ASSOCIATION
OF AMERICAN
RAILROADS

Craig F. Rockey
Vice President - Policy & Economics

March 5, 2003

The Honorable Vernon A. Williams
Secretary
Surface Transportation Board, Room 711
1925 K Street, N.W.
Washington, DC 20423-0001

Dear Mr. Williams:

This submission is the AAR forecast of the second quarter 2003 All-Inclusive Index and Rail Cost Adjustment Factor, filed in Ex Parte No. 290 (Sub-No. 5) (2003-2), *Quarterly Rail Cost Adjustment Factor*. The versions of RCAF-related indices covered in this filing are: the All-Inclusive Index (initiated in the second quarter 1985), the Unadjusted RCAF (produced since October 1982), the Adjusted RCAF (first published in the second quarter of 1989), and the RCAF-5 (created by the STB in its Ex Parte No. 290 (Sub-No. 7) decision served October 3, 1996). The table below summarizes the second quarter 2003 results on the fourth quarter 2002 base, and shows the percentage changes from the previous quarter.

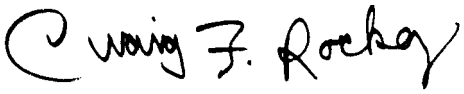
	2003Q1	2003Q2	% Change
All-Inclusive Index	99.2	101.1	1.9
Preliminary RCAF	0.992	1.011	1.9
Forecast Error Adjustment	0.004	0.009	
RCAF (Unadjusted)	0.996	1.020	2.4
Productivity Adjustment Factor	1.9466	1.9557	
RCAF (Adjusted)	0.512	0.522	2.0
PAF-5	2.0126	2.0333	
RCAF-5	0.495	0.502	1.4

50 F Street, N.W.◆ Washington, D.C. 20001-1564
Phone (202) 639-2319 ◆ Fax (202) 639-2499 ◆ crockey@aar.org

In its October 3, 1996 decision in Ex Parte No. 290 (Sub-No. 7), *Productivity Adjustment - Implementation,* the STB noted its intent to publish, in addition to the RCAF (Unadjusted) and RCAF (Adjusted), an RCAF-5 (i.e., a calculation of the productivity adjusted RCAF values as if the agency had always used a 5-year rolling average to calculate the productivity adjustment). In response to a request by STB staff, the AAR is including a calculation of the RCAF-5 in its quarterly RCAF filing. The AAR and its members, however, do not believe the publication of a third RCAF index is required or permitted by the applicable statute (49 U.S.C. § 10708) and do not endorse its publication.

Two copies of the quarterly non-proprietary workpapers underlying this submission are filed herewith, in accordance with the ICC's order in Ex Parte No. 290 (Sub-No. 2), *Railroad Cost Recovery Procedures,* served February 8, 1990. A third copy of the working papers has been delivered to Jeff Warren in the STB office handling this proceeding. All workpapers are available for STB inspection. Questions should be directed to me or Clyde Crimmel (202 639-2309) of this office.

Sincerely,



Craig F. Rockey

Attachments

Second Quarter 2003
All-Inclusive Index

Ex Parte No. 290 (Sub-No. 5) (2003-2)

Quarterly Rail Cost Adjustment Factor
Surface Transportation Board

Policy and Economics Department
Association of American Railroads

March 5, 2003

Table of Contents

Introduction

On January 2, 1985, the Interstate Commerce Commission (ICC) [now the Surface Transportation Board (STB)] adopted the All-Inclusive Index of Railroad costs as the basis for the Rail Cost Adjustment Factor (RCAF). The quarterly projection of railroad costs, as documented herein, employs the All-Inclusive Index as required by the regulations. Also presented in this submission is the RCAF, both Adjusted and Unadjusted, as required by the ICC in its decision in Ex Parte No. 290 (Sub-No. 4), *Rail Cost Recovery Procedures - Productivity Adjustment,* served March 24, 1989. In addition, the AAR has included (but does not endorse) the RCAF-5, which was instituted by an STB decision served October 3, 1996 in Ex Parte No. 290 (Sub-No. 7), *Productivity Adjustment - Implementation.* This quarter's projection of railroad costs is for the second quarter of 2003.

Index Weights

In the Ex Parte No. 290 (Sub-No. 2) final rules, issued in April 1981, the Interstate Commerce Commission mandated that the weights of each major cost component be updated annually. These "external" weights are calculated using data from Schedules 410 and 210 of the R-1 annual report filed with the Surface Transportation Board by the Class I railroads. The weights are typically updated with the fourth quarter projection.

The previous (2000) weights were used for the fourth quarter of 2001 through the third quarter of 2002. Beginning with the fourth quarter of 2002, the 2001 weights are used. The biggest change in the weights was for Labor, which increased by 1.3 percentage points and moved closer to its weights for the late 1990s. Interest decreased by 0.8 percentage points to almost match its 1997 weight. The changes for the remaining components were by six tenths of a percentage point or less. The 2001 (current) and 2000 (previous) weights are shown below.

RCAF Weights

	Previous 2000	Current 2001
Labor	36.5 %	37.8 %
Fuel	10.7	10.5
Materials & Supplies	4.8	4.6
Equipment Rents	11.1	10.5
Depreciation	10.2	10.6
Interest	4.6	3.8
Other	22.1	22.2

Reweighting of the index is accomplished by calculating both the current quarter (normally the fourth) and prior (normally the third) quarter indexes with the new weights. The relative change between the two quarters is then multiplied times the prior quarter (usually the third) *linked* index. Use of this method ensures that the weight change, by itself, does not cause a change in the level of the All-Inclusive Index.

Internal weights in the labor and equipment rents components are updated at the same time as the external weights. When these weights are changed, they are also linked using the procedure described above in order to eliminate the effect of the change in weighting.

All-Inclusive Index
Second Quarter 2003

The components and values of the current and previous All-Inclusive Indexes are shown below. Details of the construction of each component of the index are contained in the Appendices.

	2001 Weights	Forecast Previous 2003Q1	Forecast Current 2003Q2	Percent Change
1. Labor	37.8%	269.7	270.4	0.3 %
2. Fuel	10.5%	100.7	130.4	29.5
3. M&S	4.6%	144.2	152.6	5.8
4. Equipment Rents	10.5%	175.2	175.9	0.4
5. Depreciation	10.6%	149.6	149.1	-0.3
6. Interest	3.8%	98.6	98.6	0.0
7. Other	22.2%	162.2	162.1	-0.1
8. Weighted Average				
a. 1980 = 100		193.2	196.9	
b. 1980 = 100 (linked)		190.6	194.3 [1]	
c. 4Q02 = 100		99.2	101.1 [2]	1.9

[1] To calculate the 1980 = 100 Linked Index:
Index80 = (Current Index / Previous Index) * the Previous Quarter Linked Index
= 196.9 divided by 193.2 times 190.6
= 194.3

[2] To calculate the 4Q02 = 100 index:
Index4Q02 = (Current Linked Index / 4Q02 Linking Factor) * 100
= 194.3 divided by 192.1 times 100
= 101.1

4Q97 based index = 112.2
4Q92 based index = 123.8
4Q87 based index = 147.0

Forecast vs. Actual All-Inclusive Index

Fourth Quarter 2002

As shown below, the fourth quarter actual index of 99.8 is 0.9 index points above the forecast value of 98.9. Thus, the forecast error adjustment in the second quarter 2003 is 0.9 index points.

	2001 Weights	Fourth Quarter 2002 Forecast	Fourth Quarter 2002 Actual	Amt Difference
1. Labor	37.8%	267.6	267.6	
2. Fuel	10.5%	103.5	107.8	
3. M&S	4.6%	148.6	148.6	
4. Equipment Rents[1]	10.5%	175.9	176.8	
5. Depreciation	10.6%	149.7	148.8	
6. Interest	3.8%	98.6	98.6	
7. Other	22.2%	160.2	161.2	
8. Weighted Average				
a. 1980 = 100		192.5	193.2	
b. 1980 = 100 (linked)		189.9	191.7 [2]	
c. 4Q02 = 100[3]		98.9	99.8	0.9

Forecast error ⟶ 0.9 index points

---

[1]

	2001 Weights	Fourth Quarter 2002 Forecast	Fourth Quarter 2002 Actual
Car-Hire	51.5%	180.3	180.4
Lease Rentals	48.5%	160.2	161.2
Weighted Average		170.6	171.1
Weighted Average (linked)		175.9	176.8

[2] Linked actual index = (actual index / previous actual index) x previous linked actual index.

191.7 = 193.2 / 187.9 x 186.4

Note: the previous actual index has been recalculated using 2001 weights.

[3] The 4Q02 based indexes are 1980 based indexes divided by the 4Q02 linking factor (192.1/100).
4Q97 based indexes are the 1980 based indexes divided by the 4Q97 linking factor (173.2/100).
4Q92 based indexes are the 1980 based indexes divided by the 4Q92 linking factor (156.9/100).

Productivity

On January 31, 2003, the Surface Transportation Board (STB) served a decision in Ex Parte 290 (Sub-No. 4) which added the year 2001 to the Productivity Adjustment Factor (PAF) and deleted the year 1996. This creates an average annual productivity for 1997 through 2001 of 1.9 percent – an decrease from the 1996 through 2000 average of 4.2 percent. The components of this average annual value are shown on the following table. Productivity changes are calculated by dividing the output index by the input index. The average annual rate is calculated by multiplying each of the five productivity changes together and taking the result to the one fifth power. The quarterly productivity adjustment factors (PAF) are calculated by increasing the previous quarter's PAF by quarterly versions of the annual rate which are the fourth root of the average annual growth rate. The difference between the PAF and the PAF-5 is the timing of the 5-year productivity trend.

Comparison of Output, Input, & Productivity

1997 - 2001

Year	Output Index (1)	Input Index (2)	Productivity Changes (3)
1997	1.008	1.019	0.989
1998	1.006	1.018	0.988
1999	1.032	1.008	1.024
2000	1.029	0.953	1.080
2001	0.971	0.955	1.017
Average			1.019
Previous Average (1996-2000)			1.042

Note: To be consist with their recent requirement that CSX Transportation (CSXT) include expenses and operating statistics for CSX Intermodal traffic carried by CSXT, the STB has recalculated all of the Input and Output Indexes used to develop the latest 5-year average. The impact of this change was insignificant.

Calculation of PAF and PAF-5

For 1997-2001 use fourth root of avg. productivity change 1.0047
For 1996-2000 use fourth root of previous avg. change 1.0103

Quarter	Year	PAF	PAF-5
Q1	2002	1.9466	2.0126
Q2	2002	1.9557	2.0333
Q3	2002	1.9649	2.0542
Q4	2002	1.9741	2.0754
Q1	2003	1.9834	2.0852

1996-2000

1997-2001

Rail Cost Adjustment Factor
Second Quarter 2003

Four RCAF values are presented in this filing. Two of the indexes, the All-Inclusive Index and the Unadjusted RCAF, are not modified for productivity, while the Adjusted RCAF and the RCAF-5 incorporate a productivity calculation. The All-Inclusive Index and all four RCAF values, plus the percent change for each, are shown below.

	Previous 2003Q1	Current 2003Q2	Percent Change
All-Inclusive Index[1]	99.2	101.1	1.9
Preliminary RCAF[2]	0.992	1.011	1.9
Forecast Error Adjustment[3]	0.004	0.009	
RCAF (Unadjusted)[4]	0.996	1.020	2.4
Productivity Adjustment Factor[5]	1.9466	1.9557	
RCAF (Adjusted)[6]	0.512	0.522	2.0
PAF-5[7]	2.0126	2.0333	
RCAF-5[8]	0.495	0.502	1.4

[1] See All-Inclusive Index on page 3.

[2] All-Inclusive Index divided by the All-Inclusive Index in the base period (100.0).

[3] The current figure is from Forecast vs. Actual All-Inclusive Index in this filing (page 4). The previous quarter figure is shown in a similar section of the previous quarter's filing.

[4] Preliminary RCAF plus the forecast error adjustment.

[5] See Productivity on page 5.

[6] RCAF (Unadjusted) divided by the Productivity Adjustment Factor (PAF).

[7] See Productivity on page 5.

[8] RCAF (Unadjusted) divided by the PAF-5.

Appendixes

Labor
Second Quarter 2003

The second quarter 2003 Labor Index is forecast to increase 0.3 percent, caused by new labor agreements. The Wage Index increased 0.6 percent, and the Supplements Index decreased 0.3 percent.

Wage Index

National Contracts: On January 22, 2003, an arbitration decision was issued concerning the Transportation Communication International Union (TCU) and the National Carriers' Conference Committee. The arbitration, which also affects the TCU's Brotherhood of Railway Carmen Division, involves a group of railroads that includes 5 Class I railroads. Highlights of the decision are as follows: 27 cents of the cost-of-living allowance (COLA) is rolled into basic rates of pay effective October 1, 2001; COLAs terminate effective June 30, 2002; a 2.5 percent (retroactive) general wage increase effective June 30, 2002; and an additional 3.5 percent (retroactive) general wage increase effective July 1, 2002. Additional general wage increases are 3 percent effective July 1, 2003; and 3.25 percent effective July 1, 2004. COLAs will resume in 2005. In addition, TCU employees will participate in health & welfare cost sharing by making a pre-tax contribution toward health & welfare premiums. This employee health & welfare contribution will be $33.39 per employee per month from July 1, 2001 through June 30, 2002. Effective July 1, 2002 through June 30, 2003, the health & welfare cost sharing changes to $81.18. Further health & welfare cost sharing will be in effect after June 30.

Independent Contracts: Two new contracts for Canadian National's Grand Trunk Railroad (GTW) were added to the wage index. GTW's Yardmaster Department of the United Transportation Union (UTU-YMD) signed an agreement in December that has 3 percent wage increases effective January 1, 2002 and 2003. GTW's Brotherhood of Railroad Signalmen (BRS) signed a new contract in January, which has two retroactive wage increases and a signing bonus.

Lump Sums: The lump sum adjustment decreased by 0.8 cents as two amounts were completely amortized and removed from the Wage Index, and three amounts were added. The Norfolk Southern Brotherhood of Locomotive Engineers Thoroughbred Performance Bonus caused the most change – the amount paid in 2002 was completely amortized and removed, while a slightly smaller amount was added for 2003. A small amount for the GTW TCU signing bonus was completely amortized and removed. Small amounts were added for a signing bonus in the new GTW BRS contract and the second half of the CSX Yardmaster signing bonus from the independent contract ratified in August.

Back Pay : The back pay adjustment increased 2.9 cents. The most significant change in the back pay adjustment was the addition of amounts for the new TCU and TCU-Carmen arbitration decision. Those back pay amounts have been reduced for COLAs received that are not part of the arbitration and for the health & welfare cost sharing.

Labor
Second Quarter 2003

Other: This component contains the amortization of a profit sharing payment that the BNSF made to its Brotherhood of Locomotive Engineers employees from the former Atchison, Topeka and Santa Fe Railway in early 2002 for performance in 2001. The adjustment of $0.002 is unchanged from the prior three quarters.

Supplements Index

The Supplements Index is forecast to decrease by 0.3 percent from the first quarter filing. This change was caused mostly by the TCU health & welfare cost sharing.

Health & Welfare: The health & welfare premiums are unchanged from the prior quarter. However, the employer contribution has decreased 1.1 percent because the new national TCU and TCU-Carmen health & welfare cost sharing replaces some of the employer contributions with employee contributions.

Railroad Retirement: Higher wages caused the slight increase in the Railroad Retirement and Medicare hourly rate. Railroad Retirement and Medicare taxes were calculated on taxable wages. Taxable wages are wages less the TCU and TCU-Carmen health & welfare cost sharing, which are pre-tax employee contributions.

Unemployment Insurance: Railroad unemployment insurance costs are unchanged from the prior quarter.

Other: The "Other" category, a reflection of a quarterly employer matching contribution by BNSF to certain BMWE and Brotherhood of Locomotive Engineers employees, is unchanged.

Labor Index Calculation

As shown in table A-1 on the next page, the 0.6 percent increase in the Wage Index and the 0.3 percent decrease in the Supplements Index had a combined effect of a 0.3 percent increase in the Labor Index. The linked second quarter 2003 index is 270.4.

Labor

Second Quarter 2003

Table A-1 Labor Index

	2003Q1	2003Q2	Change Percent	Change Amount
Base Wage – Straight Time & Pay For Time Not Worked	$27.577	$27.716	0.5%	$0.139
Adjustments:				
Lump Sum	0.146	0.138	-5.5%	-0.008
Back Pay	0.072	0.101	40.3%	0.029
Other	0.002	0.002	0.0%	0.000
Total Wages	27.797	27.957	0.6%	0.160
Health & Welfare Benefits	3.913	3.870	-1.1%	-0.043
RR Retirement & Medicare	6.273	6.287	0.2%	0.014
Supplemental Annuities	0.000	0.000		0.000
Unemployment Insurance	0.325	0.325	0.0%	0.000
Other	0.010	0.010	0.0%	0.000
Adjustments	0.000	0.000		
Total Supplements	$10.521	$10.492	-0.3%	-0.029
Total Labor	$38.318	$38.449		
Wage Index[1]	237.9	239.3	0.6%	
Supplements Index[2]	388.8	387.7	-0.3%	
Total labor Index, 2001 Weights[3]	280.2	280.9		
Labor Index (linked)[4]	**269.7**	**270.4**	0.3%	

[1] 1980 wage rate $11.685

[2] 1980 supplements rate $2.706

[3] 2001 weights: wages, supplements 72.0% 28.0%

[4] 2003Q2 linked Index = 2002Q1 $_{linked}$ x (2003Q2 / 2002Q1)

= 269.7 x 280.9 / 280.2

Fuel
Second Quarter 2003

The forecast for fuel is based on: (1) a survey of railroad fuel purchasing officers concerning current price and volume levels, (2) expectations of railroad purchasing officers based on discussions with their major suppliers, and (3) a consensus of petroleum industry experts and general business publications.

Second quarter (April 2003) fuel prices are expected to increase 14.6 percent from the first quarter (January) actual level – a 29.5 percent increase from the first quarter forecast. In late February, crude oil prices rose to their highest level since the 1990 build-up prior to the Gulf War. A combination of related factors are causing the surge in oil prices: low levels for U.S. stocks of crude oil (inventories fell to near a 28-year low in late February); a strike and political unrest in Venezuela, the world's fifth largest exporter; continuing severe weather in the U.S. northeast, the world's largest heating oil* market; the threat of war with Iraq, the world's eighth largest exporter; and the possible impact of war with Iraq on other nearby oil producing countries.

Forecast fuel index	130.4
Change from previous quarter forecast	29.5%
Change from previous quarter actual	14.6%

* Heating oil is very similar to the diesel fuel used by locomotives. Heating Oil spot prices and futures prices are monitored by the U.S. Department of Energy and other energy industry groups.

Materials & Supplies
Second Quarter 2003

The Materials & Supplies index increased by 5.8 percent in the second quarter 2003. Ballast prices caused much of the increase. The 2003Q2 index is 1.7 percent higher than the 2002Q2 index of one year ago.

2003Q2	Materials & Supplies Index =	152.6
2003Q1	Materials & Supplies Index =	144.2
	Difference	8.4 basis points
		or
		5.8 %

Equipment Rents
Second Quarter 2003

The equipment rents index consists of two components -- car hire and lease rentals. The methodology used to create these two components and the final equipment rents index are explained below.

Car Hire

The car hire component is indexed using data from the Car Hire Accounting Rate Master (CHARM) file. Car hire rates for the forecast quarter are estimated based on data for the most recent month available. For the first quarter, December 1 of the previous year is used. For the second, third and fourth quarters; March 1, June 1, and September 1 are used, respectively. Using data retrieved from the latest CHARM file, an average rate per car is developed. Next, those average rates are grouped into car type categories to create an overall summary of car hire rates. The summary rates are then compared from quarter to quarter to determine the car hire index.

Lease Rentals

The lease rental portion of the equipment rents index uses the Producer Price Index for Industrial Commodities less Fuel and Related Products and Power (PPI-LF). The Commission adopted this surrogate in its decision served March 13, 1987. The AAR uses six years of historical data to derive its forecast for the PPI-LF. The forecast is used not only for lease rentals, but also for the "Other" component of the All-Inclusive Index. Appendix G discusses the forecast in more detail.

Equipment Rent Index Calculation

The table below calculates the Equipment Rent Index. The increase in the Car Hire Index was caused by rates for privately-owned cars (other than tank cars, auto racks, and covered hoppers) that had been lowered in December, but later returned to their higher levels.

	2001 Weight	2003Q1	2003Q2	Percent Change
Car Hire	51.5%	177.2	178.7	0.8 %
Lease Rentals	48.5%	162.2	162.1	-0.1
Weighted Average		169.9	170.6	0.4
Weighted Average (Linked)		175.2	175.9	0.4

Depreciation
Second Quarter 2003

The Producer Price Index for Railroad Equipment (PPI-RE) is used to index depreciation expense. The PPI-RE is forecast using an ARIMA process on 6 years of monthly data (a sample size of 72) with the most recent available monthly data being the first month of the quarter prior to the forecast quarter. For a first quarter forecast, the most recent month of data available would be for October of the prior year. For a second quarter forecast, January would be the most recent monthly data available. April and July would be the most recent months available for third and fourth quarter forecasts, respectively. The output from the forecast model is shown on page 2 of this appendix for 1982=100. The value for the forecast, decreased slightly from the previous quarter's forecast, reflects a PPI-RE that does not have a consistent trend of increases or decreases.

Forecasted depreciation index (1982=100)	134.8
Forecasted depreciation index (1980=100)	149.1
Change from previous quarter forecast	-0.3%
Change from actual first month of previous quarter	0.0%
Change from same quarter of prior year (actual)	-0.5%

Depreciation
Second Quarter 2003

PPI RAIL EQUIPMENT

Forecast Model for PPIRE
Exponential smoothing: No trend, Multiplicative seasonality

Component	Smoothing Weight	Final Value
Level	0.31964	134.74
Seasonal	0.11514	

Seasonal Indexes

January - March	0.99994	1.00167	0.99842
April - June	0.99846	1.00031	1.00197
July - September	1.00032	1.00017	1.00042
October - December	0.99944	0.99897	0.99990

Within-Sample Statistics

Sample size 72	Number of parameters 2
Mean 135	Standard deviation 0.8123
R-square 0.3697	Adjusted R-square 0.3607
Durbin-Watson 1.626	Ljung-Box(18)=16.61 P=0.45
Forecast error 0.6495	BIC 0.6796
MAPE 0.003123	RMSE 0.6404
MAD 0.4204	

Actual Values for the Most Recent 6 Periods:

Date	Actual
2002-08	135.000
2002-09	134.600
2002-10	134.200
2002-11	134.700
2002-12	134.700
2003-01	134.800

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2003-02	133.635	134.970	136.305
2003-03	133.135	134.532	135.930
2003-04	133.076	134.537	135.997
2003-05	133.263	134.787	136.310
2003-06	133.426	135.010	136.594
QTR AVG	**133.255**	**134.778**	**136.300**

Interest
Second Quarter 2003

The Interstate Commerce Commission, in its decision served February 28, 1989, revised the All-Inclusive Index methodology to include a specific interest component, which is to track changes in the average interest rate from year to year. The interest rate is essentially the embedded cost of debt, i.e., total interest expense divided by average total long term debt. The interest rate is calculated for the most recent year and used until the next year's figures are available. Typically in the fourth quarter filing, the interest rate is updated to the new level. The source for interest expense is Schedule 210, column b, from the R-1 annual report. The lines used from current R-1 annual reports are listed below. The source for average total debt is Schedule 200 from the R-1 annual report. The sums of data from columns b and c (ending and beginning balances) are combined and divided by 2 to compute an average balance. The line numbers are listed below.

Interest Expense (Schedule 210)

Line	
42	Total Fixed Charges
44	Contingent Interest
less	
22	Release of Premium on Funded Debt

Average Total Debt (Schedule 200)

Line	
30	Current Loans and Notes Payable
39	Equipment Obligations and Other Long Term Debt Due Within One Year
41	Funded Debt Unmatured - Non-Current
42	Equipment Obligations - Non-Current
43	Capitalized Lease Obligatons - Non-Current
44	Debt in Default - Non-Current
45	Accounts Payable: Affiliated Companies - Non-Current
46	Unamortized Debt Premium - Non-Current

2001	Interest Rate	7.74%
1980	Interest Rate	7.85%
2003Q2	**Interest Index**	**98.6**
2003Q1	Interest Index	98.6
	Percent Change	0.0%

Other Expenses
Second Quarter 2003

The Producer Price Index for Industrial Commodities less Fuel and Related Products and Power (PPI-LF) is used to index purchased services, casualties and insurance, loss and damage, taxes (other than income and payroll), general and administrative expenses, and lease rentals. These expenses, when grouped together, are usually called "Other" expenses.

Like the PPI-RE, the PPI-LF is forecast using an ARIMA process on 6 years of monthly data (a sample size of 72) with the most recent available monthly data being the first month of the quarter prior to the forecast quarter. For a first quarter forecast, the most recent month of data available would be for October of the prior year. For a second quarter forecast, January would be the most recent monthly data available. April and July would be the most recent months available for third and fourth quarter forecasts respectively. The output from the forecast model is shown on page 2 of this appendix for 1982=100. The figure forecast by the model reflects monthly PPI-LF figures that remained constant or decreased in the last months of 2002.

Forecasted Other Expense (1982=100)	144.6
Forecasted Other Expense (1980=100)	162.1
Change from previous quarter forecast	-0.1%
Change from actual first month of previous quarter	0.2%
Change from same quarter of prior year (actual)	1.2%

Other Expenses
Second Quarter 2003

PPI INDUSTRIAL COMMODITIES LESS FUEL AND RELATED PRODUCTS AND POWER

Forecast Model for PPILF
ARIMA(1,1,0) with log transform

Term	Coefficient	Std. Error	t-Statistic	Significance
a[1]	0.2414	0.1232	1.9597	0.9460

Within-Sample Statistics

Sample size 72	Number of parameters 1
Mean 4.949	Standard deviation 0.01384
R-square 0.9822	Adjusted R-square 0.9822
Durbin-Watson 1.902	Ljung-Box(18)=22.93 P=0.8066
Forecast error 0.001846	BIC 0.2664
MAPE 0.001359	RMSE 0.2602
MAD 0.1924	

Actual Values for the Most Recent 6 Periods:

Date	Actual
2002-08	143.000
2002-09	143.200
2002-10	143.900
2002-11	143.900
2002-12	143.500
2003-01	144.300

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2003-02	143.972	144.494	145.017
2003-03	143.709	144.541	145.377
2003-04	143.480	144.552	145.631
2003-05	143.284	144.555	145.837
2003-06	143.112	144.555	146.013
QTR AVG	**143.292**	**144.554**	**145.827**
2003-07	142.958	144.555	146.170
2003-08	142.818	144.555	146.314
2003-09	142.689	144.555	146.446