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(BEAs). In what follows I will use the BEA as the unit of origin and destination for all but the bulkiest of commodities; for the latter 1 will use counties.

V. COMPETITIVE ANALYSIS OF THE PROPOSED ATSP/SP MERGER

Let us consider all traffic moving on origin-destination pairs in which an ATSF/SP merger would reduce the number of railroad competitors from three to two or from two to one. According to the empirical evidence cited earlier, such a reduction could result in a significant increase in market power for the merged firm and significantly increased transport prices facing shippers, but, according to the theory outlined above, only for those location/ commodity combinations in which the two or three remaining rail carriers constitute the market—in other words, only for those combinations for which intermodal competition and source competition are not important.

Tables A.I through A.XIII in the Appendix list the most important com-

modifies and locations where the number of rail carriers would be reduced from three to two or from two to one. The source of the data is the 1985 sample waybill tape compiled by the ICC. (Considerations of both tractability and data confidentiality compel the geographic aggregation.) Here I address only a sample representing those commodities of the largest tonnages and illustrating the analytical principles involved.

Chemical products are represented here by products 28123, sodium compounds; 28125, potassium compounds; 28151, cyclic intermediates; 28181, acyclic organic chemicals; 28185, glycols and glycerines; 28211, plastic materials; and 28419, soaps. These are bulk products travelling over long distances, distances for the most part great enough that, with the exception of most of the within-California and within-Texas moves, motor carriers are not in the market.¹⁴ In all cases geography prevents water carriers from participating effectively. Source competition is of potential significance for bulk, mostly undifferentiated commodities such as these, but the railroad data and my shipper interviews revealed it only rarely to be a powerful factor at both origin and destination (though it is often a factor at one or the other). Thus for the majority of these commodities listed in the tables, it appears that the merged railroad would be able to raise its prices.

Containerized ("piggyback") traffic -45111, shipper association traffic, and 46111, all freight rate shipments—is a somewhat different matter. Motor carriers can compete effectively for this traffic over a much longer distance

¹⁴ See, for example, Oum [1979, p. 480]. The traffic manager of Dow Chemical told me that the maximum range of truck competitiveness for bulk chemical commodities such as these is 400-600 miles, and the president of the <u>El Paso Products Company testified that</u> "bulk motor carrier rates from Odessa to the West Coast [about 1000 miles] are approximately 200% higher than rail tank and hopper car rates." See also the verified statement of Union Carbide.

RAILROADS AND COMPETITION

than for commodities such as bulk chemicals, so that some of the table entries are removed from the list of moves of competitive concern—specifically, the within-California moves and some of the Los Angeles-Houston intracorridor moves. However, the remainder of the tonnage is beyond the reach of regular motor carrier competition.¹⁵ We cannot analyze source competition with complete confidence for this traffic, since we do not know what the specific commodities in the containers *are*, but we do know that much containerized traffic is branded, which suggests that this factor is not critical. For most of the containerized traffic listed, then, it appears that the merged railroad would be able to raise its prices.

Fresh fruits and vegetables of importance here include 1195, potatoes; 1214, oranges; 1224, grapes; 1312, carrots; 1331, broccoli; 1334, celery; 1335, lettuce; and 1398, melons. These are relatively high-value, time-sensitive commo dities for which motor carriers must be included in the market even for moves as long as 2000 miles (Oum [1979, p. 480]). This removes all but the longest moves of Table A.I from our list of matters of possible concern. The remainder-still over a hundred thousand tons-remain subject to railroad price, increases, however, since source competition does not appear likely to mitigate the market power of the merged railroad.

Several grains appear likely to be affected by the merger, including 1131, barley; 1132, corn; 1136, sorghum; 1137, wheat; and 1144, soybeans. Since these commodities typically leave the farm by truck, truck is quite competitive with rail for short-distance moves; however, the evidence suggests trongly that beyond a certain distance — perhaps 250 miles, certainly no n. withan 500 miles—motor carriers cannot be included in the market.¹⁶ Ah G, the within-Midwest and within-California tonnage is removed from concern by the likelihood of this intermodal competition. Source competition offers some protection to shippers or receivers of some of these movements but almost never to both shippers and receivers, and hence it is rarely effective in preventing the exercise of railroad market power.

A fifth group of commodities of importance consists of automobile products-37111, motor passenger cars; 37112, motor trucks; and 37149, motor vehicle accessories and parts. These are high-value, branded manu-

¹³ See the verified statements of the California Grape and Tree Fruit League, Hapag-Lloyd Agencies, and LACNY Freight Forwarders, and the Post-Hearing Brief of the US Department of Justice, p. 29, fn. 28.

¹⁴ See, for example, Sorenson [1983], Adam and Anderson [1985], Baumel, et al. [1987], and the "Distance Travelled" data in the annual Kansas Grain Marketing reports. The president of Agrex, Inc., testified that bulk grains are typically shipped only "up to 150 miles" by motor carrier. Supporting evidence is contained in the verified statements of the Farmers Co-op Elevator Company, Atchison County Farmers Union Cooperative Association, the Colorado Wheat Administrative Committee, Cooperative Producers, Farmers' Elevator Company, Lexington Mill and Elevator Company, Marty Mason and Associates, and Mathis Grain and Elevator Corporation.

32

RUSSELL W. PITTMAN

factured commodities for which motor carriers can compete with rail for distances of perhaps one thousand miles, but not for distances significantly greater than that.¹⁷ Thus some of the Los Angeles-Houston intra-corridor moves are probably protected from supercompetitive rail prices, as are some of the Midwest-Guif Coast moves. The same cannot be said, however, of the California-Midwest and Los Angeles-Houston and beyond traffic, most of which must move distances exceeding two thousand miles. Similarly, the strongly branded nature of these commodities renders source competition ineffectual in protecting shippers from rail price increases.

Finally, consider the *lumber products* represented in the tables-24114, pulpwood logs; 24115, pulpwood chips; 24211, lumber; 24321, plywood; and 24996, wood particle board. These divide neatly into two groups. Pulpwood logs and chips are low-value commodities for which intermodal competitionis effective only for the shortest of distances; this factor can remove from our list of concern some but not all of the within-Midwest and within-Texas moves listed here. The other lumber products are higher-value manufactured commodities for which intermodal competition can be effective over moderate distances, but not long enough to eliminate these moves from the list of problem moves.¹⁸ Source competition does not appear to be important for these moves.

Using analyses such as these for the commodity movements shown in the tables and rougher estimates for movements of lesser tonnages in the same geographic corridors, I estimate that an ATSF/SP merger would cause a significant loss of competition for 35.3 million tons of traffic. The average revenue to the railroads from this traffic—to all the railroads participating in the traffic, not just the ATSF and SP—is \$63.64 per ton, yielding an estimate of \$2.24 billion of commerce adversely affected by the merger.

Using Figure 1, we may divide the aggregate effect of the merger into four parts:

- (1) triangle A, the loss to shippers from an increase in price,
- (2) rectangle B, the loss to the railroads from a reduction in tonnage that was earning more than marginal cost,
- (3) rectangle C, the transfer from shippers to the railroads, and
- (4) rectangle D, the gain to the railroads from a reduction in operating costs.

Areas A and B represent unambiguous welfare losses to society. Area C may not represent such a welfare loss if it is merely a transfer; however, to the extent that the transfer results in increased rent-seeking or the loss of competition results in X-inefficiency, then some or all (or conceivably more

¹⁷ See the verified statements of the Chrysler Corporation, the General Motors Corporation, and Volkswagen of America, and Pittman [1985, p. 40, fn. 31].

¹⁴ See the verified statements of Cowlitz Stud Company, Grays Harbor Hardwood, and Valley Lumber Sales, and Pitiman [1987, p. 35, fn. 24]. Note that based upon these statements, Oum's [1979] conclusion that for lumber products there is "no significant intermodal competition even in short-haul markets" goes too far.



Figure 1 Competitive Consequences of the Merger

than all) of area C represents a welfare loss to society as well.¹⁹ Area D represents an unambiguous welfare gain to society.

We can estimate a range for the size of these areas by making the following assumptions:

 the merger would result in an average price increase by the railroads for the affected traffic in the range of 15 percent (MacAvoy [1989], MacDonald [1987, 1989]) to 30 percent (Atkinson and Kerkvliet [1986]);²⁰

¹⁹ The classic reference for rent-seeking is Posner [1975]; see also Tullock [1980] and Tirole [1988]. The classic reference for X-inefficiency is Leibenstein [1966]. An example of the type of rent-seeking and rent-dissipation which might follow an anticompetitive rate increase is the multi-year, multi-tribunal dispute between the Omaha Public Power District and the Burlington Northern Railroad over coal tariffs (ICC No. 38783). See, for example, the Administrative Law Judge decision of January, 1986, the initial ICC decision of November, 1986, and the ICC decision (in response to an appeal) of May, 1987. For an example of rent-seeking brought about by an anticompetitive merger, one need look no further than the multitude of conditions to merger approval sought by competing and connecting railroads in the ATSF/SP proceeding.

³⁰ There is no dispute that the merged railroad planned to raise some of its prices. In an interview with the Journal of Commerce published on the morning of the scheduled ICC vote on the merger proposal, ATSF president John Swartz "zeroed in on pricing as a major post-merger concern. "We've got to have pricing discipline," he said.... "Some business is so unprofitable ..., we will have to raise our prices." Although he did not specify all of the "business" to which he was referring, two areas mentioned which are relevant to the discussion above are "intermodal [i.e. plggyback] business" and "eastbound perishables."

34

- 237

CADE AND COMPETITION

TABLE II COSTS AND BENEFITS OF THE PROPOSED MERGER IF PRICES OF AFFECTED TRAFFIC INCREASE BY PERCENT

	Annual Operating Savings \$110 Million	Annual Operating Savings \$220 Million
Elasticity of Demand 0.5	Direct Welfare Loss = \$116.4 million Transfer from Shippers = \$520.8 million	Direct Welfare Loss = \$98.0 million Transfer from Shippers = \$466.4 million
Elasticity of Demand - 1.0	Direct Welfare Loss = \$232.8 million Transfer from Shippers = \$440.1 million	Direct Welfare Loss = \$:95.9 million Transfer from Shippers = \$403.7 million

concerning cost reductions are especially generous. First, not all changes in what railroad people call operating costs are changes in what economists call marginal costs. Second, I have assumed that the marginal cost curve is flat. If there is any decline in the marginal cost curve in the relevant range of demand-due to economies of scale or density-the reduction in output caused by the loss of competition will prevent the forecasted cost savings from being achieved. This effect is compounded by the fact that the level of marginal cost affects the level of price chosen.

Tables I and II show the results of calculations utilizing these assumptions.23 Two points stand out. The first is the importance of choosing the correct value for both the annual operating savings and the elasticity of demand.24 I believe that the case record supports more strongly the smaller estimate of operating savings, but there is almost no discussion of the elasticity value (which of course varies by product and location). The second point shown clearly by the table is the importance of the treatment of transfers. If transfers from shippers to the railroads are treated as a direct welfare loss-either because through rent-seeking and X-inefficiency they are likely to become traditional welfare losses or because transfers resulting from mergers are negatively valued per se-then the merger is socially harmful under any reasonable estimates of efficiencies and the other relevant

33 As an example of the celculations, consider the southeast quadrant of Table I. P. = \$63.64. 10 MC1 - \$63.64/1.34 - \$47.49. Then MC1 - (0.95) (\$47.49) = \$45.12, and P1 = (\$45.12) (1.34) (1.15) - \$69.53. 11(3Q/3P)/(Q/P) = -1 and Q, = 35.3 million, then Q, = 32.04 million. It follows that A = (0.5) (\$5.89) (3.26 million) = \$9.6 million; B = (\$63.64 - 47.49) (3.26 million) = \$52.64 million; and C = (\$5.89) (32.04 million) = \$188.72 million. The size of D is not important, since the total savings-spread across both traffic competitively harmed and traffic not competitively harmed by the merger - is set by assumption.

¹⁴ Indeed, it could be argued that the wide range of uncertainty concerning an estimate of cost savings here is evidence for the position of Bork [1978] and others that efficiencies should not be considered in individual merger cases but rather should be factored into the concentration levels in the Merger Guidelines. See also Lande [1988].

PRICES OF APPECTED TRAFFIC INCRUSE BY 15

Direct Weifare Loss

Transfer from Shippers

= \$31.1 million

- \$198.3 million

- \$62.2 million

- \$188.7 million

Direct Welfare Loss

Transfer from Shippers

Annual Operating Savings

\$220 Million

(2) the average pre-merger ratio of price to marginal cost for this traffic is 1.34 (the average revenue-to-variable-cost ratio for US railroads calculated by the ICC from its 1986 waybill statistics);

PERCENT

Annual Operating Savings

SIIO Million

Direct Welfare Loss

Transfer from Shippers

Transfer from Shippers

= \$42.8 inillion

= \$255.1 million

= \$85.6 million

- \$239.2 million

Direct Welfare Loss

(3) the own-elasticity of demand facing the railroads is in the range of -0.5(Friedlaender and Spady [1981]) to -1.0 (MacAvoy [1984]; Wilson, et al.

(4) the merger would result in a reduction in operating costs for the railroads

in the range of 2.5 percent to 5 percent.21

Two points should be made immediately concerning these assumptions. The first is that the assumed price effects are a bit conservative given the other

assumptions. In a Cournot model with equal-sized firms, a constant elasticity of demand, and an initial price-to-marginal-cost ratio of 1.34, a merger of duopoly firms/which results in a marginal cost reduction of 5 percent (2.5 percent) increases the profit-maximizing output price by 42 percent (46 percent). Correspondingly, a merger of two of three firms which results in a marginal cost reduction of 5 percent (2.5 percent) increases the profitmaximizing output price by 13 percent (16 percent)-and this does not include the possibility that a movement from three to two tirms changes the

nature of firm interaction from Cournot to collusion.22 The second point is that, as a referee points out, the assumptions

¹¹ The merging railroads testified that the result of the transaction would be a savings of operating expenses of \$220 million, or about 5 percent per year (MacAvoy [1984]). This is clearly an upper bound estimate, not only because the firms have every incentive to inflate it but also because there was no serious attempt made to subtract those savings that could be obtained through means less anticompetitive than merger. (See, for example, the Merger Guidelines at 3.5, or Fisher [1987, pp. 503-506].) It is clear upon close examination that many of the savings could be so obtained (Harris [1985]; Pittman [1988]). The parties also forecast one-time savings of \$522.4 million in avoided capital expenditures, but this was an undiscounted stream of savings occurring over many years. For example, only a total of \$126.8 million would be avoided in the

first three years following the merger. " See, for example, Farrell and Shapiro [forthcoming].

238

Elasticity of Demand

Elasticity of Demand

-0.5

-10

RAILROADS AND COMPETITION

RUSSELL W. PITTMAN

variables. If transfers are treated as welfare-neutral, then the merger is socially beneficial with the higher estimate of efficiency gains, or even with the lower estimate if the lower estimate of price increases is accepted as well.

However, if one accepts the smaller estimate of operating savings, and if one is willing to place a non-negligible value on transfers, the merger becomes straightforward to evaluate. So long as one assumes that at least 26 percent of the wealth transfer is translated into a welfare loss, the merger is on net harmful to society.

Finally, consider a shift from normative to positive analysis. It is beyond the scope of this paper to engage in a sophisticated examination of the decision-making process at the ICC. Still it is interesting to note that this merger proposal may serve as one observation in testing the relative importance of two hypotheses which appear frequently in the literature of the economic theory of regulation:

- (1) Regulators are at least as concerned about the effects of transfers as about deadweight losses.
- (2) Regulators tend to favor small, organized groups at the expense of large, unorganized groups.²³

The ICC decision reports an estimate of annual operating savings resulting from the merger at \$188.2 million-4.3 percent of total operating costs. If we accept this as the Commission's true estimate and choose midpoint estimates for the other parameters of interest- an elasticity of demand of -0.75 and a price increase on affected traffic of 22.5 percent-we arrive at an evaluation of the proposed merger as causing gross deadweight losses of \$98.6 million and transfers from shippers to railroads of \$336.9 million. Under these assumptions, the ICC turned down a merger which promised efficiencies nearly twice the magnitude of gross deadweight losses. Why? Arguably because the magnitude of the sum of gross deadweight losses and transfers was more than twice the promised level of efficiencies. Thus whether the ICC believed that transfers are transformed into deadweight losses or that transfers was sufficient to overcome the small numbers effect (hypothesis (2) above) and defeat the merger.

VI. CONCLUSION

In this paper I have described how the Merger Guidelines may be applied to a merger in the railroad industry and have used the Guidelines to evaluate the proposed merger of the Santa Fe and Southern Pacific railroads. Although simple conclusions are difficult to reach in a merger of this complexity, I have shown that under reasonable assumptions concerning the likely operating efficiencies resulting from the merger, the merger is likely to be harmful to

23 See, in general, Stigler [1971] and Peltzman [1976].

society, particularly if one places modest, though significant negative value on transfers from shippers to the merging railroads.

What the analysis also demonstrates is the critical importance of three factors in evaluating the impact of a merger such as this one: a careful, location- and commodity-specific analysis of the loci of likely competitive harm, an unbiased estimate of those operating savings promised by the merger which could not be obtained through means less anticompetitive, and a careful judgment as to the importance (or lack thereof) of transfers in the calculation of welfare losses.

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APPENDIX

TAULE A 1 LOCATION \Rightarrow CALIFORNIA - MIDWEST; DIRECTION = EAST

STCCS	PRODUCT	TONS
46111	All Freight Rate Shipments	1 3 51 641
45111	Shipper Association Traffic	706 321
1335	Lettuce	363 336
20841	Wine, Brandy or Brandy Spirits	311 948
20995	Mixed Loads of Food	251 252
20621	Sugar, Granulated or Powdered	220 948
37111	Motor Passenger Cars, Assembled	213 460
1214	Oranges	186 192
28:23	Sodium Compounds	139 120
20336	Catsup or Other Tomato Sauces	113 636
1224	Grapes	102 030
33511	Copper, Brass or Bronze	100 860
1398	Cantaloupes, Melons or Muskmelons	100 758
28125	Potassium Compounds	96 532
20391	Mixed Loads of Canney Food	84 760
1195	Potatoes. Other than Sweet	83 332
1334	Celery	78 848
1331	Broccoli	64 120
20373	Frozen Vegetables	64 212
1312	Carrols	61 116
20933	Nut or Vegetable Oils	54 660

38

239 -

ACCEPTED NOVEMBER 1989

- 240 -

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40

	TABLE A.II		
LOCATION -	CALIFORNIA MIDWEST;	DIRECTION - WES	т

STCCS	PRODUCT	TONS
	All Ereight Rate Shipments	1 560 400
16/11	Shinger Association Traffic	1 196 392
1114	Sarahum Gruins	727 448
27111	Motor Passenger Cars. Assembled	712936
20461	Com Syrup	509 920
20401	Beer Ale Porter Stout	432 480
17117	Motor Trucks Assembled	267 400
37140	Motor Vehicle Accessories or Parts	197 529
1117	Wheat	188 380
20023	Soubean Cake Flour, Grits, Meal	163 696
20923	Ereicht Forwarder Traffic	162 680
44///	Come Come Conversion Come	152910
1132	Corn	138 760
28211	Plastic Materials of Synthetic Reside	132 576
20921	Soybean Oil, Crude of Reinied	112 800
20421	Prepared Feed, Animal, Fish of Fourty	110 920
1131	Barley	107 620
11212	Prepared Bituminous Coal	101 840
40241	Paper Waste or Scrap	09680
33127	Tin Mill Products	87.480
20141	Hides, Pelts or Skins	70 255
42211	Trailers, Semi-Trailers, or Containers	19 233
43111	Mail	77120
20411	Wheat Flour	15920
28441	Cosmetics, Perfumes	01 408
33123	Iron or Steel Sheet or Strip	00 044
28419	Soap or Other Detergents	54 440

TABLE A.III LOCATION = LA - HOUSTON, INTRA-CORRIDOR; DIRECTION - EAST

STCCS	PRODUCT	TONS
	Potessium Compounds	1 0 69 404
28125	All Essiste Date Shipments	490 540
40111	All Freight Rate Shiphients	367 604
32411	Hydraulic Cement	291,000
29116	Asphalt Pitches	210.020
20821	Beer, Ale, Porter, Stout	210920
11711	Lumber, Rough or Dressed	121 040
2122	Sodium Compounds	109 400
0113	Maran Passenger Cars Assembled	97 040
\$7111	Motor Passenger Cars, risenere	89888
15111	Shipper Association Traffic	67 240
20841	Wine, Brandy or Brandy Spirits	02 240
10212	Copper Concentrates or Precipitates	50 484

RAILROADS AND COMPETITION

TABLE A.IV LOCATION = LA-HOUSTON, INTRA-CORRIDOR; DIRECTION = WEST

STCCS	PRODUCT	TONS
1137	Wheut	268 752
1136	Sorghum Grains	230112
32411	Hydraulic Cement	155 168
1129	Raw Cotton, NEC	147064
26311	Fiberboard, Paperboard or Pulpboard	129 120
26211	Newsprint	112 560
28211	Plastic Materials or Synthetic Resins	109 200
1132	Corn	95 488
46111	All Freight Rate Shipments	93232
26111	Pulp	78 520
20461	Corn Syrup	66 120
20141	Hides, Pelts or Skins	63 920
32741	Lime or Lime Plaster	52 452
45111	Shipper Association Traffic	50 092

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TABLE A V			
LOCATION =	LA-HOUSTON, AND SEYOND; DIRECTION = EAST		

STCCS	PRODUCT	TONS
46111	All Freight Rate Shipments	1 340 570
1129	Raw Cotton, NEC	258 100
20841	Wine, Brandy or Brandy Spirits	150 648
45111	Shipper Association Traffic	112 332
37111	Motor Passenger Cars, Assembled	107 584
20995	Mixed Loads of Food	84 000
28123	Sodium Compounds	73 192
37149	Motor Vehicle Accessories or Parts	52 400

TABLE A.VI LOCATION = LA-HOUSTON, AND BEYOND; DIRECTION = WEST

STCCS	PRODUCT	TONS
40:11	All Freight Rate Shipments	1 1 52 792
28211	Plastic Materials or Synthetic Resins	573 316
26311 .	Fiberboard, Paperboard or Pulpboard	167 780
45111	Shipper Association Traffic	133 644
28185	Glycols or Glycerines	128 400
24321	Plywood or Veneer	100 200
29117	Petroleum Residual Fuel Oils	99 080
37112	Motor Trucks, Assembled	94 600
33124	Lion or Steel Bars	74 600
32952	Light Weight Aggregates	72 720
28151	Cyclic Intermediates from Benzene	67 880
29114	Petroleum Lubricating or Similar Oils	63.800
28181	Miscellaneous Acyclic Organic Chemicals	60 520
41117	Military Impedimenta	66 009
29119	Petroleum Refining Products, NEC	51 348

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RUSSELL W. PITTMAN

TABLE A.VII LOCATION - MIDWEST-GULP COAST; DIRECTION - NORTH

STCCS	PRODUCT	TONS
28211	Pl stic Materials or Synthetic Resins	111 360
33511	Copper, Brass or Bronze	100 060
26311	Fiterboard, Paperboard or Pulpboard	70 060
1137	Wheat	59710
32959	Nonmetallic Minerals or Earths, Ground	38 480

TABLE A.VIII LOCATION = MIDWEST-GULF COAST, DIRECTION = SOUTH

STCCS	PRODUCT		TONS
1127	Wheat		370 546
1137	Com		223 726
1132	Corn		219 648
20411	Wheat Flour		121 676
1144	Soybeans (Soya Beans)		131010
20461	Com Syrup		117 000
20013	Be colour Coke	1	107 800
29913	Fertoleum Coxe		88 440
14413	Industrial Sand		71 490
17111	Motor Passenger Cars, Assembled		/1 480
20143	Grease or Inedible Tallow		60 880

TABLE A.IX LOCATION = FACIFIC NW - CALIFORNIA, ARIZONA; DIRECTION - NORTH TONS STCCS PFODUCT

46111	A!! Freight Rate Shipments	66 600

TABLE A.X

LOCATION = PACIFIC NW-CALIFORNIA, ARIZONA; DIRECTION - SOUTH

STCCS	PRODUCT	TONS
24211	Lomber Rough or Dressed	2054160
24211	Fiberboard Paperboard or Pulpboard	699 120
24221	Plywood or Veneer	558 240
24321	Newsprint	518 680
24006	Wood Particle Board	404 280
36313	Printing paper Coated or Uncoated	197 880
20213	Iron or Steel Bars	127040
26214	Wranning Paper	85 680
20831	Malt	77 080

RAILROADS AND COMPETITION

TABLE A.XI LOCATION - WITHIN CALIFORNIA

STCCS	PRODUCT	TONS	
1197	Sugar Beets	641 400	
32411	Hydraulic Cement	562 094	
28123	Sodium Compounds	412 212	
26311	Fiberboard, Paperboard or Pulpboard	200 440	
12752	Gypsum Plaster	175 444	
46111	All Freight Rate Shipments	134 268	
1137	Wheat	120 980	
24115	Pulpwood or Other Wood Chips	78 240	
20841	Wine Brandy or Brandy Spirits	64 360	
10211	Iron or Steel Scrap	55040	
20821	Beer Ale Porter Stout	53 680	
20441	Blee Cleaned	52 560	
24211	Lumber, Rough or Dressed	51 440	

÷7	TABLE A.XII Location = Within Midwest	
STCCS	PRODUCT	TONS
1137 1136 40211	Wheat Sorghum Grains Iron or Steel Scrap	748 628 274 694 70 380

1. 2. 14

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1.1.7

1.5.11

TABLE A.XIII	
LOCATION = WITHIN	TEXAS

		TONS
STCCS	PRODUCT	1003
1137	Wheat	343 216
28211	Plastic Materials or Synthetic Resins	278 800
24114	Pulpwood Logs	149 780
40711	Iron or Steel Scrap	147 280
24115	Pulpwood or Other Wood Chips	107 080
29913	Petroleum Coke	76 640

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ortation Research Forum, 26, pp. 357-363.

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WINSTON, C., 1985, 'Conceptual Developments in the Economics of Transportation: An Inte: pretive Survey', Journal of Economic Literature, 23, pp. 57-94. Published first in October 1952, the Journal has a very wide international circulation and has established itself as the leading journal in the field of industrial economics if was founded to promote the analysis of modern industry, particularly the behaviour of firms, and the functioning of markets. More specifically it seeks to bring the tools of modern economic analysis to bear on the analysis of real problems of industrial economies.

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AIESEC (International Association of Students in Economics and Commerce) Trainee, Swedish State Power Board, June 1975 -

PUBLICATIONS:

Books and Monographs

1) C. Winston, T. Corsi, C. Grimm and C. Evans, <u>The Economic</u> <u>Effects of Surface Freight Deregulation</u>, Brookings Institution, Washington, D.C., 1990.

2) <u>Deregulation of Domestic Aviation: The First Year</u>, Bureau of Transport and Communication Economics, Australian Government Publishing Service, Canberra, Australia, 1991 (lead author).

3) Smith, K., C. Grimm and M. Gannon, <u>The Dynamics of Competitive</u> Strategy, Sage Publishing, Newbury Park, CA, 1992.

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53) Grimm, C. and R. Harris, "The Financial Performance and Prospects of Railroads in the South and Southwest," <u>Texas Business</u> <u>Review</u> 56 (6), November/December 1982, pp. 257-262.

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57) Grimm, C., "Public Interest Evaluation of Recent Rail Mergers," <u>1981 Eastern Transportation Law Seminar Papers and Proceedings</u>, Association of ICC Practitioners, Washington, D.C., pp. 171-176.

58) Grimm, C., "Promoting Competition in the Railroad Industry: A Public Policy Analysis," <u>Transportation Research Forum Proceedings</u>, 1984, pp. 222-227.

59) Grimm, C. and K. Smith, "Impact of Deregulation on Railroad Strategies and Performance," <u>Transportation Research Forum Proceedings</u>, 1985, pp. 540-544.

60) Corsi, T., C. Grimm and R. Lundy, "ICC Exemptions of Rail Services: Summary and Evaluation," <u>Transportation Research Forum</u> <u>Proceedings</u>, 1985, pp. 86-92.

61) Corsi, T., C. Grimm and R. Smith, "Motor Carrier Strategies in a Changing Environment: An Empirical Analysis," <u>Transportation</u> <u>Research Forum Proceedings</u>, 1986, pp. 177-180.

62) Grimm, C., K. Smith and R. Blankinship, "Railroad Strategies and Performance: An Exploratory Study," <u>1987 Eastern Academy of</u> <u>Management Proceedings</u>, pp. 25-28.

63) Smith, E., M. Gannon, C. Grimm and G. Young, "Competitive Advantage in Diverse Industries," <u>Proceedings of the Second</u> <u>Biennial High Technology Conference</u>, University of Colorado, Boulder, Colorado, January 1990.

64) Grimm, C., "The Impact of Entry and Concentration in Australian Aviation: A Test of Contestability Theory," <u>Transportation Research</u> Forum Proceedings, 1992.

Sagranza, H. and C. Grimm, "The Importance of Founder, Start-Up est, and Structural Variables in Entrepreneurial Firms: A Study the Shortline Railroad Industry," Frontiers of Entrepreneurship http://1994.

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C., "Combining Scholarly Research with Public Policy aluation," <u>ITS Review, Vol. 5, No. 2</u>, Institute of California, February 1982.

Grimm, C., "Strategic Motives and Competitive Effects in Railroad Mergers: A Public Policy Analysis," Dissertation Series, Institute of Transportation Studies, University of California, August 1983 (UCB-ITS-DS-83-1).

Grimm, C., "Preserving and Promoting Rail Competition," Report to the National Industrial Transportation League, 1984.

Grimm, C., "Econometric Techniques to Estimate Rail Costs," Report to the Railroad Accounting Principles Board, General Accounting Office, Washington, D.C., October 1985.

Roberts, M., T. Corsi and C. Grimm, "Benefit-Cost Analysis of Weight Limit Exemption for Vehicles Carrying International Freight in the Route 50 Corridor," Study Prepared for the State Highway Administration, State of Maryland, February 1988.

CONTRACTS AND GRANTS:

Course Development Grant, Joint MS Program in Telecommunications.

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University of Maryland Grant to Integrate Computer Use into the Classroom, 1985.

University of Maryland General Research Board Summer Research Award, 1984.

CONFERENCE PAPER PRESENTATIONS:

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"Public Interest Evaluation of Recent Rail Mergers," presented at the 11th Association of ICC Practitioners' Eastern Transportation Law Seminar, October 1981.

"Stand-Alone Costs: Use and Abuse in Railroad Maximum Rate Determination," presented at the Eastern Economics Association Annual Meeting, March 1984 (with Philip Fanara).

"Promoting Competition in the Railroad Industry," presented at the Transportation Research Forum Annual Meeting, October 1984.

"The Politics of the Budget Deficit and the Role of Pol ical Interest Groups," presented at the Annual Meeting of the Association for Public Policy Analysis and Management, October 1984 (with John Holcomb).

"Impact of the Staggers Act on Rates and Shipper Quality: Role of Shipper Size and Competition," presented at the American Economics Association/Transportation and Public Utilities Group Annual Meeting, December 1984 (with Ken G. Smith).

The Effects of Railroad Mergers on Industry Performance and Productivity," Transportation Research Board Conference on Rail Productivity, University of Illinois, June 1985, (with Robert G. arris).

Invironmental Variation, Strategic Change and Firm Performance: Study of Railroad Deregulation, " presented at the Annual Meeting the Academy of Management, August 1985 (with Ken G. Smith).

anagement Characteristics, Strategy, and Strategic Change," esented at the Strategic Management Society Annual Meeting, rcelona, Spain, October 1985 (with Ken G. Smith). "Impact of Deregulation on Railroad Strategies and Performance," presented at the Transportation Research Forum Annual Meeting, November 1985 (with Ken G. Smith).

"ICC Exemptions of Rail Services: Summary and Evaluation," presented at the Transportation Research Forum Annual Meeting, November 1985 (with Thomas M. Corsi and Robert Lundy).

"Excess Branchline Capacity in the Railroad Industry," presented at the Transportation Research Board Annual Meeting, January 1986.

"The Economics of Coal Transportation: Implications for Railroad Shipper Strategies," presented at the Transportation Research Board Annual Meeting, January 1986 (with Les Selzer and Kent Phillips).

"The Organization as a Reflection of its Top Managers: An Empirical Test," presented at the Annual Meeting of the Academy of Management, August 1986 (with Ken G. Smith).

"Motor Carrier Strategies in a Changing Environment: An Empirical Analysis," presented at the Transportation Research Forum Annual Meeting, September, 1986 (with Thomas M. Corsi and Raymond Smith).

"Shifts in Use of Owner-Operators Among LTL General Freight Carriers Since the Motor Carrier Act of 1980," presented at the Transportation Research Forum Annual Meeting, September, 1986 (with Thomas M. Corsi).

"Environmental Variation, Decision Comprehensiveness and Performance," presented at the Strategic Management Society Annual Meeting, Singapore, October, 1986 (with Ken G. Smith, Martin Gannon, and Terence Mitchell).

"Gambit and Repartee: A Theory of Competitive Action and Responses," presented at the Annual Meeting of the Academy of Management, August 1986 (with Ken G. Smith).

"The Impact of the Environment on Personnel Policies: Management Characteristics in the U.S. Railroad Industry," presented at the Annual Meeting of the Academy of Management, August 1987 (with James Guthrie and Ken G. Smith).

"Mobility Barriers in the Motor Carrier Industry," presented at the Transportation Research Forum Annual Meeting, November 1987 (with Thomas M. Corsi).

"Railroad Cost Structure - Revisited" presented at the Transportation Research Forum Annual Meeting, November 1987 (with Tony Barbera, Kent Phillips and Les Selzer). "The Impact of Rail Rationalization on Traffic Densities: A Test of the Feeder Line Theory," presented at the Transportation Research Board Annual Meeting, January 1988 (with Les Selzer and Kent Phillips).

"Porter's Generic Strategies and Organizational Size," presented at the Strategic Management Society Annual Meeting, October 1988 (with Ken Smith).

"Predictors of Competitive Responses in the Domestic Airline Industry," presented at the Strategic Management Society Annual Meeting, October 1988 (with Ken Smith and Martin Gannon).

"ATLFs: Driving Owner-Operators into the Sunset," presented at the Transportation Research Forum Annual Meeting, November 1988 (with Thomas M. Corsi).

"Competitive Strategic Interaction: Action Characteristics as Predictors of Response," presented at the Annual Meeting of the Academy of Management, August 1989 (with Ming-Jer Chen and Ken G. Smith).

"Strategies and Performance in the Truckload General Freight Segment Before and After Deregulation," presented at the Transportation Research Forum Annual Meeting, October 1989 (with Thomas M. Corsi).

"Rivalry in the U.S. Domestic Airline Industry," presented at the Strategic Management Society Annual Meetings, October 1989 (with Ken Smith and Martin Gannon).

"Building Competitive Advantage in Diverse Industries," presented at the Boulder, Colorado Conference on the Management of the High Technology Firm, January 1990 (with Greg Young, Ken Smith, and Martin Gannon).

"Economic Effects of Surface Freight Deregulation," presented at the Transportation Research Board Annual Meeting, January 1990 (with Cliff Winston and Thomas Corsi).

"Strategies of Challenging Airlines at Hub-Dominated Airports," presented at the Transportation Research Forum Annual Meeting, October 1990 (with James Kling and Thomas M. Corsi).

"Size, Strategy, and Performance: LTL Motor Carriers," presented at the Transportation Research Board Annual Meeting, January 1991 (with Raymond Smith and Thomas Corsi).

The Role of Firm Reputation in Competitive Interaction, " presented t the Annual Meeting of the Academy of Management, August 1991 With Leith Wain, Martin Gannon and Ken G. Smith). "The Advantage of Size in the U.S. Trucking Industry," presented at the Transportation Research Forum Annual Meeting, November 1991 (with Carol Emerson and Thomas M. Corsi).

"The Impact of Entry and Concentration in Australian Aviation: A Test of Contestability Theory," presented at the Transportation Research Forum Annual Meeting, October 1992.

"Reevaluating Returns to Scale in Transportation," presented at the Transportation Research Forum Annual Meeting, October 1993 (with K. Xu, R. Windle and T. Corsi).

"Access and Competition Policy in the US Rail Freight Industry: Potential Applications to Telecommunications," presented at a conference on <u>Sustaining Competition in Network Industries through</u> <u>Regulating and Pricing Access</u>, CITI, Columbia University, November 1993 (with R. Harris).

"Engaging a Rival for Competitive Advantage: Firm Resources and the Competitive Environment as Predictors of Competitive Firm Activity," presented at the Annual Meeting of the Academy of Management, August 1994 (with G. Young, A. Schomburg and K. Smith).

"David and Goliath: Strategies for Challenging the Dominant Rival," presented at the Annual Meeting of the Academy of Management, August 1994 (with K. Smith, T. Corsi and J. Kling).

"Wealth Effects of New Product Rivalry," presented at the 14th annual international conference of the Strategic Mangement Society, Paris, September 1994 (with H. Lee, K. Smith, and A. Schomburg).

"Business Distress and a Firm's Propensity to be Rivalrous," presented at the 14th annual international conference of the Strategic Mangement Society, Paris, September 1994 (with C. MacFhionnlaoich and K. Smith).

"Industrial Organization Economics, Resource-Based Theory, and Schumpeterian Perspectives on Competitive Advantage: Toward an Action-Based Model of Advantage," presented at the Annual Meeting of the Academy of Management, August 1995 (with K. Smith).

"Strategic Groups and Rivalrous Firm Behavior: Towards a Reconciliation," presented at the Annual Meeting of the Academy of Management, August 1995 (with K. Smith and G. Young).

"Shareholder Wealth Effects of New Product Rivalry," presented at the Annual Meeting of the Academy of Management, August 1995 (with H. Lee and K. Smith).

RESEARCH AWARDS :

Award for the best airline paper and best paper overall, 1990 Transportation Research Forum Conference.

Plowman Award for the best paper, 1987 Transportation and Logistics Educators Conference.

Regular Common Carrier Conference Award for the best motor carrier paper, Transportation Research Forum Annual Meeting, September, 1986.

EDITORIAL AND REVIEWING ACTIVITIES:

Consulting Editor (1991-1993) <u>Journal of the Transportation</u> Research Forum.

Editorial Review Board, Journal of Transportation Management (1993present).

Editorial Review Board, <u>Journal of the Transportation Research</u> Forum (1993-present).

Frequent Referee for the following journals: <u>Logistics and</u> <u>Transportation Review</u>, <u>Transportation Research</u>, <u>Transportation</u> <u>Research Record</u>.

Occasional Referee for <u>Journal of Business Logistics</u>, <u>Strategic</u> <u>Management Journal</u>, <u>Academy of Management Review</u>, and <u>Academy of</u> <u>Management Journal</u> and other journals.

Book Review Editor for the <u>Journal of the Transportation Research</u> Forum (1988-1991).

National Review Board Member, Academy of Management Annual Meetings, Business Policy and Planning Division.

PROFESSIONAL AFFILIATIONS:

American Society of Transportation and Logistics; Transportation Research Forum; American Economics Association & Transportation and Public Utilities Group; Transportation Research Board/Member, Committee on Application of Economic Analysis to Transportation; Academy of Management; Strategic Planning Society.

TEACHING AND ADVISING:

Courses Taught

BMGT 370 (Introduction to Transportation: also served as course coordinator)
BMGT 372 (Introduction to Logistics Management)
BMGT 476 (Computer Models in Transportation and Logistics)
BMGT 495 (Business Policy)
BMGT 670 (Economic Environment of Business)
BMGT 671 (Managerial Economics)
BMGT 770 (Transportation Theory and Analysis)
BMGT 808 (Seminar in Industrial Organization and its Application to Strategic Management)
ENTS 632 (Telecommunications Policy)

Teaching Awards

Allen J. Krowe Award for Teaching Excellence, College of Business and Management, 1988.

Selected as one of the top 15% teachers in the College of Business and Management (12 times)

Member of the Following Ph.D. Dissertation Committees:

Wally Ferrier (co-chair) August Schomburg (co-chair) Greg Young (co-chair) Hun Lee (co-chair) Carol Emerson (chair) Cormac Mac Fhionnlaoich Constantinos Christou Chul Moon Deborah Lyons Jane Feitler Laura Power Ming-Jer Chen Harry Sapienza Jack Scarborough James Kling Robert Trempe George Rubenson Ven Sriram Raymond Smith Ritu Lohtia Jason Chang Douglas Meade Barbara Houchen Leith Wain John Burgess Douglas LaBahn Ker-Tsung Lee

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UNIVERSITY SERVICE:

Member, Executive Committee, Middlestates Accreditation Committee.

Department Chair, Transportation, Business and Public Policy Group (December 1994-present).

Chair, MBA Oversight Committee, College of Business and Management (1994-present).

Member, MBA Oversight Committee, College of Business and Management (1992-1994).

Member, External Communications Committee, College of Business and Management, 1994.

Chair, PR on Academic Quality Committee, 1993.

Member Technology Advancement Program Business Screening Panels (1986-present).

Member, Faculty Grievance Hearing Board, College Park Campus (1991).

Member, College Budget Committee (1990-1991).

Member, Strategic Planning Steering Committee, and Chair, MBA Subcommittee, College of Business and Management (1989-1990).

Member, General Committee on Faculty Affairs, College Park Campus Senate (1984-1986, 1987-1988).

Elected Representative to the College Park Campus Senate (1988-1991).

Member, Graduate Committee, College of Business and Management (1987-1988).

Chairman, MBA Case Competition Subcommittee of the Graduate

Faculty Assistant Coordinator, MBA/Rutgers Invitational Case

Faculty Judge, MBA Case Competition, College of Business and Management (1989).

Member, Undergraduate Committee, College of Business and Management (1987-1988).

Faculty Co-Advisor, University of Maryland Transportation and Logistics Club (1985-1990).

International Task Force, College of Business and ment (1986-1987).

Dean's Computer Integration Task Force, College of Business

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Business and Management, Wye Woods (Sept. 1987).

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Member of Search Committee, Transportation, Business and Public Pclicy Faculty Positions (1985-1988, 1992).

Chair of Search Committee, Transportation, Business and Public Policy Faculty Positions (1994).

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Verified Statement of Tom O'Connor and John A. Darling Before the SURFACE TRANSPORTATION BOARD

Finance Docket No. 32670

UNION PACIFIC CORPORATION, UNION PACIFIC RAILROAD COMPANY AND MISSOURI PACIFIC RAILROAD COMPANY ---- CONTROL AND MERGER -----SOUTHERN PACIFIC RAIL CORPORATION, SOUTHERN PACIFIC TRANSPORTATION COMPANY, ST. LOUIS SOUTHWESTERN RAILWAY COMPANY, SPSCL CORP. AND THE DENVER AND RIO GRANDE WESTERN RAILROAD COMPANY

March 29, 1996

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TABLE OF CONTENTS

I.	Introd	luction,	Summary and Statement of Qualifications
	A. B. C.	Introd Sumi Stater	luction262mary262nent of Qualifications264
п.	Result	ts of U.	S. Railroad Mergers Since 1980 265
	A.	Applie	cants' Recent Experience with Major Railroad Mergers 266
		1.	Union Pacific Corp. et al Control Missouri Pacific and Western Pacific Railroads, F. D. No. 30,000 (11982) ("MOPUP")
			a.Gross Revenues.267b.Net Operating Revenues.270c.Income Performance Indicators.270d.Railway Operating Expenses.275e.General and Administrative Expenses.275f.Car Utilization Experience.278
ł		2.	Santa Fe Southern Pacific Corp Control Southern Pacific
		3.	Transportation Co., F. D. No. 30,400 (1986)
			 a. Rail Operating Revenues and Expenses
		4.	Union Pacific Corp. et al Merger Chicago and North Western Holdings Corp., et al. F. D. No. 32133 (1995) (UP/CNW)
and the	4	5.	Burlington Northern Inc., et al Control and Merger Santa Fe Pacific Corporation, et al, F.D. No. 32,549 (1995) ("BNSF")
	B.	A Rece	ent Independent Review
te argun	C.	Persiste	ent Inability to Achieve Merger Savings

i

Ш.	Review of Applicants' Merger Cost and Benefit Claims					
	А. В. С.	Unit Benet Appli	Costs fits . icants'	Used B Operat	By UP-SP	
		1. 2. 3. 4. 5.	Gross Raily Net 1 Com The	ss Oper way Op Railway parativ Railroa	rating Revenue.299perating Expenses.303y Operating Revenues.303e Income Performance.307id Industry in 1995.307	
			a. b. c.	Traff Perfo Capa	fic Trends	
		6.	Revie Benef	ew and fits.".	Analysis of Applicants' Appendix A, "Summary of	
			a. b.	Gene Net F	ral Issues	
				(1) (2) (3) (4)	URCS Unit Cost Determinations	
			c.	Labor	Savings Chime	
			d.	Non-L	abor Savings Claims	
				(1) (2) (3) (4)	Car Utilization	
		6	2.	Shippe	ers Logistics Costs	
	7	. 4 t	Applica	ants' "I D	Pro Forma Financial Statements," Appendices B	

ii

Revi	ew of A	Applicants' Operating Plan
A.	Omi	ted Costs and Overstated Benefits
	1. 2. 3. 4.	The Dismissal of SP Problems.348Omitted Transition Expenses.352Capacity Limitations.354Where are the Costs and Benefits?358
		 a. The Geography of Costs and Benefits

0

гv.

I. Introduction, Summary and Statement of Qualifications

A. Introduction

In this proceeding, we were asked by Kansas City Southern (KCS) to examine the merger benefits and savings claimed by Union Pacific and Southern Pacific (UP-SP) and to estimate the real costs that will be borne by the shipping public if this merger is approved without remedial conditions.

In our analysis we have used the most accurate and reliable data available describing the merger and its possible consequences on competition and on the shippers who rely on rail. In this Statement, we have primarily used actual data as produced by the involved railroads describing actual performance history over the routes which would be affected by the merger. We have also supplemented this actual data with reliable data available from the public record and with our experience in conducting transportation and logistics studies over the course of our careers.

B. Summary

The UP-SP merger filing contains merger savings and benefits estimates that have been repeatedly revised, are still not finalized as of this date and must be regarded as unsupported by this Board in the deliberations.

The applicants' failure to present persuasive support for their merger savings claims is endemic to most major rail merger applications. Independent studies have shown that no major rail merger approved since 1980 has achieved the benefits claimed by the applicants.

We have found the costs and benefits defective as presented by applicants, Union Pacific Railroad and Southern Pacific Rail Corp., (collectively, the "Applicants"), based on our examination of the:

- context of historic results and patterns,
- Applicants' work papers or depositions,
- quantitative accuracy, and

consistent application of recognized estimation methodologies.

In their Appendix A, the Applicants claim total, net annualized benefits of \$3,014.3 million, plus total, net one-time costs of \$1,447.0 million, for the proposed merger. Our analysis of the projected benefits from prior mergers establishes that a significant number of the claimed benefits failed to materialize. Based upon these studies and a careful analysis of the Applicants' claimed benefits for this transaction, we believe that Applicants have overstated the public benefits of this transaction.

We submit the UP-SP Application is demonstrably flawed by both errors of omission and by errors of commission. UP-SP made significant errors in its computation of the costs used in estimating the benefits of the merger. Further errors were committed by the improper mixing of dissimilar Econometric and engineering estimation methodologies. In addition, the Applicants' Pro Forma Financial Forecasts contained in Appendices B through D of the Application are unusable due to internal inconsistencies which lead to errors of unknown magnitude and direction. The application is thus flawed by improper methodology, inconsistent application of recognized practices, errors of commission, and errors of omission. Our conclusion is clear: the merger benefits are overstated, the costs are understated.

complete Market Share of UP-SP and BN-SF Railroads



Map of Business Economic Areas

Market Share Basis: Carloads Originated by Class I Railroads

C. Statement of Qualifications

My name is Tom O'Connor. I am Vice President of Snavely, King, Majoros, O'Connor & Lee, Inc. (SKA), an economic consulting firm with offices at 1220 L Street, N.W. in Washington, D.C. I have been engaged in the study of transportation economics for more than twenty years.

My professional career began in 1973 as an economist with the Interstate Commerce Commission (ICC). Subsequently, I have held increasingly responsible management positions in transportation, government, industry and consulting:

- Manager of Local Rail Services Planning for United States Railway Association;
- Assistant Director of Costs and Economics for Conrail;
- Assistant Vice President of Economics for the Association of American Railroads;
- Vice President of DNS, Transportation Consultants
- Vice President of Snavely King Majoros O'Connor & Lee, Inc.

I have previously provided testimony on transportation economics, costing, design and use of the waybill sample, and other issues before the Interstate Commerce Commission, the U.S. Railway Association and federal and state courts. A statement of my qualifications appears in Attachment A.

My name is John Darling. I am President of Rail-Ways, Inc. (Rail-Ways), a ransportation consulting firm with offices at 18 South Porter Street in Elgin, Illinois. I have seen engaged in railroad management, operations, planning, cost analysis and finance for arly thirty years. My professional career in the railroad industry began in 1967 as an Industrial Engineer in the Planning Department of the Baltimore & Ohio Railroad (B&O). Since then I have held increasingly more responsible staff, management and investment positions in the railroad industry.

I have previously provided testimony with regard to railroad cost finding, economics, finance, mergers and acquisitions, and operations before the ICC, the U.S. Office of Technology Assessment, state regulatory agencies and legislatures, and federal courts. A statement of my qualifications appears as Attachment B.

II. Results of U.S. Railroad Mergers Since 1980

The specific purpose of the Staggers Rail Act of 1980 ("Staggers Act") is "to provide for the restoration, maintenance, and improvement of the physical facilities and financial stability of the rail system of the United States."¹

Given the profound economic consequences of the present Application, it is incumbent upon the Surface Transportation Board (the "Board") to review the results of mergers and consolidations considered by the Commission since 1980 to determine what contribution previous mergers have made, if any, to furthering the purpose of the Staggers Act, as that purpose was articulated by the U.S. Congress.

Sec. 3, Public Law 96-448: 96th Congress (October, 1980).

A. Applicants' Recent Experience with Major Railroad Mergers.

Each of the Applicants has been involved in at least one previous major merger proceeding since 1980 -- UP in three and SP in two.² We have examined some of these mergers to determine if the claimed benefits were obtained, and at what price.

Union Pacific Corp. et al – Control – Missouri Pacific and Western Pacific Railroads, F. D. No. 30,000 (11982) ("MOPUP").³

The cost and benefit claims of the applicants in MOPUP, and the restatement of those claims adopted by the Commission, are recapitulated in Tables II.1 and II.2, respectively.⁴ The only immediately apparent difference in the treatments of costs and benefits used in this proceeding to those used in MOPUP is that in this proceeding labor severance and protection costs are treated as onetime items, whereas in MOPUP those costs were treated as recurring. That distinction will be discussed further in Section III of our Statement.

We selected six areas of inquiry for further examination. For each indicator we accumulated operating or financial data for ten years: for the four years preceding the merger, the year of consummation, and five years following consolidation. The data used by us are found in Exhibit 1 to this V.S. Historic data were all taken from Applicants' reports to the Commission. Forecasted levels of revenues and expenses were taken from the Commission decision in MOPUP.⁵

Ibid.

² In addition, SP has purchased significant line extensions from the estates of the Chicago, Rock Island and Pacific Railroad and the Chicago, Missouri & Western Railway, and participated in two small corporate restructuring mergers with its subsidiaries, the Pacific electric Railway and the Texas and New Orleans RR.

³ 366 I.C.C. 459.

³⁶⁶ I.C.C. 780 - 791.
a. Gross Revenues.

Nominal (*i.e.*, reported) combined gross operating revenues realized by the UP, MP and WP in the four years preceding approval of the merger in 1982 had been rising rapidly until the year of the merger when gross revenues fell by roughly 5%. This fall continued the following year and was not reversed until the second year following the merger. For the remainder of the study period, gross revenues were flat.

In constant dollar terms, gross revenue fell sharply in the year of unification and remained stagnant for the remainder of the study period at a level approximately \$250 to 300 million below the applicants' forecasts, or 8% to 10% below forecasts. The results of this analysis are illustrated in Figure II.1.

SUMMARY OF BENEFITS

UNION PACIFC RAILROAD, ET AL -- CONTROL -- MISSOURI PACIFIC & WESTERN PACIFIC

As estimated by the Applicants in Finance Docket No. 30000

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				(a mousands)						
DESCRIPTION		YEAR 1			YEAR 2		YEAR 3			
	Annual	One-Time	Total	Annual	One-Time	Totel	Annuel	One-Time	Total	
NET REVENUE GAINS: (a)	28,793		28,793	37,019		37,019	41,132		41,13	
OPERATING BENEFITS:										
Labor Savings	(b)			(b)			(b)			
Non-Labor Savings										
Car Utilization	22,500	(52,995)	(30,495)	31,458	(10,229)	21,229	31,458	(8,451)	23,00	
Communications/Computers	27	(2,381)	(2,354)	93		93	518	1	518	
Operations	17,898	(25,047)	(7,149)	18,040	(11,400)	6,640	18,112	(10,801)	7,31	
General & Administrative	7,170		7,170	13,494		13,494	13,528		13,52	
Total Operating Benefits	47,595	(80,423)	(32,828)	63,085	(21,629)	41,456	63,616	(19,252)	44,36	
Employee Relocation Expense			0			0			(
Labor Protection/Separation	(29,362)		(29,362)	(7,064)		(7.064)	(5,874)		(5.874	
SH PPER LOGISTICS SAVINGS			0			0			(
TOTAL COSTS AND BENEFITS:							1 1			
Excluding revenue gains	18,233	(80,423)	(62,190)	56,021	(21,629)	34,392	57,742	(19,252)	38,490	
All Inclusive	47,026	(80,423)	(33,397)	93,040	(21,629)	71,411	98,874	(19,252)	79,622	

DESCRIPTION		YEAR 4			YEAR 5	Normal	Total	
	Annual	One-Time	Total	Annual	One-Time	Total	Annual	One-time
NET REVENUE GAINS: (a)	41,132		41,132	41,132		41,132	41,132	C
OPERATING BENEFITS:								
Labor Savings	(b)			(b)			(b)	
Non-Labor Savings				1 1		1	1 1	
Car Utilization	32,006		32,006	32,006		32,006	32,006	(71,675
Communications/Computers	518		518	518		518	518	(2,381
Operations	18,112	(7,967)	10,145	18,112	(5,798)	12,314	13,922	(61,013
General & Administrative	13,528		13,528	13,528		13,528	13,528	0
Total Operating Benefits	64,164	(7,967)	56,197	64,164	(5,798)	58,366	59,974	(135,069
Employee Relocation Expense			0			0		0
Labor Protection/Separation	(4,921)		(4,921)	(4,665)	7	(4,665)	0	0
SHIPPER LOGISTICS SAVINGS			0			0		0
TOTAL COSTS AND BENEFITS								
Excluding revenue gains	59,243	(7,967)	51,276	59,499	(5,798)	53,701	59,974	(135,069
All inclusive	100,375	(7,967)	92,408	100,631	(5,798)	94,833	101,106	(135,069

Note a: Net of additional costs of handling increased traffic.

Note b: Labor benefits not lated separately by either Applicants or Comm4ission.

366 I.C.C. 786 - 791

24-Sep-82

SUMMARY OF BENEFITS

UNION PACIFC RAILROAD, ET AL -- CONTROL -- MISSOURI PACIFIC & WESTERN PACIFIC

As restated by the I.C.C. in Finance Docket No. 30000 (OThousanda)

DECONIDEUSU				(a mousands)						
DESCRIPTION		YEAR 1			YEAR 2			VEAD 2		
	Annual	One-Time	Total	Annual	One-Time	Total	Annual	One-Time	Total	
NET REVENUE GAINS: (a)	40,000		40,000	40,000		40,000	40,000		40,000	
OPERATING BENEFITS:										
Labor Savings Non-Labor Savings	(b)			(b)			(b)			
Car Utilization Communications/Computers Operations	47,000 27 19,755	(1,836) (2,381) (19,817)	45,164 (2,354) (62)	58,658 93 19,897	(785)	57,873 93 14,223	60,606 518	(10.801)	60,606 518	
General & Administrative	7,170		7,170	13,494		13,494	13.528	(10,001)	9,108	
Total Operating Benefits	73,952	(24.034)	49,918	92,142	(6,459)	85,683	94,621	(10,801)	83,820	
Employee Relocation Expense Labor Protection/Separation		(29,362)	0 (29,362)		(7,064)	0 (7,064)		(5,874)	0 (5,874	
HIPPER LOGISTICS SAVINGS OTAL COSTS AND BENEFITS:			0			о			0	
Excluding revenue gains	73,952	(53,396)	20,556	92,142	(13.523)	78.619	04 601			
All inclusive	113,952	(53,396)	60,556	132,142	(13,523)	118,619	134 621	(16,675)	117,946	
	the second se	CONTRACTOR OF A DESCRIPTION OF A DESCRIP	COLUMN TWO IS NOT THE OWNER.	and the second se			104.0211	110 0/011	11/046	

D	E	S	CF	IP	T	10	N			

NET REVENUE GAINS: (a) OPERATING BENEFIT Labor Savings Non-Labor Savings Car Utilization Communications/Computers Operations General & Administrative Total Operating Benefits

Employee Relocation Expense Labor Protection/Separation

SHIPPER LOGISTICS SAVINGS TOTAL COSTS AND BENEFITS

Excluding revenue gains All Inclusive

YEAR 4				YEAR 5		Normal	Tatal
Innuai	One-Time	Total	Annual	One-Time	Total	Annual	One-time
40,000		40,000	40,000	-	40,000	40,000	0
(b)			(b)			(b)	
60,606		60,606	60,606		60,608	60600	(2 6 2 1)
518		518	518		518	518	(2,021)
19,969	(7,967)	12,002	19,969	(5,798)	14 171	10,060	(2,301)
13,528		13,528	13,528		13.528	13,528	(50,057)
94,621	(7,967)	86,654	94,621	(5,798)	88,823	94,621	(55,059)
		0			0		0
	(4,921)	(4,921)		(4,665)	(4,665)		(51,886)
		0			0		0
94,621	(12,888)	81,733	94,621	(10,463)	84,158	94.621	(106 945)
134,621	(12,888)	121,733	134,621	(10,463)	124,158	134,621	(106,945)

134,621

(16,675)

117,946

Note a: Net of additional costs of handling increased traffic.

Note b: Labor benefits not stated separately by either Applicants or Comm4ission.

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b. Net Operating Revenues.

In nominal dollars, the combined net operating revenues for UP's predecessors were trending slowly upward in the years preceding the merger. However, when expressed in constant dollars, this modest up-trend became a precipitous fall which continued until the year following the merger. If one ignores the extraordinary write-off in 1986, UP's constant-dollar net operating revenues were recovering at a rate of roughly 10% per year from about \$300 million in 1983 to approximately \$450 million in 1987. Nevertheless, UP's constant-dollar net operating revenues remained at a level well below forecasted levels of approximately \$543 million per year. These results are illustrated in Figure II.2.

c. Income Performance Indicators.

It is particularly instructive to look at three separate measures of financial performance for the UP and its predecessors in the years spanning the 1982 merger. In Figure II.3 we have displayed ordinary income, net railway operating income, and earnings before interest and taxes ("EBIT") expressed in constant 1982 dollars for the ten years from 1978 through 1987.

By all three indicators, the financial performance of the UP, and its predecessors, was not materially affected by the merger.

It was not until five years after the merger that the financial performance of the UP begin to climb. By that time, any effort to attribute the growth of the UP to the 1982 merger would have been, at best, highly problematical. It is far more likely that, by 1987, the railroad industry -- including the UP -- had instituted marketing initiatives, begun to reduce abor costs, restructured (or "reengineered") their operations, and taken other steps to improve productivity. At the UP, these actions would have all been independent of, and unrelated to, the 1982 merger.

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272 -



- 273 -

Income Performance (Const 1982 \$)



- 274 -

d. Railway Operating Expenses.

Again expressed in nominal dollars, total railway operating expenses, as reported by the UP's predecessors, had been climbing steadily at an average compound rate of about 14.5% per year until the year before the merger. In the next two years, including the year of the merger, total railway operating expenses fell, but then resumed an upward trend at a much lower rate than before the merger. Expressed in constant dollars, however, the fall in operating expenses was impressive but did not continue beyond the first year following the merger. In the aggregate, total railway operating expenses appear to have attained savings greater than forecasted. However, one must recall that actual traffic levels averaged 20% below forecasted levels. These performances are shown in Figure II.4.

e. General and Administrative Expenses.

General and Administrative ("G&A") expenses are always one area which is singled out for specific attention by the applicants. Historically, as in the present instance, merger applicants always forecast large and immediate G&A expense savings. However, when examines the UP experience, as shown in Figure II.5, one finds that following the merger not only were the savings not realized, but the downward trend established years before the merger was reversed, ar ' G&A expenses increased substantially in the years immediately following consummation of the merger. For UP, the G&A expenses did not fall to forecasted ievels until the fifth year after the merger.

- 275 -

Railway Operating Expenses



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f. Car Utilization Experience.

Another area of merger benefits that applicants almost always tout are claimed car utilization savings. The applicants usually find a network model for the new system that forecasts attractive reductions in car miles and car days, irrespective of any putative traffic gains that may also be claimed by the applicants. We sought to test these forecasts by examining the car mile data for the UP and its predecessors. Car mile, revenue ton mile and tonnage data are good indicators to test since they are not susceptible to definitional or combinatorial errors when more than one carrier is involved.

Reported car-mile reductions achieved in 1981 and 1982 were sustained by the merged UP following unification. However, when car miles are normalized using revenue ton miles per ton indicia to eliminate the effects of year to year variations in annual tonnages handled and average lengths of haul, then it is found, as shown in Figure II.6, that the observed car utilization trends began long before the merger and were not influenced in any measurable way by the merger. Indeed, an exponential trend line fitted to the data suggests an invariant down-trend across the entire ten year period.

To summarize, merger benefits in general, and particularly for Applicant UP, have historically proved to be elusive. As we see in the following sections, other investigators have come to similar conclusions.





COMBINED UP-MP-WP RAILROADS

279 -

Figure 11.6 The historic data demonstrate convincingly that Applicant UP did not obtain the benefits it claimed or sought from the MOPUP consolidation of 1982.

2. Santa Fe Southern Pacific Corp. - Control - Southern Pacific Transportation Co., F. D. No. 30,400 (1986).⁶

Claiming to be a "failing firm" and a "weakened competitor," SP's first attempt to become party to a railroad merger under present merger regulations was the proposed control of SP (also known as "SPT") by the Santa Fe Southern Pacific Corp. ("SF") decided in 1986 ("SF/SPT"). The SF/SPT case is particularly relevant to the instant proceeding for several reasons.

First, SF/SPT has been, so far, the only major rail merger application denied by the Commission since 1970.⁷ It is likewise true that until the present Application was filed, SF/SPT had been the only parallel merger considered under post-Staggers Act regulations. The Commission found that "the transaction's anticompetitive effects outweigh its potential public benefits."⁸

Secondly, the Commission concluded that:

"SPT's financial condition is not desperate, that SPT has not been shown to be failing, and that the applicants 'weakened competitor' and revenue adequacy arguments [were] without merit." ⁹

⁶ 2 I.C.C. 2nd 709.

⁷ Since 1970, four other major merger applications were dismissed at the request of the applicants.

⁸ Ibid., pg. 713.

Ibid., pg. 828.

Finally, in SF/SPT the Commission criticized the "temporal narrowness" of the applicants' analyses.¹⁰ The Commission went on reject the applicants' calculation of public harm, not because of the cost methodology adopted, but because of the tonnage estimates.

Because applicants' estimate of the alleged dollar amount of welfare loss due to potential revenue increase is based upon estimates of the specific amount of exposed tonnage, the exercise is not a useful one. For one thing, attempts to calculate the specific volume of exposed tonnage <u>assumes unrealistically a</u> static economic environment. [Emphasis added.]¹¹

The Commission also noted that the applicants' five-state common service area was one of the most rapidly growing corridors in the country. And because that "region of unparalleled growth" is served in whole or part by the applicants, the "possible anticompetitive" effects of the proposed SF/SPT merger must be viewed with extreme caution."¹²

Since the SF/SPT merger failed to receive approval, no quantitative retrospective is possible. Nonetheless, we believe it is instructive to review the reasons for its failure.

We each participated in the preparation of the analyses in the SP/SFT case, though neither of us appeared as a witness. At that time John Darling was Director of Cost Analysis for the Santa Fe and Tom O'Connor was Vice President of DNS Associates, a transportation consulting firm retained by SF/SPT. Our conclusion is that the merger was denied because the risks of competitive harm from loss of competition were significant and satisfactory remedial conditions were not proposed or adopted. We see the same pattern in this case.

¹⁰ Ibid., pg. 813.

¹¹ Ibid., pg. 875.

12 Ibid. pp. 761 - 762.

3. Rio Grande Industries, Inc. et al -- Control -- Southern Pacific Transportation Co., F. D. No. 32,000 (1988) ("RGI/SPT").¹³

With Santa Fe Pacific Corp's failure to obtain approval for the SF/SPT merger, SF was ordered to divest itself of either ATSF or SPT. SF's petition to reopen was denied¹⁴ and in September, 1987. SF filed an initial plan setting forth several alternatives for divestiture that were under consideration. In December, 1987, SF filed its final plan under which it had agreed to sell SPT to Rio Grande Holding, Inc., a subsidiary of Rio Grande Industries, Inc., which was also the parent of the Denver & Rio Grande Western Railroad Co. ("DRGW"). Approval of the RGI/SPT control application by the Commission was the action that created the present Applicant, SP, and such approval had to be a foregone conclusion if the Commission's divestiture order in SF/SPT was to be effectuated in a timely manner.

As in the preceding cases, the applicants filed a summary of estimated benefits to be derived from a DRGW - SPT consolidation.

In addition to total operating benefits of \$149.4 million per year projected by the applicants following consolidation, the Commission found that "push-down" accounting (to be used to write down SPT's assets to reflect the actual price to be paid by RGI) was proper and appropriate in purchase transactions of this type.¹⁵ The effect of this write down, the Commission observed, would be to reduce depreciation expense in years subsequent to the

- 13 4 I.C.C. 2d 834.
- 14 2 I.C.C. 2d 852.

¹⁵ 4 I.C.C. 2d 980 and Accounting Principles Board Opinion No. 16.

unification, "... resulting in a projected increase in earnings."¹⁶--- but producing no change in cash flows.

It was widely believed the RGI/SPT consolidation was intended by the Commission to solve the problems of the SPT. In its decision and order, the Commission found that:

In addition to the increase in earnings, Applicants [RGI/SPT] have demonstrated a viable plan of financing, sales of real estate properties and estimated benefits from consolidation (increased revenues and traffic, cost savings and other efficiencies) which will allow RGI and SPT to generate sufficient cash flows to undertake all necessary maintenance and capital expenditure programs and adequately service and gradually reduce the debt incurred to finance this transaction.¹⁷ [Emphasis added]

Given that Commission finding, it is instructive to subject this transaction to the same general retrospective used by the Banks Study as described in the following section and by us in the preceding cases. In this instance, however, we have used the "SPHI Four Year Projected Income Statement" reprinted by the Commission in its decision.¹⁸

We selected four areas of inquiry for further examination. For each indicator we accumulated operating or financial data for the year of consummation and for five years following consolidation. The data used by us are found in Exhibit 2 to this Statement. Historic data were all taken from Applicants' shareholder reports. Forecasted levels of revenues and expenses were taken from Table I of the "Financial Viability" attachment to the Commission decision.¹⁹

17 Ibid.

19 Ibid.

¹⁶ 4 I.C.C. 2d 980.

¹⁸ Ibid., pg. 999.

a. Rail Operating Revenues and Expenses.

Figure II.7 compares the forecasted revenues and expenses adopted by the Commission in RGI/SP to the actual experiences of the consolidated firms following approval (expressed in constant dollars). As is evident from the Figure, revenues generally followed the forecasts. Expenses, however, never even came close to meeting the applicants' (and the Commission's) expectations. Once again, the applicants in a major rail merger were condemned to repeat history.

b. Railway Operating Earnings.

An unbiased analysis of forecasted earnings in comparison to actual experience further illustrates how far from reality were the expectations of the applicants. Whereas the principal shareholder may have profited, the firm did not. Earnings improvements were elusive and inconsistent with the experience of the railroad industry as a whole during this period.

Even a cursory examination of Figure II-8 shows clearly that the actual experience, as measured by Net Railway Operating Income (NROI) and EBITDA was far below forecasts.

Forecasted G&A and car utilization savings wer, not readily available and a **post-audit of those measures could not be conducted.**

To summarize, in this instance (as with the MOPUP), merger benefits have been hown to be elusive. Applicant SP has not received the benefits it sought -- or hoped for -rom its consolidation with RGI. Going into 1995, collectively, the Applicants were "0 for





- 286 -

Forecast vs. Actual Earnings

c. Other Recent Merger Experiences.

Two other recent mergers or consolidations have a prospective bearing on this Application. Both occurred in 1995. These are the merger of the Chicago & North Western Transportation Co. ("C&N"") with Applicant UP²⁰ and the merger of the Santa Fe Pacific Corporation into Burlington Northern Inc. and a concomitant consolidation of the Burlington Northern Railroad Co. and the Atchison, Topeka and Santa Fe Railway Co.²¹

Both transactions are relevant because of what each demonstrates with regard to the complexity inherent in a major rail consolidation and the management planning and discipline necessary to complete a coordination of the size and scope that is contemplated by the Operating Plan (the "Plan") included with this Application.

4. Union Pacific Corp. et al -- Merger -- Chicago and North Western Holdings Corp., et al. F. D. No. 32133 (1995) (UP/CNW).

The involvement of the UP with C&NW dates back more than a century and is much too complicated (and irrelevant) to recite here. Suffice it to say that in March, 1995, UP received authority from the Commission to complete its long, and often, predicted absorption of the C&NW. In 1995 the C&NW had gross operating revenues of \$905.3 million - \$1.13 billion if Western Railroad Properties, Inc. ("WRPI") is included.²²

By way of comparison, for the same year, UP had gross operating revenues of \$5,167.2 million. After consolidating adjustments, if UP and C&NW had been merged in

²⁰ F.D. No. 32133, Decision No. 25, decided February 21, 1995, served March 7, 1995.

²¹ F. D. No. 32549, Decision No. 38, August 16, 1995 (Unpublished).

²² Applicants' Workpapers pp. NO3-000466 through NO 3-000468 and Applicants' work paper, pp. N03-000344.

1994, the effect on UP's gross revenue would have been a net increase of \$1.08 billion, or about 21%.²³ This is a large number, but not in comparison to the magnitude of the \$3 billion, or about a 49% increase, contemplated by this Application.

Regardless of the many years of study and preparation, however, UP's efforts to coordinate the activities of the former C&NW, and to consolidate its operations into those of the UP, turned into a fiasco. Among the problems that developed by September and October, 1995, were the following:

Locomotive and crew shortages leading to extensive car and train delays;

- Shortages of qualified train and engine crews leading to further train delays;
- Route congestions which caused still further train, engine and crew shortages;
- Labor savings delayed or deferred as termination dates were extended; and
- Shipper switching services were delayed or suspended.²⁴

The obvious question is if UP has experienced this much difficulty in coordinating the C&NW integration, what is going to happen with the SP, which is roughly 200% bigger than was the C&NW. In the Applicants' Operating Plan, Witness Bradley King acknowledges the existence of these problems, admits the Applicant UP "may have been too aggressive" in the

²³ Applicants' work paper, pp. N03-000344.

 ²⁴ Three letters of Ronald J. Burns, President and Chief Executive Officer, Applicant P, to shippers and employees, one undated, two dated November 7 and December 4, 1995,
 Pectively; Metra, Commuter Rail System On-Time performance Report, November 22, 1995; Gary Washburn, *Chicago Tribune*, Metro Section, Wednesday, November 22, 1995.;
 S., King & Ongerth (Separate testimony by Mr. King), *Application*, Vol. 3, pg. 60.

way the UP tried to absorb the C&NW, and avers that this experience was a "lesson [they] will remember in connection with a UP/SP merger."²⁵

To try to gain some insights into the merits of this promise, we have examined the Plan and its derivative merger costs and benefits in comprehensive detail in an effort to determine if it reflects the experience of the UP with the C&NW, or are there challenges which remain ignored or unaddressed. Some results of this examination are presented in detail in Sections III and IV, following.

5. Burlington Northern Inc., et al – Control and Merger – Santa Fe Pacific Corporation, et al, F.D. No. 32,549 (1995) ("BNSF")²⁶

The difficulties encountered when bringing two large organizations together have also been felt by the BNSF. Unanticipated implementation problems, including ex post facto decisions regarding space allocation, have introduced some disarray into BNSF's implementation schedules. BNSF has also had to delay certain personnel reductions and, reportedly, some terminated employees were recalled to duty.

All of this is only to say that management of a major railroad consolidation is a very difficult and complex undertaking. Applicant UP has experienced difficulties with its most recent adventure. BNSF has also has problems. And, as we will show, there is nothing in the Applicants' Operating Plan to give the experienced observer any comfort that the Applicants have tried to anticipate, much less solve, the problems.

²⁵ V.S., King & Ongerth (Separate testimony by Mr. King), Application, Vol. 3, pg. 60.

²⁶ Commission Decision No. 38, August 16, 1995, unpublished.

B. A Recent Independent Review.

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Our findings with respect to the consistent inability of merging entities to achieve their claimed savings are confirmed in a recently completed independent study. In March, 1995, a review of U.S. railway mergers titled *Railway Merger Initiatives: The U.S. Experience*,²⁷ was published by the Ontario (Canada) Ministry of Transportation. Prepared by the U.S. consulting firm of R. L. Banks & Associates, in association with KPMG Management Consulting (Canada), this study (hereinafter referred to as the "Banks Study"), sought to identify the implications of railway consolidations for Canada. At the request of the Ministry, Banks examined the "genealogies" of several U.S. rail systems, including, but not limited to, a detailed evaluation of the actual economic effects of four particular railway mergers -- it was, if you will, a post-audit of those mergers.

The Bank's Study provides a factual and illuminating discussion of the benefits of mergers. The report is certainly objective with respect to this case, since it was:

- Produced in March, 1995; months before the UP-SP merger was announced
- Prepared on behalf of a Canadian Provincial ministry not involved in the UP-SP merger case
- Based on public data routinely reported to the ICC by the railroads and compiled by the Association of American Railroads.

Among the objectives of the report was the evaluation of the actual economic effects of mergers. The principal method of determining the effects was to compare the reported

²⁷ R. L. Banks & Associates: Inc./KPMG Management Consulting, Railway Merger tatives: The U. S. Experience, A Report to the Ontario [Canada] Ministry of Transportation, PS. plus Appendices A - D (March, 1995). This unpublished study is attached hereto as chment "C" and incorporated herein by reference.

activity, expenses and revenue of the merging carriers before and after the merger. Four U.S. mergers were analyzed:

- Burlington Northern and St. Louis-San Francisco (1980)
- Chessie System and Family Lines (1980)
- Southern Railway and Norfolk & Western (1982)
- Union Pacific, Missouri Pacific and Western Pacific (1982)

The findings of the study as to the actual economic effects of mergers have direct bearing on the merger savings claims made by UP-SP and should be considered carefully by the STB. Those findings can be summarized as follows:²⁸

- Large mergers generally failed to achieve their promised efficiencies
- Rationalization of physical plant was slower than forecast and slower than rationalization achieved by non-merging railroads
- Staff reductions were slower than forecast and slower than those achieved by non-merging railroads
- There was no noticeable improvement of financial performance in the merged entity compared to other railroads.

The strength of the Merger Initiatives study is that it provides an unbiased comparison between the claims of the applicants and the performance of the applicants. Here are the findings:²⁹

- The costs of the merger typically involve:
 - Loss of competitive alternatives to shippers
- ²⁸ See Railway Merger Initiatives, The U.S. Experience, page 82.
- ²⁹ See Railway Merger Initiatives: The U.S. Experience, page 39.

- Costs and administrative burdens of integrating staffs and systems
- Costs of labor reduction
- The benefits of the merger typically involve:
 - Rationalization of plant and facilities
 - Ability to offer single line system service over an extended range
 - economies of scale and density
- Comparison of the costs and benefits of the merger studied typically showed that the costs and occur but the merged entities failed to achieve the claimed benefits, more specifically:
 - Three of the four merged entities experienced reductions in operating revenues during the four years following the merger.³⁰
- Employment reduction was already underway prior to the merger and UP-MP WP had their largest one year reduction the year <u>before</u> the merger³¹
- Claimed economies of scale <u>failed</u> to show up in the bottom line. UP and NS saw Net Railway Operating Income (NROI) plunge. CSX NROI increased slightly. BN NROI increased noticeably.³²
- By the fourth year of the merger, plant rationalization, as measured by miles of road, was largely <u>unrealized</u>. In fact, non-merging carriers rationalized plant faster than the merging carriers.³³

³⁰ Ibid., pg. 40.
³¹ Ibid., pg. 42.
³² Ibid., pp. 44 - 45.
³³ Ibid., pp. 46 - 47.

- In terms of Gross Ton Miles per mile of road NS and UP both <u>failed</u> to achieve improvement. ³⁴
- In terms of Loaded to Empty ratio, the merged carriers showed lack luster performance. CSX and NS loaded to empty ratio got worse while UP failed to show improvement in this critical measure of performance.³⁵
- In terms of staff utilization, as measured by the number of hours paid for compared to the number of hours worked, all of the merging carriers showed <u>deteriorated performance.³⁶</u>
- In terms of revenue per ton mile, the merging carriers were slightly higher than Class I railroads as a whole. If savings were achieved they were apparently not passed on to the shippers.³⁷

The overall conclusion of this report is clear. Merger savings estimates should be regarded as claims rather than accomplishments. Moreover, the STB should realize that history indicates that even if savings are achieved, the shipper probably will still not realize the benefits.

As noted above, The Banks Study found that large rail mergers were widely supposed to generate substantial costs and benefits. The most widely touted costs were (i) the results of a loss of competitive alternatives for shippers, (ii) the burden of integrating staffs and systems, and (iii) the costs of compensating redundant personnel. Similarly, the greatest

- ³⁵ Ibid., pp. 59 60.
- ³⁶ Banks Study, pp. 65 66.
- ³⁷ Ibid., pp. 67 68.

- 293 -

³⁴ Ibid., pg. 58.

benefits were supposed to result from (i) the rationalization of plant, (ii) the resulting economies of scale and density, and (iii) the ability of the merged carrier to offer single-line service over an extended range.

One of the most important finding of the Banks Study was that, when realized revenue per RTM for the merged subjects is normalized to total Class I experience from the year preceding the merger, the <u>merged carriers rates increased relative to the nation as a</u> <u>whole</u> -- which experienced falling rates.

This crucial finding demonstrates that the merged carriers were able to extract a premium, and did extract a premium, from the shippers relative to other railroads.

Thus, the Banks Study found persuasive analytic evidence that large merged carriers do have an ability to influence prices. From these observations, one may infer that the resulting carriers do exert "market power," even where the Commission has determined that the public would continue to have access to competitive alternatives following the merger.

It should be emphasized here that the Banks Study was commissioned, completed and presented long before there was any hint of the Applicants' plan to merge. The observations, results, findings and recommendations of the Banks Study were arrived at and made completely independent of either the present Application, the Applicants' claimed costs and benefits, or the objections and concerns of any protestant or respondent in this proceeding.

The Banks Study findings were arrived at through an unbiased application of recognized analytical techniques, consistently applied to publicly available data, and subjected to peer review by a respected public accounting firm. These results should, in our Opinion, be accorded the same weight and consideration as would be extended to any scholarly inquiry published by a qualified, objective investigator.

C. Persistent Inability to Achieve Merger Savings

As noted above, failure to achieve merger savings is a long standing problem. This same pattern of difficulty in achieving the claimed savings in merger cases has been documented by us, by Banks and by others in several studies. For example, in October 1978 the Secretary of Transportation issued a landmark study, "A Prospectus for Change in the Freight Railroad Industry." That report cited two Federal Railroad Administration (FRA) case studies which found that two mergers achieved only a portion of their projected cost savings. Among the Secretary's major findings, with respect to these case studies, were the following:

- The mergers achieved only a portion of their projected cost savings
- Availability of capital was a constraint on achieving the savings
- Change was restricted by the need to preserve certain service arrangements
- The merger savings were hampered by the extended period of time required to

implement the merger

Moreover, when one considers the beneficiaries of the changes, the FRA concluded

that

"... characteristically, these [changes] resulted in more advantages to the railroad company than to the rail customers."³⁸

This is a very important observation for the STB to consider in its deliberations on the current case. The data we have reviewed indicates that this pattern would repeat in the UP-SP merger as proposed.

³⁸ A Prospectus for Change in the Freight Railroad Industry, A Preliminary Report by the Secretary of Transportation, U.S. Department of Transportation, Washington, D.C., October 1978, page 92.

In this respect, the conclusions of one of the FRA studies are instructive.³⁹ The Report to FRA found that:

- Savings were over estimated by 33 percent
- Capital costs were <u>under</u> estimated by 24 percent.

The net effect of these two forces is quite predictable. <u>The merger benefits did not</u> <u>materialize as predicted</u>.

Based on our observation and analyses, this prolonged and repetitive pattern of failure to achieve the predicted merger savings will likely continue in the current case. The presumption that merger savings will be achieved is clearly <u>not</u> supported by the facts and an assumption that savings will be achieved is definitely <u>not</u> warranted.

The uncertain nature of merger savings claims is underlined by the fact that during deposition of its witnesses UP-SP revised its trackage rights costs significantly and conceded that further revisions affecting merger costs and benefits were coming. If the UP-SP merger is to be financed largely by the claimed savings, as indicated by the Applicants' Pro Forma Financial, the unresolved questions regarding the size and timing of the savings raises questions with regard to the financial viability of the consolidated entity and raises fundamental questions regarding the long-term advisability of the merger. We see two possible outcomes which would work to the decided disadvantage of the shipping public:

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Failure to achieve savings leading to service cutbacks in an attempt to reduce costs

³⁹ Analysis of N&W-Wabash-Nickel Plate Merger, Prepared for Federal Railroad ministration by Gellman Research Associates, December, 1977, page 22.

 Failure to achieve savings leading to rate increases in an attempt to increase revenue.

If the savings are not achieved, one or the other of these outcomes is probable and neither outcome would work to the benefit of the public.

III. Review of Applicants' Merger Cost and Benefit Claims.

A. Unit Costs Used By UP-SP

In computing the benefits they ascribe to the merger, the Applicants have used URCS unit costs to estimate net revenue. Thus, the accuracy of the URCS unit costs is a foundation of the accuracy of the Applicants' claimed merger benefits.

Accordingly, we have examined carefully the construction and application of the Applicants' URCS unit costs. We have identified a fundamental error in the URCS costs used by UP-SP in this case. When UP-SP revised its estimate of the costs associated with trackage rights, however, UP-SP also stated that the <u>URCS unit costs</u>, as computed by its consultant, Klick, Kent and Allen had not been revised.⁴⁰

We are both expert in the development and application of URCS. The UP-SP witness made a number of statements which are key to this crucial finding. These may be summarized in the following points:

 The process of URCS generating its unit costs is "...science or purely analytical process..." [Tr. page 85]

⁴⁰ See Transcript of the deposition of Mr. Richard F. Kauders, taken on February 29, 1996, page 85 and following.

There "...was no change" in the Klick, Kent URCS unit costs between the original filing and the revision that was distributed at the deposition. [Tr. page 109, 110]

This deposition transcript establishes that the URCS unit cost runs at issue, those produced by Klick, Kent, the "...runs that I have talked about for 1994 URCS throughout today are in the depository." [Tr. page 109]. These are the unit cost runs used by UP-SP. We have a number of difficulties with these unit costs.⁴¹

A fundamental flaw (discussed in Section III.2.b) is the impermissible exclusion of labor costs from an URCS application in which the percents variable regression results are predicated on the *inclusion* of labor costs.

The flawed unit costs on which UP-SP has based its cost estimates are similarly incorrect to varying and unpredictable degrees. As will be explained in greater detail below, these errors mean that the Econometric estimates of volume and reroute cost savings themselves are demonstrably incorrect.

The inescapable conclusion is that these UP-SP unit costs, and the conclusions Applicants base on them, are not suitable for use by the Board in its deliberations.

B. Benefits

As stated previously, a review of the Applicants' Plan is necessary for several reasons including, but not limited to, a need to try to understand how the Applicants have proposed

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- 298 -

to deal with the enormous transition and implementation problems which would confront them in the event this Application were to be approved as proposed.

Additionally, because of the probably profound economic dislocations which would occur in the event this merger were approved, it is important for the STB to understand what benefits may be derived by the public if this merger were to succeed where all others have failed. In an effort to meet these needs, we have carefully examined each merger cost and benefit claim made by the Applicants, the proposed timing of each claim, and the treatment accorded each claim by the Applicants in preparation of Appendices A through D of the Application.

As a first step, however, we have sought to establish the financial and operating condition of each Applicant through the end of 1994 (the Applicants' "Base Year"), with projections through the end of 1995, as a context which will give perspective to the Applicants' merger claims.

C. Applicants' Operating Results - 1991 through 1995.

Our summaries of actual and projected operating results for the Applicants are found in Table III.1 and presented graphically in Figures III.1 through III.4. The measures used for this portrayal are: gross operating revenues, net operating revenues, comparative income performance, and railway operating expenses.

1. Gross Operating Revenue.

As shown in Figure III.1, for the period of 1991 through a projected 1995, railroad operating revenues for both UP and SP have each grown in nominal terms.⁴² In constant 1992 dollars, however, the gross revenues for SP are projected to have fallen slightly in 1995

⁴² Gross operating revenues exclude non-operating sources such as land sales revenues.

suggesting that SP's real growth has been stagnant over the last three years. For that reason, it is surprising, given the testimony of SP's witnesses regarding its difficulties with regard to selling its services, to find that as a percentage of total U.S. Class I freight revenues, SP's efforts to improve its op_rating revenues through 1994 have been *slightly more* successful than the efforts of the UP in terms of national market share. The constant dollar data may be found in Tables III.2.

For UP it is instructive to compare revenue trends experienced in the period of 1991 through 1994 with the trends experienced during an earlier pre-MOPUP merger planning period from 1978 through 1981. During the earlier period, UP's revenues had been stagnant, beginning to fall the year before the merger was approved and failing to recover until long after the MOPUP merger was consummated. In the present instance, UP revenues have been rising steadily and strongly throughout the merger planning period. Given the strength of UP's current trends -- even before the inclusion of robust C&NW revenues -- the viability of the UP as a private sector firm is no more assured with the added revenues to be letived from the SP merger than it presently is without those revenues.


INDIVIDUAL UNION PACIFIC,	SOUTHERN PACIFIC	AND C&NW	RAILROADS
And a second			

Description	Sources	1991	1992	1993	1994	1995	1996
REVENUES, TOTALS			Nomine	(Adi Base Yr)	THE FALLEN		
Total Operating Revenues	R-1, Sch 210						
Union Pacific Railroad		4,662,956	4,788,999	4,856,068	5,167,248	5.405.248	
Southern Pacific Rall Corp.		2,445,000	2,859,200	2,742,569	2,941,527	2,943,030	
Chicago & North Western		803,033	816,456	838,903	905,342	999.542	
Totals		7,910,989	8,464,655	8,437,540	9,014,117	9.347.820	0
U. S. Total Class I	AAR 10 Yr Trends	27,845,000	28,349,000	28,825,000	30,809,000	n/a	
TOTAL RWY OPERATING EXPENSES	R-1, Sch 210						
Union Pacific Railroad		4,569,874	3,862,534	3,904,661	4,094,723	4.264.723	
Southern Pacific Rail Corp.		2,900,300	2,699,700	2,732,100	2,715,200	2,816,300	
Chicago & North Western		796,743	722,866	724,440	764,497	788.070	
Totals		8,266,917	7,285,100	7,361,201	7,574,420	7.869.093	0
U. S. Total Class I	AAR 10-Yr Trends	28,061,000	25,325,000	24,517,000	25,511,000	n/a	
NET RWY OPERATING INCOME	R-1, Sch 210						
Union Pacific Railroad		90,082	926,465	951,407	1,072,525	1,140,525	
Southern Pacific Rail Corp.		(455,300)	159,500	10,469	226.327	126,730	
Chicago & North Western		6,290	93,590	114,463	140.845	211.472	
Totals		(355,928)	1,179,555	1,076,339	1,439,697	1.478.727	0
U. S. Total Class I	AAR 10-Yr Trends	(216,000)	3,024,000	4,308,000	5,298,000	n/a	
EARNINGS BEFORE INTR, TAXES, DEPR &	AMORT						
Union Pacific Railroad	(Calc.)	527,082	1,380,965	1,421,848	1,568,106	1,651,525	
Southern Pacific Rail Corp.	(Calc.)	(330,400)	298,400	143,669	366,127	270,730	
Chicago & North Western	(Calc.)	55,097	143,995	165,212	193,368	264,472	
Totals		251,779	1,823,360	1,730,729	2,127,601	2,186,727	0
U. S. Total Class I	AAR 10-Yr Trends	2,290,000	5,344,000	6,694,000	7,756,000	n/a	

File: UPSP.WQ2

2. Railway Operating Expenses.

Operating results, in both nominal and real terms, from 1991 through end of a projected 1995 show that in recent years, both firms have continued to hold the line on costs as traffic and output increased. It should be noted, however, that regardless of SP's cost containment activities, the forecasted expense levels upon which the 1988 RGI/SPT merger was predicated, as shown in Figure II.7, have remained an unattainable goal. These data are presented graphically in Figure III.2.

Expressed in terms of a proportion of total Class I operating expenses, SP has maintained an average position at 10.7 percent (plus or minus 0.2%) of total Class I operating expenses from 1991 through 1994. By way of comparison, during this same period UP's proportion averaged 15.9 percent (plus or minus 0.3%) of total Class I operating expenses. If the variances for each company are expressed as a percentage of its average operating expense, one finds the variances are virtually identical (plus or minus 1.9%) and neither company can claim to have made any noteworthy, additional progress in controlling costs since 1991.

3. Net Railway Operating Revenues.

Net railway operating revenues (which exclude non-operating incomes) for both UP and SP can be seen in Figure III.3 to have been following similar trend paths until 1995, the year the merger was announced. Even if SP's \$112.6 million 1995 special charge is excluded, its net railway operating income is projected to have fallen in 1995.⁴³ Judging from 1995's projected poor results, SP's efforts to hold it costs have been inadequate.

⁴³ The SP Prospectus shows the special charge to be \$65 million, whereas its Form 10-Q filed with the Securities and Exchange Commissions states the special charge to be \$112.6.

Arguably, the roots of this failure may be traced back to the time that SP languished in the SF's voting trust.⁴⁴ At various times, the trust was managed by one or another of two banks, neither of which had any experience managing railroads. As the Commission observed, going into the SF trust, SP was a strong company -- for that time. But since its emergence from the trust, the SP has never demonstrated any of its former vitality.

⁴⁴ Pursuant to the Commission's cease and desist order of December 14, 1983, the SPT was placed in an irrevocable, independent voting trust which allowed the holding companies, Santa Fe Industries, Inc. And Southern Pacific Co., to consummate their merger on December 23, 1983. The SPT remained in that trust until the RGI control order was consummated in 1988.



Figure III.2

- 305 -

INDIVIDUAL UNION PACIFIC, SOUTHERN PACIFIC AND C&NW RAILROADS

Description	Sources	1991	1992	1993	1994	1995	1996
REVENUES, TOTALS			Constant 1	995 Dollars		(Adj Base Yr)	THE OWNER OF THE
Total Operating Revenues	RCAF =	91.8	92.7	95.0	96.8	100.0	
Union Pacific Railroad		5,078,112	5,167,330	5,111,900	5,335,369	5,405,248	
Southern Pacific Rail Corp.		2,662,685	3,085,077	2,887,056	3,037,232	2,943,030	
Chicago & North Western		874,529	880,956	883,099	934,798	999.542	
Totals		8,615,326	9,133,363	8,882,054	9,307,399	9,347,820	0
TOTAL RWY OPERATING EXPENSES							
Union Pacific Railroad		4,976,742	4,167,674	4,110,370	4.227.948	4,264,723	
Southern Pacific Rail Corp.		3,158,522	2,912,976	2,876,035	2,803,541	2.816.300	
Chicago & North Western		867,679	779,972	762,606	789,371	788,070	
Totals		9,002,943	7,860,623	7,749,011	7,820,860	7,869,093	0
NET RWY OPERATING INCOME				· · ·			
Union Pacific Railroad		101,369	999,656	1,001,530	1,107,421	1,140,525	
Southern Pacific Rail Corp.		(495,837)	172,101	11,021	233,691	126,730	
Chicago & North Western		6,950	100,984	120,493	145,428	211,472	
Totals		(387,617)	1,272,740	1,133,044	1,486,539	1,478,727	0
EARNINGS BEFORE INTR, TAXES, DEPRC & AMOR	т.						
Union Pacific Railroad		535,369	1,454,156	1,471,971	1,603,002	1.651.525	
Southern Pacific Rall Corp.		(370,937)	311,001	144,221	373,491	270,730	
Chicago & North Western		55,657	151,389	171,242	197,951	264,472	
Totals		220,090	1,916,545	1,787,434	2,174,443	2,186,727	0

File UPSP.WQ2

Page: UP_CONSTINC

4. Comparative Income Performance.

Figure III.4 displays the effect of SP's asset write-down on railway operating earnings. However, one can also see that UP's railway earnings before interest, taxes, depreciation and amortization ("EBITDA"), while significantly higher than SP's, is not growing at a rate that is projected to be significantly greater than the growth rate demonstrated by the SP. For all practical purposes, SP's real earnings growth rate has stagnated.

5. The Railroad Industry in 1995.

a. Traffic Trends.

Exhibit 3 develops a pro forma projection of the results of operations for 1995 for both UP and SP. As Exhibit 3 shows, the projected operating income for SP is well below that for UP. Regardless of the problems that SP may be experiencing individually, the railroad industry as a whole has become a robust, vital member of the private sector of the economy. On the whole, most railroads are seeing continuing gains in car loadings across a broad base of traffic lines. Many of these gains have come from trucking companies shifting to increased use of intermodal services to preserve market share in the face of increasing driver shortages, fuel prices and equipment regulation.⁴⁵ Additional gains have come from the strong growth in the demand for low sulphur Western coal by Eastern utilities faced with tough Clean Air Act restrictions.⁴⁶ Last, other bulk commodities, such as grains, have remained strong.

- 307 -

⁴⁵ Trucking industry officers predict a shortage of 200,000 long-haul drivers by the year 2000.

⁴⁶ USA Today, 10/7/94.

In 1993, railroads moved 54% of all coal mined in North America -- approximately 523 million tons.⁴⁷ The next year, 1994, became the largest year in history for coal car loadings at almost 6 million carloads originated. Coal now accounts for approximately 40% of the railroad industry's total business.

⁴⁷ Source: National Mining Association, Facts About Coal 1994, page 49.

SEPARATE UP - SP RAILROADS Net Operating Revenue



Figure III.3



- 310 -

Figure III.4

Strong gains, however, have not been limited just to coal. Through December 30, 1995, total car loadings for all commodities were up 2.4% over 1994.⁴⁸ 1995's continuing revenue growth follows a 1994 total freight revenue increase of 6.9% over 1993. It is not surprising, then, that with these continued revenue increases, Class I railroad stocks have appeared on almost everybody's "buy" list.

But with this newly found prosperity has come increasing pressure from the shipping community for further performance improvements -- particularly with on-time reliability -and from the stock markets to keep increasing shareholder value. So regardless of the recent strength of the industry, continuing economic demands have forced Class I railroad managers to look even harder for more efficient ways to run their businesses and utilize their assets.

b. Performance Trends.

As a complement to the recent gains in traffic volumes and revenues summarized above, the railroads have also been doing a better job of delivering the service they sell. Aggressive use of new technology has not only permitted the industry to cut investment and employment but also improve performance and achieve on-time delivery rates of between 90% and 95%. Diverse new technological applications have addressed a myriad of operating problems from quicker stops for heavy, fast trains to computerized routing and track monitoring.

However, these successes notwithstanding, problems continue to test the industry's "Interline Service Management" (ISM) system. The ISM system is intended to respond to shipper demands for an easy and speedy passage of goods from one carrier to another. The

⁴⁸ Railway Age, February, 1996, pg. 1, citing the Association of American Railroads.

big customers in particular want ever greater on-time reliability and a "seamless" transfer of their freight between carriers and transportation modes.

Two important shippers have even complained publicly about a perceived "deterioration" of service.⁴⁹ Clearly, the railroads have not yet progressed far enough to tolerate even small distractions from their goals.

Further, for the first time in decades, the railroads are facing severe capacity limitations that restrict the traffic volumes which can be handled economically. Such physical challenges raise issues that no one in today's generation of railway managements has ever dealt with. In order to continue this growth, the industry must now confront the daunting task of increasing capacity in an industry that has historically had a difficult time of earning its cost of capital. Specifically, how can capacity be increased without slowing -- or even reversing -- recent gains in increased shareholder value?⁵⁰

c. Capacity Trends.

For the first time in more than two generations, railroads are investing heavily in increasing mainline track capacity. For example, in 1994 and 1995, all Class I railroads were either building new, or restoring previously removed, second and third mainline tracks, and for the first time since before the Great Depression of the 1930's, new 4th mainline trackage was built for the exclusive use of freight trains.⁵¹ The railroad industry spent more than \$200 million in 1994 on *new* track and infrastructure and even more was expected to be

⁴⁹ Progressive Railroading, July, 1995 and Railway Age, May, 1995.

⁵⁰ Progressive Railroading, July, 1995.

⁵¹ 3.3 miles of UP mainline located west of North Platte, NE. Progressive Railroading, 1995.

invested in 1995.⁵² This amount does not include investments in bettering existing tracks and infrastructure.

Similarly, 1994 was the best year in a decade for buildings of rail equipment. For some builders, business was up by more than 50% in 1994.⁵³ Railroads are hiring train and engine crews for the first time in 10 years. The locomotive fleet is growing at the fastest pace in 15 years. And 1994 saw the first increase in the freight car fleet since 1980.⁵⁴

There can be no doubt that the Staggers Act has achieved its stated purposes with regard to the railroad industry as a whole. However, does the present Application offer the best, or only, solution consistent with public policy goals of the Staggers Act. We submit there is a better solution than that proposed by the Applicants but in order to understand the comparative merits of the proposals, one must first understand the strengths and weakness of the present Application.

6. Review and Analysis of Applicants' Appendix A, "Summary of Benefits."

Pursuant to applicable regulations, the Applicants have filed a "Summary of Benefits" in appendix A to their Application (the "Summary").⁵⁵ For convenience, the Summary is reproduced below as Table III.3. In addition, Table III.3 offers totals for both annual and onetime costs and savings for the entire five-year post-merger period as reported by the Applicants.

53 Traffic World, 2/13/95.

54 Railway Age, April. 1995.

⁵⁵ Railroad Merger Application ("Application"), F.D. No. 32760, Vol. 1, pg. 93.

⁵² Progressive Railroading, March, 1995.

30-Nov-95

SUMMARY OF BENEFITS

UNION PACIFC RAILROAD, ET AL -- CONTROL & MERGER -- SOUTHERN PACIFIC RAIL CORP.

Finance Docket No. 32700 (\$Thousands)

Annual

5.,232

222.973

8,674

102,822

116,070

451,560

63,585

515,145

568,377

821

DESCRIPTION

NET REVENUE GAINS: (A)

OPERATING BENEFIT8:

Labor Savings Non-Labor Savings

- Car Utilization
- Communications/Computers
- Operations
- General & Administrative
- **Total Operating Benefits**

Employee Relocation Expense Labor Protection/Separation (b)

SHIPPER LOGISTICS SAVINGS TOTAL COSTS AND SENEFITS:

314

Excluding revenue gains

All inclusive

YEAR 1							
Annual	One-Time	Total					
22,814		22,814					
90,585		90,585					
3,803		3,803					
(11,861)	(82,479)	(94,340)					
46,501	(529,947)	(483,446)					
110,797	139,805	250,602					
239,825	(472,621)	(232,798)					
	(26,594)	(26,594)					
	(107,411)	(107,411)					
27,251		27,251					
267,076	(606,628)	(339,550)					
289,890	(606,626)	(316,736)					

YEAR 2			YEAR 3	
One-Time	Total	Annuel	One-Time	Total
	53,232	60,836		60,836
	222,973	255,194		255,194
	8,874	10,142		10 142
(27,716)	(26,895)	26,997	(2,960)	24 037
(394,951)	(292,129)	130,467	(266,539)	(136.072)
35,300	151,370	125,245	62,300	187.545
(387,367)	64,193	548,045	(207,199)	340,846
(44,742)	(44,742)		(3.914)	(3.914)
(67,251)	(67,251)		(11,926)	(11,926)
	63,585	72,669		72,669
(499,360)	15,785	620,714	(223,039)	397,675
(499,360)	69,017	681,550	(223,039)	458.511

DESCRIPTION

NET REVENUE GAINS: (A)

OPERATING BENEFITS:

Labor Savings Non-Labor Savings Car Utilization

Communications/Computers Operations

General & Administrative **Total Operating Benefits**

Employee Relocation Expense Labor Protection/Separation (b)

SHIPPER LOGISTICS SAVINGE TOTAL COSTS AND BENEFITS:

Excluding revenue gains All Inclusive

File. RECONCIL WO2 Page BENE SUMM 23-Mar-96

YEAR 4				YEAR 5		Normal		
Annual	One-Time	Total	Annual	One-Time	Total	Annual	To	T
68,441		68,441	76,045		76,045	76.045	281.368	t
258,390		258,390	201,150		261,150	261,150	1,088,292	
11,409 21,719 144,122	(1,223) (124,960)	11,409 20,496 19,162	12,677 14,214 157,756	9,905	12,677 14,214 167,661	12,677 14,214 157,756	46,905 51,890 581,668	
573.610	(126.183)	447 427	137,970	0.005	137,970	137,970	628,052	_
	(1,726)	0 (1.726)	505,707	9,905	0 0	583,767	2,396,807 0 0	
81,752		81,752	90,836		90,836	90,836	336,093	
655,362	(127,909)	527,453	674,603	9,905	684,508	674 603	2 722 000	-
723,803	(127,909)	595,894	750,648	9,905	760,553	750,648	3 014 268	-

Note a: Net of additional costs of handling increased traffic.

Note b: Labor protection payments should be reclassified as an annual expense to be consistent with Applicant UP's treatment in F.D. No. 30000.

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-
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One-time

0

0

0 (114.378)

(1,306,492)

(1,183,465)

237,405

(75,250)

(188,314)

(1.447.029)

(1.447.029

0

The effects of the Applicants' claimed merger benefits on forecasted results of operation are shown in Figures III.5 through III.7. Forecasted operating results were taken from Applicants' pro forma financial statements ("Pro Formas") as given the Application.⁵⁶ In Section III.3, we discuss some methodological problems with the Applicants' Pro Formas, but we have assumed here that those problems do not impact the pro forma income statement. For the reader's convenient reference, the data are attached hereto as Exhibit 4.

a. General Issues.

Before undertaking our discussion and analysis of the UP-SP Summary, there are three general points that need to be understood:

- First, the Summary makes no distinction among the accounting treatments that may be appropriate for the various component cost and benefit claims. In particular, operating income and expense items are mixed indiscriminately with capital, or balance sheet, items.
- Second, the Summary draws on a mixture of analytical techniques. Some cost and benefit claims are derived from engineering studies, while other elements depend upon Econometric modeling techniques. Mixing techniques can, if one is not very careful, result in double-counting some savings or costs elements and/or omission of others.
- And last, the Applicants provide no coordinated schedule of investment and savings timings and recognition of some savings may precede the investment upon which that savings is dependent.

56 Application, Vol. 1, pp. 95 through 152.

b. Net Revenue Gains.

For the purposes of our statement, we have accepted *arguendo* and without extensive comment the Applicants' gross revenue projections as presented in their work papers.⁵⁷ Our use of these projections must not be interpreted or construed as an acceptance of either the Applicants' traffic or revenue projections. We have serious concerns and reservations with estimates of merger revenue gains in general and with the Applicants' estimates in particular. We have already shown in this statement that merging entities typically fail to achieve the forecast revenues. We have cited specific instances where this Applicant has failed to achieve its forecast revenues. We expect that to occur again if this merger is approved.

Having stated that, however, we are using the Applicants' traffic and revenue projections as a matter of convenience and to simplify comparison of our conclusions with those of the Applicants.

⁵⁷ Applicants' Work papers, p. CO3-300083 and CO2-100012 - CO2-100013.



- 317 -

Figure III.

UI



(1) URCS Unit Cost Determinations.

The composite unit costs of handling the subject traffic were determined using a combined UP, SP and C&NW Uniform Railroad Costing System ("URCS") cost model application that was predicated on the Form R-1 Annual Reports to the Commission filed by each of the foregoing carriers.⁵⁸ There are two versions of the Applicant's composite unit cost factors: the customary, all-inclusive model,⁵⁹ and a separate version in which labor costs have been "excluded" by setting the labor expense inputs to Collectively, these files are referred to hereinafter as the "URCS Files."

REDACTED

The Applicants' principal cost analyst, Richard D. Kauders, did not file a separate Verified Statement, but his deposition was taken on February 29, 1996 in Washington, D.C. and is referred to hereinafter. Western Rail Properties is the Class II railroad created by C&NW and Union Pacific to compete with BN for Powder River Basin coal traffic. According to Witness Kauders, Western Railroad Properties, Inc. ("WRPI") is not included in either of the URCS files.

However, it was determined that several changes have been made (and perhaps are still being made) to the Applicants' unit costs. Among other effects of these pending changes has been an increase in the revenue-to-cost ratios that were imputed to the BNSF trackage rights agreement. On a weighted average basis, the revised cost estimates show the Applicants' proposed trackage rights fees will cover between 171% at the 3.0 mill rate, to

- ⁵⁹ Found in the Applicants' computer file labeled "UPSPCN94" on disc CO4-300508.
- ⁶⁰ Found in the Applicants' computer file labeled "94NOLABR" on disc CO4-300598.

⁵⁸ Application, V.S. Draper and Saltzman, Vol 1, pg. 365. *Application*, V.S. R.E. Peterson, Vol 2, pp. 299-301. Applicants' Work papers, pp. CO4-300394 - CO4-300446, CO2-100005 - CO2-100006, and Applicants' computer disc labeled CO4-300508.

177% at the 3.1 mill rate, or 199% at the 3.48 mill rate.⁶¹ Further, Witness Kauders confirmed that there is an error in both URCS Files attributable to the Applicants' inadvertent omission of incremental locomotive gross ton miles associated with the projected handling of the incremental traffic. The Applicants, at the time of the deposition, were still preparing revised URCS Files to remedy this defect, and errata and revisions were subsequently filed.

It should be noted that the Applicants' URCS unit costs continue to be clouded by the errors we pointed out earlier in this statement, and which we discuss further in the next section. Accordingly, these errors continue to be transmitted into the Applicants' revised analyses.

(2) Exclusion of Labor Expenses.

An example of the difficulties encountered when attempting to mix cost finding methodologies is observed in the Applicants' procedure used to generate unit costs which exclude labor costs. Since the Summary treats "Net Revenue Gains," "Labor" and "Non-Labor" benefits separately, it is necessary to remove labor from the URCS applications used to estimate non-labor savings to avoid a double-count of labor expense. The Applicants' objective was proper, but their execution is flawed. One cannot simply zero the labor expenses to construct a valid non-labor cost model. To do so causes serious analytic problems.

URCS is similar to its predecessor Rail Form A ("RFA") in its basic methodology of applying statistical analysis to individual expense accounts in order to provide a tool for

⁶¹ Application, V.S. of J.H.Rebensdorf, Vol. 1, pg. 306 as modified in Kauders' workpapers, pp.CO4-700001 - CO4-700056.

allocating expenses to an individual process. The URCS, however, provides a significant advance over RFA by allowing for different "percents variable" on an individual railroad basis for expense allocation purposes. The value of the percent variable is used to show either the percentage change in a cost level that will occur relative to a given change in actual output level or, conversely, to allocate a given cost level to one or more activity measures.

In its elementary form, URCS applies a "standard" multi variate linear function to each of the URCS expense categories to determine a relationship between total costs at each level of output and variable costs at each such output level. If the "true" cost relationships are linear over the range of interest -- which we assume they are -- then estimates of total variable cost can be made for specific transportation movements. The Applicants' use of the URCS model is theoretically sound, provided that there are no attempts to apply the model in ways it was not intended to be used.

A question arises in the use of the URCS when modifications are made to expense account aggregations. The percent variables were estimated by including all elements of variable expense. If one arbitrarily fixes a single, large group of component expenses at zero, then the apportionment of expenses between fixed and variable expenses has shifted. Similarly, the total variable portion of costs has been redefined by this shift and the former analytical relationship between total variable expense and variable (or marginal) costs is fundamentally altered, as is the resulting unit cost estimate.

Percent variable coefficients may appear to be linearly distributive across the total ariable cost expression, but the contributions of each constituent expense component to the gression process that derived the value are definitely not distributive. Simply put, computations produce a different result when performed on the combined total as compared to the same computations performed on the parts making up that total.

It has been shown theoretically that if percent variable values from a standard URCS regression equation are applied to a segmented cost aggregation (i.e., an aggregation which *excludes* elements such as labor that affected the determination of that initial percent variable value), then two errors will be made.⁶²

- First, the percent variable estimates for the segmented expense aggregation will be incorrect and biased in an unknown direction by an indeterminate amount.
- Second, application of the biased percent variable values to segmented expenses will produce unit cost estimates that are biased in an unknown direction by an indeterminate amount.

While the analysis may be a bit complex, the conclusion is crystal clear. In practical terms:

- The UP-SP calculation of its unit costs for use in this case is incorrect;
- The resultant unit costs are incorrect; and
- The findings based on them are incorrect.

This single error clouds the Applicants' URCS unit costs and all of the results drawn from those unit costs.

⁶² Bereskin, C.G., Memorandum to Witness Darling, St. Ambrose University, College of Business, Bettendorf, LA (March, 1996).

Should the assumption of fixed, zero expense be arbitrarily imposed, as it is in the present Application, then biases in both the percent variable and unit cost estimates will cause biases in the resultant variable cost estimates.

Further, depending on the "true" relationship among the labor and non-labor expenses and output (which determination has not been introduced by the Applicants) the resultant biases will also be of unknown direction. Such an unsound process must create doubt on all estimates of variable cost resulting from the improperly specified model. Expressed metaphorically, you can't take the tomatoes out of the sauce and still sell it as tomato sauce.

(3) UP-SP Multi-modal Model System Output Forecasts.

The Applicants forecast that the merged company will garner certain traffic gains, net of identified losses resulting from the settlement agreement with BNSF. The Plan postulates an operating network (routes, schedules, blocking, and the like) that will emerge when the Applicants consolidate their operations.⁶³

As described by Witnesses King and Ongerth, the Applicants used a so-called "Multi Modal" network modeling system (a proprietary computer model).⁶⁴ As shown in the attachments to Mr. Kauders' memorandum to Witness Mark Draper dated November 19, 1995,⁶⁵ the presumed outputs from this model were used by Witness Kauders to estimate both the variable cost of handling incremental traffic volumes and certain other elements that will be discussed below. The unit cost factors determined from the URCS model are then

Applicants Workpapers, pp. CO4-300394 to CO4-300446.

⁶³ Application, Exhibit 13, UP/SP Operating Plan, Vol. 3, pp. 103 et seq.

⁶⁴ *Ibid.*, pp. 21 - 22 and pp. 112 - 114.

applied to the output statistics generated by the Multi Modal model to estimate the variable costs of handling forecasted incremental traffic.

The analytical concept adopted by the Applicants is basically sound. However, in addition to the problems already identified with regard to unit cost estimation, there is another, independent set of problems with the forecasted output statistics. The output statistics used by Kauders to estimate total variable costs do not demonstrate reasonable -- cr even rational -- functional behavior.⁶⁶

⁶⁶ Applicants' Workpapers, pp. CO4-300396 to CO4-300397.

DESCRIPTION	RR - Ld	PVT - Ld	RP - Empty	PVT - Empty	Totals		Combined
					Loaded	Empty	Totals
Volume-Based Changes							
Car Hours	4,730	(196)	(476)	(2.250)	4,534	(2.726)	1,808
Car Days	197	(8)	(20)	(94)	189	(114)	75
Car Miles	561,313	413,104	323,571	91,792	977,417	415,363	1,392,780
1st Elfference: miles/hour	118.7	-2123.0	-679.8	-40.8	215.6	-152.4	770.3
Rerouta-Eased Changes							
Car Hours	(15,253)	(27,105)	(20,693)	(8,881)	(42,358)	(29,574)	(71,932)
Car Days	(636)	(1,129)	(862)	(370)	(1,765)	(1.232)	(2.997)
Car Miles	(265,872)	(214,486)	(206.642)	(128,273)	(480,358)	(334,915)	(815,273)
1st Difference: miles/hour	17.4	7.9	10.0	14.4	11.3	11.3	11.3
Net Changes							
Car Hours	(10,523)	(27,301)	(21,169)	(11,131)	(37,824)	(32,300)	(70,124)
Car Days	(438)	(1,138)	(882)	(464)	(1,576)	(1.346)	(2.922)
Car Miles	295,441	201,618	116,929	(36,481)	497,059	80,448	577,507
1st Difference: mlles/hour	-28.1	-7.4	-5.5	3.3	-13.1	-2.5	-8.2
Volume-Based Changes					.]		
Car Hours	104.32%	-4.32%	17.46%	82.54%	250.77%	-150.77%	100.00%
Car Days	104.32%	-4.32%	17.46%	82.54%	256.77%	-150.77%	100.00%
Car Miles	57.43%	42.57%	77.90%	22.10%	70.18%	29.82%	100.00%
Reroute-Based Changes		1			V		
Car Hours	36.01%	63.99%	69.97%	30.03%	58.89%	41.11%	100.00%
Car Days	36.01%	63.99%	69.97%	30.03%	58.99%	41.11%	100.00%
Car Miles	55.35%	44.65%	61.70%	38.30%	58.92%	41.08%	100.00%
Net Changes							
Car Hours	27.82%	72.18%	65.54%	34.46%	53.94%	46.06%	100.00%
Car Davs	27.82%	72.18%	65.54%	34.46%	53.94%	46.06%	100.00%
Car Miles	59.44%	40.56%	145.35%	-45.35%	86.07%	13.93%	100.00%
File: RECONCIL WQ2	Source: A	pplicants' workp	apers pg. C04-30	0400			

Proposed Merger of Union Pacific Corp, et al and Southern Pacific Rail Corp. et al

File: RECONCIL.WQ2 Page: VOL. COSTS.4

Proposed Merger of Union Pacific Corp, et al and Southern Pacific Rail Corp. et al

File: RECONCIL.WO2

Applicants' Estimations of Costs to Handle Increased Volumes

Page: VOL COSTS.3

Source: Applicants' Workpapers pp. C04-300396 thru 300412

Lin	9	Performance	Firet Difference					
LNO		Statistic	per GTM(C)	per TM	per LUM	Der CM	00101	
	VOLUME BASED CHANGES RUNNING				and and all the search and the		PERCEON	
	Gross Ton Miles	99,019,000		(12,707.7772)	1,313.5698	71 0945	569 0470	
	Diesel Fuel (Gallons)	193,400	0.0020	(24.8203)	2.5656	0.1389	1 1112	
	Train Miles	(7,792)	(0.0001)		(0.1034)	(0.0056)	10 04481	
4	Car Miles - Private	507,896				(0.0000)	(0.0440)	
0	Car Miles - Railroad	884,884						
6	Car Miles - Total	1,392,780	0.0141	(178.7449)	18.4764		8 0007	
1 1	Car Hou's - Private	(2,446)					0.0027	
8	Car Hours - Railroad	4,254						
9	Car Hours - Total	1,808	0.000	(0.2320)	0.0240	0.0013	0.0104	
10	Horsepower Miles	231,120,000	2.3341	(29,661.1910)	3,066,0000	165 9415	1 327 0782	
11	Locomotive Unit Miles (000)	75,382	0.0003	(9.6742)		0.0541	0.4221	
12	VOLUME BASED CHANGES - TERMINAL				•	0.0041	0.4331	
13	Car Houla - Privite	1,255,680					7 2140	
14	Car Hours - Railroad	3,738,984					21 4838	
15	Car Hours - Total	4,994,664					28 6085	
16	Car Loads Orig/Recvd	174,039					20.0505	
17	Switch Engine Minutes	1,163,804					6 6970	
18	Cars Loaded & Unloaded TCU/MVU	229,730					1 3200	
19	REROUTE-BASED CHANGES RUNNING						1.5200	
20	Gross Ton Miles	(54,892,000)		(2,838.5562)	828.1284	67 3296	(315 4006)	
21	Diesel Fuel (Gallons)	(70,122)	0.0013	(3.6261)	1.0579	0.0860	(0 40201	
22	Train Miles	19,338	(0.0004)	1.0000	(0.2917)	(0.0237)	01111	
23	Car Miles - Private	(342,759)				(0.0201)	v	
24	Car Miles - Railroad	(472,514)						
25	Car Miles - Total	(815,273)	0.0149	(42.1591)	12,2996		(4 6844)	
26	Car Hours - Private	(35,986)					(4.0044)	
27	Car Hours - Railroad	(35,946)						
28	Car Hours - Total	(71,932)	0.0013	(3.7197)	1.0852	0.0882	11.11221	
29	Horsepower Miles	(203,228,000)	3.7023	(10,509,2564)	3.066.0000	249 2760	(1 167 7153)	
30	Locomotive Unit Miles	(66,284)	0.0012	(3.4277)		0.0813	(0.3800)	
31						0.0015	(0.0009)	
32								
33	,							
34				14				
35			1.1					

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Table III.4.

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Using applied mathematical techniques of finite difference analysis to the output data,⁶⁷ as shown in Table III.4.1 and III 4.2, it was demonstrated that the network model's results are illogical. For example, according to the model, for each additional loaded car mile of a loaded, railroad-owned freight car that is added to the new system, the time online will increase by only seconds -- a first difference of 118.7 miles per hour.⁶⁸

Even more remarkable is the behavior of incremental loaded, privately owned freight cars. For private cars, each additional car mile operated *reduces* the time on line by seconds -- a first difference of -2,123 miles per hour. Similarly confounding results are found for the first difference of almost every other output variable.

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Simple analyses of output variables used by UP-SP to estimate total variable costs yield improbable -- even irrational -- results. These analyses again undermine the data put forth by UP-SP to describe the costs and benefits of its merger.

As noted above, first approximations of the first derivatives of almost every output variable used by Witness Kauders to estimate total variable costs yield improbable and irrational results⁶⁹. The Applicants have offered no theory to explain the aberrant behavior of the output predictions and we know of no mechanism that would cause the total variable costs of a finite traffic increment to exhibit the behavior demonstrated by the Applicants'

67 Ibid., pp. CO4-300399 to CO4-300400.

⁶⁸ For a discussion of the calculus of finite differences and the computation of approximate derivatives of functions known only in tabular form for selected values of the independent variables, see texts such as, Pipes, L.A., *Applied Mathematics for Engineers and Physicists*. Chapter 10, McGraw-Hill Book Co., New York (1958) or Kapalan W., *Advanced Calculus*, pp. 136 et seq., Addition-Wesley Publishing Co., Reading, MA (1956).

⁶⁹ For example, a first difference is the slope of the chord connecting any two finite points of observation. It is only a first approximation of the first derivative. The first derivative of distance with respect to time, for example, is speed.

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model. Simply put, how can GTM increase by million gross-ton-miles, while LUM increases only by unit-miles and TM decreases by train miles?⁷⁰

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To put the Applicants data into railroad operating terms, the trains are getting heavier, the locomotive power per gross ton mile is falling and the number of trains is decreasing. Simply put, this does not add up.

The only conclusion supportable by the data is that there are profound errors in the \pplicants' network model. Consequently, the Applicants forecast of the net revenue gains is fatally flawed. The flaws come from the use of nonsensical incremental cost estimates.

Evidently, these cost results are not merely poor approximations; the Applicants' total variable cost forecasts are predicated on;

- unit costs containing unknown biases of indeterminate magnitudes,
- applied to inconceivable output statistics,
- to obtain results that can be described only as unbounded fantasy.

We submit the Applicants variable cost forecasts are totally worthless and of no probative value whatsoever to anyone - including the Applicants.

(4) Total Variable Cost Calculations.

The Applicants claim net revenue gains of \$76,045,000 per Normal Year and a total of \$281,268,000 in the first five years following consummation of the merger.⁷¹ These

⁷⁰ See Appendix A Page 92, Volume I of UP-SP Application and Applicants' Workpapers, pg. CO4-300396. Note: to obtain the LUM change, one must divide the "Horsepower Miles" number appearing on this workpaper by Applicants' average horsepower per unit of 3,066 hp per locomotive unit found on workpaper page CO4-300411.

⁷¹ Applicants' Workpapers, pg. CO4-300083.

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claims are predicated on gross revenue gains, net of settlement and other losses, amounting to \$233,700,000 per Normal year or \$864,690,000 over the first five years. As demonstrated above, however, the Applicants' claimed incremental costs of per Normal year, or over the five year transition period -- before reroute economies -- are unsupported by any credible evidence. Further, the Applicants' workpapers show the Applicants calculated total incremental variable costs using unit cost factors which excluded labor and then added back a separate Train Mile-Crew labor cost factor.⁷² This total incremental variable cost estimation procedure introduces a *third* hybrid cost application of equally serious analytical dubiety.

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The Problem

While we have identified serious problems with the Applicant's unit costs, a proper reestimation of the Applicants' composite URCS regression analysis excluding labor is not possible.

A Solution

We respectfully submit that, regardless of the obvious procedural and theoretical infirmities, a more useful and reliable, base year expense number may be obtained by using the Applicants' base year weighted average operating ratio. From the Applicants' Base Year pro forma income statement consolidation, the average operating ratio is found to be 82.1%.⁷³ This implies that the forecasted, incremental operating expense incurred by the average company attributable to the net traffic gains -- before reroute economies -- is closer

⁷² Applicants' Workpapers, p. C04--300405.

⁷³ Applicants' Workpapers, pg. N03-000354.

to \$191. 9 million per Normal Year, or approximately \$709.9 million over the five year implementation period.

c. Labor Savings Claims.

When Applicants' labor savings claims were reviewed carefully for support from the workpapers and other sources cited by the Applicants. Once again, we found claims and assumptions that simply do not add up.

The Summary claims labor savings which total about \$1.1 billion over five years. For the aggregate sum of "Agreement" and "Non-Agreement' positions presently staffed (or authorized but not filled) by the Applicants, the Applicants Labor Impact Exhibit⁷⁴ Identifies approximately 4,909 positions to be abolished, 1,522 positions created, and roughly 2,950 positions to be transferred, subject to further negotiations with affected labor organizations. Up to a point, the workpapers provided by the Applicant support the savings recited in the Summary.⁷⁵

⁷⁴ Application, Labor Impact Exhibit, Vol. 3, pp. 407 through 422.

⁷⁵ Applicants' Workpapers pp. CO4-300379 through CO4-300382.

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Reserves and the second second			and Souther	n Facilic Mail	CORD. et al



A Manual Procession of the Second Second		Source: Applice	"Estimated Li	abor Coste and	Savinge				23-Mar-96
Description	Pre-Merger Totals (1994)	Abolished	Created	Transferred	Post-Merger Totals	Average Ci Wages	Enge	Total	Page 1 of 2 Total
REEMENT POSITIONS Blacksmiths Bollermakers	Ŧ					(1994)	Benefits	Compensation	Fringe Benefits

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Page LABOR 2

1

A

Carmon

Clerks

Dispatchers

Electricians

Leborere Machiniste

Signalmen T&E Positions

Ya dmastere

23 TOTAL POSITIONS CALCULATED CHANGE IN COMPENSATION

Maintenance of Way Railway Supervisors Sheet Metal Workers

Enginemen

Trainmen

Total T&E

No Agreement Total No Agreement

Total Agreement NON-AGREEMENT POSITIONS

Line No.

2

4

5

8

7

8

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10 11 12

13 14 15

10

17

18

10

20

21

Line	Description	
No.		
1	AGREEMENT POSITIONS	
2	Blacksmiths	
3	Boltermakers	
4	Cermen	
5	Clerke	
6	Dispatchers	
1	Electricians	
8	Laborera	and the second s
9	Machinists	
10	Maintenance of Way	
11	Rellway Supervisore	
12	Sheet Metal Workers	
13	Signalman	
14	T&E Positions	
15	Enginemen	
16	Trainmen	
17	Total T&E	
18	Yardmasters	
19	Total Agreement	
20	NON AGREEMENT POSITIONS	
21	Non-Agreement	
22	Total Non-Agreement	
23	TOTAL POSITIONS	

However, as shown in Table III.5, if one takes the stated compensation rates for the various I.C.C. Employee Classes, which are extracted from the Applicants' composite Wage Form A&B,⁷⁶ and applies those rates to the positions identified for abolishment, the total annual labor savings, including fringe benefits, in a "Normal" year is , or about \$5,071, 160 less than the total "Normal" year savings claimed in the Summary.

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Over the five year implementation period the total labor savings claimed by the Applicants appear to be overstated by about \$78.6 million.

Further, if one applies the rates established by the Applicants for employee severance to the positions identified in the Labor Impact Exhibit as being subject to reduction,⁷⁷ and then adds the products for each I.C.C. Employee Class, we find more disturbing errors:

The total severance cost over the five year implementation period is \$370,719,312 - or approximately \$223,717,000 more than the Applicants show in Appendix B.

The severance rates we extracted from the Applicants' work papers and used here are consistent with and supported by the experience of Applicant UP in reducing employment following its absorption of the C&NW.⁷⁸

In summary, when one attempts a careful reconciliation between the composite Wage Form A&B, the compensation and severance rate, and the Labor Impact Exhibit, the overstatement of net savings totals approximately \$300.3 million over five years.

⁷⁷ Applicants' Workpapers, pg. C04-300383.

⁷⁸ Applicants' Workpapers, pp. HC32-000203 and HC32-000208.

⁷⁶ Applicants' Workpapers, pp. C04-300387 through C04-500392.

In addition, the Applicants employee relocation forecasts would seem to comport with both the numbers of people projected to be relocated and the assumed average costs for such relocation.

Finally, the Applicants claim to create new jobs in the future at the cumulative rate of million per year⁷⁹. We have found no explanation for this claim.

d. Non-Labor Savings Claims.

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Over the five-year implementation period, the Applicants' non-labor savings claims total approximately \$1.9 billion, or roughly 64% of all claimed savings for the period. As seen in Table III.6, the one-time costs incurred over the same period to obtain these benefits total about \$1.2 billion. For presentation purposes, non-labor costs and benefits are separated by the Applicants among four categories labeled "Car Utilization,"

"Communications/Computers," "Operations," and "General and Administrative." Within each of the major categories of Operations and General and Administrative the Applicants have identified numerous individual projects. We discuss each of these categories in the following pages and a detailed critique of each project may be found in our Exhibit 5 attr .ed hereto.

(1) Car Utilization.

As used by the Applicants, the category labeled "Car Utilization" is misleading. The Applicants' discussion of "Equipment Availability" (pertaining only to freight cars, however) is found at page 85 et seq. of King and Ongerth's V.S.⁸⁰ The Applicants' Witnesses identify three areas of freight car benefits:

⁷⁹ Applicants Workpapers, pp. C04-300379 through C04-300382.

⁸⁰ Application, Vol. 3, pp. 85-87.

- 1. Matching Seasonal Utilization patterns
- 2. Eliminating Cross-Hauls.
- More Efficient Operations.⁸¹

However, the only car utilization savings identified and claimed separately in the Summary are those attributed to mitigation of seasonal low utilization patterns (item 2, above).⁸²

Witnesses King and Ongerth claim car savings of about million annually.⁸³ Examination of Applicants' workpapers show that this savings is attributed to the elimination of leased cars.⁸⁴ However, there is no support for or source of the number cited or found in the workpapers. REDACTED

81 Ibid.

83 Ibid., pg. 86.

84 See fn42.

⁸² Applicants' Workpapers, pp. CO4-300294 through CO4-300302. It is curious that the Applicants did not also claim interchange car day savings attributable to the elimination of interchanges between Applicants as a car utilization benefit. These savings are lumped in with the Applicants' so-called "T-Plan" benefits.

			Proposed	Merger of	Union Paci	lic Corp,et	al and Sou	to loss					23-Mat-96		
f #.	RECONCIL WO2	Summery of Me					ger Benefit and Cost Claims					Normal 5-Year Totals			
	BENE DETLI			Yea	2	Yes	3	Yea	Ore Time	Annual	One-Time	Year	Annual	One Time	Ret
		Tes	Oce Time	Annual	One-Time	Annual	One-Time	Annual	One-sine	Benefite	Benefits	Benefits	Benefits	Benefits	-
1.00		Annual	Benefite	Benelite	Benefits	Benefite	Benefits	Benefits	Denents						
Line		Benelits	Devience							001 160		261,150			
	CREATING BENEFITS - LABOR SAVINGS			222 073		255,192		258,390		201,100	sol	\$261,150	\$1.088,290	\$0	LBA
	Labor Benefite , Savings/(Costs)	90,585		6222 973	10	\$255,192	\$0	\$258,390	50	\$201,100					
	Tatal Labor Savinge Claimed	\$90,585									1				1993
3	COCONTING DENEETS NON-LABOR SAVINGS									10070	1	12.677	48,908		
1 4	Contribution					10.142		11,410		12,010				0	1223
1 2	Car Unitzation Monetary Benefits	3,804		0.074	0		0		0					0	
0	Car Utilization One Time Benefits		0		0		0		0			\$12 877	\$46.908	\$0	cu
1 1	Car Dimization One Time Benefits		0			\$10,142	\$0	\$11,410	\$0	\$12,678					
0	Locomotive Unitation Savinge Claimed	\$3,804	\$0	\$0,0/4							1	14 214	51,890		
9	Total Car officianti a second					26.997		21.719		14,214				(114,378)	
1 10	Communications/Computers	(11.861)		621	(97 716)		(2,980)		(1,223)			E14 214	\$51.890	(\$114,378)	CC
1 11	IT Monetary Benefits		(82,479)		(427 716)	\$26 997	(\$2,980)	\$21,719	(\$1,223)	\$14,214					
1 12	IT One-Time Benefits	(\$11,861)	(\$82,479)	5921	(321,110)								50	\$0	X
1 13	Total Comm/Comp Saving Comme					0	0	0	0			100 240	308 846		
1 14	Operations	0	0	0	0	00.041		99,643		108,347		100.340		(35.386)	
1 15	Ops Team State Benefits	31,678		68.237		50,541	(9.050)		0		0	0	0	(1.315,703)	CAF
1 18	Ops Team Monetary Bentits w/o Car & Loco Lilius		(14,842)		(11,494)		(281 949)	POST NAME	(129.420)		5,445		174 474	0	TR
17	Ops Team One-Time Bennits w/o Car a Loco China		(532.943)		(396,830)	07 704	(101.010)	42,440		47.156		47,155	114.414	0	
18	Ops Dept Capital Savings/(investments)	14,146		33,008		31.124	0	0	0	0	0	0	(84)		AB
1 18	Net From Trackage Hights	0	0	0	0	(20)		(12)		(26)		(25)	(04)	44 598	AB
23	Reroutes	(8)		(18)		(20)	4 460		4,460		4,460	0			LU
2	Abandonment Benefits - Annual	1	17,838		13,378		4,400	2.050		2,278		2,278	8561 88A	(\$1 306 493)	OP
2	Abandonment Benefits - One-Time	684		1,594		1,822	10200 5301	\$144 121	(\$124,960)	\$157,755	\$9,905	\$157,756	\$301,004	(31,300,100)	
1 2	Locomotive Utilization Monetary Benefits	\$46.500	(\$529,947)	\$102,821	(\$394,952)	\$130,461	19500,0301								
24	Total Operatione Savinge Claimed							137.970		137,970		137,970	020,055	237 405	
2	5 General/Administrative	110,797		116,073		120,240	000 00		0		0	0	1000 055	\$237 405	G
1 2	G&A Monetary w/o IT		139,805		35,300		662 300	\$137.970	\$0	\$137,970	\$0	\$137,970	3020,000	(\$1 193 466)	
2	G&A One Time w/olf	\$110,797	\$139,805	\$116,073	\$35,300	8125,245	(1207 100)	\$481.060	(\$128,183)	\$494,588	\$9,905	\$484,587	81,842,071	(01,105,400)	1
2	Total Geni & Admin Savinge Cleimed	1 \$183.879	(\$472,021)	\$332,231	(\$387,368)	\$450,315	(0207,100)								
1 2	Total Non-Labor Savings Claimed													1875 250	LB
3	TOTAL OPERATING SAVINGS CLAIMED						(12014)	\$0	\$0	\$0	\$0	50		(0,0,200)	1
1 3	Employee Relocation	1 50	(\$26.594	\$0	(\$44,742)		1 100,014							(C188 314	ALE
3	2 Total Employee Relocation Expense						1 11000	50	(\$1,720	\$0	\$0	50	1	10100,014	1
1 3	3 Labor Protection/Separation	5	(\$107,411	\$0	(\$67,251)	\$0	(311,920)					1			
3	4 Total Labor Protection/Separation (Expense)							A1 752		90,838		90,836			
1 3	S SHIPPER LOGISTICS SAVINGS	27 25		83,588		72,665			iNonel		[None]	1			110
1 3	8 Shipper Logistics - Annual	1	INonel		[None]		None	801 752	1 80	\$90,836	\$0	\$90,836	\$336.092	11 447 030	1
1	Shipper Logistics - One-Time	1 827 250	80	\$63,586	\$0	\$72,663	50	A33 342	(127.000	674,603	9,905	674,603	2,732,899	(1,447,030	'ac
1	Shipper Logistice Savings Claimed	247 07	1 (808 626	515,148	(499,361)	620,711	(223,039)	89.44	1	76.045		76,04	\$281,36		
	TOTAL LABOR, NON-LABOR & LOGISTICS CLAIMS	201,01		63,232	2	60,636		ET23 801	(\$127.909	\$750.648	\$9,905	\$750,646	\$3,014,267	(\$1,447,030	H
	10 Net Revenue Cleims	1 4280 80	a (\$806 526	\$569,380	(\$499,361)	\$681,547	(\$223,039	0123,003	1.577.1.5		\$684,508		1	31,200,801	1
	11 Totals, with Net Revenue Claims	\$200,00	TETTO NET		115,707	1	\$397,672	1	1						
	12 COMBINED ANNUAL TOTALS, W/O NET REVENUE CL														
L	the second state and the secon														

and Southern Pacific Rall Corp. et al

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- 336 -

Table III.6

If the size of the car reduction is a product of the Multi modal network model, then such estimates should be subject to the same skepticism with which the other system output forecasts are received.⁸⁵ Moreover, certain car types are identified for reduction, such as equipped gondolas and open top hoppers, which are not usually associated with any lengthy seasonal fluctuations that vary geographically. For example, when certain coal mines shut down for the miner's vacation, many shut down nationwide. The available evidence persuades us that this benefit claim is predicated on unsupported data and is inconsistent with industry expectations for the indicated car types.

Finally, the historic results of the Applicants earlier mergers demonstrate unequivocally that the Applicants have *never* obtained the car utilization savings that were forecast in their applications. For these reasons, the Applicants' car utilization savings claims should be rejected as speculative, unsupported and historically unattainable.

(2) Communications and Computers.

The forecast costs and benefits attributable to consolidation of the Applicants' management information systems ("MIS") is discussed in the Operating Plan at pages 250 through 253.⁸⁶ No elaboration on the summary presented in the Plan is offered by any of the operating Witnesses. The Summary includes Normal Year benefits of \$14,214,000 per year with a total savings over the five years following unification of about \$51.9 million. The cost to obtain these benefits is estimated by the Applicants to amount to more than

⁸⁵ See our preceding discussion of Applicants' system output forecasts.

⁸⁶ Application, Operating Plan, Vol. 3, pp. 250-253.
million.⁸⁷ The documentation supporting the Applicants' MIS planning appears to be comprehensive and, at first look, appears to be well thought-out -- with one exception.

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As stated in the Plan, in 1994, SP outsourced all of its program development and data center activities. The Plan states that "(f)ollowing the merger, the SP outsourcing will be canceled."⁸⁸ This was a new program. The value of the contract to the vendor is purportedly close to \$600 million. The Applicants should expect to pay a cancellation fee of at least three times the annual vendor fee or about million.⁸⁹ The cost to buy out that contract was omitted from the Summary.

The one-time costs of the MIS consolidation should be increased to approximately \$284,730,000.

(3) Operations and General/Administrative.

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The Applicants' Appendix A shows that the majority of the costs and benefits are ascribed to either an Operations or a General/Administrative function. As stated above, the Applicants claim more than \$1.9 billion of recurring, non-labor savings in the five years following merger. Further, the Applicants forecast these recurring savings to continue at a rate of \$494.6 million per Normal Year thereafter. From Table III.3, one can see that the Applicants forecast recurring benefits over the five-year transition period totaling \$581.7 million from Operations and \$628.1 million from General/Administrative, or \$157.8 million and \$138.0 million, respectively, per Normal year thereafter.

⁸⁷ Applicants' Workpapers, pp. CO4-300007, HC04-300001 - HC04-300002, and CO4-300031 through CO4-300033.

⁸⁸ Application, Operating Plan, Vol. 3, pg. 250.

⁸⁹ Applicants' Workpapers, pg. HC04-300002.

From Table III.3, one can also observe that the one-time costs to secure the Operations benefits amounts to \$1.31 billion over the five-year transition period. The General/Administrative function, however, appears to provide additional one-time benefits totaling \$237.4 million for a net cost to the firm of \$1.18 billion.

We did not have the time or workpapers needed to examine the details of each and every project; we have not attempted to reengineer the Applicants' proposal. Our intention has been to test each claim for reasonableness by applying independent measures and criteria wherever reliable indicators could be found. In our review of the individual projects that comprise the Applicants' Operations and General & Administrative cost and benefit claims, we found problems and questions which would affect the amount or level of cost or benefit claims. These problems or questions generally fall into one of six types. Sometimes, more than one type is identified. They are as follows:

[a] Benefits which are overstated or costs which are understated.

Our criticisms of the net revenue gains, labor savings, cu utilization and MIS benefits each reflect this problem. The problems arises when the Applicants failed to include some known cost item which impacts the cost or benefit forecast. Examples include⁹⁰:

- Failure to include the costs of utilities and tenant service for the expansion of offices at
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- Estimated cost understatement:
- Failure to accurately portray the fuel cost. If UP fuel cost was adopted by SP, fuel costs would not go down, they would go up..

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Estimated cost understatement:

⁹⁰ See our Exhibit V for additional detail.

[b] Speculative claims for which Applicants provide no support.

This problem arises as the result of the recognition of some cost element, whether recognition is extended either by inclusion or exclusion, which is not expected or typically known to be part of a customary railroad or other business activity or relationship.

Examples include⁹¹:

- Failure to support claimed improvement in warranty recovery.
- Failure to support claimed price reduction for fuel.

[c] Claims unrelated to implementation of the merger.

Sometimes operating managers see an opportunity to accomplish some capital goal or finish some project by including it in a much larger project where it may go "unnoticed." Such projects may be worthwhile on their own merits, but such activities should not be allowed to affect the consideration or outcome of the bigger project. Examples include⁹²:

Misconstruing the fuel purchasing agreement as a merger benefit.
This is a mechanism available independent of the merger.
Failure to support claimed cost reduction in material transportation

Miscategorizing savings from a combined vehicle fleet as being associated with the merger. These savings are available independent of the merger.

⁹¹ See our Exhibit V for additional detail.

charges.

⁹² See our Exhibit V for additional detail.

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[d] Artificial claims based on the avoidance of a discretionary obligation.

If an undertaking creating an obligation or liability is purely discretionary, then that undertaking cannot be used to support or justify another action; two activities are independent. For example, one cannot claim \$30,000 of income by deciding to visit the local Lincoln dealer for the purpose of not buying a car. One example is:⁹³

Misconstruing deferral of purchase of maintenance of way equipment as a merger benefit. Whether the merger occurs or not, purchases like this, and the Lincoln, can be deferred.

[e] A disclosed opportunity which may be exploited by either Applicant without the merger being a necessary condition precedent.

Briefly, either Applicant may have obtained certain business information from the other Applicant which may not be proprietary or confidential to either Applicant. The first Applicant may use that information freely without incurring an obligation to participate in the proposed merger. Examples include:⁹⁴

Many of the items in Exhibit 5, including examples cited in this list. Knowledge of the savings opportunity is often the only requirement for achieving the saving. Much of the savings potential can now be realized by either SP or UP with or without the merger.

[f] All Other. Self-explanatory.

We have used the foregoing standards to review the Applicants' cost and benefit claims.

- 341 -

⁹³ See our Exhibit V for additional detail.

⁹⁴ See our Exhibit V for additional detail.

RESTATED SUMMARY OF BENEFITS

UNION PACIFC RAILROAD, ET AL -- CONTROL & MERGER -- SOUTHERN PACIFIC RAIL CORP.

Finance Docket No. 32670

Annual

29,2

213,7

50,1

28,9

293,6

322,8

35,0

328,6

357,9

0

DESCRIPTION		YE
	Annual	One
NET REVENUE GAINS: (a)	12,550	
OPERATING BENEFITS:		
Labor Savings	86,162	
Non-Labor Savings	1 1	
Car Utilization	0	
Communications/Computers	(11,861)	
Operations	23,796	(
General & Administrative	30,416	
Total Operating Benefits	128,513	(
Employee Relocation Expense		

Employee Rel Labor Protection/Separation (b) TOTAL OPERATING BENEFITS SHIPPER LOGISTICS SAVINGS TOTAL COSTS AND BENEFITS: Excluding revenue gains All inclusive

DESCRIPTION

NET REVENUE GAINS: (a) **OPERATING BENEFITS:**

> Labor Savings Non-Labor Savings

> > Car Utilization

Operations

Communications/Computers

General & Administrative

Employee Relocation Expense Labor Protection/Separation

Total Operating Benefits

Excluding revenue gains

12,550		12,550
86,162		86,162
0		0
(11,861)	(83,969)	(95,830)
23,796	(565,027)	(541,231)
30,418	140,256	170,672
128,513	(508,739)	(380,228)
	(26,594)	(26,594)
	(274,252)	(274,252)
141,062	(809,586)	(668,523)
27,250		27,250
155,763	(809,586)	(653,823)
168,312	(809,586)	(641,273)

AR 1

-Time

Total

.

Tauno	VEADO			VEAD 3	
	YEAH 2		-	Total	
al	One-Time	Total	Annual	Une-Time	Total
9,283		29,283	33,466		33,468
3,721		213,721	244,810		244,810
0		0	0		0
821	(198,016)	(197,195)	26,997	(2,960)	24,037
0,125	(391,451)	(341,326)	69,146	(265,589)	(196,443)
3,942	38,000	66,942	37,267	65,000	102,267
3,609	(551,467)	(257,859)	378,221	(203,549)	174.871
	(44,742)	(44,742)		(3,914)	(3,914)
	(161,332)	(161,332)		(16,102)	(16,102)
2,891	(757,542)	(434,651)	411,687	(223,565)	188,122
5,086		35,086	(22,332)		(22,332)
8,695	(757,542)	(428,847)	355,889	(223,565)	132,324
7.977	(757,542)	(399,565)	389,355	(223,565)	165,790

	YEAR 4					
Annual	Total	One-Time	Annual			
41,832	37,649		37,649			
250,743	247,983		247,983			
0	0		0			
14,214	20,496	(1,223)	21,719			
82,188	(49,294)	(124,960)	75,666			
49,992	49,992	0	49,992			
397,136	269,176	(126,183)	395,360			
	0	0				
	(1,726)	(1,728)				
438,968	305,099	(127,910)	433,009			
(4,164)	(13,248)		(13,248)			
392,972	254,202	(127,910)	382,112			
434,804	291,851	(127,910)	419,761			

Note a: Net of additional costs of handling increased traffic.

EAR 5		Normal	Tot	1
ne-Time	Total	Annual	Annual	
	41,832	41,832	154,780	
	250,743	250,743	1,043,418	
	0	0	0	
0	14,214	14,214	51,690	
9.905	92,092	82,188	300,921	
0	49,992	49,992	196,609	
9,905	407,041	397,138	1,592,838	
0	0		0	
0	0		0	
9,905	448,873	438,968	1,747,617	I
	(4,164)	(4,164)	22,592	
9,905	402,877	392,972	1,615,430	
9.905	444,709	434,804	1,770,209	I

mai	Totals							
nual	Annual	One-time						
41,832	154,780	o						
250,743	1,043,418	o						
0	0	0						
14,214	51,690	(286,168)						
82,188	300,921	(1,337,123)						
49,992	196,609	243,256						
397,138	1,592,838	(1,380,035)						
	0	(75,250)						
	0	(453,413)						
438.968	1,747,617	(1,908,698)						
(4,164)	22,592	0						
392,972	1,615,430	(1,908,698)						
434,804	1,770,209	(1,908,698)						

Table III . 1

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All Inclusive

TOTAL OPERATING BENEFITS

SHIPPER LOGISTICS SAVINGS TOTAL COSTS AND BENEFITS:

24-Mar-96

342

Other Findings.

and General/Administrative cost and benefits claims. Our criticisms, and our adjustments, if any, stated. These adjustments are summarized To recapitulate our findings:

The Applicants' Normal Year recurrent savings claims are overstated by \$315.8 million per year. The supportable Normal Year recurrent savings are \$ 434.8 million per year.

(ii) The Applicants' total one-time costs, net of one-time benefits, incurred over the five-year transition period are understated by at least \$ 461.7 million. The supportable net one-time costs will be \$1.906 billion.

e. Shippers Logistics Costs.

Shipper logistic costs include the entire spectrum of costs, direct and indirect, confronting the shipper once the transportation choice is made. The direct costs are easy to see. These are primarily transportation rates. The indirect costs are less clear and much more difficult to measure. An example of indirect costs is the carrying costs for inventory.

The UP-SP estimates of shipper logistics costs are based on a model vaguely described in by Witness Roberts. Our experience with conducting shipper logistics studies and with research on the type of model apparently used to estimate the shipper logistics costs⁹⁵ indicates the following:

⁹⁵ Tom O'Connor, as Assistant Vice President of Economics for the Association of American Railroads, had oversight responsibility for the project which collected data on (continued...)

- The shipper logistics costs are driven by several major determinants which are inherently difficult to impossible to measure. These include:
 - The locus of the responsibility for making the modal choice.
 - The value of the goods, a very important factor In determining modal choice.
 - Inventory costs, including ownership of the goods and the relevant cost of capital to hold the goods in inventory.
 - Stock out costs, consisting of the probability that the customer will take the business elsewhere if the shipper does not have the goods on hand at the point and time of sale. This is a behavioral problem more akin to applied psychology than to applied economics. Again no reasonable investigator can claim to have measured this behavioral situation with anything approximating precision.
 - Alternate mode availability, including not only the physical availability, but also the equally important shipment size and transport cost characteristics. Our experience indicates all three are essential to any determination that alternate modes will be either available or effective,

Based on our experience in working with dozens of major rail shippers and railroads in solving actual logistics problems and our experience with the data and analytical techniques used by the Applicants to estimate the benefits to shippers we find the Applicants

95(...continued)

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nuckload shipments over selected lanes and developmental research by Dr. Paul Roberts on the shipper Logistics Cost Model.

estimates flawed. Specifically we find the estimates weakly supported as to the key determinants noted above and poorly documented as to process and results.

7. Applicants' "Pro Forma Financial Statements," Appendices B through D.

The Pro Forma Financial Statements included with the Application as Appendices B through D were prepared by the Applicant UP.⁹⁶ The Applicants' workpapers reveal how each element of the Summary was separated among the various applicable accounting treatments.⁹⁷ The separate elements were then transferred through pro forma journal entries to the appropriate accounts needed to generate pro forma financial statements for a consolidated UPC/SPR and for a consolidated UP/SPR.⁹⁸ This presentation is required under the application regulations.⁹⁹

There is a problem with the presentation, however. The Applicants' Pro Forma Sources and Applications of Funds for UP/SPR consolidated, Applicants' Exhibit 18, shows a *cash increase* of \$103,256,000 in each year following the merger and in the Normal year.¹⁰⁰ The Pro Forma Balance Sheets for UP/SPR consolidated, Applicants' Exhibit 16, show a *constant cash* and cash equivalents for each of the five years and for the Normal Year. One -- or both -- of these depictions must be wrong. Net cash changes in cash must tie to the balance sheet.

- ⁹⁶ Application, Appendices B through D, Vol. 1, pp. 94-152.
- ⁹⁷ Applicants' Workpapers, pg. CO4-300004.
- ⁹⁸ Applicants' Workpapers, pp. N03-000270 N03-000463.
- 99 49 CFR § 1180.9(a).

100 See fn55.

Moreover, as a general criticism, it is remarkable that during a transitional period of traffic growth, increasing output, revenue increases, and intensive capital spending, the new firm's current assets (including but not limited to its accounts receivable), accounts payable, and material and supplies are all unaffected, remaining fixed throughout the implementation period. This fictional portrayal of the firm's behavior contributes nothing to the Board's understanding of the effects of the merger on the Applicants and we urge that these exhibits should be accorded no probative value whatsoever in the Board's deliberations.

IV. Review of Applicants' Operating Plan.

From the perspective of an investor or business analyst, the Applicants' Operating Plan *is* the most important part of the Application. The Application, when taken in its entirety, is among other things, a summary of the firm's Business Plan. The firm's Business Plan, if used as intended and executed aggressively, becomes a responsive, vital document that:

- sets forth management's goals,
- explains their vision of the firm's structure and functions,
- identifies the firm's assumptions, resources and problems,
- maps the path the firm will follow to reach its goals, and
- explains how management will adapt to the unexpected.

Finally, a proper Business Plan defines specific financial objectives for management. However, it is the Operating Plan that allows us to see how all the elements will come together.

Regardless of the comprehensive preparation that is evident in some parts of the Plan, the failure of the Applicants to coordinate the Plan's various component parts suggests this document was hastily assembled and intended more to meet the technical filing requirements of applicable regulations than to serve as a management or advisory tool.

Other Witnesses have identified specific operating problems that the Plan either ignores, fails to treat adequately, or treats in ways which could be construed as disingenuous. In the preceding Sections of our Statement, we have demonstrated that the Plan contains numerous substantive flaws which affect the Applicants' cost and benefit claims. In this Section, we identify two elements that evidently have been omitted from the Applicants' planning. Specifically, the Plan omits certain costs (which leads to an overstatement of benefits) and it fails to organize and present the Applicants' claimed benefits in ways that would permit an investor or a manager (or regulator) to analyze the claimed benefits in the context of projected costs and investments required to obtain such benefits.

We submit that without a comprehensive, coordinated Operating Plan, the Application offers little useful information with regard to either the Applicants' ability to consummate its plans -- or the likelihood the merger will be successful.

A. Omitted Costs and Overstated Benefits.

The Applicants' Plan omits discussions of at least three key elements of cost. Specifically, the Plan (i) simply dismisses certain major problems which have dogged the SP for years, (ii) fails to make adequate provision for transitional expenses, and (iii) does not explain how the Applicants' corridor capital program will relieve the capacity problems created by projected traffic gains and proposed internal reroutes. Each of these items could individually have a profound effect on both the costs and timing of benefits for the merged company.

1. The Dismissal of SP Problems.

As observed elsewhere in our Statement, the SP was held in voting trust for five years while the SF pursued its ultimately futile merger plans. That debacle was quickly followed by an ill-planned sale of the SP to RGI. For 17 years, the SP has barely progressed while the rest of the industry grew, modernized and restructured.

Now comes the UP with another merger proposal which it claims will sweep the problems of the SP, but -- like the others -- UP fails to explain how.

The Application and the Applicants' Witnesses repeatedly make the claim that "[this] transaction will provide shippers faster, more reliable and more efficient service that will be more responsive to their needs. The expanded rail system will be able to offer its customers, and particularly SP shippers, important service benefits that merging railroads cannot provide as independent carriers." [Emphasis added.]¹⁰¹

These benefits, according to the Applicants, will be derived from (i) shorter combined routes, (ii) reduced terminal delay and improved car utilization attributable to reduction of interchange and en route switching, (iii) improved SP reliability through application of TCS, ATCS and other UP systems and procedures to the SP and (iv) the savings obtained through consolidation of facilities and reduced overheads. We have already addressed each identified, individual claim, but what of the costs that are not specifically identified?

To put our inquiry into perspective, it is instructive to compare the SP as it was in 1977, the year before its application to buy the Tucumcari to Kansas City route of the former Chicago, Rock Island and Pacific Railroad Co.¹⁰² The following Table IV.1 summarizes a few key indicators for our further reference. These data show that in 17 years, following two major line purchases (the Tucumcari line and the SPCSL line), and two merger proceedings (one granted, the other not), traffic volumes and financial performances have both deteriorated. We would be remiss if we failed to ask what is the proposed merger

¹⁰¹ Application, Vol. 1, pg. 26.

¹⁰² F.D. No. 298799 (Sub Nos 1F through 6F) (1978).

going to do to remedy the effects of the last 17 years? We contend the answer is: Not as much as the UP claims.

"Service and reliability" are expressions of the frequency, speed and variance in performance, *i.e.*, variance in scheduled pickup and delivery of the firm's product. Regardless of differences in how individual shippers may weight the relative importance of each attribute, they tend to consider all three attributes jointly. But of the three, "variance in performance," which is the complement of reliability, is most often accorded the greatest importance. Above all else, most shippers want to be able to depend on their goods being received at a specified time.

Table IV.1

Summary of Summary of Selected Key Indicators

Southern Pacific Transportation Co. - 1977 - 1994

	<u>1994</u>	<u>1977</u>
Gross Operating Revenue [Smillions]	2,941.5	1,560.4
Total Rwy Operating Expenses	2,718.0	1,207.8
Pre-Tax Rwy Operating Income	223.5	352.6
Route Miles Operated - miles	13,715	6,150
Carloads, Originated	1,580,333	1,406,000
Tonnage, Originated (000)	103,862	75,765
Freight Cars	43,820	53,302
Locomotives	2,407	2,321
Average Haul - miles	639	562

Sources: 1994: Application and AAR Analysis of Class I RR. 1977: Financial data: Reports to I.C.C. as reported in Moody's Transportation Manual, 1982.

Any railroad operating manager will confirm the old adage that a thousand things have to happen on-time for the train to be on-time, but it takes only one failure to disrupt the entire process. Because of geography, climate, and engineering, the SP has always been subject to the capriciousness of weather (both alpine and Saharan), the effects of altitude and humidity, and the concomitant limits of human and mechanical endurance.

- 351 -

There is no question that the UP has the experience and abilities to operate a railroad under difficult conditions -- conditions different from those that affect the SP, but nonetheless difficult.

What is missing from the Plan, however, is any recognition that, in addition to training, it is going to take time and cost money to transfer the UP experience to the SP and to make it effective. Merely imposing new systems on and/or relocating UP managers to the SP does not solve its problems. The managers and systems are essential but each must be integrated into SP's "culture" to become effective.

The Applicants have introduced no evidence with regard to the timing and costs of integrating UP experience and technology into the SP's corporate culture to help solve its recent service and reliability problems. To the contrary, Applicants' Witnesses King and

Ongerth state that:

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Using the Multi modal network modeling system, we compared how 1994 traffic on the two separate systems was handled... The comparison showed that 1994 traffic on UP and SP could have been handled by a merged system for at least \$70 million less in direct operating costs... These savings do not include savings resulting from the improvement in SP operations and reliability we expect as a result of the merger because the model "corrected" all those problems before it made this comparison.¹⁰³ (Italics added for emphasis)

Evidentially, the Plan "corrects" the problems by assuming that SP's problem can and

will be dismissed -- a dubious solution: zero-price, and often close to zero in effectiveness.

2. Omitted Transition Expenses.

First, no operating manager, whether from the railroad industry or elsewhere, who has been through a turnaround experience will realistically expect that systems, training and capital investment define all the costs that are going to be incurred to effectuate a turnaround

¹⁰³ Application, V.S. King and Ongerth, Vol. 3, pg. 22.

of the SP. Turnarounds of an entire firm, particularly of a big corporation, are brutal and costly and should be undertaken only if the shareholders, lenders and management are absolutely convinced the result is worth the effort. Absorbing the SP in one piece is not going to be like taking on a healthy and well-disciplined Missouri Pacific Railroad, or the Western Pacific, or even the C&NW.

As managers who have "been there and done that," we can attest that it simply takes time for the "cure to take effect." As illustrated in a small way by the acquisition of C&NW by the UP in late 1995, the first year following absorption of the SP will start off like a fire drill. Even if all the labor negotiations are in place (which they are not), all the systems in place and ready to switch on (which they also are not), and all of the training completed (which has not even begun), a certain amount of disarray inevitable. The only question is, how bad will it get and how long will it last? As a first approximation of a cost of confusion estimate, the Applicants should assume that the SP's operating ratio will, on average, achieve no more than half of the first year's adjusted improvements, i.e., 93%, or operating expenses of approximately \$117.5 million more than the Applicants projected for Year 1 -- after adjustment for misstated costs and benefits.

Second, even if one assumes, *arguendo*, that SP's service and reliability problems can be solved, other significant transition expenses have been omitted from the Plan. Principle among these are the costs of training SP employees how to use UP procedures, systems and technology. The Summary includes a total of \$34.4 million over five years for training and implementation.¹⁰⁴ Of that total, the largest portion, \$13.7 million, is included by the

¹⁰⁴ The Summary projects an annual, recurring savings of \$720,000 per year from SP's withdrawal from the locomotive training school operated jointly with BNSF at Lenexa, KS. No money is added for performing this training elsewhere.

Information Technologies Group for "implementation." However, the only groups to receive "training" are the maintenance of way forces, with a total budget of almost \$12.4 million for time and materials, and \$6.4 million to train conductors and foremen in use of ATCS. The balance of \$1.9 million for all other training and implementation. At a projected cost of roughly \$3,600 per employee, we estimate the omitted training costs to total approximately \$37.4 million over five years.

3. Capacity Limitations.

SP Witness John T. Gray discusses several physical capacity problems which he claims have limited SP's ability to compete against both BNSF and UP. We have alluded to some of these same factors in the preceding Section. The Applicants are concerned, according to Witness Gray, with the effects of SP's longer transit times and lower traffic densities which have contributed to its high operating costs.¹⁰⁵

Since 1977, SP has extended its markets twice by purchasing lengthy pieces of bankrupt former railroads. The hallmark of both lines was overhead traffic and neither the Tucumcari line to Kansas City nor the SPCSL line to Chicago increased SP's access to new on-line customers in any meaningful way. Nevertheless, the Tucumcari line has allowed the SP to increase traffic across the "Sunset" route west of El Paso and the route to Kansas City since 1977.¹⁰⁶ As shown in Table IV.2, by 1994, traffic density between Lordsburg and Tucson, Arizona (the Sunset Route), increased about 25% -- using the same tracks SP had in place in 1977.

¹⁰⁵ Application, Verified Statement of J.T. Gray, Vol. 1, pp.228-231.

¹⁰⁶ In 1977 traffic density on the Tucumcari line under CRIP ownership and operation was about 4.4 million gross tons. In 1994, according to the Applicants' Plan, Vol. 3, pg. 431, the density was 22.1 million gross tons.

Similarly, Table IV.2 shows that in 1977 SP handled more traffic, at greater traffic densities, across the Central Corridor and between Northern California and the North Pacific Coast than it does today -- using the same tracks it had in 1995. The obvious question is then: did SP have the business in 1977 because it could move it, or did it move it because it had the business? The Applicants argue that to get the business, SP has to be able to move it.

As shown in Table IV.2, the Plan proposes to significantly increase traffic densities over key SP routes. In some instances, the added traffic still does not reach SP traffic levels of 1977 levels, and in other instances (e.g., the Sunset Route) traffic levels would, if the projected traffic is garnered, continue to be significantly greater than 1977 levels. To support these "new traffic levels, the Plan proposes capital investments of more than \$1.3 billion in corridor track structure over five years.

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Table IV.2

Selected Comparative SP Route and Terminal Utilizations

Routes	<u>1977</u>		<u>1994</u>		Post-Merger
"I-5" [Oregon]					
Traffic Densities (MGT) 1/ 35.0		29.8		33	
Daily Terminal Car Handling_2/	n/a				
Central Corridor [Nevada]					
Traffic Densities (MGT)	40.0		23.8		38
Daily Terminal Car Handling	n/a				
Sunset Corridor [Arizona]	•				
Traffic Densities (MGT)	46.5		60.7		76
Daily Terminal Car Handling	n/a				
Golden State Corridor [SSW, Kansas]					
Traffic Densities (MGT)	4.4		23.6		33
Daily Terminal Car Handling	n/a				
Mid-Continent [SSW, Arkansas]					
Traffic Densities (MGT)	38.0		34.4		39
Daily Terminal Car Handling	n/a				

1/ Traffic densities: Exhibit A-13(I)-a and -b, SSW -- Purchase (Portion) -- Chicago, Rock Island and Pacific (CRIP), F.D. No. 28799, Sub-Nos 1F through 6F (filed November, 1978).

2/ Applicant's Workpapers, pp. CO2-302339 through CO2-302347.

Throwing a lot of money into the ground will permit the UP to reduce running times across SP routes and lower maintenance costs for those lines, allowing the merged company to operate more trains at lower running costs than are presently being obtained. But those investments do not, per se, increase traffic capacity or improve service and reliability.

The first effect of the corridor programs is to shift the accounting responsibility from the income statement to the balance sheet. The second effect is to relocate the delay. If corridor termini are unable to handle the projected traffic increases, then neither total transit times nor reliability will improve, and service quality may even deteriorate.

In principle, the SP terminals in the West should be able to handle the increased work since lesser volumes were handled in the late 1970s, particularly after the programmed yard improvements are completed. However, our observation cannot be extended to include the Mid-Continent Corridor. The projected 20% increase in yard activity attributable to system traffic gains and internal reroutes, in addition to the BNSF use of its trackage rights, may well swamp terminals such as Pine Bluff, Arkansas. Further, projected intermodal terminal changes in the Chicago metropolitan switching district would seem to ignore the geographic and capacity limitations, and the high costs, of terminals such as Canal Street. These possible capacity limitations and costs are potential difficulties that the Plan does not address. Moreover, an effort by us to estimate the possible extent and costs of known terminal limitations could not be completed within the allowed response time. For that reason, all we can do is point to the possibility of unrecognized costs for the merged system in the Midwest.

4. Where are the Costs and Benefits?

a. The Geography of Costs and Benefits.

In the course of our examination and critique of the projected benefits imputed to the Applicants' proposed merger, we found there was no systematic attempt to evaluate the merits of each proposed investment, or cost, in terms of the benefits to be derived from those costs. Nowhere have the Applicants made a systematic effort to examine the contribution of each part of the proposed merger. Even the Applicants' statement that, "Combining the two railroads will allow each marginal dollar of capital to be used in a way that yields far more in terms of capacity and efficiency."¹⁰⁷ was conceded to be an unsupported claim.¹⁰⁸ The sort of comprehensive analysis that a financial analyst would insist on is beyond the scope of our Statement. As an alternative, we have aggregated the Applicants' cost and benefit claims geographically. The proposed service area of the merged firm has been split into two pieces: the West and the Midwest. For each region that could be associated with specific geographical regions, we have summarized the costs and benefits, exclusive of net revenue gains. The results of our operating cost and savings inquiry are presented in Table IV.4.

107 Application, Vol. 11, pg.34.

¹⁰⁸ Applicants' responses to KCS' Second Interrogatories, Interrogatory No. 43, January 22, 1996.

Table IV.4

Estimated Geographic Distribution of

Merger Costs and Benefits

Excluding Net Revenue Gains

(\$000)

Region	Capital	Labor	Other	Total
West	(789.6)	799.4	200.8	160.6
Midwest	(349.6)	294.0	69.8	14.2
Total Located	(1,139.2)	1,043.4	270.6	174.8

b. Distribution of Costs and denefits.

A systematic examination of the geographic distribution of the Applicants' claimed costs and benefits attributable to the proposed merger of the Southern Pacific Rail Corp. into the Union Pacific Railroad clearly reveals the Applicants' plans and intention to focus their efforts on obtaining the benefits available to them in the Pacific Northwest, West and Southwest (excluding East Texas), at the expense of the midwest and East Texas. This objective is discernible not only in the Applicants' revenue projections, but also in the Operating Plan and c_{1}^{2} and investment program that would serve as the foundation for the merger, should it be approved.

The Applicants Operating Plan proposes the consolidation and elimination of many putatively redundant or duplicative activities and facilities now being performed or operating across what would become the emerged system. The Applicants propose to achieve most of their claimed benefits by consolidating or closing many activities and facilities that are situated at points which would become common to the new railroad. However, an examination of the Applicants' claimed daily terminal car switching work load (c.f. Application, Vol. 3, pp. 373-375) shows that, in addition to the economies of scale attributed to the new system, there is a profound shift of activity from the Midwest, which experiences a decrease of more than 800 cars handle per day, to the West, particularly California and the Pacific Northwest, where the Applicants' projections show an increase of nearly 600 cars handled per day. Obviously, not only is there a net growth of traffic in the West, the Applicants are positioning their operations to concentrate on the services offered to Western shippers and markets.

The Applicants' commitment to this strategy is even more fully illuminated by an examination of the geographic distribution of the proposed capital investment program that underlies the Operating Plan. The workpapers supporting the Application identify capital investments to be made over the first five years following the merger amounting to more than \$1.3 billion. Of this total amount, more than 75 percent--or almost \$1 billion--is to be invested in the West. The balance is about \$200 million; nearly \$100 million is to be invested in equipment and systems to support the new railroad, and which leaves only about \$200 million for capital improvements in the Midwest and East Texas.

The foregoing capital investments do not, however, include, or even consider, the huge labor costs of effectuating this consolidation--should it occur. Labor protection payments, severance costs and employee transfer expenses amounting to nearly \$260 million will be incurred to achieve the labor savings claimed by the Applicants. (Exhibit 6) Much of this costs

is related to the proposed reductions of employment at SP locations in the Midwest that are going to be eliminated in favor of UP facilities and locations. These reduction reflect the staffing levels believed adequate to handle the reduced, Midwest regional work loads. Additionally,m other costs are going to be incurred at UP's Western locations where the Applicants propose to train new employees to perform the duties of former employees unwilling or unable to leave the Midwest.

In summary, the Applicants Operating Plan, and its attendant capital budget, shows convincingly that the management of this new railroad looks to the West as the source of all merger benefits. It is in the V/est that the new traffic going to be captured and served. The Midwest--with some isolated exceptions--would seem to be regarded by the Applicants as an obstacle that has to be survived in order to reach the West. Moreover, the discrimination obvious in the capital program is so plainly drawn that one is left to speculate with regard to what other, unidentified markets in the Midwest may be abandoned by the Applicants in the years soon to come.

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Since the Applicants must not see a long term future in the Midwest, the apparent strategic investment alternative for the Applicants would be for the Applicants--or the STB-to seek another investor--a joint venture, perhaps-- who could not only reduce the cost of the merger to the Applicants (with little or no erosion of their realizable benefits), but who may also have complementary strategic interest that could improve the opportunity for everyone to share in increased regional markets.

The evidence regarding the geographic distribution of costs demonstrates that the new system would, if approved, become two railroads. The Western part of the SP, if combined " with the UP, would enjoy the preponderance of the operating economies. However, as

shown in Table IV.4, the Midwestern fragment, consisting of the balance of the SP, would produce relatively smaller savings, and substantially greater competitive problems.

We would suggest that not only the public, but also the UP and the SP, would be best served if the SP were to be split into at least two (and possibly more) pieces. If adopted, the "Comprehensive Solution" as put forth by KCS and others is a definitive solution to the problem, allowing Applicants to maintain the preponderance of the public benefits.

Conceptually Figure IV.1 illustrates the solution: The UP could acquire all lines West of the indicated line. The remainder of the SP could be sold to other carriers. One very substantial benefit that everyone would garner would be a division of the transition and turnaround problem. As Julius Caesar said, "Divide and conquer."



The Major Corridor Upgrades Figure, produced by Union Pacific Railroad¹⁰⁹ demonstrates that UP-SP is being very selective about its investment. The investment is focused on the I 5 corridor along the West Coast and along the Southern Corridor. Investment is sparse along the Gulf Coast and the Texas to St. Louis and Chicago corridors. Investment is virtually nonexistent along the SP Central Corridor. *See* Major Corridor Upgrade Map prepared by Union Pacific.

We see in this investment program the beginnings of a rationalization program, downgrading and disinvesting in lines not slated for long term growth in UP's individual corporate plans. The problem is that these same lines are very important sources of competition to shippers. Disinvestment is often a prelude to divestiture. An alternative which could preserve competition and serve the public interest is simple: Divest now to willing buyers who can provide the service needed, carriers who will maintain both the line and the competitive service.

¹⁰⁹ See Traffic World, March 25, 1996, page 21.

Major Corridor Upgrades



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V. Conclusion

Exhibit 6 summarizes and analyzes the claimed merger benefits. In Exhibit 6 we replicate the merger benefit claims of Applicants.¹¹⁰ We also restate those merger benefits and costs reflecting the points made and supported in our Verified Statement. Our restatement demonstrates the numerous defects that permeate the Applicants' merger benefit assertions and claims. We summarize our findings on Exhibit 6, page 10 demonstrating the weakness of Applicants' merger proposal. We recommend that the Board reach one of two decisions: (1) deny the merger as proposed or (2) heavily condition the merger as recommended by KCS.



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CONSOLIDATED UNION PACIFC, MISSOURI PACIFIC AND WESTERN PACIFIC RAILROADS

Finance Docket No. 30000

INCOME STATEMENT - NOMINAE So	1978	1979	1980	1981	1982	1983 (Est.)	1984	1985	1986	1987	1988
aliway Operating Revenues	2 787 053	3.253.274	3,796,295	4,093,474	3,623,897	3,395,695	3,862,827	3,652,774	3,693,618	3,778,043	4,214,324
Freight Service Revenues	2,101,005			and a second			71 016	76,103	78,273	69,662	80,848
Real property revenues	66.654	74,702	82,266	83,229	76,021	65,052	3 033 843	3.728.877	3,771,891	3,847,905	4,295,172
Other Revenues Total Operating Revenues	2,833,607	3,327,976	3,878,581	4,176,703	3,639,918	3,401,347	146,740				
		6.9 . 20				643 203	589.450	587,607	503,660	517,741	587,790
Rallway Operating Expenses	446,826	518,961	598,556	673,942	558,461	770 705	853.036	771,397	821,471	872,666	978,533
Way & Structures	582,193	683,114	812,435	674,821	741,928	1 512 261	1.641.383	1,504,832	1,368,281	1,434,705	1,587,533
Equipment	1,124,321	1,419,703	1,672,430	1,771,107	1,568,331	1,512,201			and the second	Section Practices	
Transportation	No. We and		C. C. Stolar	679.1200 B	C. Same	N. C. Martin		In and and	A	and the second	i sere i
Taxes other than income	SCHARTS.		in the second	S. Street .	C. C. S. S. S. S.	223.422	1		6.59,734		
Deprec. & Amon. [1]	and the second	and the second second	Strate and		357 382	398,104	407,379	399,597	391 815	371,549	342,23
Merger Expenses	240,508	271,439	309,182	336,905	3 226 102	3,253,363	3,491,248	3,379,114	3,744,961	3,196,661	3,490,000
Total Bwy Oper Exp.	2,393,848	2,893,380	3,392,697	814 174	473.816	207,984	442,595	349,763	26,930	651,244	100,000
Not Ballway Operating Income	439,759	434,596	460,004			3,253,363	3,491,248			140 526	153.87
Other (Income) Expense:			148 388	159.868	158,835	160,431	153,590	139,869	156,470	(110 872)	(93.20
Interest Expense	99,302	118,082	(144 469)	(112,157)	(102,055)	(113,618)	(126,641)	(99,835)	(100,134)	38.654	60.67
Other Expense (Income), Net	(90,481)	(114,057)	3,919	47,711	56,780	46,813	26,949	40,034	00,342		
Total Other Expense Operating Income before provision for Income taxes	8,821 430,938 85 158	431,071	481,945 31,138	466,463 (114,869)	417,036 (45,747)	161,171 (58,474)	415,646 (44,948)	309,729 (63,310)	(23,412) 76,817 (104,926)	612,590 124,177 66,458	738,412 6,98 234,67
Current income taxes	30,290	68,966	74,395	247,010	107,169	166,716	83 304	51,567	(28,109)	190,635	241,60
Deferred income taxes	115,448	89,974	105,531	132,141	61,422	E2 020	332,340	258,162	4,697	421,955	496,75
Total provision for income taxes	315,490	341,097	376,414	334,322	355,614	02,020					
Net Income (Loss) - EXcl Extraord items Average shares outrstanding Operating ratio:	84.48% 530,240	86.94% 549,153	87.47% 630,333	87.69% 626,331	87.19% 575,871	93.99% 321,6C2	88.75% 569,236	90.62% 449,598	99.29% 133,064	83.08% 762,116	81.4 892,20

24-Mar-96

Exhibit 1, pg. 1

CONSOLIDATED UNION PACIFC, MISSOURI PACIFIC AND WESTERN PACIFIC RAILROADS

Finance Docket No. 30000

INCOME STATEMENT - CONSTANT 1982 DOLLARS

Fiscal Year and: December 31st. RCR (West) Indexes:	1978 0.634	1979 0.718	1980	1981	1982	1963	1984	1985	1986	1987	1988
Reliway Operating Revenues				0.057	1.000	1.044	1.082	1.094	1.095	1.133	1.192
Freight Service Revenues Real property revenues	4,367,553	4,529,172	4,567,835	4,369,266	3,623,897	3,253,099	3,568,735	3,338,620	3,372,348	3,333,797	3,534,661
Other Revenues	105.050	103 999	08 085								
Total Operating Revenues	4,472,603	4.633.171	4 666 820	4 458 103	76,021	62,895	65,609	69,558	71,465	61,647	67,809
Revenue Index (1982 = 100)	120.9	125.2	126 1	4,450,105	3,099,918	3,315,994	3,634,344	3,408,178	3,443,813	3,395,444	3,602,470
Rellway Operating Expenses			120.1	120.0	100.0	89.6	98.2	92.1	93.1	91.8	07.4
Way & Structures	705,276	722.492	720 203	710 348							
Equipment	918,941	951.024	977 550	033 781	741 000	539,552	544,573	537,070	459,852	456,862	492,994
Transportation	1,774,843	1.976.495	2012 326	1 890 433	1 669 334	141,049	788,091	705,054	750,020	770,052	820,721
Car hire expense		the thet	-,,	1,000,400	1,000,001	1,440,750	1,516,418	1,375,410	1,249,268	1,266,003	1,331,504
Deprec. & Amort. [1]	and the set of the	Contraction of the	1.111	Section 1	1.13 199 100	a the second	and the split of	1. 1. 1. 1. 1.		Same Charles	Res 16 Bran
Taxes other than income	State State	and the	and the state	S Addalor	C. Starter	1.1.1.1.1.1.1.1	and the second second	C. Margaret	and the same	Sec. and the	1
General & Admin.	379.621	377.894	372 010	381 800			a los mais trabalas				
Total Rwy Oper Exp.	3,778,481	4.028.131	4 082 211	3 900 287	307,302	381,386	376,364	365,230	357,735	327,800	287,039
Net Rallway Operating Income	694,121	605.040	584.609	548 818	473 818	3,110,744	8,225,446	3,088,498	3,419,225	2,820,777	2,932,258
Other (Income) Expense:					4/3,010	199,200	408,899	319,682	24,588	574,667	670,212
Interest Expense	99,302	118.062	148 388	150 868	159 975						
Other Expense (Income), Net	(142,816)	(159.485)	(173 830)	(110 713)	(102.055)	100,431	153,590	139,869	156,476	149,528	153,877
Total Other Expense	(43,514)	(41,403)	(25.442)	40 155	56 780	(108,84/)	(118,999)	(91,249)	(96,902)	(97,835)	(78,173)
Operating Income before	1 1					51,584	38,591	48,620	59,574	51,691	75,704
provision for income taxes	737,636	646,443	610.051	508.661	417 038	147.000					
Current income taxes	85,158	21,008	31,136	(114 880)	145 747	147,000	372,308	271,062	(34,986)	522,976	594,509
Deterred income taxes	30,290	68,966	74.395	247.010	107 160	(50,4/4)	(44,948)	(63,310)	76,817	124,177	6,985
Total provision for income taxes	115,448	89.974	105.531	132 141	A1 433	100,716	128,254	114,877	(104,926)	66,458	234,675
let Income (Lose) - Excl Extraord Items	622,188	556.469	504.520	376 820	366 614	100,242	83,306	51,567	(28,109)	190,635	241,660
verage shares outrstanding						30,424	289,002	219,495	(6,877)	332,341	352,849
perating Ratio	84.48%	86.94%	87.47%	87 60%	87 100	02.000					
BIT	836,938	764,525	758.439	668 529	575 871	83.89%	88.75%	90.62%	99.29%	83.08%	81.40%
BITDA				000,020	575,671	308,097	525,898	410,931	121,490	672,502	748,386

24-Mar-96

Exhibit 1, pg.2

- 367 -

C	ONSOLIDATED	UNION PAC	CIFC, MISSO	URI PACIF	IC AND V	VESTERN	PACIFIC R	AILROADS
10	UNION POCHE Haven	pe	11.105 021 0	0. 4.0		1351001		
	Cardina march and	and and the second second	1.105, Cor b	116,542	122 441	1401264		
		- Prove Transit the Additional provide and the	Contraction of the second s	the subset of the second states and	to be the stand of	the sum as the sum of the second		

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- 368 -

FORECASTED INCOME STATEMENT - CONSTANT 1982 DOLLARS

LIOS, COID

Fiscul Year end: December 31st.	1978	1979	1980	1981 Actual	Year 0 1982 Actual	YEAR 1 1983	YEAR 2 1984	YEAR 3 1985	YEAR 4 1986	YEAR 5 1987	YEAR 6 1988
Railway Operating Revenues											
Freight Service Revenues	4,367,553	4,529,172	4,567,835	4,369,266	3,623,897	3,808,793	3,808,793	3,608,793	3,808,793	3,808,793	3,808,793
Real property revenues											
Other Revenues	105,050	103,999	98,985	88,836	78,021	62,895	65,609	89,558	71,465	61,647	67,809
Total Operating Revenues	4,472,603	4,633,171	4,666,820	4,458,102	3,699,918	3,871,688	3,874,402	3,878,351	3,880,258	3,870,440	3,876,602
the second s		is mar i	1. 17 1 1.	1.5.1.1.1							
Reliway Operating Expenses	The part of the pa	in the second		1							
Way & Structures	1. 11										
Equipment					1						
Transportation		ist.	6-2								,
Car hire expense			and the second		there are a	S. S. Land	No Martinetter	C. S. Martin State		P. S. L.	and the second
Deprec. & Amort. [1]			20 . S. 1	and the second			345 T 3. C. C. C.	C.L. C. M. M.	the second	and we it the	
Taxes other than income			arasa ji sa	Section 2	State the	CONTRACTOR .	Encie 182	12. 1. 25 2	1	and the second	in my
General & Admin.	379,621	377,894	372,019	361,802	357,332	350,212	343,888	343,854	343,854	343,854	343,854
Total Rwy Oper Exp.	3,778,481	4,028,131	4,082,211	3,909,287	3,228,102	3,320,902	3,285,137	3,287,000	3,284,186	3,281,997	3,278,199
Net Rallway Operating Income	694,122	605,040	584,609	548,815	473,816	550,786	589,265	591,351	596,092	588,443	600,403
Other (Income) Expense:		1111	5	* · · ·	14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						
Interest Expense	99,000	118,000	148,000	160,000	159,000	159,000	159,000	159,000	159,000	159,000	159,000
Other Expense (Income), Net	(143,000)	(159,000)	(174,000)	(120,000)	(102,000)	(102,000)	(102,000)	(102,000)	(102,000)	(102,060)	(102,000)
Total Other Expense	(44,000)	(41,000)	(26,000)	40,000	57,000	57,000	57,000	57,000	57,000	57,000	57,000
Operating Income before			1								
provision for income taxes	736,122	646,040	610,609	508,815	416,816	493,786	532,265	534,351	539,092	531,443	543,403
Current income taxes	146,000	31,000	39,000	(115,000)	(48,000)	(179,000)	(58,000)	(109.000)	(1,769,000)	108,000	5,000
Deferred income taxes	52,000	103,000	94,000	247,000	107.000	511,000	164,000	198,000	2,416,000	58,000	173,000
Total provision for income taxes	198,000	134,000	133,000	132,000	61,000	332,000	106,000	89,000	647,000	166,000	178,000
Net Income (Loss) - Excl Extraord Items	540,122	512,040	477,609	376,815	355,816	161,786	426,265	445,351	(107,908)	365,443	365,403
Average shares outrstanding		1.1.1									
Operating Ratio:	84.48%	86.94%	87.47%	87.69%	87.19%	85.77%	84.79%	84.75%	84.84%	84.80%	84.51%
EBIT	837,122	764,040	758,609	668,815	575,816	652,786	691,265	693,351	698,092	690,443	702,403
EBITDA										-	

Finance Docket No. 30000

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24-Mar-96

CONSOLIDATED UNION PACIFC, MISSOURI PACIFIC AND WESTERN PACIFIC RAILROADS

Description	I Sources	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Description	0001083					ALCONTRACTOR OF						
CAPITAL INVESTMENT		250.078	308 504	379 586	141.808	93,120	101.583	197,263	622,526	479,751	504,003	680,365
Union Pacific Hailroad		251,565	255 122	283,554	298.583	286,449	221,037	357,490				
Missouri Pacific Hailroad		12 334	(108 408)	7.685	29,798	4,352		53,244				
Western Facine Hanroad		513 975	455 220	670.825	470,189	383.921	322,620	607,997	622,528	479,751	504,003	680,365
lotais		010,070	400,220									
	B.1 Sch 240											
MILES OF HOAD	L 12 Colb	9 420	9.315	9.266	9.096	9.082	9,081	8,932	8,783	21,417	20,945	22,653
Union Pacific Hailroad	1.12 Colb	11 364	1 469	11.524	11,272	11,167	11,056	10,922	10,922			
Missouri Macilic Haliroad	1.12, Colb	1 380	1.30	1.332	1.332	1.323	1,323	1,323	1,323			
Western Pacific Hailroad	L.12, COID	22 164	22 164	22.122	21,700	21,572	21,460	21,177	21,028	21,417	20,945	22,653
Totais												
MANAGE OF WAY EXPENSE DED DT MI	E											
MAINTENACE OF WAT EXPENSE PER HT MIL		20 160 0	23 414 6	27.057.0	31.057.2	25,888.2	26,244.3	27,834.4	27,944.0	23,518.8	24,719.1	25,947.6
Combined Total		10,100.0										
COURSENT LITELIZATION												
Number of freight & company cars	B-1. Sch710											
Linion Recilic Beilroad	1.55. Col. k	66,735	65.788	66,984	64,263	54,153	51,588	48,548	50,246	98,622	79,199	81,714
Missouri Pacific Beilroad	1.55 Col. k	58.420	56,854	56,808	55,931	51,541	49,543	45,774	44,200			
Western Resilie Beilroad	1.55 Col k	6.253	6,419	6,230	6,296	6,300	6,300	6,300	6,300			
Totale	2.00, 00, 1	129,416	129,061	130,020	126,490	111,994	107,431	100,620	100,746	98,622	79,199	81,714
Freight carloade , criginaled & received	R-1. Sch 755		1.									
Union Pacific Pailroad		1,735,000	1,778,000	1,718,000	1,594,000	1,347,000	1,389,000	1,510,000	1,629,000	3,264,000	3,517,000	3,928,000
Missouri Pacific Pailroad		2.029.188	2,201,739	2,160,323	1,952,555	1,818,783	2,202,128	1,985,427	2,520,428			
Western Pacific Paliford		228,365	225,238	211,048	199,653	178,091	223,980	211,582	234,800			
Vestern Pacific Hairroad		3 992 553	4.204.977	4,089,371	3,746,208	3,343,874	3,815,107	3,706,989	4,384,228	3,264,000	3,517,000	5,928,000
Totals		58.2	57.8	62.7	65.1	62.6	62.8	63.5	66.9	77.7	67.8	67.4
Average Tons per Canoad (0P)		89.6	92.3	100.0	103.9	100.0	100.2	101.4	106.7	124.1	108.3	107.6
Avg tons/car index (1982=100)	P.1 Sch 753											
Freight car miles - loaded plus empty	LAR COLD	2 430 848	2 492 557	2.521.772	2,155,184	1,728,192	1,468,084	1,827,935	1,513,028	3,210,565		
Union Pacific Hailroad	L BB Colb	1 714 918	1,748,780	1.881.625	1,634,601	1,253,542	1,843,808	1,329,331	1,989,897			
Missouri Pacific Paircad	L BB Colb	211,820	210,783	197,397	183,743	165,812	160,019	166,274	181,109			
Western Pacific Hallroad	12.00, 00, 0	4.357.684	4,452,120	4,600,794	3,973,528	3,145,546	3,471,911	3,323,540	3,684,032	3,210,565	0	0
Totals		3 530 894	3,442,768	3,723,957	3,411,098	3,145,546	3,401,487	3,041,292	3,376,457	3,311,177	ERA	ERA
RIM/I-normalized car miles		3 938 767	3,728,609	3,722,645	3,281,778	3,145,546	3,395,090	2,999,938	3,163,101	2,668,919	0	0
HIM normalized car miles	18.1 Sch 755	0,000,101										
Revenue ton miles	1 108 Colb	67 843 728	73,708.047	75.362.937	74,544,887	59,537,022	49,330,529	67,046,768	51,370,521	136,096,762	157,219,392	176,548,431
Union Pacific Haircad	1 108 Colb	52 202 571	56,239,589	59.842.578	58,298,607	49,768,194	61,185,460	52,844,158	74,612,304			
Missouri Pacific Hairoad	1 108 Col b	5 122 792	5 141 900	4.618.837	4.140.164	3.832.999	5,180,149	5,449,257	5,785,798			***
Western Pacific Hallroad	1.100,0010	125 109 091	135 089 536	139,824,350	136,983,658	113,138,215	115,698,144	125,340,181	131,768,621	136,096,762	157,219,392	178,648,431
Totals		110.6	119.4	123.6	121.1	100.0	102.3	110.8	116.5	120.3	139.0	158.1
RTM Index: (1982=100)		123.4	129.3	123.5	116.5	100.0	102.1	109.3	109.1	97.0		
RTM/T Index (1982=100)	D 1 Sch 755	120-4				535						
TOTAL TONNA'SE HAND'ED (000 8)	intions'											
Originating on the plus received from contre	LI 105 Col h	97.43	102.843	107.661	103,790	84,382	87,177	95,897	*08,931	253,678	238,550	204,891
Union Pacific Hailroad	1 105 Cd b	118 512	132.447	140,795	132,222	118,494	143,739	131,134	175,282			
Missoun Pacino Hairroad	1.105 Colb	10,003	10,162	10.316	10,140	8,702	10,965	10,480	12,247			
and the same to be a should be the second and the second s	1	10,005	10,102	050 370		011 570	041 001	027 511	008 460	252 874	238 550	284 801

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Exhibit 1, pg.

4

RIO GRANDE INDUSTRIES, INC. (SPRC) ACTUAL VS. FORECAST INCOME STATEMENTS

PROFORMA PROJECT AN CHERRIN

Description	Sources	1989	1990	1991	1992	1993	1994
DEVENUES TOTALS	RCAF =	1.080	1.126	1.174	1.187	1.217	1.240
Total Operating Revenues	1.040	1.038	1.083	1.129	1.141	1.170	1.193
Actual (Constant 1089 \$)		2,571,710	2,568,469	2,421,411	2,462,268	2,425,634	2,562,575
		2,341,900	2,386,700	2,429,200	2,429,200	2,429,200	2,429,200
Forecast							
Adjustment		(229 810)	(181,769)	7,789	(33,068)	3,566	(133,375)
Difference		(110,010)	(101)100/				
TOTAL RWY OPERATING EXPENSES						0.005.000	0.076 500
Actual (Constant 1988 \$)		2,433,047	2,435,451	2,569,261	2,365,365	2,335,368	2,270,503
Forecast		1,955,100	1,934,600	1,939,200	1,924,500	1,924,500	1,924,500
Adjustment							1050 000
Difference		(477,947)	(500,851)	(630,061)	(440,865)	(410,868)	(352,003)
NET RWY OPERATING INCOME				(117.050)	06.002	90.286	286.072
Actual (Constant 1988 \$)		138,663	133,018	(147,850)	50,503	504 700	504 700
Forecast		386,800	452,100	490,000	504,700	504,700	004,100
Adjustment				607.050	407 707	414 424	218 628
Difference		248,137	319,082	637,850	407,797	414,434	210,020
EARNINGS BEFORE INTH & TAXES		212.594	241,640	(22,950)	235,803	223,466	425,872
Actual (Constant 1988 \$)		446 700	517,400	560,700	580,800	580,800	580,800
Forecast		410,100					
Adjustment		224 108	275 760	583 650	344,997	357,334	154,928
Difference		234,100	210,100	000,000			
				and a second second	and the second s		

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File: UPSH WQ2

(and the second

Exhibit 2

				(incusand s) At or for the Year Ended December 31			
				1994	Change	Change	1995
U	nion Pacific Railroad						
	Sources and Notes:			(a)	<i>(b)</i>	(0)	(d)
Lir	10			(1)	(2,3)	(3)	(4)
	Operating Revenues Consolidated C&NW					- · · ·	
:	2 Operating Revenues WRPI (est.)						
3	Net Form R-1 Operating Revenues C&NW						
4	Operating Revenues UPRR						
5	Total Adjusted Form R-1 Revenues						
6	Operating Expenses Consolidated C&NW						
7	Operating Expenses WRPI (est.)						
8	Net Form R-1 Operating Expenses C&NW			-			
9	Operating Expenses UPRR						
10	Total Adjusted Form R-1 Expenses			_			
11	Operating Income			-			
					RED	ACTED	
So	uthern Pacific Rall Corporation						
	Sources:						
12	Operating Revenues						
13	Adjustments						
14	Net Adjusted Form R-1 Revenues			-			
15	Operating Expenses						
16	Adjustments						
17	Total Adjusted Form R-1 Expenses						
18	Operating Income						
	Sources and Notes						
	File: UPSP.WQ2	1 Anniic	anta' Farma D. e. e.	_			
	Page: UP_NOMINC.2	2 LIP m	arits Forms H-1 Annual	Reports for 1994, S	Sch 210		
		Apolio	ante West Decluses, SP	Form 10-q for Quar	ter ended 9/30/	95,	
		3 Note:	Whore energy apers pg. H	C32-000214 for C&	NW		
		1995	obtained from the	not exist, percentag	e changes dete	rmineu ior nine n	nonths,
		4. Lines	will not add presided	ants' Prospectuses	s were used to e	stimate changes	for the year
-		5. Exclud	es	cause of rounding.			,
·			specia	i charge to operatir	g expenses.		

PRO FORMA PROJECTION OF APPLICANTS' RESULTS OF OPERATIONS FOR 1995 (Thousand's) At or for the Year Er

Exhibit 3, pg. 1
PRO FORMA PROJECTION OF APPLICANTS' RESULTS OF OPERATIONS FOR 1995

			At or for the Nine Mo's Ended September 30			At or fo Ended D	ecember 31	
			1994	1995	Change	1994	1995	%
								Change
Unl	on Pacific Corporation		(a)	(5)	(0)	(d)	(e)	(1)
	Sources and Notes:		(2,3)	(1)		(1)	(4)	
Line	•		Actual	Actual		Actual	Projected	
1	Operating Revenues							
2	Adjustment of Resources spin-off							
3	Sub-total							
4	Adjustment for C&NW acquisition							
5	Net Adjusted Revenues							
6	Operating Expenses							
7	Adjustment of Resources spin-off							
8	Sub-total							
9	Adjustment for C&NW acquisition							
10	Net Adjusted Operating Expenses							
11	Operating Income							
Sou	Ithern Pacific Rail Corporation							
	Sources:							
12	Operating Revenues							
13	Adjustments							
14	Net Adjusted Revenues							
15	Operating Expenses							
16	Adjustments							
17	Net Adjusted Operating Expenses							
18	Operating Income							
	Sources and Notes:							
	File: UPSP.WQ2	1.	Union Pacific C	Corporation Me	rger Prospectus	, pp. 82 - 100		
	Page: UP_NOMINC	2.	Southern Pacif	ic Rail Corp. Fo	orm 10-Q for Ou	arter ended 9,	/30/95, pp. 2 - 8.	
		3.	Note: Operatin from the UPC r	g income resul esults shown in	Its for UPC giver n the SPR Prosp	ectus. The re	ectus differ asons for these	
			Note: For lines	5 10 14 and	17 only Col (a)	equals Col. id	Dus Col (c)	
		4.	Evolution C	0. 10, 14 and	al charge to on	arating expense		
		Б.	Excludes \$	speci	a charge to opt	are ing expense		

COMBINED UNION PACIFIC, CHICAGO AND NORTHWESTERN AND SOUTHERN PACIFIC RAILROADS

UP INCOME STATEMENT - NOMINAL DOLLARS

- 373 -

Fiscal Year end: December 31st.	1991	1992	1993	1994	1995 (Proj)	1996 (Forcst)	1997 (Forcst)	1998 (Forcet)	1999 (Forcst)	2000 (Forcat)	2001 (Forcsi)
Rallway Operating Revenues	+			14 Million Construction	december of the second	in the second		A second s	the barrow of the second		
Freight Service Revenues											
Real property revenues											
Other Revenues											
Total Operating Revenues											
Rallway Operating Expenses											
Way & Structures											
Equipment											
Transportation											
Taxes other than income											
Deprec & Amort [1]											
Merger Expenses											
General & Admin.											
Total Rwy Oper Exp.											
Not Rallway Operating Income											
Other (Income) Expense:											
Interest Expense					KE	DACTED)				
Other Expense (Income), Net											
Total Other Expense											
Operating Income before											
provision for income taxes											
Current income taxes											
Deferred income taxes											
Total provision for income taxes											
Net Income (Loss) - Excl Extraord items											
Average shares outrstanding											
Operating ratio											
BIT											
BIIDA											
24-Mar-96											

CONSOLIDATED UNION PACIFIC RAILROAD AND SOUTHERN PACIFIC RAILROADS

FORECASTED INCOME STATEMENT - CONSTANT 1995 DOLLARS

Fiscal Year end: December 31st.	1991	1992	1993	1994 Actual	1995 Projected	1996	1997	1998	1999	2000	2001
Railway Operating Revenues											
Freight Service Revenues											
Real property revenues											
Other Revenues											
Total Operating Revenues											
Rallway Operating Expenses											
Way & Structures											
Equipment											
Transportation											
Car hire expense											
Deprec. & Amort. [1]											
Taxes other than income											
General & Admin.											
Total Rvvy Oper Exp.					F	REDACTE	ED				
Net Rallway Operating Income						/					
Other (Income) Expense:											
Interest Expense											
Other Expense (Income), Net											
Total Other Expense											
Operating income before											
provision for income taxes											
Current income taxes											
Deferred income taxes											
Total provision for income taxes											
Net Income (Loss) - Excl Extraord Items											
Average shares outrstanding											
Operating Ratio											
EBIT											
EBITDA											
24-Mar-96											



Exceptions to Applicants Function or Project	Proposed <u>Note</u>	and Claimed Costs a <u>Type</u>	nd Benefits <u>Discussion</u>
GENERAL AND ADMINISTRATIVE Non-Labor Communications Eliminate SP communications	Bource GA-1	Ref: GENL_ADMIN	Page: Ex. 6.16
Facilities Add to UP offices - rent	GA-2	1	
Employee training and supplies	GA-2	1	
Bupply Fuel management contract	GA-3	3	
Fuel price	GA-3	1	REDACTED
		2	
Warranty recovery	GA-4	2	

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- 375 -

ALCONOMY.

Exceptions to Applican Function or Project	ts Proposed <u>Note</u>	and Claimed Type	Costs an	d Benefits <u>Discussio</u>
Travel/contract lodging - non-agreement	GA-5	5		
Adopt ProCard for SP	GA-6	5		
New warehouses (4)	GA-10	3		
•				
Internal (Company) material transport	GA-7	2		
Combine vehicle fleet	GA-8	5	ſ	REDACTED
Service contract benefits	GA-9	2, 5		

Reduce OE for closed facilities	GA-10
Material purchases savings	GA-11

2, 5

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Exceptions to Applicants Function or Project	s Proposed <u>Note</u>	and Claimed Type	Costs and Benefits <u>Discussion</u>
			· · · · · · · · · · · · · · · · · · ·
New locomotive savings	None		
Inventory reduction (carrying/handling costs)	GA-12	1	
Capital service contracts	GA-14	2, 5	
Material purchase systems	GA-15	1	
•			
Marketing Employee training and supplies	GA-16	1	
Finance and Law	No Comments		
Labor Relations and Kuman Resources Employee training and supplies	GA-17	1	REDACTED
OPERATIONS Non-Labor Ta "T-Plan"	ble: OPERA	TIONS	
Use of 286,000 lbs. cers	OP - 1	1, 5	
Reroute fuel savings	OP - 2	1	
Reroute locomotive savings	CP-2	1	
Reroute savings - other than fuel & locomotives	OP-2	1	

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- 377 -

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	Exceptions to Applicants Function or Project	Proposed <u>Note</u>	and Claimed C	osts and Benefits <u>Discussion</u>
	Employee training and supplies	OP-3	1	
	Intermodal and Auto Employee training and supplies	OP-4	1	
	Common Point Consolidations Employee training and supplies	OP-5	1	
نې	Centralized Functions Reduced L&D claim payouts	OP-6	1, 2, 3	
78 -	Replace UP weather contractor	0P-7	3, 5	REDACTED
	Locomotive Utilization	02-5		
	Maintenance of Equipment Mechanical Employee training and supplies	OP-8	1	
	Reduce M/W equipment repair	OP - 9	1, 6	

.

Exceptions to P Function or Project	Applicants	Proposed Note	and Claimed Type	Costs	and	Benefits Discussion
Reduce M/W equipment repair (Cont'd)						
Defer purchase of M/W equipment		OP-9	1, 6			
Increase M/W due to new business		OP-9	1,6			REDACTED
Remove obsolete facilities		OP-10	3,4			

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SUMMARY OF MERGER BENEFIT AND COST CLAIMS EXHIBIT 6, PAGES 1 - 18

REDACTED

PAGES 380 - 397

Attachment A

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Railway Merger Initiatives: The U.S. Experience

A Report To The Ontario Ministry of Transportation



R.L. Banks & Associates, Inc. 1717 K St. NW Washington D.C. 20006

in association with

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March, 1995

Railway Merger Initiatives: The U.S. Experience

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Table of Contents

Section		Page			
	Introduction	1			
I.	Economic/Market Conditions Giving Rise To Mergers	3			
II.	The Process Of Developing Merger Proposals				
ш.	Legislative Mechanisms Governing Mergers	26			
IV.	Government Approaches To The Evaluation Of Mergers	30			
v.	Resolution Of Merger Issues				
VI.	Economic Analysis Of The Effects Of Mergers	39			
VII.	Analysis of Eastern Canadian Conditions	69			
VIII.	Summary and Conclusions	82			
	Appendix A: Macroeconomic, Class I Rail Data	86			
•	Appendix B: Merger Analysis Charts	88			
	Appendix C: Canadian Analysis Bibliography	105			
	Appendix D: Merger Database	106			

Introduction

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Railway Merger Initiatives: The U.S. Experience

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INTRODUCTION

The number of Class I Rail Carriers in the U.S. has declined from 52 to 13 in the last 25 years three out of every four major railway has lost its independent identity. The following graphic displays the genealogies of some of the remaining systems. The reasons for this industry consolidation are varied, and have important implications for Canada, which is facing the possibility of some form of unification of all or part of the nation's two major railways.



U.S. Railway Consolidations

In theory, combinations, mergers and acquisitions can give the resulting carrier significant market power -- for more aggressive pricing and building market share.

A merger or acquisition may result in improvements in cost structure permitting the abandonment of duplicative or excess facilities, and improvement of the utilization of those retained.

The surviving carrier can also compete for traffic which did not move in the base period -either by taking traffic from highways or opening a new source of supply to a new on-line industry.

But mergers may also result in increments to market power that may be exercised at the expense of the public interest. Rates may rise, service deteriorate or disappear.

A fundamental quandary exists with regard to mergers inasmuch as those that promise the greatest economic benefits to the merging carriers - parallel or largely overlapping mergers - also promote the greatest potential for the abuse of market power. Thus, "end-to-end" mergers, or those whose benefits are principally the expansion of service territory, are less likely to pose competitive issues that concern third parties or the government.

This report, based on the U.S. experience, is intended to:

- explore the conditions which give rise to rail mergers,
- describe the corporate and governmental approaches to mergers,
- explain how anticompetitive conditions can be ameliorated,
- evaluate the actual economic effects of mergers, and
- describe the applicability of the U.S. experience to Eastern Canada.

I. Economic/Market Conditions Giving Rise To Mergers

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I. ECONOMIC/MARKET CONDITIONS GIVING RISE TO MERGERS

1. <u>Several Factors, Both Macro- And Micro-Economic In Nature, Have Provided The Impetus</u> <u>Towards Rail Mergers</u>

- Macroeconomic factors include economic contraction, demographic change and evolutionary change in the character of demand for transportation services
 - Economic contraction may be the most powerful causes of rail consolidation, as it can threaten the survival of weak carriers
 - ... Many mergers in the first half of the century were in response to contraction

... As contraction is temporary, and a weak merger partner will often debilitate a stronger railroad, this is a poor, and dangerous reason to pursue consolidation

Demographic change, such as the migration of industry, can result in railroads searching for ways to rationalize physical plant; merger is often seen as a device to achieve this end

... Historically, however, plant rationalization has occurred independently of mergers, while mergers have generally failed to generate the economies expected

- 3 -

Macroeconomic factors, continued

- The nature of the demand for transportation services has changed with increasing need for highly reliable service, and a gradual increase in the value of general merchandise.

...

- ... Extension of single-line service is now often given as a justification for rail mergers
- ... Initiatives short of merger, such as third-party trains, have frequently succeeded in generating these benefits, perhaps with more positive results than carrier-sponsored services.
- Microeconomic drivers include the need to make a competitive response to a prior merger within the carrier's service territory, to achieve greater organizational efficiencies, and to reduce competition for valued market segments.
 - The tendency to respond to a previous merger is the only satisfactory predictor of merger activity
 - Improved efficiency is invariably anticipated by merger applicants; the section III discussion of the proposed BN - ATSF merger provides an example. However, as shown in the section VI analysis of merger impacts, realization of efficiencies is not always assured
 - The reduction in competition promoted by rail merger is always a contentious issue; section V reviews means of mitigating anti-competitive effects.

- 2. <u>This Section Analyzes U.S. Rail Merger Activity Since 1970 To Determine What, If Any,</u> <u>Economic Variables Are Associated With Merger Activity.</u>
 - Figure I-1 and Table I-1 identify the rail unification activity reviewed.
 - High levels of merger activity are considered to occur the year preceding and the year of "Major" mergers or attempted mergers. These events are indicated by large, black circles in the ensuing charts



407

- 5 -

No.	Effective Date	Type of Unification	Applicant Railroads	Controlling Railroad
1	3/2/70	Merger	Great Northern, Northern Pacific, Chicago, Burlington & Quincy	Burlington Northern
2	3/2/70	Lease	Spokane, Portland & Seattle	Burlington Northern
3	4/1/70	Merger	Kansas, Oklahoma & Gulf	Texas & Pacific
4	5/31/71	Merger	Central of Georgia, Georgia & Florida, Savannah & Atlanta, Wrightsville & Tenille	Central of Georgia
5	7/31/71	Merger	Monon	Louisville & Nashville
6	8/10/72	Merger	Illinois Central, Gulf, Mobile & Ohio	Illinois Central Gulf
7	6/15/73	Consolidation	Baltimore & Ohio, Chesapeake & Ohio, Western Maryland	Chessie System
8	1/1/74	Merger	Carolina & Northwestern	Norfolk & Western
9	4/1/76	Consolidation	Central RR of NJ, Erie Lackawanna, Lehigh & Hudson River, Lehigh Valley, Penn Central, Reading, Ann Arbor	Conrail
10	10/16/76	Merger	Texas & Pacific, Chicago & Eastern Illinois	Missouri Pacific
11	11/1/78	Merger	Abilene & Southern, Fort Worth Belt, Missouri-Illinois, New Orleans & Lower Coast, St. Joseph Belt, Texas-New Mexico, Union Terminal	Missouri Pacific
12	6/24/80	Control	Grand Trunk Western, Detroit, Toledo & Ironton	Grand Trunk Western
13	11/1/80	Consolidation	Chessie System, Family lines	CSX Corp.
14	11/21/80	Merger	Burlington Northern, St. Louis - San Francisco	Burlington Northern
15	4/13/81	Control	Grand Trunk Western, Detroit & Toledo Shore Line	Grand Trunk Western

Table I-1 U.S. Railroad Unifications

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- 6 -

Table I-1, Concluded U.S. Railroad Unifications

No.	Effective	Type of	Applicant Railroads	Controlling Railroad
	Date	Unification		
16	6/16/81	Control	Maine Central	Guilford Transportation
				Ind.
17	1/1/82	Merger	Burlington Northern, Colorado & Southern,	Burlington Northern
•			Fort Worth & Denver, Burlington Northern	·
			(Oregon-Washington), Walla Walla Valley	
18	6/1/82	Consolidation	Southern, Norfolk & Western	Norfolk Southern
			·	Corporation
19	12/22/82	Merger	Union Pacific, Western Pacific, Missouri	Union Pacific
			Pacific	
20	1/1/83	Consolidation	Family Lines, Louisville & Nashville,	Seaboard System
			Clinchfield	
21	7/1/83	Control	Boston & Maine	Guilford Transportation
				Ind.
22	1/5/84	Control	Delaware & Hudson	Guilford Transportation
				Ind.
23	2/19/85	Control	Soo Line, Chicago Milwaukee	Soo Line
24	5/17/88	Purchase	Missouri-Kansas-Texas	Union Pacific
25	10/13/88	Purchase	Rio Grande Ind, Southern Pacific Transp.	Rio Grande Industries
			Co.	
26	6/4/93	Control	Kansas City Southern Ind., Midsouth Rail	Kansas City Southern
			Corp., Midlouisiana Rail Corp., Southrail	
			Corp., Tennrail Corp.	

Source: AAR Trends; ICC filings.

- 409 -

- 7 -

- 3. <u>Pronounced Merger Activity In The 1970s Coincided With Weak Economic Growth And</u> <u>Unprecedented Inflation</u>
 - As seen in Figure I-2, major mergers seemed to almost eerily foreshadow recessions; BN the year before the 1971 downturn, Chessie before the 1974-75 decline, CSX and BN/SLSF before the 1981 drop and UP and NS just in advance of the 1983 recession
 - GNP declines were magnified by decreases in real rail operating revenues.



- Figure I-3 suggests a different story, however. Merger activity was greatest while rail operating revenues were still generally growing with the economy.
- Not shown is the ill-fated Southern Pacific/Santa Fe merger of the mid-eighties which was attempted following an extended relative decline in rail revenues; this proposed combination of supposed "weak sisters" was a wagon-circling exercise in the face of strong competition; it could be considered a "macro" driven transaction reminiscent of depression-era consolidations. Eventually, the struggling SP was acquired by the far smaller DRGW.



Figure 1-3

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• Revenue ton-miles continued to grow with GNP in the 1980s; Figure -4 suggests that railroad work output is a less important variable in unification activity than are revenues.



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Figure I-4 Railroad Unifications Compared With Railroad Operating Revenues and Revenue Ton Miles

- Low profit margins and returns on investment are positively correlated with merger activity, as seen in Figure I-5.
- The defensive nature of most mergers is reflected in the tendency to link together when times are toughest.





- 11 -

 As seen in Figure I-6, merger activity has been more intense during periods of rail loss of market share. After railroads started "turning the corner" on intercity ton-mile share, there occurred a relative hiatus in merger negotiations between large railroads, the SP and SF excepted.



Figure I-6 Railroad Unifications Compared With Railroad and Total Intercity Ton-Miles

- 4. During The 1970s And 1980s. The Year Of And Year Preceding Major Mergers Were Characterized By A Poor Economy And Low Rail Profitability.
 - Figures I-7 through I-9 display various indicators for the 21 years from 1971 through 1991, the six years preceding major mergers, the six years of major mergers, and the nine years not affected by major merger activity.
 - Figure I-7 reveals that while average inflation rates varied little between merger and non-merger years, GNP growth was a significant 1.28 percent lower during years of merger activity.



• Figure I-8 shows that railway return on net investment was 74 percent higher, 4.36 percent versus 2.50 percent, in years of no major merger activity.

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• Similarly, operating profit margin was 61 percent greater in non-merger active years.



- 14 -

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Figure 1-8 Merger Activity and Rail Profitability

- Paradoxically, Figure I-9 indicates that rail operating revenues declined much more rapidly in non-merger years, despite a slightly greater rate of increase in RTMs over the same period.
- Rail also outpaced other modes in RTM growth during years of merger activity
- The cause of this anomaly is that the railroads' most successful efforts to improve efficiency generally occurred in non-merger activity years. The decreases in revenues were more than offset by reductions in costs something that the carriers found more difficult to accomplish while managements were distracted by system consolidations.



Figure I-9 Merger Activity and Rail Gross Revenues and Output

- 15 -

5. The Rationale For Rail Mergers Today Is Often Based On Competitive Modal Economics.

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- The U.S. rail industry consists of several major overlapping and interconnected networks, producing fierce competition along with strong requirements for cooperation
- Motor carrier networks, on the other hand, are not interdependent, providing significant operational and information flow advantages
- Railroads wish to harness the benefits of a fully-integrated, continental network and circumvent the "artificial" constraint of limited geographic scope. Figure 1-11 illustrates the potential advantages in modal competition of extended rail hauls.



- 16 -



- The declining average cost structure of railroads.is another common argument for consolidation: as illustrated in Figure I-11 the cost per unit of output declines with increased volume.
- This declining cost structure clearly exists with respect to line density; it is not so clear that it exists merely with respect to rail organization scale. In section VI, the realities of economies of scale in rail consolidation are explored.



Figure I-11 Rail Declining Costs

- 17 -

II. The Process Of Developing Merger Proposals

II. THE PROCESS OF DEVELOPING MERGER PROPOSALS

1. <u>The Driving Forces Behind Railroad Managers' Desires To Merge Are Not Unique To The</u> Industry. Principal Reasons Include:

- <u>Industry Consolidation</u>: as an industry's share of gross domestic product decreases, there is a strong tendency to reduce the number of players. For example, as U.S. military spending has declined by a third in the past decade, Northrop and Grumman have combined, Lockheed has sought combination with Martin Marietta, and General Dynamics has found willing buyers for whole divisions as it reorients its business.
- <u>Changing Markets</u>: pharmaceutical manufacturers faced with competition from generic drug manufacturers have been linking up to extend product lines and reduce sales cost.
- <u>Generating Rapid Growth</u>: mergers are the quickest way to expand businesses and mangers' power with ...

- 2. <u>Serious Merger Proposals Tend To Originate Within Companies That Anticipate</u> <u>Competitive Benefits But Which Have A Reasonable Chance Of Being Approved By The</u> <u>Government.</u>
 - The currently pending Santa Fe BN merger proposal, filed with the ICC, would serve both carriers by pressuring UF, the dominant railroad in the West - but would not likely run afoul of government concern over the anticompetitive effects emanating from a parallel merger.
 - The UP's counter-proposal was developed only as a response to BN; as several Santa Fe routes are parallel to the UP's, it would face much closer scrutiny than a BN merger.
 - UP's real intent in developing a counter-proposal may have been to break up the BN merger or make it so costly that any unification economies would be long-delayed

422

• Merger proposals with highly anti-competitive features are often developed in response \bigcirc mergers or merger proposals which pose competitive threats; the reactive mergers are then more likely to be approved. A reactive proposal may take the form either of an inconsistent application (see figure on p.27) or independently of the initial proposal, typically being filed one to three years after the catalyzing filing.

- 19 -


- 3. <u>The Development Of Merger Proposals Usually Entails Serious Consideration Of</u> Economic Benefits To The Merging Carriers.
 - The BN-Santa Fe proposal anticipates benefits from:
 - Improved Traffic Mix Santa Fe's strength is in its intermodal service (and primary mainline route between the LA ports and Chicago), while BN has not committed the same level of resources to develop its intermodal services. BN has benefited in recent years by the growth in coal tonnage originating from the Powder River Basin, while Santa Fe's coal business is not as strong.
 - Substantial cost savings should be derived from reductions of administrative costs and elimination of duplicative procedures.
 - Improved Utilization of Assets and Facilities:
 - ... Increased traffic densities,

- ... Improved equipment (both motive power and freight cars) utilization, and,
- ... Greater use of shared facilities
- The BN/Santa Fe merger creates a rail network which covers the mid-west and west, providing single line coverage between all primary west coast ports and all major mid-west market as well as the Gulf ports and interchange points with the east coast. This network could potentially provide certain single line service advantages to many shippers.

Merger Benefits, Continued

424 -

- Because this is an "end to end" merger, competition should be preserved in most major markets served by the two railroads; the government imposition of potentially debilitating conditions is therefore less likely.
- BN and Santa Fe quantified the anticipated benefits in their merger applications. A summary is shown below in Table II-1.

..

Table II-1

Merger Benefits Anticipated by BN and Santa Fe

Annual Revenue Gains	Million Dollars		
Extended Hauls	\$ 59.2		
Rail Diversions	115.2		
Truck to Rail Diversions	132.1		
Total Increased Revenue:	\$306.5		
Operating Benefits (Year 3)			
Maintenance of Way	\$ 6.2		
Maintenance of Equipment	5.4		
Transportation/Operations	39.6		
General/Administrative	189.7		
Total Operating Benefits:	\$240.9		
Total Annual Benefits:	\$547.4		

Source: ICC Finance Docket No. 32549, BN/SF7-7

- 4. <u>The Following Chronological Summary Of Santa Fe Pacific Corporation Merger Activity</u> <u>Is Descriptive Of The Complexity Possible In Major Merger Processes</u>
 - While most major proposed mergers are complicated by the filing of inconsistent applications by other carriers who seek inclusion, substitution, or their own competitive merger, the Santa Fe merger is unusual because of the presence of hostile takeover bid; such bids are more typical of consolidations in other industries than in railroading. However, this may be an indication of things to come.
 - On June 30, 1994, Burlington Northern Inc. and Santa Fe Pacific Corp. signed a definitive agreement to merge. Under the terms of the agreement, the two railroads would be operated independently while the merger is under review by the Interstate Commerce Commission, and it was anticipated that a formal application requesting approval of the merger would be submitted to the ICC by the end of October, 1994. The new entity would be named the Burlington Northern Santa Fe Corporation, and the combined railroads would go by the name of the Burlington Northern and Santa Fe Railway Company.
 - Under the agreement, Santa Fe shareholders would receive 0.27 shares of BN common stock for each Santa Fe share. The transaction would qualify as a tax-free exchange to Santa Fe and Burlington Northern shareholders. The transaction was valued at \$2.7 billion, based on the BN stock price as of June 30. The merger was described as an "end to end merger", as opposed to a combination of overlapping or parallel systems. Regardless of description, the Union Pacific and the Southern Pacific immediately issued brief statements expressing competitive concerns.

- 22 -

- On October 5, 1994, the Union Pacific Corporation submitted an unsolicited proposal to acquire Santa Fe. Under the UP proposal, Santa Fe shareholders would receive 0.344 shares of UP common stock for each share of Santa Fe stock. At a market price of \$52 per share of UP common stock, the UP transaction was valued at approximately \$3.4 billion which, at the time, represented a 34 percent premium over the market value of the Santa Fe common and a 33 percent premium over the June 30, BN offer.
- The Santa Fe board of directors immediately and unanimously voted to reject the UP offer, and repeated its commitment to merge with BN. Further, the Santa Fe board stated that the UP proposal was unlikely to achieve ICC approval. On October 13, 1994, the BN and Santa Fe filed for ICC approval to merge. The UP countered by filing suit in Delaware against BN, Santa Fe, and the board members of the Santa Fe Pacific Corp., seeking a judgment which, if successful, would declare that the agreement between BN and Santa Fe can be terminated to allow Santa Fe to accept UP's proposal. On October 18, a Delaware Court rejected UP's request for an expedited hearing, and no judgment in UP's favor was given.

- On October 27, 1994, the BN increased its offer for Santa Fe to \$17.21 per share in a transaction which was valued at approximately \$3.2 billion. On October 28, Santa Fe told UP that it would consider a UP proposal only if such an offer called for establishing a voting trust under which the two railroads would be operated separately until the ICC rendered a decision. The Santa Fe board is committed to the belief that removal of the regulatory risk is critical to the interests of the Santa Fe shareholders, given the strong perception that ICC approval of a UP/Santa Fe merger without, at least certain onerous concessions, is unlikely. A voting trust would allow for Santa Fe shareholders to be compensated immediately, while shifting the financial risk associated with an adverse ICC decision (adverse to the UP's interests) to the UP shareholders.
- On October 30, 1994, UP countered by increasing its offer for Santa Fe to \$20 per share, or a total value of approximally \$3.78 billion. Under the October 30 offer, UP made no mention of a voting trust. During late October and early November, BN and UP ran advertisements in daily and financial publications soliciting interest for their respective offers, both recognizing that approximately 65 percent of Santa Fe's common stock is held by institutional investors. The timing of these events and activities was clearly focused on a Santa Fe stockholders' meeting originally scheduled for November 16, 1994.

- 24 -

- On November 9, 1994, the UP revised its proposal by offering to place Santa Fe in a voting trust. Under the revised offer, UP would pay \$17.50 per Santa Fe share for 57 percent of the outstanding common stock (110 million shares) and 0.354 shares of UP common for the remaining 43 percent of the Santa Fe shares (83 million remaining shares). The total value of this transaction was estimated to be \$3.3 billion.
- On December 19, 1994, BN raised its offer for Santa Fe to \$20 per share. (UP subsequently dropped its bid on January 1, 1995.) Under the most recent proposal, BN and Santa Fe would jointly tender 33 percent of the Santa Fe's outstanding shares (63 million shares tendered) at \$20 per share, and BN would exchange 0.4 shares of its common stock for each of the remaining Santa Fe shares (130 million remaining shares), in a deal valued at approximately \$3.88 billion. Santa Fe may repurchase up to ten million shares, in which the exchange ratio could rise to as high as 0.4347. BN and Santa Fe shareholders were scheduled to vote on the revised offer on February 7, 1995.

4. In Any Major Merger, It Is Reasonable To Anticipate Strong Opposition From Other Railways In The Affected Service Territories.

- The railways will either attempt to block the merger outright, or position themselves to obtain compensatory conditions.
- Shippers will be recruited to testify or comment on both sides of the case.
- Shipper organizations may also submit comments without being requested; these
 comments generally either oppose the proposed merger, or endorse it subject to the
 imposition of conditions.

- 25 -

III. Legislative Mechanisms Governing Mergers

111. LEGISLATIVE MECHANISMS GOVERNING MERGERS

- 1. U.S. Code Title 49 Section 11321 Et Seq. (Part Of The "Interstate Commerce Act" As Amended) Governs Procedure And Dictates The Relevant Considerations In Adjudging Rail Merger Applications.
- 2. The Interstate Commerce Commission (ICC) Possesses Exclusive Authority to Approve Rail Mergers
 - The ICC possesses plenary authority over railroad mergers:

- State governments are completely preempted
- Other Federal Agencies act purely in an advisory capacity in most instances
- Merging carriers are exempted from the antitrust laws to the extent necessary to allow them to carry out an ICC-approved transaction
- But if the ICC is "sunset," we may anticipate major changes in the law and the locus of authority.

- 3. The Regulatory Process May Extend to Over Two and One Half Years
 - Figure III-1 traces the procedural elements of major rail merger applications.





- 27 -

4. The ICC Must Consider In Class I Railroad Merger Proceedings:

- The effect of the proposed transaction on the adequacy of transportation to the public
- The effect on the public interest of including, or failing to include, other carriers in the area involved in the proposed transaction
- The total fixed charges that result from the proposed transaction
- The interests of carrier employees affected by the proposed transaction
- Whether the proposed transaction would have an adverse effect on competition among rail carriers in the affected region

28 -

- 5. <u>Transactions Must Be Approved if The ICC Finds Them Consistent With The Public</u> Interest
 - The Commission may impose conditions governing the transaction

- Conditions are much more likely to be necessary to rectify anticompetitive consequences of parallel mergers, wherein the number of railways serving a particular geographical area are reduced.
- If the transaction does not involve the merger or control of at least two Class I carriers, the Commission shall approve the transaction unless:
 - There is likely to be a substantial lessening of competition, creation of a monopoly or restraint of trade, and
 - The anticompetitive effects of the transaction outweigh the public interest in meeting significant transportation needs.
 - The Interstate Commerce Act requires that the competitive analysis evaluate impacts anywhere within the U.S.; in practice, the analyses are generally limited to impacts within the affected service territories.

IV. Government Approaches To The Evaluation Of Mergers

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IV. GOVERNMENT APPROACHES TO THE EVALUATION OF MERGERS

1. The Central Standard In Evaluating Mergers Is Whether The Public Interest Is Served

- A merger will be approved as long as the public benefits of the transaction exceed any harm caused by diminution in competition
 - The ICC may act to condition the merger to mitigate anticompetitive effects (Further discussion of merger remedies is found in Section V)
 - While the ICC is required to consider the interests of carrier employees in major mergers, Courts have held that it need not consider employee interests as an element of the public interest in approving a transaction. Employees unsatisfied with labor protective condition may complain under Title 49 Section 10505 for specific remedies - but they cannot halt an otherwise acceptable transaction

While the ICC is required to consider any adverse effect on competition among rail carriers in the affected region, it need not consider any adverse effects on *competitors*. The ICC's concern is in the preservation of viable, alternative transport. If essential services are maintained, the fact that a competing carrier is harmed is of no concern.

- 30 -

2. <u>There Are Several Economic Tests That Are Conventionally Applied In Analyses Of The</u> <u>Potential Affects Of A Change In The Composition Of Market Participants.</u>

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- Measures of changes in market concentration are often reviewed to determine if an acquisition may create increases in oligopolistic or monopolistic power
 - First, if this is so, the potential is heightened for the abuse of market power or the diminishing of carriers' incentives to operate efficiently.

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Second, an acquisition could result in the creation of captive shippers, or reduce the transport alternatives available to others. This would also be an indication of the potential for harm to the public interest, and must therefore be explored.

Finally, market characteristics bearing on ease of entry need to be examined to determine whether anti-competitive conduct can be sustained. If entry barriers are low, a dominant carrier may not be able to exploit monopoly power, for such an action would bring a rapid response from new entrants eager to participate in any windfall from an above-normal rate structure.

• The conventional means of determining potential for abuse of market power are before-and-after measures of four and eight firm concentration ratios and the use of the Herfindahl-Hirschmann Index ("HHI")

- 31 -

436

Conventional measures of market concentration, cont.

437 -

- Firm concentration ratios are the oldest and least sophisticated method employed in determining the potential for abuse of market power, and are now rarely used

The HHI is a statistical technique employed by the Department of Justice in analyzing industries pre- and post merger to determine the impact of a merger/acquisition on competition. While the method has been sanctioned by the Department of Justice and the Federal Trade Commission in their Horizontal Merger Guidelines, April 2, 1992, it has faced growing criticism in recent years.

HHI indices are calculated by summing the squares of market share for all market participants, and can range from slightly above zero to 10,000 (where one participant holds a 100 percent share - 100 X 100 = 10,000).

The pre- and post merger change in the index is of principal concern. The U.S. Department of Justice considers markets with HHI indices of below 1,000 to be unconcentrated, from 1,000 to 1,800 to be moderately concentrated, and above 1,800 to be highly concentrated. In a moderately competitive market (HHI 1,000 - 1,800) the Justice Department views HHI increases of less than 100 points an indication of a lack of likelihood of anti competitive effects.

Conventional measures of market concentration, cont.

Table IV-1 displays the before-and after IIIII calculations for the 1980 CSX unification. The table shows that the CSX merger would change a moderately concentrated market (IIII 1,364) to a more concentrated IIII 2000 market - an increase of 636 points. In actuality, the previous consolidation of the Chessie System meant that the true IIII increase would not have been so pronounced.

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	Pre-merger revenue	Share of East and South Region Revenue	Revenue ^ 2 (HHH)	Post-merger revenue	Share of East and South Region Revenue	Revenue ^ 2 (11111)
Merger carriers						
1340	\$922,248	6.96%	48			
040	\$812,635	6.14%	38			
WM	\$78,411	0.59%	0			
IEN	\$973,239	7.35%	54			
SCL	\$1,049,747	7.93%	63		00.050/	020
CSX	· · · · ·			\$3,836,280	28.97%	8.59
Other regional						
carriers:					0.020	
B&LE	\$121,449	0.92%		\$121,449	0.9270	
B&M	\$108,310	0.82%		\$108,310	0.82%	
CLINCH	\$66,207	0.50%	0	\$66,207	0.50%	
CRC	\$3,770,466	28.47%	810	\$3,770,466	28.47%	010
D&II	\$102,236	0.77%	1	\$102,236	0.77%	
FILT	\$145,843	1.10%	1	\$145,843	10%	
GTW	\$213,185	1.61%	3	\$213,185	1.61%	
ICG	\$853,296	6.44%	42	\$853,296	6.44%	
NEW	\$1,430,894	10.80%	117	\$1,430,894	10.80%	
PELE	\$78,955	0.60%	0	\$78,955	0.60%	0
30	\$1.049,747	7.93%	63	\$1,049,747	7.93%	63
SRS	\$1,467,270	11.08%	123	\$1,467,270	11.08%	123
Total IIII			1,364			2,000
IIII increase:						636

- 33 -

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Table IV-1 HHI Calculation: CSX, 1979

- Diversion analyses are another technique for measuring the likely impacts of a merger; the technique requires the application of decision rules to the movement of traffic to see which traffic will change routings and carriers.
 - Diversion analyses are usually proffered by experts on either side of a merger case; probative analyses normally require the construction of sophisticated models which adhere to the principles of total logistics cost estimation.
 - A difficulty with diversion analyses that competently predict the capture of traffic by the prospective merged carrier is that this diversion is normally premised on a rational shipper taking advantage of superior or lower cost service. These models are temperamentally unsuited to identifying the negative impacts of merger.
 - Diversion, or traffic analyses, are also used by merger proponents to establish the anticipated revenue benefits of the transaction. Even for small carriers, the process can be extremely complex and relies on sophisticated statistical sampling techniques.

- 3. <u>A Finding Of Harm To Competition May Well Turn On The Definition Of The Market.</u> The Narrower The Definition, The More Likely Anticompetitive Effects Will Be Found.
 - Limiting market definition to an origin-destination transport corridor will almost inevitably result in a finding that competition will be diminished.
 - The most constrained definition that may be used limits the review to rail transport only; less restrictive interpretations invite evidence of the presence, capacity, and competitive effectiveness of other modes, as well.
 - However, the ICC has been using even more expansive market definitions since the passage of the Staggers Rail Act in 1980. Geographical competition, source competition, substitute product competition are all among the constructs that the Commission will typically examine.

- The examination of competition from other than from a transportation origin destination perspective reflects the ICC's interpretation of the law's requirement that *competition*, not *competitors* must be protected.
- Thus, if receivers can obtain goods from other sources, or replace their inputs with other commodities with alternative origins served by alternative carriers, this is all relevant to the determination of harm to competition.

V. Resolution Of Merger Issues

V. <u>RESOLUTION OF MERGER ISSUES</u>

- 1. Losers Are More Readily Discernible In Rail Mergers Than Are Winners. Shippers, Non-Included Carriers, Labour And Communities In Danger Of Losing Service May All Be Negatively Affected. A Limited Number Of Remedies Have Been Applied By The ICC With Varied Degrees Of Usefulness. The Five Principal Remedies Are Described Below.
 - *Trackage rights.* Non-included carriers may be granted access to the merged carrier's service territory over their tracks. The merged carrier will normally maintain control of dispatching, but the ICC can establish the rental charges (by formula) and mandate the reasonable provision of access.
 - Trackage rights requests are usually made by excluded carriers who must show harm to competition
 - Shipper requests for the preservation of competitive access will accomplish little if there are no other carriers anxious to provide service.
 - Forced sale of lines. The ICC may exclude specific lines from the merger, and mandate their sale to a competitor or to a new carrier entity. This remedy is most likely to be used where the merged carriers would have multiple means of accessing a particular market, and where line abandonment is a strong possibility negating the value of trackage rights.
 - Sale of lines may be necessary if a new carrier is to be the tool to provide alternative access a start up formed in response to a merger may not have any other fixed facilities of its own.

- Carrier rate protection. A merger may transform a non-included carrier's connections from friendly to hostile. A railway which formerly was congenially located at the end of another carrier's service territory may become part of a larger and directly competitive system. In this instance, the ICC may require that existing divisions agreements not be substantively altered for a specified period, say ten year.
- Inclusion. A carrier which could face devastating loss of business, threatening its operations in regions within or beyond the merged carriers service territory, may petition for inclusion in the merger.
- Employee protection. Standard employee protective conditions may be imposed, based on the 1979 ICC decision New York Dock Railway -- Control -- Brooklyn Eastern Dist.
 - New York Dock Railway tracks a plan proposed by the Secretary of Labor in 1971
 - Wages are protected for six years at 100 percent of earnings, subject to general wage increases.

2. Other Remedies Are Geared To Preserving Fairness Along With The Preservation Of Access.

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- Expanded interswitching districts. Excluded carriers may be granted the right to interchange cars at an extended distance from terminals.
- Creation of union railways. Union or belt railways may be formed in urban areas which provide non-discriminatory access to local industry. The railway will normally be jointly owned by the line haul carriers in the region, or by the local government itself. This device is not created by mandate of the ICC.

VI. Economic Analysis Of The Effects Of Mergers

VI. ECONOMIC ANALYSIS OF THE EFFECTS OF MERGERS

1. Large Rail Mergers Are Widely Supposed To Generate Substantial Costs And Benefits.

- The most widely-touted costs are results of the loss of competitive alternatives to shippers, the burden of integrating staffs and systems, and the costs of compensating redundant personnel. Benefits are supposed to come through the rationalization of facilities and resulting economies of scale and density, and the ability to offer single-system service over an extended range.
- These suppositions are examined in this section through an analysis of four major U.S. mergers:
 - The 1980 merger of the Burlington Northern and the St. Louis San Francisco
 - The 1980 consolidation of the Chessie System and the Family Lines
 - The 1982 consolidation of the Southern and the Norfolk & Western
 - The 1982 merger of the Union Pacific, Missouri Pacific and Western Pacific
- The last three unifications are by far the most significant ones to occur in the U.S. since the formation of Conrail in 1976.
- The analysis involves a detailed examination of data from the year prior to the consummation of each unification, the year of unification, and the second and fourth years following consolidation or merger. Additional data may be found in the Appendix.

- 2. <u>As Seen In Figure VI-1, Three Of The Four Merged Carriers Experienced Reductions In</u> Operating Revenues.
 - Only the BN, with its rapidly growing oil-crisis inspired coal business. experienced slightly increased revenues.



- 40 -

3. <u>Revenue Ton-Miles Were Flat, Except For BN's Major Jump In The Fourth Year - A Jump</u> Barely Reflected In Increased Revenues.

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- 4. All Four Carriers Slashed Employment Dramatically.
 - But this process was already underway prior to unification. UP's constituent carriers greatest one-year reduction actually occurred in the year preceding merger.



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- 42 -

5. Of The Four Carriers, Only UP And BN Notably Increased Their Share Of Tons Carried Following Merger.

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 As both carriers were beneficiaries of the coal boom, tonnage data fails to support the notion that merger produces larger, stronger carriers which can attract more traffic with improved services.



450

- 43 -

- 6. Figure VI-5 Indicates That The Purported Economies Of Consolidation Failed To Be Reflected In Operating Income.
 - UP and NS's NROI plunged (although UP's year four results were the consequence of an extraordinary adjustment), CSX remained stagnant, and only BN showed marked gains principally the result of weakened maximum rate regulation impacting the carrier's several captive utility customers.



451

- 44 -

• Return on shareholder's .quity paralleled is e NROI results. Figure VI-6 does highlight the fact that the four carriers are unusually strong organizations; Class I railroads averaged only a 5.8 percent return during these year, and that number itself was boosted largely by the four subject carriers.



- 45 -



- 7. <u>By The Fourth Year O1 The Respective Mergers, Economies From Plant Rationalization</u> Were Largely Unrealized.
 - As figure VI-7 shows, only CSX had managed to meaningfully reduce miles of road.



- 46 -

 Of greater significance is the fact that all four carriers physical plant actually grew in terms of share of all Class I's - the non-merging carriers were succeeding in rationalizing plant more rapidly than were the merged carriers.



- 47 -

- 8. None Of The Merged Carriers Appeared To Have Suffered From Undue Financial Leverage As A Result Of Consolidation.
 - Figure VI-9 indicates that fixed charges tended to drop for all carriers, and fixed times coverage generally improved. Note that UP net revenue from operations was particularly strong in year four the year that an extraordinary write-off decimated net income.



- 9. Figure VI-10 Begins A Series Of Charts Depicting How The Merged Carriers, And Their Component Railroads, Fared In Terms Of Their Shares Of Class I Railroad Net Income.
 - CSX's share dropped steadily, principally as the northern roads, B&O and C&O, experienced worsening performances.



- 49 -

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• Merger did not help the BN's earnings, either. Share of net income was lower following than preceding the combination with SLSF. Note that the SLSF made only a minor contribution to the overall entity.



457 -

- 50 -
• The Norfolk Southern, on the other hand, performed remarkably well in 1986, the fourth year of the merger, when its net income exceeded 90 percent of the entire industry's. That year was a particularly poor one for the nation; NS's results reflected its ability to hold steady in the face of an industry downturn.

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- 51 -

• UP's net income declined with the merger, although, as noted before, 1986 results are highly distorted. The losses experienced by the weak WP did little to harm the overall performance of the UP; inclusion minor carriers such as the WP, or the WM in the case of CSX do not appear to necessarily undermine otherwise viable combinations.



- 52 -

- 10. <u>The Following Series Of Charts Allows For The Comparison Of Each Merged Carrier's</u> <u>Share Of Class I Employees. Miles Of Road, Operating Revenues And Revenue Ton</u> <u>Miles Over Time And By Component Railroad.</u>
 - As seen in Figure VI-14, CSX failed to downsize its work force as rapidly as Class I carriers in general, and it modest relative increases in revenues and RTMs were outpaced by its growth in employee share. Thus, as was the case with miles of road, economies failed to accrue from staffing reductions.



460

 BN reduced staff relative to other Class I railroads, while revenues and RTMs grew rapidly. It did not shed employees any more aggressively than the average carrier, while, again, its traffic growth reflects the coal boom.



- 54 -

• Figure VI-16 shows that Norfolk Southern failed to realize economies of downsizing either staff or physical plant. Revenue ton-mile and operating revenue per employee declined relative to other railroads. Further, as seen in Appendix Figure 1, NS's executive staff and executive compensation grew as its ton-miles declined.



- 55 -

462

• The UP is a relatively efficient railroad; Figure VI-17 shows operating revenue and RTM shares above those for employees and miles of road -- demonstrating good utilization of human and capital assets. The data does not show, however, that merger economies were realized as staff and trackage shares increased following merger.



463

- 56 -

- 11. The Merged Carriers' Records Are Mixed On Being Able To Contain General And Administrative Costs Following Merger.
 - By the fourth year, as seen in Figure VI-18, all but NS had reduced their G&A expense per ton-mile. However, G&A expenses did not decline as rapidly as total operating expenses per ton miles for Class I carriers as a whole.



Figure VI-18 G&A Expense Per Revenue Ton Mile

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- 57 -

- 12. <u>Neither The NS Nor The UP Succeeded In Improving The Physical Output Of Their Fixed</u> Facilities In Terms Of GTMs Per Mile Of Road.
 - Although UP's (as well as CSX's) success in improving RTMs is an indicator that, as noted above, some efficiencies from merger were found.



- 58 -

13. <u>One Of The Prime Indicators Of The Ability To Realize Efficiencies Is The Load To</u> Empty Ratio.

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• Increased geographical scope should allow for greater ability to position freight cars to minimize empty movements. All carriers other than CSX managed to improve this critical ratio, although industry - wide revisions of equipment rental practices also was a contributing factor.



466 -

• When compared with U.S. Class I's as a whole, the merged carriers performance in improving the load to empty ratio is less impressive; CSX and NS showed declines relative to the year preceding merger, and UP showed no improvement from the year of the consummation of its merger.



14. <u>All Four Carriers Showed Improvement In Terms Of The Ratio Of Road Switching Hour.</u> To Yard Switching Hours, Although NS's Was Negligible.

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• This indicator, shown in Figure VI-22, is a measurement of the relative intensity of yard operations, which should, in theory, decline with the reduction in terminal activity resulting from merger.

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- 468 -

• With the exception of NS, the road:yard switch hour ratio improved for the merged carriers relative to other Class I's, although marked benefits were found only with the western carriers. However, BN's improvement would not appear to be merger-related.



- 62 -

15. The Level Of Capital Expenditures Reflects Not Just Need And The Availability Of Resources: It Also Is An Indicator Of Commitment To The Business.

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• Figure VI-24 suggests that the subject carriers, while not expending the increased level of resources that might be expected to be needed to truly unify their systems, were intent on reinvesting in railroading. The Appendix and the following figure contain further detail on capital expenditures.



470

- 63 -

• With the exception of UP, capital expenditures for each carrier grew as a proportion of U.S. Class I investment. Also except for UP, capital expenditure shares by year four equaled or exceeded operating revenue shares as shown earlier in this section.



- 64 -

- 16. <u>Staff Utilization Deteriorated In Terms Of The Number Of Hours Paid Versus Those</u> <u>Actually Worked</u>
 - This is in part a result of the costly, ongoing reassignments of workers as the carriers adjusted to their respective mergers.



472

• The period in which the subject mergers occurred was one in which all railroads were struggling with labour redundancy and restructuring; the merged carrier's performance on paid versus worked hours is not at all poor when compared with the U.S. Class I's as a whole.



473

- 66 -

- 17. <u>Perhaps The Ultimate Test Of Whether Mergers Promote The Public Interest Is Whether</u> Shippers Save Money.
 - Increased rates would largely reflect the exercise of greater market power. Figure VI-28 displays the revenue per ton mile generated by the four carriers compared against the U.S. average for the comparable year. While rates dropped for all merged carriers, they did for the nation as a whole, as well.



- 474

• The final figure directly addresses the issue of the change in rates for the carriers as compared with the U.S. The carriers, on average, realized revenue per RTM at almost the exact level of the Class I's as a whole. The final set of columns indexes the merged carriers' rates against the U.S. from the year preceding the merger. The merged carriers rates are seen to increase slightly more than one percent vis a vis the U.S. -- if any savings were realized by merger, they would not appear to have been passed on to their customers -- in fact, the merged carriers seem to have extracted a small premium compared to other railroads.



475

- 68 -

VII. Analysis of Eastern Canadian Conditions

VII. ANALYSIS OF EASTERN CANADIAN CONDITIONS

- 1. Evidence Suggests That The Eastern Canadian Railway Network Must Become More Efficient If It is To Continue To Play A Competitive and Relevant Role In The Transportation Marketplace in Eastern Canada.
 - Overall, the financial performance of both CN and CP has deteriorated since 1988. The operating ratios (i.e., operating expenses divided by operating revenues) of CN and CP were 0.87 and 0.85, respectively in 1988. In 1993, the operating ratios of CN and CP were 0.96 and 0.93, respectively. Some improvement in financial performance is expected in 1994 but not back to 1988 levels. In contrast, the 1993 operating ratios of competing U.S. railways such as Conrail and Burlington Northern were 0.83 and 0.86, respectively. It is generally acknowledged that an operating ratio in the 0.80 to 0.85 range is necessary to service invested capital and attract further private investment.
 - CN and CP contend that their combined Eastern Canadian operations east of Winnipeg lost about \$2 billion over the five year period 1988-1992 inclusive. Losses continued in 1993.

- The competitive position of Canadian railways versus U.S. railways has deteriorated since 1988 in spite of progress made by CN and CP in rationalizing its network and work force. In 1993, U.S. track densities (in terms of revenue tonne-kilometres per kilometre of track) were 66% higher than in Canada. U.S. labour productivity (in terms of revenue tonne-kilometres per employee) was 64% higher.
- A traffic density comparison between the Eastern and Western Canadian rail networks is presented in Figure VII-1, below. When the protected low-density prairie branch lines are removed from the equation, there is a much greater proportion of higher density rail lines in Western Canada.

Density Category	West		East	Total	
(MGTM Per Mile)	Route Miles	(%)	Route Miles	(%)	Route Miles
<2	9,176	49.5	2,666	24.7	11,842
2 to 10	3,626	19.6	3,519	32.6	7,145
10 to 25	2,260	12.2	3,622	33.6	5.882
25 to 70	3,465	18.7	984	9.1	4.449
Totals	18,527	100.0	10,791	100.0	29,318

Traffic Density¹ (Millions of Gross Ton-Miles Per Mile of Track)

Figure VII-1

¹ CN North America and CP Rail System Lines only.

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The Eastern Canadian transportation marketplace is dominated by higher valued general freight traffic that is truck competitive. Much of the traffic in Western Canada is bulk commodities that is much more suitable for rail transport. In the East, the Seaway provides a marine alternative for the movement of bulk commodities. As illustrated in Figure VII-2, below, bulk commodities dominate rail traffic in Western Canada. In Eastern Canada (after removing about 30 million tonnes of iron ore traffic handled by Class II railways), general freight traffic moved by rail is much more prevalent.

Commodity	East to East		East to West		West to East		West to West		Totals	
	000's Tonnes	(%)	000's Tonnes	(%)	000's Tonnes	(%)	000's Tonnes	(%)	000's Tonnes	(%)
Grains	1,222	(1.5)	17	(0.3)	11,245	(49.7)	21,708	(27.6)	34,192	18.4
Forest products	5,094	(6.4)	163	(2.8)	770	(3.4)	10,752	(13.7)	16,779	9.0
Minerals	55,359	(69.9)	41	(0.7)	4,368	(19.3)	34,158	(43.4)	93,926	50.4
Petroleum products	2,717	(3.4)	156	(2.7)	523	(2.3)	1,143	(1.5)	4,538	2.4
Other processed commodities	4,256	(5.4)	1,687	(29.1)	1,601	(7.1)	967	(1.2)	8,511	4.6
Intermodal	4,170	(5.3)	1,977	(34.1)	1,726	(7.6)	1,483	(1.9)	9,356	5.0
Other commodities	6,347	(8.0)	1,764	(30.4)	2,375	(10.5)	8,435	(10.7)	18,920	10.2
Totals	79,165	(100.0)	5,805	(100.0)	22,608	(100.0)	78,646	(100.0)	186,222	100.0

Figure VII-2 Canadian Rail Traffic Flows¹—1992

¹ Class I and Class il carriers.

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Sources: Transport Canada & Statistics Canada.

- 71 -

The observations of Figure VII-2 are reflected in the relative market shares of rail and truck presented in Figure VII-3, below. The East is dominated by truck transport whereas in the West, rail is the dominant mode. It is interesting to note the evolution of the market shares over time. In the West, rail has been actually gaining slightly in market share over the 1984 to 1992 time period. In the East, the market share of rail has appeared to have bottomed out primarily due to rail intermodal growth and driver shortages in the trucking industry. The 1992 volumes transported by rail and truck also reflect the contraction in the Canadian economy due to the recession in the early 90's.

Fig	ure VII-3		
Evolution of Truck ¹	and Rail?	Market Shares	

	East to East		East to West		West to West		West to East	
	000's		000's		000's		000's	
Year	Tonnes	(%)	Tonnes	(%)	Tonnes	(%)	Tonnes	(%)
1984								
Rail	48,827	36.0	5,632	79.1	68,041	60.0	31,550	96.3
Truck	86,720	64.0	1,487	20.9	45,276	40.0	1,210	3.7
1988								
Rail	43,616	26.4	5,836	77.3	79,145	60.4	28,492	94.2
Truck	121,729	73.6	1,710	22.7	51,906	39.6	1.753	5.8
1992							.,	
Rail	33,602	29.2	5,669	75.4	69,903	64.2	23,341	94.4
Truck	81,379	70.8	1,850	24.6	39,045	35.8	1 382	5.6
¹ Common carrier. ² CN and CP only.							1,002	

Source: Statistics Canada.

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480

- 2. <u>There Are Both Similarities And Dissimilarities Between The Present Situation in Eastern</u> <u>Canada And The Conditions Which Gave Rise To Mergers In The U.S.</u>
 - Many of the same economic/market conditions now existing in Eastern Canada were prevalent prior to many U.S. mergers. These include:

A general economic contraction of the marketplace; this time caused by the recession in the early 90's.

<u>A shift in traffic patterns.</u> In Canada, there has been a gradual shift in traffic patterns from an East-West to a more North-South flow due principally to CUSTA. This North-South traffic is in mary instances more conducive to truck the port due to: 1) the high service demands and shorter distances associated with this traffic; and, 2) the existence of an already well-developed North-South road network compared to a Canadian rail network that was built to move traffic East-West. CN and CP have taken some initiatives to improve North-South connections through acquisition (e.g., purchase of Delaware & Hudson and Soo Line by CP) and strategic alliances with U.S. carriers.

Loss in market share to the trucking industry in Eastern Canada (at least until recently). Truckers can better respond to the transportation service demands (e.g. just-in-time deliveries) of shippers in the manufacturing and finished goods sector who are much more prevalent in Eastern Canada. Similarity of Economic conditions, cont.

As in the case of U.S. railways, <u>a belief by CN and CP that a merger in Eastern</u> <u>Canada will result in a more cost competitive and efficient railway network</u> due to plant rationalization, improved utilization of assets and facilities and reduction in administrative overheads.

On the other hand, there are also dissimilarities between the situation in Eastern Canada and recent U.S. mergers.

The potential merger in Eastern Canada involves only a partial merger of the systems of two railways. The merger has become a pooling or purchase of assets rather than a purchase or exchange of railway company shares as in the U.S. The valuation of assets of a public company such as CN can be more subjective and can lead to more controversy than the valuation of common shares of a company as a complete entity. This has proven to be the case with the unsuccessful merger discussions between CN and CP.

 CN would not be considered a serious merger candidate in the U.S. because of its poor financial performance and the large debt load that it currently carries.

Successful mergers in the U.S. such as the BN and NS had a significant traffic base of bulk commodities (e.g. coal) which are not suitable for movement by truck. This is not the case for the Eastern Canadian railway network of CP and CN.



Dissimilarities, cont.

- The monopoly-duopoly situation that would be created in Canada by the merger of CN and CP in Eastern Canada needs a detailed mechanism to enhance competition. Although CP proposed an "Eastern Access Agreement" in its purchase offer for CN, shippers remain strongly opposed to the merger.
- A merger of Canada's only two trans-continental railways in Eastern Canada puts the merger much more in the spotlight and under much more public scrutiny than a merger of two of thirteen U.S. Class I Rail Carriers.
- CN carries some public duty and its only shareholder is the Government of Canada. Thus, the approval or disapproval of any merger in Eastern Canada will probably not be based strictly on the usual business/regulatory process but will also involve political considerations.
- In conclusion, the merger conditions in Eastern Canada are dissimilar in many aspects from the conditions surrounding successful railway mergers in the United States.

- 3. The Canadian Regulatory Regime Is Generally Considered Less Efficient Than The U.S. Regime In Dealing With Railway Mergers and Rail Line Abandonments
 - In contrast to one legislative mechanism in the U.S., there are two legislative mechanisms and corresponding regulatory agencies in Canada that can deal with railway mergers:
 - Under Part VII of the National Transportation Act of 1987 (NTAct), the National Transportation Agency (Agency) has the right to review the acquisition of any transportation undertaking (with assets or sales over \$10 million) engaged in any transportation activity under the legislative authority of the Federal Parliament. The Agency can disallow the proposed acquisition if the acquisition is found to be against the public interest. The Agency has 120 days after receipt of receiving notice to make a decision or longer if agreed to by the party making the acquisition.
 - Under Section 92 of the Competition Act, the Competition Tribunal can dissolve a merger or dispose of assets or shares where the Tribunal finds that a merger prevents or substantially lessens competition. The Tribunal can take up to 3 years to conduct its investigations and come to a decision.

- The transportation policy implications from this duplication of effort have already been recognized by the National Transportation Act Review Commission (NTARC). NTARC has recommended that Part VII of the NTAct be repealed due to the duplication of effort between the two legislative bodies. This recommendation is still under study by Transport Canada.
- There is general opinion supported by the findings of the NTARC that the procedures for rail line abandonment and conveyance of lines to short line operators under the NTAct should be simplified and made as efficient as possible. The NTARC has made a number of recommendations in this regard. The NTARC believes that the restrictiveness of the process, its cost and its complexity are impeding the railways from rationalizing their networks effectively. This in turn is affecting the productivity of Canadian railways, their ability to compete against the trucking industry and U.S. railroads, and the ability to create short lines. Measures to reduce regulations and the time required to rationalize rail plant and create short lines is now being seriously considered by Transport Canada.
- In conclusion, Canadian legislative regimes may impede railway mergers in Canada versus the more efficient U.S. regime. From the point of view of the Ministry of Transportation, Ontario (MTO), a merger approval process which can take up to three years (which will remain in effect even if the NTARC recommendation is approved) can cause uncertainty in the business and shipping community. Uncertainty can lead to delays in business decisions or investments which in turn could have detrimental economic repercussions on the Province. MTO should encourage a more expeditious merger process if the merger is felt to be in the best interests of the Province.

- 77 -

- The current or modified rail line abandonment regulatory process in Canada should not prove any more advantageous to a merged railway than two separate railways in efforts to rationalize their networks. Two railways should be just as effective as one in shedding low density lines, creating short lines or working together (e.g., the CN/CP partnership to operate a single route in the Ottawa Valley) to rationalize the Eastern Canadian rail network.
- 4. The Proposed Merger of CN and CP in Eastern Canada Has Already Raised A Number Of Issues and Concerns In Canada Both In Favour And Against The Merger.
 - Issues which favour the merger generally have originated from CN and CP and from studies (see bibliography in Appendix D) demonstrating that the productivity and financial performance of CN and CP must be improved. A merger is viewed by some as one possible solution to solving the poor financial performance of the Canadian railways in Eastern Canada. As evidenced with U.S. railway mergers, this may not be the most viable solution.
 - A key contributing factor to the deterioration in the financial performance of CP and CN since 1988 (aside from the recent recession) has been the significant decline in railway unit prices (expressed in revenue per revenue tonne-kilometre). It is generally concluded that competitive pressures will continue to depress rates in the future.

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- Thus, improvements in the financial viability of Canadian railways will depend on their ability to reduce the costs of operation. A rationalization of the CN and CP railway network in Eastern Canada may be necessary if the financial performance of the network is ever to reach a satisfactory level to ensure its long term survival.
- As indicated above, a merger is just one possible solution to improving the competitive position and financial performance of CN and CP in Eastern Canada. Factors to consider include:
 - As Canadian railways compete increasingly with U.S. railways in the North American marketplace, productivity is now a key issue. Whether a merger in Eastern Canada can significantly improve the productivity picture faster than CN and CP continuing their efforts on an individual basis is open to debate. Some issues such as tax in quities (e.g., fuel taxes, property taxes, depreciation rates) between U.S. and Canadian carriers can be resolved independently of the merger process.
 - A merger of CN and CP in Eastern Canada will not necessarily improve financial performance if the U.S. experience is any indicator. Little improvement in financial performance was experienced by merged entities in the U.S. as demonstrated by the analyses presented in the previous chapter.

- 79 -

Non-merger solutions, cont.

The creation of short line railways to improve the financial performance of main line railways and preserve lower density branch lines has not yet been fully exploited in Canada. There are over 450 short lines and regional railways in the U.S. Canada has not developed its short line potential nearly to the same extent as the U.S. rail industry.

The recent report of the Government Parliamentary Task Force which examined the possibilities for the commercialization of CN concluded that the eventual commercialization of CN is possible and recommended that the Government commit itself to this process, and that CN employees be offered participation.

- There are also some negative aspects which have been raised if a merger was to take place in Eastern Canada:
 - Concern has been expressed about the impact of the potential monopolistic power of the merged railway on shippers in Eastern Canada (where many shippers will become rail captive in certain locations for specified products with no competitive transportation alternative) and on rail rates between Eastern and Western Canada.

Negative aspects, cont.,

The eventual ownership structure of the merged railway in Eastern Canada (e.g., if owned by one of the railways operating in Western Canada) could be detrimental to the other independent railway operating in Western Canada for the movement of East-West traffic.

- In conclusion, some of the policy issues that the different levels of government in Ontario will have to consider to ensure adequate rail service in the Province include:
 - Facilitating the creation of short lines by having an efficient and effective approval process in place.
 - Permitting short line operators to have more job flexibility in the work place to reduce the labour costs now experienced by CN and CP.
 - Revising tax policies (e.g., fuel taxes, property taxes) in coordination with other provincial governments and the Federal government to ensure that Canadian railways are not disadvantaged vis-à-vis U.S. railways or truckers due to taxation policies.

- 81 -

VIII. Summary And Conclusions

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VIII. SUMMARY AND CONCLUSIONS

- 1. The Present Competitive Position And Financial Performance Of CN and CP In Eastern Canada Will Not Necessarily Be Resolved By A CN/CP Merger of Operations And Infrastructure in Eastern Canada.
 - The analysis of U.S. experience revealed that large mergers generally failed to realize their promised efficiencies. Some of the more notable findings were:
 - Rationalization of physical plant and staff reductions did not meet forecasts and slowed in comparison with other railways.
 - The level of capital expenditures bore no noticeable relationship to the need to integrate systems.
 - There was no noticeable improvement in financial performance in the merged entity versus other railways.
 - The merger conditions in Eastern Canada are dissimilar in many aspects from the conditions surrounding successful railway mergers in the United States.

2. There Are A Number of Other Options Available To Ensure Competitive And Adequate Rail Service In Eastern Canada.

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- The creation of more short line railways which have not developed to the same extent in Canada as in the United States.
- Rationalization of the rail networks by each of CP and CN on an individual basis and collaborating on joint facility usage where advantageous to both parties.
- Collaboration between labour and management to improve labour productivity and reduce compensation levels.
- The successful commercialization of CN.
- 3. <u>Government Policy Will Have An Important Role To Play In Maintaining A Competitive</u> And Adequate Rail Service In Eastern Canada.
 - Modifications to the present regulatory process as recommended by the NTARC and the more recent Parliamentary Task Force will facilitate plant rationalization and the creation of short line railways.
 - The less efficient regulatory regime dealing with railway mergers in Canada could be potentially detrimental to the Province of Ontario if a railway merger became the preferred option.
 - Revisions to the taxation regimes at all levels of government may be required to ensure that there are no inequities between modes of transport (i.e., truck versus rail) and between U.S. and Canadian railways.
 - Government of Ontario policy could complement and support the above mentioned policies particularly regarding the creation of short lines and permitting or encouraging work flexibility for short line operators.
 - An important side issue with plant rationalization or a merger is the retention of essential inter-city passenger services and commuter services (i.e., GO Transit) in the Province of Ontario. Ontario Government policy may have to be reviewed as rail plant rationalization evolves in Eastern Canada.

Appendix A: Macroeconomic, Class I Rail Data

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APPENDIX A

Table APP-1Macroeconomic, Class I Rail Times Series Data

	GNP: Index	Percent Change	Class I Op. Rev.	Percent Change	Op. Rev.
Year	(Constant dollars)	in GNP	(1993 dollars, 000s)	in Op. Rev.	Index
1970	100.00		\$40,450,922		100.00
1971	99.71	-0.29%	\$40,617,230	0.40%	100.40
1972	102.52	2.81%	\$41,043,778	1.05%	101.45
1973	107.64	4.99%	· \$43,136,273	5.10%	106.62
1974	113.25	5.21%	\$45,466,125	5.40%	112.38
1975	112.63	0.55%	\$40,312,354	-11.34%	99.64
1976	111.23	-1.25%	\$43,317,082	7.45%	107.07
1977	116.63	4.86%	\$44,362,691	2.41%	109.65
1978	122.12	4.71%	\$44,958,843	1.34%	111.13
1979	128.56	5.27%	\$48,072,524	6.93%	118.82
1980	131.74	2.47%	\$48,948,221	1.82%	120.99
1981	131.53	-0.16%	\$48,638,877	-0.63%	120.22
1982	134.09	1.95%	\$40,762,948	-16.19%	100.76
1983	130.66	-2.55%	\$38,070,992	-6.60%	94.10
1984	135.33	3.57%	\$40,199,099	5.59%	99.36
1985	144.49	6.77%	\$36,294,873	-9.71%	89.71
1986	149.36	3.37%	\$33,586,707	-7.46%	83.02
1987	153.45	2.74%	\$33,065,123	-1.55%	81.73
1988	159.06	3.66%	\$33,392,090	0.99%	82.54
1989	163.05	2.51%	\$32,001,199	-4.17%	79.10
1990	164.66	0.99%	\$31,099,113	-2.82%	76.87
1991	163.45	-0.74%	\$29,382,962	-5.52%	72.63
1992	172.46	5.51%	\$29,074,589	-1.05%	71.87
1993	182.04	5.56%	\$23,824,852	-0.86%	71.25
Sources:	1,2		1.2.3.4		

- 86 -

Table APP-1 (Concluded) . Macroeconomic, Class I Rail Times Series Data

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Year	Class I Return	Class I profit	Class I Rev. Ton Miles (Millions)	PTM Index	GNP Deflator		
1070	1 770/	A 200	Willes (Willions)	KTWI Index	1993=1.00		
1071	2 1 2 01	4.29%	764,809	100.00	3.37		
1072	2.12%	5.85%	739,743	96.72	3.20		
1972	2.34%	6.58%	776,746	101.56	3.06		
1973	2.33%	6.26%	851,809	111.38	2.92		
1974	2.70%	6.74%	850,961	111.26	2.69		
1975	1.20%	2.85%	754,252	98.62	2.46		
1976	1.60%	3.53%	794.059	103.82	2.34		
1977	1.24%	2.77%	826,292	108.04	2 21		
1978	1.52%	3.12%	857.921	112.17	206		
1979	1.68%	4.98%	904,956	118.32	1.90		
1980	4.22%	6.73%	918.958	120.16	173		
1981	3.09%	7.48%	910,169	119.01	1.57		
1982	2.11%	3.68%	797,759	104.31	1.48		
1983	4.29%	9.81%	828,275	108.30	1.42		
1984	5.70%	12.40%	921,542	120.49	1.36		
1985	4.58%	8.56%	876,984	114.67	1.32		
1986	1.30%	4.99%	867.722	113.46	1.28		
1987	4.75%	10.31%	943,747	123.40	1.24		
1988	6.73%	11.18%	996.182	130.25	1.20		
1989	6.34%	10.44%	1,013,841	132.56	1.14		
1990	8.11%	13.11%	1.033.969	135.19	1.10		
1991	1.30%	0.78%	1.038.875	135.83	106		
1992	6.30%	10.67%	1.066.781	139.48	1.03		
1993	7.06%	14.95%	1,109,309	145.04	1.00		
Sources:		3,4	3,4,5		1.2		
1	U.S. Statistical Abstract, various years						
2	Danast of the Passan	to A dedage to the D	11. 1 1000				

Report of the Economic Advisers to the President, 1995 AAR Yearbook of Railroad Facts, various years AAR Analysis of Class I Railroads, various years USDOT, National Transportation Statistics, 1993

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Appendix B: Merger Analysis Charts



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