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**BEFORE THE
SURFACE TRANSPORTATION BOARD**



ARIZONA PUBLIC SERVICE COMPANY
And PACIFICORP,

Complainants,

v.

THE BURLINGTON NORTHERN AND
SANTA FE RAILWAY COMPANY,*

Defendant.

Docket No. 41185

**THE BURLINGTON NORTHERN
AND SANTA FE RAILWAY COMPANY'S
REPLY EVIDENCE ON REOPENING**

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Dated: April 9, 2004

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April 9, 2004

Via HAND DELIVERY

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

PUBLIC VERSION

Re: **STB Docket No. 41185, *Arizona Public Service Co. and PacifiCorp v. The Burlington Northern and Santa Fe Railway Company***

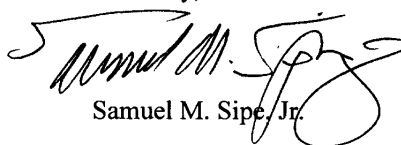
Dear Secretary Williams:

Enclosed for filing in the above-captioned matter are the original and ten copies of the Public version of the Reply Evidence on Reopening of The Burlington Northern and Santa Fe Railway Company. The Public version of this Reply Evidence on Reopening consists of a single volume containing the Argument, Verified Statements and Exhibits. This volume contains color documents. Also enclosed are three copies of a CD containing a PDF version of the Public volume.

BNSF is filing the Highly Confidential version of this Reply Evidence on Reopening today under a separate cover letter.

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

Sincerely,



Samuel M. Sipe, Jr.

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Enclosures

cc: Counsel for Complainant

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ARGUMENT

I. INTRODUCTION

The Burlington Northern and Santa Fe Railway Company (“BNSF”) submits its reply evidence on reopening to address whether the rate prescription imposed by the Surface Transportation Board (“STB” or “Board”) in April 1998 in this docket for the transportation of coal from the McKinley Mine to the Cholla plant owned by Complainants, Arizona Public Service Company and PacifiCorp (hereafter jointly referred to as “APS/PacifiCorp”) continues to be appropriate in light of new evidence relating to a key assumption made by the Board in that 1998 decision.¹ As BNSF’s evidence demonstrates, a rate higher than the prescribed rate is appropriate effective May 22, 2003, given the new evidence and changed circumstances relating to the economically recoverable reserves at the McKinley Mine.

Effective 1994, BNSF has been restricted to charging a rate prescribed by the Board for the McKinley Mine to Cholla movement that was based on what is now recognized to be an incorrect assumption about the volume of economically recoverable coal reserves at the McKinley Mine. As a result of this incorrect assumption, the rate prescribed by the Board for the McKinley Mine to Cholla movement was lower than it should have been. Even Complainants’ evidence on reopening demonstrates this fact. Specifically, the DCF analysis presented by Mr. Crowley, Complainants’ expert, shows that the amount by which SAC revenues exceed SAC costs on a present value basis has dropped significantly due to these changed circumstances.²

¹ *Arizona Pub. Serv. Co., et al. v. Atchison, Topeka & Santa Fe Ry. Co.*, 3 S.T.B. 70 (1998) (“1998 APS Decision”).

² Under Mr. Crowley’s revised DCF, that differential is now only \$47.1 million whereas under the Board’s 1998 decision in this docket it had been \$69.6 million. *See* attached Verified Statement of Michael R. Baranowski (hereafter “Baranowski VS”) at Table MRB-1; *see also* Complainants Arizona Public Service Co. and PacifiCorp’s Opening Evidence and Arguments

Recognizing that the circumstances regarding the reserves at the McKinley Mine have changed, the Board reopened this docket in May 2003 on a limited basis to allow the parties to modify and update the earlier DCF analysis to account for this changed circumstance.³

APS/PacifiCorp submitted their opening evidence in this reopened proceeding on February 27, 2004. Based upon their analysis, APS/PacifiCorp contend that the Board should reduce slightly the earlier prescribed rate for the McKinley Mine to Cholla movement for the years 2003 through 2008, the last year coal is expected to be transported from the McKinley Mine.⁴

However, the Complainants' evidence is based upon a number of flawed assumptions. As explained in detail below and in the attached verified statements of BNSF's witnesses, Michael Baranowski and Julie Murphy, some of the most significant flaws in APS/PacifiCorp's evidence on reopening include the following:

A significant conceptual problem with Mr. Crowley's analysis is that he assumes that the APS/PacifiCorp issue traffic would generate revenues for the already elapsed portion of the DCF period (from 1994 through May 21, 2003) that exceed the rates that the Board previously prescribed and that APS/PacifiCorp have actually paid. Because the actual revenue generated by the issue traffic movement to date has been lower than that called for in Mr. Crowley's analysis, there is a shortfall in cost recovery that will not be covered over the DCF period unless an adjustment is made to the issue traffic rates going forward.

on Reopening, STB Docket No. 41185 (filed February 27, 2004) ("APS Reopening"), Verified Statement of Thomas D. Crowley, Attachment 1, Exhibit TDC-4 ("Crowley VS").

³ *Arizona Pub. Serv. Co., et al. v. The Burlington Northern and Santa Fe Ry. Co.*, Docket No. 41185, at 4-6 (served May 12, 2003) ("*May 2003 APS Decision*").

⁴ See APS Reopening at 30.

APS/PacifiCorp also make fundamental errors in the implementation of the DCF analysis. For example, Complainants' improperly decide to incorporate re-sourced coal movements into the DCF analysis as early as 1997. However, such an assumption is inconsistent with the Board's May 2003 decision which only allows the parties to include re-sourced coal, *i.e.* non-McKinley Mine coal, in the stand-alone railroad ("SARR") traffic group "once McKinley shuts down."⁵ BNSF corrects this flawed assumption. BNSF first includes non-McKinley Mine coal in the SARR traffic group on January 1, 2007, the year that Salt River Project ("SRP"), one of the shippers in the SARR traffic group, has stated that it will no longer purchase McKinley Mine coal.

Moreover, Complainants improperly forecast future inflation index values to project future revenues and operating expenses based upon a change in those index values developed from a 13-year historical trend.⁶ This is inconsistent with the Board's approach in its 1998 decision in this docket in which it used a 6-year historical trend to forecast future index values. BNSF has corrected Complainants' flawed assumption by using a 6-year historical trend to forecast future index values.

The cross-over revenue allocation methodology used by Complainants is also flawed. Complainants use the modified straight-mileage prorate ("MSP") to allocate revenues for cross-over traffic. However, in allocating cross-over revenue, they do not use the customary route on the residual BNSF to transport Powder River Basin ("PRB") coal to the SARR shipper group and, as a result, significantly understate the residual BNSF's share of the revenues associated with this traffic. Moreover, Complainants' use of 100-mile credit blocks for originating and

⁵ *May 2003 APS Decision* at 5.

⁶ *See, e.g., APS Reopening, Argument* at 22, 26.

terminating unit coal train traffic is improper, because the 100-mile block substantially overstates the costs of originating or terminating unit coal train traffic. As shown below, a more appropriate mileage block credit for originating or terminating unit coal trains would be a 25-mile credit block for movements in shipper-owned cars and a 57-mile block for movements in railroad-owned cars.

Several more flaws in the Complainants' assumptions are identified below. When the flaws in Complainants' calculations are corrected, the differential between stand-alone costs and stand-alone revenues on a present value basis decreases dramatically from \$47.1 million (the amount calculated by Mr. Crowley) to \$26.9 million.⁷ Based upon the evidence presented by BNSF, the Board should order that maximum reasonable rates for the issue traffic from the McKinley Mine to Cholla from May 22, 2003 through 2008, the last year that the McKinley Mine is expected to operate, be set at the levels indicated in Table 1.

Table 1
Maximum Reasonable Rates
for Issue Traffic⁸

Year	Maximum Reasonable Rate
May 22, 2003 through Dec. 31, 2003	\$7.20
2004	\$7.27
2005	\$7.61
2006	\$7.22
2007	\$7.36
2008	\$7.20

Since the maximum reasonable rate for the issue traffic effective May 22, 2003 is higher than \$4.21 per ton, the rate that the Board has required BNSF to charge APS/PacifiCorp while this reopening is pending, APS/PacifiCorp owe BNSF money. Pursuant to the Board's May 12, 2003

⁷ See Baranowski VS, Exhibit MRB-2.

⁸ See Baranowski VS, Section V.

decision, the Board should also order APS/PacifiCorp to pay BNSF a sum equal to the difference between the new maximum reasonable rate prescribed by the Board and the \$4.21 that BNSF has been paid for the tonnage shipped from the McKinley Mine to Cholla since May 22, 2003, plus interest.⁹

II. BACKGROUND

A. The Original APS/PacifiCorp Proceeding

In 1994, Complainants APS/PacifiCorp initiated this proceeding with the STB's predecessor, the Interstate Commerce Commission ("ICC" or "Commission"), alleging that the common carrier tariff rates available for the movement of coal from the McKinley Mine to the Cholla plant were unreasonable under 49 U.S.C. 10701a(b)(1).¹⁰ In the evidentiary proceedings before the agency, APS/PacifiCorp designed a stand-alone railroad, called the Arizona & Gallop Railroad ("AGR"), that followed the route of the existing rail line of the Atchison, Topeka and Santa Fe Railway Company ("ATSF"), BNSF's predecessor, from the McKinley Mine in western New Mexico to the Cholla plant and also connected to an existing 42-mile private rail spur running from East Coronado Junction, Arizona to Salt River Project's ("SRP") electric generating plant at Coronado, Arizona.¹¹

The only traffic selected by APS/PacifiCorp for their SARR were two coal movements originating at the McKinley Mine: the movement from the McKinley Mine to the Cholla plant at issue in the proceeding and the movement from the McKinley Mine to SRP's Coronado plant.¹²

⁹ See *May 2003 APS Decision* at 7.

¹⁰ *Arizona Pub. Serv. Co. et al. v. Atchison, Topeka & Santa Fe Ry. Co.*, 2 S.T.B. 367, 370 (1997) ("1997 APS Decision").

¹¹ *Id.* at 381.

¹² *Id.* at 381, 384.

APS/PacifiCorp assumed that the SARR would transport 3.5 million tons of coal annually to the Cholla plant and 2.5 million tons of coal annually to SRP's Coronado plant from the McKinley Mine through 2013, the last year of the DCF period.¹³ ATSF vigorously contested APS/PacifiCorp's coal volume assumptions, arguing that mineable reserves at McKinley would run out well before the 2013 SAC analysis period.

Despite ATSF's evidence, the Board accepted APS/PacifiCorp's assumption that the McKinley Mine would produce, and that APS/PacifiCorp and SRP would ship, a combined 6 million tons of coal annually for the Cholla and Coronado plants from 1996 through the year 2013.¹⁴ In response to ATSF's petition for reconsideration challenging the Board's McKinley Mine volume assumptions, the Board declined to modify its volume assumptions but stated that the parties should have the proceeding reopened if "traffic from the McKinley Mine to the Cholla or Coronado plants were permanently reduced below the levels upon which the SAC analysis is based."¹⁵

Subsequent to the Board's 1998 decision, the parties entered into a rail transportation contract governing the movement of coal from the McKinley Mine and other mine origins to the Cholla plant. The contract rate for the McKinley movement was the prescribed rate.¹⁶ The contract applied to coal transportation from January 1, 1999 through December 31, 2002.¹⁷

¹³ *Id.* at 382-384.

¹⁴ *Id.* at 384-385.

¹⁵ *1998 APS Decision* at 79, n. 42.

¹⁶ *See* Petition of the Burlington Northern and Santa Fe Railway Company to Reopen and Vacate Rate Prescription, STB Docket No. 41185 (filed January 10, 2003) ("BNSF Petition to Reopen"), Verified Statement of Randall R. Reyff at ¶ 9.

¹⁷ *Id.*

B. BNSF's Petition to Reopen and Vacate the Rate Prescription Due to New Evidence and Changed Circumstances

Upon the expiration of that rail transportation contract, BNSF filed a petition to reopen this proceeding and vacate the rate prescription based upon the fundamentally changed circumstances and new evidence relating to the economically recoverable reserves available at the McKinley Mine. In that petition, BNSF presented evidence that the volume of coal available to be shipped from the McKinley Mine from January 2003 forward was less than one-half that assumed by the Board in its SAC analysis.

In their reply to BNSF's petition, APS/PacifiCorp did not dispute that circumstances had changed regarding the McKinley Mine reserves but argued that the reopening should not be limited to issues relating to the McKinley Mine reserves.¹⁸

C. The Limited Scope of This Reopening

In May 2003, the Board reopened this proceeding, finding that "it is now clear that McKinley will exhaust its coal reserves sooner than anticipated in [the Board's] prior decisions" and concluding that "this changed circumstance justifies reopening the proceeding to redetermine the maximum reasonable rate" for the McKinley Mine to Cholla movement.¹⁹ The Board limited the scope of the reopening to evidence regarding "how [APS/PacifiCorp] and Salt River will re-source their coal needs once McKinley shuts down, what portion of that traffic could flow over the SARR, and what revenues the SARR could reasonably expect to earn from that coal traffic."²⁰ The Board further explained that both parties may "update the record

¹⁸ APS/PacifiCorp Reply to Petition to Reopen and Vacate Rate Prescription, STB Docket No. 41185 (filed January 30, 2003) ("APS Reply").

¹⁹ *May 2003 APS Decision* at 1.

²⁰ *Id.* at 5.

regarding any forecasts made in [the Board's] prior decisions, such as inflation indexes, cost of rail equity, and revenue forecasts for the Salt River traffic that proved to be inaccurate" but specified that the parties "may not seek to reargue or recalculate the costs upon which the projections were based."²¹

In addition, the Board also removed the prescriptive effect of the prior rate order effective May 22, 2003 and instructed BNSF to collect no more than \$4.21 per ton for the transportation of coal from the McKinley Mine to Cholla while the reopening is pending.²² The Board explained that if it finds that the maximum reasonable rate is higher than \$4.21 at the conclusion of this proceeding, it will order APS/PacifiCorp to remit to BNSF the underpayments (plus interest) for the period beginning May 22, 2003.²³

APS/PacifiCorp filed a petition for reconsideration of the Board's May 2003 APS decision. On October 14, 2003, the Board denied that petition for consideration and reaffirmed that the scope of the reopening is limited as specified in the May 2003 decision.²⁴

III. STAND-ALONE COST

A. Traffic Group

As required by the Board's decision regarding the scope of the reopening, the stand-alone railroad posited by APS/PacifiCorp has the same configuration as the SARR posited by APS/PacifiCorp in the original proceeding -- it follows the BNSF line from the McKinley Mine

²¹ *Id.* at 5-6.

²² *Id.* at 7.

²³ *Id.*

²⁴ *Arizona Public Service Co. et al. v. The Burlington Northern and Santa Fe Ry. Co.*, STB Docket No. 41185 (served October 14, 2003) ("*October 2003 APS Decision*").

to the Cholla plant and connects to an existing 42-mile private spur line running from East Coronado Junction, Arizona to Coronado Station.²⁵ As required by the Board's decision authorizing the reopening, the stand-alone railroad continues to serve only two shippers and two plants-- APS/PacifiCorp's Cholla plant and SRP's Coronado plant. However, unlike the earlier proceeding, the stand-alone railroad now includes coal from mine origins other than the McKinley Mine. Originally, the stand-alone railroad included only movements that could be served directly by the SARR -- movements from the McKinley Mine to the Cholla and Coronado plants. Since the Board reopened this proceeding recognizing that the McKinley Mine will shut down before the end of the DCF period, it has allowed Complainants to include re-sourced coal that will replace the McKinley Mine coal. The mine origins for the re-sourced coal are not located on the SARR and, as a result, the new, re-sourced coal movements are cross-over traffic.²⁶

There are some serious flaws in APS/PacifiCorp's modification of the volume assumptions for the SARR in their reopening evidence. Most significantly, APS/PacifiCorp include re-sourced coal in the traffic group well before the Board has authorized such inclusion. While the Board has only authorized non-McKinley coal to be added to the traffic group "once McKinley shuts down,"²⁷ APS/PacifiCorp include non-McKinley coal in the traffic group as early as 1997. Moreover, APS/PacifiCorp's future volume assumptions relating to both the Coronado plant and the Cholla plant are overstated. With respect to the Coronado plant,

²⁵ See APS Reopening, Argument at 10.

²⁶ "Cross-over traffic" is traffic currently handled by the incumbent railroad (here BNSF) that the Complainant assumes would move in interline service between the stand-alone railroad and the incumbent railroad. See *PPL Montana LLC v. The Burlington Northern and Santa Fe Railway Co.*, STB Docket No. 42054, at 7, n. 13 (served August 19, 2002).

²⁷ May 2003 APS Decision at 5.

APS/PacifiCorp improperly include volumes in the traffic group coal that {
} APS/PacifiCorp also incorrectly assume that all PRB coal
delivered to the Coronado plant will originate at { } In fact, such coal
has historically originated at both { } mines.
As explained below, by improperly assuming all PRB coal delivered to Coronado will originate
at { }, APS/PacifiCorp have overstated the SARR's division of revenue for this
traffic using the MSP revenue allocation methodology. With respect to APS/PacifiCorp's own
Cholla plant, APS/PacifiCorp assume future volumes that are inconsistent with precedent in prior
SAC cases that cap volume growth at the 85 percent capacity factor.

Flaws also exist in APS/PacifiCorp's revenue assumptions. APS/PacifiCorp use the MSP
methodology to calculate the division of revenues that will be received by the SARR and
residual BNSF, respectively, for the cross-over traffic. One problem with this approach is that it
assumes a 100-mile block credit associated with origination and termination activities. As
explained below, for unit-train coal traffic, the only traffic transported by the SARR, the more
appropriate mileage block credits for such activities are a 25-mile block credit for movements in
shipper-owned cars and a 57-mile block credit for movements in railroad-owned cars. A second
flaw results from APS/PacifiCorp's use of an incorrect route and consequent assumption of
incorrect mileages associated with PRB shipments to Cholla and Coronado. APS/PacifiCorp's
error results in an understatement of the mileage on the residual BNSF and consequent
overstatement of the SARR's division of revenues associated with this PRB cross-over traffic.
Finally, APS/PacifiCorp err in their forecast of future revenues. Complainants incorrectly use a
13-year historical trend of the change in inflation indexes to forecast SARR revenues from 2004
through 2013. APS/PacifiCorp's approach is inconsistent with the previous approach adopted by

the Board in this proceeding in which a six-year trend of the change in the inflations indexes, rather than a 13-year trend, was used to forecast revenues.

The evidence in this section of BNSF's reply evidence is supported by the attached verified statement of Julie Murphy ("Murphy VS"), a Director in FTI's Economic Consulting Division, and related workpapers.

1. Stand-Alone Railroad Traffic

APS/PacifiCorp have improperly included certain re-sourced coal volumes in their traffic group. Specifically, APS/PacifiCorp included re-sourced volumes well before the expected shut down of the McKinley Mine, which is inconsistent with the Board's instructions in its decision defining the scope of the reopening. Moreover, APS/PacifiCorp have improperly included volumes destined for SRP's Coronado plant that are too speculative to include under SRP's own projections. Each of APS/PacifiCorp's improper traffic inclusions are discussed in detail below.

a. APS/PacifiCorp's Improper Inclusion of Non-McKinley Coal Traffic Prior to the Shut Down of McKinley Mine

In the original proceeding, APS/PacifiCorp designed a stand-alone railroad that only transported coal originating at the McKinley Mine. In their response to BNSF's petition to reopen and vacate the rate prescription, APS/PacifiCorp argued that they should be able to change their stand-alone traffic group on reopening.²⁸ However, in granting BNSF's petition to reopen, the Board strictly limited the scope of non-McKinley Mine coal traffic that can be added to the traffic group in this reopened proceeding, authorizing the parties to update the record on the traffic group only with respect to "how [APS/PacifiCorp] and Salt River will re-source their

²⁸ See APS Reply at 25.

coal needs *once McKinley shuts down* [and] what portion of that traffic could flow over the SARR, . . .”²⁹

APS/PacifiCorp have not adhered to the Board’s instructions in developing their revised traffic group for the reopening. Complainants include non-McKinley Mine movements in the traffic group beginning in 1997, approximately 10 years before the McKinley Mine is expected to shut down and certainly long before Complainants anticipated that the McKinley Mine would shut down. In 1997, Complainants were arguing in response to ATSF’s petition for reconsideration in the original proceeding that the McKinley Mine would produce coal through 2013, the end of the DCF period. Further, coal from origins other than the McKinley Mine was moving to the Cholla plant by the time of BNSF’s petition for reconsideration of the Board’s 1997 decision yet no one took the position at that time that this other coal was replacing McKinley Mine coal.³⁰

BNSF has modified the Complainants’ traffic assumptions to exclude certain non-McKinley Mine coal volumes to be consistent with the Board’s instructions regarding the proper scope of the reopening. BNSF’s evidence shows how APS/PacifiCorp and Salt River will re-source their coal needs once the McKinley Mine shuts down. Specifically, BNSF excludes all non-McKinley Mine traffic from the SARR traffic group prior to January 1, 2007. BNSF chose the date January 1, 2007 as the date on which the SARR would begin to transport non-McKinley Mine volumes because 2007 is the first year that {

}, has indicated that it will stop purchasing McKinley Mine coal for its Coronado plant.³¹

²⁹ *May 2003 APS Decision* at 5 (emphasis added).

³⁰ *See 1998 APS Decision*, 3 S.T.B. at 77-80.

³¹ *See BNSF Reply electronic workpaper “SRP Volume Projection.pdf.”*

Consequently, as of January 1, 2007, it is clear that { } will be re-sourcing its McKinley Mine coal due to the shut down of the McKinley Mine. Since { } will be re-sourcing its McKinley Mine coal by 2007, BNSF also assumes { } will begin to re-source their McKinley Mine coal by that date, even though { } project that they will continue to ship some McKinley Mine coal to Cholla through 2008.³²

The following Table 2 identifies the volume of coal BNSF is excluding from the SARR traffic group based upon the assumption that re-sourced coal is not transported by the SARR until January 1, 2007.³³

³² See BNSF Reply electronic workpaper “APS Volume Projection.pdf.”

³³ BNSF also has analyzed how the DCF results would change if non-McKinley Mine coal is included in the SARR traffic group at some earlier point in time, *i.e.* as of January 1, 2003. While the McKinley Mine had not shut down by 2003, by this time APS and SRP plausibly knew that the McKinley reserves would run out around 2007 or 2008 and could have begun to plan how they would re-source their McKinley Mine coal. This is approximately the time that BNSF filed its petition to reopen this docket and vacate the rate prescription due to the new evidence relating to the McKinley Mine reserves. The results of the DCF analysis using this traffic assumption, *i.e.* that re-sourced coal can be included in the AGRR traffic group as of January 1, 2003, and incorporating all other BNSF modifications to the DCF analysis discussed below, is presented in Exhibit MRB-3 to the Baranowski VS. As shown in that exhibit, the results of the DCF analysis under this re-sourced traffic assumption are very similar to the results of the DCF analysis under BNSF’s assumption that re-sourced traffic should not be included in the SARR traffic group until January 1, 2007 (*See* Exhibit MRB-2).

Table 2
Summary of Volumes Excluded
Under BNSF's Assumption that SARR
Does Not Transport Re-sourced Coal Until 2007³⁴

Year	Tons Removed Under Assumption that No Non-McKinley Coal Transported By AGR Prior to January 1, 2007
1997	230,591
1998	691,814
1999	545,804
2000	2,381,796
2001	1,367,673
2002	978,805
2003	1,604,869
2004	1,591,000
2005	2,107,500
2006	2,107,500

b. Exclusion of "Supplemental Coal" to Coronado from 2007 through 2013

In this reopened proceeding, SRP produced projections of the volume of coal it expects to purchase for its Coronado plant from 2004 through 2013.³⁵ For non-McKinley Mine coal, SRP includes two columns of volumes. The first column indicates the maximum quantities of {
} coal that SRP could take under its current contracts.³⁶ The second column, labeled "Supplemental Coal" includes additional quantities that SRP defines as {

}³⁷ APS/PacifiCorp include such Supplemental Coal

in their volume projections and further assume that such coal will originate from the {

³⁴ See BNSF Reply electronic workpaper "AGR_Traffic and Revenues_A1_BNSF Reply.xls" worksheet "BNSF Reply Assmptions."

³⁵ See BNSF Reply electronic workpaper "SRP Volume Projection.pdf."

³⁶ *Id.*

³⁷ *Id.*

}.³⁸ However, it is improper to include such coal in the traffic group because SRP's own projections indicate that it is too speculative to assume that SRP will purchase such coal.

Even without the inclusion of this Supplemental Coal, the volume of coal that BNSF assumes will be transported to Coronado in years 2007 through 2013 -- { } tons per year -- is substantially higher than the annual volume assumption made in the original APS decision. In that decision, the Board accepted APS/PacifiCorp's assumption that SRP would ship 2.5 million tons of coal annually from McKinley to Coronado.³⁹

Table 3 below shows the amount of coal excluded by BNSF from the traffic group as a result of excluding the "Supplemental Coal" volumes destined for SRP's Coronado plant.

Table 3
Supplemental Coal Tons
Excluded By BNSF⁴⁰

Year	Supplemental Coal Excluded (Tons)
2007	{ }
2008	{ }
2009	{ }
2010	{ }
2011	{ }
2012	{ }
2013	{ }

³⁸ See APS Reopening, Crowley VS, Attachment 2, Exhibit TDC-2, row 20, columns 14 through 20. The SRP projections do not specify the { } mine origin(s) for this Supplemental Coal.

³⁹ 1997 APS Decision, 2 S.T.B. at 382-384.

⁴⁰ See BNSF Reply electronic workpaper "AGR_Traffic and Revenues_A1_BNSF Reply.xls" worksheet "BNSF Reply Assmptions."

2. SARR Volumes (Historical and Projected)

a. Historical Volumes (1994 through 2003)

For the year 1994, APS/PacifiCorp use the actual coal volumes shown in the Board's 1998 decision.⁴¹ BNSF accepts this assumption.

For the years 1995 through 1998 and 2003, APS/PacifiCorp use the actual volumes delivered to the Cholla and Coronado plants from the accounting data produced by BNSF in discovery.⁴² BNSF accepts this source for determining volumes of McKinley Mine coal delivered to the plant in these years. However, for the reasons set forth in section III.A.1.a above, BNSF excludes all the historical non-McKinley Mine coal from the traffic group in these years.

For the years 1999 through 2002, APS/PacifiCorp use a stipulation between the parties to determine AGRR volumes.⁴³ In that stipulation, the parties agreed for purposes of this reopening that a specified volume of coal would be deemed to have been shipped from the McKinley Mine to the Cholla plant in the years 1999 through 2002. The stipulated amount is higher than the actual amount of McKinley Mine coal shipped to the Cholla plant in those years.⁴⁴ In this stipulation, the parties also agreed that the amount of McKinley Mine coal BNSF shipped to the Coronado plant (and to other coal shippers) in these years would be proportionately reduced, on the assumption that it would not have been available for purchase by others if APS/PacifiCorp

⁴¹ See APS Reopening, Crowley VS at 8.

⁴² *Id.*

⁴³ *Id.*

⁴⁴ This stipulation is included with the APS Reopening as Exhibit 1 to the Verified Statement of Kenneth Nordlander ("Nordlander VS").

purchased it.⁴⁵ BNSF accepts APS/PacifiCorp's assumptions regarding the volumes of McKinley Mine coal transported to the Cholla and Coronado plants in the years 1999 through 2002. For the reasons set for above in section III.A.1.a, BNSF excludes all the historical non-McKinley Mine tonnages from the traffic group in those years.

b. Projected Volumes (2004 through 2013)

APS/PacifiCorp rely on a forecast prepared by APS on { } as updated by APS/PacifiCorp witness Nordlander to project volumes to be delivered to the Cholla plant from 2004 through 2013.⁴⁶ BNSF accepts Complainants' methodology for forecasting future volumes to the Cholla plant with the following two exceptions. First, BNSF excludes volumes from the non-McKinley Mine origins from the SARR traffic group for the years 2004 through 2006 for the reasons set forth in section III.A.1.a above. Second, BNSF does not accept the assumption in APS' forecast that the Cholla plant will burn at approximately { } percent capacity beginning in { }.⁴⁷ APS/PacifiCorp's assumption is inconsistent with the Cholla plant's historical burn which averaged 72 percent from 1997 through 2002 and did not exceed 82 percent during this period.⁴⁸ It is also inconsistent with existing SAC rate case precedent in which volumes are typically capped at 85 percent of plant capacity if the plant burn has not

⁴⁵ *Id.*

⁴⁶ See APS Reopening, Crowley VS, Attachment 2, Exhibit TDC 2; Nordlander VS at 13-14.

⁴⁷ See Murphy VS at 9-11.

⁴⁸ See Murphy VS at 9.

exceeded that capacity historically.⁴⁹ Consistent with existing Board precedent and the historical burn at Cholla, BNSF caps the capacity of the coal burn at the Cholla plant at 85 percent.⁵⁰

For the Coronado plant, APS/PacifiCorp rely on volume projections produced by SRP in discovery to project volumes transported to the Coronado plant in 2004 through 2013. BNSF accepts APS/PacifiCorp's methodology for projecting volumes to the Coronado plant in the years 2004 through 2013 with the following three exceptions. First, BNSF excludes volumes from the non-McKinley Mine origins from the SARR traffic group for the years 2004 through 2006 for the reasons set forth in section III.A.1.a above. Second, BNSF excludes the { } "Supplemental Coal" volumes from the SARR traffic group for the years 2007 through 2013 for the reasons set forth in Section III.A.1.b above. Third, BNSF does not accept the PRB mine origin assumed by Complainants for the PRB coal that is projected to be delivered to the Coronado plant.⁵¹ The coal projections produced by SRP in this proceeding do not specify the mine from which the PRB coal is expected to originate.⁵² APS/PacifiCorp assume that all the PRB coal destined for Coronado in the years 2004 through 2013 will originate at the {

}⁵³ However, historically, the PRB coal that has been transported to the Coronado

⁴⁹ *Wisconsin Power & Light Co. v. Union Pacific R.R.*, STB Docket No. 42051, at 20 (served September 13, 2001).

⁵⁰ See Murphy VS at 11.

⁵¹ As explained above, under BNSF's revised assumption, such PRB coal is included in the SARR traffic group as of January 1, 2007.

⁵² See BNSF Reply electronic workpaper "SRP Volume Projection.pdf."

⁵³ See APS Reopening, Crowley VS, Attachment 2, Exhibit TDC-2, rows 19, 20 for the years 2004 through 2013.

plant has originated at both the { } mine and the { } mine.⁵⁴

Consequently, BNSF has modified the mine origin assumption for PRB coal to reflect the historic pattern of origination from the { } and { } mines.⁵⁵

c. Volume Summary

Table 4 below compares the annual SARR volumes developed by APS/PacifiCorp with those developed by BNSF based upon the modifications described above and in the attached verified statement of Julie Murphy.

⁵⁴ See Murphy VS at 7-8; *see also* APS Reopening, Crowley VS, Attachment 2, Exhibit TDC 2, rows 19, 20 for the years 2000 through 2003.

⁵⁵ See Murphy VS at 7-8.

Table 4
AGRR Volumes
Comparison of Complainants and BNSF⁵⁶

Year	Complainants' Volumes	BNSF Revised Volumes
1994	6,035,384	6,035,384
1995	4,640,828	4,640,828
1996	4,064,006	4,064,006
1997	5,367,367	5,136,776
1998	6,268,251	5,576,437
1999	6,350,559	5,804,755
2000	6,499,170	4,117,374
2001	7,688,264	6,320,591
2002	6,462,333	5,483,528
2003	5,827,093	4,222,224
2004	7,141,000	5,550,000
2005	7,307,500	5,200,000
2006	7,307,500	5,200,000
2007	7,288,521	7,057,500
2008	7,655,651	7,219,958
2009	8,103,898	7,492,643
2010	7,995,702	7,492,643
2011	7,900,863	7,492,643
2012	8,098,706	7,492,643
2013	7,992,139	7,492,643

3. Revenues

a. Historical Single-line revenues (1994 through 2003)

The single-line movements transported by the AGRR are the McKinley Mine to Cholla movement and the McKinley Mine to Coronado movement. APS/PacifiCorp develop revenues for the McKinley Mine to Cholla movement using the common carrier tariff rate proposed by ATSF in the original rate proceeding as adjusted by the RCAF-A.⁵⁷ For the historic period, First Quarter 1997 through First Quarter 2004, it adjusts this tariff rate based upon the actual

⁵⁶ See BNSF Reply electronic workpaper "AGR Traffic and Revenues_A1_BNSF Reply.xls." Exhibit JAM-4 to the Murphy VS shows BNSF's revised volumes by shipper and mine origin for each year of the DCF period from 1994 through 2013.

⁵⁷ See APS Reopening, Argument at 21.

published quarterly RCAF-A index.⁵⁸ BNSF accepts this methodology for developing revenues for the issue traffic.

APS/PacifiCorp develop historic revenues for the McKinley Mine to Coronado movement using two different sources. In 1994, they use the revenues determined by the Board in its 1998 decision for that movement in that year.⁵⁹ From 1995 through 2003, APS/PacifiCorp use the average rate per ton reflected in BNSF's produced accounting data to develop revenues for the McKinley Mine to Coronado movement. BNSF accepts APS/PacifiCorp's methodology for developing revenues for the McKinley Mine to Coronado movement from 1994 through 2003.

b. Division of Revenue -- Existing Interchanges

Since there are no movements in the AGRR traffic group that interchange at existing BNSF interchanges, there is no issue regarding the division of revenues associated with such movements in this reopening.

c. Division of Revenue -- Cross-Over Traffic

APS/PacifiCorp include several cross-over movements in the traffic group beginning in 1997.⁶⁰ APS/PacifiCorp use the MSP methodology adopted by the Board in a recent rate case⁶¹

⁵⁸ *Id.*, as modified by APS/PacifiCorp Errata to Complainants Arizona Public Service Company's and PacifiCorp's Opening Evidence and Argument on Reopening, STB Docket No. 41185 (filed March 31, 2004) ("APS Errata").

⁵⁹ See APS Reopening, Crowley VS at 11.

⁶⁰ See APS Reopening, Crowley VS, Attachment 2, Exhibit TDC-2.

⁶¹ *Duke Energy Corp. v. Norfolk Southern Ry. Co.*, STB Docket No. 42069, at 22-25 (served November 6, 2003) ("Duke/NS").

to calculate the division of revenue between the stand-alone railroad and the residual BNSF for this cross-over traffic.⁶²

BNSF accepts the use of the MSP methodology to allocate revenues in this proceeding with one adjustment.⁶³ Specifically, BNSF corrects the origination/termination credit used in the Board's generic MSP to reflect more accurately the cost of originating and terminating unit coal trains. The 100-mile block of credit for originating or terminating traffic is a system average number that is not a good proxy for the costs incurred in originating or terminating unit coal train traffic. As explained in the verified statement of Ms. Murphy, it substantially overstates the costs of originating and terminating unit coal train traffic.⁶⁴ BNSF has modified the MSP methodology to use a 25-mile credit block for origination and termination of movements in shipper-owned cars and a 57-mile credit block for origination and termination of movements in railroad-owned cars rather than a 100-mile credit block.⁶⁵

BNSF has also changed the mileages assumed by APS/PacifiCorp for the cross-over PRB movements which affects the revenue allocations calculated under the MSP methodology. As

⁶² See APS Reopening, Crowley VS at 11-12.

⁶³ In several pending cases involving challenges to rates on movements of Powder River Basin coal, BNSF has advocated use of the Density Adjusted Revenue Allocation ("DARA") procedure for determining revenues on cross-over traffic. Those cases involve SARRs that are totally dominated by cross-over traffic and present circumstances where an imprecise revenue allocation procedure can distort fundamentally the outcome of the SAC analysis. In the current case, the role of cross-over traffic is limited in scope. There was no cross-over traffic in the original SARR configuration, and under BNSF's evidence the re-sourced cross-over traffic does not become part of the traffic group until 2007. Given the limited role of cross-over traffic here and the limited nature of this reopening proceeding, BNSF has decided to minimize the scope of the revenue divisions dispute here by accepting a slightly modified version APS/PacifiCorp's MSP approach in lieu of the more accurate DARA procedure.

⁶⁴ See Murphy VS at 15-17.

⁶⁵ See Murphy VS at 17.

explained above in section III.A.2.b, BNSF changed the origin mine for some of the PRB coal destined for the Coronado plant from { } to { }. This change affected the mileage associated with this movement, increasing it by 158 miles. This entire mileage increase is on the residual BNSF's portion of the movement.⁶⁶

In addition, BNSF corrects the route miles associated with the residual BNSF's portion of all movements from the PRB. APS/PacifiCorp did not route those PRB trains on the residual BNSF along its customary routing. APS/PacifiCorp have rerouted these trains so that they travel from Pueblo, CO through Raton, N.M. and Santa Fe, N.M. to Defiance, N.M.⁶⁷ In the real world, BNSF routes those trains from the PRB through Pueblo, CO to La Junta, CO to Amarillo, TX to Clovis, TX and on to Defiance, N.M.⁶⁸ A diagram showing BNSF's customary route and the APS/PacifiCorp reroute of the PRB cross-over traffic is attached as Exhibit JAM-2 to Ms. Murphy's verified statement. While APS/PacifiCorp's reroute of this PRB traffic is shorter than BNSF's typical route, BNSF does not use that shorter route because of the considerable grades in the York Canyon area near the Raton pass.⁶⁹ In any event, APS/PacifiCorp are not entitled to change the way the traffic is routed on the residual BNSF. APS/PacifiCorp's decision to reroute the PRB traffic on the residual BNSF through Raton is improper. Using BNSF's customary route for these movements increases the total mileage for these PRB movements -- as well as the residual BNSF's share of the mileage -- by 312 miles.⁷⁰

⁶⁶ See Murphy VS at 8.

⁶⁷ See APS Opening electronic workpaper "AGR_Traffic and Revenues_A1_BNSF Reply.xls" at worksheet "Summary."

⁶⁸ See Murphy VS at 13.

⁶⁹ See Murphy VS at 13-14.

⁷⁰ See Murphy VS at 14-15.

d. Other -- Projected Revenues (2004 through 2013)

(1) Movements to the Cholla Plant

McKinley Mine to Cholla Movement: As explained above, APS/PacifiCorp develop revenues for the issue traffic using the common carrier tariff rate that was under challenge in the original proceeding. For the years 2004 through 2008, APS/PacifiCorp adjust this tariff rate based upon 100 percent of the change in the RCAF-A, using the historical trend line for the change in the RCAF-A from 1Q90 through 1Q04.⁷¹ BNSF believes that it is improper to use a 13-year historical trend index to project the change in the RCAF-A index.⁷² The Board used a six-year historical trend index in its 1998 decision in this proceeding and has rejected the use of longer historical trend lines in other proceedings.⁷³ Further, use of a 13-year historical trend would improperly incorporate the impact of a one-time spike in inflation that occurred in the early 1990s.⁷⁴ Consistent with the Board's approach in the original decision in this docket, BNSF uses a six-year index of the historical change in the RCAF-A (from 1Q98 through 1Q04), rather than a 13-year index, to project revenues for the issue traffic from 2004 through 2008.⁷⁵

Movements from Mine Origins Other Than the McKinley Mine to Cholla:

APS/PacifiCorp include several cross-over movements originating at mines other than McKinley for transportation to Cholla in the AGRR traffic group. These movements are all common carrier tariff movements, subject to BNSF's Common Carrier Pricing Authority ("CCPA")

⁷¹ See APS Reopening at 22.

⁷² See Baranowski VS, section IV.A.; Murphy VS at 18.

⁷³ See 1998 APS Decision, 3 S.T.B. at 82; Baranowski VS, Section IV.A.

⁷⁴ See Baranowski VS, Section IV.A.

⁷⁵ See Baranowski VS, Section IV.A.; Murphy VS at 18.

90040.⁷⁶ APS/PacifiCorp use CCPA 90040 to establish the rates in 2004 for these movements.⁷⁷ Subsequent to 2004, APS/PacifiCorp adjust the rates for these movements based upon 100 percent of the change in the RCAF-U, using the historical trend line for the change in the RCAF-U from 1Q90 through 1Q04.⁷⁸ BNSF accepts APS/PacifiCorp's use of CCPA 90040 to establish 2004 rates for these movements. However, BNSF does not accept APS/PacifiCorp's decision to use a 13-year historical trend line of the changes in the RCAF-U to adjust the rates for these movements subsequent to 2004. For the reasons set forth above, BNSF uses a six-year historical average of the change in the RCAF-U (from 1Q98 to 1Q04) to adjust the rates for the non-McKinley Mine to Cholla movements for years subsequent to 2004.⁷⁹

(2) Movements to the Coronado Plant

Lee Ranch to Coronado: This movement is a tariff movement subject to CCPA 90040. APS/PacifiCorp use the tariff rate to develop revenues for this movement in 2004 and, subsequent to 2004, adjust the rate based upon 100 percent of the change in the RCAF-U, using the historical trend line for the change in the RCAF-U from 1Q90 through 1Q04.⁸⁰ BNSF accepts APS/PacifiCorp's use of CCPA 90040 to establish 2004 rates for these movements. However, BNSF does not accept APS/PacifiCorp's decision to use a 13-year historical trend line of the changes in the RCAF-U to adjust the rates for these movements subsequent to 2004. For

⁷⁶ CCPA 90040 is included in BNSF Reply electronic workpaper "Tariff.pdf."

⁷⁷ See APS Opening electronic workpaper "AGR_Traffic and Revenues_A1.xls" at worksheet "ForecastedRates."

⁷⁸ See APS Opening electronic workpaper "AGR_Traffic and Revenues_A1.xls" at worksheet "ForecastedRates."

⁷⁹ See Baranowski VS, Section IV.A.; Murphy VS at 18.

⁸⁰ See APS Opening electronic workpaper "AGR_Traffic and Revenues_A1.xls" at worksheet "ForecastedRates."

the reasons set forth above, BNSF uses a six-year historical average of the change in the RCAF-U (from 1Q98 to 1Q04) to adjust the rates for the Lee Ranch Mine to Coronado movement for years subsequent to 2004.⁸¹

McKinley Mine to Coronado: This movement is a contract movement. APS/PacifiCorp project rates for this movement from 2004 through {
} based upon the contract escalator.⁸² The contract adjustment mechanism adjusts the rate based upon { } change in the RCAF-U { }⁸³ APS/PacifiCorp calculate future RCAF-U values using the historical trend line for the change in the RCAF-U from 1Q90 through 1Q04.⁸⁴ While BNSF accepts APS/PacifiCorp's use of the contract adjustment mechanism to project rates for this movement, it does not accept APS/PacifiCorp's decision to use a 13-year historical trend line of the changes in the RCAF-U. For the reasons set forth above, BNSF uses a six-year historical average of the change in the RCAF-U (from 1Q98 to 1Q04) to adjust the rates for this movement from 2004 through { }.⁸⁵

PRB Mine to Coronado Movements: These movements had been governed by a Memorandum of Understanding ("MOU"), until last week when the final contract was signed. APS/PacifiCorp project rates for these PRB movements from 2004 through { } based upon

⁸¹ See Baranowski VS, Section IV.A; Murphy VS at 18.

⁸² See APS Opening electronic workpaper "AGR_Traffic and Revenues_A1.xls" at worksheet "ForecastedRates."

⁸³ See BNSF Reply electronic workpaper "Rates.pdf."

⁸⁴ See APS Opening electronic workpaper "AGR_Traffic and Revenues_A1.xls" at worksheet "ForecastedRates."

⁸⁵ See Baranowski VS, Section IV.A.; Murphy VS at 18.

the contract escalator.⁸⁶ The contract adjustment mechanism adjusts the rates based upon {
} of the change in the RCAF-U { }⁸⁷ While BNSF accepts
APS/PacifiCorp's use of the contract adjustment mechanism to project rates for this movement,
it does not accept APS/PacifiCorp's decision to use a 13-year historical trend line of the changes
in the RCAF-U. For the reasons set forth above, BNSF uses a six-year historical average of the
change in the RCAF-U (from 1Q98 to 1Q04) to adjust the rates for this movement from 2004
through { }.⁸⁸

(3) Total Traffic Summary

Table 5 below compares the annual AGRR revenues developed by APS/PacifiCorp with
those developed by BNSF based upon the modifications described above and in the attached
verified statement of Julie Murphy.

⁸⁶ See APS Opening electronic workpaper "AGR_Traffic and Revenues_A1.xls" at worksheet "ForecastedRates."

⁸⁷ See BNSF Reply electronic workpaper "Rates.pdf."

⁸⁸ See Baranowski VS, Section IV.A; Murphy VS at 18.

Table 5
AGRR Revenue
Comparison Of Complainants and BNSF⁸⁹

	Complainants' Revenues	BNSF Revised Revenues
1994	\$36,679,448	\$36,679,448
1995	\$28,460,713	\$28,460,713
1996	\$24,735,472	\$24,735,472
1997	\$31,250,552	\$30,740,401
1998	\$33,499,419	\$31,647,468
1999	\$32,360,171	\$30,911,172
2000	\$28,924,337	\$23,201,221
2001	\$38,864,547	\$35,170,191
2002	\$32,872,968	\$29,712,836
2003	\$30,238,671	\$24,139,310
2004	\$36,666,351	\$31,320,454
2005	\$33,436,490	\$28,460,843
2006	\$33,331,241	\$28,289,595
2007	\$25,236,402	\$22,018,250
2008	\$26,462,929	\$21,821,865
2009	\$25,573,492	\$17,550,647
2010	\$25,834,510	\$17,911,444
2011	\$26,132,603	\$18,291,536
2012	\$27,224,394	\$18,677,353
2013	\$27,508,368	\$19,073,575

IV. DCF

There is a significant conceptual error in APS/PacifiCorp's DCF analysis as described in section A below. Apart from this error, APS/PacifiCorp also use some flawed assumptions in updating the DCF analysis for this reopening. Michael Baranowski is BNSF's witness with respect to DCF issues. His attached verified statement explains in detail the modifications made by BNSF to APS/PacifiCorp's DCF analysis.

⁸⁹ See BNSF Reply electronic workpaper "AGR_Traffic and Revenues_A1_BNSF Reply.xls." Exhibit JAM-4 to the Murphy VS shows BNSF's revised revenues by shipper and mine origin for each year of the DCF period from 1994 through 2013.

A. Conceptual Error in Revised DCF Analysis

As explained in Mr. Baranowski's verified statement, APS/PacifiCorp's witness Crowley presents a revised DCF analysis that restates the results of the Board's 1998 DCF analysis underlying the Board's prior rate prescription. Under his revised analysis, Mr. Crowley concludes that revenues exceed costs by \$47.1 million dollars on a present value basis, a substantial reduction from the \$69.9 million present value overage that the Board had previously found. One would expect that this outcome would result in higher prescribed rates for the issue traffic than those that the Board prescribed in 1998. However, Mr. Crowley contends that the issue traffic rates should be further reduced for the period May 22, 2003 through 2008.

The source of this counterfactual position is Mr. Crowley's failure to take account of the level of the prescribed rates that he calculates for the elapsed portion of the DCF period, from 1994 through May 21, 2003. These rates are generally higher than those prescribed by the Board in 1998. Mr. Crowley assumes cost recovery in the early years of the DCF at the level of his prescribed rates, but in fact APS/PacifiCorp have paid the lower rates that the Board prescribed throughout the elapsed period. Thus the revenue contributed by the issue traffic movement has fallen short of that needed to cover stand-alone costs under Mr. Crowley's revised analysis. Mr. Baranowski has corrected for this error in Mr. Crowley's analysis by setting the issue traffic rate for the period May 22, 2003 through the end of 2008 at levels that allow stand-alone revenues just to equal stand-alone costs on a present value basis over the 20-year DCF period.⁹⁰

⁹⁰ See Baranowski VS, Section III.

B. Correction of Formula Error in DCF Model

APS/PacifiCorp claim to correct a formula error in the DCF model used by the Board in its original decisions.⁹¹ BNSF accepts this correction.

C. Construction Expenses

APS/PacifiCorp construct a new interchange siding near Defiance to facilitate the interchange of the new non-McKinley Mine traffic included in the traffic group.⁹² BNSF accepts the construction of the new interchange facility and the costs associated with it. However, since BNSF assumes re-sourced coal will not begin to be transported by the AGRR until 2007, BNSF assumes that the interchange facility is not built until January 2007.⁹³

D. Operating Expenses

APS/PacifiCorp continue to adjust future operating expenses using the RCAF-U, consistent with the Board's approach in the earlier APS decisions.⁹⁴ APS/PacifiCorp again use a 13-year historical trend line of the change in the RCAF-U from 1Q90 through 1Q04 to project the change in operating expenses from 2004 through 2013.⁹⁵ For the reasons set forth above, BNSF does not accept APS/PacifiCorp's decision to use a 13-year historical trend line of the changes in the RCAF-U to adjust future operating expenses for the AGRR. Instead, BNSF uses a six-year historical average of the change in the RCAF-U (from 1Q98 to 1Q04) to adjust those operating expenses.⁹⁶

⁹¹ See APS Reopening, Argument at 22-23.

⁹² *Id.* at 23-24.

⁹³ See Baranowski VS, Section IV.D.

⁹⁴ See APS Reopening, Argument at 24-25.

⁹⁵ See APS Reopening, Crowley VS at 20-21.

⁹⁶ See Baranowski VS, Section IV.A.

Since APS/PacifiCorp assume an increase in traffic volumes over time on reopening, they have also adjusted operating expenses to reflect the impact of fluctuating volumes.⁹⁷ While BNSF accepts APS/PacifiCorp's general methodology for adjusting operating expenses due to fluctuating volumes, BNSF does not agree that the traffic volumes will fluctuate as assumed by APS/PacifiCorp for the reasons set forth in section III.A.1 above.

E. Updated Inflation Indexes

APS/PacifiCorp forecast the values for the RCAF-A and RCAF-U indexes for the years 2004 through 2013 based upon the historical trend of the change in the actual RCAF-A and RCAF-U indexes, respectively, for the last 13 years from 1Q90 through 1Q04.⁹⁸ Contrary to APS/PacifiCorp's argument, this approach is not consistent with the approach adopted by the Board in its 1998 decision in this docket. As explained above, the Board used a six-year, not 13-year, historical trend of the change in the inflation indexes. Moreover, APS/PacifiCorp's historical trend is problematic because it includes the effects of a one-time spike in inflation that occurred in the early 1990s.⁹⁹ Consequently, BNSF does not accept APS/PacifiCorp's approach for forecasting future changes in inflation indexes. Rather, consistent with the Board's approach in the 1998 APS decision, BNSF forecasts the change in the RCAF index values for 2004 through 2013 based upon the historical trend of the change in the actual RCAF indexes for the last six years (1Q98 to 1Q04).¹⁰⁰

⁹⁷ See APS Reopening, Argument at 25.

⁹⁸ See APS Reopening, Crowley VS at 13, 14.

⁹⁹ See Baranowski VS, Section IV.A.

¹⁰⁰ See Baranowski VS, Section IV.A.

F. Railroad Cost of Capital

For the years 1996 through 2002, APS/PacifiCorp incorporate the actual annual railroad industry cost of capital for each of the respective years 1996 through 2002.¹⁰¹ BNSF accepts this approach.

For the years 2003 through 2013, APS/PacifiCorp forecast the cost of capital based upon the average actual railroad industry cost of capital of debt and equity for 1993 through 2002.¹⁰² Use of a nine-year historic time period to forecast future cost of capital values is inconsistent with the Board's previous standard practice of using a five-year historic time period for projecting the cost of capital.¹⁰³ Consequently, BNSF modifies APS/PacifiCorp's methodology for forecasting railroad cost of capital in 2003 through 2013. As explained in Mr. Baranowski's verified statement, BNSF uses a six-year historical time period to project the cost of capital from 2003 forward.¹⁰⁴

G. Federal and State Tax Rates

APS/PacifiCorp have applied actual state and federal tax rates for the years 1994 through 2003.¹⁰⁵ For future years 2004 through 2013, APS/PacifiCorp forecast tax rates by applying the

¹⁰¹ See APS Reopening, Argument at 26. The 1998 Decision in this docket already incorporated the actual annual railroad industry cost of capital for the years 1994 and 1995. See *1997 APS Decision*, 2 S.T.B. at 438.

¹⁰² See APS Reopening, Argument at 26.

¹⁰³ See Baranowski VS, Section IV.B.

¹⁰⁴ See Baranowski VS, Section IV.B.

¹⁰⁵ See APS Reopening, Argument at 27.

2003 federal and state tax rates.¹⁰⁶ BNSF accepts this approach regarding federal and state tax rates.

H. Adjustment for Value of McKinley Mine Spur

The current expectation is that the McKinley Mine will cease production post-2008. As a result, APS/PacifiCorp revised the DCF model to allow for the sale and salvage of the McKinley mine spur assets as of the end of 2008 and to exclude any replacement or residual value for these assets.¹⁰⁷ BNSF accepts the methodology used by APS/PacifiCorp to estimate the undepreciated value of the track assets as of 2008 but corrects the calculations to use a six-year average of the RCR indexes to project the value as of 2008.¹⁰⁸ BNSF also adjusts the proceeds from the sale of these assets to properly account for the tax liability associated with the sale.¹⁰⁹

V. DCF RESULTS

BNSF's DCF analysis shows that SAC revenues exceed SAC costs by a modest amount on a net present value basis based upon BNSF's modifications and updates to the DCF analysis described above.¹¹⁰ The differential between costs and revenues calculated by BNSF is much smaller than the differential between costs and revenues calculated by APS/PacifiCorp. Specifically, on reopening APS/PacifiCorp conclude that SAC revenues exceed SAC costs by

¹⁰⁶ *Id.*

¹⁰⁷ *Id.* at 27-28.

¹⁰⁸ *See* Baranowski VS, Section IV.C.

¹⁰⁹ *Id.*

¹¹⁰ *See* Baranowski VS, Exhibit MRB-2.

\$47.1 million on a net present value basis.¹¹¹ In contrast, BNSF calculates that SAC revenues only exceed SAC costs on a present value basis by \$26.9 million.¹¹²

Mr. Baranowski determined the maximum reasonable rate for the issue traffic for the remaining years in the DCF period (*i.e.* May 22, 2003 through 2008, the year that the McKinley Mine is expected to cease production), given the revised SAC revenues and SAC costs.¹¹³ In doing so, Mr. Baranowski took account of the Board's prior rate prescription for the elapsed portion of the DCF period which affects cost recovery during the elapsed period. Mr. Baranowski's calculations ensure that total SAC revenues equal total SAC costs over the DCF period.

Consistent with the modifications described above, BNSF calculated the maximum reasonable rates for the issue traffic from May 22, 2003 through 2008. Those rates are set forth in Table 6 below. This table also compares the Board's previous rate prescription with APS/PacifiCorp's revised rate prescription and BNSF's revised rate prescription.

¹¹¹ See Baranowski VS, Table MRB-1.

¹¹² See Baranowski VS, Exhibit MRB-2.

¹¹³ See Baranowski VS, Exhibit MRB-2.

Table 6
Comparison of Maximum
Reasonable Rates for Issue Traffic

Year	Board 1998 Rate Prescription¹¹⁴	APS/PacifiCorp's Recalculated Maximum Reasonable Rate¹¹⁵	BNSF's Recalculated Maximum Reasonable Rate¹¹⁶
2003 (as of 5/22/03)	\$4.21	\$4.04	\$7.20
2004	\$4.30	\$4.12	\$7.27
2005	\$4.75	\$4.60	\$7.61
2006	\$4.49	\$4.47	\$7.22
2007	\$4.59	\$4.38	\$7.36
2008	\$4.69	\$4.27	\$7.20

VI. BNSF RECOVERY OF UNDERPAYMENTS SINCE MAY 22, 2003

The Board lifted the prescriptive effect of its rate prescription for the McKinley Mine to Cholla movement as of May 22, 2003.¹¹⁷ The Board further found that if any revised rate prescription established in this reopening exceeds \$4.21 (the rate that the Board ordered BNSF to charge APS/PacifiCorp during the pendency of the reopening), APS/PacifiCorp will have to pay BNSF the difference between the revised rate prescription and the \$4.21 rate paid by APS/PacifiCorp, plus interest, for the tonnage shipped from the McKinley Mine to Cholla since May 22, 2003.¹¹⁸

BNSF has shown that the revised rate prescription for the McKinley movement should be \$7.20 in 2003. *See* Table 6 above. As calculated by Mr. Baranowski, APS/PacifiCorp owe BNSF \$4.8 million in underpayments from May 22, 2003 through December 31, 2003, not

¹¹⁴ *1998 APS Decision*, 3 S.T.B. at 86.

¹¹⁵ *See* APS Reopening, Argument at 30.

¹¹⁶ *See* Baranowski VS, Exhibit MRB-2.

¹¹⁷ *May 2003 APS Decision* at 8-9.

¹¹⁸ *Id.* at 7.

including interest.¹¹⁹ Additional underpayment amounts will be due by APS/PacifiCorp between January 1, 2004 and the date of the Board's decision on reopening.

VII. CONCLUSION

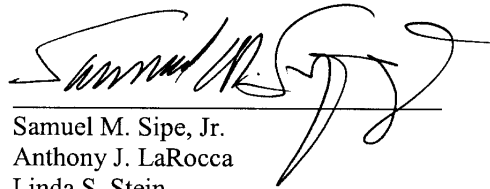
As demonstrated in BNSF's reply evidence, including the attached verified statements, the maximum reasonable rates prescribed by the Board in this docket for the McKinley Mine to Cholla movement should be revised based upon the changed circumstances relating to the McKinley Mine. The Board should prescribe new maximum reasonable rates for the time period May 22, 2003 through December 31, 2008 as calculated by BNSF.

In addition, the Board should order APS/PacifiCorp to pay BNSF for the difference between the revised maximum reasonable rate prescribed by the Board in this proceeding and the \$4.21 rate per ton that BNSF has charged APS/PacifiCorp for the issue traffic transported since May 22, 2003, plus interest.

¹¹⁹ See Baranowski VS, Section VI.

Finally, BNSF requests the Board to grant such other and further relief as it may determine is appropriate under the circumstances.

Respectfully submitted,



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ATTORNEYS FOR THE BURLINGTON
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April 9, 2004

CERTIFICATE OF SERVICE

I hereby certify that on April 9, 2004, I caused 6 copies of The Burlington Northern and Santa Fe Railway Company's Reply Evidence on Reopening to be served by hand upon the following counsel for Arizona Public Service Company and PacifiCorp:

C. Michael Loftus
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Linda S. Stein

BARANOWSKI

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

Docket No. 41185

*As successor in interest to the Atchison, Topeka and Santa Fe Railway Company

alone capital recovery costs, operating costs and revenues over the life of the stand-alone system and am, thus, intimately familiar with the evolution and all operational aspects of that model.

I submitted testimony in this proceeding jointly with John C. Klick on behalf of The Atchison, Topeka and Santa Fe Railway Company ("ATSF") on October 30, 1995 addressing both the stand-alone and variable cost of providing service to the Cholla generating facility in Joseph City, AZ which is owned by Arizona Public Service and PacifiCorp (jointly referred to as "APS"). As a result, I am familiar with all of the inputs to and assumptions incorporated in the Board's DCF model that underlies the Board's April 17, 1998 decision ("*1998 Decision*").

I also submitted a verified statement on behalf of The Burlington Northern and Santa Fe Railway Company ("BNSF") in support of its Petition to Reopen and Vacate the Rate Prescription in Docket No. 41185 filed January 10, 2003 (hereafter "BNSF Petition to Vacate") in which I updated the Board's stand alone cost ("SAC") calculations to reflect current information regarding coal volumes shipped over the hypothetical stand-alone railroad ("SARR") from the McKinley Mine during the 20-year period from 1994 through 2013 used in the Board's DCF model. The current information showed that the McKinley Mine would run out of its economically recoverable reserves (30 to 31 million tons of coal as of the end of 2002) in 2008 or 2010. *See* Michael R. Baranowski Verified Statement attached to BNSF's Petition to Vacate (hereafter "1/03 Baranowski VS") at ¶¶ 8-10. My statement of qualifications is included at Exhibit MRB-1.

I have been asked by BNSF to respond to the APS reopening evidence filed February 27, 2004, and in particular to address the testimony of APS witness Thomas D. Crowley. In his testimony, Mr. Crowley presents a SAC analysis that now acknowledges that the McKinley Mine reserves will be depleted by the end of 2008, and allegedly seeks to incorporate the effects

of other changed circumstances identified by the Board in its May 2003 and October 2003 decisions in this proceeding. Based on that analysis, Mr. Crowley concludes that the rates initially prescribed by the Board for movements from McKinley to the APS generating facility at Cholla for the period 2003 through 2008 are too high, and that additional reparations are now due from BNSF.

Mr. Crowley's revised DCF is based on the DCF analysis underlying the Board's *1998 Decision*, covering the period 1994 through 2013, and incorporates certain changes to reflect the understanding that the McKinley Mine reserves will be depleted by the end of 2008. His revised DCF also reflects actual historical experience for a number of parameters in lieu of the forecasts relied on when the Board's DCF was generated. Thus, the essential framework of Mr. Crowley's analysis is to reassess the reasonableness of the challenged rates over the same 20-year DCF period used in the original analysis in light of information now known by the parties and the Board. BNSF agrees with the essential framework of the analysis undertaken by APS and Mr. Crowley, but it has identified a significant conceptual error and several implementation errors in Mr. Crowley's DCF analysis that render his results invalid.

Conspicuously absent from Mr. Crowley's verified statement is any summary of his complete DCF results for the period 1994 through 2013 or a comparison of those results to the Board's DCF results in its *1998 Decision*. Table MRB-1, below, sets forth this comparison.¹

¹ The Board did not, in fact, include in its *1998 Decision* the DCF that it relied upon in that decision. It did however, include a DCF with its initial decision in 1997, and its *1998 Decision* identified the changes that it made to the 1997 DCF in establishing the rates it prescribed in the *1998 Decision*. I have developed the DCF results underlying the *1998 Decision* by starting with the 1997 DCF and making the identified changes.

Table MRB-1
Comparison of the Board's DCF Results from the 1998 Decision
And Mr. Crowley's Revised DCF Results
(dollars in millions)

DCF Results From 1998 APS Decision ²													Mr. Crowley's Revised DCF Results ³				
Year	Revenues	Costs	Overage (Underage)	PV of Overage (Underage)	Cumm. PV of Overage (Underage)	Resulting Issue Traffic Rate	Revenues	Costs	Overage (Underage)	PV of Overage (Underage)	Cumm. PV of Overage (Underage)	Resulting Issue Traffic Rate					
1994	\$36.7	\$20.2	\$16.5	\$15.6	\$15.6	\$3.67	\$36.7	\$21.1	\$15.6	\$14.7	\$14.7	\$4.23					
1995	\$30.2	\$17.5	\$12.6	\$10.7	\$26.2	\$3.78	\$28.5	\$16.3	\$12.1	\$10.2	\$25.0	\$4.15					
1996	\$35.3	\$20.8	\$14.5	\$11.0	\$37.2	\$3.65	\$24.7	\$14.6	\$10.2	\$7.7	\$32.6	\$4.00					
1997	\$35.4	\$21.8	\$13.6	\$9.2	\$46.3	\$3.68	\$31.2	\$19.7	\$11.5	\$7.8	\$40.4	\$4.10					
1998	\$35.2	\$22.8	\$12.4	\$7.5	\$53.8	\$3.76	\$33.5	\$23.2	\$10.3	\$6.2	\$46.6	\$4.05					
1999	\$35.1	\$23.9	\$11.2	\$6.1	\$59.9	\$4.16	\$32.2	\$25.5	\$6.7	\$3.6	\$50.2	\$4.12					
2000	\$35.0	\$27.0	\$8.0	\$3.9	\$63.8	\$3.93	\$28.9	\$25.1	\$3.9	\$1.9	\$52.1	\$4.41					
2001	\$34.9	\$26.2	\$8.8	\$3.8	\$67.6	\$4.02	\$38.9	\$30.6	\$8.3	\$3.6	\$55.7	\$4.09					
2002	\$34.8	\$27.4	\$7.4	\$2.9	\$70.5	\$4.11	\$32.9	\$26.1	\$6.7	\$2.6	\$58.3	\$3.98					
2003	\$34.8	\$28.7	\$6.1	\$2.1	\$72.6	\$4.21	\$30.2	\$24.2	\$6.1	\$2.1	\$60.4	\$4.04					
2004	\$34.8	\$30.1	\$4.7	\$1.5	\$74.0	\$4.30	\$36.7	\$30.6	\$6.1	\$1.9	\$62.3	\$4.12					
2005	\$34.8	\$31.5	\$3.2	\$0.9	\$74.9	\$4.75	\$33.4	\$35.3	(\$1.9)	(\$0.5)	\$61.8	\$4.60					
2006	\$34.8	\$33.1	\$1.7	\$0.4	\$75.3	\$4.49	\$33.3	\$33.1	\$0.2	\$0.0	\$61.9	\$4.47					
2007	\$34.8	\$37.2	(\$2.4)	(\$0.5)	\$74.8	\$4.59	\$25.2	\$34.0	(\$8.8)	(\$2.0)	\$59.9	\$4.38					
2008	\$34.8	\$36.4	(\$1.6)	(\$0.3)	\$74.5	\$4.69	\$26.5	\$36.8	(\$10.3)	(\$2.1)	\$57.8	\$4.27					
2009	\$34.9	\$38.2	(\$3.4)	(\$0.6)	\$73.9	x	\$25.6	\$40.1	(\$14.5)	(\$2.6)	\$55.2	x					
2010	\$35.0	\$40.2	(\$5.2)	(\$0.8)	\$73.1	x	\$25.8	\$40.7	(\$14.9)	(\$2.4)	\$52.8	x					
2011	\$35.1	\$42.2	(\$7.1)	(\$1.0)	\$72.0	x	\$26.1	\$40.2	(\$14.1)	(\$2.0)	\$50.8	x					
2012	\$35.2	\$44.4	(\$9.2)	(\$1.2)	\$70.9	x	\$27.2	\$41.9	(\$14.6)	(\$1.9)	\$48.9	x					
2013	\$35.3	\$46.6	(\$11.3)	(\$1.3)	\$69.6	x	\$27.5	\$42.6	(\$15.1)	(\$1.7)	\$47.1	x					

² See BNSF Reply electronic workpaper "BNSF STB April 98 Decision Run.123".

³ See APS/PacifiCorp Opening electronic workpaper "DCF.123".

There are two critical differences between the Board's 1998 DCF analysis and Mr. Crowley's revised analysis that are readily apparent from Table MRB-1. First, Mr. Crowley's revised DCF has a cumulative present value overage (revenues in excess of costs) of \$47.1 million, as compared to the cumulative present value overage of \$69.6 million that was reflected in the DCF underlying the Board's *1998 Decision*. This substantial reduction in the overage suggests that the rate reductions needed to bring revenues and costs into balance over the DCF period should be less under Mr. Crowley's revised analysis than those imposed under the Board's *1998 Decision*, *i.e.*, that any rate prescribed on the basis of the revised results should be higher, not lower, than the rates prescribed in the Board's *1998 Decision*.

The second critical difference between the two DCF analyses is that the *pattern* of SAC maximum rates for the McKinley Mine-to-Cholla movement is significantly different under the two DCFs. Under the DCF underlying the Board's *1998 Decision*, the SAC rate reflects a pattern of gradual increase over the DCF period, starting out as \$3.67 in 1997, increasing to \$4.21 per ton by 2003, and increasing to \$4.69 in 2008. In contrast, the SAC rate generated by Mr. Crowley's revised DCF is relatively flat – starting out at \$4.23 in 1994, decreasing to \$4.04 in 2003, and reaching \$4.27 in 2008, the last year coal is expected to be produced at the McKinley mine. This difference in the patterns of maximum reasonable rates under the two DCFs is caused by a number of factors, including (1) changed assumptions about the rates of inflation in revenues, operating expenses and the value of capital assets, and (2) differences in tonnage levels reflecting assumptions about resourced coal. The important point is this – the SAC maximum rate calculated for each year of a DCF period is affected by the level of revenues and costs in every other year of the DCF period, as well as the pattern of revenue/cost relationships throughout the DCF period. In the DCF model used in this case, if tonnages

increase in the later years, all other things being equal, the SAC rate per ton in the early years of the DCF declines. If the future rate of capital asset inflation is reduced, the SAC rate per ton in the early years of the DCF will increase. These are just two of the many interdependencies that combine to determine the pattern of SAC maximum rates in the DCF analysis.

These two critical differences between the Board's DCF analysis and Mr. Crowley's revised DCF analysis point to a fundamental conceptual flaw in Mr. Crowley's approach, a flaw that allows him to argue for further rate reductions even though the present value of the cumulative overcharge has declined. Mr. Crowley achieves this counterintuitive result by ignoring the substantial under-recovery of costs that has actually occurred – under his revised DCF – during the 1994 to May 21, 2003 time period. The difference between the prescribed rates as calculated by Mr. Crowley from 1994 through May 21, 2003 and the lower rates prescribed by the Board that APS actually paid over this period represent a shortfall in cost-recovery that violates the SAC principle that revenues should just equal costs over the DCF period. In Section III of this statement, I demonstrate that when this conceptual error is corrected, the McKinley-to-Cholla SAC rate for the period May 22, 2003 through 2008 needs to be higher than the rates prescribed in the *1998 Decision* for this time period in order for revenues to equal costs.

The fundamental conceptual error discussed in Section III is not the only flaw in Mr. Crowley's DCF analysis, however. Mr. Crowley has made various errors in the implementation of his DCF analysis that are discussed in Section IV of my testimony and in the accompanying verified statement of Ms. Julie A. Murphy. Table MRB-2, below, summarizes the effect of correcting both the conceptual flaw in Mr. Crowley's analysis and the implementation errors.

Table MRB-2
Revised Rate Prescription for the Movement From McKinley Mine to Cholla
For May 22, 2003 through 2008 In Light of McKinley Mine Closure⁴

Year	Rate Requirement in Light of McKinley Closure
2003	\$7.20
2004	\$7.27
2005	\$7.61
2006	\$7.22
2007	\$7.36
2008	\$7.20

II. THE BASIC FRAMEWORK OF MR. CROWLEY'S ANALYSIS IS APPROPRIATE

As noted above, the starting point for Mr. Crowley's revised DCF calculations was the DCF analysis underlying the Board's *1998 Decision*. In that DCF, the Board used the challenged tariff rate to calculate revenues associated with the McKinley-to-Cholla movement and the existing contract rate levels for the SRP movement. Because both movements were handled in their entirety by the AGRR, there was no revenue divisions issue. Based on the construction and operating costs it developed, the Board concluded that revenues exceeded costs, in cumulative present value dollars, by \$69.6 million, and prescribed the substantially reduced rates for the McKinley-to-Cholla movement, as set forth, above, in Table MRB-1.

Mr. Crowley accepted this framework, but made revisions to reflect (1) a recognition that the McKinley Mine reserves will be depleted by 2008, and (2) a number of other changes designed to show the effect of using actual historical values in lieu of the projections relied on in the Board's original DCF. Specifically, Mr. Crowley continues to employ the challenged rate level to calculate the revenues associated with the McKinley-to-Cholla movement, although he has substituted actual tonnages for the 1995 through 2003 time frame, modified by the parties'

⁴ See BNSF Reply electronic workpaper "DCF BNSF Reply 2007.123".

stipulation, in lieu of the forecasts used by the Board. Similarly, Mr. Crowley has used actual volumes and rate levels for the movement to Salt River Project's Coronado Station, modified by the parties' stipulation, rather than the forecast volumes and revenues from the Board's original DCF.

Recognizing that the McKinley coal reserves will be depleted by the end of 2008, Mr. Crowley expanded the AGRR configuration to accommodate resourced traffic, which is handled in cross-over service, and divested the assets associated with the McKinley Mine Spur after 2008, generating a net salvage value "credit" in his DCF. He also included the cost to construct an interchange in 2000 to accommodate the resourced coal.

Mr. Crowley made two computational changes to the Board's original DCF. First, he corrected an error he uncovered in the "Investment SAC" tab of the Board's original DCF (which produced an incorrect calculation of the cumulative net present value of the discounted cash flow); and second, he modified the formulas in the Board's original DCF to ensure that changes in operating expenses each year increased or decreased in proportion to changes in tonnage.

Finally, Mr. Crowley modified his forecasts of the RCR, RCAF-A, and RCAF-U indexes, and the equity cost of capital, incorporating a longer stream of actual data than the Board used in its original DCF.

As noted above, BNSF agrees that the task at hand is to revise the DCF analysis underlying the Board's *1998 Decision* to assess the reasonableness of the challenged tariff rate on the McKinley Mine to Cholla movement for the period May 22, 2003 forward in light of current information, including the understanding that coal movements from McKinley will cease by the end of 2008. Accordingly, BNSF agrees with the basic framework of Mr. Crowley's

analysis, which starts with and builds upon the Board's original DCF analysis for the period 1994 through 2013 to assess the reasonableness of the challenged tariff rate. Based upon the cost to construct and operate the AGRR, and the revenues to be earned by the AGRR overall, the Board determines whether revenues exceed costs on a present value basis over the 20-year DCF period. If so, the Board uses a percentage reduction method to determine what revenue is required from the McKinley Mine-to-Cholla movement, over the 20-year DCF period, to ensure recovery of the full economic costs of the AGRR, and prescribes the issue traffic rate accordingly.

While accepting the general framework of the analysis as described above, BNSF has identified significant errors in the way Mr. Crowley developed his DCF analysis. In Section III, below, I describe a conceptual flaw in Mr. Crowley's DCF analysis which prevents it from satisfying the fundamental principle of stand-alone cost analysis, *i.e.*, that stand-alone revenues must be set at a level high enough to exactly offset stand-alone costs on a present value basis. In Section IV, below, I identify a number of flaws in Mr. Crowley's implementation of his DCF analysis, incorporating certain findings on volumes and revenues from Ms. Murphy's verified statement. In Section V, I summarize the effects of correcting all of these errors, and show what the appropriate issue traffic rates are for the period May 22, 2003 through 2008, when coal is expected to stop moving from the McKinley Mine.

III. MR. CROWLEY'S DCF ANALYSIS SUFFERS FROM A FUNDAMENTAL CONCEPTUAL FLAW – FAILURE TO ENSURE THAT THE PRESCRIBED RATES GENERATE SUFFICIENT REVENUE TO FULLY DEFRAY STAND-ALONE COSTS OVER THE DCF PERIOD

Even under the assumptions made by Mr. Crowley, the substitution of resourced cross-over traffic for the McKinley mine coal assumed in the Board's original DCF analysis has the effect of reducing the revenues available to the AGRR. Because the cross-over volumes are

assumed by Mr. Crowley to be higher than the McKinley mine volumes employed in the Board's original DCF, operating costs are higher. In addition, the substitution of actual historical data for the 1994 through 2003 time period for the forecasted data originally used in the Board's DCF also serves to reduce considerably the amount by which stand-alone revenues exceed stand-alone costs over the 20-year DCF period. As shown above in Table MRB-1, the present value of the amount by which revenues exceed SAC declined from \$69.6 million in the DCF analysis that underlies the Board's *1998 Decision* to \$47.1 million in Mr. Crowley's revised DCF. This revised DCF outcome should result in a smaller reduction to the challenged tariff rate for the APS movement compared to the Board's original prescription. In his verified statement, however, Mr. Crowley argues that based on his revised DCF analysis, the rates previously prescribed by the Board for the period May 22, 2003 through 2008 should be further reduced. This counterfactual conclusion is based on a fundamental oversight – the failure to take account of the prescribed rate levels during the elapsed portion of the DCF period (1994 through May 21, 2003).

Table MRB-3 below is an extract of certain information from Table MRB-1. It compares the 1994 through 2003 rates prescribed by the Board in its *1998 Decision* to those developed in the revised DCF submitted by Mr. Crowley on reopening.

Table MRB-3
Comparison of 1994 Through 2003 Board Prescribed Rates For
Movement from the McKinley Mine to Cholla to Those
In the Revised DCF Submitted by Mr. Crowley⁵

Year	STB	Crowley	Difference
1994	\$3.67	\$4.23	\$0.56
1995	\$3.78	\$4.15	\$0.37
1996	\$3.65	\$4.00	\$0.35
1997	\$3.68	\$4.10	\$0.42
1998	\$3.76	\$4.05	\$0.29
1999	\$4.16	\$4.12	(\$0.04)
2000	\$3.93	\$4.41	\$0.48
2001	\$4.02	\$4.09	\$0.07
2002	\$4.11	\$3.98	(\$0.13)
2003	\$4.21	\$4.04	(\$0.17)

As shown in Table MRB-3, the issue traffic rates prescribed by the Board for the portion of the 20-year DCF that has already elapsed, *i.e.*, the 1994 through May 21, 2003 time period, are generally lower than the rates for this time period that are calculated in Mr. Crowley's revised DCF. Mr. Crowley's DCF analysis assumes cost recovery predicated on payment by APS of issue traffic rates at the level calculated by Mr. Crowley throughout the DCF period, but APS in fact has paid the generally lower rates calculated and prescribed by the Board in its 1998 decision for the elapsed period. The resulting shortfall in cost recovery during the elapsed portion of the DCF period means that costs will exceed revenues over the full DCF period if APS pays only at the level of Mr. Crowley's proposed prescriptions for the period May 22, 2003 through 2008. To obtain full cost recovery over the 20-year DCF period, the issue traffic rates for the May 22, 2003 through 2008 time period must be adjusted upward to offset the shortfall in cost recovery that has occurred during the elapsed portion of the DCF period.

⁵ See APS Opening electronic workpaper "DCF.123" and BNSF Reply electronic workpaper "BNSF STB April 98 Decision Run.123".

The first step in determining the adjustments required to bring revenues and costs into equilibrium over the DCF period was to calculate the present value of the shortfall in cost recovery resulting from APS's payment of the Board prescribed rates versus payment of Mr. Crowley's generally higher prescribed rates during the elapsed period. As shown in Table MRB-4, the shortfall is \$5.1 million (in 1994 present value dollars).

Table MRB-4
Comparison of Annual Revenues, Costs and
Net Present Value Difference Between DCF Submitted
By Mr. Crowley and After Substitution of Prescribed Rates Paid By APS
(\$ millions)

Year	Revenues Assumed in Crowley Revised DCF ⁶	Costs ⁷	Present Value Difference	Revenues Corrected to Incorporate Actual APS Revenues for 1994 through 5/21/03 ⁸	Costs ⁹	Present Value Difference
1994	\$24.9	\$21.1	\$3.6	\$22.9	\$21.1	\$1.7
1995	\$19.3	\$16.3	\$2.5	\$18.4	\$16.3	\$1.7
1996	\$17.1	\$14.6	\$1.9	\$16.2	\$14.6	\$1.2
1997	\$22.5	\$19.7	\$1.9	\$21.3	\$19.7	\$1.1
1998	\$25.7	\$23.2	\$1.5	\$24.8	\$23.2	\$1.0
1999	\$27.1	\$25.5	\$0.9	\$27.3	\$25.5	\$1.0
2000	\$26.0	\$25.1	\$0.5	\$24.8	\$25.1	(\$0.1)
2001	\$32.6	\$30.6	\$0.9	\$32.4	\$30.6	\$0.8
2002	\$27.8	\$26.1	\$0.6	\$28.2	\$26.1	\$0.8
2003	\$25.7	\$24.2	\$0.5	\$25.9	\$24.2	\$0.6
2004	\$32.1	\$30.6	\$0.5	\$32.1	\$30.6	\$0.5
2005	\$33.4	\$35.3	(\$0.5)	\$33.4	\$35.3	(\$0.5)
2006	\$33.2	\$33.1	\$0.0	\$33.2	\$33.1	\$0.0
2007	\$25.2	\$34.0	(\$2.0)	\$25.2	\$34.0	(\$2.0)
2008	\$26.5	\$36.8	(\$2.1)	\$26.5	\$36.8	(\$2.1)
2009	\$25.6	\$40.1	(\$2.6)	\$25.6	\$40.1	(\$2.6)
2010	\$25.8	\$40.7	(\$2.4)	\$25.8	\$40.7	(\$2.4)
2011	\$26.1	\$40.2	(\$2.0)	\$26.1	\$40.2	(\$2.0)
2012	\$27.2	\$41.9	(\$1.9)	\$27.2	\$41.9	(\$1.9)
2013	\$27.5	\$42.6	(\$1.7)	\$27.5	\$42.6	(\$1.7)
Total			\$0.0			(\$5.1)

Table MRB-4 shows that under Mr. Crowley's revised DCF approach, the revenues that would be generated by the issue traffic rates that he calculates added to other SARR revenues

⁶ See APS Reopening, Crowley VS, Exhibit TDC-3, Column 9.

⁷ See APS Reopening, Crowley VS, Exhibit TDC-3, Column 10.

⁸ See BNSF Reply electronic workpaper "APS Prescribed Rate DCF.123".

⁹ See APS Reopening, Crowley VS, Exhibit TDC-3, Column 10.

(i.e., revenues from resourced APS coal traffic and Salt River traffic) would exactly offset the AGRR's overall stand-alone costs, but the revenues *actually generated* on the issue traffic at the level of the Board-prescribed rates during the 1994 through May 21, 2003 time period result in an under-recovery of costs of \$5.1 million in 1994 present value dollars.¹⁰

To bring stand-alone revenues and stand-alone costs into equilibrium (on a present value basis), as required by the Board's procedures, the rates to be prescribed by the Board for the May 22, 2003 through 2008 time period must be adjusted to offset this cost under-recovery of \$5.1 million in 1994 dollars. To accomplish this, I calculated an amount per ton that would be added to Mr. Crowley's prescribed issue traffic rates for the period May 22, 2003 through 2008, using the number of issue traffic tons projected to move from the McKinley Mine to Cholla during this period. The amount of the additive per ton differs from year to year in accordance with the pattern of cost recovery dictated by the Board's DCF. In undertaking this analysis, which is intended to illustrate the effect of correcting the conceptual flaw in Mr. Crowley's revised DCF analysis, I have assumed that all of Mr. Crowley's other inputs and assumptions are correct (which, as I discuss below, is not the case). The recalculated issue traffic rates for the period May 22, 2003 through 2008 are set forth in Table MRB-5.¹¹

¹⁰ The Board's May 12, 2003 order established a procedure for the parties to keep account of any underpayments or overpayments that occur after May 21, 2003. Therefore, the only under-recovery that I address in this section of my verified statement is that which occurs during the 1994 through May 21, 2003 time period.

¹¹ In Table MRB-7, below, I make a similar calculation after correcting all of the other flaws in Mr. Crowley's revised DCF analysis.

Table MRB-5
 APS Rates for May 22, 2003 through 2008 that Will Yield
 Stand-Alone Costs Equal to Stand-Alone Revenues
 Over the 20-Year DCF Period, Assuming All of Mr. Crowley's
 Other Inputs and Assumptions Are Correct¹²

Year	Required APS Rate
2003 (eff. May 22, 2003)	\$4.95
2004	\$5.06
2005	\$5.64
2006	\$5.48
2007	\$5.38
2008	\$5.25

Table MRB-6 confirms that when the rates reflected in Table MRB-5 are incorporated into Mr. Crowley's revised DCF results for May 22, 2003 through 2008, the \$5.1 million cost recovery shortfall is eliminated, and stand-alone costs equal exactly stand-alone revenues over the 20-year DCF period.

¹² See BNSF Reply electronic workpaper "APS Prescribed Rate DCF.123".

Table MRB-6
Annual Revenues, Costs and Net Present
Value Difference After Substitution of Prescribed Rates
Paid By APS, Assuming All of Mr. Crowley's
Other Inputs and Assumptions Are Correct¹³
(\$ millions)

Year	Revenues Corrected to Incorporate Actual APS Revenues for 1994 through 5/21/03, And Adjusted to Account for Cost Under-Recovery	Costs	Present Value Difference
1994	\$22.9	\$21.1	\$1.7
1995	\$18.4	\$16.3	\$1.7
1996	\$16.2	\$14.6	\$1.2
1997	\$21.3	\$19.7	\$1.1
1998	\$24.8	\$23.2	\$1.0
1999	\$27.3	\$25.5	\$1.0
2000	\$24.8	\$25.1	(\$0.1)
2001	\$32.4	\$30.6	\$0.8
2002	\$28.2	\$26.1	\$0.8
2003	\$27.3	\$24.2	\$1.1
2004	\$35.4	\$30.6	\$1.5
2005	\$37.4	\$35.3	\$0.6
2006	\$37.0	\$33.1	\$1.0
2007	\$29.0	\$34.0	(\$1.1)
2008	\$29.4	\$36.8	(\$1.5)
2009	\$25.6	\$40.1	(\$2.6)
2010	\$25.8	\$40.7	(\$2.4)
2011	\$26.1	\$40.2	(\$2.0)
2012	\$27.2	\$41.9	(\$1.9)
2013	\$27.5	\$42.6	(\$1.7)
Total			(\$0.0)

In summary, while the DCF framework adopted by Mr. Crowley is appropriate, the way in which he developed the rates he proposes for the APS movement for the May 22, 2003 through 2008 time period violates one of the fundamental principles of the stand-alone cost test, *i.e.*, the need to ensure that the full economic costs of the stand-alone railroad are recovered. Because he ignored the cost under-recovery that, under his revised DCF approach, would occur

¹³ See BNSF Reply electronic workpaper "APS Prescribed Rate DCF.123".

in the elapsed period 1994 through May 21, 2003, the rates Mr. Crowley proposes for the May 22, 2003 through 2008 time period yield revenues insufficient to cover the AGRR's full economic costs over the 20-year DCF period. The stand-alone cost test can be properly implemented only by adjusting the May 22, 2003 through 2008 issue traffic rates to eliminate this shortfall, as I have demonstrated here.

IV. MR. CROWLEY HAS MADE OTHER ERRORS IN IMPLEMENTING HIS DCF ANALYSIS

As noted above in Section II, Mr. Crowley's revised DCF incorporates several implementation errors that need to be corrected. In subsections A and B, below, I discuss respectively errors in the way in which Mr. Crowley developed his forecasts of various inflation indexes used in the DCF and the way in which he developed his forecast of the cost of equity capital. In subsection C, I demonstrate that Mr. Crowley has overstated the amount of the net salvage value he has calculated for the dismantling of the McKinley Spur after 2008 by failing to account for the tax liability. In subsection D, I describe a modification to Mr. Crowley's assumption regarding the construction of a new interchange siding. Finally, in subsection E, I summarize the errors involving volume and revenue identified in Ms. Murphy's verified statement, and explain how corrections to those errors have been incorporated into my restated DCF. In Section V, below, I restate Mr. Crowley's DCF analysis to correct the conceptual error discussed in Section III and the implementation errors discussed here in Section IV.

A. MR. CROWLEY'S USE OF A 13-YEAR HISTORICAL AVERAGE FOR FORECASTING THE RCR, RCAF-A AND RCAF-U INDEX VALUES, INSTEAD OF THE SIX-YEAR TIME FRAME EMPLOYED IN THE BOARD'S DECISION IS IMPROPER

The DCF underlying the Board's *1998 Decision* used RCR indexes to inflate the value of the AGRR's assets, the RCAF-U to inflate operating expenses, 90 percent of the RCAF-U to inflate the SRP rate, and the RCAF-A to inflate the APS rate. In his revised DCF, Mr. Crowley

used the actual index for each year, where available, and to forecast these indexes he used a 13-year trend of the historical index values.¹⁴ Notwithstanding Mr. Crowley's claims to the contrary, his approach to forecasting these indexes is inconsistent with both the Board's *1998 Decision*, which specified a 6-year historical trend to project future index values, and with the Board's then standard practice, which was to employ a 5-year historical trend to forecast future inflation.¹⁵

The use of a five-year historical trend for these purposes was first established in *McCarty Farms*, where the ICC used historical data for the 1989 through 1994 time frame for a DCF analysis that began in 1979. In rejecting an argument made by BN for a forecast of future inflation based upon a longer historical time series, the Board explained:

Consistent with our cost-of-equity analysis, we conclude that inflation estimates based on shorter time frames that are adjacent to periods being estimated yield more reliable results than estimates based on 17-year averages.

McCarty Farms, et al. v. Burlington Northern, Inc., STB Docket No. 37809 (decided Aug. 14, 1997) at 55 (hereafter "McCarty Decision").

The *1998 Decision* in this proceeding departed slightly from the standard practice of using a five-year historical period because additional historical RCR and RCAF index data became available between the time of the initial decision in 1997 and the decision on reconsideration in April of 1998, and the Board incorporated these additional data in its *1998 Decision*, thereby slightly extending the time frame over which the historical trend was

¹⁴ See APS Reopening, Crowley VS at 13, 14, 20-21.

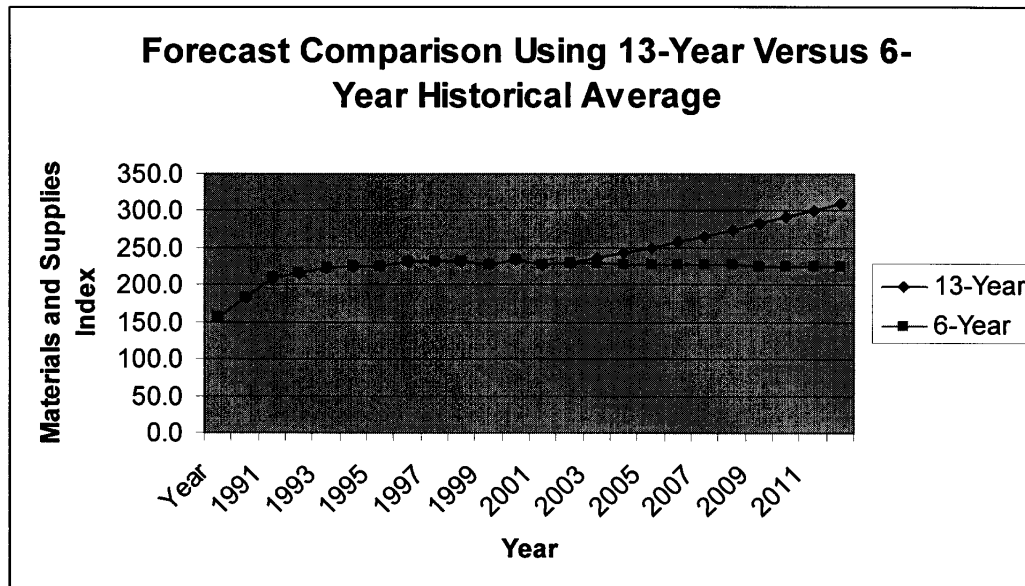
¹⁵ More recently, the Board has changed from its once standard method of projecting future inflation based on a 5-year historical average to the use of actual forecasted index values when such forecasts are available.

calculated from five years to six.¹⁶ In context, such a modest deviation from standard procedure cannot be viewed as a repudiation of the Board's expressed established preference for the use of shorter time frames directly adjacent to the future periods that are being estimated, or a blanket endorsement of a methodology that would continue to expand the time frame over which the historical average values would be calculated as additional years of historical experience became available.

In addition to being inconsistent with both the Board's *1998 Decision* and prior precedent, Mr. Crowley's use of a 13-year trend has the effect of significantly overstating the level of inflation likely to occur over the 2003 through 2013 time period, because it incorporates into the projection the impact of a one-time spike in inflation that occurred in the early 1990s. The chart below shows the historical data, and compares the projected inflation in the AAR RCR Materials and Supplies index value that is applied to rail, ties and ballast investment in the DCF, based on the 13-year trend used by Mr. Crowley, to the projected inflation based on the more realistic 6-year trend employed by the Board in its *1998 Decision*.

¹⁶ *1998 Decision*, 3 S.T.B. at 82.

Chart 1¹⁷



As noted earlier, the cost recovery required in any one year of the DCF is a function of what happens in each of the other years of the 20-year DCF. By artificially overstating the amount of inflation in the latter years of the 20-year DCF, Mr. Crowley has overstated the amount of AGRR investment recovery that is assumed to occur in the later years of the DCF, and thereby understated the investment recovery required in the early years of the 20-year DCF period. I have corrected the DCF analysis submitted by Mr. Crowley to use the *1998 Decision's* six-year historical average to forecast future inflation.

¹⁷ See BNSF Reply electronic workpaper "Materials and Supplies Index Chart".

B. MR. CROWLEY'S USE OF A NINE-YEAR HISTORICAL AVERAGE FOR FORECASTING THE EQUITY COST OF CAPITAL, INSTEAD OF THE SIX-YEAR TIME FRAME EMPLOYED IN THE BOARD'S DECISION IS IMPROPER

To forecast the equity cost of capital for the 2003 to 2013 time period, Mr. Crowley used the average cost of equity for a nine-year time period, *i.e.*, 1993 through 2002.¹⁸ In its *1997 Decision*, the Board used the cost of equity associated with the construction period (*i.e.*, the cost of equity for the 1993 time period) for all future years.¹⁹ However, where a stand-alone cost case covers several years for which actual historical data is available, the Board's standard practice has been to use a five-year average of the costs of equity capital, as described in the following quotation the *McCarty Farms* decision:

Both parties used the cost of equity developed in the ICC's annual cost of capital determinations for each year from 1978 through 1993. For years before 1978 and after 1993, McCarty used the 5-year averages of 1978 through 1982 and 1989 through 1993, respectively. BN used an average of the rail industry's cost of equity for 1978 through 1993 to estimate equity costs for years where the agency-determined cost of capital findings are unavailable.

We have restated the cost of equity for 1994 and 1995 based on the agency's cost-of-capital determinations released after the close of the evidentiary record. We use McCarty's evidence on the cost of equity for 1976-1977 and its method for estimating the cost of equity for 1996-1998, because use of 5-year averages better estimate near-term equity costs than BN's long-term average for the period from 1978 through 1993. We substitute a 1991-1995 5-year average for McCarty's 1989-1993 average, to reflect the more recent agency cost-of-equity determinations.

McCarty Decision at 54.

¹⁸ See APS Reopening, Crowley VS at 21.

¹⁹ *1997 Decision*, 2 S.T.B. at 438.

Mr. Crowley's use of a nine-year historical average to forecast the equity cost of capital (1993 through 2002) is inconsistent with the Board's standard practice of using a five-year average. To be consistent with the approach I used for the RCR and RCAF indexes, I have restated Mr. Crowley's revised DCF to employ a six-year historical average in order to estimate the future cost of equity capital.

C. MR. CROWLEY HAS OVERSTATED THE NET SALVAGE VALUE OF DISMANTLING THE MCKINLEY MINE SPUR BY FAILING TO PROVIDE FOR THE TAX LIABILITY PRODUCED BY THE SALE OF ASSETS FULLY DEPRECIATED FOR TAX PURPOSES

Mr. Crowley credits the APS SAC with the proceeds from the sale of the undepreciated portion of the track assets of the McKinley Mine Spur after the McKinley Mine reserves are depleted at the end of 2008.²⁰ I have accepted the method used by Mr. Crowley to estimate the undepreciated value of the track assets as of 2008, but have corrected the calculations to use a six-year average of the RCR indexes to project the value as of 2008. In addition, Mr. Crowley has failed to account for the tax liability applicable to the sale proceeds. The track assets for which Mr. Crowley claims credit are rails, ties and ballast. Each of these asset categories is assumed in the DCF to have a seven-year life for tax purposes, and thus would be fully written off for tax purposes by 2008. I have adjusted the proceeds from the sale of these assets to properly account for the tax liability associated with the sale.²¹

²⁰ See APS Reopening, Crowley VS at 16-18.

²¹ See BNSF Reply electronic workpaper "DCF BNSF Reply 2007.123".

**D. MR. CROWLEY'S CONSTRUCTION EXPENSES ASSOCIATED WITH
NEW INTERCHANGE FACILITY MUST BE MODIFIED**

APS constructs a new interchange siding near Defiance to facilitate the interchange of resourced coal traffic.²² I accept the assumption that a new interchange facility must be constructed. However, since BNSF assumes resourced coal will not be transported by the SARR until 2007, I modify the DCF analysis so that the interchange facility is not built until January 2007.²³

**E. IMPLEMENTATION ERRORS DESCRIBED IN MS. MURPHY'S
TESTIMONY**

In her verified statement, Ms. Murphy identifies a number of errors in APS's development of tonnage and revenue estimates for Mr. Crowley's revised DCF analysis. Based on her testimony, I have made the following modifications to Mr. Crowley's assumptions in preparing my DCF analysis:

1. eliminated the resourced cross-over traffic that Mr. Crowley included for time periods prior to 2007;²⁴

²² APS Reopening, Argument at 23-24.

²³ See BNSF Reply electronic workpaper "DCFDS BNSF Reply 2007.123."

²⁴ In its October 10, 2003 decision, the Board stated that APS could "submit evidence on how the two shippers in the original traffic group will re-source their coal needs once McKinley shuts down." Decision at 3. { } will stop taking McKinley coal at the end of 2006 and will replace its McKinley coal supply with coal from other sources beginning in 2007. Therefore, eliminating resourced coal from the DCF analysis for time periods prior to 2007 is most consistent with the language of the Board's order – and this is the approach I have followed in preparing my restated DCF, which is set forth in Exhibit MRB-2.

Even if one were to make an assumption that resourced coal began to move earlier in anticipation of the McKinley shut down, *i.e.*, once APS became convinced that the McKinley mine was, in fact, going to shut down, that would not justify Mr. Crowley's assumption that resourced coal can be included in the SAC analysis as early as 1997 – had APS believed at that point that McKinley was going to be shut down by 2007 or 2008, it should have brought that to the Board's attention in advance of the *1998 Decision*. On this record, it would be reasonable to conclude that the fact that McKinley would have to shut down sometime in the 2007 to 2008

(Continued)

2. excluded the “supplemental” tonnage for SRP that Mr. Crowley included;
3. changed Mr. Crowley’s assumption that all resourced coal would originate at the { } mine, and assumed, instead, that approximately { } of this coal will originate at the { } mine, as has been the case historically;
4. reduced Mr. Crowley’s assumptions about annual volumes to Cholla to conform to an 85% utilization factor, consistent with standard Board practice;
5. modified the routing of the resourced PRB traffic assumed by Mr. Crowley – which is not the real world route actually used by the traffic, but rather an operationally infeasible (but shorter) route – to the route used by the traffic in the real world;²⁵ and
6. modified Mr. Crowley’s revenue divisions algorithm to employ more reasonable mileage block credits for originating and terminating bulk coal shipments.

These changes are incorporated in the modified DCF analyses that are included as Exhibits MRB-2 and MRB-3 to this verified statement.

V. RESTATEMENT OF RESULTS

Exhibit MRB-2 is the DCF analysis I have created by modifying Mr. Crowley’s DCF analysis to correct the fundamental conceptual flaw described in Section III and the implementation errors described in Section IV. This analysis yields the rates for the May 22,

time frame became widely known in 2003 – the year BNSF petitioned to re-open this proceeding. The earliest possible date that one could assume re-sourcing began would be 2003. To show the impact of this assumption, Exhibit MRB-3 restates the results of Exhibit MRB-2 with only one change, *i.e.*, permitting resourced coal to be included in the stand-alone traffic group beginning in 2003. Comparing these two exhibits demonstrates that allowing resourced traffic beginning in 2003 changes only slightly the issue traffic rates per ton for the May 22, 2003 through 2008 time period.

²⁵ As explained in Ms. Murphy’s testimony, Mr. Crowley’s use of the shorter route is designed to reduce the division of revenues that the residual BNSF would receive under the mileage prorate assumptions he makes.

2003 through 2008 time frame shown in Table MRB-7, which are sufficient to provide for full cost recovery over the 20-year DCF period.

Table MRB-7
APS Rates for May 22, 2003 through 2008
That Will Yield Stand-Alone Costs Equal
To Revenues Over the 20-Year DCF Period
After Correcting all Conceptual and Implementation Errors
Identified in Mr. Crowley's Analysis²⁶

Year	Required APS Rate
2003 (eff. May 22, 2003)	\$7.20
2004	\$7.27
2005	\$7.61
2006	\$7.22
2007	\$7.36
2008	\$7.20

Table MRB-8 demonstrates that when the rates reflected in Table MRB-7 are incorporated into Mr. Crowley's revised DCF results, as I have corrected it for the errors identified above, stand-alone costs equal exactly stand-alone revenues over the 20-year DCF period, as required by the Board.

²⁶ See BNSF Reply electronic workpaper "DCF BNSF Reply 2007.123".

Table MRB-8
Annual Revenues, Costs and
Net Present Value Difference After Correcting All Conceptual
And Implementation Errors Identified in Mr. Crowley's Analysis²⁷
(\$ millions)

Year	Revenues	Costs	Present Value Difference
1994	\$25.0	\$24.0	\$0.9
1995	\$20.2	\$18.6	\$1.4
1996	\$17.6	\$16.6	\$0.7
1997	\$22.5	\$21.5	\$0.7
1998	\$24.9	\$23.5	\$0.8
1999	\$27.2	\$26.3	\$0.5
2000	\$19.4	\$17.9	\$0.7
2001	\$30.4	\$28.4	\$0.8
2002	\$26.5	\$25.1	\$0.6
2003	\$26.4	\$19.8	\$2.3
2004	\$39.2	\$26.7	\$3.9
2005	\$39.7	\$27.7	\$3.4
2006	\$38.1	\$26.0	\$3.0
2007	\$33.2	\$36.8	(\$0.8)
2008	\$30.4	\$38.4	(\$1.6)
2009	\$17.4	\$40.7	(\$4.2)
2010	\$17.7	\$41.5	(\$3.9)
2011	\$18.1	\$41.4	(\$3.4)
2012	\$18.4	\$42.0	(\$3.1)
2013	\$18.7	\$42.9	(\$2.8)
Total			(\$0.0)

VI. CALCULATION OF APS UNDERPAYMENT

Under the terms of the Board's May 12, 2003 order, beginning May 22, 2003 the parties were required to keep account of the volumes shipped to Cholla from the McKinley Mine, and the rates paid, so that once the Board determines the appropriate rate levels for the May 22, 2003 through 2008 time period, the parties would be in a position to quantify and pay monies owed, including interest, for underpayments or overpayments. The Board has ordered BNSF to charge

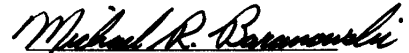
²⁷ See BNSF Reply electronic workpaper "DCF BNSF Reply 2007.123".

APS \$4.21 per ton for the issue traffic during the pendency of the reopening. BNSF has asked me to calculate the underpayment owed by APS, based on my restated DCF results shown in Exhibit MRB-2, for the time period for which we have actual issue traffic tonnage and rate information, *i.e.*, for the time period May 22, 2003 through December 31, 2003.

Because the appropriate rate level I have calculated for 2003 is higher than the \$4.21 rate per ton that APS has been paying, APS owes BNSF monies under the terms of the Board's order. I have calculated those under payments before applicable interest in Exhibit MRB-4. Through the end of 2003, that figure is \$4.8 million. When the Board issues a decision on reopening, I will be able to update this calculation as well as compute the applicable interest through the date of that decision.

VERIFICATION

I, Michael R. Baranowski, declare that I have personal knowledge of the facts set forth above and that those facts are true and correct to the best of my knowledge.


Michael R. Baranowski

Dated: April 8, 2004

STATEMENT OF QUALIFICATIONS
OF
MICHAEL R. BARANOWSKI

My name is Michael R. Baranowski. I am a Senior Managing Director of FTI Consulting, Inc, an economic and financial consulting firm with offices located at 1201 Eye Street, NW, Suite 400, Washington, DC 20005. Since 1980, I have been involved in various aspects of transportation analysis including operations, engineering, facility requirements, valuations and costing. I hold a Bachelor of Science degree in accounting from Fairfield University in Fairfield, Connecticut.

In 1980, I joined the consulting firm of Wyer, Dick and Company in Livingston, New Jersey as a consultant. I participated in a variety of studies for railroad, shipper and other clients including line abandonments, operations analysis, terminal switching studies, labor protection and rail facility and equipment valuation.

In late 1981, I became a consultant with Snavelly, King and Associates with offices in Morristown, New Jersey and Washington, D.C. While at Snavelly, King, I was involved in rail merger, traffic, switching, liquidation and valuation studies for a variety of rail and rail related clients. I was also responsible for engineering, operating and costing components in a number of Section 229 proceedings.

I joined Klick, Kent & Allen in 1988 as a Senior Consultant.

I have previously testified before the Surface Transportation Board, the Special Court, before numerous state public utility commissions, and in state courts in New Jersey.

REDACTED

REDACTED

ADJUSTMENT TO ELIMINATE SHORTFALL RESULTING FROM APS PAYMENTS AT STB PRESCRIBED LEVELS

Assuming Resourced Coal Beginning in 2003

Year	APS Rate Required To Cover SAC Costs	STB Prescribed Rates	Annual Stand-Alone Revenues With Board Prescription 1994 - 2003 (current \$)	Actual & Forecasted Annual Cost (current \$)	Over Payments Or (Shortfalls) (current \$)	Incremental APS Increase Per Ton	APS McKinley Tons Post - May 22	Additional McKinley Revenues	Revised Revenue Stream	Actual & Forecasted Annual Cost (current \$)	Over Payments Or (Shortfalls) (current \$)	APS Rate Prescription 2003-2008
1994	\$5.05	\$3.67	\$24,829,814	\$23,293,381	\$1,451,620				\$24,829,814	\$23,293,381	\$1,451,620	
1995	\$4.96	\$3.78	20,108,995	18,042,744	1,744,928				20,108,995	18,042,744	1,744,928	
1996	\$4.74	\$3.65	17,500,168	16,108,118	1,050,414				17,500,168	16,108,118	1,050,414	
1997	\$4.73	\$3.68	22,417,089	20,823,895	1,072,776				22,417,089	20,823,895	1,072,776	
1998	\$4.51	\$3.76	24,752,251	22,797,456	1,177,650				24,752,251	22,797,456	1,177,650	
1999	\$4.46	\$4.16	26,992,330	25,517,342	797,403				26,992,330	25,517,342	797,403	
2000	\$4.26	\$3.93	19,306,427	17,383,692	930,343				19,306,427	17,383,692	930,343	
2001	\$4.32	\$4.02	30,146,521	27,558,737	1,121,066				30,146,521	27,558,737	1,121,066	
2002	\$4.26	\$4.11	26,361,351	24,288,340	807,539				26,361,351	24,288,340	807,539	
2003	\$4.49	\$4.21	28,075,781	26,822,757	438,352	\$2.77	1,606,377	\$4,456,505	32,532,286	26,822,757	1,997,392	\$7.26
2004	\$4.55		34,908,300	33,715,650	373,964	\$2.81	3,550,000	9,980,099	44,888,399	33,715,650	3,503,295	\$7.36
2005	\$4.61		31,724,263	38,314,589	(1,852,154)	\$2.85	3,800,000	10,831,247	42,555,510	38,314,589	1,191,874	\$7.46
2006	\$4.50		31,578,398	35,920,024	(1,093,644)	\$2.79	3,800,000	10,586,796	42,165,194	35,920,024	1,573,142	\$7.29
2007	\$4.40		21,988,739	35,404,389	(3,028,928)	\$2.72	3,800,000	10,347,862	32,336,601	35,404,389	(692,632)	\$7.13
2008	\$4.30		21,753,929	36,969,081	(3,078,981)	\$2.66	3,000,000	7,984,990	29,738,919	36,969,081	(1,463,116)	\$6.97
2009	\$4.17		17,383,594	39,164,739	(3,950,617)				17,383,594	39,164,739	(3,950,617)	
2010	\$4.11		17,717,162	39,986,099	(3,620,239)				17,717,162	39,986,099	(3,620,239)	
2011	\$4.06		18,054,268	39,879,519	(3,180,171)				18,054,268	39,879,519	(3,180,171)	
2012	\$4.13		18,392,770	40,405,144	(2,874,827)				18,392,770	40,405,144	(2,874,827)	
2013	\$4.21		18,732,692	41,267,309	(2,637,840)				18,732,692	41,267,309	(2,637,840)	
					(\$14,351,347)						(\$0)	

Increase Required for 2003 \$2.77

REDACTED

REDACTED

**Calculation of Underpayments Before Interest Based on the SAC Maximum
Rate for McKinley to Cholla Movements
(05/22/2003 to 12/31/2003)**

Page 1 of 5

Shipment Date 1/ (1)	Tons 1/ (2)	Rate Per Ton 1/ (3)	Amount Paid 1/ (4)	SAC Maximum Rate 2/ (5)	Increase Per Ton 3/ (6)	Underpayments 4/ (7)
<u>2Q2003</u>						
1 . 05/22/2003	8,789	\$4.21	\$37,002.64	\$7.20	\$2.99	\$26,279.78
2 . 05/24/2003	8,582	4.21	36,131.48	7.20	2.99	25,661.08
3 . 05/26/2003	8,882	4.21	37,393.96	7.20	2.99	26,557.70
4 . 05/27/2003	8,663	4.21	36,470.49	7.20	2.99	25,901.85
5 . 05/27/2003	8,786	4.21	36,989.80	7.20	2.99	26,270.66
6 . 05/28/2003	8,399	4.21	35,360.00	7.20	2.99	25,113.16
7 . 05/29/2003	8,613	4.21	36,262.31	7.20	2.99	25,753.99
8 . 05/30/2003	8,397	4.21	35,351.37	7.20	2.99	25,107.03
9 . 05/31/2003	8,483	4.21	35,714.06	7.20	2.99	25,364.62
10 . 06/02/2003	8,868	4.21	37,333.86	7.20	2.99	26,515.02
11 . 06/03/2003	8,907	4.21	37,500.26	7.20	2.99	26,633.20
12 . 06/03/2003	8,583	4.21	36,134.22	7.20	2.99	25,663.02
13 . 06/05/2003	8,507	4.21	35,814.68	7.20	2.99	25,436.08
14 . 06/06/2003	8,690	4.21	36,586.16	7.20	2.99	25,984.00
15 . 06/07/2003	8,484	4.21	35,718.69	7.20	2.99	25,367.91
16 . 06/09/2003	8,873	4.21	37,354.07	7.20	2.99	26,529.37
17 . 06/10/2003	8,485	4.21	35,723.85	7.20	2.99	25,371.57
18 . 06/11/2003	8,783	4.21	36,974.96	7.20	2.99	26,260.12
19 . 06/12/2003	8,299	4.21	34,936.69	7.20	2.99	24,812.52
20 . 06/14/2003	8,875	4.21	37,363.12	7.20	2.99	26,535.80
21 . 06/16/2003	8,487	4.21	35,731.53	7.20	2.99	25,377.03
22 . 06/16/2003	8,879	4.21	37,380.48	7.20	2.99	26,548.14
23 . 06/17/2003	8,492	4.21	35,751.64	7.20	2.99	25,391.30
24 . 06/18/2003	8,200	4.21	34,522.84	7.20	2.99	24,518.60
25 . 06/19/2003	8,888	4.21	37,417.64	7.20	2.99	26,574.52
26 . 06/20/2003	8,884	4.21	37,400.38	7.20	2.99	26,562.26
27 . 06/20/2003	8,780	4.21	36,964.43	7.20	2.99	26,252.65
28 . 06/21/2003	8,690	4.21	36,585.64	7.20	2.99	25,983.62
29 . 06/23/2003	8,697	4.21	36,615.32	7.20	2.99	26,004.70
30 . 06/23/2003	8,691	4.21	36,587.95	7.20	2.99	25,985.27
31 . 06/24/2003	8,779	4.21	36,959.59	7.20	2.99	26,249.21
32 . 06/24/2003	8,690	4.21	36,583.22	7.20	2.99	25,981.90
33 . 06/25/2003	8,587	4.21	36,149.27	7.20	2.99	25,673.71
34 . 06/26/2003	<u>8,681</u>	4.21	<u>36,547.33</u>	7.20	2.99	<u>25,956.41</u>
35 . Subtotal-2Q2003	294,374		\$1,239,313.91			\$880,177.81
<u>3Q2003</u>						
36 . 07/01/2003	8,589	\$4.21	\$36,160.53	\$7.20	\$2.99	\$25,681.71
37 . 07/02/2003	8,690	4.21	36,585.64	7.20	2.99	25,983.62
38 . 07/03/2003	8,501	4.21	35,788.68	7.20	2.99	25,417.62
39 . 07/03/2003	8,683	4.21	36,556.90	7.20	2.99	25,963.22
40 . 07/04/2003	8,489	4.21	35,738.16	7.20	2.99	25,381.74
41 . 07/05/2003	8,383	4.21	35,293.80	7.20	2.99	25,066.14
42 . 07/09/2003	8,492	4.21	35,750.90	7.20	2.99	25,390.78
43 . 07/10/2003	8,504	4.21	35,800.47	7.20	2.99	25,425.99

Calculation of Underpayments Before Interest Based on the SAC Maximum

Page 2 of 5

Rate for McKinley to Cholla Movements

(05/22/2003 to 12/31/2003)

	Shipment Date 1/ (1)	Tons 1/ (2)	Rate Per Ton 1/ (3)	Amount Paid 1/ (4)	SAC Maximum Rate 2/ (5)	Increase Per Ton 3/ (6)	Underpayments 4/ (7)
44 .	07/11/2003	8,415	4.21	35,427.57	7.20	2.99	25,161.15
45 .	07/12/2003	8,880	4.21	37,386.80	7.20	2.99	26,552.62
46 .	07/14/2003	8,871	4.21	37,348.07	7.20	2.99	26,525.11
47 .	07/15/2003	8,897	4.21	37,454.27	7.20	2.99	26,600.54
48 .	07/15/2003	7,715	4.21	32,480.47	7.20	2.99	23,068.07
49 .	07/16/2003	9,107	4.21	38,342.47	7.20	2.99	27,231.35
50 .	07/17/2003	8,877	4.21	37,371.96	7.20	2.99	26,542.08
51 .	07/18/2003	8,872	4.21	37,349.54	7.20	2.99	26,526.16
52 .	07/19/2003	8,601	4.21	36,210.42	7.20	2.99	25,717.14
53 .	07/19/2003	8,687	4.21	36,571.22	7.20	2.99	25,973.38
54 .	07/21/2003	8,773	4.21	36,932.44	7.20	2.99	26,229.92
55 .	07/22/2003	8,776	4.21	36,946.96	7.20	2.99	26,240.24
56 .	07/23/2003	8,097	4.21	34,087.63	7.20	2.99	24,209.51
57 .	07/24/2003	7,906	4.21	33,285.31	7.20	2.99	23,639.69
58 .	07/25/2003	7,713	4.21	32,470.26	7.20	2.99	23,060.82
59 .	07/26/2003	7,792	4.21	32,803.48	7.20	2.99	23,297.48
60 .	07/28/2003	7,779	4.21	32,750.12	7.20	2.99	23,259.58
61 .	07/28/2003	7,593	4.21	31,965.79	7.20	2.99	22,702.55
62 .	07/29/2003	7,600	4.21	31,994.11	7.20	2.99	22,722.65
63 .	08/04/2003	7,804	4.21	32,852.84	7.20	2.99	23,332.54
64 .	08/05/2003	8,895	4.21	37,448.16	7.20	2.99	26,596.20
65 .	08/05/2003	8,789	4.21	37,003.16	7.20	2.99	26,280.16
66 .	08/06/2003	8,880	4.21	37,383.43	7.20	2.99	26,550.23
67 .	08/07/2003	7,791	4.21	32,801.27	7.20	2.99	23,295.91
68 .	08/08/2003	8,773	4.21	36,932.96	7.20	2.99	26,230.30
69 .	08/09/2003	8,883	4.21	37,395.75	7.20	2.99	26,558.97
70 .	08/11/2003	8,989	4.21	37,844.22	7.20	2.99	26,877.48
71 .	08/11/2003	8,407	4.21	35,392.31	7.20	2.99	25,136.11
72 .	08/12/2003	8,903	4.21	37,483.31	7.20	2.99	26,621.17
73 .	08/13/2003	8,922	4.21	37,560.99	7.20	2.99	26,676.33
74 .	08/15/2003	8,879	4.21	37,380.80	7.20	2.99	26,548.36
75 .	08/16/2003	8,877	4.21	37,370.49	7.20	2.99	26,541.03
76 .	08/18/2003	8,993	4.21	37,859.27	7.20	2.99	26,888.17
77 .	08/18/2003	8,771	4.21	36,925.07	7.20	2.99	26,224.69
78 .	08/19/2003	8,396	4.21	35,346.53	7.20	2.99	25,103.59
79 .	08/23/2003	8,881	4.21	37,387.01	7.20	2.99	26,552.77
80 .	08/24/2003	8,695	4.21	36,607.63	7.20	2.99	25,999.25
81 .	08/25/2003	8,895	4.21	37,447.95	7.20	2.99	26,596.05
82 .	08/26/2003	7,315	4.21	30,796.15	7.20	2.99	21,871.85
83 .	08/26/2003	8,896	4.21	37,451.95	7.20	2.99	26,598.89
84 .	08/27/2003	8,683	4.21	36,554.06	7.20	2.99	25,961.20
85 .	08/28/2003	8,794	4.21	37,024.32	7.20	2.99	26,295.18
86 .	08/30/2003	8,881	4.21	37,389.12	7.20	2.99	26,554.26
87 .	09/02/2003	8,871	4.21	37,348.07	7.20	2.99	26,525.11
88 .	09/03/2003	8,905	4.21	37,488.79	7.20	2.99	26,625.05
89 .	09/04/2003	8,893	4.21	37,441.11	7.20	2.99	26,591.19
90 .	09/08/2003	8,889	4.21	37,423.53	7.20	2.99	26,578.71
91 .	09/09/2003	8,895	4.21	37,446.48	7.20	2.99	26,595.00

Calculation of Underpayments Before Interest Based on the SAC Maximum

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Rate for McKinley to Cholla Movements

(05/22/2003 to 12/31/2003)

	Shipment		Rate	Amount	SAC	Increase	
	<u>Date 1/</u>	<u>Tons 1/</u>	<u>Per Ton 1/</u>	<u>Paid 1/</u>	<u>Maximum</u>	<u>Per</u>	
	<u>(1)</u>	<u>(2)</u>	<u>(3)</u>	<u>(4)</u>	<u>Rate 2/</u>	<u>Ton 3/</u>	<u>Underpayments 4/</u>
92 .	09/10/2003	8,880	4.21	37,385.64	7.20	2.99	26,551.80
93 .	09/12/2003	8,870	4.21	37,342.38	7.20	2.99	26,521.08
94 .	09/13/2003	8,883	4.21	37,399.43	7.20	2.99	26,561.59
95 .	09/13/2003	8,982	4.21	37,814.96	7.20	2.99	26,856.70
96 .	09/14/2003	8,878	4.21	37,374.49	7.20	2.99	26,543.87
97 .	09/15/2003	8,697	4.21	36,614.26	7.20	2.99	26,003.96
98 .	09/16/2003	8,905	4.21	37,491.52	7.20	2.99	26,627.00
99 .	09/16/2003	8,892	4.21	37,436.37	7.20	2.99	26,587.83
100 .	09/17/2003	8,994	4.21	37,866.00	7.20	2.99	26,892.96
101 .	09/18/2003	8,985	4.21	37,826.01	7.20	2.99	26,864.55
102 .	09/19/2003	8,709	4.21	36,664.47	7.20	2.99	26,039.61
103 .	09/20/2003	8,878	4.21	37,376.70	7.20	2.99	26,545.44
104 .	09/22/2003	8,879	4.21	37,381.01	7.20	2.99	26,548.51
105 .	09/22/2003	8,992	4.21	37,857.90	7.20	2.99	26,887.20
106 .	09/23/2003	8,905	4.21	37,491.31	7.20	2.99	26,626.85
107 .	09/25/2003	9,000	4.21	37,890.32	7.20	2.99	26,910.22
108 .	09/27/2003	8,907	4.21	37,497.10	7.20	2.99	26,630.96
109 .	09/27/2003	8,906	4.21	37,493.00	7.20	2.99	26,628.04
110 .	09/28/2003	8,892	4.21	37,433.32	7.20	2.99	26,585.66
111 .	09/29/2003	8,798	4.21	37,039.79	7.20	2.99	26,306.17
112 .	09/30/2003	<u>8,927</u>	4.21	<u>37,581.83</u>	7.20	2.99	<u>26,691.13</u>
113 .	Subtotal-3Q2003	666,484		\$2,805,898.48			\$1,992,787.76

4Q2003

114 .	10/02/2003	8,866	\$4.21		\$37,324.39	\$7.20	\$2.99	\$26,508.29
115 .	10/03/2003	8,974	4.21		37,779.70	7.20	2.99	26,831.66
116 .	10/05/2003	8,882	4.21		37,392.59	7.20	2.99	26,556.73
117 .	10/06/2003	8,969	4.21		37,758.12	7.20	2.99	26,816.34
118 .	10/07/2003	8,882	4.21		37,392.90	7.20	2.99	26,556.96
119 .	10/08/2003	8,889	4.21		37,420.80	7.20	2.99	26,576.76
120 .	10/09/2003	8,802	4.21		37,058.42	7.20	2.99	26,319.40
121 .	10/10/2003	8,680	4.21		36,542.17	7.20	2.99	25,952.75
122 .	10/11/2003	8,900	4.21		37,469.32	7.20	2.99	26,611.22
123 .	10/13/2003	8,892	4.21		37,433.74	7.20	2.99	26,585.96
124 .	10/14/2003	8,891	4.21		37,429.64	7.20	2.99	26,583.04
125 .	10/14/2003	9,004	4.21		37,906.63	7.20	2.99	26,921.81
126 .	10/15/2003	8,711	4.21		36,674.68	7.20	2.99	26,046.86
127 .	10/16/2003	8,808	4.21		37,081.68	7.20	2.99	26,335.92
128 .	10/16/2003	9,307	4.21		39,184.47	7.20	2.99	27,829.35
129 .	10/17/2003	8,892	4.21		37,435.64	7.20	2.99	26,587.30
130 .	10/18/2003	8,584	4.21		36,139.90	7.20	2.99	25,667.06
131 .	10/20/2003	8,907	4.21		37,499.21	7.20	2.99	26,632.45
132 .	10/23/2003	8,895	4.21		37,449.00	7.20	2.99	26,596.80
133 .	10/24/2003	8,892	4.21		37,434.79	7.20	2.99	26,586.71
134 .	10/26/2003	8,876	4.21		37,369.85	7.20	2.99	26,540.59
135 .	10/26/2003	8,801	4.21		37,054.21	7.20	2.99	26,316.41
136 .	10/27/2003	8,982	4.21		37,814.54	7.20	2.99	26,856.40
137 .	10/28/2003	8,912	4.21		37,518.05	7.20	2.99	26,645.83

Calculation of Underpayments Before Interest Based on the SAC Maximum

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Rate for McKinley to Cholla Movements

(05/22/2003 to 12/31/2003)

	Shipment Date 1/ (1)	Tons 1/ (2)	Rate Per Ton 1/ (3)	Amount Paid 1/ (4)	SAC Maximum Rate 2/ (5)	Increase Per Ton 3/ (6)	Underpayments 4/ (7)
138 .	10/29/2003	8,788	4.21	36,996.85	7.20	2.99	26,275.67
139 .	10/29/2003	8,885	4.21	37,406.48	7.20	2.99	26,566.60
140 .	11/01/2003	8,979	4.21	37,802.01	7.20	2.99	26,847.51
141 .	11/02/2003	8,835	4.21	37,193.56	7.20	2.99	26,415.38
142 .	11/03/2003	9,098	4.21	38,301.11	7.20	2.99	27,201.97
143 .	11/04/2003	8,899	4.21	37,466.47	7.20	2.99	26,609.21
144 .	11/11/2003	8,889	4.21	37,423.22	7.20	2.99	26,578.48
145 .	11/11/2003	8,998	4.21	37,883.16	7.20	2.99	26,905.14
146 .	11/14/2003	8,969	4.21	37,761.07	7.20	2.99	26,818.43
147 .	11/18/2003	8,799	4.21	37,042.21	7.20	2.99	26,307.89
148 .	11/20/2003	8,490	4.21	35,743.22	7.20	2.99	25,385.32
149 .	11/21/2003	8,888	4.21	37,420.06	7.20	2.99	26,576.24
150 .	11/22/2003	8,705	4.21	36,645.95	7.20	2.99	26,026.46
151 .	11/24/2003	8,890	4.21	37,425.11	7.20	2.99	26,579.83
152 .	11/25/2003	8,875	4.21	37,365.64	7.20	2.99	26,537.60
153 .	11/27/2003	8,789	4.21	37,002.22	7.20	2.99	26,279.48
154 .	11/27/2003	9,108	4.21	38,343.84	7.20	2.99	27,232.32
155 .	11/29/2003	8,495	4.21	35,765.63	7.20	2.99	25,401.25
156 .	11/30/2003	8,888	4.21	37,416.69	7.20	2.99	26,573.85
157 .	11/30/2003	8,886	4.21	37,408.17	7.20	2.99	26,567.79
158 .	12/01/2003	8,885	4.21	37,404.80	7.20	2.99	26,565.40
159 .	12/03/2003	8,888	4.21	37,420.48	7.20	2.99	26,576.54
160 .	12/04/2003	8,883	4.21	37,397.64	7.20	2.99	26,560.32
161 .	12/04/2003	8,898	4.21	37,462.26	7.20	2.99	26,606.22
162 .	12/06/2003	8,981	4.21	37,809.38	7.20	2.99	26,852.74
163 .	12/07/2003	9,181	4.21	38,651.06	7.20	2.99	27,450.52
164 .	12/09/2003	8,891	4.21	37,429.01	7.20	2.99	26,582.60
165 .	12/10/2003	8,898	4.21	37,461.11	7.20	2.99	26,605.39
166 .	12/10/2003	8,894	4.21	37,443.63	7.20	2.99	26,592.99
167 .	12/11/2003	8,789	4.21	37,002.01	7.20	2.99	26,279.33
168 .	12/12/2003	8,797	4.21	37,033.48	7.20	2.99	26,301.68
169 .	12/14/2003	8,694	4.21	36,599.64	7.20	2.99	25,993.57
170 .	12/15/2003	8,941	4.21	37,641.93	7.20	2.99	26,733.81
171 .	12/17/2003	8,810	4.21	37,088.31	7.20	2.99	26,340.63
172 .	12/17/2003	8,990	4.21	37,846.64	7.20	2.99	26,879.20
173 .	12/18/2003	9,004	4.21	37,905.26	7.20	2.99	26,920.84
174 .	12/19/2003	8,699	4.21	36,622.47	7.20	2.99	26,009.79
175 .	12/20/2003	8,294	4.21	34,919.00	7.20	2.99	24,799.96
176 .	12/20/2003	8,880	4.21	37,386.17	7.20	2.99	26,552.17
177 .	12/22/2003	9,187	4.21	38,675.48	7.20	2.99	27,467.86
178 .	12/23/2003	5,834	4.21	24,559.56	7.20	2.99	17,442.54
179 .	12/23/2003	9,100	4.21	38,311.00	7.20	2.99	27,209.00
180 .	12/26/2003	8,991	4.21	37,853.37	7.20	2.99	26,883.99
181 .	12/27/2003	9,103	4.21	38,325.10	7.20	2.99	27,219.02
182 .	12/29/2003	9,066	4.21	38,167.65	7.20	2.99	27,107.19
183 .	12/29/2003	8,906	4.21	37,493.94	7.20	2.99	26,628.72
184 .	12/30/2003	8,899	4.21	37,463.42	7.20	2.99	26,607.04
185 .	12/31/2003	8,888	4.21	37,419.11	7.20	2.99	26,575.57

**Calculation of Underpayments Before Interest Based on the SAC Maximum
Rate for McKinley to Cholla Movements
(05/22/2003 to 12/31/2003)**

Page 5 of 5

Shipment		Rate		Amount	SAC	Increase	
<u>Date 1/</u>	<u>Tons 1/</u>	<u>Per Ton 1/</u>	<u>Paid 1/</u>	<u>Rate 2/</u>	<u>Ton 3/</u>	<u>Underpayments 4/</u>	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
186 . 12/31/2003	8,899	4.21	37,465.63	7.20	2.99	26,608.61	
187 . Subtotal-4Q2003	645,519		\$2,717,635.62			\$1,930,102.26	
188 . Grand Total	1,606,377		\$6,762,848.01			\$4,803,067.83	
(05/22/03 Through 12/31/03)							

1/ See APS electronic file "ARIZONA PUBLIC SERVICE 2001 2003_REV.XLS"

2/ See Exhibit_(MRB- 2)

3/ Column (2) - Column (5)

4/ Column (2) x Column (6)

MURPHY

PUBLIC VERSION

BEFORE THE
SURFACE TRANSPORTATION BOARD

ARIZONA PUBLIC SERVICE	)	
COMPANY and PACIFICORP	)	
	)	
Complainants,	)	
	)	
v.	)	Docket No. 41185
	)	
THE BURLINGTON NORTHERN	)	
AND SANTA FE RAILWAY	)	
COMPANY,	)	
	)	
Defendant.	)	
	)	

VERIFIED STATEMENT OF JULIE A. MURPHY

I. INTRODUCTION

My name is Julie A. Murphy. I am a Director in FTI's Financial Consulting Division, with offices at 1201 Eye Street, N.W., Suite 400, Washington, D.C. 20005. I have been involved in every major rate reasonableness proceeding conducted by the Surface Transportation Board ("STB") over the last 4 years. In these cases, I have conducted analyses and evaluated the traffic and revenue assumptions hypothesized for the stand-alone railroad. My experience and expertise are described in detail in my Statement of Qualifications, a copy of which is attached to this Verified Statement as Exhibit JAM-1.

II. SUMMARY AND CONCLUSIONS

I have been retained by The Burlington Northern and Santa Fe Railway Company (“BNSF”) to respond to certain evidence presented by APS/PacifiCorp in their reopening evidence filed in this docket on February 27, 2004. In particular, I have been asked by BNSF to address the traffic and revenue assumptions presented in the testimony of APS/PacifiCorp witnesses Kenneth Nordlander and Thomas D. Crowley. In so doing, I have identified improper assumptions that result in an overstatement of the traffic and revenues transported by the hypothetical stand-alone railroad named the Arizona & Gallup Railroad (“AGRR”). For example, as explained in detail below, APS/PacifiCorp’s volumes and, consequently, their revenues are overstated because of the following flawed assumptions: (1) it improperly includes resourced traffic in the AGRR traffic group prior to the shut down of the McKinley Mine; (2) it improperly includes “Supplemental Coal” tonnages to the Coronado Station in 2007 through 2013; (3) it improperly assumes all PRB coal volumes transported to Coronado will originate from the Jacobs Ranch mine in the Powder River Basin when such coal has traditionally originated at both the Jacobs Ranch and Spring Creek mines; and (4) it improperly assumes that the Cholla plant will operate in excess of 85 percent capacity for the 2008-2013 period.

In addition, APS/PacifiCorp’s revenue assumptions are flawed and result in the overstatement of AGRR revenues due to the following improper assumptions: (1) APS/PacifiCorp assume that the residual BNSF would reroute PRB origin traffic via a shorter but operationally more difficult route as opposed to that used by BNSF in the real world, thereby allocating excessive revenues to the AGRR under the mileage based revenue division calculation; (2) APS/PacifiCorp improperly use a 13-year historical trend of the change in the

RCAF indexes to forecast future index values from 2004 through 2013 which is inconsistent with the practice adopted by the Board earlier in this proceeding; and (3) APS/PacifiCorp rely upon a revenue division calculation for cross-over traffic that assumes an inappropriately large 100-mile block credit for originating and terminating unit train coal movements and, consequently, allocates a disproportional percentage of the total revenues to the AGRR.

As explained below, I correct these errors in APS/PacifiCorp's traffic and revenue assumptions.

III. FLAWS IN APS/PACIFICORP'S VOLUME ASSUMPTIONS

In this section of my Verified Statement, I describe my corrections to APS/PacifiCorp's calculation of traffic volumes for the AGRR.

A. Exclusion of Non-McKinley Mine Volumes Prior to the Shut Down of the McKinley Mine

For the reasons set forth in BNSF's Reply Evidence on Reopening, BNSF has requested that I remove non-McKinley Mine volumes that APS/PacifiCorp included in the AGRR traffic group prior to January 1, 2007. The following Table JAM-1 identifies the volume of non-McKinley Mine coal that BNSF is excluding from the AGRR traffic group under this modification to the SARR traffic group.

Table JAM-1
Summary of Non-McKinley Mine Volumes
Excluded By BNSF From AGRR Traffic Group¹

Year	Non-McKinley Coal Removed Prior to January 1, 2007 (Tons)
1994	0
1995	0
1996	0
1997	230,591
1998	691,814
1999	545,804
2000	2,381,796
2001	1,367,673
2002	978,805
2003	1,604,869
2004	1,591,000
2005	2,107,500
2006	2,107,500

B. Errors in Forecasted Volumes

Beginning in 2004, APS/PacifiCorp project the volumes of coal handled each year by the AGRR based on upon the Verified Statements of APS/PacifiCorp witnesses Kenneth Nordlander and Brian Durning and documents provided by Salt River Project in discovery.²

1. Flaws in the Assumptions Regarding Projected Volumes to Coronado

APS/PacifiCorp have made two material errors in their projection of volumes to be transported to Salt River Project's ("SRP") Coronado station. First, APS/PacifiCorp erroneously include "Supplemental Coal" tonnages from PRB mine origins in the years { } which are too speculative to include. The following Table JAM-2 summarizes the

¹ See BNSF Reply electronic workpaper "AGR_Traffic and Revenues_A1_BNSF Reply.xls" worksheet "BNSF Reply Assmptions."

² Nordlander VS at 10-14; Crowley VS at 9-10.

“Supplemental Coal” volumes improperly included by APS/PacifiCorp in their forecast of tonnage to be transported by the AGRR.

Table JAM-2
Supplemental { } Coal for SRP Coronado³

Year	Tons
{ }	{ }
{ }	{ }
{ }	{ }
{ }	{ }
{ }	{ }
{ }	{ }
{ }	{ }

While these tonnages appear in SRP’s projections of future coal tonnage for the Coronado plant, it is clear from the projections that SRP is uncertain whether it will in fact purchase these tons. In its projections, SRP describes these tons as follows: “{

}⁴ The { } classification of the { }

“Supplemental Coal” volumes demonstrates} that SRP is uncertain whether it will purchase those tons. Furthermore, it is not unusual for utilities to develop base line and alternative forecasts—such as low demand growth and high demand growth scenarios—when preparing long-range business plans to reflect the range in potential outcomes. When alternative “low demand” or “high demand” growth forecasts exist, it is common practice to rely on the base case

³ See APS/PacifiCorp Opening electronic workpaper “AGR_Traffic and Revenues_A1.xls” worksheet “Summary” and APS workpapers at 0080-82.

⁴ See SRP Projections, included in APS/PacifiCorp workpapers at 0080-82 (emphasis added).

forecast unless there is significant evidence that the alternate forecast is more reliable. For example, in recent rate litigations, the STB has accepted the Energy Information Administration's ("EIA") base case coal production forecast (from the Annual Energy Outlook) to project coal volumes for the DCF period rather than the low demand growth and high demand growth scenarios that the EIA published.⁵ In this instance, the SRP forecast that includes the "Supplemental Coal" is akin to a high demand growth forecast. There is no evidence suggesting that the "high demand growth" forecast should be relied upon. Moreover, as the following Table JAM-3 shows, including the Supplemental Coal will result in coal purchase at the Coronado plant that is substantially higher than the plant's historical coal purchase. I have revised the AGRR traffic forecast to exclude the { } supplemental coal volumes.⁶

⁵ The EIA reference case forecast from the Annual Energy Outlook was accepted in Wisconsin Power and Light rate case. See *Wisconsin Power & Light Co. v. Union Pacific R.R.*, STB Docket No. 42051, at 20 (hereinafter "*WPL*"). In addition to the reference case, the EIA develops high and low economic growth forecasts and high and low fossil fuel cases that are described on the EIA website. See <http://www.eia.doe.gov/oiaf/aeo/forecast.html>.

⁶ BNSF does not have the same concern regarding the { } tons of { } coal for 2004 that SRP designated as Supplemental Coal in its projections because SRP did not denote this traffic with the { } classification.

Table JAM-3
Comparison of Coronado Historical Coal Purchase
To Coal Purchase With { } Supplemental Coal⁷

Year	Historical Coronado Coal Purchase⁸
1997	{ }
1998	{ }
1999	{ }
2000	{ }
2001	{ }
2002	{ }
2003	{ }
Year	Coronado Coal Purchase With Supplemental { } Coal
2007	{ }
2008	{ }
2009	{ }
2010	{ }
2011	{ }
2012	{ }
2013	{ }

The second flaw in APS/PacifiCorp's tonnage forecast for the SRP Coronado power plant is their assumption that 100 percent of the PRB coal destined to this plant will originate from { }⁹ Historically, the Coronado station has received a mix of PRB coal originating from { } and { }. As the following Table JAM-4 demonstrates, Salt River Project received nearly { } percent of its PRB coal from the { } mine over the past few years. Furthermore, BNSF has received no information from

⁷ See BNSF Reply electronic workpaper "AGR_Traffic and Revenues_A1_BNSF Reply.xls" worksheet "BNSF Reply Assmptions."

⁸ See APS/PacifiCorp Opening electronic workpaper "AGR_Traffic and Revenues_A1.xls" worksheet "Summary."

⁹ See APS/PacifiCorp Opening electronic workpaper "AGR_Traffic and Revenues_A1.xls" worksheet "Summary."

SRP that suggests that this mix of PRB coal will change in the future.¹⁰ Since PRB coal is cross-over traffic, the location of the origin mine will affect the mileage for the movement and, consequently, the allocation of revenue between the AGRR and residual BNSF. Coronado coal movements that originate from { } are 158 miles longer than movements originating at { }.¹¹ This additional mileage is exclusively on the residual BNSF's portion of the haul. Therefore, under any mileage based revenue division calculation—like the generic modified straight mileage prorate used by APS/PacifiCorp—the residual incumbent should be allocated a greater portion of the revenues for a longer portion of the haul and the AGRR should receive a smaller portion of the revenue division. Thus, APS/PacifiCorp's failure to acknowledge SRP's { } originations results in an overstatement of AGRR revenues. For these reasons, I have revised the AGRR traffic forecast to reflect the historic pattern of PRB originations for traffic destined to SRP's Coronado plant.

¹⁰ This information is based on discussions that I had with Randy Reyff, a Director of Coal Marketing for BNSF, who is responsible for this movement.

¹¹ See APS/PacifiCorp Opening electronic workpapers "AGR_Traffic and Revenues_A1.xls" worksheet "Summary."

Table JAM-4
Salt River Project's Historical Purchases of PRB Coal¹²

	Total Tonnages				Percentage of Tons			
	2000	2001	2003	Total	2000	2001	2003	Total
{ }	{ }	{ }	{ }	{ }	77.7%	73.5%	80.4%	76.4%
{ }	{ }	{ }	{ }	{ }	22.3%	26.5%	19.6%	23.6%
Total	{ }	{ }	{ }	{ }	100.0%	100.0%	100.0%	100.0%

2. Flaws in the Assumptions Regarding Projected Volumes to Cholla

APS/PacifiCorp also have made an erroneous assumption in the volume forecast to their own Cholla plant -- they assume that the plant will substantially increase its burn to { } percent capacity beginning in { }. As discussed in the Verified Statement of Kenneth Nordlander, APS/PacifiCorp's forecast of Cholla volumes is based upon a { } internal business forecast prepared by APS, as updated by Mr. Nordlander based upon more current events.¹³ Beginning in { }, Mr. Nordlander's updated APS/PacifiCorp volume forecast assumes that the power plant will begin to produce significantly more power than it has historically consumed as shown in Table JAM-5. Specifically, while the plant historically operated at a 72 percent capacity factor from 1997 to 2002 and did not exceed 82 percent.¹⁴

¹² See BNSF Reply electronic workpaper "AGR_Traffic and Revenues_A1_BNSFReply.xls" worksheet "BNSF Reply Assumptions." I excluded the one-time purchase of coal from { } in 2000 from the development of this historical purchase pattern that I use to project the distribution of future coal volumes because these origins were discontinued.

¹³ Nordlander VS at 10-14.

¹⁴ See BNSF Reply electronic workpaper, "APS CF analysis.xls."

APS/PacifiCorp's forecast contemplates that the plant will operate at a { } capacity factor from { } through the duration of the DCF period. *See* Table JAM-5.

Table JAM-5
Capacity Factor Assumption for APS/PacifiCorp Cholla¹⁵

Year	Capacity Factor
1997-2002	72.0%
2005-2007	{ }
2008-2013	{ }

The assumption that the plant will operate at a { } percent capacity factor beginning in { } is inconsistent with STB precedent — reaffirmed in numerous recent rate cases — that volume forecasts to a power plant should be capped at an 85 percent capacity factor.¹⁶ It is well-recognized that a plant will not operate at a 100 percent capacity factor because a plant experiences planned and unplanned outages due to general maintenance activities and unexpected operational problems. Further reductions in plant utilization may result from fluctuating demand due to weather and other factors or transmission-related limitations.

APS/PacifiCorp's assumption that the plant will operate at a { } percent capacity factor beginning in { } is also suspect because it reflects a sudden, significant increase in plant production. While some increase in the power plant's utilization is typically forecasted over time to reflect demand growth, that increase tends to follow a gradual incline instead of the nearly

¹⁵ *See* BNSF Reply electronic workpaper "AGR_Traffic and Revenues_A1_BNSF Reply.xls" worksheet "APS Cholla."

¹⁶ *WPL* at 20. On limited occasions the parties in these SAC rate proceedings have made an exception to this 85 percent capacity factor cap in circumstances where a power plant has historically operated at a capacity factor greater than 85 percent. In this instance, however, the Cholla plant has not operated historically at a capacity factor in excess of 85 percent. *See* BNSF Reply electronic workpaper "APS CF analysis.xls."

{ } percent instantaneous increase that APS/PacifiCorp forecast for { }.¹⁷ Since this increased utilization is higher than the plant has historically achieved and exceeds the maximum capacity factor found in STB rate cases, it should be rejected.¹⁸

I have adjusted the traffic forecast for the AGRR to assume that the Cholla plant operates at 85 percent capacity, rather than { } percent capacity in the years { }.¹⁹ As a result of this adjustment, I have reduced the volumes forecasted to be transported to the Cholla plant by approximately { } tons in { } and by { } tons annually from { }.²⁰

¹⁷ Contrary to Mr. Nordlander's assertion at page 14 of his verified statement, the coal deliveries to Cholla forecast in the { } are not "comparable to the forecasted deliveries for { }." As adjusted by Mr. Nordlander based upon more current data, the coal deliveries to Cholla (in MMBTUs) projected for the { } period are { } percent higher than the coal deliveries projected to that plant in the { } period. *See* BNSF Reply electronic workpaper "AGR_Traffic and Revenues_A1_BNSF Reply.xls" worksheet "APS Cholla."

¹⁸ There is other evidence produced by APS/PacifiCorp in this case that support the reduced volume level. For example, APS provided other forecasts in discovery that projected { } volume levels for Cholla for the { } approximating { } million tons of coal annually. *See* BNSF Reply electronic workpaper "APS_Discovery.pdf." (APS/BAC 04667).

¹⁹ To make this adjustment, I reduced the tonnages from the { } mine origin to Cholla because APS/PacifiCorp identified { } as the secondary source of coal for future use. Nordlander Verified Statement at 11.

²⁰ *See* BNSF Reply electronic workpaper "AGR_Traffic and Revenues_A1_BNSF Reply.xls" worksheet "BNSF Reply Assmptions."

C. BNSF's Revised Volumes

The following Table JAM-6 compares the total AGRR volumes developed by BNSF with those developed by APS/PacifiCorp. The total volumes projected by BNSF are lower than those projected by APS/PacifiCorp due to BNSF's exclusion of certain traffic as described above.

Table JAM-6
AGRR Tonnage Forecast
Comparison Of APS/PacifiCorp And BNSF²¹

	APS/PacifiCorp Reopening	BNSF Reply
1994	6,035,384	6,035,384
1995	4,640,828	4,640,828
1996	4,064,006	4,064,006
1997	5,367,367	5,136,776
1998	6,268,251	5,576,437
1999	6,350,559	5,804,755
2000	6,499,170	4,117,374
2001	7,688,264	6,320,591
2002	6,462,333	5,483,528
2003	5,827,093	4,222,224
2004	7,141,000	5,550,000
2005	7,307,500	5,200,000
2006	7,307,500	5,200,000
2007	7,288,521	7,057,500
2008	7,655,651	7,219,958
2009	8,103,898	7,492,643
2010	7,995,702	7,492,643
2011	7,900,863	7,492,643
2012	8,098,706	7,492,643
2013	7,992,139	7,492,643

²¹ See BNSF Reply electronic workpaper "AGR_Traffic and Revenues_A1_BNSF Reply.xls" worksheet "Summary BNSF Reply."

IV. FLAWS IN APS/PACIFICORP'S REVENUE ASSUMPTIONS

APS/PacifiCorp have included cross-over traffic originating at mines other than the McKinley Mine in the AGRR traffic group beginning in 1997. APS/PacifiCorp develop the AGRR's division of revenues associated with these cross-over movements by using the modified straight-mileage prorate ("MSP") methodology. There are two fundamental problems with APS/PacifiCorp's revenue division calculation. There is also a flaw in the methodology used by APS/PacifiCorp to project revenues from 2004 through 2013. I discuss each of those flaws below.

1. Use of Incorrect Mileage for Certain PRB Movements

In developing the revenue division for coal originating in the PRB, APS/PacifiCorp incorrectly assume that the residual BNSF would route this traffic from Pueblo to Defiance via Raton and Santa Fe, New Mexico.²² Although it is the shortest route to the AGRR, this route is characterized by steep grades in the York Canyon area over Raton Pass (including nearly 3% grades at Raton and Glorieta).²³ Therefore, BNSF typically routes loaded trains destined to Cholla and Coronado via Pueblo - LaJunta - Amarillo - Clovis TX, rather than the alternative route via Raton hypothesized by APS/PacifiCorp.²⁴ I have confirmed that BNSF typically routes

²² See APS/PacifiCorp Opening electronic workpaper "AGR_Traffic and Revenues_A1.xls" worksheet "Summary," and BNSF Reply electronic workpaper "APS mileage.pdf." The mileage assumed by APS can be compared to the actual mileage of the route via Raton reported by PCRail and included in BNSF Reply electronic workpaper "APS mileage.pdf."

²³ This information is based on discussions that I had with numerous BNSF personnel, including Randy Reyff, a Director of Coal Marketing for BNSF, and Steve Behn, Director of Equipment and Service Planning in BNSF's Coal Marketing Department .

²⁴ See APS/PacifiCorp Opening electronic workpaper, "AGR_Traffic and Revenues_A1.xls" worksheet "Summary."

the PRB trains destined for Cholla and Coronado via Denver, CO – Amarillo, TX – Clovis, TX based upon a review of BNSF's Train System Train Event History reports.²⁵

Exhibit JAM-2 contains a map showing the real-world BNSF route from the PRB to the AGRR and the route assumed by APS/PacifiCorp. The real world route for the traffic is approximately 312 miles longer than the alternate route hypothesized by APS/PacifiCorp.²⁶

The Board has made clear that the hypothetical SARR may not adversely affect the residual incumbent's operations, as APS/PacifiCorp attempt to do here by rerouting the PRB movements on the residual BNSF.²⁷ APS/PacifiCorp have made no effort to explain why they have rerouted the PRB trains on the residual BNSF. Indeed, there is no rationale for doing so since the reroute would cause operational difficulties due to the considerable grades. In any event, the stand-alone railroad has no authority to determine the routing on the residual BNSF. Consequently, APS/PacifiCorp's effort to reroute PRB coal movements via Raton should be disallowed. The SAC analysis should assume that the residual BNSF will utilize the historical route of movement from the PRB to Arizona via Denver, CO – Amarillo, TX and Clovis TX.

²⁵ I have attached a sample of these reports from 2004 in BNSF Reply electronic workpaper "PRB Train Event Routing.pdf." I obtained these train event reports from Steve Behn, Director of Equipment and Service Planning in BNSF's Coal Marketing Department.

²⁶ According to PCRail, the difference in these two routes from the PRB to APS Cholla equals 312.4 miles. See BNSF Reply electronic workpaper "APS mileage.pdf."

²⁷ In the *TMPA* case the STB rejected TMPA's attempt to reroute traffic that could have operational effects on the residual incumbent. "Thus TMPA's proposed rerouting of this traffic would have an affect not only on how the GCRR would move this traffic but also how it could be moved by the residual BNSF.redirecting the off-SARR portion of traffic introduces new variables that extend the inquiry well beyond the original parameters of the SAC analysis." *Texas Municipal Power Agency v. The Burlington Northern and Santa Fe Railway Company*, STB Docket No. 42056, at 21, 22 (served March 24, 2003).

APS/PacifiCorp's failure to incorporate the historic route of movement for PRB shipments to Cholla and Coronado results in an understatement of the total miles that the residual BNSF will carry the traffic and, therefore, understates the revenues allocated to the residual BNSF and overstates AGRR revenues. I have corrected this error.²⁸

2. Use of 100-Mile Credit Block for Origination and Termination

The second flaw in APS/PacifiCorp's revenue division calculation for cross-over traffic results from the use of a 100-mile block credit for originating or terminating traffic. The 100-mile block of credit for originating or terminating traffic is a system average number that is not a good proxy for the costs incurred in originating or terminating particular categories of traffic. As explained below, the 100-mile block substantially overstates the costs of originating and terminating unit coal train traffic.

The source of the 100-mile origin and termination blocks used in the MSP formula is the Board's Carload Waybill Sample, which divides revenue on interline moves using an assumption that the originating and terminating carriers each receive a revenue credit that is the equivalent of a 100-mile line haul move. This credit is expressly intended to compensate the originating and terminating carrier for the costs associated with originating and terminating each movement.²⁹

²⁸ See BNSF Reply electronic workpaper "AGR_Traffic and Revenues_A1_BNSF Reply.xls" worksheet "Summary BNSF Reply."

²⁹ The documentation explaining the Waybill calculations states that the origin carrier receives "an additional [100-mile] block to allow for the pick-up and switching expenses," and the destination carrier receives "an additional [100-mile] block to allow for delivery expenses." *User Guide for the 1996 Surface Transportation Board Waybill Sample* at 8-33. The cite excerpt is included in BNSF Reply electronic workpaper "Waybill.pdf."

However, this 100-mile block credit was calculated to apply across all shipments, whether the traffic moves in single-car, multiple-car, or unit-train shipments, whether the traffic moves in shipper-owned or carrier-owned equipment, and regardless of the traffic type. The 100-mile block credit may reasonably reflect the origination and termination costs of a “system-average” carload. However, the relative costs of originating and terminating a carload of unit train coal are considerably lower than the costs of originating or terminating a “system-average” carload of traffic.

Unit coal trains consist of continuously cycling sets of cars moving between an established origin and an established destination. The essence of unit coal train service, and one of the main factors driving railroads to provide unit train service, is the elimination of costs associated with the switching that would otherwise be incurred to create a trainload from numerous individually originated cars or blocks of cars. To originate a unit train carload, an existing set of preconfigured cars is sent to a mine, where the entire set of cars is moved through the loading facilities. Coal is automatically dumped into each car from a loading tippie as the car moves through the loading dock. In the PRB, all of these operations are carried out on mine-owned loop tracks, so the originating railroad does not even own any road property associated with the origination of the coal. In some cases, the loading operations are carried out by third party loading crews that specialize in these activities. The loading operations in the PRB have become highly efficient due to the large volume of trains that load at individual mines. Unit trains that regularly consist of 115 to 130 carloads can be loaded at PRB mines in a matter of three to four hours.

The Board's URCS costing methodology recognizes the efficiencies and lower costs associated with originating and terminating unit trains. Ex Parte No. 270 (Sub-No. 4) prescribes specific adjustments to various URCS system-average costs to account for these efficiencies. All of these adjustments reduce the system-average costs for unit train traffic by substantial amounts.³⁰

In Exhibit JAM-3, BNSF shows the effect of these unit train adjustments using BNSF's 2002 URCS. This exhibit shows that URCS itself assumes that the costs to originate and terminate unit train carloads in shipper-owned cars is about 2 percent of the cost to originate the system-average carload and the cost to originate and terminate unit train carloads in railroad owned cars is about 57 percent of the system average. Applying these relationships to the 100-mile blocks that the Board's Waybill Sample uses to reflect the origination and termination costs of the system-average carload results in revised origination and termination blocks of 25 miles and 57 miles respectively for unit train carloads of coal in shipper and railroad cars.

Currently, APS/PacifiCorp use only BNSF-provided railcars for coal transported to the Cholla plant.³¹ SRP uses its own steel rotary gondolas for coal originating from Lee Ranch and McKinley mines but relies upon BNSF-provided railcars for coal originating from the PRB or other more northern mines.³² I have modified the MSP methodology to apply a 57-mile credit

³⁰ *Ex Parte No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal* 344 I.C.C. 71, 227 (decided Dec. 3, 1974).

³¹ This information is based on discussions that I had with Randy Reyff, a Director of Coal Marketing for BNSF, who is responsible for this movement.

³² This information is based on discussions that I had with Randy Reyff, a Director of Coal Marketing for BNSF, who is responsible for this movement.

block for origination and termination activities for movements in railroad-owned cars and a 25-mile credit block for origination/termination activities for movements in shipper-owned cars.³³

3. Use of 13-Year Historical Trend of the Change in the RCAF Indexes to Project Future Revenues

In its reopening SAC filing, APS/PacifiCorp project revenues for the traffic in the AGRR traffic group based upon the average rate of change in the respective RCAF-A and RCAF-U indexes over a 13-year time frame from 1990 (first quarter) through 2004 (first quarter).³⁴ As explained in more detail in Mr. Baranowski's verified statement, it is inconsistent with the Board's prior decisions in this proceeding to use a 13-year historical trend of the change in those indexes to project future revenues. Consistent with those previous Board decisions, I have revised APS/PacifiCorp's rate forecast to reflect the average escalation in the appropriate RCAF index over the six-year period from 1998 (first quarter) to 2004 (first quarter).

4. BNSF's Revised Revenues

The following Table JAM-7 compares the total AGRR revenues developed by BNSF with those developed by APS/PacifiCorp. The total revenues projected by BNSF are lower than those projected by APS/PacifiCorp due to BNSF's exclusion of certain traffic and modification of certain volume and revenue assumptions as described above.

³³ See BNSF Reply electronic workpaper "AGR_Traffic and Revenues_A1_BNSF Reply.xls" worksheet "Summary BNSF Reply."

³⁴ See APS/PacifiCorp Opening electronic workpaper "AGR_Traffic and Revenues_A1.xls" worksheet "RCAFIndex."

Table JAM-7
AGRR Revenue
Comparison Of APS/PacifiCorp And BNSF³⁵

	APS/PacifiCorp Reopening	BNSF Reply
1994	\$36,679,448	\$36,679,448
1995	\$28,460,713	\$28,460,713
1996	\$24,735,472	\$24,735,472
1997	\$31,250,552	\$30,740,401
1998	\$33,499,419	\$31,647,468
1999	\$32,360,171	\$30,911,172
2000	\$28,924,337	\$23,201,221
2001	\$38,864,547	\$35,170,191
2002	\$32,872,968	\$29,712,836
2003	\$30,238,671	\$24,139,310
2004	\$36,666,351	\$31,320,454
2005	\$33,436,490	\$28,460,843
2006	\$33,331,241	\$28,289,595
2007	\$25,236,402	\$22,018,250
2008	\$26,462,929	\$21,821,865
2009	\$25,573,492	\$17,550,647
2010	\$25,834,510	\$17,911,444
2011	\$26,132,603	\$18,291,536
2012	\$27,224,394	\$18,677,353
2013	\$27,508,368	\$19,073,575

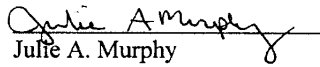
Exhibit JAM-4 shows BNSF's revised traffic and revenue forecast for the AGRR shippers by mine origin and year from 1994 through 2013.

³⁵ See BNSF Reply electronic workpaper "AGR_Traffic and Revenues_A1_BNSF Reply.xls" worksheet "Summary BNSF Reply."

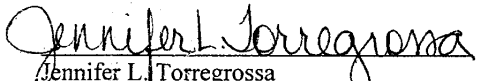
VERIFICATION

DISTRICT OF COLUMBIA)
)
CITY OF WASHINGTON)

I, JULIE A. MURPHY, verify under penalty of perjury that I have read the foregoing Verified Statement of Julie A. Murphy, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.


Julie A. Murphy

Sworn to and subscribed
before me on April 9, 2004.


Jennifer L. Torregrossa
Notary Public for the District of Columbia

My commission expires: May 14, 2007

CURRICULUM VITAE
OF
JULIE A. MURPHY

EDUCATION

Allegheny College, Meadville, Pennsylvania, 1991
Bachelor of Arts in Economics with an emphasis in Mathematics

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Masters of Arts in Economics

EMPLOYMENT HISTORY

American Public Power Association, Washington, DC, 1994 - 1996
Research Analyst

LECG, Inc., Washington, DC, 1996-2000
Associate
Senior Associate
Economist

FTI Consulting, Inc., Washington, DC, 2000-Present
Consultant
Manager
Director

TELECOMMUNICATIONS TESTIMONY

Federal Communications Commission

January 7, 2003	WCB Docket No. 03-18. In the Matter of Alascom, Inc. Request for Waiver of Commission Rule And Orders Requiring Annual Tariff Revision, Alascom, Inc. Petition for Waiver, Declaration of John Klick and Julie A. Murphy.
March 5, 2003	WCB Docket No.03-18. In the Matter of Alascom, Inc. Request for Waiver of Commission Rule And Orders Requiring Annual Tariff Revision, Alascom, Inc. Petition for Waiver, Reply Declaration of John Klick and Julie A. Murphy.
March 13, 2003	WCB Docket No.03-18. In the Matter of Alascom, Inc. Request for Waiver of Commission Rule And Orders Requiring Annual Tariff Revision, Alascom, Inc. Petition for Waiver, Declaration of John Klick and Julie A. Murphy, In Support of Alascom's Opposition to General Communication, Inc. FOIA, Control No. 2003-208.

April 4, 2003 WCB Docket No.03-18. In the Matter of Alascom, Inc. Request for Waiver of Commission Rule And Orders Requiring Annual Tariff Revision, Alascom, Inc. Petition for Waiver, Declaration of John Klick and Julie A. Murphy, Supplement to Waiver Request and Supplement Response to FOIA Request.

Michigan Public Utilities Commission

January 20, 2004 Case No. U-13531, In the Matter, on the Commission's Own Motion to Review the Costs of Telecommunication Services Provided by SBC Michigan, Reply Declaration of Mike Baranowski and Julie A. Murphy.

Public Utilities Commission of the State of California

February 7, 2003 Application No. 01-02-024. Joint Application of AT&T Communications of California, Inc. (U 5002 C) and WorldCom, Inc. for the Commission to Reexamine the Recurring Costs and Prices of Unbundled Switching, Loop, Transport and other elements in Its First Annual Review of Unbundled Network Element Cost Pursuant to Ordering Paragraph 11 of D.99-11-050. Reply Declaration of Robert A. Mercer and Julie A. Murphy.

Texas Public Utilities Commission

December 29, 2003 SOAH Docket. No.473-04-0001, PUC Project No. 27957, Application of CenturyTel of San Marcos, Inc. for Approval of a Plan for Disaggregation of State and Federal Universal Service Support, Direct Testimony of Julie A. Murphy on Behalf of Grande Communications Networks, Inc.

February 19, 2004 SOAH Docket. No.473-04-0001, PUC Project No. 27957, Application of CenturyTel of San Marcos, Inc. for Approval of a Plan for Disaggregation of State and Federal Universal Service Support, Testimony of Julie A. Murphy on Behalf of Grande Communications Networks, Inc.

TRANSPORTATION TESTIMONY

Surface Transportation Board

September 20, 2002 Docket No. 42070, Duke Energy Corporation v. CSX Transportation, Inc., Part III-A of Reply Evidence and Argument of CSX Transportation, Inc.

September 27, 2002 Docket No. 42069, Duke Energy Corporation v. Norfolk Southern Railway Company, Part III-A of Reply Evidence and Argument of Norfolk Southern Railway Company

October 11, 2002 Docket No. 42072, Carolina Power & Light Company v. Norfolk Southern Railway Company, Part III-A of Reply Evidence and Argument of Norfolk Southern Railway Company

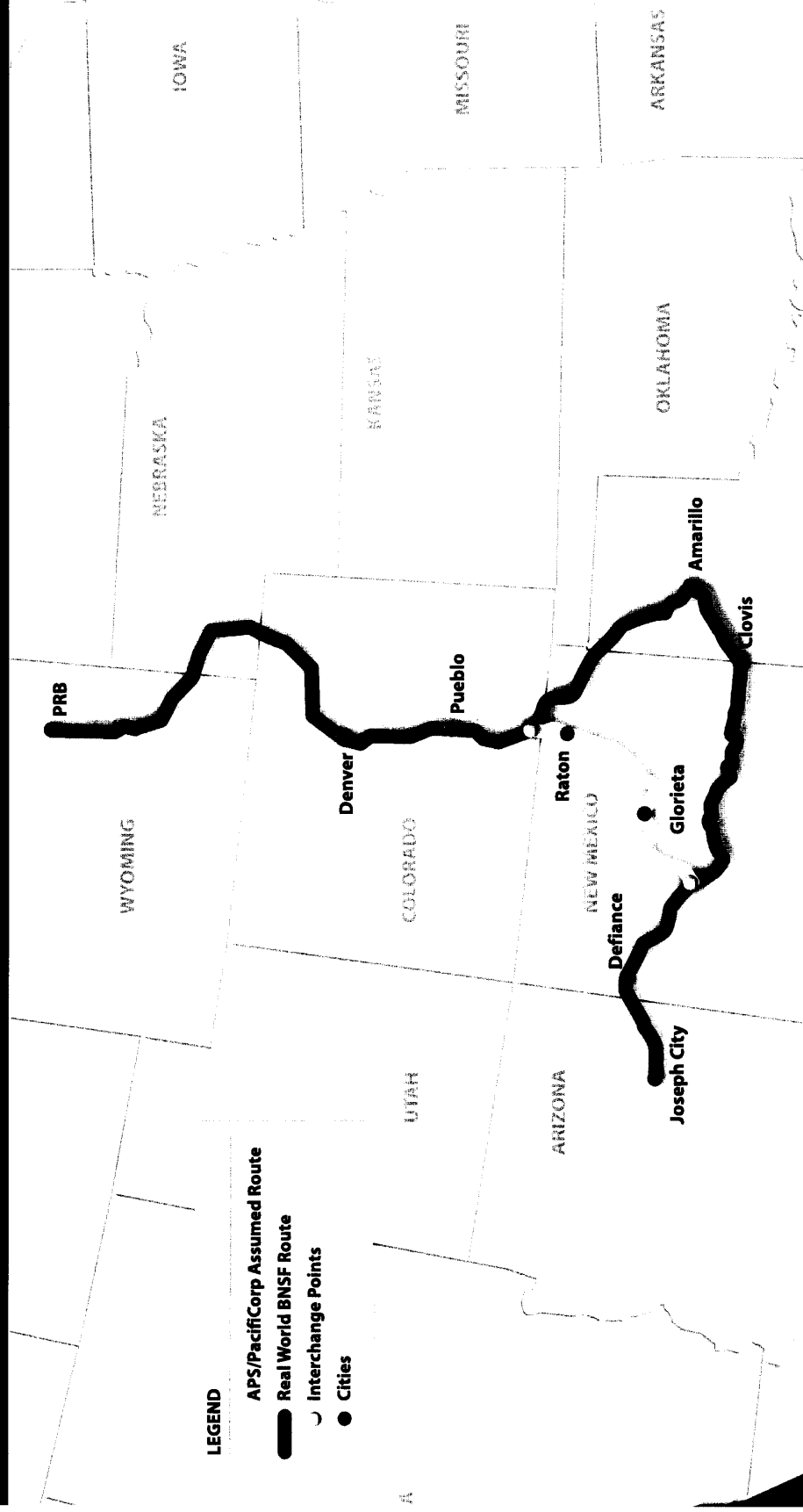
April 4, 2003 Docket No. 42057, Xcel Communications v. Burlington Northern Santa Fe Railway Company, Part III-A of Reply Evidence and Argument of Burlington Northern Santa Fe Railway Company.

April 18, 2003 Docket No. 42058, Arizona Electric Power Coop, Inc. v. Burlington Northern Santa Fe Railway Company and Union Pacific Railroad, Verified Statement of John Klick and Julie Murphy, In Support of UP's Petition to Require Submission of New Opening Evidence, Or,

Alternatively, To Dismiss.

October 8, 2003	Docket No. 42071, Otter Tail Power Company v. Burlington Northern Santa Fe Railway Company, Part III-A of Reply Evidence and Argument of Burlington Northern Santa Fe Railway Company.
January 5, 2004	Docket No. 42070, Duke Energy Corporation v. CSX Transportation, Inc., Part III-A of Supplemental Testimony of CSX Transportation, Inc.
January 12, 2004	Docket No. 42070, Duke Energy Corporation v. CSX Transportation, Inc., Part III-A of Response to Supplemental Testimony of CSX Transportation, Inc.
January 26, 2004	Docket No. 42058. Arizona Electric Power Cooperative Inc. v. the Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company, Part III-A of Reply Evidence and Argument of Burlington Northern Santa Fe Railway Company.
March 22, 2004	Docket No. 42071, Otter Tail Power Company v. Burlington Northern Santa Fe Railway Company, Part III-A of Supplemental Reply Evidence and Argument of Burlington Northern Santa Fe Railway Company.

Comparison of BNSF Route to Route Assumed by APS/PacifiCorp for PRB Traffic to the AGRR Railroad



REDACTED

REDACTED