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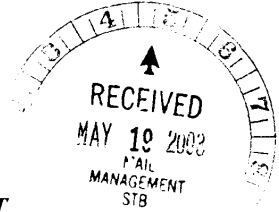
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Hon. Vernon A. Williams
Secretary
Surface Transportation Board
1925 K Street, N.W.
Washington, D.C. 20423

ACCOMPANIES DOCUMENT
FILED UNDER SEAL



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 10 copies of the Rebuttal Evidence and Argument of Defendant The Burlington Northern and Santa Fe Railway Company ("BNSF") and corresponding workpapers. Also enclosed are three compact discs containing an electronic version of BNSF's Rebuttal Evidence and Argument and electronic workpapers.

Pursuant to a waiver from the Board's staff, BNSF's electronic version of its Rebuttal Evidence and Argument is being submitted in Word format.

These materials are being filed under seal because they contain Confidential and Highly Confidential Information subject to the Board's January 29, 2001 Protective Order in this proceeding.

BNSF is also filing an original and 10 copies of the Public Version of its Rebuttal Evidence and Argument, along with 3 compact discs containing the Public Version in PDF format.

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

Sincerely,

Anthony J. LaRocca

Enclosures

cc: Counsel for Complainant

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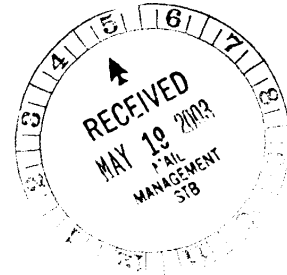
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PUBLIC VERSION

SURFACE TRANSPORTATION BOARD

STB Docket No. 42057



PUBLIC SERVICE OF COLORADO D/B/A XCEL ENERGY
v.
THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY

Rebuttal Evidence and Argument of
The Burlington Northern and Santa Fe Railway Company

Volume I of I

NARRATIVE, EXHIBITS, AND WORKPAPERS

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May 19, 2003

II-A Quantitative Evidence – Variable Costs
PUBLIC VERSION

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**I. Counsel's Argument
and Summary of
Evidence**

**Counsel's Argument and Summary of Evidence
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I. COUNSEL'S ARGUMENT AND SUMMARY OF EVIDENCE

This is the Rebuttal Evidence and Argument of defendant The Burlington Northern and Santa Fe Railway Company ("BNSF") in the rate reasonableness proceeding *Public Service Company of Colorado D/B/A Xcel Energy v. The Burlington Northern and Santa Fe Railway Company*, STB Docket No. 42057. The format of this Rebuttal Evidence and Argument complies with that prescribed in the Board's March 12, 2001 decision in STB Ex Parte No. 347 (Sub-No.3), *General Procedures for Presenting Evidence in Stand-Alone Rate Cases*.

The Narrative portion of this Rebuttal Evidence is limited to a discussion of evidence relating to the variable costs of providing the issue traffic transportation. While BNSF does not contest the Board's jurisdiction on quantitative market dominance grounds, BNSF submits this variable cost evidence to correct several improper and inaccurate variable cost calculations sponsored by Xcel in its Reply Evidence. The Argument portion of this Rebuttal Evidence focuses on the legal and policy framework within which the Board is required to assess the evidence that has been submitted in this proceeding. As BNSF explained in its Opening Evidence, the governing statutory provision (49 U.S.C. §10707(d)(2)) is clear - the fact that a challenged rate exceeds the jurisdictional threshold creates no presumption concerning the reasonableness of that rate. The Board has already found that BNSF must be able to generate revenues on traffic with relatively inelastic demand substantially in excess of 180% of variable costs to be revenue adequate. The challenged rates in this proceeding, which involve transportation for a shipper that has highly inelastic demand, reflect the permissible use of differential pricing by a carrier that is revenue inadequate.

Counsel's Argument and Summary of Evidence
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A. VARIABLE COST EVIDENCE

Section II.A.1 of this Narrative describes BNSF's analysis of the variable costs of providing service to Xcel's Pawnee Station and its conclusion that the revenue to variable cost ("R/VC") ratio for this service exceeds the jurisdictional threshold. The R/VC ratios for transportation at issue in this proceeding are set out below in Table I-1 and in Sections II.A.1 and 2 of the Narrative.

Table I-1
R/VC Ratios

	100-Ton Rate	116-Ton Rate
Eagle Butte		
1Q01	262%	270%
2Q01	263%	284%
3Q01	255%	275%
4Q01	248%	271%
1Q02	268%	292%
2Q02	262%	282%
3Q02	264%	N/A
4Q02	259%	279%
1Q03	256%	271%
Belle Ayr		
1Q01	263%	273%
2Q01	280%	N/A
3Q01	286%	312%
4Q01	N/A	N/A
1Q02	257%	N/A
2Q02	269%	290%
3Q02	N/A	N/A
4Q02	266%	N/A
1Q03	N/A	N/A

BNSF's rebuttal variable cost evidence is sponsored by two witnesses. Benton V. Fisher, a Director at FTI Consulting, Inc. ("FTI"), is BNSF's principal variable-cost witness in this

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proceeding. Mr. Warren H. Wasserburger, a former BNSF General Road-Foreman, sponsors evidence that supports a movement-specific adjustment to reflect actual fuel consumption on Xcel trains.

The most significant difference between the parties relates to the calculation of road property costs. BNSF demonstrates that the use of road property data that BNSF maintains on a segment-specific basis would not produce an accurate assessment of the road property costs for the line segments used to provide the transportation service at issue in this case. The data, particularly data relating to depreciation, do not reconcile with the R-1 in part because the Board's rules do not require such a reconciliation. But more important, any attempt to calculate a segment-specific road property ownership cost using the system-average default variability factor would vastly understate the variable ownership costs of high density lines such as those used to provide the issue traffic service. Xcel has not proposed any adjustment to the variability factor that might justify a departure from system-average costs even if accurate segment-specific costs were available.

Other differences between the parties' variable cost evidence are described in detail in Section II.A.1 of the Narrative and do not need to be addressed further here. The remainder of this Argument addresses the framework within which the evidence on variable costs and SAC that BNSF has submitted in this proceeding should be considered.

B. REVENUE ADEQUACY AND DIFFERENTIAL PRICING

On opening, BNSF provided a context for evaluating the transportation rates being challenged by Xcel within the broader framework of SAC theory, the recognized need for railroads to engage in differential pricing, and BNSF's continuing revenue inadequacy as

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determined by the Board. In reply, Xcel concedes the key points, but attempts to mask the fact that it has done so with pages of obscuring discourse.

1. Points Made By BNSF on Opening

BNSF made a number of straightforward points on opening:

BNSF Continues to be Revenue Inadequate. The governing legal standard for revenue adequacy is whether a rail carrier earns a return on net investment equal to its current cost of capital. *Standards for Railroad Revenue Adequacy*, 364 I.C.C. 803 (1981), *aff'd sub nom. Bessemer & Lake Erie Railroad v. I.C.C.*, 691 F.2d 1104 (3rd Cir. 1982), *cert. denied*, 462 U.S. 1110 (1983). BNSF continues to be revenue inadequate under the standard applied by the Board. BNSF's continued revenue inadequacy is a critical factor in this case because the statute contains an explicit requirement that the Board must give "due consideration" to the requirement that railroads "shall" earn adequate revenues when evaluating the reasonableness of rates, and must otherwise assist railroads in achieving revenue adequacy. 49 U.S.C. §§ 10701(d)(2), 10101(3).

CMP and the SAC Constraint Were Intended to Give Railroads a Meaningful Opportunity to Achieve Revenue Adequacy. In adopting SAC, the ICC endorsed differential pricing by railroads. In theory, railroads were to be entitled to charge proportionately higher prices to shippers with higher (more inelastic) demand for transportation. The ICC recognized that differential pricing was essential for railroads to achieve adequate revenues because in many cases competition forces railroads to price their services at levels that do not enable them to recover a substantial portion of unattributable costs. To make up for these shortfalls, and to enable railroads to earn adequate revenues, some customers must pay higher rates.

Xcel Should Pay Higher Prices Due to its Highly Inelastic Demand. Xcel's demand for coal transportation to its Pawnee plant is highly inelastic. Ramsey pricing theory, on which

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SAC analysis is premised, provides that the most economically efficient method (other than negotiated contracts) for determining which customers should pay more is to require customers with the strongest demand to pay the proportionately highest rates. Because Xcel's demand is highly inelastic, Xcel should be expected to pay among the highest rates.

R/VC Ratios in This Case Represent Reasonable Differential Pricing. As of May 2002, the Board had concluded that BNSF would need to earn average revenues of 282¹ percent of its variable cost for traffic that generates revenue in excess of 180 percent of variable cost to become revenue adequate. *Rate Guidelines – Non-Coal Proceedings*, STB Ex Parte No. 347 (Sub-No.2)(served May 8, 2002). BNSF's revenue to variable cost ratios for the Pawnee movement are generally below 282 percent. The Board should not be surprised or concerned that the rates challenged by Xcel are somewhat above this average for certain time periods. *Some* rates must be above average if BNSF is to have any prospect of revenue adequacy and Xcel's highly inelastic demand suggests that its rates should be within the above-average group.

A Properly Applied SAC Analysis Would Uphold the Challenged Rates. A properly applied SAC analysis would demonstrate that BNSF is entitled to charge rates to Xcel that are at least as high as the rate being challenged given Xcel's highly inelastic demand. ICC and Board precedent provide that SAC results should approximate Ramsey outcomes; shippers with inelastic demand should be required to pay more. Should the Board determine in this case that SAC requires rates below the RSAM, the Board should question whether the SAC analysis has

¹ The above discussion focuses on 282 percent because that is the number that was available when BNSF filed its opening evidence. In its most recent finding, covering the years 1998-2001, the Board determined that this average figure had increased to 289. *Rate Guidelines – Non-Coal Proceedings*, STB Ex Parte No. 347 (Sub-No.2)(served Apr. 21, 2003). The Board should consider Xcel's rates in conjunction with this more up-to-date number.

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been properly performed. Where SAC is applied in a manner that significantly understates the true costs of railroad operation – by permitting large volumes of cross-over traffic without requiring the SARR to pay the full costs for such traffic, for example – railroads are prevented from engaging in necessary and appropriate differential pricing. As discussed below, the Board must make its policy decisions, such as the proper treatment of cross-over traffic, in a manner that does not depart markedly from Ramsey outcomes.

2. Xcel Concedes BNSF's Key Points

In its reply, Xcel made several important admissions in response to BNSF's opening evidence. First, Xcel recognized that the Board has adopted differential pricing. Speaking of the *Coal Rate Guidelines*, Xcel states: "the ICC embraced the concept that railroads should be able to engage in 'demand-based differential pricing, whereby the carrier may price its services according to the varying demand elasticities for them,'" Xcel Reply Nar. at I-8. Second,

III

]]]]² Finally, although it contends that the Board's calculation of a revenue adequacy measure is a meaningless action performed only due to a congressional mandate, Xcel does not contest that BNSF is revenue inadequate under that standard.

² Triple brackets indicate Confidential and Highly Confidential material that has been redacted from the Public Version.

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Taken together, these admissions confirm the points BNSF made in its opening. In particular, as a shipper with highly inelastic demand, Xcel should be expected to pay proportionately higher prices under a regulatory regime where “demand-based differential pricing” is both permissible and expected.

3. Xcel Cannot Obscure the Force of its Admissions with Spurious Arguments

Xcel makes a number of arguments in an effort to conceal the impact of its admissions on BNSF's key, dispositive points. All are without merit.

First, Xcel argues that BNSF “asks the Board to ignore the Coal Rate Guidelines and their Constrained Market Pricing (“CMP”) principles, including the stand-alone cost (“SAC”) constraint on rail rates for captive coal shippers.” Xcel Reply Nar. at I-2 to I-3. This claim is simply untrue, a substitution of rhetoric for veracity. At one point, Xcel even characterizes BNSF's supposed argument as “unlawful.” Xcel Reply Nar. at I-11. In fact, BNSF did not make the argument alleged and certainly did not request the Board to ignore the *Coal Rate Guidelines*. As explained above and in BNSF's opening brief, BNSF argued that the SAC test is supposed to support railroad revenue adequacy by permitting railroads to charge appropriate differential prices. A proper application of SAC principles would permit BNSF to charge Xcel – a shipper with highly inelastic demand – the rates now in effect.

Second, Xcel argues that revenue adequacy “is immaterial to the determination of maximum reasonable rates.” Xcel Reply Nar. at I-3. But the statute plainly says otherwise. The statute says that in determining the reasonableness of rates in individual cases, the Board is

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required to “recogniz[e] the policy . . . that rail carriers shall earn adequate revenues. . . .”³ 49 U.S.C. § 10701(d)(2). There are at least two ways in which the Board should give meaning to this statutory directive here. First, the Board should explicitly recognize that due to its highly inelastic demand, Xcel is precisely the type of shipper that should be paying the highest rates under CMP theory. If the SAC analysis produces a result suggesting that BNSF is not entitled to substantial differential pricing on the Xcel movement at issue in this case, then something is wrong with that analysis. A railroad cannot become revenue adequate if it cannot charge shippers with higher demand differentially higher rates. Performing SAC analyses in a manner that prohibits railroads from engaging in differential pricing, and thereby from achieving revenue adequacy, violates the policies underlying the *Coal Rate Guidelines* and the congressional revenue adequacy mandate.

The Board’s obligation to take revenue adequacy into account in individual cases also means that the Board must assure itself that the SAC analysis has been applied in accordance with the economic principles underlying SAC. BNSF has shown in this case that Xcel’s use of cross over traffic is not consistent with the economic principles underlying the SAC test. *See* BNSF Reply Nar. §§ III.A.1 and III.A.3.c. In particular, Professor Janusz Ordover, one of the nation’s most distinguished economists, has presented a serious, probing critique of cross-over traffic and Xcel’s implementation of it. Although the Board has accepted cross-over traffic in prior cases, it cannot simply rely on that prior practice but must address Professor Ordover’s critique, particularly as it applies to Xcel’s revenue allocation. To fail to do so where the use of

³ As Xcel admits, the SAC analysis was developed to provide “necessary protection for captive shippers, *while providing the railroads the opportunity to earn adequate revenues.*” *Coal Rate Guidelines* at 521 (emphasis added).

Counsel's Argument and Summary of Evidence
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cross-over traffic drives the outcome of Xcel's SAC evidence would be to ignore the revenue adequacy directive. It would be error for the Board to allow Xcel's manipulation of cross-over traffic to result in a SAC determination that undermines BNSF's right to engage in differential pricing.

Third, Xcel argues that BNSF's rates "represent confiscatory returns typically charged by a monopolist." Xcel Reply Nar. at II-A-132. Xcel significantly overstates the actual return achieved by BNSF on Pawnee traffic by understating the costs attributable to those movements. Even though the challenged rates []

[] for BNSF, however, that is consistent with differential pricing: customers with higher demand are supposed to produce a better margin for the railroad. Calling the prices charged "confiscatory" or "monopolistic" adds nothing to the analysis. Xcel clearly objects to paying rates that it feels are too high, but under the Board's approach to rate regulation, BNSF should be able to charge Xcel a rate consistent with the level of Xcel's demand for transportation. By the same token, Xcel's argument that BNSF rates to Pawnee are "preposterous" and that other shippers who would be served by the hypothetical WCC are allegedly paying proportionately lower rates, Xcel Reply Nar. at II-A-143 to 146, are beside the point. Under differential pricing, BNSF is supposed to charge rates to Xcel consistent with the level of Xcel's demand for transportation. Xcel has admitted that []

[]. As a result, Xcel should expect to pay high rates.

Fourth, Xcel argues that the Board should ignore "technical" revenue adequacy considerations because the current legal standard, in Xcel's view:

has little relation to the real world financial condition of the Class I railroads generally and BNSF specifically, which is by all accounts an extremely healthy company. Rather, the annual 'revenue

Counsel's Argument and Summary of Evidence
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adequacy' determination under § 10704 is merely a mechanical calculation performed by the Board only because it is directed to do so by Congress.

Xcel Reply Nar. at I-13. On its face, an argument that the Board should simply ignore its governing statute (and is free to do so) is somewhat surprising. Xcel clearly objects to the current legal standard for revenue adequacy, but Xcel's disagreement with that standard cannot justify a departure by the Board from its legal obligations. The legal standard is the legal standard until Congress changes it or the Board engages in rulemaking that adopts a different measure of revenue adequacy. This proceeding is not an appropriate forum in which to challenge the method for measuring revenue adequacy.⁴

Xcel's supposed measures of BNSF's financial health are irrelevant. The question addressed by the current revenue adequacy standard is not whether BNSF is on the verge of bankruptcy or whether BNSF has *any* access to capital, but whether BNSF is earning returns on capital investments that meet or exceed its cost of capital. The test compares the benefit of investment (returns) against the cost of investment. As the ICC succinctly explained in the *Coal Rate Guidelines*, if railroads cannot earn their cost of capital, "their ability both to retain existing investments and obtain new capital will be impaired, because both the existing and prospective funds could be invested elsewhere at a more attractive rate of return." 1 I.C.C. 2d at 535. Relative stock performance (Xcel Reply Nar. at II-A-123) and analysts' views that BNSF stock is currently attractively priced (Xcel Reply Nar. at II-A-127) provide no indication as to whether BNSF's net returns exceed its cost of capital. Many factors entirely unrelated to a company's

⁴ Shippers were given an opportunity to address the proper standard for revenue adequacy as a follow-on to the proceedings in Ex Parte No. 575 in 1998, but elected not to do so. See *Review of Rail Access and Competition Issues*, STB Ex Parte No. 575 (served May 4, 1998).

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cost of capital and level of capital expenditures affect the company's stock price. Similarly, a non-junk debt rating (Xcel Reply Nar. at II-A-124) means only that BNSF has *some* access to capital, not that the cost for such access is sufficiently low to justify reinvestment in the company or expansion.

Fifth, Xcel opines that, in its view, BNSF has adequate access to capital, Xcel Reply Nar. at II-A-125 to 126, and is expending capital at rates above historic levels. Xcel Reply Nar. at II-A-128 to 130. The governing revenue adequacy standard and not Xcel's subjective view is the measure of whether BNSF has access to capital at an appropriate price, *i.e.*, one that is equal to or less than return on net investment. That BNSF now offers guaranteed on-time delivery for some shippers and high-technology services says nothing about whether capital spending levels are what they would be if BNSF were revenue adequate. Nor would capital expenditures that exceed historic levels indicate that BNSF's level of capital expenditure is appropriate when the historic levels were themselves depressed because of the revenue inadequate status of the railroad. In fact, it is clear that capital expenditures are down, not up. As noted in BNSF's opening evidence, BNSF made \$2.5 billion in capital expenditures in 1998 but only \$1.5 billion (40 percent less) in 2002.⁵

Sixth, Xcel exhibits some confusion about basic economic principles including the nature of supply and demand and the meaning of demand inelasticity. Xcel argues that "market forces" have nothing to do with prices charged captive customers and that "BNSF believes the only

⁵ Xcel asserts that the peak in capital expenditures was related solely to "the complex merger of the operations of BN and ATSF." *See* Xcel Reply Nar. at II-A-122 n.167, II-A-127 to 128 (citing a supposed statement in the BNSF 2001 Annual Report). In fact, that Annual Report states on the cited page only that: "After an aggressive expenditure program following the merger, BNSF has scaled back its capital investment."

Counsel's Argument and Summary of Evidence
PUBLIC VERSION

constraint on its ability to price its services should be the point at which the cost of transportation adversely effects [*sic.*] the Pawnee Station's ability to burn coal." Xcel Reply Nar. at I-14; *see also* Xcel Reply Nar. at II-A-137 to 138. Xcel is wrong on both points. Demand and supply determine prices regardless of whether a shipper is "captive" or not. Adam Smith's "invisible hand" does not cease to function in the marketplace simply because a shipper's options may be limited. Indeed, the premise of CMP is that demand should determine which shippers – including "captive" shippers – pay more. Nor did BNSF contend that the only limit on its pricing of transportation to the Pawnee plant should be the point at which Xcel's "ability to burn coal" at the plant is affected. Rather, BNSF used the evidence that []

[] to demonstrate that Xcel's demand for coal transportation is highly inelastic. The fact of Xcel's inelastic demand, in turn, demonstrated that under SAC principles, Xcel should be expected to pay higher rates.

Finally, []

[]⁶ Again, however, the dispute is an effort to cloud the real issue, []

[] Xcel's demand for coal transportation to the Pawnee plant is highly inelastic.

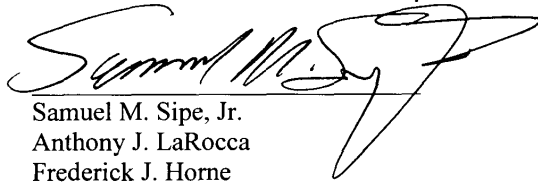
This is confirmed by the fact that, []

[] is exactly what would be expected if demand for transportation to Pawnee is highly inelastic.

⁶ [] [Xcel's contention that, when a buyer and seller contract for services to two separate locations as part of a single package, the seller's conduct is tantamount to an antitrust tying violation, Xcel Reply Nar. at I-17, is gratuitous and wrong. It is also totally irrelevant here and requires no response.] []

**Counsel's Argument and Summary of Evidence
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Respectfully submitted,

A handwritten signature in black ink, appearing to read "Samuel M. Sipe, Jr.", with a large, stylized flourish extending from the end.

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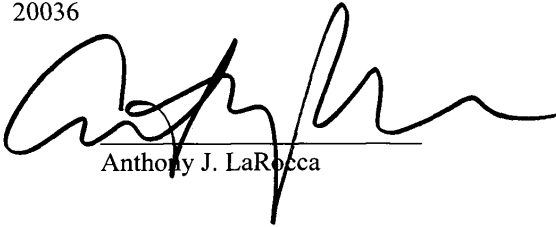
May 19, 2003

**Counsel's Argument and Summary of Evidence
PUBLIC VERSION**

CERTIFICATE OF SERVICE

I hereby certify that on May 19, 2003, I caused six copies of the foregoing Rebuttal Evidence of The Burlington Northern and Santa Fe Railway Company to be served by hand upon the following counsel for Public Service Company of Colorado d/b/a Xcel Energy:

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Anthony J. LaRocca

II. Market Dominance

II. MARKET DOMINANCE

A. QUANTITATIVE EVIDENCE

1. Variable Costs

BNSF filed opening and reply market dominance evidence in this proceeding on January 10, 2003 and April 4, 2003, respectively. BNSF presented the variable cost of service for moving coal from the two PRB mines, Eagle Butte and Belle Ayr, that originated coal destined to Xcel's Pawnee Station Generating Station near Brush, Colorado. In order to calculate variable costs, BNSF's principal variable cost witness, Benton V. Fisher, relied upon 2001 BNSF URCS unit costs and, where appropriate, adjusted URCS system-average costs consistent with the results of movement-specific studies. BNSF's reply evidence showed First Quarter 2001 through Fourth Quarter 2002 variable costs ranging between \$2.88 and \$3.71 per net ton, depending upon the origin mine, resulting in revenue-to-variable cost ("R/VC") ratios of between 2.47 and 3.10. In this rebuttal evidence, BNSF shows First Quarter 2001 through First Quarter 2003 variable costs ranging between \$2.86 to \$3.70 per ton, resulting in R/VC ratios ranging from 2.48 to 3.12.

Xcel also filed opening and reply variable cost evidence on January 10, 2003 and April 4, 2003, respectively. While that evidence was sponsored predominately by L.E. Peabody Vice President Joseph J. Plaistow, his colleague, Roger C. Prescott, sponsored evidence on variable maintenance-of-way costs and Thomas E. Johnson, P.E. sponsored reply evidence responding to BNSF's special study of fuel consumption by Xcel trains. Xcel's variable cost evidence was also based on a 2001 BNSF URCS. Xcel's reply presented First Quarter 2001 through Fourth Quarter 2002 variable costs ranging between \$2.22 and \$2.74 per net ton, with R/VC ratios ranging between 3.35 and 4.05. Xcel also calculated First Quarter 2003 costs.

II-A Quantitative Evidence – Variable Costs PUBLIC VERSION

Prior to the filing of reply evidence, the Board issued its decision in the *TMPA*¹ rate case. That decision addressed a number of issues that account for many of the differences between the parties in this case. These issues include the following:

- Treatment of Account 90 in developing the General Overhead ratio for Return on Investment
- Inadequacy of SFGT for developing MOW costs
- Development of locomotive ownership costs
- Use of BNSF's locomotive maintenance contracts in developing locomotive maintenance costs
- Development of fuel consumption costs using a special study of locomotive event recorder data
- Adjustment to URCS railroad-owned car operating costs
- Adjustment to URCS carload handling costs

BNSF's reply evidence was developed consistent with the *TMPA* decision on each of these issues. Xcel's reply variable costs filing rejects the Board's treatment in *TMPA* of all but one of these issues, yet Xcel offers no new evidence or argument to support rejection of the Board's decision on these issues.

Analysis of each party's reply evidence shows that the principal difference between the parties' variable cost results continues to be driven by the parties' respective development of road property ownership costs. BNSF relies on URCS system-average road ownership costs while Xcel continues to advocate a movement-specific adjustment. BNSF has explained in detail

¹ *Texas Municipal Power Agency v. The Burlington Northern and Santa Fe Ry.*, STB Docket No. 42056 (served Mar. 24, 2003) ("*TMPA*").

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why its line-specific road property data cannot be used to develop a valid movement-specific adjustment to system-average. BNSF has also explained other significant flaws in Xcel's proposed methodology, including its use of a variability factor that does not account for density. Xcel's opening evidence contained little explanation as to its methodology and was silent on the issues that BNSF had already raised in this proceeding. Xcel's reply evidence fails to show that BNSF's road property data can be used to produce a movement-specific adjustment that is superior to a system-average calculation. These issues are addressed below in Section II.A.1.c.i.(b).

Like BNSF's opening and reply evidence, the organization of this Narrative is based on the format of the Board's *WPL*² decision, and is consistent with the Board's Decision on *General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases* ("General Procedures").³ Specifically, Section II.A.1.a. addresses differences in the general cost estimating procedures used by each party. Section II.A.1.b. describes the differences in the traffic and operating characteristics used by each party and explains why BNSF's assumptions are superior to Xcel's. Section II.A.1.c. examines the differences in certain cost adjustments made by the parties. Finally, Section II.A.2 updates BNSF's estimate of the First Quarter 2001 through Fourth Quarter 2002 variable costs for the Xcel traffic and presents BNSF's estimate of First Quarter 2003 costs. Table II.A-1 below summarizes BNSF's variable costs for shipments originating at Eagle Butte that moved under the 100-ton rate (the majority of shipments moving under the

² *Wisconsin Power & Light Co. v. Union Pacific R.R.*, STB Docket No. 42051 (served Sept. 13, 2001).

³ *See, Ex Parte No. 347 (Sub-No.3)* (STB served Mar. 12, 2001).

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challenged rate) and compares these costs to Xcel’s estimates in its reply evidence. Exhibit II.A-1 compares the parties’ cost estimates for shipments that originated at Belle Ayr and at Eagle Butte moving under each rate. Exhibit II.A-1 also presents these costs by individual cost components, and Exhibit II.A-2 identifies the source of differences between the parties on specific cost categories.

Table II.A-1
Comparison of
Revenue to Variable Cost Ratios for Eagle Butte Originations, 100-Ton Rate

	BNSF Rebuttal		Xcel Reply	
Period	Variable Cost/Ton	Revenue to Variable Cost Ratio	Variable Cost/Ton	Revenue to Variable Cost Ratio
1st Qtr 2001	\$3.53	2.62	\$2.55	3.62
2nd Qtr 2001	\$3.48	2.63	\$2.54	3.62
3rd Qtr 2001	\$3.60	2.55	\$2.49	3.69
4th Qtr 2001	\$3.70	2.48	\$2.58	3.56
1st Qtr 2002	\$3.42	2.68	\$2.35	3.90
2nd Qtr 2002	\$3.49	2.62	\$2.44	3.75
3rd Qtr 2002	\$3.47	2.64	\$2.46	3.72
4th Qtr 2002	\$3.53	2.59	\$2.57	3.56
1st Qtr 2003	\$3.65	2.56	\$2.56	3.65

- a. Differences in General Cost Estimating Procedures
 - i. General Overhead Ratio for Return on Investment

BNSF’s opening evidence explained in detail why it is appropriate, and consistent with both STB precedent and economic theory, to include Account 90 and to exclude Account 76 when developing the General Overhead ratio for Return on Investment. On reply, BNSF cited the STB’s *TMPA* finding that “unless the construction projects included in Account 90 are long-

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term in nature,” it is appropriate and consistent to include expenditures in Account 90.⁴ BNSF also presented affirmative evidence that its construction projects in Account 90 are of relatively short duration.

In its reply, Xcel repeats the arguments proffered by TMPA in the *TMPA* case as to the proper treatment of Accounts 76 and 90.⁵ These arguments were rejected by the Board in *TMPA*. We assume that Xcel makes these arguments in order to preserve the record for appeal on this issue. BNSF addresses these arguments in Exhibit II.A-3, which tracks BNSF’s responses to these same arguments in *TMPA*.

Xcel also challenges one of the two special studies BNSF presented in its opening evidence that demonstrate the short-term nature of the construction projects in Account 90 and asserts that BNSF has not “shouldered its burden” to justify the inclusion of Account 90.⁶ Xcel’s argument misconstrues the Board’s *TMPA* decision, and its criticism of BNSF’s evidence is unfounded. This issue is addressed below.

In its opening evidence, BNSF submitted the results of two special studies that support its position that investments recorded in Account 90 – Construction Work in Progress should be included in its net investment base. These studies separately demonstrated that the vast majority of BNSF’s projects are of short duration (*i.e.*, less than one year) and that the vast majority of the charges in Account 90 had been incurred within the prior year.⁷ One study was based on a list of capital projects with total expenditures in excess of \$1 million (“AFE Report”) that was

⁴ BNSF Reply Nar. at II-3, quoting *TMPA* at 40.

⁵ See Xcel Reply Exh. II-A-25.

⁶ Xcel Reply Nar. at II-A-24.

⁷ BNSF Opening Nar. at II-26 to 31.

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produced to Xcel in response to a discovery request for construction and rehabilitation projects.⁸ The AFE Report, which was generated on March 2, 2001, identified the start date, completion date, and total expenditures for each project, as of February 28, 2001. As BNSF explained on opening, the AFE Report showed that the vast majority of projects were open less than one year, and that the average duration of these projects was less than eight months.⁹

In addition to providing the overall duration of its largest projects based on the AFE Report, BNSF presented a second study that analyzed the actual charges in Account 90 just prior to filing of opening evidence. BNSF compiled the Account 90 amounts by specific project as of October 31, 2002, and also identified for each project the date of the earliest charge, the charges that had been incurred in the prior ten months (*i.e.*, during 2002), and the charges incurred prior to January 1, 2002, that were still in Account 90. This report showed that 90 percent of the projects with charges still in Account 90 had incurred their first charge within the prior 12 months, and that 92 percent of the charges were associated with projects that were less than one-year-old.¹⁰

While Xcel's reply challenges BNSF's study of the duration of AFEs over \$1 million, Xcel did not challenge BNSF's study of the actual age of charges in Account 90.¹¹ Moreover,

⁸ BNSF/PSC 01023-01047, summarized in opening electronic workpaper "AFE 1998-2000.xls."

⁹ BNSF Opening Nar. at II-26 to 28 and opening electronic workpaper "AFE 1998-2000.xls."

¹⁰ BNSF Opening Nar. at II-28 to 31 and opening electronic workpaper "Account 90 as of 10-31-02.xls."

¹¹ In *TMPA*, BNSF submitted a similar analysis of its then-current Account 90 balances by project, which the Board accepted when adopting BNSF's demonstration that its projects are of short duration. *TMPA* at 40.

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Xcel's criticisms of the AFE study are based on mischaracterizations of the data and unsupported conclusions. Xcel makes the following erroneous claims regarding the AFE study:

1. BNSF mischaracterized the data in the AFE Report;
2. The expenditures shown in the AFE Report are not actual expenditures but are estimates of future expenditures;
3. BNSF fails to account properly for \$167 million that are still in Account 90;
4. Analyses of the AFE Report show that BNSF's study is inaccurate.

BNSF addresses each of these claims in turn.

First, Xcel claims that BNSF "mischaracterized" the data in the AFE Report. Xcel's claim is based on the fact that 10 of the approximately 800 AFEs listed show a "Start Date" that Xcel claims is the same as the AFE approval date. According to Xcel "it is highly unlikely that the projects were approved and commenced on the same date."¹² However, the "Start Date" is the date on which work is scheduled to commence on a project, and it is not at all unreasonable to assume that certain projects may be "scheduled to commence" as soon as they are approved.¹³

Second, Xcel claims that the dollars labeled "Capital and Removal" in the AFE Report appear to be "dollars estimated at the time the AFEs were prepared" and not actual expenditures under the AFE.¹⁴ BNSF explained on opening and in response to Xcel's workpaper requests that the monies in the "Capital and Removal" field represent total expenditures by AFE as of the date

¹² Xcel Reply Nar. at II-A-27.

¹³ BNSF advised Xcel in response to Xcel's workpaper requests that the "term 'Start Date' refers to the date on which work under an AFE was scheduled to commence." BNSF's Responses to Complainant's Second Request for Workpapers and For Data Supporting Defendant's Variable Cost Calculations, Response No. 4 at 3, included as BNSF.RB.WP.II-A-00071.

¹⁴ Xcel Reply Nar. at II-A-26.

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the AFE Report was generated.¹⁵ Xcel draws a different conclusion from the fact that 22 of the approximately 800 AFEs in the AFE Report indicate 0 percent completion, but show dollar amounts in the “Capital and Removal” field. However, the apparent anomalies in a handful of entries show only that BNSF has not entered, or entered incorrectly, the data for the “project completion” field. It does not support Xcel’s counterfactual inference as to the meaning of that data field.

Third, Xcel claims that there are \$167 million dollars still in Account 90 from AFEs started during 1997 to 1999.¹⁶ Xcel concludes this from the fact that the AFE Report shows 40 1997-1999 AFEs, with \$167 million in expenditures, that did not list a project completion date as of March 2, 2001. Xcel’s conclusion incorrectly assumes, however, that the dollars in the “Capital and Removal” column remain in Account 90 until the entire AFE is completed. BNSF explained on opening and in response to Xcel’s workpaper requests that charges are closed out of Account 90 when the underlying assets are placed into service.¹⁷ Because assets can be placed into service before all work under the AFE is completed, the fact that an AFE is not identified as having been completed as of the date the AFE Report was generated does not indicate that those dollars expended remained in Account 90 then or are there now. And, in fact, when BNSF reviewed the charges in Account 90 as of October 31, 2002, it found no charges associated with the 40 1997-1999 AFEs for which no completion date was listed as of March 2, 2001. Thus, the

¹⁵ BNSF Opening Nar. at II-27; BNSF Response to Second Request for Workpapers, Response No. 5 at 4, included as BNSF.RB.WP.II-A-00072.

¹⁶ Xcel Reply Nar. at II-A-27.

¹⁷ BNSF Opening Nar. at II-28; BNSF Response to Second Request for Workpapers Response No. 8 at 5, included as BNSF.RB.WP.II-A-00073.

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\$167 million dollars Xcel claims are still in Account 90 from 1997-1999 AFEs have, in fact, been closed out of Account 90.

Xcel's fourth criticism consists of a number of comparisons that purport to show that there is an inconsistency between BNSF's R-1 data and BNSF's special study. These analyses largely rest on the following three incorrect assumptions: (1) \$167 million dollars associated with 1997-1999 AFEs are still in Account 90; (2) "Capital and Removal" dollars for open AFEs represent dollars in Account 90; and (3) all expenditures under an AFE occur on the AFE's "Start Date." The first two assumptions are related and have been addressed above. The third assumption is illogical and contradicted by the evidence in BNSF's study of dollars in Account 90 as of October 31, 2002. That study shows that BNSF incurs charges as work progresses under an AFE.¹⁸ Since the underlying assumptions are flawed, Xcel's claims are meaningless.

Fifth, Xcel claims that the AFE study does not show the duration that dollars were in Account 90. Indeed, BNSF's AFE study does not purport to show the average duration of monies in Account 90, but the average length of time that AFEs over \$1 million remain open. In fact, Xcel's criticism highlights why BNSF's AFE study is highly conservative. The average duration that charges remain in Account 90 is likely far less than the average time an AFE remains open because (1) charges are reported to Account 90 as they are incurred over the course of a project and (2) are closed out of Account 90 as the underlying assets are placed in service, which occurs at or before completion of all work under an AFE.

Finally, Xcel makes one economic argument against the inclusion of Account 90. Xcel appears to be arguing that BNSF's treatment of Account 90 allows it to earn a return on

¹⁸ BNSF opening electronic workpaper "Account 90 as of 10-31-02.xls."

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investment prematurely, even before a project starts.¹⁹ Because the monies in Account 90 represent charges incurred, this is clearly not a valid argument. Moreover, since BNSF has shown that the monies in Account 90 are related to projects that will be placed in service within weeks, not years, there is no basis to Xcel's argument that inclusion of Account 90 results in a boon to the railroad. On the other hand, it is clear beyond a doubt that Xcel's proposed treatment of Account 90 would deny BNSF a return on investment to which it is clearly entitled.

In summary, Xcel has presented no credible arguments that refute the conclusion of BNSF's separate studies: that most of its projects are of short duration and most of its Account 90 charges were incurred within the previous year. Thus, there is no reason for the Board to diverge from its recent finding in *TMPA* that Account 90 should be included in the carrier's net investment base.²⁰

b. Differences in the Traffic and Operating Characteristics Developed by BNSF and Xcel

Table II.A-2 compares the traffic and operating characteristics for the issue traffic that BNSF used to develop variable costs for the Second Quarter 2002 with those used by Xcel in its reply evidence. Similar tables for the other costed quarters are set forth in Exhibit II.A-4. The

¹⁹ Xcel Reply Nar. II-A-25 and 31. According to Xcel, "[p]roviding a return on investment before the project starts (such as BNSF has done) changes each project's anticipated return on investment, advances the timing, and increases the return." Xcel Reply Nar. at II-A-25. Nowhere in BNSF's evidence has it provided a return on investment before the project starts and Xcel has not identified any such instance. It is possible that Xcel is referring to the five AFEs on the AFE Report, out of approximately 800, without start dates. However, all five include completion dates. Thus, the absence of a start date, which appears to be inadvertent, is irrelevant.

²⁰ *TMPA* at 40.

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table is in the format required by *PEPCO*.²¹ A discussion of the differences between the parties' evidence on traffic and operating characteristics follows the table.

Table II.A-2
Comparison of the Parties' Traffic and
Operating Characteristics of Movements Originating
at Eagle Butte in the Second Quarter 2002 (100-ton rate)

Item	BNSF Rebuttal	Xcel Reply
1. Name of origin mines Name of destination	Eagle Butte, WY Pawnee, CO	Eagle Butte, WY Pawnee, CO
2. Milepost(s) at origin Milepost at destination	Eagle Butte MP 9.5 Pawnee MP 458.0	Eagle Butte MP 23.8 Pawnee MP 139.4
3. Annual tons	See Below	See Below
4. Date of first shipment	January 2, 2001	January 2, 2001
5. Alpha-numeric car type	Plain gondolas (AAR Type J)	Plain gondolas (AAR Type J)
6. Weight of lading per car (in tons)	104.5	105.14
7. Tare weight per car (in tons)	28.1	28.2
8. Identity of car owner	Xcel	Xcel
9. Identity of locomotive owner	BNSF	BNSF
10. Car lease rental	N/A	N/A
11. Locomotive lease rental	See Reply	See Reply
12. Present rates per net ton	\$9.34 per net ton / January 1, 2003	\$9.34 per net ton /January 1, 2003
13. Proposed rate	N/A	N/A
14. Initial rate / effective date	\$9.24 per net ton / January 1, 2001	\$9.24 per net ton / January 1, 2001
15. Amounts (or percent) of rate escalation and date	RCAF-U / See Reply	RCAF-U / See Reply
16. Cars per train or per shipment	122.8	122.83
17. Loaded miles (excluding loop track)	382 miles	382 miles
18. Empty miles	382 miles	382 miles
19. Length of origin loop track	3.3 miles Loaded	3.3 miles Loaded

²¹ *Potomac Elec. Power Co. v. Consol. Rail Corp.*, Docket No. 36114 (Sub-No. 1) (served Apr. 7, 1982).

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**Table II.A-2
Comparison of the Parties' Traffic and
Operating Characteristics of Movements Originating
at Eagle Butte in the Second Quarter 2002 (100-ton rate)**

	4.3 miles Empty	4.3 miles Empty
20. Length of destination track	3.1 miles Loaded 3.1 miles Empty	2.0 miles Loaded 1.0 miles Empty
21. Number of locomotives	3.0	3.0
22. Loading hours	Included in Item 24	Included in Item 24
23. Unloading hours	Included in Item 24	Included in Item 24
24. Cycle hours/locomotives	100	96
25. Number of train sets	N/A	N/A
26. Trips/year per train set	N/A	N/A
27. Crew districts, loaded	See Reply	See Reply
28. Crew districts, empty	See Reply	See Reply
29. Turnaround crews	See Reply	See Reply
30. Locomotive units	3	3
31. Cars required (RR-owned)	See Reply	See Reply
32. Caboose	N/A	N/A
33. Locomotive spare margin	[[[]]]	5.0%
34. Freight car spare margin	N/A	10%
35. Switching by road-haul locomotives (per train)	55 minutes	19 minutes
36. Switching by yard locomotives (per train)	162 minutes	52 minutes
37. Helper service	100% Campbell 100% Crawford	14% Campbell 0% Crawford
38. Helper crew	See Item 37	See Item 37
39. Location of interchanges	None	None
40. Location of inter- and intra-train switches	See Reply	See Reply
41. Joint facility payments	See Below	See Below

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Name of Origin Mines (Item 1):

The parties agree that the vast majority of Xcel's tonnage transported under the challenged rates has originated from Eagle Butte mine, and, with one exception, the remainder originated from Belle Ayr mine. That one exception was a shipment from Black Thunder mine that Xcel costed and BNSF did not. BNSF explained in its reply that this shipment, which accounts for less than one half of one percent of the total tonnage shipped under the challenged rate, departed from Black Thunder mine destined to Xcel's Arapahoe plant, but then was diverted to Pawnee Station en route.²² Since this move was atypical of all other moves under the challenged rate, and is unlikely to be characteristic of any future moves that might originate at Black Thunder, it is inappropriate to include it in developing variable costs for purposes of this rate reasonableness challenge.²³ Accordingly, BNSF did not develop variable costs for the Black Thunder move.

Mileposts at Origin and Destinations (Item 2):

In its reply, Xcel did not address the differences in the parties' mileposts at the origin and destination. BNSF explained that Xcel's mileposts were wrong.²⁴

²² BNSF Reply Nar. at II-5-6.

²³ Even Xcel's analysis of stand-alone costs recognizes this movement as an anomaly. Xcel's traffic and revenue evidence shows no movements in the years 2002-2020 to Pawnee from Black Thunder. Xcel opening electronic workpaper "WCC Traffic.xls."

²⁴ BNSF Reply Nar. at II-6.

Weight of Lading per Car (Item 6):

While there is little difference between the parties' lading weight figures, there is a significant difference how the figures were developed. Xcel claims that BNSF used a different data source than Xcel used to develop lading weights.²⁵ In fact, the only apparent distinction between the data the parties used is that BNSF's evidence is based on a summary of the electronic data used to generate the billing invoices that Xcel used, and not on the hardcopy invoices on which Xcel apparently relies. The reason there is a difference between the parties is not because the parties used different data but because Xcel misclassified certain shipments by rate and mine.²⁶ For this reason, BNSF continues to rely upon the summary of actual freight bill data to develop the variable costs for the Pawnee traffic.²⁷

Tare Weight per Car (Item 7):

As is the case with lading weights, there is little difference between the tare weights used by each party. As BNSF identified on reply, however, Xcel used a different source of data for tare weights (train movement data) than it used for lading weights (billing invoices).²⁸ Xcel's use of multiple data sources for its operating statistics is inferior to BNSF's development of the movement characteristics from a single data source, *i.e.*, the summary of the actual freight bill data. For this reason, BNSF's tare weight evidence is the best evidence of record.

²⁵ Xcel Reply Nar. at II-A-10.

²⁶ BNSF Reply Nar. at II-6 to 7.

²⁷ BNSF rebuttal electronic workpaper "Opstats Rebuttal.xls."

²⁸ BNSF Reply Nar. at II-7 to 8.

Cars per Train or per Shipment (Item 16):

The parties' calculations of the average number of cars per train is similar. The minor differences continue to be caused by the misclassification of shipments by rate and mine. This error was described in BNSF's reply. Moreover, BNSF's evidence is based on the same source data (summary of actual freight bill data) that BNSF used to develop lading and tare weights. For these reasons, BNSF's cars per train evidence is the best evidence of record.²⁹

Loaded Miles (excluding loop track) (Item 17):

On opening, the parties developed distances traversed by the loaded Eagle Butte train that differed by only one-tenth of one percent. To narrow the areas of difference between the parties, BNSF accepted on reply Xcel's opening mileage.³⁰ However, Xcel appears to have changed its mileages on reply. Xcel's reply workpapers reveal that Xcel decreased the loaded distance from Belle Ayr mine from its opening evidence.³¹ Because Xcel provides no explanation for this change, BNSF continues to use Xcel's opening mileage evidence to develop its rebuttal costs.

Empty Miles (Item 18):

BNSF accepted Xcel's empty distances on reply, and continues to use them in the rebuttal.³²

²⁹ BNSF Reply Nar. at II-8 to 9.

³⁰ BNSF Reply Nar. at II-9.

³¹ Xcel reply electronic workpapers "Xcel Miles Reply.123" and opening electronic workpaper "Xcel Miles Opening.123."

³² BNSF Reply Nar. at II-9.

Length of Destination Track (Item 20):

In its reply, Xcel rejected BNSF's destination track miles because of an apparent discrepancy between BNSF's opening electronic and hardcopy workpapers.³³ BNSF's reply evidence clarified its calculation of the distance from its mainline to the loop track at the Pawnee plant.³⁴ Xcel's calculations exclude the lead track, thereby understating the length of the loop track.

Cycle Hours/Locomotives (Item 24):

On opening, Xcel presented cycle time evidence that was developed using train movement data to develop transit times between the origin mines and Pawnee Station, but using data from other unsupported sources to develop the time spent at the mines and at the plant.³⁵ Xcel omitted substantial amounts of time that Xcel trains spend at origin and at destination. Xcel did not explain its methodology in its opening evidence, leaving it to BNSF to try to understand and then explain to the Board Xcel's methodology in its reply evidence.³⁶ Before Xcel had even read BNSF's reply evidence, however, Xcel abandoned its opening cycle time evidence and proffered reply evidence somewhat more consistent with established Board precedent.³⁷ While

³³ Xcel Reply Nar. at II-A-9.

³⁴ BNSF Reply Nar. at II-9 and BNSF.RP.WP.II.A-00022.

³⁵ BNSF Reply Nar. at II-36.

³⁶ BNSF Reply Nar. at II-36 to 38.

³⁷ Although Xcel's reply evidence indicated that it used *train movement* data to develop transit time between the mine and plant and *car movement* data to develop time at the mine and plant (Xcel Reply Nar. at II-A-13, 14), Xcel claimed, in response to a workpaper request, that it used train movement data to develop all time included in its cycle time calculations. Response to BNSF's Request for Workpapers Relating to Section II of Xcel's Energy's Reply Evidence, Response No. 2, at 2 (included). BNSF.RB.WP.II-A-00119-00121.

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Xcel's reply evidence is closer to the evidence presented by BNSF, it continues to understate actual cycle times.³⁸

The difference in the parties' cycle times now result principally from the approaches that the parties used to develop cycle times. BNSF developed cycle times based only on trains that made a complete round-trip (origin mine - Pawnee Station - origin mine).³⁹ Xcel developed cycle times by segmenting the movement and developing an average time for each segment.⁴⁰ Xcel's approach results in an internal inconsistency regarding the number of trains used to develop an average transit time for each segment. For example, Xcel's calculation of average cycle times used to calculate Eagle Butte costs for 2001 include 176 loaded trains and 137 empty trains.⁴¹ BNSF's approach avoids this inconsistency by developing the actual round-trip cycle times of the Xcel unit coal trains that move under the challenged rates.

Another source of the difference between the parties' cycle times is that Xcel, while claiming to have adopted BNSF's cycle times for certain trains⁴², made improper and unexplained reductions to transit times of those same trains. For example, Xcel reduced from

³⁸ Xcel's cycle times presented in its Reply Narrative and Exhibits do not match the cycle times calculated in its workpapers and used to develop its variable costs. For example, Xcel's Table II-A-16 and Exhibit II-A-23 suggest 2Q02 cycle times for Eagle Butte and Belle Ayr of 98.5 and 89.9 hours, respectively, but its variable costs are based on 95.7 hours and 74.9 hours. Compare Table II-A-16 at Xcel Reply Nar. at II-A-15 and Exhibit II-A-23 to Xcel reply electronic workpapers "T&O Summary Reply.123", Tab "A" and "VC XCEL REPLY.123", Tab "Opr_stats."

³⁹ BNSF Reply Nar. at II-38 to 39.

⁴⁰ Xcel Reply Nar. at II-A-14.

⁴¹ Xcel reply electronic workpaper "T&O Transit Hours-Reply.xls."

⁴² Xcel reply electronic workpaper "T & O Transit Hours-Reply.xls", Tab "BN TMS adjusted", Column "P" includes a footnote indicating that for 35 trains "BNSF transit time [was] adopted based on data in file 'Pawnee Trains 2001 2002.xls.'"

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111 to 48 hours the total time for empty train E0PAPEBM96A.⁴³ BNSF's workpaper shows that the locomotives remained with the train for the entire 111 hours and, therefore, all 111 hours are properly included as cycle time.⁴⁴

In its reply evidence, Xcel criticized BNSF's opening cycle times evidence because BNSF included as round-trips a handful of movements that that did not return to one of the origin mines used by Xcel to originate coal for Pawnee.⁴⁵ BNSF's reply evidence corrected this inadvertent error,⁴⁶ and presented corrected cycle times. BNSF continues to use the corrected cycle times in this rebuttal evidence.⁴⁷ Because BNSF's evidence accounts for the actual cycle times of the Xcel trains, it is the best evidence of record.

Locomotive Spare Margin (Item 33):

The parties continue to differ regarding the appropriate locomotive spare margin. BNSF relies on operating data maintained in the ordinary course of business that show that BNSF's spare margin was |||
|||⁴⁸ Xcel continues to rely on expired contract provisions to develop spare margins and fails to include all relevant unavailable

⁴³ Xcel reply electronic workpaper "T&O Transit Hours-Reply.xls", Tab "BN TMS adjusted."

⁴⁴ BNSF opening electronic workpaper "Pawnee Trains 2001 2002.xls", Tab "27" shows that BNSF 8955 and BN 9533 were reported on the train for the entire empty trip from Pawnee Station to the mine.

⁴⁵ Xcel Reply Nar. at II-A-14.

⁴⁶ BNSF Reply Nar. at II-38 to 39.

⁴⁷ BNSF rebuttal electronic workpapers "BNSF Xcel Rebuttal PRG.123."

⁴⁸ As explained below in Section II.A.1.c.iv.(c), BNSF slightly modifies its spare margins for this rebuttal to account for the non-SD70MAC units that are used on the Pawnee trains. See, BNSF.RB.WP.II-A-00123; BNSF rebuttal electronic workpaper "loco spare margin rebuttal.xls."

and non-utilized time. The differences in the parties' evidence is discussed in detail in Section II.A.1.c.iv.(c).

Switching by Road-Haul Locomotives (Item 35):

On opening, both parties presented evidence showing that, on average, road crews on the Xcel train spend approximately one hour engaged in switching activities at Pawnee Station.⁴⁹ Xcel's evidence was based on observations taken during a field trip by its witness to Pawnee Station,⁵⁰ and was confirmed by BNSF's special study of switching activities at Pawnee Station.⁵¹ Notwithstanding this apparent agreement between the parties' opening evidence on this issue, on reply, Xcel challenges BNSF's and, therefore its own evidence, and now sponsors 19 minutes of switching time -- less than one third of what Xcel's own witness claims to have "observed" during his field trip to Pawnee Station.⁵²

Xcel's challenge is based on the erroneous reclassification of the switching activities at Pawnee Station from "switching" to "hostling." Specifically, Xcel claims that the reconfiguration of the locomotive consist at Pawnee Station is within the definition of the term "hostling" and, therefore, the time associated with this activity should not be included in calculating switch engine minutes.⁵³ Xcel's logic assumes that the locomotive operating costs associated with this activity are captured in the variable costs calculation as "hostling."

⁴⁹ Xcel Opening Nar. at II-A-45; BNSF Opening Nar. at II-37, 38.

⁵⁰ Xcel Opening Nar. at II-A-45 ("Based on Xcel's field trip (including an inspection of the Pawnee Station operation) Xcel used 60 minutes of switching at the Pawnee Station").

⁵¹ BNSF opening electronic workpapers "Pawnee Switching.123."

⁵² Xcel opening workpapers II-A-3317 to 3319.

⁵³ Xcel Reply Nar. at II-A-21.

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However, under Xcel's approach, these costs would never be reflected in the variable cost calculation. This is because "hostling" in railroad parlance refers to the movement of locomotives within a *yard* by mechanical personnel called "hostlers." Hostling costs are reported as locomotive servicing in the R-1 and, more importantly, are not included as locomotive operating costs. The reconfiguration of the locomotives at Pawnee Station, however, is performed by *road* locomotives operated by road crews, not hostlers. Thus, in order to account for the locomotive operating costs of providing service to Xcel, the time associated with these activities is properly classified as road switching time.⁵⁴ See *TMPA*, at 53.

Finally, Xcel claims that based on its review of BNSF's Train Activity Reports from October 1999 through April 2001, Xcel "determined that Mr. Plum's Pawnee Station analysis covering the period August 29, 2002, to November 11, 2002, produce results that were *different* from results he would have obtained had he used the same data for other periods."⁵⁵ This vague statement is totally unsupported and should be disregarded for that reason alone. Xcel does not disclose (1) the magnitude of the supposed difference, (2) the specific time period when this supposed difference occurs, or (3) whether the difference is even in Xcel's favor.

Moreover, given the fact that Xcel's assertion is based on its review of Train Activity Reports while Mr. Plum's special study was primarily based on detailed logs maintained by

⁵⁴ Xcel also complains that the time associated with installing the EOTD should not be included in calculating switch engine minutes. This activity, however, is an integral part of the reconfiguration of the locomotive consist and the time associated with this specific activity is inseparable from the rest of the switching activity.

⁵⁵ Xcel Reply Nar. at II-A-21 (emphasis added).

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BNSF road crews during the study period,⁵⁶ the existence of a “difference” between the study results and Xcel’s review is neither surprising nor relevant. BNSF crews recorded time and activity in the study logs at a more detailed and precise level than they would typically do for the Train Activity Reports which are not intended to serve as a record of switching activity. Mr. Plum relied on the Train Activity Reports only in those instances where study log data was missing and a Train Activity Report was available. Accordingly, it is not unexpected that for time periods other than the study period, or even for the study period, switching times developed based on the Train Activity Reports appear to differ from times determined by Mr. Plum based principally on the study logs. In light of the increased detail and precision with which the study logs were maintained, however, Mr. Plum’s study undoubtedly yielded a more accurate result than that yielded by a mere review of the Train Activity Reports.

Switching by Yard Locomotives (Item 36):

On opening, Xcel included no yard switching time for Xcel trains. By contrast, BNSF submitted a detailed study of switching operations at both the Alliance and Guernsey yards that determined that each train averages approximately 160 minutes of yard switching. On reply, Xcel criticizes BNSF’s switching studies at Alliance and Guernsey on the ground that BNSF’s study determined average switch minutes for all coal trains at each yard and not specifically for

⁵⁶ Because these logs were maintained solely during the study period for purposes of conducting a special study, and do not exist for other time periods, there is no merit to Xcel’s suggestion that BNSF withheld evidence from it. *See* Xcel Reply Nar. at II-A-20, 21. Moreover, during the course of discovery BNSF produced or made available several boxes of Train Activity Reports. Xcel’s *workpaper* request seeking Train Activity Reports for a period well after the agreed close of discovery -- Reports that BNSF neither relied on nor consulted in preparing its evidence -- constitutes an unjustified attempt to reopen discovery.

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the Xcel train.⁵⁷ Xcel asserts that evidence of average per train switch minutes would not be relevant to Xcel trains because it does not account for the supposed direct proportional relationship between a train's length of haul and the amount of switching time that the train will require at Alliance and Guernsey.⁵⁸ According to Xcel, trains with shorter length of haul, like Xcel's, will have fewer bad order cars when they pass through Alliance and Guernsey. Based on these assumptions, Xcel claims that, because the length of haul for the Xcel train is one third of the average for all trains passing through Alliance and Guernsey,⁵⁹ Xcel trains require one third the switching that the average train requires at Alliance and Guernsey. Accordingly, Xcel reduces BNSF's study results by two thirds. However, Xcel's underlying unsupported assumption -- that there is a direct proportional relationship between length of haul and switching requirements at Alliance and Guernsey -- is wrong and the resulting adjustment is both unnecessary and invalid.

Xcel claims to have verified in a special study that Xcel trains incur a third fewer bad order cars.⁶⁰ Xcel's special study, however, is not credible. Xcel purports to have identified from BNSF's train event data for the Fourth Quarter 2000, all events in which a car was set out or picked up at Alliance. Xcel then compared the number of cars allegedly set out or picked up

⁵⁷ Xcel Reply Nar. at II-A-16 to 20.

⁵⁸ *Id.* at II-A-19.

⁵⁹ According to Xcel's calculations, the Pawnee movement is 382 miles, and the average for all coal unit trains that pass through Alliance was 1,206 miles. Xcel Reply Nar. at II-A-19. Although Xcel's workpaper suggests that it used the PCRail software to determine the distance between origin and destination, many of its mileages are simply wrong. For example, Xcel shows 1,638 miles from Smithers Lake, Texas, to Nacco Junction, Wyoming. PCRail calculates the mileage as 1,504 miles. *See*, BNSF.RB.WP.II-A-00128-00130; BNSF rebuttal electronic workpaper "Smithers Lake.pdf."

⁶⁰ Xcel Reply Nar. at II-A-9 n.29.

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for the Xcel train to the alleged average number for all trains. According to Xcel's study, however, of the 61 Pawnee trains passing through Alliance, only *one car* was set out or picked up.⁶¹ And, of the remaining 4,322 trains (approximately 500,000 cars) in Xcel's study, there were only 229 cars set out and picked up at Alliance, or less than 8 cars set out or picked up *each day* at Alliance.⁶² Thus, Xcel's study shows that, at best, only 3 percent of the trains passing through Alliance would require car switching. These results are fanciful.⁶³

Xcel's assumption that there is a relationship between the length of haul and switching requirements at Alliance and Guernsey overlooks the critical fact that trains are inspected, and bad order cars are switched, at locations other than Alliance and Guernsey. The average coal train will have had a 1,000-mile inspection at an additional location (such as Lincoln, Nebraska; Amarillo, Texas; or Mandan, North Dakota), but Xcel trains will not have been inspected elsewhere. Similarly, those trains that travel on foreign roads, which are included in Xcel's development of the 1,206-mile average length of haul, are also likely inspected upon interchange or on the connecting carrier's line, at which time bad order cars would be switched out as necessary. In fact, because Xcel trains typically are inspected and bad order cars are changed out only at Alliance and Guernsey, it could just as reasonably be assumed that the Xcel trains will require *greater-than-average* switching at Alliance and Guernsey.

⁶¹ Xcel reply electronic workpaper "4q00 train event alliance.xls."

⁶² *Id.*

⁶³ On average, BNSF switches 100 cars (36 bad orders and 64 fills) in and out of empty coal trains at Alliance each day. Some 75 percent of all empty coal trains require car switching at Alliance. There is additional switching associated with loaded coal trains. BNSF opening electronic workpaper "Alliance Daily Reports Summary.xls," tab "Daily Summary."

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Also, road crews are more likely to switch out bad order cars en route on longer movements than on shorter movements like Xcel's. The shorter moves are generally never far from the Alliance or Guernsey Yard, which presents BNSF the opportunity to avoid intermediate switching events, if possible, until the train returns to Alliance or Guernsey. This fact is borne out by the Xcel move, where switching of bad order cars en route rarely occurs.⁶⁴ Thus, there is no basis for assuming a relationship, linear or otherwise, between length of haul and the switching needs of any one train at a particular yard.

Switching requirements are driven by a number of critical factors other than length of haul, and these factors are ignored by Xcel. These factors include the length of train, the age of the cars, the car type, the type of unloading mechanisms on the car and at the plant, and how well the cars and dumper are maintained. Each of these factors would suggest that Xcel's switching requirements are at or above average at Alliance and Guernsey. For example, with 123 cars, Xcel's trains are at, or slightly above, the average for coal trains in Alliance and Guernsey Yards.⁶⁵ Xcel's Pawnee fleet is aging -- it is over 20 years old.⁶⁶ As to maintenance of the fleet, unlike many other shippers, Xcel has no scheduled preventative car maintenance program that would tend to reduce the incidence of bad order cars.⁶⁷ Also, cars are more likely to suffer damage during the loading and unloading process than during transit between terminal points. BNSF's Train Activity Reports show frequent problems at the Pawnee dumper during unloading,

⁶⁴ Because bad order cars are rarely switched out at locations other than Alliance and Guernsey, neither party included any time for switching bad orders at any other location.

⁶⁵ BNSF rebuttal electronic workpaper "alliance train size.xls."

⁶⁶ BNSF.RB.WP.II-A.00131-00133.

⁶⁷ Xcel does, on occasion, make arrangements at a Progress Rail car repair facility to have its cars shopped.

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suggesting a higher incidence of equipment failures on the cars as well as greater switching of cars in and around the plant.⁶⁸ Loading and unloading activities, as well as switching of cars, cause a greater amount of wear and tear on car bodies and various appurtenances than does the line-haul portion of a move. When these factors are considered, it is clear that there is no reason to believe that the switching requirements of Xcel trains at Alliance and Guernsey are below the average requirements for all trains at Alliance and Guernsey.

In fact, the evidence suggests that Xcel trains may experience *above* average switching requirements because of the extraordinary switching time associated with Xcel's monthly reassignment of an Arapahoe train set to serve Pawnee Station. As BNSF explained on opening, Xcel routinely switches its Arapahoe train-set of bottom-dumping hopper cars into service to the Pawnee plant, which was designed to unload rotary-dump gondolas.⁶⁹ Additional switching is required in order to convert the Arapahoe train set to Pawnee service and then to return it to Arapahoe service. This includes adding three or more cars for Pawnee service and then removing them upon return to Arapahoe service. Occasionally, the cars on the Arapahoe train set must be realigned so that they are all facing the correct direction for dumping at Pawnee.⁷⁰

Finally, Xcel attempts to discredit BNSF's well-documented studies as unverifiable. Xcel claims that it cannot verify the studies because they are built on several assumptions and on a selected subset of BNSF wage records.⁷¹ BNSF provided all wage records for the Alliance and

⁶⁸ BNSF.OP.WP.II-A-147 to 241.

⁶⁹ BNSF Opening Nar. at II-12.

⁷⁰ *Id.*

⁷¹ Xcel Reply Nar. at II-A-17. Xcel's only example relates to Mr. Plum's assumption "that crews going on duty at 07:00:00 were engaged in switching activities in the New Yard

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Guernsey switch crews for the study period.⁷² BNSF also produced all other workpapers on which Mr. Plum relied and provided support for each of his assumptions.⁷³

Mr. Plum's studies are the best evidence of record of switching required for the Xcel trains.

Helper Service Locomotives and Crews (Items 37 and 38):

On opening, BNSF presented evidence verified by the Assistant Vice President for Unit Coal Trains, Richard C. Ellis, regarding the use of helper services at various locations. In its opening, Xcel claimed that it had performed a study of BNSF's Train Activity Reports showing that Xcel trains are not helped at Crawford and Logan and receive infrequent help at Belle Ayr and Campbell.⁷⁴ Xcel rationalized the results of its special study by claiming that Distributed Power ("DP") had rendered help at these locations generally unnecessary.⁷⁵ BNSF's reply explained how Xcel's special study of Train Activity Reports was flawed.⁷⁶

Among other problems, Xcel's study relied on Train Activity Reports for portions of the move that did not traverse helper districts, and therefore, not surprisingly, contained no record of

area of the Guernsey yard." *Id.* at II-A-18. However, this assumption was not without foundation. Mr. Plum confirmed the crew assignment in an interview with Jim Mikel, the Terminal Manager at Guernsey. As Terminal Manager, he is responsible for crew assignments at Guernsey.

⁷² BNSF opening electronic workpaper "Alliance & Guernsey Hours.xls."

⁷³ BNSF opening electronic workpapers CD 1 of 2 contains 12 files in the "II-A / Switching" folder.

⁷⁴ Xcel Opening Nar. at II-A-16.

⁷⁵ *Id.*

⁷⁶ BNSF Reply Nar. at II.13 to 14. Xcel cites to an article discussing how the introduction of DP has impacted the need for helper services. That article specifically acknowledges that the advent of DP has not eliminated the need for help at Crawford Hill. Xcel Reply WP 4484.

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helper service.⁷⁷ BNSF also demonstrated mathematically that the results of Xcel's study were wrong.⁷⁸ BNSF showed that a typical Xcel train would not have sufficient horsepower to traverse Crawford Hill without help.⁷⁹ Xcel provided no new evidence on reply. BNSF's evidence continues to be the best evidence of record and should be accepted by the Board.⁸⁰

Joint Facility Payments (Item 41):

The parties agree on the joint facilities used by the Xcel trains but continue to differ on how payments should be treated in developing BNSF's variable costs. These differences are discussed below in Section II.A.c.vii.

c. Differences in BNSF's and Xcel's Development of Variable Costs

i. Gross-Ton Mile Expenses

(a) Maintenance-of-Way Expense

On opening, BNSF explained that the SFGT formula for estimating MOW costs was obsolete and produced unreliable results. Between the filing of opening and reply evidence in

⁷⁷ BNSF Reply Nar. at II-13.

⁷⁸ *Id.* at 14.

⁷⁹ *Id.*

⁸⁰ On opening, BNSF calculated helper costs for the Belle Ayr originations based on the average for the various routes (*i.e.*, by weighting evenly the Crawford helper required for the Alliance route and the Logan helper required for the Guernsey route). BNSF opening electronic workpaper "BNSF Xcel Open Prg.123", Tab "L." When BNSF accepted Xcel's line-haul mileages on reply, it advertently failed to modify its calculation of helper service costs to reflect the specific routings for the Belle Ayr traffic. In this rebuttal, BNSF modifies its calculation of helper service costs to account for Xcel's determination that loaded Belle Ayr trains used the Guernsey route in 2001 and the Alliance route in 2002. BNSF rebuttal electronic workpaper "BNSF Xcel Rebuttal Prg.123", Tabs "L" and "Opr_Stats."

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this case, the Board issued the *TMPA* decision in which it agreed that the SFGT was unreliable and obsolete.⁸¹ Nevertheless, Xcel continues to rely on SFGT in its reply evidence. While Xcel argues that the Board's decision in *TMPA* was incorrect, Xcel offers the same basic arguments that the Board rejected in *TMPA*. BNSF assumes that Xcel simply seeks to preserve the record for appeal. Accordingly, for the sake of a complete record, BNSF responds to Xcel in Exhibit II-A-5. BNSF's response closely tracks the response BNSF filed on rebuttal in *TMPA* responding to arguments made by *TMPA*, which are the same arguments presented by Xcel here.

Xcel proffers one new argument for use of SFGT. It argues that fairness requires that the Board accept its SFGT evidence here because BNSF provided MOW data that were "insufficient to allow the analysis [comparing SFGT results to actual costs] to be performed."⁸² In fact, BNSF does not maintain data that permit an accurate segment-specific MOW calculation, which is why parties to rate reasonableness cases have litigated for decades over an appropriate model to use in estimating variable MOW costs. Because of the lack of relevant existing data and the complexity of any modeling exercise, the Board properly ruled in *TMPA* that system-average MOW costs should be used. It should follow that conclusion here.

(b) Road Property Ownership

The calculation of road property ownership costs associated with the Pawnee trains is the single largest difference between the parties' variable cost evidence, representing approximately one-half of the total difference. BNSF has presented evidence demonstrating that:

⁸¹ *TMPA* at 10 n.8, 56.

⁸² Xcel Reply Nar. at II-A-37.

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- (1) BNSF's road property database does not accurately reflect the actual gross investment on individual line segments;
- (2) BNSF's road property depreciation calculator significantly overstates line-specific accumulated depreciation, thereby understating net investment and the return component of variable costs;
- (3) Xcel's proposed adjustment contains significant methodological errors; and
- (4) Xcel's adjustment fails to account for the significantly higher densities on the routes traversed by the Pawnee trains.⁸³

Xcel's reply evidence failed to address meaningfully any of these issues. BNSF addresses below the arguments presented by Xcel in support of its proposed adjustment. For the reasons set out below, the Board should reject Xcel's proposal and apply system-average road property ownership costs in this case.

(i) Reliability of Underlying
Data and Inconsistency with
R-1

On reply, Xcel argues that the Board should overlook problems with the internal data maintained by BNSF on line-specific road property expenditures and any problems in the data generated by BNSF on segment-specific depreciation.⁸⁴ Xcel's primary argument for use of this flawed data is that, in prior cases, BNSF used the same type of information and the Board and ICC have accepted it.⁸⁵ This is not true. The databases at issue here are the product of the merger between BN and ATSF. As Ms. Cami Elliott explained in her verified statement,⁸⁶ the

⁸³ E.g., BNSF Reply Nar. at II-18 to 24.

⁸⁴ The depreciation data used by Xcel are not maintained in the ordinary course of business. Rather, they are data generated, pursuant to Board order, by a depreciation calculator function. Problems with the depreciation calculator and the data it generates were addressed previously. BNSF Reply Nar. at II-19.

⁸⁵ Xcel Reply Nar. at II-A-50, 51 and 56 n.86.

⁸⁶ Filed in Opposition to Xcel's Third Motion to Compel, and incorporated in BNSF's opening evidence by reference.

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FADB, as well as its depreciation calculator, are holdovers from the ATSF.⁸⁷ *WTU*,⁸⁸ which was filed nearly a decade ago and is the most recent case cited by Xcel, involved the road property system of the former BN.⁸⁹ That system is no longer used (and has not been used since shortly after the merger) by BNSF. Ms. Elliott explained that after the merger, the BN's road property data were merged into the ATSF's fixed asset accounting system. The depreciation calculator is a product of the ATSF accounting system and incorporates the ATSF's historical depreciation rates. Therefore, as Ms. Elliott explained, that calculator cannot be used to develop reliable accumulated depreciation for former BN line segments. Elliott VS at 25-29. She also explained that numerous developments in the recent past, including changes in regulatory requirements as to the level of specificity required in accounting for assets by line segment and the change to group depreciation accounting, have affected the uses to which the data are put and reduced the level of detail that must be contained in the databases.⁹⁰

Moreover, even if BNSF had relied on similar data in the past, that certainly would not support the continued use of the data today when we now know that the data are unreliable for this purpose. BNSF only recently discovered, in the course of preparing *TMPA* evidence, that there are significant problems with the use of the FADB data and the depreciation data generated by the calculator to calculate a segment-specific road property cost.

⁸⁷ BNSF Reply Nar. at II-20; Elliott VS at 28.

⁸⁸ *West Texas Utils. Co. v. Burlington Northern R.R. Co.*, 1 S.T.B. 638 (1996), *aff'd*, *Burlington Northern R.R. Co. v. STB*, 114 F.3d 206 (D.C. Cir. 1997).

⁸⁹ The *WTU* case involved a different railroad, a different accounting system, and different regulatory recordkeeping requirements. There is no way now to confirm whether the data used in that proceeding suffered from some of the same problems as BNSF's data suffer today.

⁹⁰ *Id.* at 23, 25-28.

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In fact, Xcel's own reply evidence demonstrates that there are significant problems with the FADB data and the depreciation data that prevent them from being used to produce a viable segment-specific road property adjustment. In Table II-A-20, Xcel compares investments in a PRB line, based on the FADB, with the entire BNSF system, as reported in BNSF's R-1.

Xcel presents this table as evidence that there are economies of scale in PRB road property costs.⁹¹ But what the table really highlights is that Xcel's adjustment is completely unfounded. This comparison essentially moots Xcel's own criticisms that there are not significant inconsistencies between these two sources.

Xcel's table shows that, for the PRB line, the FADB calculator determined accumulated depreciation of \$35 million for the FADB-reported gross investment of \$119 million, suggesting that BNSF's "largest investments," for a "major, high-density" line are nearly one-third depreciated.⁹² By comparison, Xcel presents BNSF's system-wide gross investment in road property of \$20.4 billion and accumulated depreciation of \$3.3 billion, which reflects the railroad's group depreciation practices and is the basis for the URCS unit costs. These figures indicate that BNSF's system assets are, in fact, only 16-percent depreciated.⁹³ Thus, Xcel's comparison suggests that BNSF's depreciation costs on PRB assets are much *higher* than system average.⁹⁴ However, using the depreciation calculator, Xcel determined annual depreciation costs per gross ton-mile for the Pawnee route that were *less than one-half* of the system-average,

⁹¹ Xcel Reply Nar. at II-A-53.

⁹² $\$34,908,438 / \$119,434,081 = 0.29$.

⁹³ $\$3,276,658,000 / \$20,402,861,000 = 0.16$.

⁹⁴ $0.29/0.16=1.81$, or 81 percent greater.

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and incorporated this relationship in its development of variable costs. Xcel's results are inconsistent with its own data.

Xcel's Table II-A-20 undermines other aspects of Xcel's purported adjustment. Based on this table, Xcel concludes that BNSF's "PRB investment per GTM is only 48% of its average investment per GTM over its entire system."⁹⁵ However, Xcel's purported adjustment assumes that the road property costs for Xcel's route are *less than one-quarter* of the system average.⁹⁶ Xcel argues that economies of scale explain the significant reductions to system-average that it calculates using the FADB, upon which its variable costs are predicated. The problems with Xcel's economies-of-scale argument are addressed below. Even if Xcel were correct, however, that would not explain why on the Xcel route the net investment per GTM is *one half* that of the PRB as a whole.⁹⁷

Xcel raises a few other issues that can be disposed of easily. Xcel claims that its approach is consistent with the complainant's approach in *TMPA*. BNSF cannot address that assertion here because it would involve analysis of data not available in this record. However, BNSF urges the Board to challenge that assertion by comparing Xcel's calculation to its own in *TMPA*. In addition, in an effort to show that the FADB reconciles to the R-1, Xcel compared BNSF's FADB investment in *running tracks only* to a system-wide total that includes investment in running *and* yard tracks. In *TMPA*, the Board expressly rejected such an inconsistent

⁹⁵ Xcel Reply Nar. at II-A-54.

⁹⁶ Xcel Opening Exh. II-A-9.

⁹⁷ Despite the fact that Xcel's result for the PRB is twice what it produced for the issue route, Xcel suggests that "these relationships are quite consistent with those observed using Xcel's Adjusted Road Capital Costs." Xcel Reply Nar. at II-A-54. Xcel's characterization is patently absurd.

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approach. The Board corrected TMPA's error by developing the adjustments relative to the amounts that URCS assigns to running tracks.⁹⁸ Xcel has not done that here.

(ii) Use of System-Average
Variability Is Improper

In response to Xcel's Third Motion to Compel -- and in the opening and reply rounds of its evidence -- BNSF demonstrated that Xcel's proposed line-specific adjustment results in understated road property investment because it applies a system-average default variability to the investment in, and depreciation of, road property on the route used by the Pawnee trains. That route, however, is much higher density than the system-average line segment, and therefore should have a higher-than-average variability percentage.

Xcel responds both in the body of the narrative and in Exhibit 27, which is a verified statement of Mr. Plaistow, Xcel's principal variable cost witness, with three arguments, two of which mischaracterize BNSF's arguments. The third mischaracterizes prior proceedings before the ICC.

First, Xcel asserts that BNSF's contention that the percent variable increases as density increases is the equivalent of BNSF's arguing that economies of density do not exist.⁹⁹ This mischaracterizes BNSF's argument. Economies of density certainly occur, but those economies

⁹⁸ *TMPA* at 57, n.100. Xcel even acknowledges that its adjustment does not incorporate any investment for yard tracks along the route traversed by the Pawnee trains. Xcel Reply Nar. at II-A-36. For Xcel to recognize that certain yard costs are recovered elsewhere, it must also be cognizant of the clear need to perform an "apples-to-apples" comparison in its development of the road property adjustment. The system-average to which it compares the investment in and depreciation of the issue route's running tracks must be reduced to include only the investments and depreciation assigned to running tracks in URCS. Compare Xcel Exh. II-A-9, p. 9 to URCS Work Tables B5 Part 5 and D1 Part 2.

⁹⁹ Xcel Reply Nar. at II-60 to 61; Xcel Reply Exh. 27 at p. 1.

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are on the *fixed costs* side of the equation. Average *total* cost per unit of output declines as average density increases, because the *fixed* cost component of total cost is spread over ever-increasing volumes of traffic. Thus, BNSF acknowledges that there are economies of density and scale, but not that those economies affect variable costs. Xcel cites to *WTU* in an attempt to bootstrap its argument that economies of density occur on the variable cost side of the equation. *WTU*, however, is not relevant here because neither party nor the Board addressed the variability factor in that case. Variable costs there were developed using the 50-percent system-average variability factor, which is the source of the problem underlying Xcel's calculations here. That ruling can hardly be used to justify Xcel's calculations in this case.¹⁰⁰

Second, Xcel suggests that by arguing for a higher variability percent at higher densities, BNSF is effectively arguing that system-average costs are always preferable to movement-specific costs. This also is a red herring. If the FADB data were reliable on a line-specific basis -- and for the reasons articulated above, they are not -- it might be possible to develop line segment-specific road property investment costs from these data. On dense line segments, however, it would not be appropriate to multiply the total investment costs by the system-average percent variable to generate variable investment costs on a line segment-specific basis. Instead, consistent with BNSF's showing and principles of URCS, it would be necessary to multiply total investment costs on the line by a higher-than-average percent variable, consistent with its higher-than-average density. Thus, BNSF's argument does not reject the potential for a movement-specific adjustment. Rather, it recognizes that to be accepted, the movement-specific

¹⁰⁰ The route in *WTU* is almost three times the length of the Xcel issue route. In addition, data in *WTU* may have suffered from some of the same flaws present in this case and, therefore, produced results that are unreliable.

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adjustment must be reliable and demonstrably superior to URCS system average. That standard is not met by the adjustment proposed by Xcel.

System-average variable costs, however, are a good proxy for line segment-specific variable costs. BNSF believes that it is appropriate to presume a straight-line cost function (consistent with the Board's development of URCS).¹⁰¹ If one assumes a straight-line cost function, then mathematically the same variable cost per unit of output should exist, over the long-run, on each line segment. And here, where the line-specific FADB data are demonstrably inconsistent with the R-1 data, there is no realistic alternative to the use of URCS system-average road property investment costs.

Finally, Xcel mischaracterizes the record in prior proceedings in which this issue was raised. Specifically, Xcel claims that the railroads had argued during the development of URCS "that economics of scale, scope, and density do not exist in the rail industry."¹⁰² The railroads made no such argument. It is true that during the development of URCS, the AAR objected to the inclusion of the Rail Form A ("RFA") default variability factor of 50 percent for road property because a static variability factor did not account for changes in density.¹⁰³ While the ICC did not adopt the AAR's recommendation to link road property ownership to a variability factor for another cost component that increased with density, the ICC explicitly recognized that

¹⁰¹ Percents variable are higher at higher density levels *whenever* marginal costs are positive, because total costs increase as total density increases, but fixed costs remain fixed. Thus, the principle articulated by BNSF is not dependent on assuming a straight-line cost function.

¹⁰² Xcel Reply Nar. at II-A-61.

¹⁰³ Comments of Association of American Railroads, *Adoption of Uniform Railroad Costing System as a General Purpose Costing System for All Regulatory Costing Purposes*, Ex Parte No. 431 (Sub-No. 1), at 8-9 (filed Mar. 20, 1989).

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the AAR's arguments "may have merit."¹⁰⁴ However, the ICC also recognized that it lacked an "empirical foundation" on which to develop an alternative variability factor at the time.¹⁰⁵ Accordingly, the ICC incorporated the RFA default variability factor "pending further study."¹⁰⁶ In fact, the ICC was already trying to develop an alternative to the RFA default factors. The ICC stated that it had made efforts "to test and analyze these account groups to establish some usable correlation with a variety of output measures. So far our research has not provided any meaningful results. Thus, a departure from RFA default values or prior variability determinations is unsupported at this time."¹⁰⁷

The fact that URCS uses the RFA's default variability to determine the system average road property ownership costs does not make it an appropriate variability factor to be used in a movement-specific adjustment of the type advocated by Xcel on higher-density line segments in this proceeding. To the contrary. The ICC recognized that variability varies with density, but it was unable to determine the precise relationship for road property and therefore relied on a default variability reflecting average densities.¹⁰⁸ This recognition that variability changes with density, however, imposes a very high burden on any party seeking to make a line-specific

¹⁰⁴ *Adoption of Uniform Railroad Costing System as a General Purpose Costing System for All Regulatory Costing Purposes*, Ex Parte No. 431 (Sub-No. 1), 5 I.C.C. 2d 894, 919 (1989).

¹⁰⁵ *Id.*

¹⁰⁶ *Id.* at 920.

¹⁰⁷ *Id.* at 920 n.79.

¹⁰⁸ Far from being inconsistent with URCS, as Xcel claims, BNSF's argument squares directly with the Westbrook linear model on which URCS variability factors generally are based. That model holds that as output per unit of capacity increases, "the variability ratio also increases indicating recognition of density." *Id.* at 921 n.81.

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adjustment on high-density lines. That party must be able to show that its adjustment has properly accounted for the effect of density on the variability factor used to produce the adjustment. Since the ICC was unable to identify an appropriate adjustment to the variability factor after studying that issue, the proponent of a line-specific adjustment needs to show that it was able to succeed where the ICC could not. Xcel has not attempted to provide such a justification, and its proposed adjustment should therefore be rejected.

(c) Locomotive Fuel Expense

In its opening evidence, BNSF presented the results of a special study of fuel consumption for the Xcel trains. That study, which used the same methodology accepted by the Board in *TMPA*¹⁰⁹, shows that average fuel consumption for Xcel trains is 15 percent above system average. Xcel's variable costs rely on system average fuel consumption and, in its reply evidence, Xcel criticizes BNSF's fuel study. Xcel takes a shotgun approach on reply and makes the following criticisms of BNSF's fuel study:

- BNSF's methodology yields unreliable results;
- BNSF relied on fuel consumption rates that overstate fuel consumption;
- The mix of fuel study locomotives is not representative of locomotives typically used in Xcel service;
- BNSF operated the fuel study locomotives differently in order to increase fuel consumption;
- BNSF did not account for fuel consumed during pacesetter operations;

¹⁰⁹ *TMPA* at 58.

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- BNSF could have reduced fuel consumption by operating locomotives in idle for more of the return from Pawnee to Alliance;
- Three of the fuel study trains had bad data;
- BNSF fabricated fuel consumption data;
- BNSF's fuel study contains overlapping segment times resulting in a double-count of fuel consumption;
- BNSF's fuel study contains inconsistent segment times.

As BNSF demonstrates below, Xcel's criticisms are not legitimate. To the extent Xcel has alleged errors in Mr. Wasserburger's interpretation of the fuel study data, none of those alleged errors materially impact the fuel study results.

(i) BNSF's Study Methodology
Has Been Accepted By The
Board

As explained on opening, BNSF's fuel study is based upon event recorder data from Xcel trains. BNSF downloaded event recorder data for the issue trains during a study period. The event recorder captures the amount of time the locomotives spent in each throttle position. Using time in throttle position and the locomotive manufacturers' fuel consumption tables, BNSF calculated the total amount of fuel consumed by the study trains. This methodology is identical to the methodology accepted by the Board in the *TMPA* case.¹¹⁰

¹¹⁰ *Id.* Xcel claims that the methodology employed by BNSF was developed for litigation purposes. Xcel Reply at II-A-83. This is untrue. As BNSF told Xcel in response to a workpaper request regarding BNSF's methodology: "The methodology used in this litigation is identical to the methodology that Mr. Wasserburger used, as an employee of BNSF and its predecessor BN, to evaluate the fuel consumption on locomotives for

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(ii) BNSF Used Reliable And
Appropriate Manufacturers’
Fuel Consumption Tables In
Its Fuel Study

Xcel claims that a fuel study based on locomotive event recorder data is inherently unreliable because of the existence of “dozens” of fuel consumption tables that could be used to calculate the fuel consumption of the study trains.¹¹¹ It is true that there are multiple tables for each locomotive model. Generally, when manufacturers make design changes to new models or incorporate changes in older models during overhaul, the manufacturers perform extensive tests to develop highly precise fuel consumption figures for those new or modified locomotive models.¹¹² However, the mere fact that there are a number of fuel consumption tables does not render BNSF’s study unreliable. The real question is whether the rates used by BNSF accurately reflect the fuel consumption by the locomotives used in Xcel service.

The fuel consumption rates used by BNSF were provided by the two manufacturers of the locomotives used on the Xcel trains: General Motors’ Electro-Motive Division (“EMD”) and General Electric (“GE”). The accuracy of the EMD fuel consumption table that Mr. Wasserburger used to calculate fuel consumption for Xcel trains was confirmed during a field test conducted with Xcel and TMPA in May 2001. As explained on opening, the field test used a BNSF test car equipped with flow meters that measured the amount of fuel actually injected into

purposes of critiquing the performance of individual engineers.” *See* BNSF’s Responses to Complainant’s Request for Workpapers and For Data Supporting Defendant’s Variable Cost Calculations, Response No. 19 at 10 (served March 3, 2003). BNSF.RB.WP.II-A-00014.

¹¹¹ Xcel Reply at II-A-84 to 85.

¹¹² *See* BNSF Opening Nar. at II-55.

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two locomotives as they moved empty coal cars from Guernsey, Wyoming to a mine in the Powder River Basin for loading and then returned to Guernsey with loaded cars. The data generated by the test car were then compared to fuel consumption figures developed by applying the EMD fuel consumption table to the event recorder data downloaded from the locomotives used in the field test.¹¹³ The event recorder calculations for the combined fuel consumption of the two locomotives monitored were within one percent of the test car measurements.¹¹⁴ BNSF Opening Nar. at II-55 to 56. The GE fuel consumption rates were provided by GE to BNSF in response to a request for rates applicable to the locomotives used in Xcel service and Xcel has presented no evidence that they are not accurate.¹¹⁵ Xcel claims that the use of a different fuel consumption table to calculate fuel consumption for the Xcel study trains results in fuel consumption that is 4.4 percent less than BNSF's fuel consumption estimates.¹¹⁶ However, the table referenced by Xcel *is* the table used in BNSF's fuel study.¹¹⁷ Thus, the source of the alleged 4.4 percent difference is not the use of different manufacturer's fuel tables as Xcel

¹¹³ BNSF relied on this same EMD fuel consumption table to determine the fuel consumption in its special study of 31 Xcel trains. BNSF.OP.WP.II-A-0243.

¹¹⁴ Xcel does not dispute the close correlation between the event recorder data and the test car results in its reply evidence. The test car reports, Quantum reports, and the fuel consumption table used in the field test were provided to TMPA's and Xcel's joint expert, Mr. Thomas Johnson, upon the completion of the field test and event recorder analysis. These materials are provided at BNSF.RB.WP.II-A-00134-00156.

¹¹⁵ Moreover, as explained in the next section, even if the GE locomotives were excluded from the fuel study, the study results would remain the same.

¹¹⁶ Xcel Reply Nar. at II-A-85; Xcel reply electronic workpapers "fuel tables.xls" and "XcelTrains.xls."

¹¹⁷ Compare BNSF.OP.WP.II-A-0243 with Xcel reply electronic workpaper "fuel tables.xls."

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claims. Because Xcel did not provide any supporting calculations, there is no way to determine the source of the alleged difference.¹¹⁸

(iii) The Mix of Locomotives
During The Fuel Study Does
Not Impact The Study
Results

Xcel incorrectly claims that the mix of units that powered the fuel study trains was not representative of the mix of units that powered the Xcel trains in 2001, resulting in fuel consumption by the study trains that was greater than the trains operating in 2001. Specifically, Xcel claims that BNSF used more GE C44-9 locomotives which, Xcel notes, consume fuel at a slightly greater rate than the EMD SD70MAC locomotives.¹¹⁹ However, as is evident from the study, the use of non-SD70MAC locomotives to power Xcel trains does not result in increased fuel consumption. In fact, the fuel study shows the opposite effect. Ten study trains were powered by locomotives that included one or more non-SD70MAC locomotives. As shown in Table II.A-3 below, the average fuel consumption for all 31 study trains is *less* than the average fuel consumption for the 21 trains in the fuel study with locomotive consists comprised exclusively of SD70MAC locomotives.

¹¹⁸ The only evidence Xcel provided to support its supposed reduction in fuel consumption are summary statistics in column G of electronic workpaper “XcelTrains.xls.” These data are insufficient to allow the Board or BNSF to evaluate Xcel’s claim.

¹¹⁹ Xcel Reply at II-A-86.

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Table II.A-3
Comparison of Average Fuel Consumption in Gallons
For All Fuel Study Trains with Fuel Study Trains
Operated By SD70MAC Locomotives

	All Fuel Study Trains	SD70MAC Study Trains	Percentage Difference
Average Fuel Consumption In Gallons	8830	8873	+0.5%

Source: BNSF.RB.WP.II-A-00158-00160 and rebuttal
electronic workpaper “Fuel Sensitivities.123.”

Removing the ten trains from the fuel study that were powered in part by non-SD70MAC locomotives would result in greater average fuel consumption for the Xcel trains.

(iv) Xcel’s Allegation That BNSF
Operated The Fuel Study
Trains Differently Is Clearly
False

Xcel makes the outrageous claim that BNSF operated its fuel study trains in a manner specifically designed to boost fuel consumption. According to Xcel, BNSF ran the fuel study trains some sixty percent faster between terminals than it typically operates its trains.¹²⁰ For proof, Xcel presents what it asserts is a comparison of the mix of “running” and “idle” time on the Xcel trains included in the fuel study and the mix for all Xcel trains.¹²¹ But Xcel developed “running” and “idle” times for the fuel study trains from a different source than for all Xcel trains. For fuel study trains, Xcel attempted to estimate running and idle times using data from *locomotive event recorders*. Those data contain information on locomotive throttle positions,

¹²⁰ Xcel claims that the running time was 52 hours for all Xcel trains but only 32 hours for the trains in the fuel study. Xcel Reply Nar. at Table II-A-21. For this to be the case, the fuel study trains would have had to have been operated at speeds that were more than 60 percent greater than the average for all of the trains. Not surprisingly, Xcel presented no evidence that this was actually the case.

¹²¹ Xcel Reply Nar. at II-A-86 to 87 and 96.

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allowing Xcel to calculate the time the locomotive throttle was in a running or idle position. Because it obviously did not possess event recorder data for all Xcel trains, however, Xcel developed “running” and “idle” times for all trains using BNSF’s *train movement* records. These records show only the elapsed time between and at particular stations on the route of movement and do not contain information on locomotive throttle positions. Such an apples-to-oranges comparison is not legitimate and yields meaningless results.

A simple apples-to-apples comparison shows that Xcel is wrong. BNSF applied Xcel’s methodology to BNSF’s train movement data to calculate the running and idle times both for the fuel study trains and for all Xcel trains.¹²² As Table II.A-4 shows, when “running” and “idle” times for both sets of trains are derived from the same source using the same methodology, the train operations are essentially identical.

Table II.A-4
Percent of Time Spent “Running” and “Idle”
for Xcel Fuel Study Trains and All Xcel Trains
Based on Train Movement Data

	Fuel Study Trains	All Xcel Trains	Percentage Difference
“Running” Time	61%	63%	(2%)
“Idle” Time	39%	37%	2%

Source: BNSF.RB.WP.II-A-00162 and rebuttal
electronic workpaper “Fuel Study Train Events Rebuttal.xls.”

This is a marked contrast to the comparison of event recorder data to train movement data that Xcel performed. The evidence clearly demonstrates that the fuel study trains are representative

¹²² For the purposes of this comparison, BNSF accepted Xcel’s exclusion of dwell time at Alliance and Guernsey. See BNSF rebuttal electronic workpaper “Fuel Study Train Events Rebuttal.xls.”

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of all Xcel trains, and Xcel's claim that BNSF altered the operation of the fuel study trains is utter nonsense.

(v) Fuel Consumption During
Pacesetter Operations

Xcel claims that BNSF should have made an adjustment to account for the use of a pacesetter on BNSF locomotives during the loading process.¹²³ Specifically, Xcel witness Johnson claims that "the pacesetter on the train sets the locomotive at Notch 6 as a maximum throttle level, but in reality the locomotive is either idling or at Notch 1...."¹²⁴ Mr. Johnson therefore concludes that BNSF should have ignored the event recorder data during loading and assumed that the locomotive was consuming fuel as if it was in idle or in throttle position 1.¹²⁵ Mr. Johnson's testimony demonstrates a lack of knowledge and understanding of the nature of pacesetter operations and the event recorder data collected from the Xcel trains.

Mr. Johnson incorrectly assumes that the pacesetter system sets the locomotive at a particular throttle position -- position 6. It is, however, the engineer that sets the locomotive in a throttle position and then turns on the pacesetter so that the train can proceed at the appropriate speed required for loading. When the pacesetter is operating, it is linked to the governor, which is a metered device that controls the amount of fuel released to the locomotive motor. As the train is loaded and becomes heavier, the pacesetter opens the governor to allow more fuel to flow to the motor to increase tractive effort and allow the train to maintain a constant speed.

¹²³ Xcel Reply at II-A-88 to 89.

¹²⁴ *Id.* at II-A-88.

¹²⁵ *Id.*

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BNSF's engineers typically set the locomotive in throttle position 2, 3, or 4 during pacesetter operations. However, it may be necessary for operational reasons for the engineer to put the locomotive in a higher throttle position. For example, the engineer may find that a higher throttle position is needed because the pacesetter is not allowing sufficient fuel to flow to the motor to generate enough tractive effort to keep the train moving at the required loading speed.¹²⁶

While Mr. Johnson assumes that every locomotive in the fuel study is in throttle position 6 during pacesetter operations, the study trains do not bear this out. The event recorder data show that the locomotives on 27 of the 31 study trains were never in a throttle position higher than 4 during the loading process.¹²⁷ Of the four trains with locomotives that were in a higher throttle position, the engineers initially set each locomotive in throttle position 2 and then gradually increased the throttle position during the loading process, presumably to maintain the trains' speed for loading or to cool the locomotives' traction motors.¹²⁸

Contrary to Mr. Johnson's assumptions, the use of event recorder data may actually *underestimate* the locomotive's fuel consumption during pacesetter operations. The fact that tractive effort dramatically increases during the loading process means that actual fuel consumption is also increasing. While at the beginning of the pacesetter operation when the train

¹²⁶ There is another reason for using higher throttle positions that is unique to the GE C44-9 locomotives. When the pacesetter is used in these locomotives, the engineer generally must use a higher throttle position to ensure that the traction motor is properly cooled during the loading process. The fans that cool the motor do not operate at lower throttle positions, which may cause the traction motor to overheat and become damaged, resulting in greater maintenance costs and out-of-service time for the locomotives.

¹²⁷ BNSF.RB.WP.II-A-00163-00196.

¹²⁸ *Id.* at trains 91, 103, 116 and 118.

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is light the locomotives' fuel consumption may be modest, as the train gets heavier, tractive effort must increase in order to maintain the train's constant speed. To provide the tractive effort, the pacesetter will open the governor thereby increasing the rate of fuel consumption. That fuel consumption likely will exceed the rate of consumption for the particular throttle position at which the locomotives are set. Basing fuel consumption on the locomotive throttle position, however, does not account for the increase in fuel consumption.

(vi) Isolated Locomotive Units

In its opening evidence, BNSF's witness Mr. Wasserburger accounted for the fact that certain locomotives on the empty return from Pawnee to Alliance were isolated and therefore not consuming fuel at the rate indicated by the locomotives' throttle positions. Mr. Johnson claims that BNSF's fuel consumption results are overstated because they fail to account for locomotives that were not isolated during the fuel study but, in Mr. Johnson's judgment, *could have been* isolated.¹²⁹ Mr. Johnson's claim fails to take into account real world operational conditions.

Engineers are instructed to isolate locomotives on the Pawnee to Alliance route whenever it is operationally feasible to do so. However, there are a number of reasons why locomotives may not have been isolated during the return empty from Pawnee to Alliance (or Guernsey). For example, under certain weather conditions or when the train is traveling into a strong headwind, it may need tractive effort from all three locomotives over this route. Alternatively, the dispatcher may instruct the engineer not to isolate a locomotive because the train will impede the flow of other trains, resulting in increases in cycle times and jeopardizing contract commitments. This is particularly true in the PRB where, due to the traffic densities on the route from Alliance

¹²⁹ Xcel Reply at II-A-89.

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(or Guernsey) to the mines and time sensitivities associated with mine loadings, BNSF does not require its engineers to isolate locomotives. Mr. Johnson's theoretical recommendation that locomotives could be isolated over this route completely ignores these operating realities.

(vii) Three Trains That Xcel
Contends Have Bad Data

Xcel claims that the event recorder data for three trains (108, 116, and 118) were "severely corrupted, missing or not usable."¹³⁰ Xcel did not identify the specific problems with the data for these trains, and BNSF has been unable to verify independently Xcel's claims.¹³¹ In fact, as shown in BNSF's opening evidence, Mr. Wasserburger was able to calculate fuel consumption for all locomotives for all segments on train 118.¹³²

Mr. Wasserburger did find that, for trains 108 and 116, the event recorder for one locomotive on each train failed to record data for part of the movement. Consistent with the explanation in BNSF's Opening Narrative, however, Mr. Wasserburger used data from one of the other locomotives in the consist to estimate fuel consumption for the locomotive with missing data.¹³³ BNSF addresses the issue of estimated fuel consumption in the next section.

¹³⁰ *Id.*

¹³¹ Xcel's general and unverifiable claim about the event recorder data is an insufficient justification to exclude the fuel consumption data for these trains from the study. If Xcel had encountered a problem with the data for these trains, it should have asked BNSF to reproduce the relevant data.

¹³² BNSF.OP.WP.II-A-0706 to 0722.

¹³³ BNSF Opening Nar. at II-59; BNSF.OP.WP.II-A-0534 and 0669.

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(viii) “Fabricated” Fuel
Consumption Data

Xcel accuses BNSF of using “fabricated” fuel consumption data. This accusation is both irresponsible and absurd. In fact, what Xcel is objecting to is nothing more than (1) BNSF’s use of fuel consumption data for one locomotive in a consist to estimate fuel consumption for another locomotive in the same consist when event recorder data was unavailable, and (2) BNSF’s *reductions* to fuel consumption to account for the times when a particular locomotive was isolated.¹³⁴ Xcel also criticizes the validity of the estimating procedure used by Mr. Wasserburger. Xcel’s criticisms are invalid.

First, Xcel argues that “imputation [of data from one locomotive to another] only works if two of the same type of locomotives consume the same amount of fuel over the same route.”¹³⁵ Xcel then identifies three trains, 106, 117, and 121, in which the same types of locomotives purportedly consumed different amounts of fuel. Analysis of the data for these trains does not support Xcel’s claims. In fact, Xcel does not even have data for train 106 on which to base this claim since BNSF did not collect fuel consumption data for this train because it was diverted to Xcel’s Comanche plant.

The apparent differences in fuel consumption among the locomotives that powered trains 117 and 121 result from the fact that one of the two locomotives that Xcel compares was the distributed power (“DP”) unit. As to train 117, BNSF had reported that BNSF 8955 and BNSF 9799 were the two lead locomotives on this train. Following Xcel’s reply evidence, Mr. Wasserburger determined that BNSF personnel in Alliance had inadvertently misstated the

¹³⁴ Xcel Reply at II-A-90 to 92.

¹³⁵ Xcel Reply at II-A-90.

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placement of the locomotives in the train.¹³⁶ BNSF 8955 and BNSF 8953 were in fact the lead units, while BNSF 9799 was the DP unit. Review of the fuel consumption data for the two lead locomotives, BNSF 8955 and BNSF 8953, shows that they consumed virtually identical amounts of fuel (2940.85 gallons for BNSF 8955 compared to 2940.69 gallons for BNSF 8953).¹³⁷ Similarly, on train 121, BNSF personnel reported that BNSF 9647 and BN 9954 were the lead units and BNSF 4895 was the DP unit. By reviewing the event recorder data, Mr. Wasserburger determined that the lead units were actually BNSF 4895 and BNSF 9647 with BN 9954 as the DP unit.¹³⁸

The fuel study data show that consumption rates for two locomotives of the same type are comparable and, therefore, Mr. Wasserburger's estimations of fuel consumption data under these circumstances are reasonable. There is simply no justification for excluding these trains from the fuel study. Moreover, if fuel consumption data for the seven trains for which Mr. Wasserburger estimated data were *excluded* from the study, average fuel consumption for the remaining study trains would slightly *increase*.¹³⁹

Xcel's second allegation of "fabrication" of fuel consumption figures relates to Mr. Wasserburger's treatment of fuel consumption during times in which locomotives were isolated during the return trip from Pawnee to Alliance. As explained in BNSF's opening evidence, when a locomotive is isolated, use of the event recorder data to generate fuel consumption will

¹³⁶ BNSF's train movement data support Mr. Wasserburger's determination. See BNSF opening electronic workpaper "Fuel Study Train Events.xls."

¹³⁷ BNSF.OP.WP.II-A-0688.

¹³⁸ See BNSF opening electronic workpaper "Fuel Study Train Events.xls."

¹³⁹ BNSF.RB.WP.II-A-00158-00161 and rebuttal electronic workpaper "Fuel Sensitivities.123."

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overstate the amount of fuel actually consumed by the locomotive.¹⁴⁰ To calculate accurate fuel consumption for isolated locomotives, Mr. Wasserburger determined the amount of time the locomotive was isolated and multiplied it by the burn rate associated with the idle position. Mr. Wasserburger used the event recorder data to calculate fuel consumption for the portion of the movement during which the locomotive was not isolated. When the two times are added together (non-isolation time and isolation time), they equal the total time for the return trip from Pawnee to Alliance.¹⁴¹

(ix) Overlapping Segments In
The BNSF Fuel Study

Xcel correctly notes that the ending time on one segment of the fuel study should equal the beginning time on the next segment.¹⁴² The vast majority of trains in the fuel study are consistent with this principle. In a few isolated instances, Mr. Wasserburger inadvertently overlapped two segments causing fuel consumption for the overlapping time period to be counted twice. The most significant example of this overlap is seven minutes, during which the locomotive at issue is likely idling and therefore consuming small amounts of fuel.¹⁴³ BNSF

¹⁴⁰ BNSF Opening Nar. at II-59 to 60.

¹⁴¹ In one of its workpaper requests, Xcel asked BNSF to provide Quantum fuel consumption reports for isolated locomotives. *See* Letter from David E. Benz, Thompson Hine LLP, to Brooke Gaede, Steptoe & Johnson LLP, dated March 11, 2003. BNSF.RB.WP.II-A-00197-00198. BNSF explained this issue to Xcel in its response. *See* Letter from Brooke L. Gaede, Steptoe & Johnson LLP, to David E. Benz, Thompson Hine LLP, dated March 26, 2003. BNSF.RB.WP.II-A-00104. The fact that Xcel raises this issue in its reply evidence demonstrates again that its experts have a basic misunderstanding of event recorder data.

¹⁴² Xcel Reply at II-A-92.

¹⁴³ Each segment begins and ends at a location where the Xcel train has stopped for loading (mine), unloading (Pawnee plant), or a crew change at Alliance and Guernsey.

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identified a total of 23 minutes and 17 seconds of overlap for all 31 study trains, which equates to 1.28 gallons of fuel.¹⁴⁴ This de minimus amount has no impact on the fuel study results.

Xcel further criticizes BNSF for allegedly including two sets of fuel consumption figures for the mine to Alliance segment for train 101. In fact, as indicated in BNSF's workpapers, train 101 was not included in the fuel study results for this very reason.¹⁴⁵

(x) Inconsistent Segment Times
For Individual Locomotives
On The Same Train

Xcel claims that BNSF's fuel study is flawed because it allegedly shows locomotives on the same train experiencing significantly different transit times over the same segment. Xcel's criticisms are misplaced.¹⁴⁶ The alleged discrepancies are largely the result of the fact that Xcel's transit times do not account for the time a locomotive is isolated. The remaining discrepancies generally result from the event-based methodology used by Mr. Wasserburger to identify arrival and departure times for each locomotive for each segment, and are immaterial to the results of the fuel consumption study.

As explained in BNSF's opening evidence, Mr. Wasserburger divided each round-trip movement into five segments and calculated fuel consumption by segment for each locomotive.¹⁴⁷ Mr. Wasserburger examined the event recorder data for each locomotive to find evidence of specific events that signify appropriate beginning and ending points for each

¹⁴⁴ BNSF rebuttal electronic workpaper "Overlap Times.xls" and BNSF.RB.WP.II-A-00199.

¹⁴⁵ BNSF.OP.WP.II-A-0817.

¹⁴⁶ Xcel Reply Nar. at II-A-94 to 95.

¹⁴⁷ BNSF Opening Nar. at II-57.

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segment.¹⁴⁸ Mr. Wasserburger generated Quantum reports for each locomotive for any time that the locomotive was contributing tractive effort, but not for when a locomotive was isolated.¹⁴⁹ Based on the beginning and ending times shown on the Quantum reports prepared by Mr. Wasserburger, Xcel prepared a workpaper that purports to show discrepancies in time between individual locomotives in a consist.¹⁵⁰ The purported discrepancies highlighted in Xcel's workpaper typically occur during two segments of the movement. The first is the segment from Alliance to Pawnee, and the second is the segment from Pawnee to Alliance. Each of these segments is addressed below.

On the Pawnee to Alliance segment, the purported time discrepancies in Xcel's workpaper are caused by the fact that the times do not include the time during which locomotives on this segment were isolated. Because Xcel's spreadsheet is based on the times reflected in the Quantum reports, and those reports do not include times when the locomotives were isolated, Xcel's workpaper did not account for these times.

On the Alliance to Pawnee segment, Mr. Wasserburger found that train activities at the Pawnee plant made it difficult to identify one consistent end point for each locomotive in a

¹⁴⁸ *Id.* at II-58. Since event recorders' internal clocks are not synchronized, it is not feasible to use the event recorder time stamps to determine the appropriate beginning and ending point for each locomotives in each of the five segments. Mr. Wasserburger therefore used the event-based approach. As a result, the time elapsed for individual locomotives between the beginning and ending points identified by Mr. Wasserburger may not be identical. This fact does not affect the reliability of the fuel study.

¹⁴⁹ The Quantum reports would overstate fuel consumption during this period because the event recorder data shows the locomotive in a throttle position even though it is isolated and producing no tractive effort. Mr. Wasserburger performed a separate calculation to determine the fuel consumption for this time period and he identified the relevant isolation time in his workpapers.

¹⁵⁰ See Xcel reply electronic workpaper "Segment Times.xls."

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consist. When an Xcel train arrives at Pawnee, the DP unit is removed and the lead units move the train into position to unload. For the DP units, Mr. Wasserburger typically ended the Alliance to Pawnee segment and began the Pawnee unloading segment when the DP unit stopped moving, *i.e.*, when it was removed from the train. For the two lead units, however, Mr. Wasserburger typically ended the Alliance to Pawnee segment and began the next segment when the locomotives had positioned the train for unloading and were no longer generating amperage. This event might occur several hours after the DP unit was initially removed from the train. Because fuel expenses are based on the entire round-trip movement as a whole, the fact that one locomotive spends a longer portion of time in one segment than another locomotive in the same consist is irrelevant. The appropriate comparison is the entire cycle time. When the entire cycle is considered, including time a locomotive is in isolation, the inconsistency disappears.¹⁵¹

Conclusion

BNSF has demonstrated that its fuel consumption study is the best evidence of record. There is no basis for using system average fuel consumption, as Xcel advocates, when the results of a reliable special study demonstrate that fuel consumption on the Xcel trains is significantly above average. The Board's recent decision in *TMPA* supports this conclusion.¹⁵²

¹⁵¹ For example, when the isolation time for locomotive 4821 on train 103 (11 hours and 10 minutes) is added to Xcel's workpaper, the total cycle times for the locomotives on that train are within four minutes of one another.

¹⁵² *TMPA* at 58.

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(d) Locomotive Maintenance

Because BNSF does not have data from which locomotive maintenance costs for a specific locomotive, locomotive model, or series can be determined, BNSF's variable cost evidence uses system-average locomotive maintenance costs to calculate variable costs for the issue move. Xcel, on the other hand, uses BNSF's expired maintenance contracts with locomotive manufacturers to develop an adjustment to the URCS system-average locomotive maintenance cost.¹⁵³ BNSF explained on reply the errors in Xcel's approach. Those errors included the fact that Xcel used maintenance contracts (1) that terminated before traffic moved under the challenged rate and (2) that do not account for all BNSF maintenance costs.¹⁵⁴ BNSF also explained that Xcel misapplied the contracts and disregarded actual operating data to develop BNSF's alleged maintenance costs under the contracts. Specifically, Xcel ignored the fact that BNSF's payments were based on guaranteed mileage minimums and Xcel applied the contract to fictional locomotive utilization data to develop per-mile costs. Xcel calculated costs that are significantly lower than those that BNSF actually paid when the contract was in effect or would have paid if the contract had been in effect during the costed period.

In its reply, Xcel purports to have made an adjustment to its opening evidence in order to compensate for the fact that, as the Board found in *TMPA*, BNSF's contracts do not account for all BNSF locomotive maintenance costs.¹⁵⁵ Specifically, Xcel says it "modified its determination of locomotive maintenance costs by identifying the locomotive maintenance costs that are made

¹⁵³ BNSF Reply Nar. at II-25 to 29.

¹⁵⁴ BNSF Reply Nar. at II-25 to 26 and Xcel Reply Nar. at II-A-78, both citing *TMPA* at 58.

¹⁵⁵ *TMPA* at 58.

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up of ‘ . . . costs incurred due to wrecks, derailments, vandalism, abuse, or running out of fuel . . .’ and treating those costs on a system average basis.”¹⁵⁶ However, Xcel does not disclose what costs it “identified.” In fact, Xcel appears to have made *no* modification to its locomotive maintenance costs to account for expenses not covered by the contracts.¹⁵⁷ Rather, Xcel, in a footnote, simply asserts that “other repairs which are not a part of normal maintenance . . . are included in the residual other GTM and other LUM costs, which are not adjusted by the special study locomotive maintenance ratio.”¹⁵⁸ Further, in its reply, BNSF identified various *routine* costs (*i.e.*, expenses in addition to and not associated with the wrecks, derailments, etc.) that were not covered by the contracts.¹⁵⁹ Xcel did not account for these costs either.

Xcel criticizes BNSF’s use of system-average locomotive maintenance costs on the ground that such costs include the costs of maintaining a large number of DC units. DC units, according to Xcel, are significantly more expensive to maintain than the newer AC units, including the SD70MACs that are used to power the Xcel train. According to Xcel, since DC units are older and have more moving parts, it follows that they require more maintenance and are generally more expensive to maintain than the newer AC locomotives.¹⁶⁰ Xcel offers no

¹⁵⁶ Xcel Reply Nar. at II-A-78.

¹⁵⁷ BNSF notes that Xcel’s adjustment to URCS system-average locomotive maintenance costs increased from a 16.5-percent reduction on opening to the 10.7-percent reduction filed with its reply. This cost increase, however, was due to Xcel’s changing the weighting of the units covered by the different maintenance contracts, and not a new “treatment” of any maintenance expenses. *Compare* Xcel opening electronic workpaper “wgt loco maint and spare.123”, Xcel Reply Exh. II-A-29.

¹⁵⁸ Xcel Reply Nar. at II-A-78-79, n.120.

¹⁵⁹ BNSF Reply Nar. at II-26, n.55.

¹⁶⁰ Xcel Reply Nar. at II-A-79.

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evidence to support its argument, which is just a bald, conclusory assertion. Indeed, there is no reason to believe this to be the case.

First, the age of a locomotive is not a reliable indicator of dependability. BNSF locomotives typically undergo a major overhaul every seven years. After an overhaul, a locomotive should operate like new. Thus, a 15-year-old locomotive should be as reliable as a locomotive that is only one year old. Moreover, even if, as Xcel has assumed without support, DC locomotives required on average more maintenance than the AC locomotives, it does not follow that the cost of maintaining the DC locomotives is higher. The newer AC locomotives are far more complex and expensive than their DC predecessors and therefore could just as likely cost more to maintain. Any increased maintenance expense is compensated for, however, by the increased power provided by AC locomotives. Today, BNSF's use of AC locomotives enables it to power longer, heavier trains with fewer locomotives.

In fact, because BNSF is able to use just three units to power the Xcel train, the use of AC locomotives decreases the locomotive maintenance costs that are calculated for the issue traffic. This is because a portion of locomotive maintenance costs is based on the number of total unit-miles. Thus, Xcel's characterization that BNSF's maintenance costs are overstated because older DC units require more maintenance than the newer AC ones is misleading, as Xcel's trains would require four or five lower-horsepower DC units. By using the SD70MACs to power Xcel trains, BNSF is producing locomotive costs that are lower on a per-train basis. Xcel cannot have it both ways.

Finally, Xcel's attempt to invoke the relative utilization is baseless. As materials provided to Xcel in discovery and provided with BNSF's reply workpapers indicate, the Alliance

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Pool SD70MACs averaged 7,155 miles per month in 2001, *less than* BNSF's system-average for road units of 7,743 miles per month.¹⁶¹

ii. Switching

The parties generally agree on the SEM unit costs. There are negligible differences that result from rounding. The number of switching minutes associated with Xcel service is discussed above in Section II.A.1.b.

iii. Train-Mile Expense—Crew Wages

(a) Loading Crews

On opening, Xcel provided for 0.5 loading crews per coal train. BNSF, in its reply evidence, accepted Xcel's evidence in order to narrow the differences between the parties. On reply, Xcel abandoned its opening evidence and further reduced the number of loading crews per train by one-half, to 0.20-0.25, varying by origin mine and quarter.¹⁶² To calculate this number, Xcel divided the length of the average loading crew shift (10 to 11 hours) by the amount of time

¹⁶¹ In its reply, Xcel cites to an assertion it made on opening that locomotives used in PRB coal service experience a much higher level of utilization than the BNSF system average. That claim, however, is based on a finding in a 1980s *Nevada Power* case involving UP locomotives, operating in a different geographical area two decades ago. Xcel Opening Nar. At II-A-38. That claim is also contradicted by BNSF's utilization data produced to Xcel in discovery.

¹⁶² In its reply evidence, Xcel claimed that "[t]o reflect the use of those third party loading crews . . . this expense is replaced by [[\$0.0210]] per ton, BNSF's identified Contractor Rate for loading coal at Eagle Butte." Xcel Reply Nar. at II-A-99. Xcel then indicated that these costs were "[i]ncluded as Line 18.b in Xcel's Reply Exhibits II-A-21 and II-A-22." *Id.* at II-A-99, n 156. Line 18.b of Exhibit II-A-21 does not include *any* costs, however, and Xcel's reply variable cost calculations do not include the [[\$0.0210]] per ton charge. Xcel reply electronic workpaper "vc Xcel reply.123."

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it takes to load a train (2 to 2.5 hours).¹⁶³ Xcel's approach ignores the fact that loading crews generally spend significant time engaged in activities other than the actual loading at the mine, and Xcel assumes that a BNSF train is always waiting to be loaded immediately at the conclusion of the previous loading. This is simply not the case. Frequently, BNSF loading crews must (a) wait with a train while it is queued for loading, (b) deliver a loaded train to a road crew at a point on the mainline, and/or (c) travel to a different mine for the next loading job.¹⁶⁴ As a result, Xcel's approach, which fails to take these facts into consideration, clearly understates the number of crews required to load Xcel trains.

Indeed, Xcel's approach yields absurd results. For example, BNSF had 7,251 Gillette loading crews in 2001.¹⁶⁵ If each crew loaded only 4 trains (Xcel suggests that each crew will be able to load 4 to 5 trains per shift¹⁶⁶), BNSF would have originated more than 29 thousand trains from the 7 mines where BNSF uses Gillette-based loading crews,¹⁶⁷ or an average of 80 loaded trains per day. This number significantly exceeds BNSF's actual loadings.

(b) Mark-Up Ratios

Xcel's reply criticizes two items in BNSF's development of mark-up ratios to account for non-train related wages. First, Xcel criticizes BNSF's assignment of certain Constructive Allowance codes to the Train Related or Non-Train Related categories. Second, Xcel criticizes

¹⁶³ Xcel Reply Nar. at II-A-100.

¹⁶⁴ In 2001, Belle Ayr loaded only 371 trains, or approximately one per day. Thus it is clear that BNSF loading crews did not load 4-5 trains *per shift* at Belle Ayr.

¹⁶⁵ Xcel opening electronic workpaper "avg loading crew wages.xls."

¹⁶⁶ Xcel Reply Nar. at II.A-100.

¹⁶⁷ BNSF.OP.WP.II.A-1062.

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BNSF's use of separate mark-up ratios for each service, *i.e.*, road crews, loading crews, and helpers. Although the resulting differences are not large,¹⁶⁸ Xcel is wrong on both points, and BNSF responds to each criticism in turn.

First, in its reply, Xcel noted that the parties differed in the assignment of 30 Constructive Allowance codes, and further claimed that BNSF erroneously treated as "Train Related" certain Constructive Allowance codes that did not contain valid train symbols.¹⁶⁹ Xcel significantly reduced the differences by accepting BNSF's position for 14 of the codes.¹⁷⁰ In this rebuttal, BNSF accepts Xcel's position for 8 of the codes, including 7 of the 8 largest remaining differences, leaving only 8 codes in dispute. The most significant pay still disputed by the parties is Code 30-Held Away from Home Terminal, which the Board has previously cited as an example of Non-Train Related pay.¹⁷¹ Xcel has proffered no basis for diverging from this precedent.

Second, BNSF determined separate mark-up ratios for road crews, loading crews, and helpers, and applied each service-specific mark-up ratio to the corresponding base wages. Xcel claims that this approach results in a double-count of wages for crew members that split time between the services. This is not true. If a crew member splits time between the services, BNSF included the person's time in the calculation of the mark-up for each service. This does not

¹⁶⁸ BNSF rebuttal workpaper BNSF.RB.WP.II.A-0201 compares the mark-up ratios that BNSF and Xcel have submitted in this case.

¹⁶⁹ Xcel Reply Nar. at II-A-109.

¹⁷⁰ *Id.*

¹⁷¹ *See, FMC Wyoming Corp. v. Union Pacific R.R.*, STB Docket No. 42022, at 80 (STB served May 12, 2000). The other seven codes at issue total less than \$9 thousand, less than one-fiftieth of one percent of the total 2001 wages that Xcel included in its mark-up calculation. *See*, Xcel reply electronic workpaper "2001 mark ups-reply.xls."

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result in a double-count, however, because each calculation simply determines the relationship of non-train wages to direct wages for the crew members that worked each specific service.

In contrast, Xcel develops a single mark-up ratio that is not specific to the crew wages to which it is applied. This is because Xcel's mark-up is developed based on a combination of non-train related wages for all crews, including loading, helper, road, and road switcher crews. By combining all of these crews, Xcel produces a mark-up that is inconsistent with the train-related wages to which it is applied. For example, Xcel's use of a mark-up ratio based on all services to develop costs for Xcel trains originating coal from Eagle Butte during Third Quarter 2001 through First Quarter 2003 is internally inconsistent, as Xcel's costs for that traffic do not include any direct wages for either the road switcher or loading crews, and include only minimal helper wages. Since loading and road switcher crews are not even used in this service, it makes no sense to apply to road crew wages a mark-up that reflects the loading and road switcher crew data. This inconsistency is illustrated in Table II.A-5, which compares the relative mix of each service's wages that Xcel combines in its single mark-up ratio to the direct wages to which Xcel applies the mark-up ratio.

**Table II.A-5
Comparison of Mark-Up Ratio Components to Train-Related Wages**

	Total Wages Used in Calculation of Mark-Up (2001)	Percent of Total Wages Used for Mark-Up	Train-Related Wages to which Mark-Up is Applied (Eagle Butte 3Q01)	Percent of Train-Related Wages
Road Crews	[[[]]]	42%	[[[]]]	99%
Loading Crews	[[[]]]	16%	[[[]]]	0%
Helper Crews	[[[]]]	40%	[[[]]]	1%
Road Switcher Crews	[[[]]]	2%	[[[]]]	0%
Total	[[[]]]	100%	[[[]]]	100%

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Source: Xcel reply electronic workpaper “2001 mark ups-reply.xls.”

BNSF’s service-specific mark-up ratios are more appropriate, and Xcel’s single mark-up ratio should be rejected.

iv. Locomotive Ownership Expense

There are five areas of dispute in the calculation of locomotive ownership costs: (1) locomotives included; (2) development of annual lease payments; (3) spare margin; (4) cycle times; and (5) treatment of Accounts 76 and 90.¹⁷² Cycle times and the treatment of Accounts 76 and 90 are discussed above. The remaining items are addressed below.

(a) Locomotives Included

Xcel criticizes BNSF’s use of different groups of locomotives to develop the separate components of locomotive costs. Specifically, Xcel argues that it is wrong for BNSF to base its locomotive ownership costs on the specific SD70MACs that powered the Pawnee trains, but to apply a locomotive spare margin based on all SD70MACs in the Alliance Pool and to develop locomotive maintenance costs based on all units in the BNSF fleet. BNSF’s approach, however, was accepted in *WPL* and *TMPA*.¹⁷³ BNSF has used the most specific level of detail that is available for each item, and it has developed specific inputs that are applicable to the Pawnee trains. Xcel presented no evidence that the use of any of these three groups of locomotives is incorrect.

¹⁷² See BNSF Reply Nar. at II-32 to 33, Xcel Reply Nar. at II-A-63.

¹⁷³ See, *WPL* at 58-59, *TMPA* at 61.

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While there is less difference between the locomotive ownership costs the parties filed on reply than on opening, BNSF and Xcel continue to develop those costs using different approaches. Xcel criticizes BNSF for relying on the actual locomotives that powered the Xcel train, an approach repeatedly accepted by the Board.¹⁷⁴ In Xcel's opening evidence, Xcel used a simple average of the acquisition costs of all units in the Alliance pool. In its reply evidence, Xcel changes its approach and argues that such costs should be based on an average of *all* locomotives in the pool that are of the same model used in Xcel service. Xcel's reliance on the ownership costs of locomotives that were not actually used in the issue service should be rejected. Xcel argues that because the former BN used pool average in rate cases, some two decades earlier, the Board should do so here.¹⁷⁵ That evidence, however, was likely driven by the level of detail that was available. Advances in data reporting and computer processing over the last twenty years have greatly facilitated the identification and use of the specific units powering the issue trains in developing variable cost evidence.

In any event, Xcel's approach produces costs for the SD70MACs that are very close to costs produced using BNSF's approach.¹⁷⁶ Xcel's calculations produce average purchase prices that are within one percent of BNSF's in each quarter.¹⁷⁷ Xcel has neither presented an argument nor produced a result that suggests that the Board should depart from precedent.

¹⁷⁴ *Id.*

¹⁷⁵ Xcel Reply Nar. at II-A-64.

¹⁷⁶ The parties agree that SD70MACs comprise at least 95 percent of the total locomotive hours for the Pawnee trains. *See* BNSF Opening Nar. at II-65, Xcel Reply Nar. at II-A-65.

¹⁷⁷ BNSF rebuttal electronic workpaper "Xcel-BNSF Loco Cost Comparison.xls."

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(b) Development of Annual Lease Payments

Xcel also challenges BNSF's use of the average annual payment over the life of the lease for units acquired under operating leases.¹⁷⁸ Xcel argues that BNSF's approach is inconsistent with *WPL*.¹⁷⁹ BNSF explained on opening, and again on reply, that its approach is consistent with both relevant accounting standards and its R-1 reporting, and it presents a truer calculation of BNSF's lease costs.¹⁸⁰ This does not appear to have been the case in *WPL*.¹⁸¹

Xcel also claims that BNSF's approach is unnecessary because "most leases have relatively even payment schedules."¹⁸² In response to BNSF's demonstration of varying annual costs over the life of the leases that Xcel used, Xcel called the illustrative lease "an extreme example" that was "the exception rather than the rule."¹⁸³ This claim does not stand up to scrutiny. In fact, some of the leases produced to Xcel in discovery include payment schedules that vary to a greater extent than the lease payment schedules BNSF cited to in its opening evidence.¹⁸⁴ Moreover, if Xcel is correct, then normalization of the leases should have little or no impact on the costs. Review of Xcel's own workpapers, however, shows that Xcel is not correct.

¹⁷⁸ Xcel Reply Nar. at II-A-75 to 76.

¹⁷⁹ *Id.* at II-A-75 to 76.

¹⁸⁰ BNSF Reply Nar. at II-35.

¹⁸¹ *WPL* at 58.

¹⁸² Xcel Reply Nar. at II-A-76.

¹⁸³ *Id.*

¹⁸⁴ [][For example, lease OPL 00020 covering 14 locomotives increases 11% from 2001 to 2002 and increases 94% from 2002 to 2003; lease OPL 00035 covering 35 locomotives increases 46% from 2001 to 2002 and decreases 59% from 2002 to 2003; and lease OPL 00064 covering 31 locomotives increases 18% from 2001 to 2002 and increases 26% from 2002 to 2003.]] BNSF.RB.WP.II-A-00209-00212.

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Despite arguing that the example of variances in annual payments was an exception, and that payment schedules were level, Xcel's workpapers show an average increase from 2001 to 2002 (the only periods that Xcel costed) of [] percent for the annual lease payment for SD70MACs.¹⁸⁵

(c) Spare Margin

The parties' different approaches to developing an appropriate spare margin represent the single largest source of differences in the calculation of locomotive ownership costs. As explained on opening, BNSF based its spare margin calculations on data on actual locomotive availability and utilization that BNSF provided to Xcel in discovery.¹⁸⁶ This information, which BNSF corrected on reply, indicated that BNSF's Alliance Pool SD70MACs are unavailable [] percent of the time, and, when available, are not utilized an additional [] percent of the time.¹⁸⁷ As a result, BNSF calculated variable costs based on composite spare margins of [] percent.¹⁸⁸ Xcel claims that BNSF's approach fails to reflect "availability guarantees" in BNSF locomotive maintenance contracts and incorrectly defines spare margin to include non-utilized time.¹⁸⁹

¹⁸⁵ [Xcel reply electronic workpaper "Loco Capital Reply.123." (showing an average increase of nearly \$10 thousand per unit, from \$137 thousand for 2001 to \$147 thousand for 2002).]

¹⁸⁶ BNSF Opening Nar. at II-65.

¹⁸⁷ BNSF Reply Nar. at II-35 and BNSF.RP.WP.II.A-00024.

¹⁸⁸ *Id.*

¹⁸⁹ Xcel Reply Nar. at II-A-71.

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(i) Locomotive Maintenance
Contracts

BNSF's reply evidence also already explained that the locomotive availability guarantees previously found in BNSF's maintenance agreement with the locomotive manufacturer have not been in effect since the challenged rate went into effect. Although Xcel incorporated in its evidence the 1998 and 1999 Amendments (the Fourth and Fifth Amendments, respectively) to BNSF's agreement with EMD, it ignored the January 2001 Sixth Amendment that BNSF provided in discovery.¹⁹⁰ This amendment discontinued any measurement of availability as well as any associated responsibility or payments, thus terminating the very basis on which Xcel relies.¹⁹¹ In fact, most of the SD70MACs are no longer covered by any BNSF agreement with EMD.

BNSF's reply evidence also explained why, even if the availability guarantees were still in effect, they would not be an appropriate measure of availability. BNSF does not repeat those arguments here.

Moreover, the Board recognized in *TMPA* that BNSF's maintenance contracts accounted only for "routine" maintenance. Indeed, Xcel acknowledges that the contracts exclude certain events, including "Extraordinary Damage, defined to exclude collision, vandalism" and "derailments and wrecks."¹⁹² Such events clearly would lead to times that the locomotives are unavailable to the railroad in excess of the "guaranteed" level. However, Xcel asserts that its

¹⁹⁰ BNSF/PSC 17924-17927, included in BNSF reply workpapers at BNSF.RP.WP.II.A-00025 to 00028.

¹⁹¹ BNSF Reply Nar. at II-33.

¹⁹² Xcel Reply Nar. at II-A-69 to 70.

own records show that “there have been no occurrences of ‘Extraordinary Damage’ during the last three years” and that other “exclusion occurrences have not taken place.”¹⁹³ Xcel was unable to provide any such record in response to BNSF’s workpaper request.¹⁹⁴ The notion that Xcel *would* or *could* maintain useful records of BNSF’s locomotive maintenance and operating events is implausible. As the contractual definition of guarantee fails to cover these events as well as other time that the units spend moving to, across, or from yard servicing tracks to the actual shop event, it fails to provide an appropriate basis for the locomotive spare margin to be used to calculate variable costs.

(ii) Definition of Spare Margin

Xcel also argues that BNSF’s use of unavailable *and* unutilized time for the Alliance Pool SD70MACs would “re-define” spare margin. Xcel asserts that the Board has previously rejected the inclusion of non-utilized time in locomotive spare margin. This is not true. In the cases cited by Xcel, the Commission accepted the general proposition that a spare margin can include non-utilized time, but it rejected BN’s studies quantifying that time.¹⁹⁵ BN’s studies, according to the Commission, were rejected because they failed to account for a number of factors that might influence spare-margin levels. The flaws in BN’s studies that led the Commission to reject BN’s spare margin evidence in those cases do not exist in BNSF’s evidence in this case. For example,

¹⁹³ *Id.*

¹⁹⁴ Xcel’s Response to BNSF’s Second Request for Workpapers, Response No. 6 at 3 included as BNSF.RB.WP.II-A-00214-00216.

¹⁹⁵ *Arkansas Power & Light Co. v. Burlington Northern R.R. Co., et al.*, ICC Docket No. 36719 (served May 13, 1987)(“APL”); *Omaha Public Power District v. Burlington Northern R.R. Co.*, 3 I.C.C.2d 123 (1986); *Central Louisiana Elec. Co. v. Burlington Northern R.R. Co. and Missouri Pac. R.R. Co.*, ICC Docket No. 37667S (served Feb. 25, 1983).

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the excerpt from the *APL* decision quoted by Xcel indicates that the Commission was concerned about the impact of non-coal movements on the spare margins of a pool of locomotives used to provide service for coal and non-coal shippers.¹⁹⁶ As BNSF's switching study submitted on opening confirms¹⁹⁷, the Alliance Pool is almost entirely dedicated to serving PRB coal operations. The fact that the fleet is dedicated to coal insulates the Alliance Pool from fluctuations in freight traffic levels that could otherwise produce spare-margin levels that vary widely throughout the year. As BNSF's workpapers indicate, the spare margins calculated for each month range by less than six percent across the 2001-2002 period under analysis.¹⁹⁸

Another criticism of the former BN's studies was that the methodology led to unreasonable results when applied to BN's non-coal locomotive fleet. This is not the case here. Using the same methodology BNSF used to calculate the spare margin for the Xcel service, BNSF calculated a spare margin for BNSF's other road units (*i.e.*, excluding the Alliance Pool SD70MACs) of [] percent (based on an unavailable margin of [] percent and an available-but-unutilized margin of [] percent).¹⁹⁹ Thus, BNSF's use of the lower margins of [] percent for the Alliance Pool SD70MACs is consistent, reasonable, and supported.²⁰⁰

¹⁹⁶ *APL* at 4-5.

¹⁹⁷ BNSF opening electronic workpaper "Switching Time at Alliance & Guernsey.xls," Tab "Alliance."

¹⁹⁸ BNSF.RB.WP.II.A-00123 and rebuttal electronic workpaper "loco spare margin rebuttal.xls."

¹⁹⁹ BNSF rebuttal electronic workpaper "System wide spare margin.xls."

²⁰⁰ Xcel is critical of BNSF's use of a spare margin for the Pawnee trains that is based solely on the SD70MAC units for which it produced availability and utilization reports in the standard discovery. In response, BNSF has modified its calculation of spare margin to include the standard 10-percent spare margin for all other locomotive models that were used. This approach is consistent with Xcel's approach, as described in its Reply

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Moreover, non-utilized time must be included in order to comply with a fundamental principle of URCS, *i.e.*, that the URCS-based costs for all specific BNSF movements total to the costs reported in the R-1. Obviously, BNSF's coal fleet must be sufficient to provide service to its coal customers, and BNSF makes every effort to maximize the utilization of its coal fleet. No railroad, however, can keep all of its locomotives in service all the time. There are times when a locomotive is cut out of a consist because the ruling grade of the remaining trip does not warrant the additional power, only to be added back to the consist on the return trip. At other times, locomotives are moved into local service after they are repositioned close to their assigned shops, just prior to a scheduled maintenance, lowering the utilization of those locomotives. Nevertheless, BNSF incurs ownership costs during this non-utilized time. Those ownership costs are reported in the R-1 and are an input to URCS. URCS requires that a portion of these ownership costs be allocated to each move. Otherwise, a substantial portion of BNSF's locomotive ownership costs would not be recovered.

Lastly, BNSF's evidence is based on its measure of the actual spare margin on which it operates its railroad and evaluates its performance. The availability and utilization report produced to Xcel in discovery is prepared by BNSF in the normal course of business. |||

Narrative at II-A-67 and shown in its Reply Exhibit II-A-29, and produces spare margins of ||| ||| percent that BNSF uses to calculate variable costs for this rebuttal. See BNSF rebuttal workpapers BNSF.RB.WP.II-A-00123 and electronic workpaper "loco spare margin rebuttal.xls."

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]]] Tactically, BNSF reviews the non-utilized margin to determine where power should be repositioned into alternative services in order to get better utilization out of its fleet. BNSF's calculations, based on actual data maintained by BNSF in the normal course of business, identifies the appropriate amount of spare margin to be included in calculating locomotive ownership costs.

v. Car Operating and Ownership (RR-Owned Only)

In its reply evidence, BNSF identified the following three errors in Xcel's development of freight car ownership and operating costs: Xcel 1) overstated the percentage of carrier supplied cars by including trainsets that had been leased by Xcel; 2) made an improper "calendar-day" adjustment; and 3) used the wrong car type.²⁰¹ Xcel's reply corrected the percentage of carrier supplied cars. Xcel continues to make the "calendar day" adjustment, notwithstanding the Board's clear rejection of the adjustment in *TMPA*.²⁰² Xcel continues to use an incorrect mix of car types. Although Xcel corrected for the trainsets leased from BNSF in developing the percentage of carrier provided cars, it continues to include leased cars in its development of the relative mix of carrier provided cars.²⁰³ Further, in its reply, Xcel mistakenly reverses the car type codes, *i.e.*, Xcel refers to general service open-top hoppers as AAR Car Type K and special service open-top hoppers as Type H. BNSF's car ownership and operating

²⁰¹ BNSF Reply Nar. at II-40.

²⁰² *TMPA* at 63 (rejecting adjustment as "a collateral attack on the [URCS] model itself.").

²⁰³ Xcel reply workpaper "CAR MAINT & OWNERSHIP REPLY.123."

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costs, which are based on the general service (Type H) hoppers that comprise the vast majority of BNSF's substitute cars, are the best evidence of record.

vi. EOTD Ownership Expense

BNSF addressed this issue in its reply evidence and Xcel did not present any new evidence or argument.

vii. Indexing

BNSF addressed this issue in its reply evidence and Xcel did not present any new evidence or argument. BNSF updated its indices to include First Quarter 2003 as well as revisions in the PPI data for Fourth Quarter 2002.

viii. Joint Facilities

On opening, Xcel and BNSF each developed variable costs based on the specific joint facility between Sterling and Union, for which BNSF pays a per-ton-mile amount to use UP's tracks. In its reply evidence, BNSF identified four significant flaws in Xcel's approach.²⁰⁴ Xcel's reply corrected two of these (the use of incorrect miles and the exclusion of overhead costs).²⁰⁵ The two remaining differences between the parties are the applicable variability factor and Xcel's 12-percent reduction to joint facility costs to exclude costs that Xcel wrongly claims are associated with switching, and not running.

²⁰⁴ BNSF Reply Nar. at II-41 to 42.

²⁰⁵ Xcel Reply Nar. at II-A- 43.

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With regard to the variability factor, BNSF explained on opening and reply the basis for treating the entire payment to UP as variable.²⁰⁶ On reply, Xcel did not present any substantive response, so there is no reason for BNSF to repeat the arguments it presented on opening.

BNSF also explained on reply that Xcel's reduction of joint facility costs to account for supposed switching is unjustified and was rejected by the Board in *TMPA*.²⁰⁷ In its reply evidence, Xcel argues that the Board was wrong in *TMPA*. That decision rested, in part, on the fact that no switching occurred on the joint facilities.²⁰⁸ Xcel claims that the Board should have made the adjustment because theoretically "switching *can* occur" on the joint facilities.²⁰⁹ As Xcel acknowledges, however, the joint facility invoices and contract reflect no switching.²¹⁰ Moreover, Xcel has not included any such switching costs in its development of variable costs for the issue move. Xcel cannot have it both ways -- including no switching time on the joint facilities in its evidence while reducing joint facility payments to account for switching on the joint facilities. As it did in *TMPA*, the Board should reject complainant's proposed running/switching adjustment.

ix. Loss and Damage

BNSF continues to use URCS system-average loss and damage costs to develop variable costs. Xcel relies on the actual loss and damage average for Xcel traffic over the prior three

²⁰⁶ BNSF Reply Nar. at II-41.

²⁰⁷ BNSF Reply Nar. at II-42, citing *TMPA* at 63.

²⁰⁸ *TMPA* at 63.

²⁰⁹ Xcel Reply Nar. at II-A-44, n.65.

²¹⁰ *Id.* at II-A-44.

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years. BNSF believes that URCS system-average provides a better measure of the loss and damage likely to be incurred in the medium to long run.

2. Restatement of Variable Costs and Summary

As described above, BNSF updated the variable costs for First Quarter 2001 through Fourth Quarter 2002 and presents the variable costs for the First Quarter 2003. Table II.A-6 below shows the results. Exhibit II.A-1 presents the variable costs for each component by origin mine, rate, and quarter for movements under the challenged rate. BNSF electronic workpapers contain the detailed calculations.²¹¹

**Table II.A-6
Summary of Variable Costs and R/VC Ratios**

Eagle Butte Originations				
	100-Ton Rate		116-Ton-Rate	
Period	Variable Cost/Ton	Revenue to Variable Cost Ratio	Variable Cost/Ton	Revenue to Variable Cost Ratio
1st Qtr 2001	\$3.53	2.62	\$3.33	2.70
2nd Qtr 2001	\$3.48	2.63	\$3.14	2.84
3rd Qtr 2001	\$3.60	2.55	\$3.25	2.75
4th Qtr 2001	\$3.70	2.48	\$3.29	2.71
1st Qtr 2002	\$3.42	2.68	\$3.05	2.92
2nd Qtr 2002	\$3.49	2.62	\$3.16	2.82
3rd Qtr 2002	\$3.47	2.64	N/A	N/A
4th Qtr 2002	\$3.53	2.59	\$3.19	2.79
1st Qtr 2003	\$3.65	2.56	\$3.35	2.71

²¹¹ BNSF rebuttal electronic workpaper “BNSF XCEL Rebuttal prg.123.”

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Belle Ayr Originations				
	100-Ton Rate		116-Ton-Rate	
Period	Variable Cost/Ton	Revenue to Variable Cost Ratio	Variable Cost/Ton	Revenue to Variable Cost Ratio
1st Qtr 2001	\$3.52	2.63	\$3.29	2.73
2nd Qtr 2001	\$3.27	2.80	N/A	N/A
3rd Qtr 2001	\$3.21	2.86	\$2.86	3.12
4th Qtr 2001	N/A	N/A	N/A	N/A
1st Qtr 2002	\$3.56	2.57	N/A	N/A
2nd Qtr 2002	\$3.41	2.69	\$3.07	2.90
3rd Qtr 2002	N/A	N/A	N/A	N/A
4th Qtr 2002	\$3.45	2.66	N/A	N/A
1st Qtr 2003	N/A	N/A	N/A	N/A

IV. Witness Qualifications and Verifications

IV. WITNESS VERIFICATIONS AND QUALIFICATIONS

1. **Benton V. Fisher**

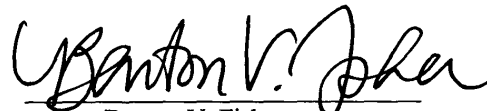
Benton V. Fisher is a Director at FTI Consulting, Inc., an economic and financial consulting firm. His business address is 1201 Eye Street, N.W., Suite 400, Washington, DC 20005. Since 1991, Mr. Fisher has been involved in various aspects of transportation consulting including economic studies involving costs and revenues, traffic and operating analyses, and work with performance measurement and financial reporting systems.

Mr. Fisher holds a Bachelor of Science in Engineering degree from Princeton University. In 1990, he served as the Deputy Controller for the Bill Bradley for U.S. Senate Campaign. In 1991, he joined Klick, Kent & Allen, Inc. ("KK&A"), which was acquired by FTI Consulting, Inc. in 1998. While with KK&A and FTI, Mr. Fisher has performed numerous analyses for and assisted in the preparation of expert testimony related to merger applications, rate reasonableness proceedings, contract disputes, and other regulatory costing issues before the Interstate Commerce Commission, Surface Transportation Board, Federal Energy Regulatory Commission, Postal Rate Commission, Federal Court, and State Utility Commissions.

Mr. Fisher is sponsoring evidence relating to BNSF's variable costs for the issue movement. His evidence is contained in Section II of the Narrative. Mr. Fisher has signed a verification of the truth of the statements contained therein. A copy of Mr. Fisher's verification is attached hereto.

I declare under penalty of perjury that I have read the Rebuttal Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on May 16, 2003


Benton V. Fisher

2. Warren H. Wasserburger

Mr. Wasserburger is a railroad transportation consultant. His business address is 8117 Wayland Drive, Weatherby Lake, Missouri 64152.

Mr. Wasserburger was employed by BNSF and its predecessors for 28 years. His management positions with the Burlington Northern Railroad ("BN") began in 1981 as Roadforeman of Engineers in Alliance, Nebraska. He held a number of positions with the railroad. From 1990 to 1995, Mr. Wasserburger was Manager Train Handling Analysis, responsible for analyzing event recorder data and monitoring the train handling skills of all engineers on the BN. Mr. Wasserburger had the same responsibilities from 1995 to 1996 as the Senior Manager Operating Practices for the BNSF. From 1996 to October 2001, Mr. Wasserburger was the General Roadforeman, Northern Service Region, in North Kansas City, Missouri, responsible for coordinating the activities of 22 division roadforemen and supervising additional train, yard and engine employees.

Mr. Wasserburger is sponsoring evidence relating to actual fuel consumption of the locomotives used on Xcel trains. His evidence is incorporated in Section II.A.1.c.i.(c) of the narrative. Mr. Wasserburger has signed a verification of the truth of the statements contained therein. A copy of his verification is attached hereto.

I declare under penalty of perjury that I have read the Rebuttal Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on May 19, 2003


Warren H. Wasserburger

Exhibits

EXHIBIT II.A-1

REDACTED

EXHIBIT II.A-2

REDACTED

BNSF'S RESPONSE TO XCEL'S CLAIMS
REGARDING THE PROPER REGULATORY AND
ECONOMIC TREATMENT OF ACCOUNT 90

On opening, BNSF explained that the Board should follow the ICC's established practice to include Account 90 and exclude Account 76 in the calculation of an overhead ratio. BNSF explained that four ICC decisions in the late 1970s, when URCS was being developed, expressly held that Account 90 should be included in calculating a carrier's investment base for regulatory purposes. The first two decisions were issued in 1978 in Ex Parte No. 338, *Standards and Procedures for the Establishment of Adequate Revenue Levels*. In the first of those decisions, the ICC determined that, unlike construction projects undertaken by public utilities, rail construction projects are generally of a short term nature and "therefore inclusion of Construction Work in Progress is both proper and realistic and should be adopted." On an appeal of this decision, the ICC affirmed that "we will include account 90 rather than account 76 with respect to capital invested in construction projects."¹

Subsequently, the ICC issued a decision in Ex Parte No. 290² that made, without discussion, technical amendments to the costing procedures for general rate increase cases. The purpose of these amendments was to conform the costing methodology used in rate cases to the ICC's Ex Parte No. 338 decision on the proper treatment of Construction Work in Progress. BNSF further explained that when URCS was implemented, it failed to reflect this treatment of Construction Work in Progress. Specifically, the URCS Phase II program excluded account 90

¹ *Standards and Procedures for the Establishment of Adequate Revenue Levels*, 359 I.C.C. 270 (1978).

² *Procedures Governing Rail General Increase Proceedings, Ex Parte No. 290; Standards and Procedures for the Establishment of Adequate Railroad Revenue Levels*, Ex Parte No. 338, slip op. at 3 and App. B (I.C.C. served November 20, 1978).

instead of including it. In 1993, this problem was brought to the ICC's attention in *Georgia Power*, and the ICC concluded that the URCS formula had failed to incorporate the holding in Ex Parte No. 338 and instructed that Account 90 should be included and Account 76 excluded from the overhead calculation. Finally, BNSF demonstrated that the Board followed this approach in subsequent cases, specifically in *WTU* and *APS*. In *IMPA*, the Board acknowledged that BNSF was correct regarding its prior treatment of Account 90.

In its reply evidence, Xcel challenges the evidence presented by BNSF as to the short-term duration of construction projects included in Account 90. BNSF addresses Xcel's critique in detail in the body of the Narrative and that discussion is not repeated here. Xcel also takes issue with BNSF's description of the regulatory history of Account 90. As explained below, Xcel's arguments are erroneous and should be given no weight.

First, Xcel argues that the ICC's decision in Ex Parte No. 338 concerned revenue adequacy determinations and is therefore irrelevant to the determination of variable costs. While it is true that the discussion of these issues appears in Ex Parte No. 338, as noted above, the ICC in Ex Parte No. 290 specifically incorporated its treatment of Construction Work in Progress for purposes of revenue adequacy determinations into its treatment of variable costs for purposes of rate challenges. Indeed, there is no rationale for distinguishing between the treatment of these accounts for revenue adequacy and rate reasonableness purposes. The Railroad Accounting Principles Board ("RAPB") has already found that it is appropriate to use the same asset base for both revenue adequacy proceedings and URCS costing.³ Moreover, Congress specifically linked the assessment of revenue adequacy and the determination of reasonable rates by instructing the

³ *Railroad Accounting Principles: Final Report*, September 1, 1987, Volume 2 - Detailed Report at 40-41.

ICC and the Board that when determining the reasonableness of a rate, the agency must make continuing efforts to assist freight railroads to achieve revenue adequacy.⁴

Second, Xcel argues that the following quote from Ex Parte 338 indicates that the ICC “*specifically declined* to encompass variable costs in the scope of its ruling [in Ex Parte No. 338].” Xcel Reply Nar., Ex. II-A-33, at 3.

Cost of capital in variable costs. — Some of the petitions included comments on the question of whether variable cost should be measured in such a way as to include the full current cost of capital. As we indicated in our report, this is a question that will be taken up in another context. Some of the parties emphasize that the only appropriate context would be a rulemaking proceeding where all affected persons can be heard. We fully agree, and it is our intention to follow rulemaking procedures in resolving this question.

359 I.C.C. 275-276 (emphasis added)

The topic of this quote has *nothing* to do with the proper treatment of Accounts 76 or 90. The quoted language related *exclusively* to the question of whether variable costs calculated in individual rate proceedings should reflect the full current *cost of capital*.⁵

Third, Xcel claims that even if the ICC concluded in Ex Parte No. 290 that Account 90 should be included and Account 76 excluded, that proceeding applied only to general rate increases, not proceedings challenging particular rates. Xcel Reply Nar., Ex. II-A-33, at 6-7. This is a distinction without a difference. Xcel offers no reason to conclude that the treatment of costs for purposes of general rate increases should differ at all from the treatment of costs for

⁴ 49 USC §10704(a)(2).

⁵ This was a recommendation of the Railroad Accounting Principles Board (“RAPB”) that was subsequently adopted by the ICC. See 5 I.C.C. 2d at 895.

purposes of a challenge to particular rates. In fact, there is no reason to develop a carrier's rate base differently under those circumstances.

Fourth, Xcel argues that Ex Parte No. 290 is irrelevant because it dealt with costs developed under Rail Form A, not URCS. While it is true that Ex Parte No. 290 dealt with Rail Form A, URCS is the successor to Rail Form A. URCS was principally designed and developed in the years 1977 to 1979 and was based on Rail Form A costing methodologies.⁶ Thus, the 1978 decisions by the ICC to include Account 90 and to exclude Account 76 for both revenue adequacy and variable costs determinations were contemporaneous with the URCS development. It is implausible that, as Xcel argues, the Commission established the proper treatment of Account 90 funds for purposes of Rail Form A and, without explanation, rejected that same treatment in the URCS program it was developing at the same time to replace Rail Form A. If the ICC had rejected that treatment of Account 90 for URCS but accepted it for Rail Form A, it is reasonable to assume that the ICC would have explained why it took such action. Xcel has pointed to no such explanation, and none exists.

Fifth, Xcel claims that the current treatment of Accounts 76 and 90 in URCS was no mistake and that after much study, the ICC reversed the 1978 decisions and expressly determined that Account 90 should be excluded in the URCS program. Xcel Reply Nar., Ex. II-A-33 at 4. Xcel points to no support at all for this proposition. Between the issuance of the decisions in Ex Parte Nos. 338 and 290 in 1978 (when URCS was in development) and November 1993, when the *Georgia Power* decision was issued, there is no record of any discussion whatsoever by the ICC of the proper treatment of Accounts 76 and 90. Moreover, the ICC implicitly concluded in

⁶ *An Introduction to the Uniform Rail Costing System: Development, Functions and Regulatory Role*, at 8.

Georgia Power that the failure to include Account 90 in the calculation of the overhead ratio in URCS was a mistake, based on the ICC's clear statement in Ex Parte No. 338 of the proper treatment of that account. The ICC in *Georgia Power* was certainly unaware of any clear statement by the ICC to disavow its prior treatment of Account 90.

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EXHIBIT II.A-4

REDACTED

**SFGT IS OBSOLETE AND SHOULD NOT BE USED TO DEVELOP
BNSF'S MOW VARIABLE COSTS**

In its reply evidence, Xcel largely fails to respond to BNSF's evidence regarding the unreliability of the SFGT formula for estimating maintenance-of-way ("MOW") costs associated with coal traffic today, choosing instead to rely almost exclusively on the fact that SFGT has been used in past cases.

On opening, BNSF explained in detail why the SFGT formula produces results that are not valid.¹ BNSF further explained that any validation of SFGT's results that was found to exist at the time of the *San Antonio* case is not applicable to BNSF's operations today. The validation found in *San Antonio* was predicated on data that are now approximately 30 years old, that were based on a different accounting methodology, and that applied to line segments with a fraction of the density of Xcel's.

In response to the criticism that SFGT's results are not valid, Xcel simply cites the 1986 *San Antonio* decision, ignoring the detailed discussion in BNSF's opening evidence that explained why that decision has no relevance today.² Xcel chose not to reply to BNSF's evidence on this issue, which clearly shows that the *San Antonio* correlation cannot be a valid basis for assuming that SFGT's estimate of 2001 and 2002 expenses for high-density lines is accurate or conforms to actual MOW expenses today.

On opening, BNSF also explained that substantial changes in freight railroad industry track structure and associated maintenance practices in the 25 years that have passed since SFGT was developed have rendered SFGT's inputs obsolete. In response, Xcel suggests that "the SFGT formula has been revised and updated several times," and enumerates the extensive

¹ BNSF Op. Nar. at II-40 to 48.

² *Id.*; Xcel Reply Nar. at II-A-36.

changes to SFGT that occurred between 1975 and the January 1986 *OPPD* decision that produced the formula used by Xcel in this proceeding.³ However, even Xcel acknowledges that significant changes have occurred since those supposed “updates” to SFGT were made. Immediately following its claim about updates to SFGT, Xcel presents a comparison of the dramatic differences between MOW costs and densities in 1983 (the period on which the engineering inputs to *OPPD*’s and Xcel’s SFGT formula are based) and 2001 (the period to which the MOW costs that Xcel is using the SFGT formula to allocate apply). For example, Xcel’s Table II-A-18 shows that average traffic density has more than doubled in that time frame, while only a third more maintenance costs were expensed, due to the rising trend towards capitalizing track work, as shown in BNSF’s opening evidence. Thus, Xcel’s own evidence strongly suggests that, despite considerable changes in the relationship between freight traffic and MOW costs over the last 17 years, the SFGT formula remains unchanged during that period.

Moreover, to the extent the SFGT formula has been updated since its early presentation in *San Antonio*, any validation that was made in the *San Antonio* case is no longer applicable to the formula used today.⁴ Xcel cannot have it both ways. It cannot claim that SFGT has been significantly improved and still argue that its results have been validated.

³ Xcel Reply Nar. at II-A-36 to 37.

⁴ Compare the formula used in *San Antonio* to the formula used by Xcel in this case. *See* 1 I.C.C. 2d at 604.

Workpapers

WORKPAPERS

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