecasts prepared in the ordinary course of business. However, as BNSF explained on reply, Xcel deviated from the BNSF forecast at times, without

justification, and overstated volumes moving to particular shippers. BNSF corrected Xcel's stand-alone traffic volumes to make them consistent with BNSF's internal forecasts that Xcel relied upon for most purposes.³ These corrections affected the volumes of three shippers – (1) volumes to LCRA's Seymour plant { } consistent with the forecast and the expiration date of the current contract, (2) volumes to LG&E's Ghent plant { } consistent with the forecast and LG&E's obligations under its transportation contract, and (3) volumes to the AEP Rockport plant were { } BNSF Rep. Nar. at III.A-30-34.

On opening, Xcel presented no evidence or explanation supporting its deviation from BNSF's internal forecasts. Xcel merely assumed that "this traffic will continue to move over the WCC after the contracts expire." Xcel Op. Nar. at III-A-9. On rebuttal, Xcel presented for the first time evidence purporting to justify its deviation from the BNSF internal forecasts. Specifically, Xcel claims that publicly available information shows that BNSF's volume forecast relating to the Rockport, Seymour and Ghent plants was inaccurate. This "public information," presented for the first time on rebuttal, is improper. As the Board has repeatedly stated, "[r]ebuttal may not be used in SAC cases as an opportunity to introduce new evidence that could and should have been submitted in the party's case-in-chief."⁴ Since Xcel's assumptions

³ The Board has recognized that internal forecasts are a valid basis for forecasting future volumes. *WPL* at 17-18; *WTU* at 662-63. Having chosen to rely on BNSF's forecasts, Xcel should not be able to selectively deviate from them.

⁴ *Duke* at 4; *see also Gen. Procedures* at 5; *TMPA* at 138.

represented a departure from the BNSF internal forecasts that Xcel relied on, Xcel should have presented any supporting evidence on opening.⁵

C. Exclusion of Rerouted Jeffrey Traffic

A particularly significant traffic issue in this case involves the non-issue traffic moving annually to Western Resources' Jeffrey plant. As BNSF demonstrated on reply, it was improper for Xcel to include the Jeffrey traffic in the stand-alone shipper group. In the real world, the Jeffrey traffic moves on BNSF from northern PRB mines through Edgemont, SD and Alliance, NB to Northport where it is interchanged with UP. This traffic does not move over the lines replicated by the SARR. As discussed below and in detail in its reply evidence, BNSF showed that the inclusion of the Jeffrey traffic violates both prongs of the two-part test announced by the Board in *TMPA* for assessing a complainant's traffic grouping assumptions. *TMPA* at 19.

As to the first prong of that test, the SARR would not meet the transportation needs of Western Resources because the service provided by the SARR on the Jeffrey movement would be inferior to that provided by the real world BNSF. As to the second prong, the rerouting of the Jeffrey traffic from its real world route would not meet the purposes and objectives of the SAC

⁵ In any event, a review of the "new evidence" submitted by Xcel does not support Xcel's claim that BNSF's internal forecast was wrong. As to LCRA, Xcel points to the 2002 LCRA Annual Report. However, that Annual Report says nothing about LCRA's coal transportation sources in 2004 and beyond. To the contrary, it merely discussed the current contract that expires on December 31, 2004. BNSF's internal forecast is the only evidence on post-2003 traffic to the Seymour plant. As to Ghent, Xcel points to a Coal Supply Agreement, apparently obtained by Xcel in mid-May 2003, months after its opening evidence, as evidence that LG&E will ship at least 1 million tons of PRB coal in 2004 and 2005. Xcel Reb. Nar. at III-A-34; Xcel Reb. WP at 5554. However, that coal supply agreement does not obligate LG&E to purchase any PRB coal after 2003. LG&E is only obligated to take PRB coal from the supplier after 2003 *if* LG&E and the supplier are able to negotiate a price and other terms. If the parties do not reach an agreement on these terms, the Agreement is terminated. *See* Agreement, § 8.1 at Xcel Reb. WP 5564 to 5565. There is no evidence that an agreement was ever reached on post-2003 PRB coal purchases. BNSF's internal coal forecast remains the best evidence of record on Ghent traffic volumes after 2003.

test. The Board has explained that it is inconsistent with the purposes and objectives of the SAC test for a complainant to rely on non-issue traffic to contribute to the costs of facilities that the non-issue traffic does not use.⁶ The Jeffrey traffic does not and would not use the facilities replicated by the SARR so the revenues from that movement should not be included in the SAC analysis.

BNSF has two routes out of the PRB. One route goes south over the Orin Line through Guernsey to Northport. The northern route exits the PRB at Donkey Creek and turns southeast through Edgemont, SD and Alliance, NB. The existence of these two routes allows BNSF efficiently to serve its PRB traffic by routing traffic originating at mines in the northern PRB over the Edgemont/Alliance line and routing the traffic originating at mines in the southern PRB over the southern route. There is no evidence in the record suggesting that BNSF's ownership and operation of these two lines is inefficient or unnecessary. Indeed, shippers, including Western Resources, clearly benefit from the existence of these multiple routes out of the PRB.

Xcel's SARR replicated only the southern BNSF route out of the PRB going through Guernsey. Xcel also assumed, consistent with BNSF's practice in the real world, that this route would handle traffic primarily originating in the southern PRB mines. Nearly 75 percent of the SARR traffic (other than Jeffrey traffic) originates at southern PRB mines, *i.e.* mines south of Cordero. Indeed, where a particular shipper served by the SARR originated coal today at mines

⁶ *AEPCO* at 2 (“a shipper should not seek to have its rate reduced by shifting any part of the costs of the lines or facilities that it needs onto traffic that does not use those lines or facilities”); *PPL II* at 7 (“revenues from non-issue traffic should not be relied upon to contribute to the costs of line segments or facilities that the non-issue traffic would not use”).

in both the northern and southern portions of the PRB, Xcel generally chose to handle only that shipper's southern mine origins.⁷

Xcel departed from this approach with the Jeffrey traffic. That traffic originates at two northern mines in the PRB – Eagle Butte and Belle Ayr – and moves on BNSF today over the Edgemont/Alliance route. {

} BNSF Rep. Nar. at III.A-24, n.16.⁸ Several operating conditions also dictate the routing of the Jeffrey traffic over the Edgemont/Alliance line. For example, that route is (1) shorter than the southern route from the PRB, (2) operationally more efficient for coal coming out of the northern Eagle Butte mine where the vast majority of Jeffrey traffic originates, and (3) avoids congestion on the heavily used southern line. *Id.* at III.A-23-24.

Xcel's assumption that the Jeffrey traffic would be rerouted from BNSF's Edgemont/Alliance line to the SARR's southern line is unreasonable and inconsistent with the traffic grouping principles underlying the SAC test. First, under SAC theory, the SARR steps into the shoes of the incumbent. {

} *See WTU* at 658, n.41. A shipper

⁷ For example, while { } originated coal from many northern mines in 2001 and 2002 (including Cordero, Buckskin, Caballo Rojo and Rawhide), Xcel only selected coal originating from Black Thunder, a southern mine, for inclusion in its traffic base. BNSF Rep. Ex. III.A-3.xls at WS Final Traffic 2002, rows 76-4, 78-9 and SMRT01H2 at rows 128, 177, 186, 197, 325, 337, 355, 385.

⁸ Xcel points to a single Jeffrey movement out of the hundreds of Jeffrey movement records produced by BNSF in this case that moved south over the Orin Line through Guernsey. *See Xcel Reb. Nar.* at III-A-19. {

}

cannot have it both ways. It cannot assume the benefits of the incumbent's existing contracts but then avoid the substantive obligations that are part of the contract.

Second, { } it is unreasonable to assume a rerouting of the traffic because the SARR's service would be inferior to the service provided by BNSF today over the Edgemont/Alliance route. As BNSF explained on reply, the disadvantages of the southern route for Jeffrey trains are exemplified by Xcel's own evidence on cycle times. Even though Xcel's string program clearly understates cycle times, Xcel assumed that the cycle times for the Jeffrey trains on the SARR would *exceed* BNSF's cycle times by as much as 17 percent. BNSF Rep. Nar. at III.A-24-27.⁹ On rebuttal, Xcel challenged BNSF's cycle times evidence as a apples-to-oranges comparison of average cycle times on the BNSF today to peak cycle times on the SARR. Xcel argued that it is not surprising that the cycle times achieved during the supposed two-week peak period on the SARR are longer than BNSF's average cycle times because one would expect cycle times during peak periods to be longer than average.

The problem with Xcel's argument is that Xcel did not, in fact, model a peak period. As BNSF showed in its Summary Disposition Motion at 10-14, Xcel's opening evidence was based on a modeled week with *below* average traffic volume. In response, Xcel claimed that it inadvertently based its opening evidence on a one-week period from the string program instead of a two-week period. Xcel Rep. to Sum. Disp. Motion, Crowley V.S., 14-15. BNSF then showed in its reply evidence that even the two-week period belatedly selected by Xcel was only an average period on the WCC and still did not qualify as a peak. BNSF Rep. Nar. at III.B-11-

⁹ The differences between the cycle times are magnified when the obvious shortcomings in Xcel's string program are considered. *See* BNSF Rep. Nar. at III.B-10-20.

15. On rebuttal, Xcel claimed that it *could* have instructed the string program to model the operations of longer trains with more cars, which would increase the annualized traffic volume based on the two-week period to a level representative of a peak period. Xcel Reb. Nar. at III-B-24-25. But Xcel *did not* model the operations of these longer trains; if it had, the SARR's trains would have been heavier and slower, causing the cycle times to be even longer.¹⁰

Also on rebuttal, Xcel presented a new string program analysis purporting to show that SARR trains would actually achieve faster cycle times than the trains Xcel modeled on opening. The Board should not give any weight to this new string program analysis. In addition to being improper rebuttal under Board precedent, the string program results generating the supposedly faster trains stemmed in part from an error in the program codes that instructed the model to ignore grades and curves on the SARR. *See* BNSF Surreb. Motion at 15-19. Trains moving over flat, straight track will obviously achieve unrealistically fast transit times. In its response to BNSF's surrebuttal motion, Xcel admits that the new string program contained this error but suggests that yet another change in the program code could fix the error. *See* Xcel Errata to Reb. At this late stage, the Board cannot accept yet another iteration of Xcel's flawed string program or place any reliance at all on operating statistics that might be produced by it.

There are other reasons to believe that the SARR would not be able to provide service as good as the incumbent's on the Jeffrey movement. Use of the Edgemont/Alliance route for the Jeffrey traffic avoids interference with other loaded and empty trains being staged into and out of the southern PRB mines. Since as many as 25 trains a day are assumed to enter and depart the

¹⁰ Xcel also claims in its rebuttal that it modeled the "WCC's three busiest weeks" in its string program. Xcel Reb. Nar. at III-A-21. However, Xcel's workpapers show that the traffic volume for this three-week period, when annualized, is equal to Xcel's expected annual volume for the WCC. *See* Xcel Reb. Elec.WP "PEAKTRAINSReb.123."

simplifying assumption that allows shippers to avoid evidentiary burdens as it was in the *Nevada Power* case where the ICC first approved its use. Instead, cross-over traffic has evolved into the 800 pound gorilla of complainants' hypothetical SARRs, completely dominating complainants' traffic groups and effectively determining the outcome of the cases. In a case like this where cross-over traffic dwarfs the issue traffic, the allocation of revenue on cross-over traffic is the most critical input to the SAC analysis, yet that allocation is unavoidably arbitrary, regardless of the allocation method used.

This is a bizarre – and in BNSF's view impermissible – state of affairs. Absent the abuse of cross-over traffic, complainants would have no basis for their rate reasonableness claims.

BNSF's reply evidence explained in detail why reliance on cross-over traffic is inconsistent with SAC principles. Professor Janusz Ordovery's extensive testimony on this conceptual aspect of the cross-over issue boils down to three basic propositions: (1) Cross-over traffic violates the cost-causality principle underlying the SAC test. That test is supposed to compare the total revenues generated by the traffic group with the full economic costs of all the facilities needed to serve movements in the group. The use of cross-over traffic (and the splitting of a stand-alone railroad into interline segments) severs the responsibility for cost recovery, necessitating an arbitrary allocation of revenues that, by definition, cannot be attributed to particular segments of the cross-over movement. BNSF Rep. Nar. at III.A.10-13. (2) The allocation of revenue on cross-over traffic can distort the outcome of a properly performed SAC test, resulting in a finding that challenged rates are unreasonably high when, in fact, they would be found to be reasonable under a full SAC analysis. *Id.* at III.A.15-21. The potential for distortion increases as the share of cross-over traffic in the stand-alone traffic group increases.

(3) Complaining shippers, including Xcel, have the incentive to use cross-over traffic as a vehicle for strategic revenue shifting that will produce distorted SAC results. *Id.* at III.A.13-15.

In its rebuttal evidence and argument, Xcel fails to refute any of BNSF's three conceptual propositions. It essentially ducks the first point, suggesting that BNSF's critique of cross-over traffic is an attack on the principal of traffic *grouping*. Xcel Reb. Nar. at I-10-11. But BNSF specifically endorsed the "ICC's decision to allow a shipper to group issue and non issue traffic that was to be carried end-to-end" as "fully consistent with the basic precepts of constrained market pricing." BNSF Rep. Nar. at III.A.9. It is the severing of end-to-end movements and the consequent inability to compare full revenues and full costs that violates SAC principles. Xcel did not even address the severing/arbitrary allocation issue on rebuttal. Nor did Xcel address BNSF's contention that the use of cross-over traffic can distort the outcome of a properly performed SAC analysis. It had no answer to the stick diagram (or "simplified example") set forth in BNSF's reply narrative. *Id.* at III.A-15-21. BNSF has presented unrefuted evidence of the distorting effect of cross-over traffic. Finally, Xcel did not dispute that it has the incentive to manipulate the division of revenues on cross-over traffic so as to engage in strategic revenue shifting.

Given these unrefuted conceptual problems with Xcel's reliance on cross-over traffic, the Board should dismiss Xcel's SAC evidence in its entirety since Xcel's case is built on cross-over traffic. If it does not do so, the Board must accept the evidence of record based on the method for allocating revenue on cross-over traffic that is less arbitrary and less likely to distort the outcome of the SAC analysis.

On the record presented here, the Board's choice of revenue allocation methods is between the modified mileage prorate ("MMP") espoused by Xcel and the density adjusted

revenue allocation method (“DARA”) proposed by BNSF. DARA is clearly superior from the perspective of SAC principles because it addresses the ability of the SARR and the residual incumbent to cover both attributable and unattributable costs. It does so by taking account of differing levels of traffic density on the on-SARR and off-SARR portions of cross-over movements. DARA is also superior from an equitable perspective because it produces more even-handed results than MMP, which, as implemented by Xcel, allocates disproportionate revenues to short-haul movements by the SARR as originating carrier.

Xcel attempts to defend MMP not as a matter of economic logic but as a matter of Board precedent. It contends that its use of MMP is based on the Board’s “well-established standard that in the absence of actual data on revenue divisions the goal of estimating the revenues that a SARR should earn from cross-over traffic is to estimate what the market-based divisions would be in the ‘real world.’” Xcel Reb. Nar. at I-24. Xcel extracts this “well-established standard” from the concurring opinion of Chairman McDonald in the ICC’s *Nevada Power* decision.

In fact, the current state of the law is that there is no “well-defined standard” that governs the issue of what method should be used to allocate cross-over traffic revenues in this case. Although the Board and its predecessor have accepted revenue allocations based on MMP in some prior SAC cases, the Board has twice recently addressed the issue of allocation methodology and said that “we have not adopted a single, preferred procedure for developing revenue divisions on cross-over traffic.”¹⁴

As to the Board’s supposed preference for allocating revenues by estimating market-based divisions, the state of the law is also different from what Xcel claims it to be. *Nevada*

¹⁴ *TMPA* at 31 n.74; *accord PPL I* at 7 n.14.

Power did not constitute an unqualified endorsement of divisions.¹⁵ Numerous other SAC cases, including those most recently decided by the Board, indicate that considerations of cost-coverage are at least as relevant as market considerations in determining how to allocate revenues on cross-over traffic.¹⁶ In *McCarty Farms*, the Board used MMP to allocate revenues on cross-over traffic not because it found MMP to estimate market-based divisions but because it “account[ed] for the non-mileage-based costs incurred when carriers switch freight cars.”¹⁷

The issue regarding cost coverage on cross-over traffic is framed by the Board’s recent statement in *TMPA*: “The revenue each carrier receives should cover the attributable costs of the service it provides and make some contribution to its unattributable costs.” *TMPA* at 37 n.74. Determining coverage of attributable costs for the SARR and the residual incumbent is relatively straight-forward.¹⁸ The question that is critical to the revenue allocation issue in this case is how the residual revenue available for coverage of unattributable costs should be divided between the SARR and the residual incumbent.

¹⁵ *Nevada Power* at 268 (“In the absence of any better evidence, we will prorate the revenues attributable to the cross-over traffic among the SARR and incumbent carriers on a mileage basis. . . . This approach is consistent with the treatment in our staff’s preliminary analysis of historically interlined traffic for which actual (market-based) divisions are not available.”)

¹⁶ *OPPD* at 136, 138; *PPL I* at 10 n.20; *TMPA* at 31 n.73.

¹⁷ *McCarty Farms* at 9. The Board stated that “[w]e find that the modified mileage proration method is superior to a straight mileage proration, because it takes into consideration differing handling costs.” *Id.*

¹⁸ BNSF calculated attributable costs for both the SARR and residual incumbent portions of cross-over movements under its DARA procedure using the most recent URCS for BNSF and employing the Board’s Ex Parte No. 399 costing assumptions. BNSF Rep. Nar. at III.A-67. Xcel purported to show that its MMP revenue allocation gives the residual incumbent sufficient revenue to cover attributable costs of off-SARR portions of cross-over movements, but it did not calculate attributable costs correctly. See BNSF Rep. Nar. at III.A.-56-57.

Xcel makes no effort to answer this question. BNSF does answer this question, and its answer is that the carrier with relatively lower densities on its segment of a cross-over movement will need a relatively greater portion of the residual revenue on the movement to cover its unattributable costs than the carrier with relatively higher densities. This proposition flows logically from the existence of production economies that characterize the economic structure of the rail industry, and in particular from “the fact that greater use of the fixed plant result in a declining average cost.”¹⁹

BNSF’s DARA procedure involves an explicit calculation of attributable costs on both portions of cross-over movements and an allocation of residual revenue in direct proportion to length of haul and in inverse proportion to traffic density.²⁰ Thus, in the current case, DARA represents a refinement and an improvement over MMP because it provides a principled basis for allocating that portion of revenue on cross-over movements that is available to cover unattributable costs. DARA is designed to be even-handed.²¹ In this case, it allows the SARR to benefit from economies of density by receiving additional revenue in excess of attributable costs for each unit of traffic that it carries, while at the same time recognizing that the less dense residual incumbent must also cover unattributable costs over the long term if it is to be able to interchange traffic with the SARR over the long term.

Xcel directs a variety of unfocused criticisms at DARA, the most prominent being that DARA is “contrary to the rule that that estimates of revenue divisions for cross-over traffic must be market-based. . . .” Xcel Reb. Nar. at III-A-63. As discussed above, the decisions of the

¹⁹ *Guidelines* at 526; *see also PPL I* at 12 n.21 (referring “to “the declining capital investment needed per unit of output as the rail system is used more intensively”).

²⁰ The procedure for implementing DARA is described at BNSF Rep. Nar. at. III.A.-65-68.

²¹ *See* BNSF Rep. Nar. at III.A-71-74 (DARA results and interpretation).

Board and its predecessor regarding cross-over traffic cannot fairly be read to establish such a categorical rule. Xcel also contends that DARA “can lead to anomalous results because it focuses on only a single cost factor – density – and ignores all others.” *Id.* at 64. This is simply wrong. In its attributable cost calculation, the DARA procedure takes account of all the cost factors that comprise variable costs. And DARA, like MMP, explicitly accounts for length of haul.

The DARA revenue allocation procedure is the best one available to the Board on the record of this case.

IV. SARR CAPACITY

Xcel’s failure to posit a SARR with adequate capacity is a critical flaw in its case-in-chief. Xcel’s understatement of capacity resulted in a railroad that would be utterly incapable of providing service at the same level as the incumbent, a flaw that should, on its own, result in dismissal of Xcel’s claims. Xcel impermissibly tried to repair the flaws in its capacity assumptions by reconfiguring the SARR on rebuttal, a misuse of rebuttal. In any event, given the deficiencies in the string program, Xcel provided no competent evidence that could be used to assess the new capacity assumptions.²² The only reliable evidence on SARR capacity in this case is that submitted by BNSF.

²² As a result, there is no evidence in the record as to the capacity that would be needed to handle the higher traffic volumes assumed by Xcel. The Board cannot logically accept Xcel’s traffic assumptions when Xcel has failed to provide competent evidence on the capacity needed to handle that traffic.

A. String Program Flaws

Apart from some general references to the former WRPI line, Xcel's only support for its capacity assumptions is a flawed and unreliable string program analysis.²³ As BNSF explained in BNSF'S Summary Disposition Motion and reply evidence, numerous errors in the string program code as well as in Xcel's application of the string program render it useless in this case as a test for the adequacy of SARR capacity.

First, the string program analysis understates the number of trains that the SARR would need to accommodate in the peak traffic period, thus understating peak period capacity requirements.²⁴ Second, the string program fails to link empty trains with loaded trains departing from PRB mines, thus ignoring capacity that would be required at the mines or at staging locations in the PRB.²⁵ Third, the string program fails to detect overloadings of sidings and

²³ Xcel claims that its SARR design is based on the former WRPI line. While Xcel's opening SARR had 26% doubletrack compared to 28% doubletrack for the former WRPI line in 1994, the WRPI line in 1994 also carried 30% less traffic than the SARR. BNSF Rep. Nar. at III.B-7. On rebuttal, Xcel claims that UP has expanded its traffic volume on the WRPI line since 1994, but it ignores the fact that UP has also added substantial capacity since 1994 to handle those higher traffic volumes. Xcel Reb. Nar. at III-B-11. By contrast, BNSF's real world Edgemont/Alliance line handles traffic volumes comparable to the SARR and has about 78% doubletrack, more than twice the amount assumed by Xcel, even after Xcel purported to add capacity on rebuttal. BNSF Rep. Nar. at III.B-34.

²⁴ Xcel's failure to model a peak period is discussed in connection with the Jeffery traffic.

²⁵ BNSF Sum. Disp. Motion at 15-16 and BNSF Rep. Nar. at III.B-15 to 16. Xcel's string program assumed that some trains would wait for days at mine loading locations but failed to include this time or consider whether there was adequate capacity for these trains at the mines. *Id.* Xcel claims that this problem is the inevitable result of its modeling assumptions, especially its use of actual departure time for individual trains. Xcel Reb. Nar. at III-B-30. But this concession highlights the unreliability of Xcel's string program analysis. Moreover, BNSF showed that it was possible to model a full cycle of SARR trains while they were on the SARR, thus ensuring that SARR capacity in the loading areas would be evaluated. BNSF Rep. Nar. at III.B-25.

yards, a fatal defect in a model designed to test the adequacy of capacity.²⁶ Fourth, the string program assumes incorrect or impossible train operations, including excessive speeds, flawed acceleration and deceleration, and erratic train movements.²⁷

BNSF pointed out these flaws in Xcel's string program in its Summary Disposition Motion, and Xcel claimed, in reply to BNSF's motion, that the errors could be fixed on rebuttal. However, as to the first two categories of errors described above, Xcel did not even attempt on rebuttal to repair the string program.²⁸ On the question of overloaded yards and sidings, Xcel claims on rebuttal to have addressed this problem by "manually adjust[ing]" trains. Xcel Reb. Nar. at III-B-33. However, BNSF demonstrated in its Surrebuttal Motion that the new string program, like its many predecessors, still failed to detect overloaded sidings and yards. BNSF Surreb. Motion at 7, 19-20. On the question of erroneous train operations, Xcel claimed that these errors could be corrected by modifying the data used in the string program on SARR grades and curves. Xcel Reb. Nar. at III-B-35. Whether or not this is true, Xcel's rebuttal string program clearly did not fix the problem because the new string program ignored grade and curve

²⁶ BNSF Sum. Disp. Motion at 17; BNSF Rep. Nar. at III.B-17 to 18; BNSF Surreb. Motion at 7, 19-20. These same defects in the string program submitted by complainants in TMPA led the Board to reject its use in that case. *TMPA* at 68 n.112 and 73-74. A related problem is the failure of the string program to detect T-Bone train collisions. BNSF Motion at 16-17 and BNSF Rep. Nar. at III.B-16 to 17.

²⁷ BNSF Sum. Disp. Motion at 17; BNSF Rep. Nar. at III.B-18 to 20.

²⁸ Xcel claims that it *could have* modeled a peak period simply by assuming the trains used in the string program were longer and heavier. But the short answer is that Xcel *did not* model the operations of those longer, heavier trains. BNSF Rep. Nar. at III.B-13 n.12. In addition, Xcel did not fix the string program's failure to link loaded and empty trains, which as noted above, is a shortcoming inherent in its model. Xcel Reb. Nar. at III-B-30 to 31.

data altogether.²⁹ Indeed, this error in the rebuttal string program, which Xcel acknowledges, alone renders it unreliable as a tool for testing capacity in this case.

The Board has seen multiple versions of the string program analysis in recent cases as complainants scramble to address program and implementation errors that are pointed out by defendants. As demonstrated in this case, every time an error in the program is supposedly fixed, other errors are introduced. The string program used here is an unwieldy and unreliable model in each of its iterations and the Board should reject all evidence based on it.

B. Xcel's Understatement of Capacity

There is no dispute that Xcel failed to design a SARR with sufficient capacity to meet the service requirements of its shippers. Xcel's own cycle times evidence showed that SARR trains consistently exceeded BNSF's existing cycle times by large margins.³⁰ Xcel's failure to posit a SARR that provides service at least as good as that provided by the incumbent justifies dismissal of Xcel's SAC evidence without even considering the many flaws in Xcel's string program. BNSF Rep. Nar. at I-4-9. Indeed, Xcel admitted on rebuttal that the SARR it posited on opening had "certain congestion problems." Xcel Reb. Nar. at III-B-4. It therefore reconfigured the SARR on rebuttal to doubletrack an additional 10% of the SARR. These changes to the SARR design constitute impermissible rebuttal.

The Board permits a complainant to correct inadvertent errors in its opening evidence, but it does not permit the complainant to redesign the SARR to address a design or operating flaw in the complainant's case-in-chief.³¹ Xcel's claim that it was merely correcting inadvertent

²⁹ BNSF Surreb. Motion at 6-7, 15-19.

³⁰ BNSF Rep. Nar. at III.B-8 to 9; III.C-15 to 16.

³¹ *Duke* at 4.

string program flaws that BNSF pointed out in its Summary Disposition Motion is patently false. *See* Xcel Reb. Nar. at III-B-3. The revised SARR design presented by Xcel on rebuttal did not simply lengthen sidings to accommodate the multiple trains that the string program erroneously assumed would fit in a siding -- the issue addressed by BNSF in its Motion -- but instead sought to expand capacity to reduce congestion and provide faster cycle times for SARR trains.³² In effect, Xcel posited a new SARR on rebuttal because it was clear that the SARR posited on opening was inadequate. This is impermissible rebuttal.

In any event, Xcel's rebuttal capacity assumptions cannot be accepted because they cannot be assessed on this record. The flaws in the string program analysis that Xcel used on rebuttal to assess transit times and capacity contain *new* errors. As explained in BNSF's Surrebuttal Motion, Xcel's rebuttal string program analysis mistakenly assumes that SARR trains move over a perfectly flat, straight track, allowing those trains to achieve unrealistic transit times. BNSF Surreb. Motion at 17. Xcel admits that the rebuttal string program contained this error but implausibly suggests that the error is not significant and that it can be corrected by yet another change to the underlying code. It would be improper to consider any evidence based on further iterations of the string program.

C. BNSF's Capacity Model

In contrast to Xcel's made-for-litigation string program, BNSF used the Rail Traffic Controller ("RTC") model developed by Berkeley Simulation Software to develop capacity assumptions for the SARR. The RTC model is sophisticated, reliable and easy to use, and it has become widely accepted among railroads, transit authorities and government agencies. BNSF

³² Indeed, Xcel admits that the changes were addressed to "congestion problems." Xcel Reb. Nar. at III-B-7.

Rep. Nar. at III.B-22. BNSF described in detail on reply the inputs to the RTC model and how that model was used to determine SARR capacity requirements.³³ Using the RTC model, Mr. Wheeler determined that the SARR required an additional 69 miles of mainline track to accommodate BNSF's revised traffic volume.³⁴

On rebuttal, Xcel challenged BNSF's use of the RTC model. First, Xcel argued that it would be improper for the Board to accept evidence based on the RTC model because the program code for the model cannot be evaluated. Xcel Reb. Nar. at III-B-38-39. However, the masking of program code is a common feature of commercial computer programs designed to prevent the theft of the underlying intellectual property. The Board should accept evidence based on such programs if the programs are used in commercial applications since acceptance by the industry is sufficient evidence that the model produces reliable results.³⁵

Second, Xcel argues that the Board should not accept evidence based on the RTC model because Mr. Wheeler did not respond to requests for detailed information about the specific projects on which the RTC model was used. Xcel Reb. Nar. at III-B-39 to 40. But Mr. Wheeler was not obligated to respond to burdensome and unauthorized discovery requests filed after reply evidence was submitted. Xcel's discovery argument is a red herring intended to distract the

³³ BNSF Rep. Nar. at III.B-20-34. BNSF will provide a copy of the RTC model to the Board after final briefs are filed to allow the Board to evaluate BNSF's evidence on capacity. BNSF provided a copy of the model to Xcel after reply evidence was filed.

³⁴ BNSF Rep. Table III.B-5. Some of the additional capacity in Table III.B-5 is second mainline within SARR yards, and BNSF therefore counted that capacity as yard track in the comparison of track miles in Tables III.B-2 and III.B-3 of its reply evidence.

³⁵ A more restrictive rule would force the Board to rely on made-for-litigation models that are more easily manipulated. Indeed, it would be irrational for the Board to reject the widely used RTC model and instead rely on a string program developed for litigation purposes whose code is available for review but clearly replete with errors.

Board from the uncontested evidence that the RTC model is in fact used in commercial applications. Xcel presents no evidence whatsoever that the model is unreliable.³⁶

Finally, Xcel raises a number of issues related to the implementation and use of the RTC model in this case. It is clear without extensive analysis that Xcel's criticisms are trivial and address minutia, not the overall logic or validity of Mr. Wheeler's RTC application.

In its August 8, 2003 order, the Board instructed the parties to address in their final briefs the development of off-line transit and unloading times used in their respective operating models. BNSF did not independently develop off-line or unloading times but instead accepted Xcel's assumptions as to those times. Xcel never explained its procedure for developing off-line and unloading times, which are set out in an electronic workpaper.³⁷ It used these off-line times in the following way. It first identified the time that each modeled train was assumed to leave the SARR loaded and then added the off-line time to determine when the train was assumed to return to the SARR empty. BNSF simply accepted Xcel's calculation of the empty return time as the beginning of the cycle of each SARR train that BNSF modeled. There was no reason to question Xcel's calculation of off-line times since those times were not relevant to the determination of SARR capacity or cycle times. Moreover, acceptance of Xcel's calculations eliminated an area of potential dispute.

³⁶ Xcel did criticize the model on grounds that it supposedly does not produce data in a form that can be utilized by an analyst. Xcel Reb. Nar. at III-B-46. Xcel is wrong. The RTC Model can produce output data in spreadsheet format that can be analyzed in either Microsoft Access or Excel.

³⁷ Xcel Op. Elec. WP "peaktrns.xls" at column AV in the "string_Xcel.zip" file.

D. Yard Capacity

The most significant difference between the parties on the issue of yard capacity relates to the Guernsey Yard, the largest and most important SARR yard. The inadequacy of Xcel's Guernsey yard is evident by comparing it to BNSF's Alliance Yard, which handles a comparable amount and type of traffic as the SARR. BNSF's Alliance Yard has 27 tracks used to process empty trains while Xcel's Guernsey Yard has *six* tracks for empty trains. BNSF Rep. Nar. at III.B-45-46. While Xcel's assumptions inconsistent with the real world, Xcel provides no support for its Guernsey Yard configuration except vague and conclusory assertions that Xcel's experts designed the Guernsey Yard to be comparable to WRPI yards. WRPI, however, handled a substantially lower traffic volume than the SARR is assumed to handle. Moreover, there is no way to verify Xcel's assertions about WRPI because Xcel did not submit a scrap of evidence on the WRPI yard configuration to support its claims.

BNSF performed two independent and complementary analyses of the trackage required for Xcel's Guernsey Yard. First, BNSF's witnesses Messrs. Cebula and Mueller evaluated the actual operations to be carried out at Guernsey. BNSF Rep. Nar. at III.B-46-48, 51. A second analysis was performed by Mr. Wheeler using the RTC model.³⁸ BNSF Rep. Nar. at III-B-48-49, 51-52. Xcel basically ignored BNSF's RTC model analysis and focused its criticism on Mr. Mueller's analysis of operations needed to be performed at Guernsey.

First, Xcel complained that it was inappropriate for Mr. Mueller to rely on real world experience in assessing the time that empty trains would spend at Guernsey. But Xcel presented no evidence challenging Mr. Mueller's detailed description of the specific steps required or the

³⁸ Both analyses were performed based on the lower traffic volumes that BNSF assumes will be available to the SARR. Obviously, higher traffic volumes would require substantially more yard capacity.

amount of time required to perform the needed operations, and Xcel likewise presented no evidence to support the 2-hour dwell time for empty trains that Xcel asserts should be used instead.³⁹ Xcel Reb. Nar. at III-B-52; III-C-19-20. Second, notwithstanding its own designation of the Guernsey yard as the SARR's "principal service/staging yard," Xcel Op. Nar. at III-B-6, Xcel asserts that it was inappropriate to include staging tracks at Guernsey to coordinate access into PRB mines. Xcel Reb. Nar. at III-B-52. But it is beyond serious dispute that any railroad originating unit coal trains in the PRB would need staging facilities to ensure the efficient flow of traffic on high volume lines. BNSF Rep. Nar. at III.B-48. Finally, Xcel challenged BNSF's assumption that southbound loaded trains must enter Guernsey Yard. Xcel Reb. Nar. at III-B-53. But BNSF demonstrated that loaded trains interchanged to BNSF at Pawnee Junction must enter Guernsey Yard for a 1,000-mile inspection. BNSF Rep. Nar. at III.C-24.

V. SARR OPERATING COSTS

It is difficult to compare directly the parties' operating costs because those costs are based on SARRs with significantly different traffic volumes. However, it is clear that the parties are far apart in their calculation of operating costs since Xcel's base year operating costs are 57 percent of BNSF's projected operating costs even though Xcel's SARR supposedly handles 12 percent *more* traffic in the base year.⁴⁰ The areas where the parties differ most significantly on operating costs relate to crew, locomotive, G&A, and MOW costs.

³⁹ Mr. Mueller pointed out that his assessment of time was very optimistic when compared to BNSF actuals. BNSF Rep. Nar. at III.C-19 to 24.

⁴⁰ Compare BNSF Rep. Ex. III-H-1 at 23; Xcel Reb. Ex. III-H-3 at 23; and BNSF Rep. Ex. III.A.8 at 1 and Xcel Reb. Ex. III-A-8 at 1.

A. Crew

Xcel failed to provide the Board with any reliable or usable crew statistics. BNSF pointed out in its Summary Disposition Motion, and Xcel in many cases conceded, the numerous mathematical errors and the failure to comply with federal hours-of-service regulations that led to Xcel's first assumption on opening of 146 T&E employees.⁴¹ In response to BNSF's Motion, Xcel hypothesized that if the errors were corrected, the WCC could require as many as 260 crew personnel in the base year.⁴² BNSF demonstrated on reply that the necessary corrections would result in a need for more than 400 crew personnel in the base year.⁴³ Then on rebuttal, Xcel came up with a new crew number that was lower than its earlier estimate of 260 crew personnel. Xcel's new crew number was based on a "corrected" two week "peak" period and a radically altered string program that purported to show much shorter transit times on SARR trains. As noted previously, the errors in Xcel's rebuttal string program invalidate any statistic, including crew personnel, that was based on the new string output. Moreover, despite its admission that the SARR would be required to comply with hours-of-service regulations, Xcel made no effort to determine whether additional crews would be required because some crews cannot complete their duty tour within the time allowed. Xcel blithely asserts without supporting evidence that "crews would have more than enough time to complete their shifts."⁴⁴

⁴¹ See BNSF Sum. Disp. Motion, at 18-22; Xcel Rep. to Sum. Disp. Motion, at 5-6; Crowley V.S. at 27.

⁴² Xcel Reb. Nar. at III-D-21.

⁴³ See BNSF Rep. Nar. at III.D-38, Table III.D.3-4, and III.D-40 (384 road crew plus 22 switch crew personnel).

⁴⁴ Xcel Reb. Nar. at III-D-22. This statement is untrue. Xcel's new (and invalid) string output demonstrates numerous instances where crews would exceed the permitted time.

In addition, Xcel continues to grossly understate the amount it would need to pay its crew personnel. Xcel calculated crew salaries that were below the average salaries paid to BNSF conductors and engineers reflected in Wage Form B, and it also assumed that its employees would work far more than the average BNSF employee despite the smaller annual salary. On reply, BNSF demonstrated that only a very small proportion of BNSF crew personnel works as many shifts as SARR crews would be required to, and that small subset of employees is compensated at much higher levels than the “average” BNSF employee.⁴⁵ The labor market would force any railroad to pay higher annual wages to crew expected to work the number of shifts posited by Xcel, especially for unit train coal operations that are unscheduled.⁴⁶ Xcel cannot have it both ways. It cannot calculate the number of crew personnel by assuming an extremely high number of crew starts per year and then avoid paying its crew personnel a salary that compensates for that heavy workload.

B. SARR Locomotive Costs

Differences between the parties on the number of locomotives required by the SARR are driven primarily by three factors. First, Xcel’s locomotive calculations do not account for peak period requirements. BNSF Rep. Nar. at III.C-33-34. Xcel argues that the SARR does not need worry about peak traffic periods because it could simply borrow locomotives from the residual

⁴⁵ See BNSF Rep. Nar. at III.D-41 to III.D-51.

⁴⁶ The low wages cited by Xcel supposedly paid by the ICE are irrelevant. There is no evidence, and no reason to believe, that ICE employees would be expected to perform the same type of work or work anywhere near the number of shifts per year that Xcel assumes for its SARR employees. See BNSF Rep. Nar. at III.D-46-48. Indeed, the Board can evaluate the vast differences between the SARR and the ICE by reviewing materials submitted by ICE. See Verified Notice of Exemption of Iowa, Chicago & E.R.R. Corp., *Iowa, Chicago & E.R.R. Corp. – Acquisition & Operation Exemption – Lines of I&M Rail Link, LLC*, STB Fin. Docket No. 34177 (filed June 7, 2002).

incumbent under a hypothetical run-through agreement. Xcel Reb. Nar. at III.C-9-10. But Xcel cannot impose on the residual incumbent the burden to incur the costs needed to maintain peak period equipment for the off-SARR *and* on-SARR portions of the movement. As the Board concluded in *TMPA*, it is “a carrier’s obligation to have sufficient locomotives to serve its customers during peak periods,” *TMPA* at 81, and Xcel failed to do so here.

The parties also disagree on the proper spare margin to use in developing the total locomotive fleet. BNSF showed that Xcel’s reliance on a { } in an expired BNSF maintenance contract was misplaced because Xcel misconstrued the scope of that guarantee. BNSF Rep. Nar. at III.C-36. Moreover, BNSF’s actual experience with the SD70MAC locomotives used to provide coal transportation service, including those covered by the maintenance agreement, was that they were in the shop and unavailable for use { } of the time. BNSF Rep. Nar. at III.C-37. Since Xcel proposes to use the same types of locomotives for the same type of service, there is no reason to expect that the SARR would experience different availability.

Third, Xcel dramatically reduced its locomotive count on rebuttal based on the output of its rebuttal string program. As discussed above, the output of that string program is flawed and cannot be used to generate reliable operating statistics.⁴⁷

C. G&A

There is not sufficient space to address in this brief the numerous assumptions and calculations needed to produce reliable G&A estimates. However, the Board should evaluate the evidence presented by the parties in light of the real world references that BNSF submitted on

⁴⁷ Differences between the parties on locomotive operating costs are driven by different assumptions as to rates of fuel consumption. BNSF Rep. Nar. at III.D-9.

reply. BNSF demonstrated that Xcel had posited a SARR that achieved unrealistically low staffing and salary levels that have never been achieved in the past.⁴⁸ Given the extreme discrepancies between Xcel's G&A assumptions and real world experience, it was incumbent upon Xcel to submit detailed and verifiable evidence supporting its G&A assumptions. On opening, Xcel failed to provide any support for its G&A assumptions other than the general and conclusory statements of its witnesses. On rebuttal, Xcel purported to submit evidence supporting some of its G&A assumptions. Pursuant to Board precedent described above, this evidence should be excluded as improper rebuttal. The Board should not permit complainants to avoid scrutiny of their cost assumptions by holding back evidence on those assumptions until rebuttal.⁴⁹

A major difference between the parties on G&A costs involves insurance. Xcel assumed the SARR's insurance cost would be a percentage of the SARR operating costs equal to the ratio of BNSF's insurance costs to BNSF's operating costs. Xcel Op. Nar. at III-D-40. However, BNSF demonstrated that its low insurance costs are the result of economies of scale not available to the SARR, and it submitted the only evidence in the record as to the insurance costs that a railroad with the specific characteristics of the SARR would incur. BNSF Rep. Nar. at III.D-95.

⁴⁸ BNSF Rep. Nar. at III.D-68-69, 79-80, 85-86, 93-95 (staffing levels); *id.* at 99-102 (executive salaries); *id.* at 74-75 (board of directors); *id.* at 87, 94 (outsourcing); *id.* at 62-63 (revenue/employee comparison to Class I railroads); *id.* at 67 (revenue/employee comparison to regional and shortline railroads).

⁴⁹ In any event, the rebuttal evidence is inadequate. For example, there are clear inconsistencies between the RailAmerica information offered in Xcel's Reb. Nar. at III-D-42 (noting 500 North American employees) and its workpapers at XCEL.REB.WP.6108 (showing 1300 employees in North America).

D. MOW COSTS

As noted previously, a complainant must design a SARR that provides service at least as good as the service provided by the incumbent. Xcel ignored this requirement in the assessment of SARR capacity and its MOW assumptions suffer from the same flaw. BNSF explained on reply that Xcel's MOW plan would result in delays and degraded service that would be unacceptable to SARR shippers. Xcel's in-house MOW staff would be insufficient to handle even routine day-to-day maintenance and it would be utterly incapable of responding to unexpected maintenance events that could shut down SARR lines. Xcel's arbitrary allocation of 10% of its contract expenditures on program maintenance to supplement the work of its meager in-house MOW staff is patently inadequate.⁵⁰ Unsupported allocations are no substitute for competent evidence on the expenditures required to maintain efficient operations of the SARR.

BNSF showed that the level of MOW spending that Xcel assumes for its high-density SARR would be inadequate even for a low density railroad. BNSF presented detailed evidence comparing the MOW staffs for two major shortline railroads, the MRL and the FEC, with Xcel's MOW staff assumptions. As BNSF explained, while both comparison lines had significantly lower traffic density, they had far larger MOW workforces than the SARR.⁵¹ Xcel claims that a better comparison would be with the WRPI line, but it failed to present any competent or verifiable information about the MOW workforce or practices on WRPI.⁵²

⁵⁰ Xcel's 10% assumption comes out of thin air.

⁵¹ See BNSF Rep. Nar. at III-D.123, III-D.159, III-D.177. The size of these railroads' operating MOW budget as a percent of total budget was also much greater than assumed by Xcel for its SARR.

⁵² The only data presented by Xcel on WRPI was the vague and confusing statement, presented on rebuttal, that "WRPI, with 60 percent higher tonnages than the WCC, averages one person for every 5.8 route miles." Xcel Reb. Nar. at III-D-97. There is no context for this figure. It is

Xcel's MOW assumptions rest on little more than rhetoric about the ability of a SAC complainant to "structure a least-cost, most efficient stand-alone railroad." Xcel Reb. Nar. at III-D-88. But the complainant has the burden of proof and it must present *evidence*, not rhetoric, supporting its cost assumptions. Xcel's opening and rebuttal MOW presentations are totally devoid of substance, analysis or data. The only competent evidence in this case as to the MOW costs for the SARR is that presented by BNSF consisting of a detailed, bottom up evaluation of the specific tasks that would have to be supported by an MOW workforce and the necessary size of that workforce given the specific traffic characteristics and territory to be covered.

VI. ROAD PROPERTY COSTS

The parties differ substantially on the costs to engineer and construct the SARR. Some of the difference results from the parties' different mainline and yard capacity assumptions, discussed previously. Most of the remaining differences are associated with a small number of cost issues that are briefly discussed below.⁵³

A. Earthworks In Yards

The single most important area of difference on RPI costs is earthworks, and the most important source of that difference relates to the cost of earthworks required to construct SARR

impossible to know whether it is accurate; whether it refers to current UP practice or the old WRPI line; what personnel are included in the number; or what line segment is at issue. Unverifiable evidence such as this is incompetent and cannot be relied upon.

⁵³ Xcel asserts that the cost/track mile calculated by the Board in *TMPA* (\$1.7 million) is a valid benchmark for assessing BNSF's RPI costs in this case (\$2.7 million) and Xcel's RPI costs (\$1.5 million). Xcel Reb. Nar. at III-F-1. However, a comparison of the *TMPA* and Xcel SARRs on a cost/track-mile basis is misleading because it does not account for the relative densities of the two railroads. Moreover, any comparison of the evidence here with findings in another case is misplaced because the Board decides SAC cases based on the evidence in the record in each case, not on an independent assessment of costs.

yards.⁵⁴ Xcel vastly understated the earthworks costs for SARR yards by assuming that all yards (except the Bill yard) would have an average of one foot of fill. Xcel's reliance on the Board's decision in *WPL* to justify this assumption is misplaced. There, the complainant located SARR yards in the same place they were located when the ICC Engineering Reports were produced. Since the Engineering Reports do not separately identify earthworks for yards and mainline, the complainant allocated the earthworks quantities for a particular valuation section between the yards in the valuation section and the corresponding mainlines assuming one foot of fill for the yards and the remainder for the mainline.⁵⁵ Having made this allocation, the Board correctly found that it would be incorrect to assume additional amounts of earthworks for the SARR yards, which would then exceed the total earthworks for the valuation section in the Engineering Reports.

In this case, Xcel chose *not* to locate SARR yards where they were when the Engineering Reports were developed and instead selected locations where earth moving requirements would be substantial. Because earthwork quantities for these new yards are not in the Engineering Report quantities, there is no linkage between yard and mainline earthwork quantities as in *WPL*, and no overstatement or double counting results from using the actual earthwork quantities for these new yards. Indeed, a one-foot-fill assumption dramatically understates the earthworks quantities that would be needed for the SARR yards (except for the yard at Sterling which existed at the time the Engineering Reports were prepared). For example, the Guernsey yard that Xcel chose for its SARR was not built until the late 1970s and its earthworks quantities are not

⁵⁴ See Xcel Reb. Nar. at Tables III-F-6 and III-F-7.

⁵⁵ Since the yards were originally located on flat ground, this one foot of fill assumption was reasonable.

reflected in the Engineering Reports. BNSF Rep. Nar. at III.F-46-47. BNSF's witnesses describe the extensive rock formations that had to be excavated in order to create that yard. Xcel's assumption that this yard would require only one foot of fill is clearly wrong.⁵⁶ An accurate assessment of earthworks for that yard, as well as the other yards that were placed at locations where yards did not exist when the Engineering Reports were developed, requires an assessment of the specific terrain for the yard, and BNSF has presented the only evidence in this case on that issue.⁵⁷

The second major issue involving earthworks in yards relates to the need to relocate the SARR's Bill yard, which Xcel improperly assumed would be constructed on top of UP's existing Bill yard. Xcel claims that the concept of entry barriers entitles it to build a yard where UP has a yard today since the SARR should not bear costs associated with its later entry into the market. Xcel misinterprets the law relating to entry barriers. As the cases cited by Xcel indicate, an entry barrier is a cost that the new entrant would have that *the incumbent* did not or would not have. Xcel Reb. Nar. at III-B-56, 57. But the existence of UP's yard would be as much an impediment to the incumbent seeking to do business in the manner proposed by Xcel as it is to the SARR.

⁵⁶ Xcel contends that its method of separating yard quantities in the Engineering Reports from quantities attributable to the mainline overstates mainline earthworks quantities. BNSF disagrees, but that is not a relevant issue since Xcel chose its methodology for separating the respective quantities.

⁵⁷ Xcel argues that BNSF should be precluded from relying on commercial software to determine earthworks unless it agrees to produce a copy of the software. It cites the Board's treatment of the RAILS model in *TMPA* as support. But the programs used by BNSF in this case, unlike the proprietary RAILS model, are commonly used by engineering firms and are readily available for purchase. BNSF Rep. Nar. at III.F-44, 146. Xcel would apparently have the Board establish a rule precluding the use of commercial programs, most of which are licensed and cannot be freely produced, so that the parties would be forced to rely on made-for-litigation models that can be more easily manipulated.

The SARR is entitled to assume that its yards are built on top of the incumbent's yards, but it cannot ignore the existence of third party facilities.

B. Earthworks On Line Segments

A SARR must be built to standards that will ensure that it can provide service at least as good as the service provided by the incumbent. Xcel's earthworks calculations for SARR mainline segments violates this principle in two significant ways. First, Xcel assumes that mainline doubletrack segments can be built with only 15 feet between track centers. But as BNSF explained in its reply evidence, BNSF currently has 25-foot track centers on the line segments replicated by the SARR because that track spacing is necessary to maintain efficient traffic flows and to ensure the safety of MOW workers on high volume doubletrack segments. BNSF Rep. Nar. at III.F-24-25. Indeed, FRA regulations require 25-foot track centers unless train speeds are restricted or adjacent tracks are cleared of all maintenance workers and equipment.⁵⁸ BNSF has chosen not to sacrifice service quality to its shippers by having narrow track centers that would require speed restrictions and delay. The SARR likewise cannot choose to save costs on the construction of mainline segments that would result in degraded service.⁵⁹

Xcel also failed to include the cost of access roads on certain high traffic portions of the SARR where operating and MOW crews, as well as outside vendors, need to have access to SARR lines without disrupting traffic. Once again, these are facilities that BNSF currently has,

⁵⁸ 49 C.F.R. 214.7, 214.327(b), 214.335(c). Xcel asserts that the FRA working limits regulation allows the trains to operate at full speed, but the regulation in fact states that movements under working limits "shall be at restricted speed [20 mph] unless a *higher* speed [not necessarily full speed] has been specifically authorized." 49 CFR 214.321(d).

⁵⁹ Xcel's assumption of 15-foot track centers is also inconsistent with Xcel's operating plan and string program, neither of which contemplate the effect of maintenance delays. BNSF Rep. Nar. at III.F-26.

and they are critical to BNSF's ability to provide quality service today. The SARR cannot expect to avoid these costs and still provide the same service that BNSF provides. In fact, Xcel does not specifically dispute the need for access roads, but it claims that the earthworks quantities for constructing these roads are already included in the Engineering Reports. Xcel Reb. Nar. at III-F-21. Xcel submits absolutely no evidence to support this assumption and it is implausible on its face. Access roads are required to maintain high volume operations without restricting traffic flows. These concerns were not relevant 100 years ago since the rail lines that were the subject of the Engineering Reports were low density lines. Access roads were built as traffic volumes increased, and there is no reason to believe the Engineering Reports contain any earthworks corresponding to such roads.

C. Engineering Costs

Another major difference between the parties relates to engineering costs. Xcel based its engineering costs entirely on the engineering costs used by the Board in *PPL* and submitted no independent evidence. But reliance on the *PPL* engineering costs is inappropriate. There, the parties agreed on at least two elements of engineering costs (design and subsurface investigation) and the Board accepted *PPL*'s evidence on another cost element (inspection) because it was the only evidence in the record. The Board did not endorse a specific percentage for future cases but merely accepted the evidence before it. Here, BNSF has presented detailed evidence on each specific engineering cost tailored to the circumstances of the SARR at issue in this case. BNSF's evidence on this issue is not only the best evidence as to the engineering costs for the SARR at issue here, it is the *only* evidence.⁶⁰

⁶⁰ Xcel claims that any costs included in BNSF's engineering estimate associated with the compressed schedule for construction of the SARR are entry barriers that should be excluded

D. Material Transportation

Differences between the parties on material transportation costs relate primarily to three factors. First, Xcel fails to include the cost to transport subballast to the work site. Xcel claims that its subballast costs include transportation, but Xcel's subballast costs are derived from a BNSF AFE that does not include a cost for the transportation of subballast from the quarry. BNSF Rep. Nar. at III.F-95-97. Second, Xcel assumes that subballast will be available from the earthworks preparation of the yard at Guernsey but ignores the fact that the SARR construction schedule specifies that the Guernsey yard would be constructed after the mainlines. *Id.* at III.F-157-158. Third, Xcel assumes the SARR could reduce material transportation costs by using the residual BNSF to transport materials to the work site. *Id.* at III.F-110. This is a distortion of SAC principles. The SAC test allows the complainant to assume the SARR is constructed on top of the existing incumbent's lines. This fiction may be necessary to allow the complainant to choose the most efficient, least cost route, but it cannot be used to ignore real world that any railroad (including the incumbent) would have to incur to construct a new line.

VII. DCF ISSUES

There are two significant areas of dispute between the parties on the implementation of the Board's DCF model. First, BNSF includes a financing fee representing the costs that would be incurred to obtain equity for construction of the SARR. Xcel claims that the Board's cost of capital already includes any flotation costs incurred by the industry. But BNSF showed that while the Board-calculated cost of capital could in theory contain amounts for raising equity, it

from the SAC analysis. Once again, Xcel misconstrues the concept of entry barrier. It is an entry barrier to assume a *premium* resulting from labor and equipment shortages that might be associated with an accelerated construction schedule. But BNSF simply included the costs for the additional staffing that would be required to achieve the posited construction schedule.

does not in fact contain such amounts. BNSF Rep. Nar. at III.D-185-86; III.G-1. Since any railroad seeking to raise capital for a significant construction project would incur these costs, it is not an entry barrier to assume those costs in the SAC analysis.

Second, Xcel uses the RCAF-A to index operating costs while BNSF uses the RCAF-U, consistent with the Board's decision in *TMPA*. As BNSF explained, it is inappropriate to assume that a SARR transporting a single commodity would be able to achieve the magnitude of productivity gains possible for an existing Class I railroad. BNSF Rep. Nar. at III.D-184.

VIII. VARIABLE COST CALCULATION

Most of the issues relating to the proper calculation of variable costs are thoroughly addressed in the evidence that has been submitted. It is necessary, however, to address briefly the calculation of road property costs, which account for more than 40% of the difference between the parties' variable cost evidence, because Xcel relies on a new road property analysis submitted for the first time on rebuttal.⁶¹

Xcel's new road property evidence purports to rely on the methodology accepted by the Board in *TMPA*. There are three problems with Xcel's reliance on *TMPA*. First, BNSF does not agree with the Board's conclusion in *TMPA* that the reconciliation of FADB and R-1 data at a *system-wide* level confirms the accuracy of the FADB data at the *segment-specific* level. BNSF Op. Nar. at II-49-50; Elliott V.S. at 23-25.⁶² Second, even if it were possible to reconcile the

⁶¹ Xcel tries to shift the blame to BNSF for its late filed road property evidence, arguing that it should be able to submit a new analysis because BNSF did not provide workpapers to support the Elliott statement until May 6, 2003. But Xcel did not even ask for those workpapers until April 18, 2003, even though it had the Elliott statement since April 2002.

⁶² Indeed, Xcel's witness here, Mr. Plaistow, has taken the position in the *AEPCO* case that BNSF's internal road property data do not permit segment-specific calculations. See *AEPCO* Op. Nar. at II-A-37 n. 31 (filed Feb. 7, 2003).

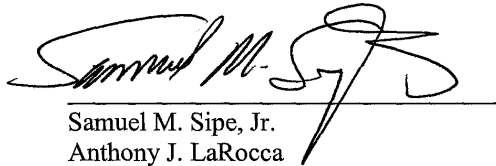
FADB and R-1 data relating to *gross* investment, BNSF showed that the depreciation data used to produce *net* investment are erroneous and overstate depreciation, particularly on high-density lines. BNSF Rep. Nar. at II-201; Elliott V.S. at 25-29. Third, the Board in *TMPA* specifically left open the question whether a line-specific adjustment could ever be made (even if accurate data were available) without first adjusting the variability factor to account for relative density. BNSF showed that variability does in fact change with density and that the ICC previously acknowledged that relationship. BNSF Op. Nar. at II-52-54; Rep. Nar. at II-22-24; Reb. Nar. at II-36-37. Xcel argues on rebuttal that there is no need to adjust the variability factor because the 50% variability in URCS is already too high. BNSF has not had an opportunity to respond to this assertion, but the short answer is that the ICC already concluded that road property variability most likely ranged between 50% and 90%, i.e., that 50% would be a *floor* for any credible variability analysis.⁶³

IX. CONCLUSION

Xcel's SAC evidence is based on fundamental conceptual flaws as well as unsupported and erroneous cost assumptions. When the SAC test is implemented using appropriate cost and revenue assumptions, it is clear that the challenged rate does not exceed a reasonable maximum rate. The Board should dismiss Xcel's complaint.

⁶³ ICC, Bureau of Accounts, Explanation of Rail Cost Finding Procedures and Principles Relating to the Use of Costs, Statement No. 7-63, at 83 (1963). This conclusion is even more applicable today given that changes in railroad accounting result in more MOW expenditures, which are highly variable with density, being treated as capitalized road property costs.

Respectfully submitted,~

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

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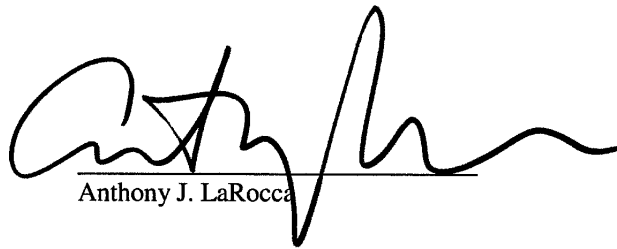
**Attorneys for The Burlington Northern
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Dated: September 8, 2003

CERTIFICATE OF SERVICE

I hereby certify that on September 8, 2003, a true and correct copy of the Final Brief of
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